

PROJECT MANUAL / SPECIFICATIONS

VOLUME 1 OF 3
DIVISIONS 00 - 01

ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN
223 Wisner Road, Middletown, NY 10940

TWIN TOWERS MIDDLE SCHOOL ADDITIONS AND ALTERATIONS

NYSED Project Control No. 44-10-00-01-0-001-041

ARCHITECT **KG+D ARCHITECTS, PC**

285 Main Street, Mount Kisco, NY 10549

CIVIL ENGINEER **INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, PC**

3 Garrett Place, Carmel, NY 10512

LANDSCAPE ARCHITECT **THE LA GROUP LANDSCAPE ARCHITECTURE & ENGINEERING, PC**

179 Graham Road, Ithaca, NY 14850

STRUCTURAL ENGINEER **THE DI SALVO ENGINEERING GROUP**

Lee Farm Corporate Park, Suite 200
83 Wooster Heights Road, Danbury, CT 06810

ROOFING CONSULTANT **WATSKY ASSOCIATES**

20 Madison Avenue, Valhalla, NY 10595

FACADE RESTORATION CONSULTANT **RYAN BIGGS CLARK DAVIS ENGINEERING & SURVEYING, DPC**

257 Ushers Road, Clifton Park, NY 12065

SYSTEMS ENGINEER **GERARD ASSOCIATES CONSULTING ENGINEERS, DPC**

223 Main Street, Goshen, NY 10924

LIGHTING CONSULTANT **GOLDSTICK LIGHTING DESIGN, LTD**

828 South Broadway, Tarrytown, NY 10591

SPECIFICATIONS CONSULTANT **SUE MCCLYMONDS, AIA**

200 Robb Road, Amsterdam, NY 12010

FOOD SERVICE CONSULTANT **RAYMOND RAYMOND ASSOCIATES**

44 St. John Street, Goshen, NY 10924

ABATEMENT DESIGNER **ADELAIDE ENVIRONMENTAL HEALTH ASSOCIATES**

1511 Route 22, Suite C24, Brewster, NY 10509

BID ISSUE: **DECEMBER 14, 2023**

THE UNDERSIGNED CERTIFIES THAT TO THE BEST OF HIS KNOWLEDGE, INFORMATION AND BELIEF, THE PLANS AND SPECIFICATIONS ARE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND BUILDING STANDARDS OF THE EDUCATION DEPARTMENT, AND THAT THE PLANS AND SPECIFICATIONS REQUIRE THAT NO ASBESTOS CONTAINING MATERIAL SHALL BE USED.

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December 14, 2023
Construction Documents
SED No. 44-10-00-01-0-001-041

Enlarged City School District of Middletown
Twin Towers Middle School
Additions and Alterations

334600 SUBDRAINAGE

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ADVERTISEMENT FOR BIDS

The Enlarged City School District of Middletown will receive individual sealed proposals at the Facilities Office, 223 Wisner Avenue, Middletown, NY 10940 for the project identified below. All proposals that have been received in accordance with the terms hereof will be opened and read aloud at the time and place of the Bid Opening.

ADDITIONS & ALTERATIONS

Twin Towers Middle School
112 Grand Avenue, Middletown, NY 10940

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

District Bid #: 44-10-00-01-0-001-041

| | |
|--|------------------------------------|
| Documents Available to Bidders: | January 15, 2024, 10:00 AM |
| Pre-Bid Site Meeting: | January 25, 2024, 3:00 PM |
| Bid Opening: | February 15, 2024, 11:00 AM |

Complete sets of Bidding Documents, which include Drawings, Specifications and Addenda, may be obtained from REVplans, 28 Church Street, Unit 7, Warwick, NY, 10990, 877-272-0216. Complete digital sets of Bidding Documents may be obtained online as a download at the following website: revplans.biddyhq.com. Follow instructions to create an account or login if already registered. Select the "Projects" tab at the top of the screen and use the search function if needed to view this project. All bidders are urged to register to ensure receipt of all necessary information, including Bid Addenda.

Complete hard copy sets of Bidding Documents may be obtained from REVplans upon depositing the sum of \$100 per set. Deposit checks or money orders shall be made payable to *Enlarged City School District of Middletown*. Plan deposits are refundable to all bidders submitting bids in accordance with NYS law and the terms in the Instructions to Bidders section of the Specifications. Any plan holder requiring document shipping shall make such arrangements with REVplans and be responsible for paying all packaging and shipping costs.

Please note REVplans (revplans.biddyhq.com) is the designated location and means for distributing all bid package information. Obtaining Bidding Documents through REVplans enables a prospective bidder to be identified as a registered plan holder. All Bid Addenda issued after initial document download will be transmitted to registered plan holders via email and will be available at revplans.biddyhq.com. Plan holders who have paid for hard copies of the Bidding Documents may coordinate directly with REVplans if hard copies of Bid Addenda are needed. There is no charge for registered plan holders to obtain hard copies of the Bid Addenda.

The site meeting shall commence at the main entry of Twin Towers Middle School. **Bidders are urged to attend the pre-bid site meeting. Knowledge of the field conditions is crucial to understanding the Work.**

Each proposal must be accompanied by a certified check payable to Enlarged City School District of Middletown or by a Bid Bond for a sum equal to five percent (5%) of the bid, conditioned as set forth in the Instructions to Bidders. All bid security, except those of the three low bidders will be returned within ten days after proposals are submitted. The bid security provided by the three low bidders will be returned after the execution of the Trade Contract.

The Owner shall require the successful bidder to provide separate Performance and Labor & Materials Payment Bonds in the amount of the contract price and in the form specified in the Bid Documents.

Attention is called to the Owner's sales tax exemption, the requirements as to conditions of employment to be observed, the minimum wage rates to be paid under the contract, and liquidated damages for failure to complete the work in contract time. In addition, the Bidding Documents for this project contain detailed requirements for the qualification of Bidders. These include among other things, bonding and insurance requirements, financial statements, bank references, lists of lawsuits, arbitrations or other proceedings in which the Bidder has been named as a party, a statement of Surety's intent to issue Performance and Payment Bonds, and a description of other projects of similar size and scope completed by Bidder.

To the fullest extent allowed by law, the Owner reserves the right to reject bids that contain omissions, exceptions, or modifications, or in their sole discretion to waive such irregularities, or to reject any or all bids or to accept any bid which is in the best interest of the Owner.

Proposals shall be sealed and in an opaque envelope distinctly marked on the outside as follows:

Enlarged City School District of Middletown
Project Name
Contract Number
Bid Opening Date
Name of Bidder
Marked "SEALED BID"

The Owner will not open or consider any proposal delivered after the bid opening date and time. Bidders are solely responsible for the arrival of each bid proposal at the place of bid opening by the appointed time, regardless of the means of delivery.

END OF ADVERTISEMENT



AIA® Document A701® – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

Infrastructure Improvements at Twin Towers Middle School
Middletown, NY

THE OWNER:
(Name, legal status, address, and other information)

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

THE ARCHITECT:
(Name, legal status, address, and other information)

KG+D Architects, PC
285 Main Street
Mount Kisco, NY 10549

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ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner’s Instructions to the Architect, Parts A and B will be completed prior to using this document.

ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents contained in the proposed project manual(s).

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents, apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents. Wherever the word "Bid" occurs in the Bidding Documents, it refers to the Bidder's proposal.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents and the Bidder accepts all of the terms and conditions of the Bidding Documents;
- .4 The Bidder has visited the site, examined the site and all existing facilities where the Project work is to be done, conducted all tests required to verify Owner-provided information, made all reviews of publicly available documents concerning the Work, reviewed the study results finding asbestos and lead on the Project site, reviewed all available as-built drawings, become familiar with local conditions under which the Work is to be performed, reviewed the Bidding Documents, the proposed Contract Documents, and all Addenda, and has correlated the Bidder's personal observations with the requirements of the foregoing. The Bidder shall inspect accessible concealed areas of existing construction, provided no significant permanent damage is inflicted upon the Owner's property. Lack of knowledge about conditions in accessible concealed areas shall not be a basis for additional cost claims at a later time. By submitting a Bid, the Bidder verifies that all Owner-provided information in the Bidding Documents and proposed Contract Documents is accurate and the Bidder waives any claim based on inaccuracy in the Bidding Documents or proposed Contract Documents that should have been reasonably found in a thorough inspection and testing of the Project site and review of the proposed Contract Documents and publicly available information;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and

- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor and the General Conditions of the Contract for Construction.

§ 2.2 It is understood and agreed that the Bidder has, by careful examination, satisfied itself as to the nature and location of the Work, and confirmation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, the general and local conditions, and all other matters which can in any way affect the Work under the proposed Contract Documents.

§ 2.3 No official, officer or agent of the Owner is authorized to make any representations as to the materials or workmanship involved or the conditions to be encountered and the Bidder agrees that no such statement or the evidence of any documents or plans, not a part of the Bidding Documents, shall constitute any grounds for claim as to conditions encountered. No verbal agreement or conversation with any officer, agent or employee of the Owner either before or after the execution of this Contract shall affect or modify any of the terms or obligations herein contained.

§ 2.4 The Bidder acknowledges its understanding and agreement that it has informed itself fully as to the conditions relating to construction and labor under which the Work will be performed and agrees as far as possible to employ such methods and means in the performance of its work so as not to cause interruption or interference with any other contractor.

§ 2.5 The Bidder's attention has been directed to the fact that all applicable state laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they are deemed to be included in the Contract Documents the same as though herein written out in full. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified in the Contract Documents. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall be required to observe all laws and ordinances including, but not limited to, relating to the obstructing of streets, maintaining signals, keeping open passageways and protecting them where exposed to danger, and all general ordinances affecting it, its employees, or its work hereunder in its relations to the Owner or any person. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall also obey all laws and ordinances controlling or limiting the Contractor while engaged in the prosecution of the Work under the Contract.

§ 2.6 The Bidder's attention has been directed to the fact that if the Contractor observes that the Drawings and Specifications are at variance with laws and regulations, it shall promptly notify the Architect in writing and any necessary changes shall be adjusted as provided in the Contract Documents for changes in the Work. By submitting a Bid, the Bidder acknowledges that if awarded the Contract and it performs any Work knowing it be contrary to such laws, ordinances, rules, regulations, or specifications, or local, state or federal authorities without such notice to the Architect, it shall bear all costs arising therefrom.

§ 2.7 The Bidder's attention is directed particularly to the Contract Documents provisions whereby the Contractor will be responsible for any loss or damage that may occur to the Work or any part thereof during its progress and whereby the Contractor must make good any defects or faults in the Work that may occur during the progress or within two (2) years after its acceptance. The Contractor shall provide for the continuation of the Performance Bond as a Maintenance Bond for two (2) full years after date of final payment request at the full Contract Sum. The Work is to be performed and completed to the satisfaction of the Owner & Architect and in accordance with the Specifications annexed hereto and the Drawings referred to therein.

§ 2.8 The Bidder's attention is directed to the fact that each Contractor shall pay not less than the minimum hourly wage rates on those contracts as established in accordance with Section 220 of the Labor Law as shown in the schedule included in the Bidding Documents. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides (among other things) that it shall be the duty of the fiscal officer to make a determination of the schedule of wages to be paid to all laborers, workers and mechanics employed on public work projects, including supplements for welfare, pension, vacation and other benefits. These supplements include hospital, surgical or medical insurance, or benefits; life insurance or death benefits; accidental death or dismemberment insurance; and pension or retirement benefits. If the amount of supplements provided by the employer is less than the total supplements shown on the wage schedule, the difference shall be paid in cash to the employee. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, also provides that the supplements to be provided to laborers, workers and mechanics upon public work, "... shall be in accordance with the prevailing practices in the locality..." The amount for supplements

listed on the enclosed schedule does not necessarily include all types of prevailing supplements in the locality, and a future determination of the Industrial Commissioner may require the Contractor to provide additional supplements. The original payrolls or transcripts shall be preserved for three (3) years from the completion of the Work on the awarded project by the Contractor. The Owner shall receive such payroll record upon completion of the Project.

§ 2.9 To be considered qualified, the Bidder must demonstrate to the Owner's satisfaction the following:

- .1 The corporation, partnership, sole proprietorship or other business entity in whose name the Bid is submitted has been in business, continuously, for no less than the previous five (5) years performing or coordinating the work which it is bidding on;
- .2 The Bidder has satisfactorily completed no less than five (5) projects of comparable size, complexity and type to this Project as a prime contractor to a project owner;
- .3 The bidder is not currently involved in bankruptcy proceedings;
- .4 The Bidder is licensed to perform the work it is bidding on in the jurisdiction where the work will take place;
- .5 The Bidder is capable of and intends to perform at least 25% of the Work with its own forces;
- .6 The Bidder is able to perform the Work with the manpower available to it; and
- .7 The Bidder and its subcontractors have a minimum of five (5) years' experience in the Work and applicable trades.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

See Advertisement for Bids

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 It is the responsibility of the Bidder before submitting a Bid:

- .1 To examine thoroughly the proposed Contract Documents and other related data identified in the Bidding Documents;
- .2 To visit the site to become familiar with and satisfy itself as to the general, local and site conditions that may affect cost, progress, performance or furnishings of the Work;
- .3 To consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the Work;
- .4 To study and carefully correlate the Bidder's knowledge and observations with the proposed Contract Documents and such other related data;
- .5 To promptly notify the Architect, in writing, of all conflicts, errors, ambiguities or discrepancies that the Bidder has discovered in or between the proposed Contract Documents and such other related documents; and
- .6 In the absence of an interpretation by the Architect, should the Drawings disagree in themselves or with the Specifications, the better quality, the more costly or the greater quantity of work or materials shall be

estimated upon, and unless otherwise determined, shall be furnished.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven (7) days prior to the date for receipt of Bids. *(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)*

Prospective bidders may request clarifications of the Bid Documents from the Architect by contacting Andrew Allison at KG+D Architects, PC, via e-mail to aallison@kgdarchitects.com with a copy to sannar@kgdarchitects.com. All questions must be submitted in writing, no phone calls will be accepted. All correspondence must be addressed to subject line "ECSDM Twin Towers Middle School Infrastructure Improvements".

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. All Addenda so issued shall become part of the Contract Documents. If any Addenda may materially affect the bid, as solely determined by the Owner, the Owner may extend the Bid date. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them. No oral interpretation will be made to any Bidder as to the meaning of the proposed Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Architect.

§ 3.2.4 The Bidder's failure to become acquainted with the extent and nature of work required to complete any portion of the Work in conformity with the requirements of the Contract Documents shall not be a basis for additional compensation.

§ 3.3 Equivalentents

§ 3.3.1 Whenever a material, article, device, piece of equipment or type of construction is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, or similar specific information, it is so identified for the purpose of establishing a standard of quality, and such identification shall not be construed as limiting competition. Any material, article, device, piece of equipment or type of construction of other manufacturers or vendors that will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, device, piece of equipment or type of construction so proposed is completely described in submittals to the Architect and is, in the opinion of the Architect, of equal substance, appearance, and function. If the contractor desires to use any kind, type, brand, or manufacturer or material other than those named in the specifications, they shall indicate in writing, when requested, and prior to award of contract, what kind, type, brand, or manufacturer is included in the base bid for the specified item, following procedures specified in Section 012500. Refer to Division 01 General Requirements (Section 012500) and General Conditions of the Contract for Construction.

§ 3.3.2 Equivalentents Process

§ 3.3.2.1 Written requests for equivalentents shall be received by the Architect at the Post-Bid meeting specified in Article 6 - Post-Bid Information of these Instructions to Bidders.

§ 3.3.2.2 Bidders shall follow procedures outlined in Specification Section 012500 when requesting approval of equivalentents and shall submit equivalentents requests on the Substitution Request Form following Section 012500.

§ 3.3.2.3 Architect will review the request for equivalentents and will notify Bidder of acceptance or rejection of proposed equivalentent prior to execution of the Contract.

§ 3.3.3 The burden of proof of the merit of the proposed equivalentent is upon the proposer. The Architect's decision of approval or disapproval of a proposed equivalentent shall be final.

§ 3.3.4 Substitution requests made after execution of the Contract may or may not be considered by the Architect as stipulated in the Contract Documents.

(Paragraph deleted)

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

All Bid Addenda will be transmitted to registered plan holders via email and will be available at revplans.biddyhq.com.

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Prior to submitting a Bid, the Bidder shall ascertain that the it has received all Addenda issued, and the Bidder shall acknowledge receipt in the Bid. It shall be the Bidder's responsibility to make inquiry as to the existence of Addenda issued. All such Addenda shall become part of the Contract Documents and the Bidder shall be bound by such Addenda whether or not received by the Bidder.

(Paragraph deleted)

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Failure to use said forms or the inclusion of bids not requested shall result in rejection of the Bid. The Project Manual shall not be submitted or included in the Bidder's Bid package. No Bid will be considered which does not include bids for all items listed in the proposal sheets.

§ 4.1.2 All blanks on the Bid Form shall be legibly executed. Bid Forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on the Bid Form must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the Bid Form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the Bid Form nor qualify the Bid in any other manner.

§ 4.1.7 The Bidder must state in the Bid his/her full name and business address, and the full name of every person, firm or corporation interested therein and the address of every person or firm, or president and secretary of every corporation interested with it; if no other person, firm or corporation be so interested, it must affirmatively state such fact. The Bidder must also state that the Bid is made without any connection (directly or indirectly) with any other bidder for the work mentioned in its Bid and is (in all respects) without fraud or collusion; it has inspected the site of the Work and has examined the Bidding Documents; no person acting for or employed by the Owner is directly or indirectly interested therein, or in the supplies or Work to which it relates or in any portion of the prospective profits thereof; it proposes and agrees if its Bid is accepted, to execute a contract with the Owner to perform the work mentioned in the proposed Contract Documents attached; and the amount it will accept in full payment..

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.1.9 The Bidder shall execute, under the penalty of perjury, and submit with its Bid, an Iran Divestment Act of 2012 certification as required by General Municipal Law §103-g.

§ 4.1.10 As a condition of bidding, the Bidder certifies, warrants and represents that it is not disqualified to contract with municipal corporations or other public bodies as provided by the General Municipal Law of the State of New York, or as provided by any successor statute thereto. The Bidder further certifies that if it becomes a Contractor hereunder, any refusal by it, including the refusal of its officers, employees, servants or agents, when called before a grand jury, head of a state department, temporary state commission or other state agency, the organized crime task force in the department of law, head of a city department or other city agency, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation concerning any transaction, or contract had with the state, any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract, it or any firm, partnership or corporation of which it is a member, partner, director or officer shall be disqualified from selling to or submitting bids or proposals to or

receiving awards from or entering into any contract with the Owner for a period of five years after such refusal; and any and all contracts made with the Owner on or after the first day of July, nineteen hundred and fifty nine by it and by any firm, partnership or corporation of which it is a member, partner, director or officer may be cancelled or terminated by the Owner without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the Owner for goods delivered or work done prior to the cancellation or termination shall be paid.

§ 4.1.11 The Bidder must verify its Bid in writing verifying that the several matters stated therein are in all respects true.

§ 4.1.12 The Owner may consider as informal any Bid on which there is an alteration of or departure from or additions to or qualification of the Bid Form or from the any of the other Contract Documents. The Owner may reject a Bid, which in the Owner's sole view, is not adequately filled out, or does not contain the requested information.

§ 4.1.13 It is the Bidder's responsibility to examine carefully the Drawings and Specifications, proposal and the site upon which the Work is to be performed. A proposal submitted shall be prima facie evidence that the Bidder has made such examination and that it is familiar with all of the conditions and requirements.

§ 4.1.14 The Owner is exempt from paying sales and compensating use taxes of the State of New York and of cities, counties, and other subdivisions of the State on all materials sold to it pursuant to the provisions of this Contract. These taxes are not to be included in bids. This exemption shall apply to supplies and materials which are incorporated in such project. This exemption does not, however, apply to equipment rentals, small tools, and supplies for equipment such as supplies of gasoline used in operating trucks. The term "materials" as used in this article shall include supplies incorporated in this project. A Tax Exemption Certificate will be furnished to the Contractor by the Owner upon request.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:
(Insert the form and amount of bid security.)

Either a certified check drawn on a solvent bank with an office in the State of New York, or a bid bond equal to five percent (5%) of the total amount of the Bid, and payable to the "Enlarged City School District of Middletown." This amount shall be the measure of liquidated damages sustained by the Owner as a result of the failure, negligence or refusal of the Bidder to whom the Contract is awarded to execute and deliver the Contract. The Bid must also be accompanied by a certified statement that the bonding company meets or exceeds the requirements set forth in Article 11 of the General Conditions of the Contract for Construction in the proposed Contract Documents.

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder; such bonds shall be in the amount of 100% of the Contract Sum. Should the Bidder refuse to enter into such Contract within 10 days after receipt of the Notice of Award or fail to timely furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

§ 4.2.3 If a surety bond is provided as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or the Bidder has not been notified of the acceptance of its Bid, the Bidder may, beginning 45 days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 Each Bid submission shall be enclosed in a sealed opaque envelope. This envelope shall be clearly marked with the name of the Project, Bidder's name, the date of the Bid opening, and marked "**BID PROPOSAL**" in large lettering on the envelope and shall contain the following items:

- .1 Certified check or Bid Bond in the amount totaling 5% of the Base Bid.

- .2 Certified letter from its bonding company, indicating that they meet the criteria set forth in Article 11 of the General Conditions contained in the proposed Contract Documents.
- .3 Certified letter that the company bidding this Project has been in business under the same name for a period of five years or longer, and is not currently disbarred from bidding or working on public works projects by the New York State Department of Labor.
- .4 One (1) fully executed original and one (1) copy (marked "copy") of the following:
 - .1 Proposal form.
 - .2 Non-collusive form.
 - .3 Sexual Harassment Prevention Certification form.
 - .4 Certification of Compliance with the Iran Divestment Act or Declaration of Bidder's Inability to Provide Certification of Compliance with the Iran Divestment Act.
 - .5 Fully completed AIA Document A305-2020 Contractor's Qualification Statement with Exhibits A-D.
 - .6 Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- .5 Bidder Qualifications
 - .1 A description of its experience with at least five similar projects of comparative size, complexity and cost together with documentary evidence showing that said projects were completed to the owner's satisfaction and were completed in a timely fashion.
 - .2 Documentation from five projects completed within the past five years, listing type and scope of work, names and addresses of owners and dates of contract completion, as well as the following information:
 - timeliness of performance of the work of the project.
 - evidence that the project was completed to the Owner's satisfaction.
 - whether any extensions of time were requested and if such requests were granted.
 - whether litigation and/or arbitration was commenced by either the Owner or the Bidder as a result of the work of the project completed by the Bidder.
 - whether any liens were filed on the project by subcontractors or material suppliers of the Bidder.
 - whether the Bidder was defaulted on the project by the owner.
 - whether the Bidder made any claims for extra work on the project, including whether said claim resulted in a change order.
 - .3 Documentation evidencing the Bidder's financial responsibility and capability to produce and execute the Work of the Project within the time periods specified, including a certified financial statement.
 - .4 Fully completed AIA Document A305-2020 Contractor's Qualification Statement with Exhibits A-D.
 - .5 Fully completed list of subcontractors.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered. Bids not exhibiting original signatures or seals will not be accepted as a responsive Bid.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 A Bid may not be modified, withdrawn or canceled by the Bidder during the forty-five (45) day period following the time and date designated for the receipt of bids and each Bidder so agrees in submitting a Bid. Beginning 45 days after the day of the opening of Bids, a Bidder may withdraw its Bid and request return of its bid security.

§ 4.4.4 Negligence on the part of the Bidder in preparing its Bid confers no right for the withdrawal of the Bid after it has been opened. If the Bidder claims to have made a material and substantial mistake in the preparation of its Bid, the Bidder shall deliver to the Owner a written notice describing in detail the nature of the mistake or error with documentary proof (including, but not limited to, bid worksheets, summary sheets and other bid related data requested of it) within twenty-four (24) hours after the opening of the Bids. Failure to deliver said notice and documentary evidence or proof within the specified time shall constitute a waiver of the Bidder's right to claim an error or mistake. Upon receipt of said notice and documentary evidence within the specified time period, the Owner shall determine if an excusable error or mistake has been made; and, if so, the Owner may permit the Bid to be withdrawn. The Owner's determination of whether a Bidder made an excusable error or mistake shall be conclusive on the Bidder, its Surety, and all those claiming rights under the Bidder.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders. The Owner reserves the right to postpone the date and time of the opening of Bids at any time prior to the date and time listed in the Advertisement or Notice to Bidders.

§ 5.2 Rejection of Bids

§ 5.2.1 The Owner reserves the right to reject any or all Bids and to accept the proposal it deems in the best interest of the Owner. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete, nonresponsive, conditional or irregular is subject to rejection by the Owner.

§ 5.2.2 In order to qualify as a Contractor satisfactory to the Owner, the Bidder shall document to the satisfaction of the Owner that he has the skill and experience as well as the necessary facilities, sufficient financial resources, experienced staff and technical organization for the Work, and adequate laborers and equipment to do the Work in a satisfactory manner and within the time specified. The Bidder may be judged qualified only for the type of work in which it demonstrates competence. The Bidder must prove to the satisfaction of the Owner that it is reputable, reliable and responsible. The Owner may make any investigation it deems necessary to assure itself of the ability of the Bidder to perform the Work, and the Bidder shall furnish the Owner with all such additional information and data for this purpose as may be requested. In addition to the general reservation of rights to reject any and all bids, the Owner specifically reserves the right to reject any Bid of any Bidder if the evidence submitted by, or investigation of such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract Documents and to complete the Work contemplated therein.

§ 5.2.3 The Owner reserves unto itself the sole right to determine the lowest qualified and responsible Bidder. The Owner may make any investigation necessary to determine the ability of the Bidder to fulfill the Contract and the Bidder shall furnish the Owner with all such information for this purpose as the Owner may request. Without limiting the general rights which the Owner has to reject Bids, as herein before set forth, in determining the lowest responsible bidder, the following considerations in addition to those above mentioned shall be taken into account. In determining the responsibility of a Bidder for a public works contract, the Owner shall consider whether the Bidder:

- .1 Maintains a permanent place of business;
- .2 Has adequate plant and equipment to do the Work properly and expeditiously;
- .3 Has the suitable financial ability to meet obligations required by the Work;
- .4 Has appropriate technical ability and experience in institutional and commercial construction including experience in public school construction in New York State;
- .5 Has performed Work of the same general type and the same scale called for under this Contract;
- .6 Has previously failed to perform contracts properly or complete them on time;
- .7 Is in a position to perform this Contract;

- .8 Has habitually and without just cause neglected the payment of bills or otherwise disregarded its obligations to subcontractors, suppliers, or employees;
- .9 Is eligible for full bonding capacity of its Contract;
- .10 Has been in business as the corporation, partnership, sole proprietorship or other business entity, in whose name the bid is submitted, continuously, for no less than the previous five (5) years performing and coordinating the Work which it is bidding on;
- .11 Is not currently involved in bankruptcy proceedings;
- .12 Is licensed to perform the Work it is bidding on in the jurisdiction the work will take place;
- .13 Is able to perform the work with manpower available to it;
- .14 Will employ a field superintendent with at least five (5) years' experience as a working field superintendent and capable of communicating in fluent English;
- .15 Has committed a willful violation of the New York State Prevailing Wage Laws within the last five years;
- .16 Has committed violations of safety and/or training standards as evidenced by a pattern of OSHA violations or the existence of willful OSHA violations;
- .17 Has committed any significant violation of the Worker's Compensation Law, including, but not limited to, the failure of the Bidder to provide proof of worker's compensation or disability benefits coverage;
- .18 Has committed any criminal conduct involving violations of the Environmental Conservation Law or other federal or state environmental statutes of regulations;
- .19 Has committed any criminal conduct concerning formation of, or any business association with, an allegedly false or fraudulent Women's or Minority Business Enterprise (W/MBE), or any denial, decertification, revocation or forfeiture of W/MBE status by New York State;
- .20 Has been debarred by any agency of the U.S. Government; and
- .21 Has engaged in other conduct of so serious or compelling a nature that it raises questions about the responsibility of the Bidder, including, but not limited to submission to the Owner of a false or misleading Contractor's Qualification Statement, or in some other form, in connection with a bid for or award of a contract.

§ 5.2.4 No bids will be accepted, and no Contract will be awarded to any employer, contractor, sub-contractor, or its successors, which have been debarred and deemed ineligible to submit a bid on or be awarded any public work contract or subcontract by the New York State Department of Labor – Bureau of Public Work, or the New York City Comptroller's Office.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to enter into separate Prime Contracts with the lowest responsive and responsible Bidder, as those criteria are defined and interpreted under the laws of the State of New York regarding competitive bidding for public improvement projects, provided the Bids are submitted in accordance with the requirements of the Bidding Documents and do not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.1.1 The Owner may consider informal any Bid not prepared and submitted in accordance with all provisions of the Bidding Documents.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

§ 5.3.3 The acceptance of a Bid will be a notice in writing signed by a duly authorized representative of the Owner by either registered or certified mail sent within forty-five (45) after the Bids have been opened and no other act of the Owner shall constitute the acceptance of a Bid. The acceptance of a Bid shall bind the successful Bidder to execute the Contract as provided hereinafter. The rights and obligations provided for in the Contract shall become effective and binding upon the parties only with its formal execution by the successful Bidder and the Owner.

§ 5.3.4 Each Bidder to whom a contract is awarded, shall, at the office of the Owner within ten (10) business days after the date of notification by either registered or certified mail of acceptance of its Bid furnish the required payment and performance bonds in an amount of 100% of the Contract Sum, and the required insurance as set forth in Article 11 of the General Conditions of the Contract for Construction, and sign the Contract for the Work for its performance and maintenance.

ARTICLE 6 POST-BID INFORMATION

§ 6.1

(Paragraphs deleted)

Contractor's Qualification Information

§ 6.1.1 The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform its obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as the Owner may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified and capable to carry out properly the terms of the Contract. The issuing of Bid Documents and acceptance of the Bidder's payment by the Owner shall not be construed as pre-qualification of that Bidder. If the Bidder is later discovered to have misrepresented or provided false or incorrect information with regard to any material party of the information submitted to the Owner, including but not limited to information regarding experience, debarment, claims, lawsuits, arbitrations, mediations, finances, license, contract termination, the Owner reserves the right to reject the Bid of such Bidder and, if a construction contract has been awarded, it will become automatically voidable at the sole discretion and election of the Owner.

§ 6.1.2 Within forty-eight (48) hours after the Bids are opened, the three (3) apparent low Bidders for each Prime Contract must submit the required pre-award submittal package described below to the Architect and Construction Manager:

- .1 Workforce and Work Plan – Provide a detailed written Work Plan which shall demonstrate the Contractor's understanding of overall Project scope and shall include, but not be limited, to the following:
 - .1 Sequential listing of specific Project activities required to successfully complete the Work of the Contract Documents.
 - .1 Include Schedule and list of Critical Milestones;
 - .2 Include phasing of the Work, if required.
 - .3 Include listing of long lead items.
 - .4 Impact of weather and restricted work period(s).
 - .5 Statement that the Project can be completed in the established time.
 - .2 Resumes for the Bidder's proposed supervisory staff, including qualifications for specialized expertise or any certification(s) required to perform the Work.
 - .3 Any special coordination requirements with other trades.
 - .4 Any special storage and staging requirements for construction materials.
 - .5 Any other special requirements.
- .2 Detailed Cost Estimate: A copy of a Detailed Cost Estimate outlined in CSI format.
- .3 Copy of most recent financial statements from CPA.
- .4 The names, addresses and phone numbers of the subcontractors and suppliers that the bidder proposes to use on the project.
- .5 A proposed schedule of values for the bidder's work.
- .6 A proposed list of submittals and a proposed schedule for making them, all keyed to the Work Plan schedule.
- .7 A list of proposed equivalents, and a fully executed "Substitution Request Form" for each request for equivalents in accordance with Section 3.3.2.

§ 6.1.3 After receipt of the above information, the Architect will designate a time and place for a meeting between the Construction Manager, Architect and the apparent low bidder. The apparent low bidder's principal, project manager and site superintendent will attend that meeting, at which time the parties will discuss the bidder's responsiveness, responsibility and qualifications.

§ 6.1.4 In the event that the Owner should reject the Bid of a Bidder as provided in this Article 6 or otherwise, at the Owner's option, the Owner may elect to meet with the next lowest bidder and to consider the information as provided per Section 6.1.2. In the event that the Bid of the next lowest Bidder is rejected as provided in this Article 6 or otherwise, at the Owner's option, the Owner may elect to meet with the third lowest Bidder and repeat the above process. At all times the Owner retains the right to reject all bids.

§ 6.2 Owner's Financial Capability – Intentionally omitted

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if the Owner, Construction Manager or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity. The Owner may accept the substituted person or entity in its sole discretion or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security shall not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 The Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Refer to Article 11 of the AIA A232-2019 General Conditions of the Contract for Construction for requirements associated with such bonds.

§ 7.1.2 The cost of the performance and payment bonds shall be included in the Bid.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the penal sum of the payment and performance bonds shall be the amount of the Contract Sum.

(Paragraphs deleted)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than 10 days following the date of notice of award of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312-2010, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum. The Bidder shall provide for the continuation of the Performance Bond for two (2) full years after date of final payment request at the full Contract Sum.

§ 7.2.2.1 The performance and payment bonds shall have as surety thereunder such surety company or companies as are acceptable to Treasury Department of the United States on Bonds given to the United States Government, are authorized to do business in the State of New York, and meet or exceed the requirements established in Article 11 of the General Conditions of the Contract for Construction. The premiums on such bonds shall be included in the Bid price.

§ 7.2.3 The bonds shall be dated as of the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 MINORITY AND WOMAN OWNED BUSINESS ENTERPRISES (MWBE) PARTICIPATION AND EEO WORKFORCE DEVELOPMENT

§ 8.1

(Paragraphs deleted)

The Bidder, in addition to any other nondiscrimination provision of the Contract and at no additional cost to the Owner, shall fully comply and cooperate with the Owner in the implementation of the Enlarged City School District of Middletown - Twin Towers - Development and Diversification Plan for Workforce and Business which is contained in Section 007300 of Division 00. These requirements include contracting opportunities for certified minority and women-owned business enterprises ("MWBEs") and diversification of the Contractor's workforce. Bidder's demonstration of "good faith efforts" shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of the nondiscrimination provisions required by the Owner or other applicable federal, state or local laws.

§ 8.2 The Owner has established an overall goal of 15% for Minority and Women-Owned Business Enterprises ("MWBE") participation, 9% for Minority Owned Business Enterprises ("MBE") participation and 6% for Women-Owned Business Enterprises ("WBE") participation (based on the current availability of qualified MBEs and WBEs).

§ 8.3 The Owner has established an overall goal of 30% for Workforce Diversification, 20% for minority workforce and 10% for female workforce.

§ 8.4 For purposes of providing meaningful participation by MWBEs on the Contract and achieving the Contract Goals, Bidder should reference the directory of New York State Certified MBWEs found at the following internet address:
<http://www.esd.ny.gov/mwbe.html>

§ 8.5 Additionally, Bidder is encouraged to contact the Division of Minority and Woman Business Development (518) 292-5250; (212) 803-2414; or (716) 846-8200 to discuss additional methods of maximizing participation by MWBEs on the Contract.

§ 8.6 Bid Procedures: Bidders are required to submit MWBE and EEO Workforce Diversification documentation with the bids as required by the Enlarged City School District of Middletown -Twin Towers - Development and Diversification Plan for Workforce and Business. These forms are contained in Section 004130 of Division 00.

- .1 The Excel worksheet for preparing bids is available as a download from the REV plan room site for the bid documents for the convenience of all bidders, whether downloading electronic copies or picking up paper copies of the Bid Documents, for use in preparing the required attachments to the bid form.
- .2 Printed copies of all the required forms must be included with the bid submission.
- .3 The three apparent low bidders for each Prime Contract will be required to submit the documents, including the original Excel file, to the ICO via e-mail immediately upon receipt of notice from Architect.

(Paragraphs deleted)

- .4 The ICO will review the plan and issue a written notice of acceptance or deficiency to the selected bidder. Any deficiency must be cured within seven days.
- .5 No contract or letters of intent will be issued until ALL compliance documentation has been submitted to and approved by the ICO.

(Table deleted)

(Paragraphs deleted)

- .6 In the event a business believes that it cannot meet the Business Development/MWBE Goals, it shall submit to the ECSDM and ICO for approval documented evidence of its Good Faith Effort within 5 workdays of being notified by ECSDM that they will be awarded a Contract.
- .7 Refer to the Enlarged City School District of Middletown - Twin Towers - Development and Diversification Plan for Workforce and Business which is contained in Section 007300 of Division 00 for additional requirements.

§ 8.7 Contractors are required to submit MWBE and EEO documentation monthly after bid award as required by the Enlarged City School District of Middletown -Twin Towers - Development and Diversification Plan for Workforce and Business. These utilization forms are contained in Section 007301 of Division 00.

- .1 The

| *(Table deleted)*

| *(Paragraphs deleted)*

| **Excel worksheets for preparing the monthly reports will be furnished to the successful bidder upon award of contract.**

| **ARTICLE 9 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

| Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A132-2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, as modified.



INFORMATION AVAILABLE TO BIDDERS

1.1 GENERAL

- A. Hazardous Material Information: Data in hazardous material investigation reports included herein are provided to the Contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity between sampling locations. The Owner will not be responsible for interpretations or conclusions drawn from this data by Contractor.
- B. Site Information: Data in subsurface investigation reports included herein are provided to the Contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings. The Owner will not be responsible for interpretations or conclusions drawn from this data by Contractor.
 - 1. Additional test borings and other exploratory operations may be performed by Contractor, at the Contractor's option; however, no change in the Contract Sum will be authorized for such additional exploration.



Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

**GEOTECHNICAL EVALUATION
ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN
TWIN TOWERS MIDDLE SCHOOL IMPROVEMENTS
112 GRAND AVENUE
CITY OF MIDDLETOWN, ORANGE COUNTY, NEW YORK**

Submitted To:

KG&D Architects, PC

285 Main Street
Mount Kisco, New York 10549

August 29, 2022

W.O. 11507.01

Submitted By:

**Tectonic Engineering
Consultants, Geologists & Land
Surveyors, D.P.C.**

1279 Route 300, 2nd Floor
Newburgh, NY 12550

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KG&D Architects, PC
285 Main Street
Mount Kisco, New York 10549

Attention: Mr. Frederick Wells, RLA/Planner – Associate
VIA EMAIL (FWells@kgdarchitects.com)

August 29, 2022

RE: W.O. 11507.01
GEOTECHNICAL INVESTIGATION
TWIN TOWERS MIDDLE SCHOOL IMPROVEMENTS
112 GRAND AVENUE
CITY OF MIDDLETOWN, ORANGE COUNTY, NEW YORK

Dear Mr. Wells:

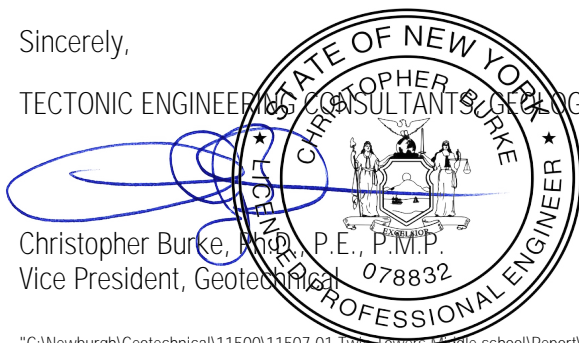
Tectonic Engineering Consultants, Geologists, and Land Surveyors D.P.C. (Tectonic) has completed a subsurface investigation and geotechnical engineering evaluation for the proposed site improvements to be performed on the campus of Twin Towers Middle School, located at 112 Grand Avenue in the City of Middletown, Orange County, New York. The purpose of the investigation was to characterize the subsurface conditions at the site and to develop geotechnical design and construction criteria for proposed improvements, which we understand may consist of the construction of a new four-story building addition, new bus and parent pick-up/drop-off loops, and play areas within the existing athletic field. This report presents our findings and recommendations.

We appreciate this opportunity to assist you with this project. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, AND LAND SURVEYORS D.P.C.

Christopher Burke, M.S., P.E., P.M.P.
Vice President, Geotechnical



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GEOTECHNICAL EVALUATION
 TWIN TOWERS MIDDLE SCHOOL IMPROVEMENTS
 ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN
 112 GRAND AVENUE
 CITY OF MIDDLETOWN, ORANGE COUNTY, NEW YORK

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GEOTECHNICAL EVALUATION
TWIN TOWERS MIDDLE SCHOOL IMPROVEMENTS
ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN
112 GRAND AVENUE
CITY OF MIDDLETOWN, ORANGE COUNTY, NEW YORK

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APPENDIX II LABORATORY TEST RESULTS

1.0 INTRODUCTION

In accordance with your request and authorization, Tectonic Engineering Consultants, Geologists, and Land Surveyors D.P.C. (Tectonic) has completed a subsurface investigation and geotechnical engineering evaluation for the proposed new building addition and site improvements to Twin Towers Middle School, in the City of Middletown, Orange County, New York. The purpose of the investigation was to evaluate the subsurface conditions within the areas of improvements, and to provide geotechnical recommendations for design and construction. This report presents detailed information about the investigations, our findings and recommendations.

2.0 SCOPE OF SERVICES

The geotechnical investigation was performed for the Enlarged City School District of Middletown (hereafter referred to as the Client), and coordinated through KG&D Architects, PC, herein referred to as Client Agent. The scope of the geotechnical investigation consisted of the following:

- Review of geological information publicly available through the United States Geological Survey (USGS) and the National Resources Conservation Service (NRCS).
- Drilling, sampling, and logging of test borings, test pits, and infiltration tests within the areas of the proposed additions and site improvements. These included:
 - Fourteen (14) structural borings, designated as borings B-1 through B-14, for the proposed building addition, and construction of new bus and parent pick-up/drop-off loops.
 - Three (3) shallow borings, designated as borings SB-1 through SB-3, for the proposed outdoor play areas to be constructed within the existing athletic fields.
 - Performance of six (6) infiltration tests, designated as INF-1 through INF-6, advanced within the footprints of the proposed site improvements.
 - Excavation of three (3) test pits, designated as TP-1 through TP-3, advanced adjacent to the existing middle school building.
- Field inspection by a Tectonic representative, working under the purview of a New York State licensed Professional Engineer, to locate the borings, test pits, and infiltration tests; and log and classify all soil samples.
- Laboratory testing of soil samples selected to verify the field classifications of the soils, and to evaluate the engineering characteristics of the soil.
- Geotechnical engineering analyses of the subsurface conditions and laboratory test results as they relate to the proposed site improvements.

- Preparation of this report presenting the results of the subsurface investigation, engineering analyses, and our geotechnical recommendations for the design and construction for the geotechnical aspects of the proposed site improvements.

3.0 SITE AND PROJECT DESCRIPTIONS

The project site is located on the campus of Twin Towers Middle School, located at 112 Grand Avenue, in the City of Middletown, Orange County, New York. Based on Orange County GIS records, the project site is an approximately rectangular shaped, 9.5-acre parcel. The campus contains the existing, four-story middle school building on the northern half of the campus, and athletic fields on the southern half of the campus. Based on documents provided by the Client Agent, the existing school building was constructed in approximately 1939, and previously had structural additions constructed in 1975. To the north and west of the school building, there are existing landscaped areas, and concrete walkways. To the east of the school building, there is an existing asphalt paved parking lot with existing landscaping. To the south of the school building, there is an existing concrete walkway that leads to the parking lot, and a perimeter chain-link fence around the athletic fields. The project site is bound by Wisner Avenue to the north; Grand Avenue to the west; Irwin Avenue to the east; and Dewitt Avenue to the south.

Based on a topographic survey provided by the Client Agent, surface elevations at the project site generally slope downwards from the north towards the southeast. Site elevations are relatively level around the western, northern, and southern sides of the existing building, at an approximate elevation of +578 feet. Surface elevations to the east of the school building slope downwards from west to east, with elevations within the existing parking lot between approximately +578 feet and to approximately +557 feet on Irwin Avenue. The athletic fields to the south of the school building slope gently from north to south, between approximately +580 and +578 feet. The eastern end of the athletic field slopes steeply towards Irwin Avenue, from +578 to +560 feet. The landscaped area to the north of the school building slope downwards from south to north, from approximately +578 to +574 feet, adjacent to Wisner Avenue. The landscaped area to the west of the school building slopes downwards from east to west, from approximately +578 feet to +576 feet, adjacent to Grand Avenue. All elevations referenced herein are per the North American Vertical Datum of 1988 (NAVD88).

The proposed site improvements will reportedly consist of the construction of a new building addition to the east of the school building, which will contain additional classrooms, a cafeteria, laboratories, and a fitness center. As of the writing of this report, the design of the building is still in the preliminary phase. Based on conversations with the project team, the building addition will reportedly be four-stories in height. Based on the preliminary

architectural plans provided by the Client Agent, the first-floor finished floor elevation (FFE) of the existing building is approximately +582 feet, and the ground floor FFE is approximately +570 feet. It is our understanding that the ground floor FFE of the proposed addition will match the existing building. A proposed grading plan was not available as of the writing of this report, but based on the existing site elevations, it is anticipated that both cuts and fills will be required to construct the building addition. Based on conversations with the project structural engineer, structural loading values have not been determined as of the writing of this report. No new retaining walls are proposed as part of the site improvements.

The other site improvements will reportedly consist of a new synthetic turf and court surface play areas on the northern portion of the existing athletic field, an asphalt-paved bus pick-up/drop-off loop on the northern portion of the campus, adjacent to Wisner Avenue, and an asphalt-paved parent pick-up/drop-off loop on the western portion of the campus, adjacent to Grand Avenue.

4.0 SUBSURFACE INVESTIGATION

The subsurface investigation consisted of the drilling, sampling, and logging of fourteen (14) deep borings, advanced throughout the middle school campus, designated as B-1 through B-14; three (3) shallow borings, advanced within the existing athletic field, designated as SB-1 through SB-3; the excavation of three (3) test pits adjacent to the southern and eastern portion of the existing building, designated as TP-1 through TP-3; and the drilling and performance of six (6) infiltration tests, designated as INF-1 through INF-6. Borings B-1 through B-11 were advanced within the footprint of the proposed building addition. Borings B-12 and B-13 were advanced within the footprint of the proposed bus loop. Boring B-14 was advanced within the footprint of the parent loop. The test locations were generally performed at the Client Agent requested locations. The boring, test pit, and infiltration test locations are shown on the attached Boring, Test Pit, and Infiltration Test Location Plan, Figure 1.

The borings were drilled by Core Down Drilling, LLC, between July 8 and July 14, 2022, using a track-mounted Geoprobe 7822DT drill rig, and a track-mounted CME 55LC drill rig, both equipped with automatic hammers. The borings were advanced using 3-¼-inch, and 4-inch inside diameter hollow-stem augers, respectively. Within the deep borings, Standard Penetration Testing (SPT) was conducted with a split-spoon sampler continuously to depths up to 12 feet, and then 5-foot maximum intervals thereafter. Within the shallow borings, SPT was conducted with a split-spoon sampler continuously to depths of 6 feet. SPT sampling was performed in general accordance with the requirements of ASTM Standard D1586 *Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*". SPT N-values were recorded for each soil sample taken. Samples of the soil obtained

during the investigation were retained in glass jars, and are currently stored at our material testing laboratory. The boreholes were backfilled with drill cuttings to match the existing conditions. Boreholes within existing roadways were finished with cold patch asphalt, as required.

The test pits were excavated by Limited Access Drilling, LLC on July 20, 2022, using a John Deere 60G mini-excavator. The test pits were advanced on the eastern and southern faces of the existing building, adjacent to the proposed building addition. The test pits were excavated to depths of between 4.25 and 11.75 feet bgs. Upon completion, the test pits were backfilled with the excavated soils.

The infiltration tests were performed within 4-inch diameter PVC casing, in select areas throughout the site. INF-1 was advanced within the footprint of the synthetic turf and court surface play areas; INF-2 and INF-3 were advanced within the footprint of the building addition; INF-4 and INF-5 were advanced within the footprint of the proposed bus loop; and INF-6 was advanced within the footprint of the parent loop. The locations of the infiltration tests are also shown on Figure 1. The infiltration test holes were drilled to depths of approximately 5 feet bgs. Each infiltration test was performed in accordance with the requirements dictated by the New York State Stormwater Management Design Manual, Appendix D, including a pre-soak, and measurement over four (4) one-hour intervals. Upon completion, the infiltration test holes were backfilled with drill cuttings.

All drilling, sampling, and logging of the borings, test pits, and infiltration tests were observed on a full-time basis by a Tectonic representative, working under the supervision of a Professional Engineer licensed in the State of New York. The representative observed the subsurface investigation, classified soil samples as they were recovered, collected representative soil samples for laboratory testing, and prepared logs of the soil and groundwater conditions encountered. Soil samples were classified in accordance with the latest edition of the New York State Building Code (Code), the modified Burmister Soil Classification System, and the Unified Soil Classification System (USCS) (ASTM D2488). Copies of the boring, test pit, and infiltration test logs are included in Appendix I.

5.0 LABORATORY TESTING

Laboratory testing was performed on soil samples selected to assist in evaluating the engineering properties of the encountered soils and to help in field identifications of the soils. Testing included the performance of eight (8) grain-size distribution tests, performed in general accordance with ASTM Standard D6913, and one (1)

Atterberg limits determination, performed in general accordance with D4318. The results of the laboratory testing are included in Appendix II.

6.0 OVERALL SUBSURFACE CONDITIONS

A review of USGS and New York State geologic maps indicates that the site is underlain by gravelly silt loam. Based on the results of the subsurface investigation, the subsurface conditions throughout the entire site generally consist of loose to dense silt and sand soils. The following subsections provide generalized descriptions of the soils and groundwater conditions encountered in the borings and test pits. Detailed descriptions of the subsurface conditions are provided in the boring, test pit, and infiltration test logs included in Appendix I. The encountered subsurface conditions are described in the following sections for defined areas of the project site.

As noted above, an automatic hammer was used in the SPT sampling of the borings. Given that an automatic hammer imparts more energy into the split spoon sampler than a safety hammer (N_{60}) – the standard hammer used for most geotechnical engineering calculations – an energy correction factor of 1.3 is applied to the field N -values to obtain the N_{60} -values.

6.1 Proposed Building Addition

Borings B-1 through B-11, infiltration test INF-3, and test pits TP-1 through TP-3 were advanced within the proposed building addition footprint. Infiltration test INF-2 was advanced within a landscaped area adjacent to the edge of the proposed building addition footprint. Within the borings, underlying a thin veneer of topsoil-like material, or asphalt pavement, the subsurface conditions within the building addition footprint generally consisted of native sand and silt soils to the termination depth of the borings. The following subsection provides generalized descriptions of the soil and groundwater conditions. More detailed descriptions are provided in the attached boring logs.

6.1.1 Uncontrolled Fill

Within borings B-3 through B-10, uncontrolled fill soils were encountered to depths up to 8 feet bgs. The uncontrolled fill soils consist of variable colored coarse-to-fine sand, or coarse-to-fine gravel, with varying amounts of fines. The uncontrolled fill soils contained fragments of brick and asphalt.

Field SPT N-values ranged between 3 blows per foot (bpf) to sampler refusal, which is defined as less than 6 inches of sampler penetration for 50 blows of the hammer. When corrected, SPT N_{60} -values ranged between approximately 4 bpf to sampler refusal, indicating a loose to very dense condition. Laboratory results of a soil sample tested indicate the fill soils are comprised of approximately 10 percent fine gravel, 35 percent fine sand, and 55 percent passing the #200 sieve. In general, the fill soils within the building footprint were observed in a loose to medium dense condition. The fill soils have USCS designations of either SM, ML, and GM.

6.1.2 Native Soils

Underlying between 2 and 5 inches of topsoil-like material, or 6 inches of asphalt pavement, or uncontrolled fill, native soils were encountered to the termination depths of the borings, to depths up to 37 feet bgs. The native soils within the southern portion of the building addition footprint generally consist of brown silt, with varying amounts of medium-to-fine sand, and fine gravel. The native soils within the northern portion of the building addition footprint generally consist of brown medium-to-fine sand, with varying amounts of coarse-to-fine gravel and fines.

Field SPT N-values of the native soils within the building footprint ranged from 1 bpf to sampler refusal. When corrected, SPT N_{60} -values ranged from approximately 1 bpf to sampler refusal, indicating a very loose to very dense condition. Laboratory results indicated the native soils are comprised of approximately 4 to 13 percent coarse-to-fine gravel, 35 to 75 percent coarse-to-fine sand, and 22 to 55 percent passing the #200 sieve. In general, the native soils within the building footprint were observed in a very loose to medium dense condition. The native soils have USCS designations of either SM, ML, and GM.

6.1.3 Groundwater

Within the footprint of the proposed building extension, groundwater in the form of saturated soil samples was observed within borings B-4 through B-7, B-9, B-10, and B-11. Groundwater was observed shallowest in borings B-4 through B-7, and B-11 between elevations +557 and +555 feet. In borings B-9 and B-10, groundwater was observed between +549 and +539 feet. Groundwater may also be encountered in perched condition in the finer-grained soils. It should be noted that groundwater levels fluctuate seasonally and with changing weather conditions.

6.1.4 Test Pits

Test pit TP-1 was advanced adjacent to the southern face of the existing school building. Within test pit TP-1, underlying 4 inches of topsoil-like material, fill soils were observed to the termination depth of the test pit of 11.75 feet bgs. The fill soils within test pit TP-1 generally consist of brown coarse-to-fine sand, with varying amounts of fines, coarse-to-fine gravel, and brick. The top of a spread footing was observed at a depth of 11.75 feet bgs, corresponding to an approximate elevation of +566.85 feet. The bearing elevation of the footing could not be verified due to limitations of the excavator. Based on the size of the building footings observed within test pits TP-2 and TP-3, it is estimated that the footing bears at approximately +565.85 feet.

Test pits TP-2 and TP-3 were advanced adjacent to the eastern face of the existing school building. Underlying 4 inches of topsoil-like material, fill soils were encountered to depths between 3.33 and 3.67 feet bgs. The fill soils generally consist of tan-brown coarse-to-fine sand, with varying amounts of fines and coarse-to-fine gravel. Underlying the uncontrolled fill, native sand soils were encountered to the termination depths of the test pits, between 4.25 and 4.67 feet bgs. The native soils generally consisted of brown coarse-to-fine sand, with varying amounts of fines and coarse-to-fine gravel.

Within test pit TP-2, a spread footing was observed bearing at a depth of approximately 4.25 feet bgs, corresponding to an elevation of approximately +563.15 feet. Within test pit TP-3, a spread footing was observed bearing at a depth of approximately 4.67 feet bgs, corresponding to an elevation of approximately +565.33 feet. Groundwater or saturated conditions were not observed within the three test pits.

6.2 Athletic Field Improvements

Borings SB-1 through SB-3, and INF-1 were advanced within the existing athletic field, in the footprint of the proposed play areas. Borings SB-1 through SB-3, designated as shallow borings by the Client Agent, were advanced to a depth of 6 feet bgs. Boring SB-1 was advanced within the northwest corner of the proposed play area. Boring SB-2 was advanced approximately in the northern-central portion of the proposed play area. Boring SB-3 was advanced within the northeast portion of the proposed play

area. Within the athletic field, the subsurface conditions generally consist of a thin veneer of topsoil-like material and loose to dense silt and sand soils.

6.2.1 Native Soils

Underlying approximately 3 to 4 inches of topsoil-like material, native soils were encountered to the termination depth of the borings. The native soils generally consisted of brown silt, with varying amounts of coarse-to-fine sand, and gravel. A layer of coarse-to-fine sand, with silt and trace amounts of fine gravel was observed between 4 and 6 feet in boring SB-1, and between 0.33 and 2 feet bgs in boring SB-3. Field SPT N-values within the native soils ranged between 4 and 35 bpf. When corrected, SPT N_{60} -values ranged from approximately 5 to 46 bpf, indicating a loose to dense condition. Laboratory test results of soil samples tested indicate the native soils consisted of approximately 8 to 16 percent fine gravel, 38 to 52 percent coarse-to-fine sand, and 32 to 54 percent passing the #200 sieve. Native soils within the existing athletic field have USCS designations of SM and ML.

6.3 Bus Pick-Up/Drop-Off Loop

Borings B-12 and B-13, and infiltration tests INF-4 and INF-5 were advanced within the footprint of the proposed bus pick-up/drop-off loop, on the northern portion of the school campus, adjacent to Wisner Avenue. The proposed bus loop is currently a landscaped area with a perimeter concrete walkway. In general, the subsurface conditions consist of a thin veneer of topsoil-like material, and native sand and silt soils to the termination depth of the borings. The following subsection provides generalized descriptions of the soil and groundwater conditions. More detailed descriptions are provided in the attached boring logs.

6.3.1 Native Soils

Underlying between approximately 3 to 5 inches of topsoil-like material, native silt and sand soils were observed to depths up to 37 feet bgs. The native soils typically consisted of brown silt, with varying amounts of coarse-to-fine sand and gravel, or brown coarse-to-fine sand, with varying amounts of fines and fine gravel.

Field SPT N-values within the footprint of the proposed bus pick-up/drop-off area ranged between 4 and 31 bpf. When corrected, SPT N_{60} -values ranged between approximately 5 and 40 bpf, indicating a loose to dense condition. The native soils were generally observed in a loose to medium dense condition. The dense soils were observed to a depth of 2 feet bgs in boring B-12, and transition to a loose condition between 2 and 27 feet bgs. Laboratory results of a soil sample tested indicated the native soils are comprised of approximately 24 percent fine gravel, 58 percent coarse to fine sand, and 18 percent passing the #200 sieve. The native soils have USCS designations of SM and ML.

6.3.2 Groundwater

As indicated on the boring logs, saturated soil conditions were encountered at a depth of 20 feet bgs within borings B-12 and B-13, corresponding to an elevation of approximately +557 feet. It should also be noted that groundwater levels fluctuate seasonally and with changing weather conditions.

6.4 Parent Pick-Up/Drop-Off Loop

Borings B-14, and infiltration test INF-6 were advanced within the footprint of the proposed parent pick-up/drop-off loop, on the western portion of the school campus, adjacent to Grand Avenue. The proposed parent pick-up/drop-off loop is currently a landscape area with perimeter concrete walkways. In general, the subsurface conditions consist of a thin veneer of topsoil-like material, and native sand and silt soils to the termination depth of the borings. The following subsection provides generalized descriptions of the soil and groundwater conditions. More detailed descriptions are provided in the attached boring logs.

6.4.1 Native Soils

Underlying approximately 4 inches of topsoil-like material, native silt and sand soils were observed to depths up to 27 feet bgs. The native soils typically consisted of brown silt, with varying amounts of coarse-to-fine sand and gravel, or brown coarse-to-fine sand, with varying amounts of fines and coarse gravel.

Field SPT N-values within the footprint of the proposed parent pick-up/drop-off loop ranged between 3 and 24 bpf. When corrected, SPT N_{60} -values ranged between approximately 4 and 31 bpf, indicating a loose to dense condition. The native soils were generally observed in a

loose to medium dense condition. The medium dense soils were observed at a depth of 2 feet bgs, and transition to a loose condition between 2 and 8 feet bgs. Laboratory results of a soil sample tested indicated the native soils are comprised of approximately 14 percent coarse gravel, 67 percent medium to fine sand, and 19 percent passing the #200 sieve. The native soils have USCS designations of SM and ML.

6.4.2 Groundwater

As indicated on the boring logs, saturated soil conditions were encountered at a depth of 15 feet bgs, corresponding to an elevation of approximately +562 feet. It should also be noted that groundwater levels fluctuate seasonally and with changing weather conditions.

6.5 Infiltration Tests

Infiltration test INF-1 was advanced approximately in the center of the footprint of the proposed play areas. Infiltration tests INF-2 and INF-3 were advanced within, or adjacent to the footprint of the proposed building addition. Infiltration tests INF-4 and INF-5 were advanced approximately in the eastern and western ends of the proposed bus pick-up/drop-off area, respectively. Infiltration test INF-6 was advanced approximately on the western end of the proposed parent pick-up/drop-off area. It should be noted that SPT sampling was not performed within the infiltration test holes. The results of the infiltration testing are attached to this report, and provided in Appendix I.

7.0 SEISMIC SITE COEFFICIENTS AND LIQUEFACTION POTENTIAL

Based on the results of the subsurface investigation and the criteria outlined in the current edition of the New York State Building Code (Code), the subsurface conditions underlying the site should be considered Class E, with maximum spectral response accelerations at short periods (S_{MS}) equal to 0.500g and at 1-second periods (S_{M1}) equal to 0.228g. Based on the procedures outlined in the Code, the corresponding five-percent damped design spectral response acceleration at short periods, S_{DS} , is equal to 0.333g, and at 1-second, S_{D1} , is equal to 0.152g.

Liquefaction of soils can be caused by strong vibratory motion due to earthquakes. Both research and historical data indicate that loose, granular soils saturated by a shallow groundwater table are most susceptible to liquefaction. Liquefaction occurs when an earthquake and associated ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid increase in pore-water pressure, causing the soil to behave as a fluid for short periods.

An analysis was performed to evaluate the liquefaction potential at the site, in accordance with the Code, using a procedure recommended by Youd et. al. (2001). This method estimates the stresses likely to be induced by an earthquake and the stresses likely to initiate liquefaction using the SPT N-values, the effective overburden pressure, and the peak horizontal ground acceleration caused by the design seismic event. The factors of safety against liquefaction were computed by the ratio of cyclic shear strength of the soil to the cyclic shear stress induced by the seismic event. Using a design earthquake magnitude of 5.56 and the peak horizontal ground acceleration of 0.116g, specified by the Code and reported by the USGS, the liquefaction analysis indicates that the subsurface soils have a factor of safety against liquefaction greater than the generally accepted minimum of 1.1. Subsequently, the soils underlying the site are unlikely to liquefy during the design earthquake.

8.0 DISCUSSION AND CONCLUSIONS

The proposed project consists of various site improvements throughout the school campus. As of the writing of this report, the improvements include the construction of a new four-story building addition to the east of the existing middle school building, new synthetic turf and court surface play areas to the south, a new bus pick-up/drop-off loop to the north, and a parent pick-up/drop-off loop to the west. Construction of the site improvements are feasible from a geotechnical standpoint.

The proposed building addition is proposed to be four-stories in height. As of the writing of this report, design of the building addition is still in the preliminary phase, and structural loading values were not available. Based on architectural drawings provided by the Client Agent, it is our understanding that the ground floor FFE will be approximately +570 feet, and the first floor FFE will be approximately +582 feet, which will match the existing school building. Based on the results of the test pits excavated at the southern and eastern faces of the existing building, the existing building is supported on shallow foundations that bear between approximately +565.85 and +563.15 feet. For the purposes of this report, it is assumed that the new addition foundations will bear at approximately +563.15 feet. Within the footprint of the proposed building, the in-place soils at +563 feet are generally very loose to medium dense sand and silt soils. In borings B-3 through B-5, and B-8 through B-11, very loose to loose sand and silt soils were observed at the assumed bearing elevation. Uncontrolled fill soils were observed at +563 feet within boring B-6.

Based on the existing conditions topographic survey, it is assumed that cuts of existing soils will be required within the western portion of the building footprint, where site grades range between approximately +575 and +565 feet. Within the eastern portion of the building footprint, where existing site grades are between +565 and +560 feet,

some cuts and fills are anticipated to construct the building foundations. Due to the generally loose condition of the existing in-place soils, they will be required to be improved by compaction, or replaced with compacted, controlled granular fill.

The subsurface conditions at the existing athletic fields generally consist of loose to dense sand and silt soils to the explored depths of 6 feet bgs. It should be noted that the soils underlying the existing athletic fields contain a relatively high proportion of fines, which could affect the performance of the field drainage.

The subsurface conditions at the proposed bus and parent pick-up/drop-off loops generally consist of loose to dense native sand and silt soils. As of the writing of this report, a final grading plan was not available, but it is assumed that there will not be significant grade changes to construct the loops. Within boring B-12, advanced within the eastern portion of the proposed bus pick-up/drop-off loop, the in-place soils were observed in a dense condition to a depth of 2 feet bgs, and transition to a loose condition 2 and 12 feet bgs. Within boring B-13, advanced within the western portion of the proposed bus pick-up/drop-off loop, the in-place soils were observed in a medium dense condition to a depth of 8 feet bgs, and transition to a loose condition to the termination depth of the boring of 27 feet bgs. Within boring B-14, advanced approximately in the center of the proposed parent pick-up/drop-off area, the in-place soils were observed at a medium dense condition at a depth of 2 feet bgs, and transition to a loose condition between 2 feet and the termination depth of the boring at 27 feet bgs. Additionally, due to the relatively high fines content of the native soils, frost heave susceptibility should be considered with regard to longevity of the pavement. The proposed new asphalt paving sections should be designed as discussed in Section 9.6. Traffic data was not available as of the writing of the report, so the recommendations are based upon a California Bearing Ratio of 5, and a design life of 20 years. The bus loop sections are based on 100 vehicles per day, with 100 percent heavy trucks, and the parent loop sections are based on 500 vehicles per day, with 25 percent heavy trucks.

Due to relatively high fines content of the on-site soils, they should be considered to be sensitive to disturbance during excavation and/or compaction, when exposed to water. Therefore, it is critical that care be taken during construction of foundations and pavement subgrade preparation to prevent undue wetting of the soils. Due to the generally high fines content of the native soils, it is expected to have relatively low permeability, and to be difficult to dewater. Grading of pavement subgrades to shed water and to prevent ponding will also be critical to prevent disturbance of the existing soils. Both of these conditions may require subgrade remediation during the construction of new structures and pavement sections, if adequate protection cannot be maintained. Subgrade disturbance can be minimized by using proper subgrade preparation techniques, as described in Section 10 of this report.

Groundwater was observed at varying depths throughout the site. Within the footprint of the proposed building addition, groundwater in the form of saturated soil samples were observed within borings B-4 through B-7, B-9, B-10, and B-11. Groundwater was observed shallowest in the borings between elevations +557 and +555 feet. In borings B-9 and B-10, groundwater was observed between +549 and +539 feet. Groundwater and seepage was not observed within the three test pits advanced at the southeast corner of the building, up to approximately +563 feet. Due to the varying depths of groundwater throughout the site, groundwater may be encountered elsewhere in a perched condition in the finer-grained soils. Groundwater was not observed within the shallow borings advanced within the athletic field. Groundwater was observed at approximately 20 feet bgs within the footprint of the bus pick-up/drop-off loop, and at approximately 15 feet bgs within the footprint of the parent pick-up/drop-off loop. It is not expected that groundwater will affect construction of the proposed addition and pavement sections, but perched groundwater may be encountered during construction throughout the site.

The following are other general conclusions that can be made regarding the proposed construction:

- Excavation should be feasible with conventional construction equipment; however, it should be noted that an obstruction was encountered within boring B-4 between approximately +571 and +569 feet. Cobbles, boulders, and oversized materials may be encountered during excavation within the footprint of the building addition.
- The soils found on-site are typically not suitable for use as controlled fill, because of their high fines content. The existing fill and native soils should not be used as backfill behind foundation walls, because their high fines content will impede the proper drainage of the backfill. If used for general fill, these soils are moisture sensitive, and should be at or below optimum moisture content when placed and compacted, to achieve the specific degree of compaction and to provide a stable pavement subgrade. Construction delays should be expected, if the on-site soils are used.
- Based on the results of the test pits, the existing building foundations bear at depths of between approximately +565.85 and +563.15 feet. The new building addition foundations adjacent to the existing building should be constructed to match the bearing elevation of the existing building. Bearing depths of the building foundations should be verified in the field during construction. Underpinning of the existing building foundations may be required depending on the final foundation configuration.
- The results of our liquefaction analysis indicate that the soils underlying the site are unlikely to liquefy.
- Monitoring should be performed to document that the construction of the proposed additions does not adversely affect the existing structures. Monitoring should include performance of preconstruction conditions surveys of the portions of the elementary, middle and high school buildings adjacent to the proposed additions. Monitoring should also include measuring vibration levels during construction to document that they are within acceptable limits.

9.0 RECOMMENDATIONS

The following sections provide our geotechnical recommendations for design and construction of the proposed building addition, and asphalt paving sections. The recommendations are based on our understanding of the proposed construction, as described in Section 3, the results of our subsurface investigation and our experience in the general vicinity of the project site.

9.1 Middle School Addition Foundations

The proposed middle school building addition can be supported on shallow spread footings and continuous wall footings that bear on native medium dense soils, or compacted controlled fill. As of the writing of this report, a proposed foundation plan was not available; however, based on the results of the test pits, the existing building foundations bear between approximately +565.85 and +563.15 feet. For the purpose of this report, it is assumed that the building foundations will bear at approximately +563.15 feet.

The proposed building addition can be supported on traditional shallow spread footings and continuous wall footings that bear on medium dense or better native soils, or properly compacted controlled fill. The loose fill and loose native sand and silt soils are not considered adequate as bearing material in their current state. Based on the conditions observed, it is anticipated that there will be pockets of very loose to loose sand and silt soils near the proposed bearing depth. It is recommended that all foundation and slab-on-grade subgrades be proofrolled and accepted by the geotechnical engineer. Conventional spread footings bearing at approximately +563 feet can be designed for a maximum net allowable soil bearing pressure of 3,000 pounds per square foot (psf). Section 10 of this report provides the subgrade preparation procedures necessary to achieve the recommended bearing capacity.

Using the above design criteria, total settlement of the proposed building is estimated to be up to 1-inch and differential settlements are estimated to be less than 0.5 inch. The differential settlement is estimated between columns and over a distance of about 30 feet along continuous footings. Continuous wall footings should have a minimum width of 2.0 feet and isolated spread footing should have a minimum width of 4.0 feet. Exterior footings should bear at least 4 feet below outside grade for frost protection; interior footings should bear at least 2 feet below the finished floor slab elevation within heated sections of the building.

9.2 Slab-On-Grade Floors

Slab-on-grade floors should be supported on a minimum 6-inch-thick layer of free draining $\frac{1}{2}$ to $\frac{3}{4}$ inch crushed stone placed over the undisturbed native soil, or controlled fill subgrades. If encountered, any loose fill that is encountered below the slab-on-grades should be removed and replaced with compacted controlled fill prior to placement of crushed stone. All moisture-sensitive floor slabs should be constructed above a vapor barrier, consisting of a polyethylene membrane with a minimum thickness of twenty (20) mils. A coefficient of friction of 0.3 should be used between the slab and the vapor barrier. If concrete is cast directly against competent native soils or controlled fill, a coefficient of friction of 0.40 can be used.

A subgrade modulus of 150 pounds per cubic inch (pci) is recommended for design of slab-on-grade floors bearing on 6 inches of crushed stone base placed above the existing fill. The design should be in accordance with the latest edition of the American Concrete Institute (ACI 360). The subgrade modulus is suitable for estimating distributions of bearing pressure beneath the slab and for estimating bending moments and shears within the slab. It is not intended for calculating total or differential settlements.

9.3 Underpinning

Based on the results of the test pits advanced adjacent to the existing building, underpinning may be necessary, based on the final bearing elevations and configuration of the addition foundations. The existing building foundations were observed bearing between approximately +565.85 and +563.15 feet. If necessary, underpinning can consist of a continuous concrete wall cast in alternating pits with dimensions and spacing selected to maintain stability of the existing foundations and minimize the disturbance of soils adjacent to each underpinning pit. Given that the in-place soils at the site are generally loose, particular care should be taken to minimize raveling and collapse of excavation sidewalls.

9.4 Design for Lateral Loading of Walls

Foundation walls, temporary shoring, and any retaining walls should be designed in accordance with the following criteria:

| Table 9.4.1 – Lateral Load Parameters | | |
|---|--------------|---------------|
| Soil Parameter | On-Site Soil | Imported Fill |
| Angle of Internal Friction | 30° | 34° |
| Active Earth Pressure Coefficient (K_a) ¹ | 0.33 | 0.28 |
| Passive Earth Pressure Coefficient (K_p) ² | 3.00 | 3.54 |
| At-Rest Earth Pressure Coefficient (K_0) ³ | 0.50 | 0.44 |
| Unit Weight of Soil (pounds per cubic foot) | 115 | 130 |

- 1) Use for freestanding walls, such as retaining walls, where movement of up to 0.0015 X height of wall is both possible and tolerable. Otherwise, use at-rest coefficient.
- 2) Reduce passive pressure by half above a depth of 4 feet below exterior grade to account for disturbance caused by frost action.
- 3) Use for walls restrained against outward lateral movement, such as foundation walls.

Additional loading due to temporary and permanent surcharges should be added to the lateral loading exerted by the retained soil. Loads due to supported structures should be applied in appropriate combinations with the lateral loads. Walls should be backfilled in accordance with Section 10.3 of this report. Placement and compaction of backfill should be observed and tested by a geotechnical engineer to monitor that proper compaction is being achieved.

9.5 Groundwater and Foundation Drainage

Based on the results of our subsurface investigation, it is not anticipated that groundwater will affect the construction of the foundations of the building addition, or the new pavement sections. However, perched groundwater may be encountered during the construction phase. Rainwater and surface water may become trapped in excavations. If necessary, dewatering can be performed with sump pumps and should be performed to allow work to be performed in the dry. Any dewatering should prevent loosening or migration of the subgrade soils. The dewatering system, if necessary, should be designed by a New York State licensed Professional Engineer.

Damproofing should be provided for all foundation walls where the outside grade is higher than the slab elevation. Foundation walls where the slab resides at a lower elevation than the outside grade should include foundation drainage consisting of a minimum 12-inch-wide drainage layer of crushed stone or clean gravel

placed against the full-height of the wall with a collector pipe at the footing bottom draining by gravity to a suitable outlet. The gradation specification for the drainage material is provided in Section 10 as **“free draining crushed stone.”** The stone or gravel should be completely separated from the soil backfill by a **permeable geotextile having an apparent opening size (AOS) of U.S. Sieve Nos. 70 to 100, such as TenCate’s Mirafi 140N.** Grading of the surface of the backfill and the surrounding topography and pavements should provide positive drainage away from the walls. Roof drains should be positively drained to areas away from the building.

9.6 Pavements

It is our understanding that the proposed site improvements include the construction of new asphalt paving sections for the proposed bus and parent pick-up/drop-off areas. Subgrade preparation and proofrolling should be performed in accordance with the recommendations provided in Section 10 of this report. For this purposes of this report, the pavement design parameters were estimated by Tectonic, standard duty traffic within the parent pick-up/drop-off loop, and heavy duty traffic in the bus pick-up/drop-off loop. The standard duty section was based upon a daily traffic of 500 vehicles, with 25 percent heavy trucks. The heavy-duty section was based upon a daily traffic of 50 vehicles, with 100 percent heavy trucks. An assumed twenty (20) year design life was used for each pavement section.

A design California Bearing Ratio (CBR) value of 5 was selected for the design of the asphalt pavement section. This CBR was selected based on the soils encountered on the site, and the compacted native soils that will underlie the pavement. We recommend that the pavement section consist of the following:

Based on the generally loose condition, and high fines content of the subgrade soils, the subgrade should be undercut by 1-foot, and a separation fabric (Mirafi® 180N or similar) should be placed between the in-place soils and a 1-foot layer of non-expansive granular controlled fill. In any proposed fill areas, the exposed subgrade should be proofrolled, and accepted prior to the placement of any fill soils. Any cut native sand or silt soils may be used to raise site grades, but compacted granular aggregate material should be placed at least 1 foot below the subgrade elevation for frost heave protection.

| Table 9.6.1 - Asphalt Pavements | |
|---------------------------------|---|
| Pavement Section Type | Recommended Section |
| Standard Duty | 2 inches Top Course HMA (Items 402.095102 or 402.125102) 2 inches Binder Course HMA (Item 402.195102 or 402.255902) 6 inches Type 2 Aggregate Subbase (Item 304.12) 12 inches Select Granular Fill (Item 203.07) |
| Heavy-Duty Flexible Pavement | 1.5 inches Top Course HMA (Items 402.095102 or 402.125102) 2 inches Binder Course HMA (Item 402.195102 or 402.255902) 3 inches Base Course HMA (Item 402.376904 or 402.377904) 8 inches Type 2 Aggregate Subbase (Item 304.12) 12 inches Select Granular Fill (Item 203.07) |

Note:

- 1) All Item Numbers are indicated in New York State Department of Transportation Standard Specifications.
- 2) Heavy-Duty pavement should be placed where busses, delivery trucks or tractor trailer trucks will travel.
- 3) Light-Duty pavement should only be placed in areas that will primarily be used by passenger vehicles.

10.0 EARTHWORK CONSTRUCTION CRITERIA

The following sections present our recommendations regarding earthwork and construction monitoring.

10.1 General Site Preparation

Initially, the footprints of the proposed building addition, pick-up/drop-off loops, and new play areas should be cleared and grubbed, then stripped of all existing fill, pavement, topsoil and debris. The clearing and grubbing should extend at least 5 feet beyond the planned structures to be constructed. All existing asphalt pavement should be stripped and removed. Debris and vegetation from the clearing operations should be removed from the site and disposed of at a legal disposal facility. All soft or unsuitable materials and subsurface obstructions should be removed from the building addition footprint and the zone of influence of the slab-on-grade or foundation. The zone of influence is defined by 1:1 (horizontal to vertical) planes sloping downward and outward from the bottom edges of the slab or footing.

Any existing utilities within the project limits should be re-routed around the foundations, or removed. The resulting excavations should be backfilled with controlled fill in accordance with the procedures outlined in Section 10.3. Trench excavations should be properly benched to allow for adequate compaction.

10.2 Subgrade Preparation

All foundation, slab-on-grade, and pavement subgrades should be inspected by the geotechnical engineer prior to the placement of controlled fill, concrete, or pavement subbase material. Based on the composition of the existing in-place soil and uncontrolled fill, remedial removals may be required. Uncontrolled fill was observed within borings B-3 through B-10 to depths up to 8 feet bgs, which should be removed from the zone of influence of the building foundations.

For the proposed pick-up/drop-off loops, cut areas of the site should be lowered to the planned subgrade depth, and the exposed native soils should be proofrolled to observe for potentially yielding soils. It is recommended that the subgrade soils in the pick-up/drop-off loops are undercut by 1 foot, and replaced with compacted, granular fill for frost heave protection. In any proposed fill areas, the surface should be cleared and grubbed, and the resulting subgrade prior to fill placement should also be proofrolled. Areas to receive controlled fill should also be proofrolled before placing any backfill materials.

The foundation and pavement subgrades, and any surfaces to receive controlled fill or concrete should be proofrolled under the observation of the geotechnical engineer. Proofrolling should be accomplished by making a minimum of four (4) passes in perpendicular directions with a 15-ton vibratory roller, or a high-energy impact roller (Landpac 25-kJ three-sider impact roller, or similar). High-impact rollers transfer high-impact compaction energy to densify subgrades without overexcavation and replacement, and can compact thick soil lifts, thus increasing compaction productivity. Vibratory rolling should not be performed within 20 feet of the existing building; proofrolling within 20 feet of the existing building should be performed with a static roll. A 1.5-ton trench roller can be used where access is confined. The existing building should be monitored for vibration and settlement while proofrolling is performed, and the proofrolling plan should be adjusted if necessary. Proofrolling should not be performed on saturated soils or in areas having freestanding surface water, until they are dewatered and allowed to dry. Proofrolling soils that exceed the optimum moisture content may disturb the soils, resulting in more unfavorable conditions.

Unsuitable materials or areas identified to be soft by the geotechnical engineer, based on visual inspection and observation of proofrolling operations should be removed and replaced with compacted controlled fill. Any subgrade soils found to be soft and yielding during proofrolling, or otherwise deemed

unsuitable by the geotechnical engineer, should be removed and replaced with properly compacted select granular fill.

10.3 Fill and Backfill Materials

Imported controlled fill should be well-graded granular soil that meets the general gradation requirements for New York State Department of Transportation (NYSDOT) Type 2 Aggregate Subbase (Item 304.12), and as follows:

| <u>Sieve Size</u> | <u>Percent Finer by Weight</u> |
|-------------------|--------------------------------|
| 2 Inch | 100 |
| ¼ Inch | 25 to 60 |
| No. 40 | 5 to 40 |
| No. 200 | 0 to 10 |

Based on the results of our subsurface investigation and laboratory testing the native soils are not suitable for use as controlled fill, due to the high fines content (up to 55 percent). If required, any native soils that are cut may be used to raise site grades in the pick-up/drop-off areas, or in the building footprint, but granular controlled fill should be used up to 1 foot below the proposed subgrade elevation. Any soils that are to be used as controlled fill should be tested, and approved by the geotechnical engineer prior to use.

Non-conforming native soils may be suitable for use as general fill in landscaped areas, provided they are free of trash, debris, roots, vegetation, or other deleterious materials. It should be noted that use of soils containing moderately high fines contents (such as those encountered at the site) will likely cause construction delays during the winter months, following periods of wet weather, or if the material is wet when excavated.

All general fill and controlled fill should be compacted to at least 95 percent of the maximum dry density, at near optimum moisture contents, as determined by the modified Proctor test (ASTM D1557). The degree of compaction should be tested and documented by a geotechnical engineer for each lift of fill. The lift thickness for the controlled fill soils will vary depending on the type of compaction equipment used. Controlled fill should generally be placed in uniform horizontal lifts not exceeding 8 inches in loose thickness when using a 15-ton roller. In confined areas, the loose lift thickness should be 4 inches or less and each lift should be compacted with sufficient passes of hand operated vibratory or impact compaction equipment. Backfill in landscape area should be compacted to at least 90 percent of the maximum dry density, at near optimum moisture contents, as determined by the ASTM D1557. A geotechnical engineer with appropriate

field and laboratory support should inspect all subgrades, approve materials for use as fill, and test backfill materials for compliance with the recommended compaction.

Free draining crushed stone placed below floor slabs and as drainage materials behind foundation walls should be Underdrain Filter Type I materials (Item No. 733.2001) as specified in the NYSDOT Standard Specifications and as follows:

| <u>Sieve Size</u> | <u>Percent Finer by Weight</u> |
|-------------------|--------------------------------|
| 1 inch | 100 |
| 1/2 inch | 30 - 100 |
| 1/4 inch | 0 - 30 |
| No. 4 | 0 - 10 |
| No. 8 | 0 - 5 |

Type 2 Aggregate Subbase (Item 304.12), to be placed immediately below the asphalt pavement, or as fill or backfill, should be a well-graded durable granular material that meets the gradation requirements for NYSDOT Type 2 Subbase (Item No. 733.0402), as follows:

| <u>Sieve Size</u> | <u>Percent Finer by Weight</u> |
|-------------------|--------------------------------|
| 2 inch | 100 |
| ¾ inch | 25 - 60 |
| No. 40 | 5 - 40 |
| No. 200 | 0 - 10 |

10.4 Protection of Subgrades and Construction Dewatering

Approved soil subgrades should be protected from the effects of frost, construction traffic, perched groundwater, surface water and precipitation. The necessary protection should be provided as soon after approval by the geotechnical engineer as is practicable and should be maintained until coverage with compacted fill or gravel. It is recommended that temporary surface drainage measures be installed to divert runoff away from the proposed construction limits.

Based on the conditions observed during the subsurface investigation, perched groundwater may be encountered during the construction phase. If necessary, dewatering should be performed in a manner that will prevent loosening or migration of the subgrade soils and performed to maintain the water level at least 1-foot below the deepest excavation. Given high fines content of the on-site soils, it is anticipated that sump pits and pumps may be suitable for dewatering. Sump pits should be placed at least 1-foot outside of

excavations for every foot below the subgrade elevation that they are excavated. The dewatering system should be designed by a New York State Licensed Professional Engineer, and it should be designed to ensure that dewatering does not result in any loss of soil.

As has been previously noted, the on-site soils contain a high percentage of fines, and they will soften and experience a reduction in load-carrying capacity when exposed to moisture and disturbed. They may also become unworkable if allowed to get wet. These soils are also frost susceptible and could become disturbed if allowed to freeze during construction. Additional excavation and material removal may be required if subgrades are allowed to be exposed for long durations without fill or concrete placement. Additionally, construction traffic could also disturb the native soils.

If maintaining subgrade stabilization during periods of wet weather is a concern, crushed stone may be placed on footing and/or floor subgrades after excavation and proofrolling. The crushed stone should be clean ½ to ¾ inch gravel, stone, or recycled concrete, and should not exceed 6 inches in thickness.

10.5 Excavations and Shoring

Temporary excavation slopes should conform to the latest OSHA standards, including slopes permitted for specified heights and soil conditions encountered. The presence of perched water, or other deleterious materials could require flatter slopes or temporary excavation support (e.g., shoring and bracing). Excavation support may also be necessary in areas where sufficient distance to provide adequate benching of slopes is not available, such as adjacent to the existing building adjacent. It is expected that the use of shoring will be required to excavate to the proposed bearing elevation on the southern side of the building, adjacent to the athletic field.

Excavations into the existing fill and native soil should be feasible using standard construction equipment (i.e. hydraulic excavator). Cobbles and boulders should be expected within both the existing fill and within the undisturbed native soils. Design of dewatering and excavation support should conform to the latest OSHA and other applicable agency requirements. Design of all excavation slopes greater than a 4-foot depth and design of sheeting, shoring, and bracing should be performed by a New York State licensed Professional Engineer. Adequate dewatering or surface-water runoff control should be provided to avoid instability and caving of soils.

11.0 CONSTRUCTION MONITORING

A geotechnical engineer familiar with the existing subsurface conditions and having the appropriate laboratory and field-testing support should be engaged by the Client to observe that all earthwork is performed in accordance with the specifications, the Code, and the criteria provided in this report. As a minimum, the following work should be performed under the observation of the geotechnical engineer:

- Subgrade preparation
- Proofrolling
- Remedial removals of unsuitable soils
- Underpinning, if necessary
- Shoring installation
- Settlement and vibration monitoring of the existing building
- Placement and compaction of fill and backfill materials
- Dewatering, if necessary

All materials proposed for use as soil fill should be tested and approved prior to delivery to the site. Additionally, all fill materials should be tested as they are being placed to verify that the required compaction is achieved. We further recommend that Tectonic be retained to review the project plans and specifications prior to completion of the bid documents.

12.0 LIMITATIONS

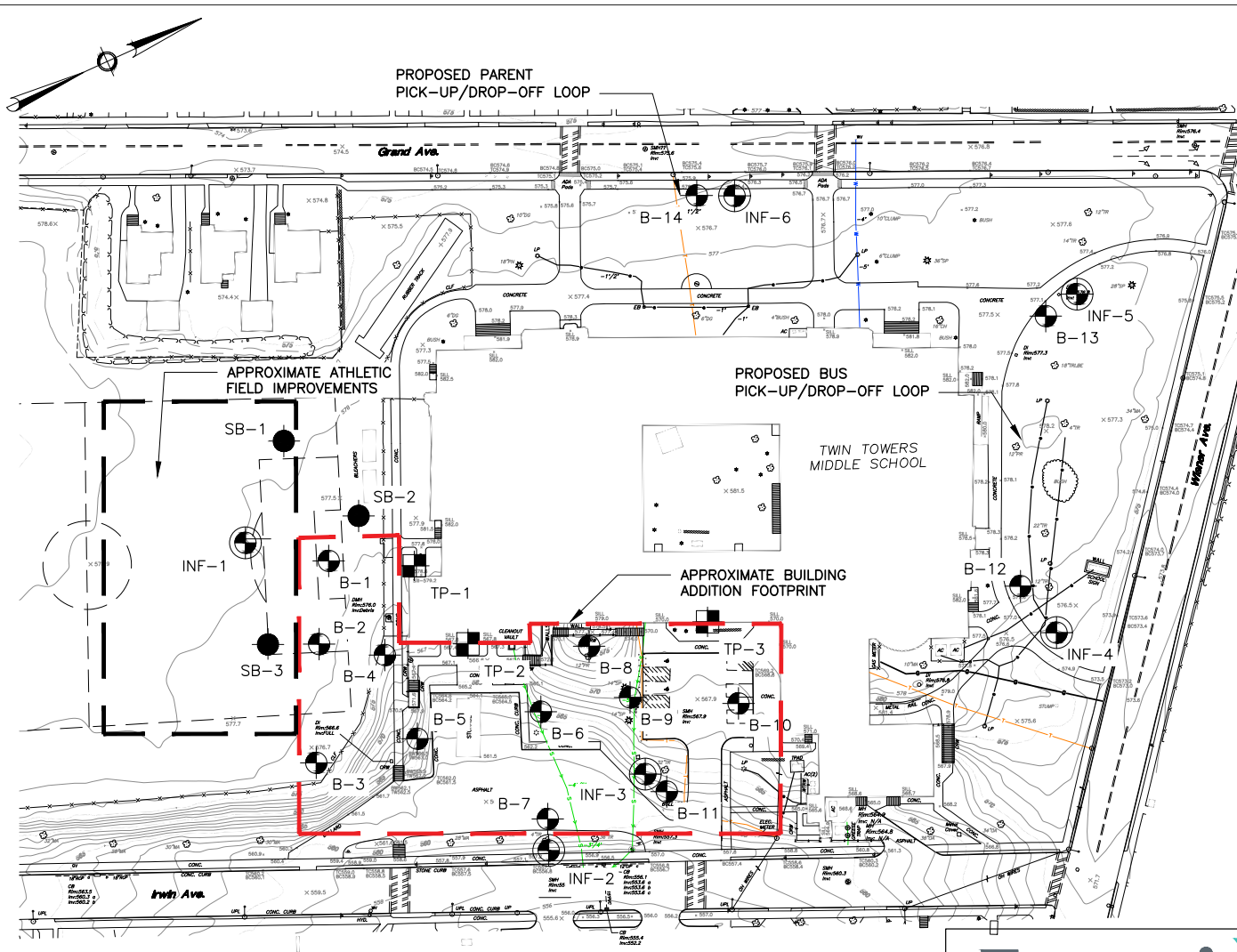
Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers and geologists practicing in this or similar situations. The interpretation of the field data is based on good judgment and experience. However, no matter how qualified the geotechnical engineer or detailed the investigation, subsurface conditions cannot always be predicted beyond the points of actual sampling and testing. No other warranty, expressed or implied, is made as to the professional advice included in this report. The recommendations contained in this report are intended for design purposes only. Contractors and others involved in the construction of this project are advised to make an independent assessment of the soil and groundwater conditions for the purpose of establishing quantities, schedules and construction techniques.

This report has been prepared for the exclusive use of the Enlarged City School District of Middletown, for the specific application to the proposed construction detailed in this report. We recommend that prior to construction; Tectonic Engineering Consultants, Geologists, and Land Surveyors D.P.C. reviews the project plans and specifications. It should be noted that upon review of those documents, some recommendations presented herein

might be revised or modified. In the event that any changes in the design or location of the proposed structures are planned, Tectonic shall not consider the conclusions and recommendations contained in this report valid unless reviewed and verified in writing. It is further recommended that Tectonic be retained to provide construction monitoring and inspection services to ensure proper implementation of the recommendations contained herein, which would otherwise limit our professional liability.

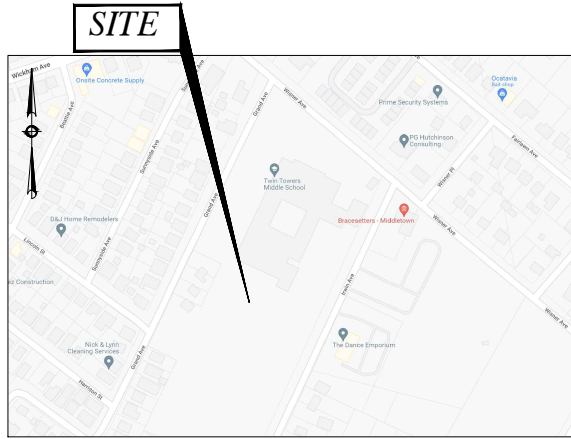
SC/CBB: G:\Newburgh\Geotechnical\11500\11507.01 Twin Towers Middle school\Report\11507.01 Twin Towers Middle School georpt.docx

FIGURE I



| LEGEND | |
|--------|---|
| | B-14 APPROXIMATE BORING LOCATION |
| | SB-1 APPROXIMATE PAVEMENT BORING LOCATION |
| | TP-3 APPROXIMATE TEST PIT LOCATION |
| | INF-6 APPROXIMATE INFILTRATION TEST LOCATION |

| NOTES | |
|-------|--|
| 1. | PLAN BASED ON A SITE PLAN PROVIDED BY KG&D ARCHITECTS, PC. |
| 2. | BORING, TEST PIT, AND INFILTRATION TEST LOCATIONS WERE FIELD LOCATED BY TECTONIC AND SHOULD BE CONSIDERED APPROXIMATE. |



Tectonic
 PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
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 P.O. Box 37 (800) 829-6531
 Mountville, NY 10953 www.tectonicengineering.com
 Project Contact Info
 1279 Route 300
 Newburgh, NY 12550 Phone: (845) 567-6656

| | | | |
|--|------------------------|-------------------------|----------|
| BORING, TEST PIT, AND INFILTRATION TEST LOCATION PLAN | | | |
| ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN TWIN TOWERS MIDDLE SCHOOL IMPROVEMENTS 112 GRAND AVENUE CITY OF MIDDLETOWN, ORANGE COUNTY, NY | | | |
| Date 08/26/2022 | Work Order 11507.01 | Drawing No. FIGURE 1 | Rev 0 |
| Scale 1" = 75' | | | |

APPENDIX I



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-1

SHEET No. 1 of 2

| | | | | | | | | |
|---|--|-----------|---------------------------------|---|------|--|-------------------------------------|--|
| CLIENT: KG&D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson | |
| METHOD OF ADVANCING BORING | | DIA. | | DEPTH | | | SURFACE ELEVATION: 577.5 | |
| POWER AUGER: | | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | DATUM: See Remarks | | |
| ROT. DRILL: | | | TO | SCREEN DEPTH: --- TO --- | | DATE START: 7/11/22 | | |
| CASING: | | | TO | WEATHER: Clear TEMP: 65° F | | DATE FINISH: 7/11/22 | | |
| DIAMOND CORE: | | | TO | DEPTH TO ROCK: Not Encountered' | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ --- 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 26 | 3 8 18 | S-1 | 16 | | M ML | 4" topsoil-like material Bwn SILT, some f Sand, some f Gravel | | |
| 2 | | 16 | | | | | | | |
| 3 | 43 | 11 27 16 | S-2 | 15 | | M ML | Same | | |
| 4 | | 19 | | | | | | | |
| 5 | 9 | 5 5 4 | S-3 | 24 | | M ML | Bwn SILT, little f Sand, trace f Gravel | 572.5 | |
| 6 | | 3 | | | | | | | |
| 7 | 5 | 2 2 3 | S-4 | 18 | | M ML | Same | | |
| 8 | | 2 | | | | | | | |
| 9 | 4 | 3 2 2 | S-5 | 19 | | M ML | Same | | |
| 10 | | 5 | | | | | | 567.5 | |
| 11 | 18 | 5 9 9 | S-6 | 24 | | M ML | Same | | |
| 12 | | 9 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 562.5 | |
| 16 | 7 | 3 3 4 | S-7 | 20 | | M ML | Bwn SILT, some f Sand, trace f Gravel | | |
| 17 | | 4 | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | 557.5 | |
| 21 | 12 | 3 5 7 | S-8 | 18 | | M ML | Bwn-gy SILT, little f Sand, trace f Gravel | | |
| 22 | | 8 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 552.5 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-1

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|--|------------|---|-----------------|----------------|----------------------------------|--|-----------------|--|-------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | | | |
| 26 | 57 | 24 29 28 32 | S-9 | 6 | | M | ML | Bwn-gy SILT, and c Gravel, little f Sand | | | | | | | | | |
| 27 | | | | | | | | End of Boring at 27' | | | | | | | | | |
| 28 | | | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | 547.5 |
| 31 | | | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | | | 542.5 |
| 36 | | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | | 537.5 |
| 41 | | | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | | | 532.5 |
| 46 | | | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | 527.5 |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | | | 522.5 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-2

SHEET No. 1 of 2

| | | | | | | | |
|---|-----------|-----------------|---|------|------|--|-------------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.5 |
| POWER AUGER: | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/11/22 | |
| CASING: | | TO | WEATHER: Clear TEMP: 65° F | | | DATE FINISH: 7/11/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 16 | 3 8 8 | S-1 | 18 | | M ML | 4" topsoil-like material Bwn SILT, some c-f Sand, little f Gravel | | |
| 2 | | 7 | | | | | | | |
| 3 | 22 | 4 5 17 | S-2 | 17 | | M ML | Bwn SILT, and m-f Sand, little f Gravel | | |
| 4 | | 11 | | | | | | | |
| 5 | 7 | 4 3 4 | S-3 | 11 | | M ML | Bwn SILT, some c Gravel, little c-f Sand | | 572.5 |
| 6 | | 3 | | | | | | | |
| 7 | 17 | 4 6 11 | S-4 | 24 | | M ML | Bwn SILT, some c-f Sand, little f Gravel | | |
| 8 | | 6 | | | | | | | |
| 9 | 6 | 3 2 4 | S-5 | 13 | | M ML | Same | | |
| 10 | | 3 | | | | | | | |
| 11 | 20 | 8 12 8 | S-6 | 24 | | M ML | Same | | 567.5 |
| 12 | | 5 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | 1 | WOH WOH 1 3 | S-7 | 24 | | M ML | Bwn SILT, some c-f Sand, trace f Gravel | | 562.5 |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | |
| 21 | 18 | 3 5 13 | S-8 | 20 | | M ML | Same | | 557.5 |
| 22 | | 14 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 552.5 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-2

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|---|------------|---|-----------------|----------------|----------------------------------|--|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 68+ | 14 18 50/3 | S-9 | 15 | | M | ML | Gy SILT, some c-f Sand, little f Gravel | | | | | | | 68 |
| 27 | | | | | | | | End of Boring at 26.3' | | | | | | | |
| 28 | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | 547.5 |
| 31 | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | 542.5 |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | 537.5 |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | 532.5 |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | 527.5 |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | 522.5 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-3

SHEET No. 1 of 2

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|-----------------|---|------|------|---|-------------------------------------|--|---|---|---|---|---|-----------------|-----------------|--|----------------|--|---|---|---|---|---|----|----|----|----|----|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | | | | | | | | | | | | | | | | | | | | | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson | | | | | | | | | | | | | | | | | | | | | |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.0 | | | | | | | | | | | | | | | | | | | | | |
| POWER AUGER: | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | | | | | | | | | | | | | | | | | | | | | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/11/22 | | | | | | | | | | | | | | | | | | | | | | |
| CASING: | | TO | WEATHER: Clear TEMP: 65° F | | | DATE FINISH: 7/11/22 | | | | | | | | | | | | | | | | | | | | | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | | | | | | | | | | | | | | | | | | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | <table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>PLASTIC LIMIT %</td> <td colspan="2">WATER CONTENT %</td> <td colspan="2">LIQUID LIMIT %</td> </tr> <tr> <td>X</td> <td>○</td> <td>○</td> <td>○</td> <td>△</td> </tr> <tr> <td>10</td><td>20</td><td>30</td><td>40</td><td>50</td> </tr> </table> | | | 1 | 2 | 3 | 4 | 5 | PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | X | ○ | ○ | ○ | △ | 10 | 20 | 30 | 40 | 50 |
| 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | ○ | ○ | ○ | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 20 | 30 | 40 | 50 | | | | | | | | | | | | | | | | | | | | | | | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | STANDARD PENETRATION (BLOWS/FT.) | | | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|----------------------------------|---|-------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | |
| 1 | 7 | 2 | S-1 | 18 | | M ML | 4" topsoil-like material Bwn SILT, and c-f Gravel, little c-f Sand (FILL) | | | | | |
| 2 | | 3 | | | | | | | | | | |
| 3 | 16 | 8 | S-2 | 4 | | M GM | Gy-bwn c-f GRAVEL, and Silt, little c-f Sand (FILL) | | | | | |
| 4 | | 9 | | | | | | | | | | |
| 5 | 15 | 5 | S-3 | 11 | | M ML | Bwn SILT, some c-f Gravel, little c-f Sand (FILL) | | | | | 572.0 |
| 6 | | 10 | | | | | | | | | | |
| 7 | 20 | 6 | S-4 | 24 | | M GM | Bwn-gy c-f GRAVEL, and Silt, little c-f Sand (FILL) | | | | | |
| 8 | | 11 | | | | | | | | | | |
| 9 | 14 | 5 | S-5 | 8 | | M GM | Same (FILL) | | | | | |
| 10 | | 9 | | | | | | | | | | |
| 11 | 8 | 5 | S-6 | 18 | | M ML | Gy-blk SILT, some c-f Sand, trace f Gravel | | | | | |
| 12 | | 5 | | | | | | | | | | |
| 13 | | 3 | | | | | | | | | | |
| 14 | | 3 | | | | | | | | | | |
| 15 | | 4 | | | | | | | | | | |
| 16 | 2 | 1 | S-7 | 20 | | M ML | Gy SILT, some c-f Sand, little f Gravel | | | | | 562.0 |
| 17 | | 1 | | | | | | | | | | |
| 18 | | 1 | | | | | | | | | | |
| 19 | | 1 | | | | | | | | | | |
| 20 | | 5 | | | | | | | | | | |
| 21 | 11 | 5 | S-8 | 22 | | M ML | Same | | | | | 557.0 |
| 22 | | 6 | | | | | | | | | | |
| 23 | | 6 | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | 552.0 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-3

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|-----------------|----------------|----------------------------------|--|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 59 | 27 24 35 42 | S-9 | 24 | | M | ML | Same | | | | | | | |
| 27 | | | | | | | | | | | | | | | |
| 28 | | | | | | | | End of Boring at 27' | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | 547.0 |
| 31 | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | 542.0 |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | 537.0 |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | 532.0 |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | 527.0 |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | 522.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-4

SHEET No. 1 of 2

| | | | | | | | | |
|---|-----------|-----------------|---|------|------|--|-------------------------------------|--|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson | |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 575.0 | |
| POWER AUGER: | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/12/22 | | |
| CASING: | | TO | WEATHER: Clear TEMP: 65° F | | | DATE FINISH: 7/12/22 | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|-------------------------|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 10 | 2 5 5 | S-1 | 24 | | M ML | | 570.0 | |
| 2 | | 18 | | | | | | | |
| 3 | 48 | 21 34 14 | S-2 | 14 | | M ML | | | |
| 4 | | 22 | | | | | | | |
| 5 | | 50+ | S-3 | 0 | | | | | |
| 6 | | | | | | | | | |
| 7 | 10 | 4 5 5 | S-4 | 24 | | M ML | | | |
| 8 | | 5 | | | | | | | |
| 9 | 13 | 9 8 5 | S-5 | 18 | | M ML | | | |
| 10 | | 3 | | | | | | 565.0 | |
| 11 | 3 | 2 1 2 | S-6 | 21 | | M ML | | | |
| 12 | | 2 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 560.0 | |
| 16 | 2 | WOH WOH 2 | S-7 | 21 | | M ML | | | |
| 17 | | 4 | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | 555.0 | |
| 21 | 7 | 3 3 4 | S-8 | 24 | | W ML | | | |
| 22 | | 8 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 550.0 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. 11507.01
 PROJECT: Twin Towers Middle School
 LOCATION: Middletown, NY

BORING No. B-4

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|---|---|-----------------|---|---|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | 1 | 2 | 3 | | 4 | 5 |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 42 | 44 24 18 | S-9 | 11 | | W | ML | Same | | | | | | | |
| 27 | | 50/0 | | | | | | | | | | | | | |
| 28 | | | | | | | | End of Boring at 26.5' | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | 545.0 | | |
| 31 | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | 540.0 | | |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | 535.0 | | |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | 530.0 | | |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | 525.0 | | |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | 520.0 | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.

| | | | | | | | |
|--|---------------|--------------------------|---|------|--|-------|-----------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Daniela Parrino |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 565.0 |
| POWER AUGER: | 3 1/4" | 0 TO 26.4' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | DATUM: See Remarks | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | DATE START: 7/12/22 | | |
| CASING: | | TO | WEATHER: Overcast TEMP: 72° F | | DATE FINISH: 7/12/22 | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- --- --- --- 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 7 | 42 | S-1 | 8 | | M | ML | 6" asphalt pavement, 4" subbase gravel Bwn SILT, and f Sand, trace f Gravel, trace brick fragments (FILL) | |
| 2 | | 3 | | | | | | | |
| 3 | 5 | 2 | S-2 | 0 | | | | No Recovery | |
| 4 | | 4 | | | | | | | |
| 5 | 8 | 6 | S-3 | 20 | | M | ML | Bwn-tn-gy SILT, some c-f Gravel | 560.0 |
| 6 | | 5 | | | | | | | |
| 7 | 10 | 7 | S-4 | 20 | | M | ML | Bwn-tn-gy SILT, trace m-f Sand | |
| 8 | | 5 | | | | | | | |
| 9 | 8 | 4 | S-5 | 18 | | W | ML | Bwn SILT, trace m-f Sand | |
| 10 | | 4 | | | | | | | |
| 11 | 18 | 6 | S-6 | 24 | | W | CL | 12" Gy SILTY CLAY, trace m-f Sand | 555.0 |
| 12 | | 8 | S-6a | | | W | ML | 12" Bwn CLAYEY SILT, little c-f Sand | |
| 13 | | 10 | | | | | | | |
| 14 | | 9 | | | | | | | |
| 15 | | 8 | | | | | | | 550.0 |
| 16 | 27 | 18 | S-7 | 10 | | W | MH | Gy-bwn CLAYEY SILT, trace c-f Sand | |
| 17 | | 9 | | | | | | | |
| 18 | | 7 | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 545.0 |
| 21 | 18 | 9 | S-8 | 20 | | W | MH | Gy-bwn CLAYEY SILT, some c-f Gravel, trace c-f Sand | |
| 22 | | 9 | | | | | | | |
| 23 | | 12 | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 540.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-5

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) |
|-------------|---------------|-----------------------------------|---------------|--------------|----------------------------------|----------|---------------------|--|------------|---|---|---|---|---|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | 1 | 2 | 3 | 4 | 5 | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | | | |
| 26 | 62+ | 8 12 50/5 | S-9 | 17 | | W | GM | Gy-bwn GRAVEL, and Silt, little c-f Sand | | | | | | | 535.0 |
| 27 | | | | | | | | End of Boring at 26.4' | | | | | | | |
| 28 | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | 530.0 |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | 525.0 |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | 520.0 |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | 515.0 |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | 510.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-6

SHEET No. 1 of 2

| | | | | | | | |
|--|---------------|-----------------|---|------|------|--|-----------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Daniela Parrino |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 565.0 |
| POWER AUGER: | 3 1/4" | 0 TO 27' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/12/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 78° F | | | DATE FINISH: 7/12/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|--|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 28 | 5 14 14 | S-1 | 15 | | M | SM | 4" topsoil-like material Bwn c-f SAND, and Silt, little c-f Gravel (FILL) | |
| 2 | | 7 13 | | | | | | | |
| 3 | 21 | 12 9 | S-2 | 24 | | M | SM | Bwn-gy c-f SAND, and c-f Gravel, little Silt, trace brick and asphalt fragments (FILL) | |
| 4 | | 11 9 | | | | | | | |
| 5 | 14 | 9 5 | S-3 | 22 | | M | ML | Bwn-gy SILT, little m-f Sand, trace f Gravel | 560.0 |
| 6 | | 5 4 | | | | | | | |
| 7 | 5 | 3 2 | S-4 | 22 | | M | ML | Bwn-or SILT, some m-f Sand, trace f Gravel | |
| 8 | | 3 5 | | | | | | | |
| 9 | 13 | 6 7 | S-5 | 20 | | M | ML | Bwn SILT, and m-f Sand | |
| 10 | | 5 4 | | | | | | | 555.0 |
| 11 | 7 | 4 3 | S-6 | 20 | | W | ML | Bwn-tn SILT, and f Sand, trace f Gravel | |
| 12 | | 3 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 550.0 |
| 16 | 11 | 5 6 | S-7 | 24 | | W | SM | Bwn-tn-gy c-f SAND, and Silt | |
| 17 | | 5 5 | S-7a | | | | CL | Gy SILTY CLAY, trace m-f Sand | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 545.0 |
| 21 | 9 | 4 5 | S-8 | 24 | | W | ML | Gy SILT, trace c-f Gravel | |
| 22 | | 4 4 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 540.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.

BORING LOG: 11507.01.GPJ TECTONIC ENG.GDT 8/26/22



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-6

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) | | | | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|---------------------|-------------------------|------------|---|-----------------|-----------------|----------------|----------------------------------|-----------------|---|---|---|---|-------|
| | | | SAMPLE NUMBER | RECOV. | | | | | MOISTURE | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | | | | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | 1 | | 2 | 3 | 4 | 5 | |
| 26 | 13 | 3 | S-9 | 20 | | W | ML | | | | | | | | | | | | |
| 27 | | 3 10 24 | S-9a | | | | CL | | | | | | | | | | | | |
| 28 | | | | | | | End of Boring at 27' | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | | | 535.0 |
| 31 | | | | | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | | | | | 530.0 |
| 36 | | | | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | | | | 525.0 |
| 41 | | | | | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | | | | | 520.0 |
| 46 | | | | | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | | | 515.0 |
| 51 | | | | | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | | | | | 510.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-7

SHEET No. 1 of 2

| | | | | | | | |
|--|---------------|-----------------|---|------|------|--|-----------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Daniela Parrino |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 561.0 |
| POWER AUGER: | 3 1/4" | 0 TO 27' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/12/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 72° F | | | DATE FINISH: 7/12/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 24 | 34 9 15 | S-1 | 6 | | M | SM | 6" asphalt pavement, 6" subbase gravel Bwn-blk c-f SAND, little Silt, little c-f Gravel (FILL) | |
| 2 | | 4 4 | | | | | | | |
| 3 | 9 | 5 4 4 | S-2 | 20 | | M | SM | Bwn-gy c-f SAND, little Silt, little c-f Gravel, trace brick fragments (FILL) | |
| 4 | | 2 4 | | | | | | | |
| 5 | 7 | 4 3 3 | S-3 | 6 | | M | SM | Bwn c-f SAND, and Silt, trace c-f Gravel | 556.0 |
| 6 | | 2 3 | | | | | | | |
| 7 | 9 | 4 5 5 | S-4 | 16 | | W | ML | Bwn-tn SILT, little m-f Sand | |
| 8 | | 6 7 | | | | | | | |
| 9 | 11 | 4 7 | S-5 | 20 | | W | ML | Gy SILT, trace m-f Sand | 551.0 |
| 10 | | 3 5 | | | | | | | |
| 11 | 9 | 5 4 5 | S-6 | 18 | | W | ML | Bwn SILT, trace m-f Sand | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 546.0 |
| 16 | 11 | 6 6 5 | S-7 | 24 | | W | SM | 6" Bwn c-f SAND, and Silt | |
| 17 | | 3 | S-7a | | | | ML | 18" Gy SILT, trace c-f Sand | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 541.0 |
| 21 | 26 | 9 13 13 | S-8 | 20 | | W | ML | Gy-bwn SILT, little c-f Sand, little c-f Gravel | |
| 22 | | 11 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 536.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.

BORING LOG: 11507.01.GPJ TECTONIC ENG.GDT 8/26/22



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-7

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|---------------------|-------------------------|---|---|-----------------|-----------------|----------------|----------------------------------|-----------------|-------|
| | | | SAMPLE NUMBER | RECOV. | | | | | MOISTURE | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 22 | 9 12 10 | S-9 | 20 | | W | ML | Gy SILT, some c-f Gravel, trace c-f Sand | | | | | | | |
| 27 | | 18 | S-9a | | | | GM | Gy-tn GRAVEL, some c-f Sand, little Clayey Silt | | | | | | | |
| 28 | | | | | | | | End of Boring at 27' | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | 531.0 |
| 31 | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | 526.0 |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | 521.0 |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | 516.0 |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | 511.0 |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | 506.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-8

SHEET No. 1 of 2

| | | | | | | | |
|--|---------------|-----------------|---|------|------|--|---------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Jesus Rivera |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 576.0 |
| POWER AUGER: | 3 1/4" | 0 TO 30' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/14/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | | | DATE FINISH: 7/14/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 19 | 5 8 11 | S-1 | 18 | | M SM | 2" topsoil-like material Tn m-f SAND, some c-f Gravel, little Silt (FILL) | | |
| 2 | | 7 | | | | | | | |
| 3 | 5 | 3 3 2 | S-2 | 12 | | M SM | Bwn m-f SAND, some c-f Gravel, little Silt (FILL) | | |
| 4 | | 4 | | | | | | | |
| 5 | 4 | 1 2 2 | S-3 | 14 | | M SM | Bwn m-f SAND, some Silt, little f Gravel (FILL) | | 571.0 |
| 6 | | 2 | | | | | | | |
| 7 | 3 | 1 2 1 | S-4 | 8 | | M SM | Bwn m-f SAND, and c-f Gravel, little Silt (FILL) | | |
| 8 | | 8 | | | | | | | |
| 9 | | | | | | | Auger chattering between 8 and 10 ft bgs | | |
| 10 | | | | | | | | | 566.0 |
| 11 | 2 | 1 1 1 | S-5 | 16 | | M SM | Bwn m-f SAND, little c-f Gravel, little Silt | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 561.0 |
| 16 | 15 | 6 8 7 | S-6 | 20 | | M SM | Bwn m-f SAND, some Silt | | |
| 17 | | 8 | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 556.0 |
| 21 | 8 | 5 5 3 | S-7 | 22 | | M SM | Bwn-tn m-f SAND, some Silt | | |
| 22 | | 3 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 551.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-8

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|---|---|-----------------|---|---|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | 1 | 2 | 3 | | 4 | 5 |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 5 | 1 | S-8 | 23 | | W | SM | Same | ● | X | ⊗ | △ | | | |
| 27 | | 2 | | | | | | | | | | | | | |
| 28 | | 3 | | | | | | | | | | | | | |
| 29 | | 4 | | | | | | | | | | | | | |
| 30 | | 5 | | | | | | | | | | | 546.0 | | |
| 31 | 7 | 3 | S-9 | 22 | | W | CL-ML | Bwn-gy SILT & CLAY | ● | X | ⊗ | △ | | | |
| 32 | | 4 | | | | | | | | | | | | | |
| 33 | | 5 | | | | | | | | | | | | | |
| 34 | | | | | | | | End of Boring at 32' | | | | | | | |
| 35 | | | | | | | | | | | | | 541.0 | | |
| 36 | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | 536.0 | | |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | 531.0 | | |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | 526.0 | | |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | 521.0 | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-9

SHEET No. 1 of 2

| | | | | | | | |
|--|---------------|-----------------|---|------|------|--|---------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Jesus Rivera |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 569.0 |
| POWER AUGER: | 3 1/4" | 0 TO 30' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/14/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | | | DATE FINISH: 7/14/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 25 | 3 11 14 | S-1 | 18 | | M | GM | 2" topsoil-like material Bwn-blk c-f GRAVEL, some m-f Sand, little Silt (FILL) | |
| 2 | | 13 | | | | | | | |
| 3 | 9 | 4 5 4 | S-2 | 14 | | M | SM | Bwn m-f SAND, some c-f Gravel, little Silt | |
| 4 | | 3 | | | | | | | |
| 5 | 4 | 2 2 2 | S-3 | 7 | | M | SM | Same | 564.0 |
| 6 | | 1 | | | | | | | |
| 7 | 3 | 1 2 2 | S-4 | 2 | | M | GM | Gy-bwn c GRAVEL, little Sand, little Silt | |
| 8 | | 3 | | | | | | | |
| 9 | 10 | 3 3 7 | S-5 | 20 | | M | SM | Bwn m-f SAND, little c-f Gravel, little Silt | 559.0 |
| 10 | | 7 | | | | | | | |
| 11 | 16 | 6 8 8 | S-6 | 20 | | M | SM | Bwn m-f SAND, some Silt | |
| 12 | | 9 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 554.0 |
| 16 | 3 | 2 1 2 3 | S-7 | 19 | | M | SM | Bwn m-f SAND, some Silt | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 549.0 |
| 21 | 10 | 4 5 5 | S-8 | 20 | | W | SM ML | 7" Same 13" Gy SILT | |
| 22 | | 5 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 544.0 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-9

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|---|-------|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | ● | X | ○ | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | |
| 26 | 8 | 3 | S-9 | 23 | | W | ML | | ● | X | ○ | 539.0 | |
| 27 | | 4 | | | | | | | | | | | |
| 28 | | 4 | | | | | | | | | | | |
| 29 | | 6 | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| 31 | 38 | 7 | S-10 | 14 | | W | ML | | ● | X | ○ | 529.0 | |
| 32 | | 20 | | | | | | | | | | | |
| 33 | | 18 | | | | | | | | | | | |
| 34 | | 9 | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | |
| 36 | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | |
| 41 | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | |
| 46 | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | |
| 51 | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-10

SHEET No. 1 of 2

| | | | | | | | |
|--|---------------|-----------------|---|------|------|--|---------------------------------|
| CLIENT: KG&D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Jesus Rivera |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 567.9 |
| POWER AUGER: | 3 1/4" | 0 TO 30' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/14/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 75° F | | | DATE FINISH: 7/14/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 19 | 5 8 11 | S-1 | 18 | | M SM | 2" topsoil-like material Tn m-f SAND, some c-f Gravel, little Silt (FILL) | | |
| 2 | | 7 | | | | | | | |
| 3 | 2 | 2 1 1 | S-2 | 18 | | M SM | Bwn m-f SAND, some Silt, trace f Gravel | | |
| 4 | | 1 | | | | | | | |
| 5 | 2 | 3 1 1 | S-3 | 14 | | M SM | Same | | 562.9 |
| 6 | | 2 | | | | | | | |
| 7 | 7 | 4 3 3 | S-4 | 10 | | M SM | Same | | |
| 8 | | 3 | | | | | | | |
| 9 | 7 | 2 3 4 | S-5 | 10 | | M SM | Same | | |
| 10 | | 4 | | | | | | | 557.9 |
| 11 | 10 | 4 5 5 | S-6 | 18 | | M SM | Tn f SAND, some Silt | | |
| 12 | | 5 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 552.9 |
| 16 | 6 | 3 3 3 3 | S-7 | 20 | | M SM | Bwn f SAND, and Silt | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 547.9 |
| 21 | 7 | 2 2 5 7 | S-8 | 22 | | M SM | Same | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 542.9 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-10

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|-------------------|----------------|-----------------|--|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | |
| 26 | 12 | 3 5 7 10 | S-9 | 23 | | M | SM | | | | | | | |
| 27 | | | | | | | 15" Same | | | | | | | |
| 28 | | | | | | | | | | | 8" Gy SILT & CLAY | | | |
| 29 | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | 8" Gy SILT & CLAY | | | | |
| 31 | 7 | 2 3 4 5 | S-10 | 23 | | W | CL-ML | | | | | | | |
| 32 | | | | | | | | | | | | | | |
| 33 | | | | | | | | End of Boring at 32' | | | | | | |
| 34 | | | | | | | | | | End of Boring at 32' | | | | |
| 35 | | | | | | | | End of Boring at 32' | | | | | | |
| 36 | | | | | | | | | | End of Boring at 32' | | | | |
| 37 | | | | | | | | End of Boring at 32' | | | | | | |
| 38 | | | | | | | | | | End of Boring at 32' | | | | |
| 39 | | | | | | | | End of Boring at 32' | | | | | | |
| 40 | | | | | | | | | | End of Boring at 32' | | | | |
| 41 | | | | | | | | End of Boring at 32' | | | | | | |
| 42 | | | | | | | | | | End of Boring at 32' | | | | |
| 43 | | | | | | | | End of Boring at 32' | | | | | | |
| 44 | | | | | | | | | | End of Boring at 32' | | | | |
| 45 | | | | | | | | End of Boring at 32' | | | | | | |
| 46 | | | | | | | | | | End of Boring at 32' | | | | |
| 47 | | | | | | | | End of Boring at 32' | | | | | | |
| 48 | | | | | | | | | | End of Boring at 32' | | | | |
| 49 | | | | | | | | End of Boring at 32' | | | | | | |
| 50 | | | | | | | | | | End of Boring at 32' | | | | |
| 51 | | | | | | | | End of Boring at 32' | | | | | | |
| 52 | | | | | | | | | | End of Boring at 32' | | | | |
| 53 | | | | | | | | End of Boring at 32' | | | | | | |
| 54 | | | | | | | | | | End of Boring at 32' | | | | |
| 55 | | | | | | | | End of Boring at 32' | | | | | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-11

SHEET No. 1 of 2

| | | | | | | | | |
|--|-----------|-----------------|---|------|------|--|-------------------------------------|--|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci | |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 563.0 | |
| POWER AUGER: | 4" | 0 TO 30' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/13/22 | | |
| CASING: | | TO | WEATHER: Clear TEMP: 65° F | | | DATE FINISH: 7/13/22 | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 10 | 5 | S-1 | 16 | | M ML | 3" topsoil-like material Bwn SILT, some c-f Sand, some f Gravel | | |
| 2 | 3 | 2 | S-2 | 15 | | M ML | Same | | |
| 3 | 5 | 2 | S-3 | 16 | | M ML | Bwn SILT, and f Sand, trace f Gravel | 558.0 | |
| 4 | 10 | 5 | S-4 | 20 | | M ML | Same | | |
| 5 | 7 | 2 | S-5 | 19 | | W SM | Bwn f SAND, and Silt, trace f Gravel | 553.0 | |
| 6 | 6 | 3 | S-6 | 24 | | W SM | Same | | |
| 7 | 4 | 2 | S-7 | 24 | | W ML | Bwn SILT, and f Sand, trace f Gravel | 548.0 | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | 4 | 2 | S-8 | 18 | | W ML | Bwn-gy CLAYEY SILT, and f Sand, trace f Gravel | 543.0 | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 538.0 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-11

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---|-------------------------|------------|---|---|-------|-----------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | ● | X | ○ | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | PLASTIC LIMIT % |
| 26 | 22 | 5 8 14 | S-9 | 4 | | W | Gy CLAYEY SILT, and f Sand, little c Gravel | | | | | | | |
| 27 | | 10 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | |
| 30 | 50+ | 50/0 | S-10 | 0 | | | No Recovery | | | | | 533.0 | | |
| 31 | | | | | | | End of Boring at 30' | | | | | | | |
| 32 | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | 528.0 |
| 36 | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | 523.0 |
| 41 | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | 518.0 |
| 46 | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | 513.0 | | |
| 51 | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | 508.0 | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-12

SHEET No. 1 of 2

| | | | | | | | |
|--|-----------|-----------------|---|------|------|--|-------------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.6 |
| POWER AUGER: | 4" | 0 TO 35' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/13/22 | |
| CASING: | | TO | WEATHER: Clear TEMP: 75° F | | | DATE FINISH: 7/13/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| CME 55LC track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 31 | 6 16 15 | S-1 | 20 | | M | ML | 3" topsoil-like material Bwn SILT, and f Gravel, some c-f Sand | |
| 2 | | 12 | | | | | | | |
| 3 | 7 | 6 4 3 | S-2 | 11 | | M | ML | Bwn SILT, and c-f Gravel, some c-f Sand | |
| 4 | | 2 | | | | | | | |
| 5 | 6 | 3 3 | S-3 | 18 | | M | SM | Bwn c-f SAND, some Silt, some f Gravel | 572.6 |
| 6 | | 2 | | | | | | | |
| 7 | 5 | 2 3 | S-4 | 23 | | M | SM | Same | |
| 8 | | 3 | | | | | | | |
| 9 | 4 | 3 2 | S-5 | 22 | | M | SM | Bwn c-f SAND, some Silt, trace f Gravel | |
| 10 | | 2 | | | | | | | 567.6 |
| 11 | 5 | 2 2 3 | S-6 | 18 | | M | SM | Same | |
| 12 | | 3 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | 562.6 |
| 16 | 10 | 3 5 5 | S-7 | 19 | | M | SP | Bwn c-f SAND, some f Gravel, little Silt | |
| 17 | | 4 | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | 557.6 |
| 21 | 7 | 2 3 4 | S-8 | 8 | | W | SM | Bwn f SAND, some Silt, trace f Gravel | |
| 22 | | 4 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | 552.6 |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-12

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | ELEVATION (FT.) | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|---|---|-----------------|-------|---|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | 1 | 2 | 3 | | 4 | 5 |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 26 | 6 | 2 | S-9 | 21 | | W | SM | [Dotted pattern] | ● | | | | | | |
| 27 | | 4 | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | 547.6 | |
| 31 | 7 | 4 | S-10 | 24 | | W | SM | [Dotted pattern] | ● | | | | | | |
| 32 | | 3 | | | | | | | | | | | | | |
| 33 | | 4 | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | 542.6 | |
| 36 | 5 | 2 | S-11 | 24 | | W | ML | [Vertical lines] | ● | | | | | | |
| 37 | | 3 | | | | | | | | | | | | | |
| 38 | | 4 | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | 537.6 | |
| 41 | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | 532.6 | |
| 46 | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | 527.6 | |
| 51 | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | 522.6 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-13

SHEET No. 1 of 2

| | | | | | | | |
|---|-----------|-----------------|---|------|------|--|-------------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.1 |
| POWER AUGER: | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/12/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 65° F | | | DATE FINISH: 7/12/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 9 | 3 | S-1 | 19 | | M SM | 5" topsoil-like material | | |
| 2 | | 4 | | | | | Bwn c-f SAND, some f Gravel, little Silt | | |
| 3 | 12 | 6 | S-2 | 22 | | M SM | Same | | |
| 4 | | 6 | | | | | | | |
| 5 | 12 | 6 | S-3 | 21 | | M SM | Same | 572.1 | |
| 6 | | 7 | | | | | | | |
| 7 | 13 | 6 | S-4 | 9 | | M SM | Same | | |
| 8 | | 6 | | | | | | | |
| 9 | 4 | 2 | S-5 | 13 | | M ML | Bwn SILT, some c-f Sand, some c-f Gravel | | |
| 10 | | 2 | | | | | | 567.1 | |
| 11 | 4 | 2 | S-6 | | | M ML | Same | | |
| 12 | | 2 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 562.1 | |
| 16 | 4 | 2 | S-7 | 20 | | M ML | Bwn SILT, and f Sand, trace f Gravel | | |
| 17 | | 1 | | | | | | | |
| 18 | | 3 | | | | | | | |
| 19 | | 3 | | | | | | | |
| 20 | | | | | | | | 557.1 | |
| 21 | 6 | 2 | S-8 | 22 | | W ML | Same | | |
| 22 | | 3 | | | | | | | |
| 23 | | 3 | | | | | | | |
| 24 | | 4 | | | | | | | |
| 25 | | | | | | | | 552.1 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. 11507.01
 PROJECT: Twin Towers Middle School
 LOCATION: Middletown, NY

BORING No. B-13

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) | | | | | | | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|-----------------|----------------|----------------------------------|---|-----------------|---|-------|---|--|--|--|--|--|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | 1 | 2 | | 3 | 4 | 5 | | | | | |
| 26 | 4 | 2 | S-9 | 24 | | W | ML | Same | | ● | | | | | | | | | | | | | |
| 27 | | 2 | | | | | | | | | | | | | | | | | | | | | |
| 28 | | 3 | | | | | | | | | | | | | | | | | | | | | |
| 29 | | | | | | | | End of Boring at 27' | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | 547.1 | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | | | 542.1 | | | | | | |
| 36 | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | | 537.1 | | | | | | |
| 41 | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | | | 532.1 | | | | | | |
| 46 | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | 527.1 | | | | | | |
| 51 | | | | | | | | | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | | | 522.1 | | | | | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-14

SHEET No. 1 of 2

| | | | | | | | |
|---|-----------|-----------------|---|------|------|--|-------------------------------------|
| CLIENT: KG&D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Andrew Bellucci |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 576.7 |
| POWER AUGER: | 4" | 0 TO 25' | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/11/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 65° F | | | DATE FINISH: 7/12/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|----------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 24 | 8 13 11 | S-1 | 16 | | M SM | 4" topsoil-like material Bwn m-f SAND, some Silt, little c Gravel | | |
| 2 | | 5 | | | | | | | |
| 3 | 3 | 2 1 2 | S-2 | 19 | | M SM | Same | | |
| 4 | | 1 | | | | | | | |
| 5 | 3 | 2 1 2 | S-3 | 9 | | M SM | Bwn m-f SAND, little Silt, little c Gravel | 571.7 | |
| 6 | | 2 | | | | | | | |
| 7 | 8 | 4 4 4 | S-4 | 17 | | M SM | Bwn c-f SAND, little Silt, little c Gravel | | |
| 8 | | 5 | | | | | | | |
| 9 | 11 | 3 6 5 | S-5 | 22 | | M ML | Bwn SILT, and f Sand, trace f Gravel | 566.7 | |
| 10 | | 5 | | | | | | | |
| 11 | 5 | 3 3 2 | S-6 | 22 | | M ML | Same | | |
| 12 | | 3 | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 561.7 | |
| 16 | 5 | 2 2 3 | S-7 | 20 | | W SM | Bwn f SAND, and Silt, trace f Gravel | | |
| 17 | | 3 | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | 556.7 | |
| 21 | 5 | 1 3 2 | S-8 | 21 | | W ML | Bwn SILT, some f Sand, trace f Gravel | | |
| 22 | | 2 | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 551.7 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. B-14

SHEET No. 2 of 2

CLIENT: **KG+D Architects, PC**

CONTRACTOR: **Core Down Drilling LLC**

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | ELEVATION (FT.) | | | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|-------------------------|------------|---|-----------------|----------------|---|---|-----------------|---|---|---|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | PLASTIC LIMIT % | WATER CONTENT % | LIQUID LIMIT % | 1 | 2 | | 3 | 4 | 5 |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | | | | |
| 26 | 2 | 1 | S-9 | 24 | | W | ML | Same | ● | | | | | | | | | |
| 27 | | 2 | | | | | | | | | | | | | | | | |
| 28 | | | | | | | | End of Boring at 27' | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | 546.7 | | | |
| 31 | | | | | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | 541.7 | | | |
| 36 | | | | | | | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | 536.7 | | | |
| 41 | | | | | | | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | | |
| 44 | | | | | | | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | | | 531.7 | | | |
| 46 | | | | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | 526.7 | | | |
| 51 | | | | | | | | | | | | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | | | 521.7 | | | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. SB-1

SHEET No. 1 of 1

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|-------|---|------|------|---|-------------------------------------|--|---|---|---|---|---|-----------------|-----------------|--|----------------|--|---|---|--|---|--|----|----|----|----|----|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | | | | | | | | | | | | | | | | | | | | | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson | | | | | | | | | | | | | | | | | | | | | |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 578.0 | | | | | | | | | | | | | | | | | | | | | |
| POWER AUGER: | | TO | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | | | | | | | | | | | | | | | | | | | | | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/8/22 | | | | | | | | | | | | | | | | | | | | | | |
| CASING: | | TO | WEATHER: Overcast TEMP: 65° F | | | DATE FINISH: 7/8/22 | | | | | | | | | | | | | | | | | | | | | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | | | | | | | | | | | | | | | | | | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | <table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td>PLASTIC LIMIT %</td> <td colspan="2">WATER CONTENT %</td> <td colspan="2">LIQUID LIMIT %</td> </tr> <tr> <td>X</td> <td colspan="2">O</td> <td colspan="2">△</td> </tr> <tr> <td>10</td><td>20</td><td>30</td><td>40</td><td>50</td> </tr> </table> | | | 1 | 2 | 3 | 4 | 5 | PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | X | O | | △ | | 10 | 20 | 30 | 40 | 50 |
| 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | O | | △ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 20 | 30 | 40 | 50 | | | | | | | | | | | | | | | | | | | | | | | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | STANDARD PENETRATION (BLOWS/FT.) | | | | | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|-------------------------|------------|----------------------------------|---|---|---|-------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | |
| 1 | 24 | 4 9 15 | S-1 | 23 | | M | ML | | | | | | | |
| 2 | | 7 13 | | | | | | | | | | | | |
| 3 | 14 | 8 6 4 | S-2 | 17 | | M | ML | | | | | | | |
| 4 | | 4 4 | | | | | | | | | | | | |
| 5 | 4 | 1 2 2 2 | S-3 | 17 | | M | SM | | | | | | 573.0 | |
| 6 | | 2 | | | | | | | | | | | | |
| 7 | | | | | | | End of Boring at 6' | | | | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | 568.0 | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | 563.0 | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | 558.0 | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | 553.0 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. SB-2

SHEET No. 1 of 1

| | | | | | | | | |
|---|------|-------|---|------|------|--|-------------------------------------|--|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri | |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson | |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.5 | |
| POWER AUGER: | | TO | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/8/22 | | |
| CASING: | | TO | WEATHER: Overcast TEMP: 65° F | | | DATE FINISH: 7/8/22 | | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) ● 10 20 30 40 50 | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|-------------------------|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 17 | 5 6 11 | S-1 | 16 | | M ML | | 572.5 | |
| 2 | | 20 | | | | | | | |
| 3 | 17 | 9 9 8 | S-2 | 19 | | M ML | | | Same |
| 4 | | 6 | | | | | | | |
| 5 | 9 | 4 4 5 | S-3 | 14 | | M ML | Same | 572.5 | |
| 6 | | 4 | | | | | | | |
| 7 | | | | | | | End of Boring at 6' | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | 567.5 | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 562.5 | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | 557.5 | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 552.5 | |

REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



PROJECT No. **11507.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **Middletown, NY**

BORING No. SB-3

SHEET No. 1 of 1


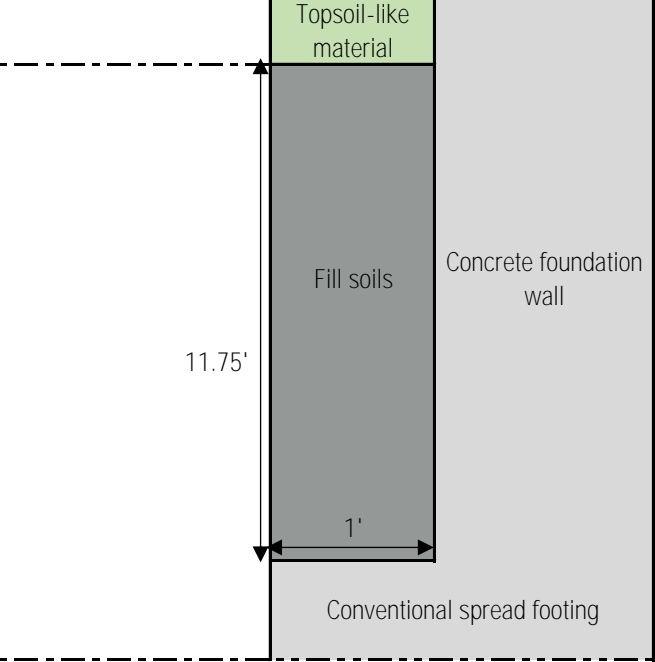
| | | | | | | | |
|---|------|-------|---|------|------|--|-------------------------------------|
| CLIENT: KG+D Architects, PC | | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: William Guerrieri |
| CONTRACTOR: Core Down Drilling LLC | | | | | | | DRILLER: Billy Johnson |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | | | | SURFACE ELEVATION: 577.5 |
| POWER AUGER: | | TO | MON. WELL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | DATUM: See Remarks | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | | DATE START: 7/8/22 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 65° F | | | DATE FINISH: 7/8/22 | |
| DIAMOND CORE: | | TO | DEPTH TO ROCK: Not Encountered' | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |
| Geoprobe 7822DT track-mounted drill rig with Automatic Hammer | | | *CHANGES IN STRATA ARE INFERRED | | | 1 2 3 4 5 PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT % X --- O --- Δ 10 20 30 40 50 STANDARD PENETRATION (BLOWS/FT.) 10 20 30 40 50 | |



| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | ELEVATION (FT.) |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|--|------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | |
| 1 | 35 | 2 14 21 | S-1 | 8 | | M SM | 4" topsoil-like material Bwn c-f SAND, some Silt, little f Gravel | | |
| 2 | | 36 | | | | | | | |
| 3 | 23 | 11 12 11 | S-2 | 18 | | M ML | Bwn SILT, and c-f Gravel, some c-f Sand | | |
| 4 | | 7 | | | | | | | |
| 5 | 6 | 2 3 3 | S-3 | 17 | | M ML | Bwn SILT, little c-f Sand, little f Gravel | | |
| 6 | | 7 | | | | | | | |
| 7 | | | | | | | End of Boring at 6' | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | 567.5 | |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | 562.5 | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | 557.5 | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | 552.5 | |


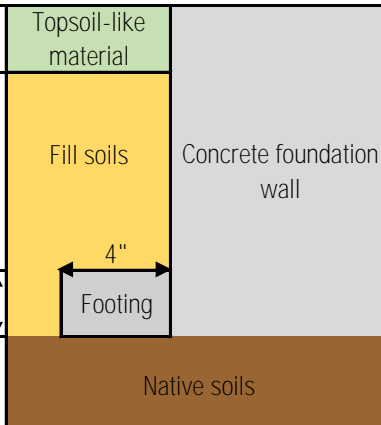
REMARKS: Surface elevations are estimated based on a topographic survey provided by KG&D Architects, PC.



LEGEND FOR SOIL DESCRIPTION


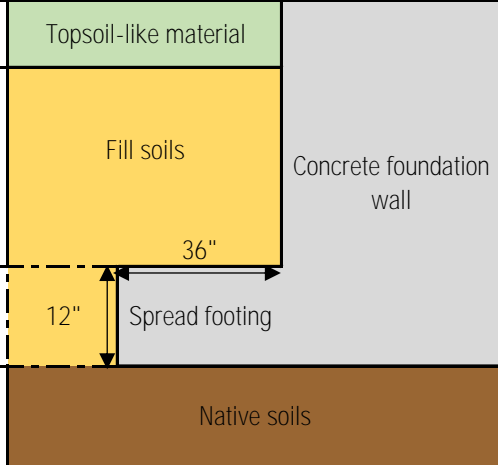
| | | |
|---|---|-------------|
| <u>COARSE GRAINED SOIL</u> (Coarser than No. 200 Sieve) | | |
| <u>DESCRIPTIVE TERM & GRAIN SIZE</u> | | |
| <u>TERM</u> | <u>SAND</u> <u>GRAVEL</u> | |
| coarse - c | No. 4 Sieve to No. 10 Sieve 3" to 3/4" | |
| medium - m | No. 10 Sieve to No. 40 Sieve 3/4" to 3/16" | |
| fine - f | No. 40 Sieve to No. 200 Sieve | |
| <u>COBBLES</u> 3" to 10" | <u>BOULDERS</u> 10" + | |
| <u>GRADATION DESIGNATIONS</u> | <u>PROPORTIONS OF COMPONENT</u> | |
| fine, f | Less than 10% coarse to medium | |
| medium to fine, m-f | Less than 10% coarse | |
| medium, m | Less than 10% coarse and fine | |
| coarse to medium, c-m | Less than 10% fine | |
| coarse, c | Less than 10% medium and fine | |
| coarse to fine, c-f | All greater than 10% | |
| <u>FINE GRAINED SOIL</u> (Finer than No. 200 Sieve) | | |
| <u>DESCRIPTION</u> | <u>PLASTICITY INDEX</u> <u>PLASTICITY</u> | |
| Silt | 0 - 1 none | |
| Clayey Silt | 2 - 5 slight | |
| Silt & Clay | 6 - 10 low | |
| Clay & Silt | 11 - 20 medium | |
| Silty Clay | 21 - 40 high | |
| Clay | greater than 40 very high | |
| <u>PROPORTION</u> | | |
| <u>DESCRIPTIVE TERM</u> | <u>PERCENT OF SAMPLE WEIGHT</u> | |
| trace | 1 - 10 | |
| little | 10 - 20 | |
| some | 20 - 35 | |
| and | 35 - 50 | |
| The primary component is fully capitalized | | |
| <u>COLOR</u> | | |
| Blue - blue | Gy - gray | Wh - white |
| Blk - black | Or - orange | Yl - yellow |
| Bwn - brown | Rd - red | Lgt - light |
| Gn - green | Tn - tan | Dk - dark |
| <u>SAMPLE NOTATION</u> | | |
| S - Split Spoon Soil Sample | WOC - Weight of Casing | |
| U - Undisturbed Tube Sample | WOR - Weight of Rods | |
| C - Core Sample | WOH - Weight of Hammer | |
| B - Bulk Soil Sample | PPR - Compressive Strength based on Pocket Penetrometer | |
| NR - No Recovery of Sample | TV - Shear Strength (tsf) based on Torvane | |
| <u>ADDITIONAL CLASSIFICATIONS</u> | | |
| New York City Building Code soil classifications are given in parentheses at the end of each description of material, if applicable. See sections 1804.2 of the 2008 Building Code for further details. | | |



|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-1 | | |
|---|----------|------------------------------------|--|---------------------|--|--|--|------------------------------|
| | | Project: Twin Towers Middle School | | | | | | |
| | | Location: Middletown, NY | | | | | | |
| (800) 829-6531 | | | | | | | | |
| Client: KG&D Architects PC | | | Depth to Seepage: Not Encountered | | | Inspector: Will Guerrieri | | |
| Contractor: Limited Access Drilling Services LLC | | | Depth to Groundwater: Not Encountered | | | Surface Elevation: 578.6 | | |
| Equipment: John Deere 60G mini-excavator | | | Depth to Bedrock: Not Encountered | | | Datum: See Remarks | | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | | REMARKS | |
| Sample No. | Moisture | | | | Foundation Profile | Foundation Profile | | |
| | M | SM | 4" topsoil-like material Gy-bwn c-f SAND, and Silt, some c-f Gravel, trace brick fragments (FILL) End of test pit at 11.75' feet bgs | -0.33 |  | <p>Corrugated drain encountered within test pit</p> <p>Test pit could not be excavated to the bottom of footing depth due to the limitations of the mini-excavator. Top of footing elevation is approximately 11.75 feet bgs.</p> <p>Surface elevations are estimated based on a topographic survey provided by KG&D Architects.</p> | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | PROPORTION (boulders & cobbles) | | MOISTURE | |
| Boulder: 10" (+) Cobble: 3-10" Gravel: 3/16"-3" | | | Sand: No.200 Sieve-3/16" Silt/Clay: No.200 Sieve (-) | | trace: 0-10% little: 10-20% some: 20-35% and: 35-50% | | sparse: 0-10% few: 10-35% many: 35-65% | D: dry M: moist W: wet |

|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-1 | |
|---|----------|------------------------------------|--|---------------------|--|--|----------|
| | | Project: Twin Towers Middle School | | | | | |
| | | Location: Middletown, NY | | | | | |
| (800) 829-6531 | | | | | | | |
| Client: KG&D Architects PC | | | Depth to Seepage: Not Encountered | | | Inspector: Will Guerrieri | |
| Contractor: Limited Access Drilling Services LLC | | | Depth to Groundwater: Not Encountered | | | Surface Elevation: 578.6 | |
| Equipment: John Deere 60G mini-excavator | | | Depth to Bedrock: Not Encountered | | | Datum: See Remarks | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | REMARKS | |
| Sample No. | Moisture | | | | | | |
| | M | SM | 4" topsoil-like material | -0.33 |  | <p>Corrugated drain encountered within test pit</p> <p>Test pit could not be excavated to the bottom of footing depth due to the limitations of the mini-excavator. Top of footing elevation is approximately 11.75 feet bgs.</p> <p>Surface elevations are estimated based on a topographic survey provided by KG&D Architects.</p> | |
| | | | Gy-bwn c-f SAND, and Silt, some c-f Gravel, trace brick fragments (FILL) | | | | |
| | | | End of test pit at 11.75' feet bgs | | | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | PROPORTION (boulders & cobbles) | | MOISTURE |
| Boulder: 10"(+) | | | Sand: No.200 Sieve-3/16" | | sparse: 0-10% | | D: dry |
| Cobble: 3-10" | | | Silt/Clay: No.200 Sieve (-) | | few: 10-35% | | M: moist |
| Gravel: 3/16"-3" | | | | | many: 35-65% | | W: wet |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-2 | | |
|---|----------|------------------------------------|---|---------------------------------------|---|---|---|--|
| | | Project: Twin Towers Middle School | | | | | | |
| | | Location: Middletown, NY | | | | | | |
| (800) 829-6531 | | | | | | | | |
| Client: KG&D Architects PC | | | | Depth to Seepage: Not Encountered | | Inspector: Will Guerrieri | | |
| Contractor: Limited Access Drilling Services LLC | | | | Depth to Groundwater: Not Encountered | | Surface Elevation: 567.4 | | |
| Equipment: John Deere 60G mini-excavator | | | | Depth to Bedrock: Not Encountered | | Datum: See Remarks | | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | | REMARKS | |
| Sample No. | Moisture | | | | | | | |
| | | | 4" topsoil-like material | -0.33 |  | | <p>Corrugated drain encountered within test pit.</p> <p>Surface elevations are estimated based on a topographic survey provided by KG&D Architects.</p> | |
| M | | SM | Tn-bwn c-f SAND, and Silt, some c-f Gravel (FILL) | -3.33 | | | | |
| M | | SM | Bwn c-f SAND, some Silt, little c-f Gravel | -4.25 | | | | |
| | | | End of test pit at 4.25 feet bgs | | | | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | | PROPORTION (boulders & cobbles) | | MOISTURE |
| Boulder: 10"(+) Cobble: 3-10" Gravel: 3/16"-3" | | | Sand: No.200 Sieve-3/16" Silt/Clay: No.200 Sieve (-) | | | trace: 0-10% little: 10-20% some: 20-35% and: 35-50% | | sparse: 0-10% few: 10-35% many: 35-65% |
| | | | | | | | | D: dry M: moist W: wet |

|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-2 | | |
|---|----------|------------------------------------|---|---------------------|--|---|--|------------------------------|
| | | Project: Twin Towers Middle School | | | | | | |
| | | Location: Middletown, NY | | | | | | |
| (800) 829-6531 | | | | | | | | |
| Client: KG&D Architects PC | | | Depth to Seepage: Not Encountered | | | Inspector: Will Guerrieri | | |
| Contractor: Limited Access Drilling Services LLC | | | Depth to Groundwater: Not Encountered | | | Surface Elevation: 567.4 | | |
| Equipment: John Deere 60G mini-excavator | | | Depth to Bedrock: Not Encountered | | | Datum: See Remarks | | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | REMARKS | | |
| Sample No. | Moisture | | | | | | | |
| | | | 4" topsoil-like material | -0.33 |  | <p>Corrugated drain encountered within test pit.</p> <p>Surface elevations are estimated based on a topographic survey provided by KG&D Architects.</p> | | |
| M | | SM | Tn-bwn c-f SAND, and Silt, some c-f Gravel (FILL) | -3.33 | | | | |
| M | | SM | Bwn c-f SAND, some Silt, little c-f Gravel | -4.25 | | | | |
| | | | End of test pit at 4.25 feet bgs | | | | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | | PROPORTION (boulders & cobbles) | | MOISTURE |
| Boulder: 10"(+) Cobble: 3-10" Gravel: 3/16"-3" | | | Sand: No.200 Sieve-3/16" Silt/Clay: No.200 Sieve (-) | | | sparse: 0-10% few: 10-35% many: 35-65% | | D: dry M: moist W: wet |
| | | | trace: 0-10% little: 10-20% some: 20-35% and: 35-50% | | | | | |

|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-3 | | |
|---|----------|------------------------------------|---|---------------------------------------|---|---------------------------|---|------------------------------|
| | | Project: Twin Towers Middle School | | | | | | |
| | | Location: Middletown, NY | | | | | | |
| (800) 829-6531 | | | | | | | | |
| Client: KG&D Architects PC | | | | Depth to Seepage: Not Encountered | | Inspector: Will Guerrieri | | |
| Contractor: Limited Access Drilling Services LLC | | | | Depth to Groundwater: Not Encountered | | Surface Elevation: 570.0 | | |
| Equipment: John Deere 60G mini-excavator | | | | Depth to Bedrock: Not Encountered | | Datum: See Remarks | | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | | REMARKS | |
| Sample No. | Moisture | | | | | | | |
| | M | SM | 4" topsoil-like material | -0.33 |  | | Surface elevations are estimated based on a topographic survey provided by KG&D Architects. | |
| | M | | Bwn c-f SAND, and Silt, some c-f Gravel (FILL) | -3.67 | | | | |
| | M | SM | Bwn c-f SAND, some Silt, little c-f Gravel | -4.67 | | | | |
| | | | End of test pit at 4.67 feet bgs | | | | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | PROPORTION (boulders & cobbles) | | MOISTURE | |
| Boulder: 10"(+) Cobble: 3-10" Gravel: 3/16"-3" | | | Sand: No.200 Sieve-3/16" Silt/Clay: No.200 Sieve (-) | | trace: 0-10% little: 10-20% some: 20-35% and: 35-50% | | sparse: 0-10% few: 10-35% many: 35-65% | D: dry M: moist W: wet |

|  | | W.O. No. 11507.01 | | Date: 7/20/2022 | | TEST PIT TP-3 | | |
|---|----------|------------------------------------|---|---------------------|--|---|--|------------------------------|
| | | Project: Twin Towers Middle School | | | | | | |
| | | Location: Middletown, NY | | | | | | |
| (800) 829-6531 | | | | | | | | |
| Client: KG&D Architects PC | | | Depth to Seepage: Not Encountered | | | Inspector: Will Guerrieri | | |
| Contractor: Limited Access Drilling Services LLC | | | Depth to Groundwater: Not Encountered | | | Surface Elevation: 570.0 | | |
| Equipment: John Deere 60G mini-excavator | | | Depth to Bedrock: Not Encountered | | | Datum: See Remarks | | |
| SAMPLES | | Unified Soil Classification | Soil Profile | Strata Change (ft.) | Foundation Profile | REMARKS | | |
| Sample No. | Moisture | | | | | | | |
| | | | 4" topsoil-like material | -0.33 |  | Surface elevations are estimated based on a topographic survey provided by KG&D Architects. | | |
| M | | SM | Tn-bwn c-f SAND, and Silt, some c-f Gravel (FILL) | -3.67 | | | | |
| M | | SM | Bwn c-f SAND, some Silt, little c-f Gravel | -4.67 | | | | |
| | | | End of test pit at 4.67 feet bgs | | | | | |
| PARTICLE SIZE | | | PROPORTION (exclusive of boulders & cobbles) | | | PROPORTION (boulders & cobbles) | | MOISTURE |
| Boulder: 10"(+) Cobble: 3-10" Gravel: 3/16"-3" | | | Sand: No.200 Sieve-3/16" Silt/Clay: No.200 Sieve (-) | | | sparse: 0-10% few: 10-35% many: 35-65% | | D: dry M: moist W: wet |
| | | | trace: 0-10% little: 10-20% some: 20-35% and: 35-50% | | | | | |



1279 Route 300
 Newburgh, NY 12550
 (845) 567-6656

INFILTRATION TEST DATA

W.O. No.: 11507.01 Lot No.: _____ Date: 7/12/2022

Client: Enlarged City School District of Middletown

Project: Twin Towers Middle School Improvements

Project Engineer: Scott Cohen, P.E.

Inspector: Jessica Ouderkirk

Infiltration Test Location: (see reverse) _____

Weather Conditions: Sunny Temperature: 95 F

| TEST HOLE No. | TEST HOLE DEPTH | TEST HOLE DIA. | PERCOLATION TEST RUNS | | | | | | | STABLE RATE (in/hr) |
|---------------|-----------------|----------------|---|---------|--------|---------|---------|---------|--|---------------------|
| | | | Drop in water levels (inches) at 1 hour intervals | | | | | | | |
| INF-1 | 5' | 4" | | | 7.00 | 3.50 | 4.00 | 2.00 | | 2.00 |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | 4 hours | | |

COMMENTS:
 INF-1 advanced within the footprint of the court surface play area.

| | | | | | | | | | | |
|-------|----|----|------|---------|--------|---------|---------|---------|--|------|
| INF-2 | 5' | 4" | | | 5.50 | 2.00 | 1.00 | 1.00 | | 1.00 |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | 4 hours | | |

COMMENTS:
 INF-2 advanced adjacent to the cafeteria addition.

Sketch Requirements

(To Be Completed On Back of Sheet)

Indicate North Indicate Nearest Roadway

Indicate Property Lines Indicate Off-Sets from 2 Adjacent Property Lines



1279 Route 300
 Newburgh, NY 12550
 (845) 567-6656

INFILTRATION TEST DATA

W.O. No.: 11507.01 Lot No.: _____ Date: 7/12/2022

Client: Enlarged City School District of Middletown

Project: Twin Towers Middle School Improvements

Project Engineer: Scott Cohen, P.E.

Inspector: Jessica Ouderkirk

Infiltration Test Location: (see reverse) _____

Weather Conditions: Sunny Temperature: 95 F

| TEST HOLE No. | TEST HOLE DEPTH | TEST HOLE DIA. | PERCOLATION TEST RUNS | | | | | | STABLE RATE (in/hr) |
|---------------|-----------------|----------------|---|---------|--------|---------|---------|---------|---------------------|
| | | | Drop in water levels (inches) at 1 hour intervals | | | | | | |
| INF-3 | 5' | 4" | | 2.00 | 1.50 | 0.00 | 3.00 | | 3.00 |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | 4 hours | |

COMMENTS:
 INF-3 advanced adjacent to the cafeteria addition.

| | | | | | | | | | |
|-------|----|----|------|---------|--------|---------|---------|---------|------|
| INF-4 | 5' | 4" | | 1.00 | 1.00 | 0.00 | 1.00 | | 1.00 |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | 4 hours | |

COMMENTS:
 INF-4 advanced within eastern portion of bus pick-up/drop-off loop.

Sketch Requirements

(To Be Completed On Back of Sheet)

Indicate North Indicate Nearest Roadway

Indicate Property Lines Indicate Off-Sets from 2 Adjacent Property Lines



1279 Route 300
 Newburgh, NY 12550
 (845) 567-6656

INFILTRATION TEST DATA

W.O. No.: 11507.01 Lot No.: _____ Date: 7/12/2022

Client: Enlarged City School District of Middletown

Project: Twin Towers Middle School Improvements

Project Engineer: Scott Cohen, P.E.

Inspector: Jessica Ouderkirk

Infiltration Test Location: (see reverse) _____

Weather Conditions: Sunny Temperature: 95 F

| TEST HOLE No. | TEST HOLE DEPTH | TEST HOLE DIA. | PERCOLATION TEST RUNS | | | | | | STABLE RATE (in/hr) |
|---------------|-----------------|----------------|---|---------|--------|---------|---------|-------|---------------------|
| | | | Drop in water levels (inches) at 1 hour intervals | | | | | | |
| INF-5 | 5' | 4" | | 24.00 | 19.00 | 19.00 | 20.00 | 20.00 | |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | | 4 hours |

COMMENTS:
 INF-5 advanced within the western portion of the bus pick-up/drop-off loop.

| | | | | | | | | |
|-------|----|----|------|---------|--------|---------|---------|------|
| INF-6 | 5' | 4" | | 6.00 | 6.00 | 5.00 | 4.00 | 4.00 |
| | | | TIME | 0:00:00 | 1 hour | 2 hours | 3 hours | |

COMMENTS:
 INF-6 advanced within the parent pick-up/drop-off loop.

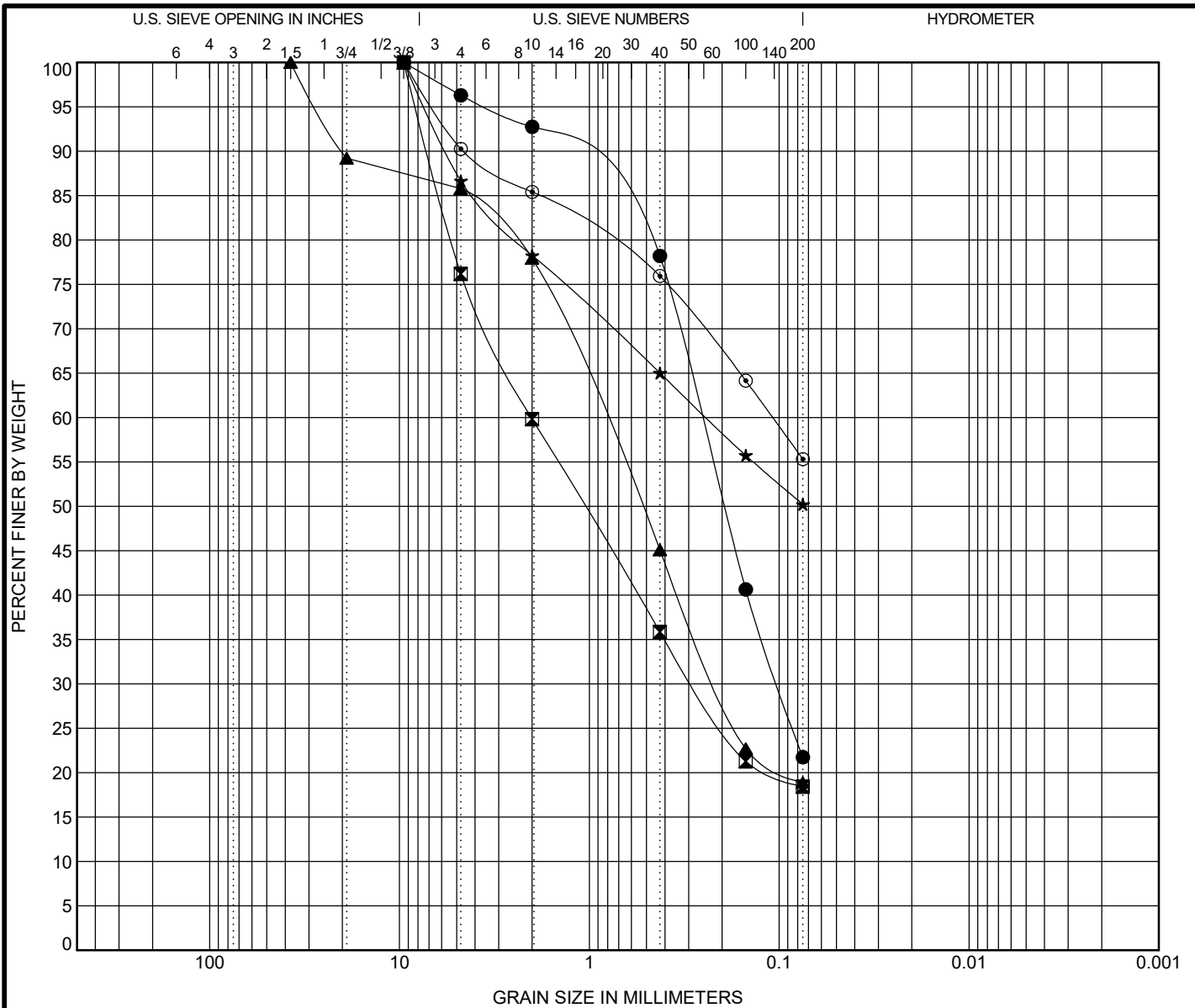
Sketch Requirements

(To Be Completed On Back of Sheet)

Indicate North Indicate Nearest Roadway

Indicate Property Lines Indicate Off-Sets from 2 Adjacent Property Lines

APPENDIX II



| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---------|--------|------|--------|--------|------|--------------|
| | coarse | fine | coarse | medium | fine | |

| Sample Identification | Classification | | | | | | WC% | LL | PL | PI | Cc | Cu | |
|-----------------------|--|--|--|--|--|--|------|----|----|----|----|----|--|
| ● B-10 2.0 S-2 | Bwn m-f SAND, some Silt, trace f Gravel | | | | | | 10.8 | | | | | | |
| ⊠ B-13 2.0 S-2 | Bwn c-f SAND, some f Gravel, little Silt | | | | | | 10.8 | | | | | | |
| ▲ B-14 4.0 S-3 | Bwn m-f SAND, little Silt, little c Gravel | | | | | | 7.6 | | | | | | |
| ★ B-2 2.0 S-2 | Bwn SILT, and m-f Sand, little f Gravel | | | | | | 10.7 | | | | | | |
| ⊙ B-5 0.0 S-1 | Bwn SILT, and f Sand, trace f Gravel | | | | | | 17.0 | | | | | | |

| Sample Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay | Source of Material |
|-----------------------|------|-------|-------|-----|---------|-------|-------|-------|--------------------|
| ● B-10 2.0 S-2 | 9.5 | 0.257 | 0.102 | | 3.7 | 74.6 | 21.7 | | Boring |
| ⊠ B-13 2.0 S-2 | 9.5 | 2.019 | 0.28 | | 23.8 | 57.8 | 18.4 | | Boring |
| ▲ B-14 4.0 S-3 | 37.5 | 0.859 | 0.211 | | 14.2 | 66.9 | 18.9 | | Boring |
| ★ B-2 2.0 S-2 | 9.5 | 0.242 | | | 13.3 | 36.4 | 50.2 | | Boring |
| ⊙ B-5 0.0 S-1 | 9.5 | 0.108 | | | 9.7 | 35.0 | 55.3 | | Boring |

GRAIN SIZE DISTRIBUTION 11507.01.GPJ_TECTONIC ENG.GDT 8/18/22



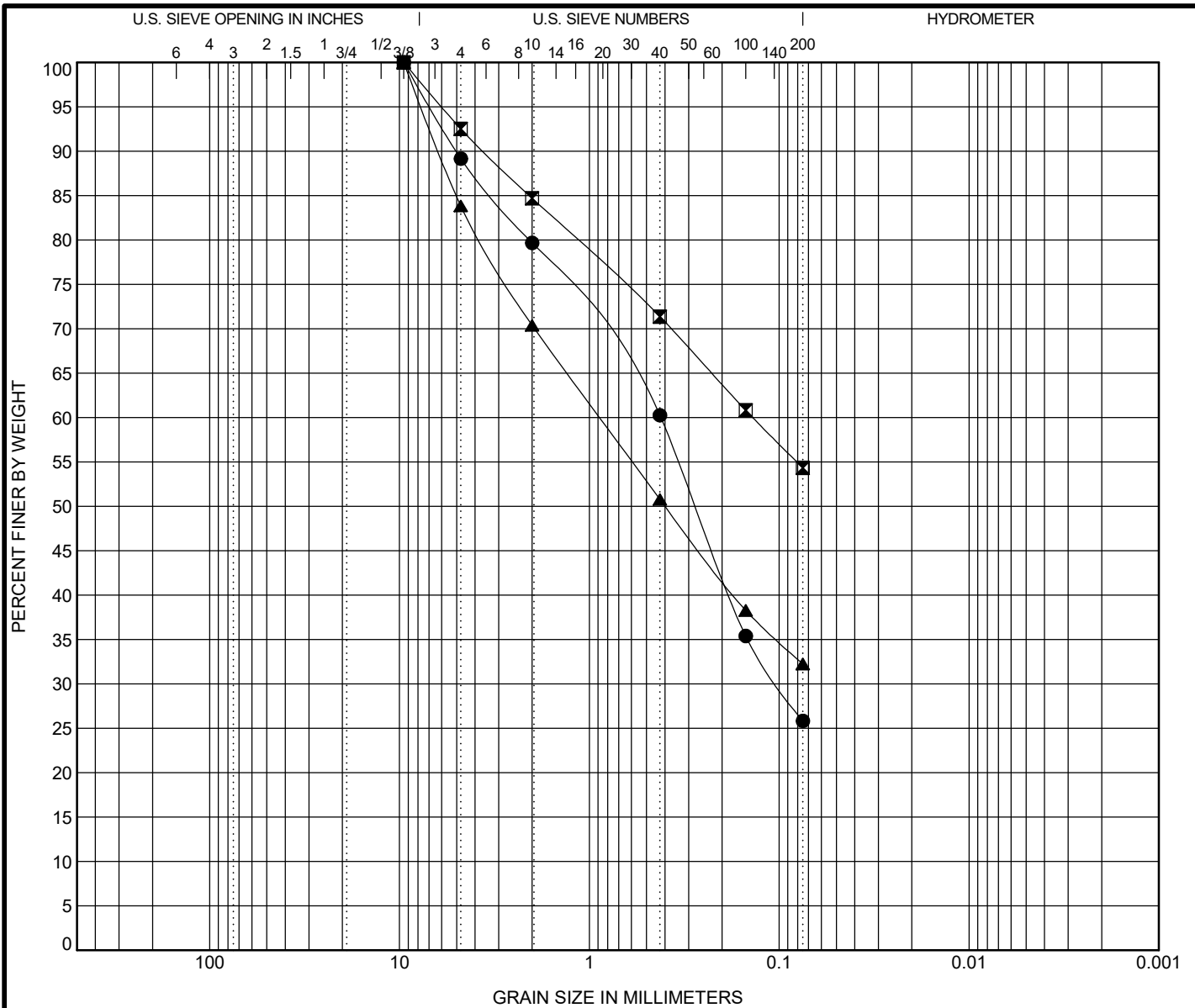
280 Little Britain Road, Bldg. 2
 Newburgh, NY 12550
 Telephone: (845) 563-9081 Fax: (845) 563-9085

GRAIN SIZE DISTRIBUTION

Project No: 11507.01 Date: 8/18/22

Project: Twin Towers Middle School

Location: Middletown, NY



| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---------|--------|------|--------|--------|------|--------------|
| | coarse | fine | coarse | medium | fine | |

| Sample Identification | Classification | | | | | | WC% | LL | PL | PI | Cc | Cu |
|-----------------------|--|--|--|--|--|--|------|----|----|----|----|----|
| ● B-8 4.0 S-3 | Bwn m-f SAND, some Silt, little f Gravel | | | | | | 11.2 | | | | | |
| ☒ SB-1 0.0 S-1 | Bwn SILT, and m-f Sand, trace f Gravel | | | | | | 8.8 | | | | | |
| ▲ SB-3 0.0 S-1 | Bwn c-f SAND, some Silt, little f Gravel | | | | | | 7.2 | | | | | |

| Sample Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay | Source of Material |
|-----------------------|------|-------|-------|-----|---------|-------|-------|-------|--------------------|
| ● B-8 4.0 S-3 | 9.5 | 0.42 | 0.101 | | 10.8 | 63.3 | 25.8 | | Boring |
| ☒ SB-1 0.0 S-1 | 9.5 | 0.138 | | | 7.5 | 38.2 | 54.3 | | Boring |
| ▲ SB-3 0.0 S-1 | 9.5 | 0.881 | | | 16.2 | 51.6 | 32.2 | | Boring |

GRAIN SIZE DISTRIBUTION 11507.01.GPJ TECTONIC ENG.GDT 8/18/22



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 Telephone: (845) 563-9081 Fax: (845) 563-9085

GRAIN SIZE DISTRIBUTION

Project No: 11507.01 Date: 8/18/22

Project: Twin Towers Middle School

Location: Middletown, NY

| Boring # | Depth (Ft.) | Sample # | Specimen Description | | | USCS | Water Content | Max. Dry Density (pcf) | Optimum W. C. (%) | Liquid Limit | Plastic Limit | Source of Material |
|----------|-------------|----------|--|--------|---------|------|---------------|------------------------|-------------------|--------------|---------------|--------------------|
| | | | % Gravel | % Sand | % Fines | | | | | | | |
| B-10 | 2.0 | S-2 | Bwn m-f SAND, some Silt, trace f Gravel | | | | 11 | | | | | Boring |
| | | | 3.7 | 74.6 | 21.7 | | | | | | | |
| B-13 | 2.0 | S-2 | Bwn c-f SAND, some f Gravel, little Silt | | | | 11 | | | | | Boring |
| | | | 23.8 | 57.8 | 18.4 | | | | | | | |
| B-14 | 4.0 | S-3 | Bwn m-f SAND, little Silt, little c Gravel | | | | 8 | | | | | Boring |
| | | | 14.2 | 66.9 | 18.9 | | | | | | | |
| B-2 | 2.0 | S-2 | Bwn SILT, and m-f Sand, little f Gravel | | | | 11 | | | | | Boring |
| | | | 13.3 | 36.4 | 50.2 | | | | | | | |
| B-5 | 0.0 | S-1 | Bwn SILT, and f Sand, trace f Gravel | | | | 17 | | | | | Boring |
| | | | 9.7 | 35.0 | 55.3 | | | | | | | |
| B-7 | 6.0 | S-4 | Bwn-Tn SILT, little m-f Sand **NON-PLASTIC: SAMPLE WILL NOT ROLL TO 1/8** | | | | 21 | | | | | Boring |
| B-8 | 4.0 | S-3 | Bwn m-f SAND, some Silt, little f Gravel | | | | 11 | | | | | Boring |
| | | | 10.8 | 63.3 | 25.8 | | | | | | | |
| SB-1 | 0.0 | S-1 | Bwn SILT, and m-f Sand, trace f Gravel | | | | 9 | | | | | Boring |
| | | | 7.5 | 38.2 | 54.3 | | | | | | | |
| SB-3 | 0.0 | S-1 | Bwn c-f SAND, some Silt, little f Gravel | | | | 7 | | | | | Boring |
| | | | 16.2 | 51.6 | 32.2 | | | | | | | |

SUMMARY OF LAB BULK SAMPLES 11507.01.GPJ TECTONIC ENG.GDT 8/18/22



280 Little Britain Road, Bldg. 2
 Newburgh, NY 12550
 Telephone: (845) 563-9081 Fax: (845) 563-9085

Summary of Laboratory Results

Project No: 11507.01 Date: 8/18/22
 Project: Twin Towers Middle School
 Location: Middletown, NY

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Tectonic 

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E-mail: adelaidemail@adelaidellc.com
Fax: 845.278.7750

RENOVATION SURVEY FOR ASBESTOS-CONTAINING MATERIALS, LEAD-BASED PAINT & PCBs

PERFORMED AT:

Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940
Adelaide Project# MIDD:22005.00-IN

PREPARED FOR:

William Bartlett
Director of Facilities III
Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940-3298

PREPARED BY:

Jason Fullum
January 25, 2023 Amended

REVIEWED BY:

A handwritten signature in blue ink, appearing to read "Stephanie A. Soter".

Stephanie A. Soter
President

| Version | Date | Prepared by |
|---------|-----------|--------------|
| 1 | 1/23/2022 | Robert See |
| 2 | 1/27/2022 | Robert See |
| 3 | 1/28/2022 | Robert see |
| 4 | 1/25/2023 | Jason Fullum |

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1.0 Introduction

1.1 Scope of Work / Project Personnel

Adelaide Environmental Health Associates, Inc. (**Adelaide**) performed an Asbestos and Lead Based Paint Survey for Building/Structure Demolition, Renovation, Remodeling and/or Repair, in conformance with ALL Federal, State and Local regulations, on January 7-12, 2022, January 25, 2022 for Enlarged City School District of Middletown throughout the ground, first, second and third floors located at Twin Towers Middle School, 112 Grand Avenue, Middletown, New York 10940. The survey included 1) review of building/structure plans, provided by KG&D Architects, for references to the scope of work for interior total renovations, building addition and crawlspace cleanup. potentially affecting hazardous materials used in construction, renovation or repair; 2) review of previous inspections and asbestos abatements preformed at the location and, 3) a visual inspection/assessment for hazardous materials throughout accessible interior and/or exterior spaces of the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired. Certified **Adelaide** personnel (Appendix E) Robert See (NYS Asbestos Inspector/Cert. #06-09124 and EPA Lead-based Paint Risk assessor/Cert. #LBP-R-101137-2) and Louis Johnson III (NYS Asbestos Inspector/Cert. #08-05954 and EPA Lead-based Paint Risk Assessor/Cert. #LBP-R-1151914-2), performed the visual assessment throughout inspection area(s) identified.

On January 25, 2022 **Adelaide** personnel (Appendix E) Philip J. Page (NYS Asbestos Inspector/Cert. #12-10888) returned to the site to take additional samples of material that was deemed insufficient to analyze by the laboratory.

On January 16, 2023 **Adelaide** personnel (Appendix E) Jason Fullum (NYS Asbestos Inspector/Cert. #97-20574 and EPA Lead-based Paint Risk Assessor/Cert. #LBP-R-12098-2) returned to the site to take additional samples of material to accommodate the additional scope of work for the windows and the site work.

1.2 Executive Summary

Adelaide inspected all areas that will be affected by the proposed work throughout the school for suspect ACM and LBP. **Adelaide** collected one hundred and fifty-two (152) suspect asbestos samples/layers and one hundred and thirty-seven (137) XRF readings [including calibrations] from the above-mentioned area(s). Eleven (11) samples/homogenous areas tested positive or assumed for asbestos and six (6) XRF readings tested positive for lead-based paint.

As per NYS protocol, **Adelaide** also collected seven (7) samples of the (SOFP) containing vermiculite. Zero (0) samples/homogenous areas tested positive asbestos.

On January 25, 2022 **Adelaide** collected five (5) suspect asbestos samples/layers. One (1) samples/homogenous area tested positive for asbestos.

On January 16, 2023 **Adelaide** collected twelve (12) suspect asbestos samples/layers, nine (9) XRF readings (including calibrations) and four (4) PCB samples. Three (3) samples/homogenous areas tested positive for asbestos, zero (0) XRF readings tested positive for lead-based paint and zero (0) samples tested positive for PCBs.

The following indicates assumed materials (electrical wire insulation) due to a need for a power shut down at the time of the inspection.

There are **asbestos materials that will be impacted** by this scope of work as described in section 1.1. These materials are listed in section 2.1.

NOTE: The following previous reports were utilized and referenced when conducting this inspection: (see Appendix F)

- Louis Berger report dated April 17, 2015
- **Adelaide** report dated August 22, 2017
- **Adelaide** report dated December 20, 2018
- **Adelaide** report dated March 6, 2020
- **Adelaide** report dated December 26, 2021

1.2.1 Conclusions and Recommendations

The following conclusions and recommendations are prepared by **Adelaide** as per the provided scope of work for Building/Structure Demolition, Renovation, Remodeling and/or Repair. Should the scope of work change, it is recommended that the findings be revisited to determine if additional sampling will be required to satisfy ALL Federal, State and Local regulations.

1.2.2 Asbestos-containing Materials (ACM)

- This survey concluded that the materials listed in Section 2.1 either tested and/or are assumed ***positive for asbestos***.
- There are asbestos materials that will be impacted by this scope of work. These materials are listed in section 2.1. Refer to Appendix A for the approximate location of the above materials in the affected scope of work.
- There are positive debris samples and these area(s) must be abated prior to Building/Structure Demolition, Renovation, Remodeling and/or Repair. Contaminated area(s), entire space, must be vacated and isolated. (Refer to Section 6.0)
- Subpart 56-5(h) of 12 NYCRR Part 56 requires that no demolition, renovation, remodeling, or repair work be commenced by any owner or the owner's agent prior to the completion of asbestos abatement. Asbestos abatement must be performed by an asbestos abatement contractor that maintains a current asbestos handling license, and employs NYSDOL/NYCDEP certified asbestos handlers and supervisors. It is recommended that a 12 NYCRR 56 certified Project Monitor oversee abatement activities.
- Subpart 56-5(g) of 12 NYCRR Part 56 specifies requirements for transmittal of asbestos survey information by the owner or owner's agent. (1) One copy of the asbestos survey report shall be sent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling, or repair work under applicable State or local laws. (2) If controlled demolition or pre-demolition activities will be performed, one copy of the asbestos survey report shall be submitted

to the appropriate Asbestos Control Bureau district office. (3) One copy of the asbestos survey report must be kept on the construction site throughout the duration of the asbestos project and any associated demolition, renovation, remodeling, or repair project.

1.2.3 Lead-based Paint (LBP)

- This survey concluded that the materials listed in Section 2.4 tested **positive for lead-based paint**.
- These areas must be either abated or lead-safe work practices must be implemented during the demolition, renovation, remodeling, or repair activities if these areas are to be disturbed.

1.2.4 PolyChlorinated Biphenyls (PCB)

- This survey concluded that the materials listed in Appendix G tested **negative for PCBs**.

2.0 Summary of Hazardous Materials

2.1 Summary of Identified ACM/PACM

KEY: **ACM** = Materials containing greater than 1% of asbestos; **HA** = Homogeneous Area; **LF** = Linear Feet; **SF** = Square Feet; **PACM** = Presumed Asbestos-containing Materials; **Friable** = ACM capable of being released into air, and which can be crumbled, pulverized, powdered, crushed or exposed by hand-pressure; ^A = Material is considered non-friable solely in an intact and undisturbed state, however, may be rendered friable if pulverized or crumbled while in dry state.

Samples collected by **Adelaide** January 7-12 & 25, 2022

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|----|---|---|--------------|-----------------------|----------------------|
| 15 | Mastic under 12"x12" Floor tile white w/ gray mottles | 3rd Floor rooms 322, 320, 304, 302, 323, 2nd Floor rooms 236, 234, 217, 215, 208, 219, 1st Floor Rooms E124, 120, 112, 103, 129, 127, 125, Staff lounge kitchenette, AS-3, Ground Floor IT room, Library under carpet | 15,440 SF | Good | No |
| 29 | Window glazing compound - soft black | Stairwell store front glass enclosures, cafeteria serving area office and kitchen office | 430 LF | Good | No |
| 39 | Residual Acoustical Plaster | Above Ceiling in Catwalk Area of Auditorium | 6,000 SF | Significantly Damaged | Yes |
| 40 | 12"x12 Dark Brown Floor Tile and Mastic | Room AS-4 | 44 SF | Damaged | No |

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|---------|---|---|------------------|-----------------------|----------------------|
| 41 | Layered Paper Insulation | Ground Floor Crawlspace | 1,200 LF | Damaged | Yes |
| 42 | Air Cell Pipe Insulation | Ground Floor Crawlspace | 1,100 LF | Damaged | Yes |
| 45 | Debris | Ground Floor Crawlspace (off Room LL1) rear space | 4,500 SF | Significantly Damaged | Yes |
| 48 | Debris | Ground Floor Crawlspace (from boiler room) 40' from entry | 6,500 SF | Significantly Damaged | Yes |
| 50 | Debris | Ground Floor Crawlspace (from boiler room) far back wall | 2,800 SF | Significantly Damaged | Yes |
| Assumed | Mudded fittings tested in previous inspections | Ground Floor Crawlspace | 300 LF | Damaged | Yes |
| Assumed | Electrical Wire Insulation and Panel Components | Throughout | Unknown Quantity | Unknown | No |

Samples collected by **Adelaide** January 16, 2023

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|----|--------------------------------|-----------------|----------------|-----------------------|----------------------|
| 1 | Caulk at Top of Window Opening | Room 107 | 4 LF/ Opening | Significantly Damaged | No |
| 2 | Brown Sealant at Wood Opening | | 24 LF/ Opening | | No |
| 3 | Old Caulk Under Newer Caulking | | 24 LF/ Opening | | No |

The window in Room 107 was taken apart for investigative purposes and these positive materials were found underneath the metal/wood trim and new caulking materials.

2.2 Summary of Identified Non-ACM

Samples collected by **Adelaide** January 7-12&25, 2022

| Identified Non-ACM | Material Location(s) & HA's |
|---|---|
| Spray Applied Fire Proofing | HA 001/ Throughout |
| Window caulk tan | HA002/ Throughout interior windows |
| Window sill plate slate | HA 003/ Throughout |
| 2x4' Ceiling tile patches | HA 004/ Scattered throughout 1 st , 2 nd and 3 rd floors |
| Resin counter tops and grout between sections | HA 005, 017/ All Sciences classrooms |


| Identified Non-ACM | Material Location(s) & HA's |
|---|--|
| 2x4 Patch ceiling tiles (width wise fissures) | HA 006/ Scattered Throughout 1 st , 2 nd , and 3 rd Floors |
| Wall plaster skim and base coats | HA 007/ Throughout |
| Texture coating on plaster ceiling | HA 008/ Throughout 1 st , 2 nd , and 3 rd Floors Corridors |
| Ceiling plaster skim and base coats | HA 009/ Throughout 1 st , 2 nd , and 3 rd Floors Corridors and Bathrooms |
| 12"x12" Floor tile white w/aqua and material beneath | HA's 010,011/ 3 rd Floor rooms 321, 314, 312,310, 308, 315, 307, 305, 2 nd floor rooms 230, 228, 225, 223, 221, 214, 216, 218, 212, 207, 205, 204, 206, 202, 200, 1 st Floor rooms 119, Main office Under Carpet. |
| 12x12" Floor tile white with gray mottles (on positive mastic) and material beneath | HA's 011,012, 014/ 3 rd Floor rooms 322, 320, 304, 302, 323, 2 nd Floor rooms 236, 234, 217, 215, 208, 219, 1 st Floor Rooms E124, 120, 112, 103, 129, 127, 125, Staff lounge kitchenette, AS-3, Ground Floor IT room, Library under carpet |
| Window glazing compound rubber vinyl type | HA 013/ HA002/ Throughout ground floor, 1 st , 2 nd , 3 rd , interior windows of hallways, classrooms and main offices |
| Leveling compound | HA 015, 022/ Room 323, Band room |
| Ceiling Plaster smooth skim and base coat | HA 016/ 1 st , 2 nd , and 3 rd Floors Bathrooms and custodial closets |
| Vibration cloth canvas tan | HA 018/ Room 222 |
| 2'x4' Patch ceiling tile (length wise fissures) | HA 019/ Scattered Throughout 1 st , 2 nd , and 3 rd Floors |
| 2'x2' Ceiling tile (pin holes) | HA 0320/ Library |
| Carpet adhesive clear | HA 021, Band Room, main offices |
| Single layer plaster | HA's 023, 038, Ground Floor Hallway, Room LL-4, It Room, band Room, Band Office and library above drop ceiling, Auditorium ceiling |
| 12"x12" Floor tile white w/ gray splotches self-stick | HA 024/ Room 101 |
| 1x1 Ceramic wall tile grout and adhesive | HA's 025, 026/ 1 st , 2 nd , and 3 rd Floors Corridor entry columns |
| 4" ceramic beige stone like wall tile grout and adhesive beige | HA's 027,028/ 1 st , 2 nd , and 3 rd Floors Corridors |
| 6" quarry stone tile grout and mud set | HA's 030, 031/ Cafeteria serving area and basement kitchen |
| 12"x12" Self-stick floor tile off white w/ gray streaks | HA 032/ Cafeteria elevator cab |
| Stucco wall | HA 033/ Ground floor storage room old cooler |
| Vapor barrier | HA 034, 035/ Ground floor storage room old cooler under stucco walls and cooler door |
| Cork like door fill insulation | HA 036/ Ground floor storage room old cooler door |
| Soft concrete | HA 037/Deck above Auditorium ceiling |
| Single layer plaster ceiling | HA038/ Auditorium ceiling |

| Identified Non-ACM | Material Location(s) & HA's |
|--------------------|---|
| Textured coat | HA 039/ Auditorium ceiling |
| Debris | HA 43 at access hatch into crawl space from LL-1 |
| Debris | HA 044/ Access hole to rear crawl space |
| Debris | HA 046/ LL-1 Rear Crawl Space between duct and wall |
| Debris | HA 047/ At hatch to boiler room crawl space |
| Debris | HA 049/ Boiler Crawl space 80' from entry |
| Debris | HA 051/ Left wing crawl space towards gymnasium |

Samples collected by **Adelaide** January 16, 2023

| Identified Non-ACM | Material Location(s) & HA's |
|--------------------|-----------------------------|
| Sidewalk Concrete | HA 4/Exterior |
| Sidewalk Sealant | HA 5/Exterior |
| Javelin Surface | HA 6/Exterior |

2.3 ACM Photos

| | |
|---|--|
| <p>HA 015 Mastic Black under 12x12" Floor Tile Tile White w/ Gray Mottles 1.7% Chrysotile</p> |  |
| <p>HA 029 Stairwell and Kitchen Offices Storefront Window Glazing Compound Soft Black 5.3% Chrysotile</p> |  |

HA 006
Residual Acoustical Plaster
Above Auditorium Ceiling
3.3% Chrysotile



HA 040
12"x12 Dark Brown Floor Tile
and Mastic
10.8% & 2.5% Chrysotile



HA041
Layered Paper Pipe Insulation
3.0% Chrysotile



HA 042
Air Cell Pipe Insulation
66.7% Chrysotile








HA 045
Debris LL-1 Rear Crawl Space
12.1% Chrysotile



HA 048
Debris Boiler Room Crawl Space
12.9% Chrysotile



| | |
|--|--|
| <p>HA 050 Debris Boiler Room Crawl Space 12.1% Chrysotile</p> |  |
| <p>Assumed Mudded Fitting Insulation Previous Sampling is Positive</p> |  |
| <p>Assumed Wiring and panel components, isolators resin switches No shut down for access</p> |  |

| | |
|---|---|
| <p>1/16/23 HA 01 Caulk at Top of Opening 4.9% Chrysotile</p> |  |
| <p>1/16/23 HA 02 and 03 Brown Sealant and Older Caulking 7.2% and 7.5% Chrysotile</p> |  |

2.4 Summary of Identified LBP

Based on review of the data generated by the Heuresis (Viken) Corp. Pb200i X-Ray Fluorescence (XRF) Analyzer(s), the following surfaces tested were identified as lead-based, as defined by HUD/EPA (equal to or in excess of 1.0 milligram per square centimeter):

Readings collected by **Adelaide** January 7-12, 2022

| Location of LBP | LBP Component | Substrate | Color | Condition | Readings (mg/cm ²) |
|----------------------------------|---------------|-----------|-------|-----------|--------------------------------|
| 2 nd Floor Stairway C | Riser | Metal | Black | Intact | 2.2 |
| 2 nd Floor Hallway | Lower Wall | Ceramic | Brown | Intact | 11 |
| Room 222 | Air Handler | Metal | Gray | Fair | 3 |
| 1 st Floor Vault | Door Case | Metal | Black | Intact | 1 |
| Room 110 | Window Case | Wood | Black | Fair | 3.3 |
| Boiler Room | Hatch | Metal | Gray | Intact | 15.3 |

2.5 Summary of Identified PCB-containing Materials

Samples collected by **Adelaide** January 16, 2023

| Sample # | Location / Description | Material Matrix | Color | Substrate | Analytical Result |
|---|------------------------|-----------------|-------|-----------|-------------------|
| <i>NO PCB-containing materials were identified above the USEPA 40 CFR 761 threshold of 50 ppm(mg/kg) of samples collected/analyzed in reference to the above-mentioned scope of work.</i> | | | | | |

2.6 Observations

ASBESTOS-CONTAINING MATERIALS (ACM)

A visual inspection was performed and homogeneous material types were established based on appearance, color and texture. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

Representative bulk sampling was performed on suspect building materials for laboratory analysis and the following is a summary of installed building materials sampled as per the scope of work provided:

- Ceiling Materials – Plaster (multiple types), Ceiling Tiles (multiple types), Spray Applied Fire Proofing.
- Wall Materials – Plaster, Sheetrock, Ceramic Tile System (ie. grout, adhesive, mortar, etc.), Stucco.
- Flooring Materials – Peel & Stick Floor Tile (multiple types), Ceramic Tile Systems (ie. grouts, mudsets, etc.).
- Thermal System Insulation – Pipe Insulation.
- Miscellaneous Materials – Fire Door Insulation, Vapor Barriers, Window Glazing (multiple types), Caulk.
- Non-suspect Materials (not sampled) – Fiberglass Insulation, Silicone, Wood, Glass, Metal.

3.0 Asbestos-containing Materials (ACM)

3.1 Field Procedures and Analysis Methodology

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA) and Title 12 NYCRR Part 56-5.1. Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos-containing Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous. 1) Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster). 2) Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue). 3) Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.
- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply
- Chilled water supply
- Steam supply and/or return
- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

3.2 Regulatory Guidelines and Requirements for ACM

FEDERAL

In accordance with the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Emission Standards for hazardous Air Pollutants (NESHAP) to protect the public from exposure to airborne pollutants. Asbestos was one of the air pollutants, which was addressed under the NESHAP 40 CFR Part 61. The purpose of asbestos NESHAP regulations is to protect the public health by minimizing the release of asbestos when facilities, which contain ACM, are being renovated or demolished. EPA is responsible for enforcing regulations related to asbestos during renovations and demolition, however, the CAA allows the EPA to delegate this authority to State and Local Agencies. Even after EPA delegate's responsibility to a state or Local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

NEW YORK STATE

Asbestos in New York State is regulated under the Labor Law Section 906, Part 56 of Title 12 of the Official Compilation of Codes, Rules, and Regulations. Within the department and for the purpose of the Department of Labor, this part (rule) is known as Industrial Code Rule No. 56 (ICR 56) relating to hazards to the public safety and health, during the removal, encapsulation, or disturbance of friable asbestos, or any handling of ACM that may result in the release of asbestos fiber.

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part...All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM...Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate

portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part.” All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

CONCEALED ACM

In addition to the ACMs identified at the site, there is a possibility that concealed suspect ACM may exist at the building/structure. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should either be 1) Sampled by an appropriately certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

4.0 Lead-based Paint (LBP)

4.1 Applicable Standards/Guidelines for LBP

The U.S Department of Housing and Urban Development (HUD) defines the action level for lead-based paint as a lead content equal to or greater than 1.0 milligrams of lead per square centimeter of painted surface ($\geq 1.0 \text{ mg Pb/cm}^2$) when measured with an XRF analyzer or 0.5 percent by weight when chemically tested. This definition is described in the HUD “Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990”. The state of New York’s definition of the action level for lead-based paint is consistent with the level established by HUD.

Please note that although the HUD defines lead-based paint as paint having lead concentrations equal or greater than 1.0 mg/cm², the Occupational Safety and Health Administration (OSHA) considers any concentration of lead in paint to be lead-containing paint. Regardless of the lead concentrations in paint, the contractor shall comply with 29 CFR 1926.62, OSHA regulations, and take precautionary measures for dust control and limit employee exposure to lead dust during the renovations.

Painted surfaces that would be impacted by planned activities such as drilling, cutting, scrapping, etc. and create dust should be properly addressed by following safe work practices, good housekeeping procedures and/or following proper abatement procedures. Grinding and sanding of paint without HEPA filter exhaust, open flame gas fired torch, unconfined abrasive blasting, and chemical strippers containing methylene chloride or other human carcinogenic chemicals are not recommended.

The Federal Resource Conservation and Recovery Act (RCRA) regulation governs the handling, transportation, and disposal of hazardous materials. Every demolition/renovation debris generator has the responsibility to determine whether the debris exhibits one or more of the characteristic wastes listed in subpart C of 40 CFR Part 261. In the case of demolition debris, lead in LBP is a characteristic waste, and therefore, it is the responsibility of the renovation/demolition debris generator to characterize the waste prior to its disposal and, if found to be hazardous waste as defined by Federal Statutes, to be properly handled and disposed.

Metal objects painted with LBP are exempt from disposal regulations applicable to lead, provided they are properly recycled. All metal objects that are painted with LBP should be sent to a certified recycling facility.

This report is not Lead-based Paint abatement specification and should not be used for specifying removal methods or techniques.

4.2 XRF Information

Heuresis (Viken) Corp. Pb200i X-Ray Fluorescence (XRF) Analyzer(s) were used to survey the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired for the presence of LBP. The Heuresis (Viken) Corp. Pb200i XRF Analyzer(s) are using a sealed source of Co-57 with 6mCi sources, meeting HUD requirements for the analysis of paint films. During the analysis, the intensity of the x-rays is converted by the instrument's internal software into an estimate of the concentration of lead in the substance being analyzed. The results are interpreted as concentrations of lead in milligrams per square centimeter. This device is a field-screening tool, used to collect multiple readings in a short period of time. The method of measurement is based on spectrometric analysis of lead x-ray fluorescence within a controlled depth of interrogation. The reading is an estimate of lead content in all layers of paint. The results are displayed in milligrams per square centimeter (mg/cm²). The device(s) used for this inspection were the Heuresis (Viken) Corp. Pb200i X-Ray Fluorescence (XRF) Analyzer(s) Serial Number 2104, Source date 2/15/21, Serial number 2231, Source date 4/5/19, Serial number 2595, Source date 1/31/20 and/or Serial number 2901, Source date 2/15/21.

5.0 PolyChlorinated Biphenyls (PCB)

5.1 Background and Protocol for PCBs

PolyChlorinated Biphenyls (PCB) are a group of manmade chemicals. PCBs were widely used in building materials and electrical products in the past. The U.S. Environmental Protection Agency banned the manufacturing and certain uses of PCBs in 1978, but buildings constructed or renovated between 1950 and 1978 may still have building materials and electrical products that contain PCBs. Examples of products that may contain PCBs include caulk, paint, glues, plastics, fluorescent lighting ballasts, transformers and capacitors.

PCBs are currently prohibited from being used in caulk and other commodities (U.S. EPA, 40 CFR 761). However, prior to 1977, PCBs were present in some caulking materials used in the construction of schools and other buildings. Studies have shown that concentrations of PCB can exceed 1% (10,000 ppm) by weight in some caulk materials. An investigation of 24 buildings in the Greater Boston Area revealed that one-third of the buildings tested (8 of 24) contained caulking materials with polychlorinated biphenyl (PCB) content exceeding 50 ppm by weight with an average concentration of 15,600 ppm or 1.5% (Herrick et al., 2004). These buildings included schools and other public buildings.

The U.S. EPA regulates the disposal of caulk, as well as soil and other materials contaminated with PCBs from caulk, if the concentration of PCBs exceeds 50 ppm. Such materials must be disposed at an appropriate approved or permitted facility.

U.S. EPA regulation 40 CFR 761 defines "PCB remediation waste" to include contaminated soil, and specifies a clean-up level of <1ppm without further conditions for unrestricted use in "high occupancy areas" (i.e., areas where individuals may be present for 335 hours or more per year). PCB caulk is defined as a PCB bulk product waste, and its disposal is subject to U.S. EPA regulations under the Toxic Substances Control Act (40 CFR761.62).

This protocol has been developed in consultation with the New York State Department of Health, Division of Environmental Health Assessment, Bureau of Toxic Substance Assessment to address concerns about properly managing caulk containing PCBs that will be disturbed during building renovation and maintenance.

CAULK SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977 have a potential to contain PCBs in existing caulk. Representative samples of caulking materials from these buildings prior to renovation or demolition work should be tested to determine whether the caulk is contaminated with PCBs. Professional judgement should be used to design the sampling plan for characterizing caulk throughout the building. The consultant should pay particular attention to construction and maintenance records and to the appearance of caulking materials (likenesses and differences). Samples should be taken from window frames or expansion joints that have not been repaired or replaced since 1977. Depending on specific information provided in the workplan developed by the project manager, such as window placement, compositing of some caulk samples might be appropriate. Caulk from different time periods or that have a different appearance should not be composited together.

It is important to note that caulk used during the time period of interest may also contain asbestos or lead. Therefore, the work plan should include testing, handling and disposal requirements appropriate for such regulated materials.

SOIL SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977, which have undergone further renovation after 1977, may have residual PCB contamination in adjacent soils. An adequate representation of surface soils should be tested to assess the potential for residual PCB contamination.

When designing a representative soil sampling plan, the likelihood of soil contamination from deteriorated or deteriorating caulk should be considered. Caulk that has in the past dried out and fallen to the ground is the most important source of soil contamination. Thus, sampling should include soil beneath windows where caulk has obviously deteriorated or been replaced because of previous deterioration. Areas subject to the stress of sun and prevailing weather (typically the southern and western side of each structure) should be included for sampling. These samples would provide a conservative evaluation of soil conditions due to an increased potential for material failure, possibly resulting in contamination of soil. Also, if earlier renovation or demolition work may have stockpiled potentially contaminated caulk in other school areas, the school should consider having soils in those areas tested as well.

Soil sampling should focus on areas of the building where "banks" or "gangs" of windows exist/were replaced and areas of the structure where large expansion joints are located. This would provide a conservative evaluation of potential soil contamination and permit efficient sampling.

Any obvious pieces of caulk encountered during the collection of soil samples should be removed from the soil, categorized (with respect to location and depth) and treated as a separate potential sample.

Depth – At each soil sample location, soil should be collected in depth intervals of 0-2 inches, 2-6 inches and 6-12 inches. The surface soil sample (0-2 inches) should be collected from below the vegetative surface layer, if present.

Distance from Structure – Samples should be collected within 1 foot of the building and 5 feet from the building.

Samples should be collected in a manner that prevents cross-contamination. Augers or driven core samplers should be avoided, as any caulk caught on the edge of this type of tool could be driven to lower intervals. Using a designated trowel for each sample location and each interval of depth is encouraged. If the sampling tool is field cleaned between samples, do so in a manner that does not add solvent contamination to the environment.

NOTE

Sampling was performed by **Adelaide** in compliance with protocols outlined by New York State Education Department (NYSED) and USEPA 40 CFR 761, as described above. Only one sample per homogeneous area was required for analysis of suspect PCB-containing materials. Bulk sample(s) were properly packaged and forwarded, with associated Chain of Custody (COC), to York Analytical Laboratories, Inc., for analysis using method SW846-3550B/8082. The analysis will determine if the suspect material will be classified as PCB-containing at or above 50 ppm or mg/kg as per the EPA regulations. Copies of the analytical results are contained within attached appendices for review.

6.0 General Discussion

All construction personnel as well as individuals who have access to locations where asbestos-containing materials (ACM), lead-based paints (LBP) and/or polychlorinated biphenyls (PCB) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel is adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities; as defined in 29 CFR 1910.1001.

7.0 Regulatory Guidelines and Requirements for ACM Contamination (NYS DOL ICR-56)

56-1.5 Responsibility for Cleanup of Uncontrolled Disturbance. If there is an incidental disturbance or other disturbance (not as part of a controlled asbestos project) of ACM, PACM, asbestos material, or suspect miscellaneous ACM assumed to be ACM at a building or structure, upon discovery of the disturbance, the property owner shall be responsible for contracting with a licensed asbestos contractor for immediate isolation of the disturbance and cleanup in accordance with all provisions of this Part.

DOL Guidance Document

56-1.5 Question: Responsibility for Cleanup of Uncontrolled Disturbance. Are property owners subject to a potential violation of ICR 56 if ACM or PACM is disturbed by a trade's contractor or other entity unbeknownst to the owner and the damaged material or debris fallout is subsequently discovered by an Asbestos Control Bureau inspector? Is the party who disturbed the ACM or PACM required to notify the property owner, to aid the owner in complying with this requirement?

Answer/Guidance: Similar to US OSHA, any contractor performing a general supervisory role on any renovation, remodeling, demolition, or repair project is responsible for informing all contractors under their direct general supervision and control that any disturbance to ACM, PACM and asbestos material (known or assumed) at the site is prohibited by any contractor other than the asbestos contractor.

Also, the contractor performing the general supervisory role shall require all asbestos contractors under their direct general supervision and control to be in compliance with Code Rule 56. (This requirement does not include entering asbestos project work areas to check on the asbestos contractor.)

In addition, Section 1.4 includes contractor notification requirements to the building/structure owner or their representative for newly discovered materials and any disturbances to ACM, PACM or suspect miscellaneous materials.

Once a disturbance is discovered, it must be cleaned up as soon as possible. For all disturbances, the room/space/area must be vacated and isolated immediately, and an asbestos contractor must be hired for appropriate cleanup of affected room/area/space. A site-specific variance is necessary for cleanup of any disturbance other than a Minor size incidental disturbance.

8.0 Disclaimers

Adelaide certifies that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected during this survey/assessment. These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local regulations. **Adelaide** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **Adelaide** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions. No other warranties are expressed or implied.

Due to the potential for concealed Asbestos-containing Materials (ACM) and/or other regulated materials, this report should not be construed to represent all ACM and/or regulated materials within the site(s). All quantities of ACM and/or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.

NYSDOH issued an Interim Guidance Letter, on July 9, 2013, which outlined the approved testing alternative for materials containing vermiculite. Specifically, "...Where TSI, surfacing materials, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer: *"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."* On July 22, 2014, NYSDOH issued a Regulatory Guidance Letter outlining the new approved analytical methods for testing sprayed-on fireproofing (SOF-P) that contains vermiculite. NYSDOH authorized the use of ***two*** analytical methods to evaluate the asbestos content of SOFP that contains vermiculite. As per NYSDOH Guidelines, *"After October 31, 2014, one of the new methods **must** be used to test SOF-V, regardless of the percent of vermiculite."* On May 6, 2016, NYSDOH issued a Regulatory Guidance Letter outlining the new protocol for analytical procedure for surfacing materials (ie. plaster, stucco, etc.) that contain vermiculite. As per NYSDOH Guidelines, *"The original July 2013 and July 2014 letters addressed SOF-V only. Both NYS DOH's Item 198.8 and RJ Lee Group Method 055 shall now be applied to test for vermiculite in other Surfacing Material (SM) as defined in 12 NYCRR Part 56 (NYS Industrial Code Rule 56)."*

APPENDIX A
ACM LOCATION MAP(S)

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
223 Wisner Avenue,
Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

DATE:01/27/2022

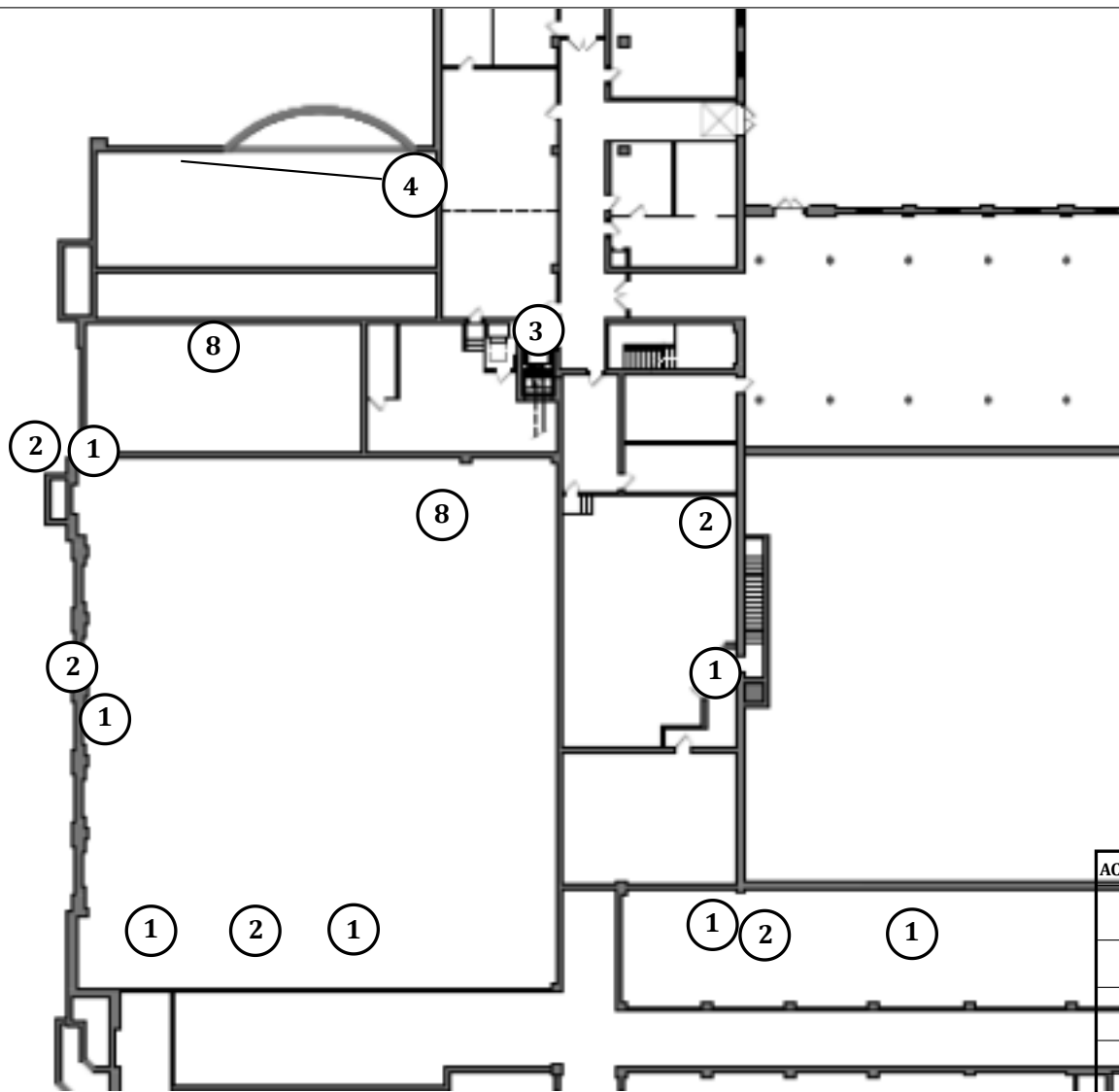
DRAWING VERSION: No. 2

ISSUED FOR:
Renovation HazMat Survey

ADELAIDE PROJECT NO.:
MIDD: 22005.00-IN

DRAWING PREPARED BY:
Robert See

ASB-01



| ACM LEGEND: (see report for details) | |
|--------------------------------------|--|
| 1 | Air Cell Pipe Insulation, Layered Paper Pipe Insulation, Mudded Fittings |
| 2 | Debris Some covered with plastic sheeting. Entire Crawl Space Contaminated |
| 3 | Assumed Electrical Components Throughout |
| 4 | Window Glazing Compound Soft Black |
| 8 | Mastic Under 12"x12" Floor Tile White w/ Gray Mottles |

Ground Floor - Asbestos Locations
Drawing Not to Scale

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
223 Wisner Avenue,
Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

DATE:01/25/2023

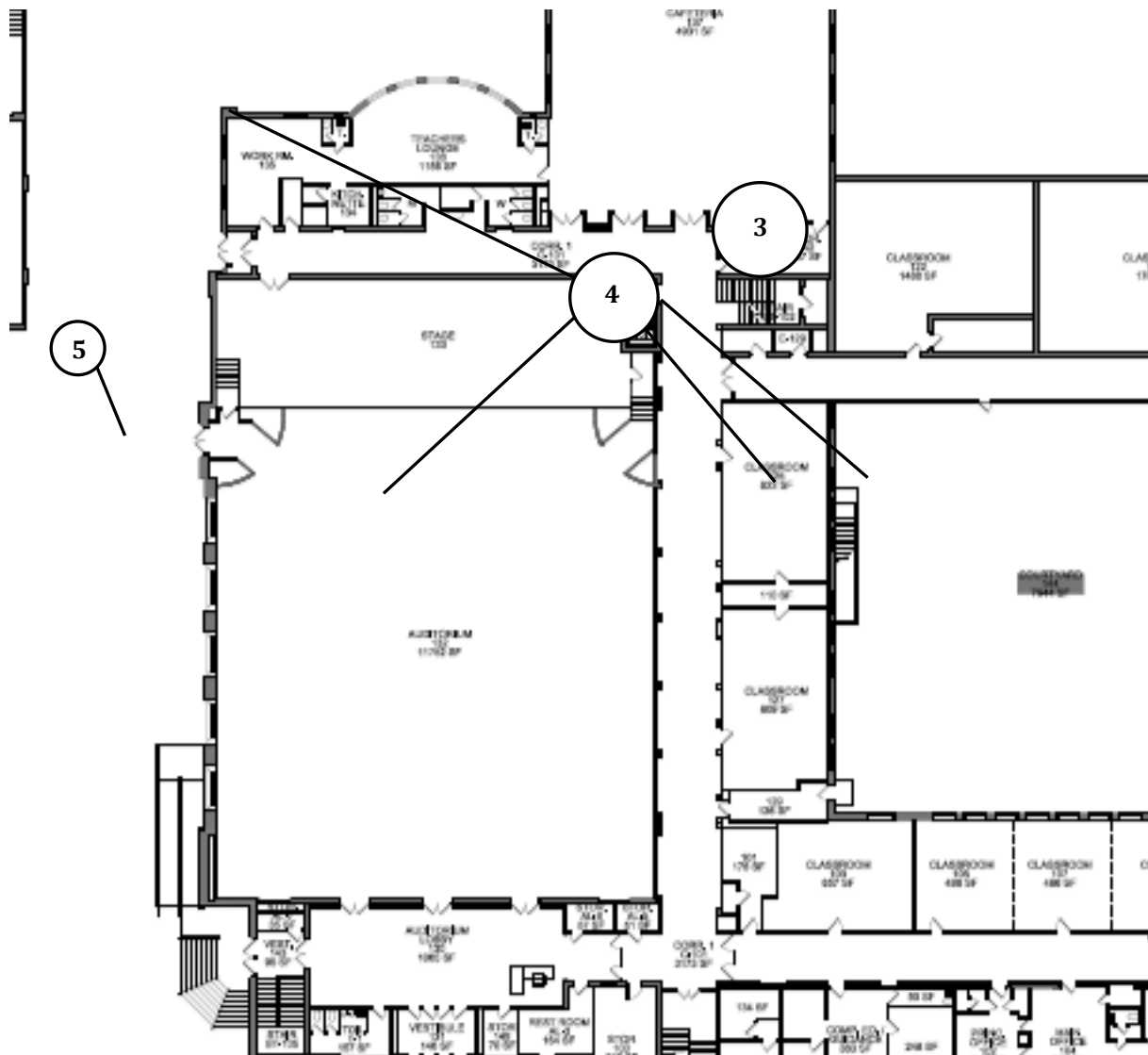
DRAWING VERSION: No. 4

ISSUED FOR:
Renovation HazMat Survey

ADELAIDE PROJECT NO.:
MIDD: 22005.00-IN

DRAWING PREPARED BY: Jason Fullum

ASB-02



| ACM LEGEND: (see report for details) | |
|--------------------------------------|--|
| 4 | Window Glazing Compound Soft Black |
| 3 | Assumed Electrical Components Throughout |
| 5 | 12x12 Floor Dark Brown and Associated Mastic |

*** All windows have asbestos sealants under new sealants and trim ***

1st Floor - Asbestos Locations

Drawing Not to Scale

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
223 Wisner Avenue,
Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

DATE:01/25/2023

DRAWING VERSION: No. 4

ISSUED FOR:
Renovation HazMat Survey

ADELAIDE PROJECT NO.:
MIDD: 22005.00-IN

DRAWING PREPARED BY: Jason Fullum

ASB-03



2nd Floor - Asbestos Locations
Drawing Not to Scale

| ACM LEGEND: (see report for details) | |
|---|--|
| 6 | Residual Acoustical Plaster Debris - Limited to Center Lighting Access Hatches |
| 3 | Assumed Electrical Components Throughout |
| 4 | Window Glazing Compound Soft Black |
| 8 | Mastic Black Under 12"x12" Floor Tile White w/ Gray Mottles |

*** All windows have asbestos sealants under new sealants and trim ***

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
223 Wisner Avenue,
Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

DATE:01/25/2023

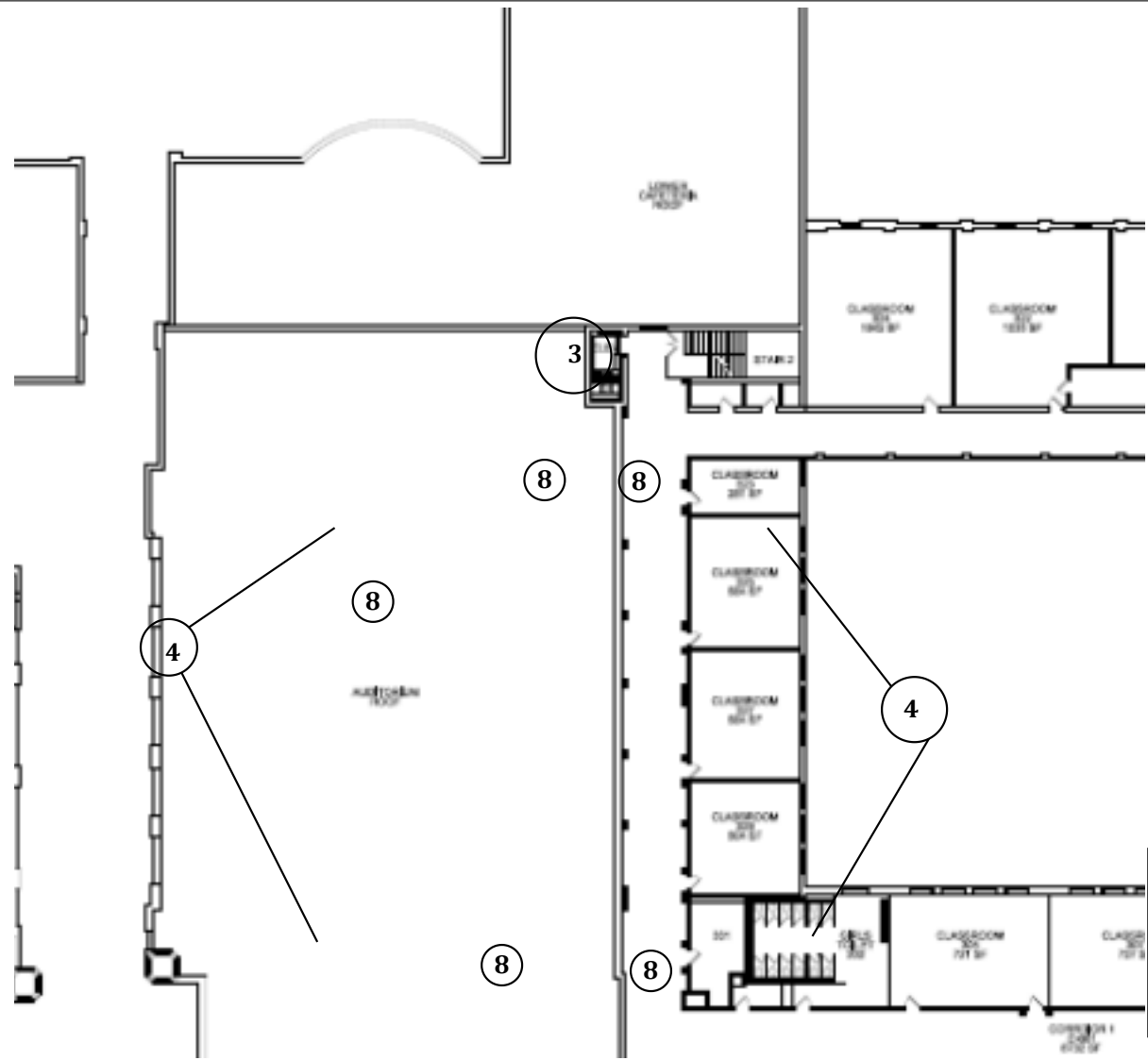
DRAWING VERSION: No. 4

ISSUED FOR:
Limited HazMat Survey

ADELAIDE PROJECT NO.:
MIDD: 22005.00-IN

DRAWING PREPARED BY:
Jason Fullum

ASB-04

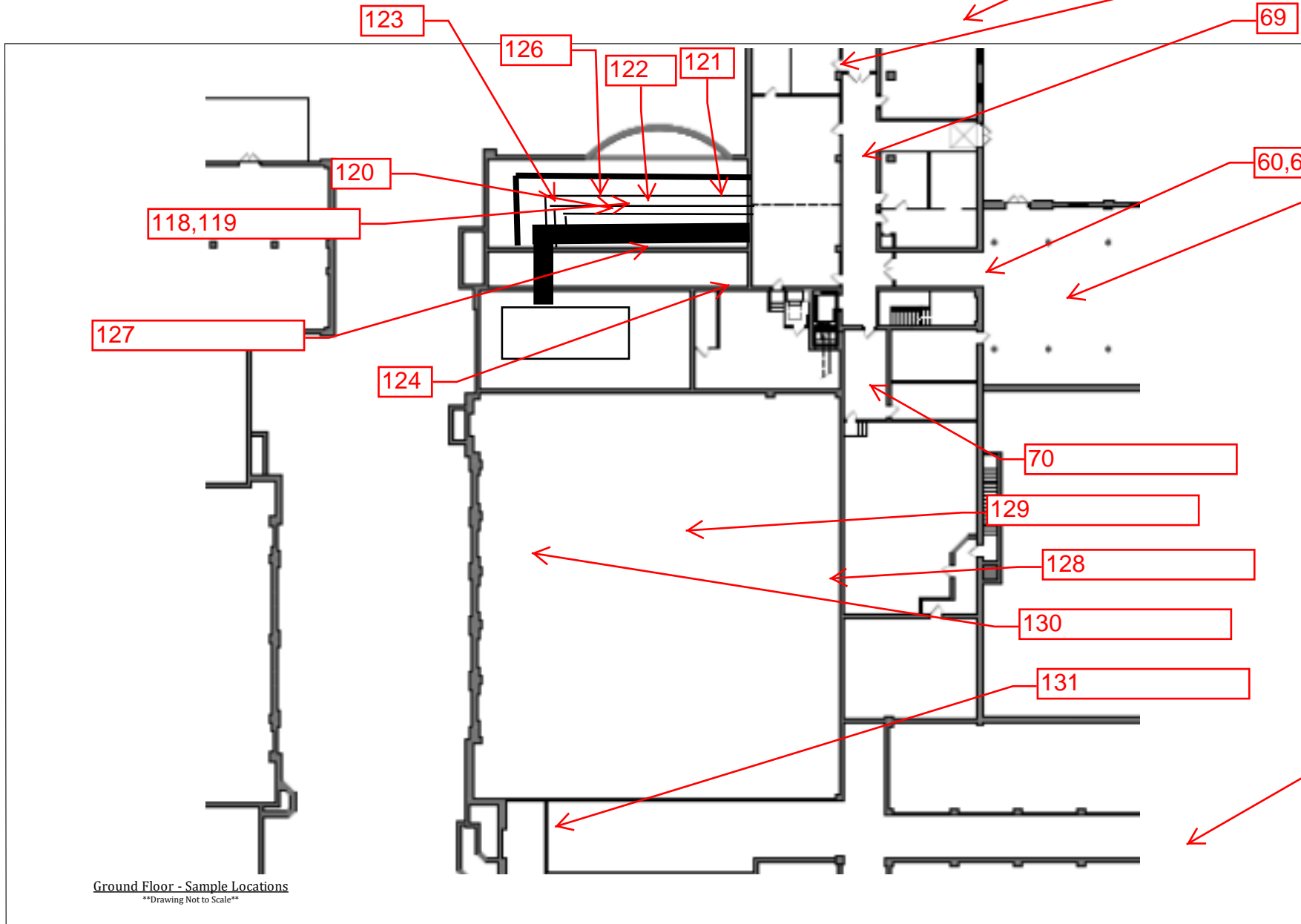


| ACM LEGEND: (see report for details) | |
|--------------------------------------|---|
| 3 | Assumed Electrical Components Throughout |
| 4 | Window Glazing Compound Soft Black |
| 8 | Mastic Black Under 12"x12" Floor Tile White w/ Gray Mottles |

*** All windows have asbestos sealants under new sealants and trim ***

3rd Floor - Asbestos Locations
Drawing Not to Scale

APPENDIX B
ASBESTOS BULK SAMPLE LOCATION MAP(S)



Adelaide
 ENVIRONMENTAL HEALTH
 1511 Route 22
 Brewster, NY 10509
 Phone: (845) 278-7710
 Fax: (845) 278-7

CLIENT:
Bill Bartlett
 Director of Facilities III
 Enlarged City School
 District of Middletown
 223 Wisner Avenue,
 Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
 112 Grand Avenue
 Middletown, New York 10940

DATE: 01/14/2022

DRAWING VERSION: No. 1

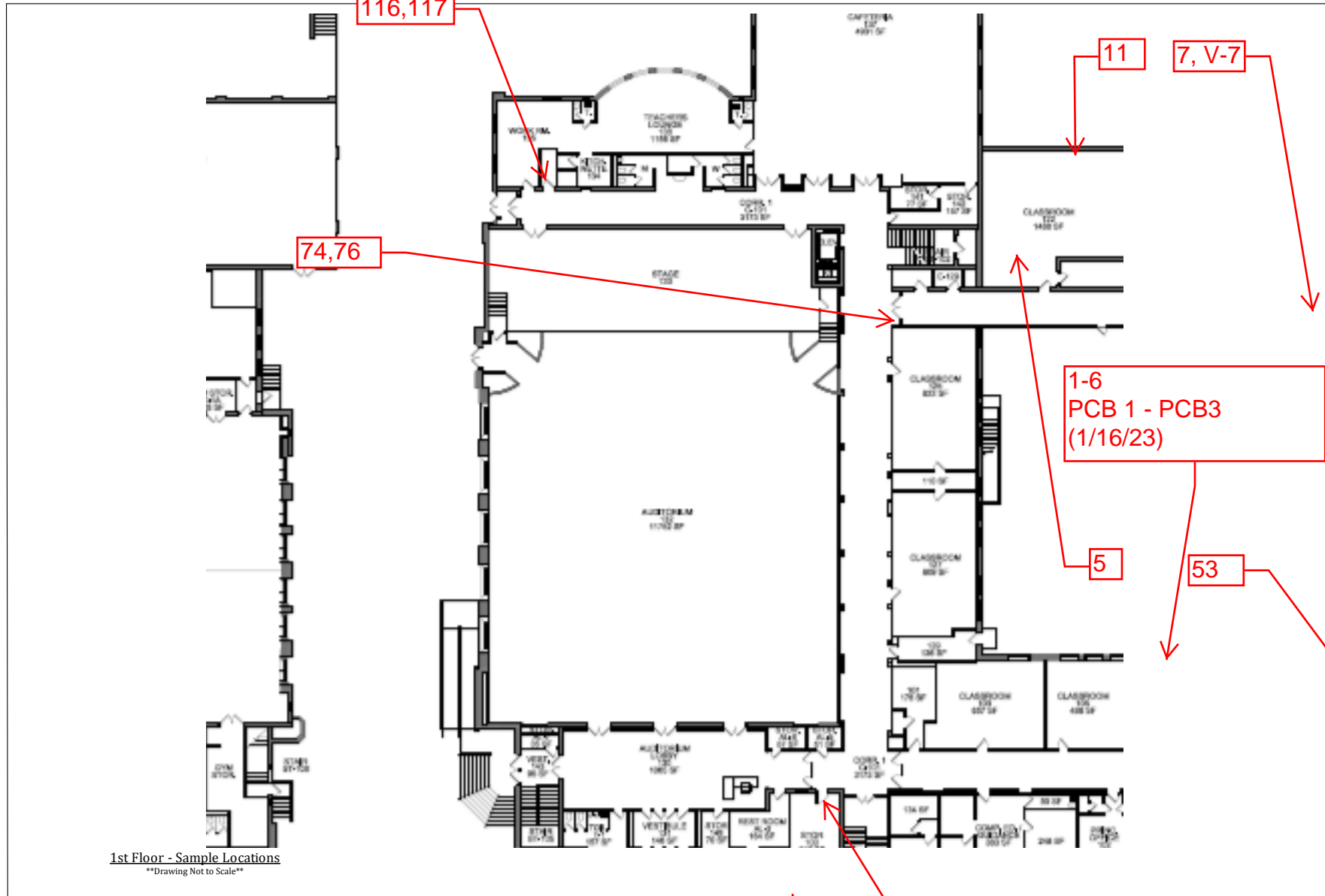
ISSUED FOR: **132**
 Renovation HazMat Survey

ADELAIDE PROJECT NO.:
 MIDD: 22005.00-IN

DRAWING PREPARED BY:
 Robert See

SLM-01

Ground Floor - Sample Locations
 Drawing Not to Scale



1511 Route 22
 Brewster, NY 10509
 Phone: (845) 278-7710
 Fax: (845) 278-7750

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
 223 Wisner Avenue,
 Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
 112 Grand Avenue
 Middletown, New York 10940

1-6
 PCB 1 - PCB3
 (1/16/23)

DATE:01/25/2023

DRAWING VERSION: No. 3

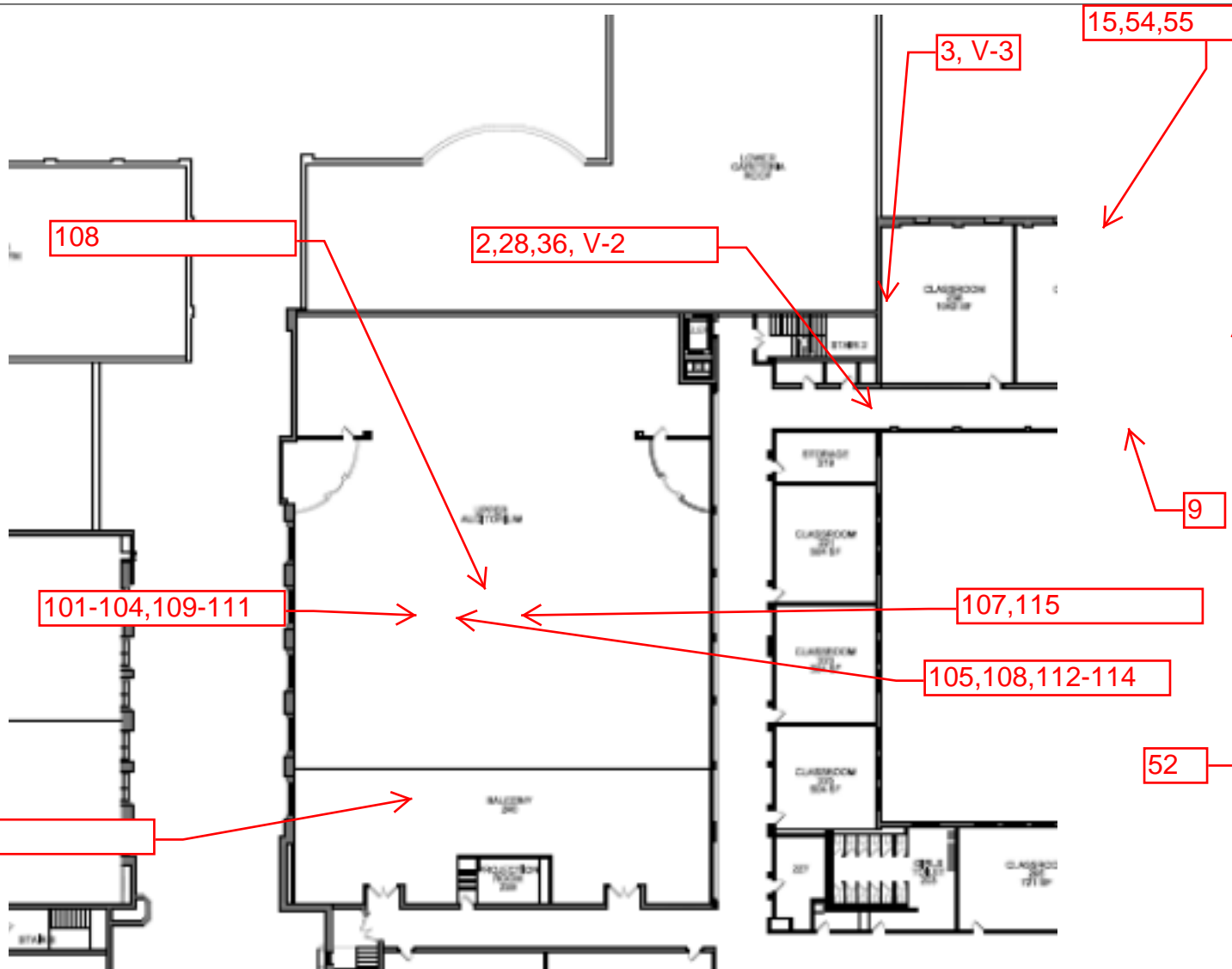
ISSUED FOR:
 Renovation HazMat Survey

ADELAIDE PROJECT NO.:
 MIDD: 22005.00-IN

DRAWING PREPARED BY: Jason Fulham

SLM-02

1st Floor - Sample Locations
 Drawing Not to Scale



Adelaide
 ENVIRONMENTAL HEALTH
 1511 Route 22
 Brewster, NY 10509
 Phone: (845) 278-7770
 Fax: (845) 278-7750

CLIENT:
Bill Bartlett
 Director of Facilities III
 Enlarged City School
 District of Middletown
 223 Wisner Avenue,
 Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
 112 Grand Avenue
 Middletown, New York 10940

DATE: 01/14/2022

DRAWING VERSION: No. 1

ISSUED FOR:
 Renovation HazMat Survey

ADELAIDE PROJECT NO.:
 MIDD: 22005.00-IN

DRAWING PREPARED BY:
 Robert See

SLM-03

2nd Floor - Sample Locations
 Drawing Not to Scale

CLIENT:
Bill Bartlett
Director of Facilities III
Enlarged City School
District of Middletown
 223 Wisner Avenue,
 Middletown, NY 10940-3298

SURVEY LOCATION:
Twin Towers Middle School
 112 Grand Avenue
 Middletown, New York 10940

DATE: 01/27/2022

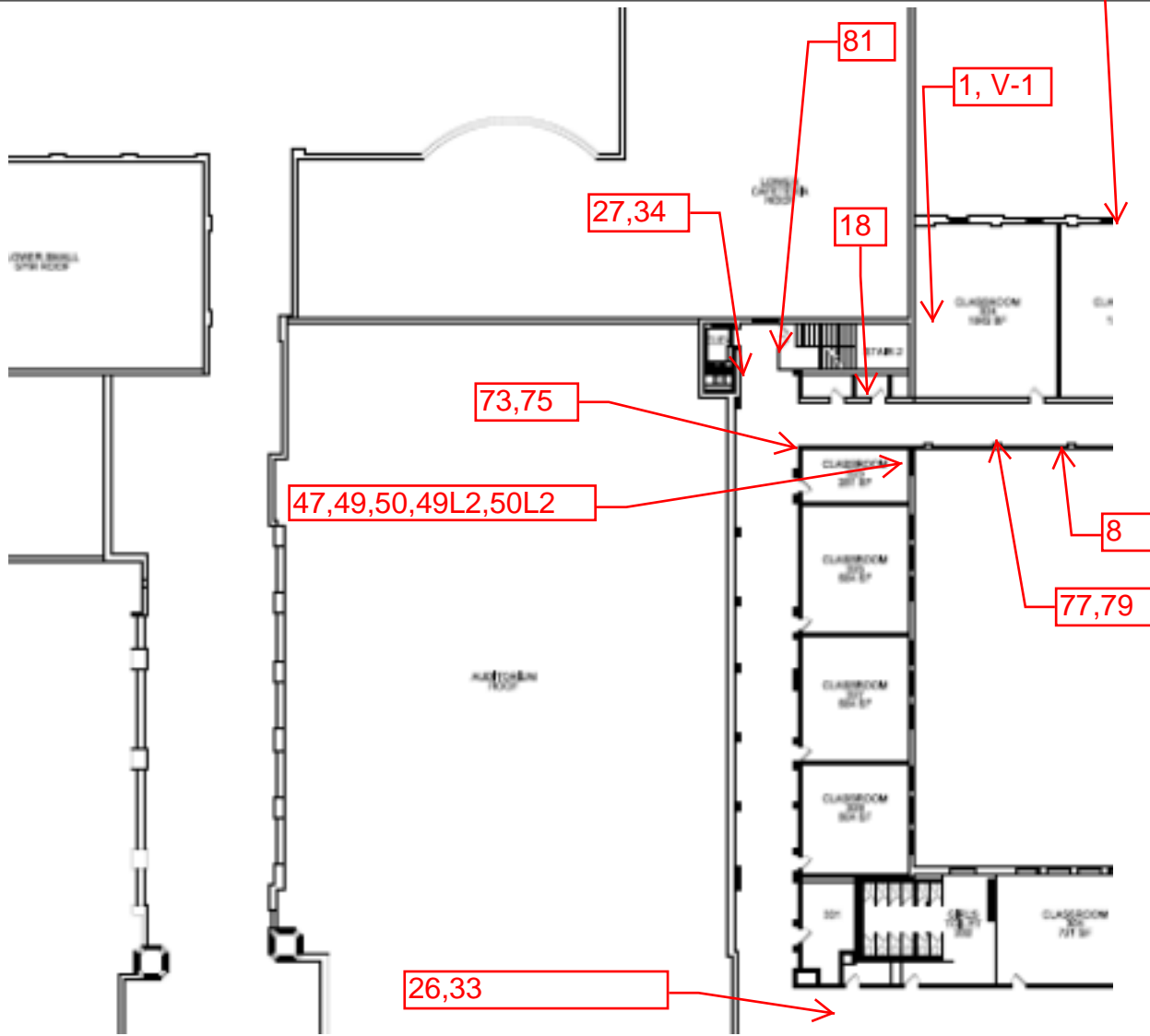
DRAWING VERSION: No. 2

ISSUED FOR:
 Renovation HazMat Survey

ADLAIDE PROJECT NO.:
 MIDD-22066-00-IN

DRAWING PREPARED BY:
 Robert See

SLM-04



3rd Floor - Sample Locations
 Drawing Not to Scale

APPENDIX C
ASBESTOS ANALYTICAL RESULTS

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results

MIDD: 22005.00-IN; Twin Towers MS; 112 Grand Avenue, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 1 | 1 | 0.192 | 44.3 | 33.7 | 17.0 | Chrysotile 4.9 | NA |
| Location: Floor Level: 1 / Rm. 107 - Caulk At Ty Of Opening | | | | | | | | |
| 02 | 2 | 1 | 0.163 | 46.4 | 33.4 | 20.2 | NA/PS | NA |
| Location: Floor Level: 1 / Rm. 107 - Caulk At Ty Of Opening | | | | | | | | |
| 03 | 3 | 2 | 0.233 | 35.1 | 36.1 | 21.5 | Chrysotile 7.2 | NA |
| Location: Floor Level: 1 / Rm. 107 - Brown Sealant At Wood Opening | | | | | | | | |
| 04 | 4 | 2 | 0.262 | 34.1 | 34.9 | 31.0 | NA/PS | NA |
| Location: Floor Level: 1 / Rm. 107 - Brown Sealant At Wood Opening | | | | | | | | |
| 05 | 5 | 3 | 0.189 | 41.6 | 20.7 | 30.2 | Chrysotile 7.5 | NA |
| Location: Floor Level: 1 / Rm. 107 - Caulk Under New Caulk | | | | | | | | |
| 06 | 6 | 3 | 0.266 | 41.6 | 17.8 | 40.6 | NA/PS | NA |
| Location: Floor Level: 1 / Rm. 107 - Caulk Under New Caulk | | | | | | | | |
| 07 | 7 | 4 | ---- | ---- | ---- | ---- | NAD | NA |
| Location: Floor Level: 1 / Exterior - Sidewalk Concrete | | | | | | | | |
| 08 | 8 | 4 | ---- | ---- | ---- | ---- | NAD | NA |
| Location: Floor Level: 1 / Exterior - Sidewalk Concrete | | | | | | | | |
| 09 | 9 | 5 | 0.180 | 45.9 | 40.5 | 13.6 | NAD | NAD |
| Location: Floor Level: 1 / Exterior - Sidewalk Sealant (Caulk) | | | | | | | | |
| 10 | 10 | 5 | 0.217 | 45.3 | 34.0 | 20.7 | NAD | NAD |
| Location: Floor Level: 1 / Exterior - Sidewalk Sealant (Caulk) | | | | | | | | |
| 11 | 11 | 6 | 0.251 | 71.3 | 10.6 | 18.1 | NAD | NAD |
| Location: Floor Level: 1 / Exterior - Javelin Surface | | | | | | | | |
| 12 | 12 | 6 | 0.253 | 67.4 | 11.0 | 21.6 | NAD | NAD |
| Location: Floor Level: 1 / Exterior - Javelin Surface | | | | | | | | |

Client Name: Adelaide Environmental Health

**Table I
Summary of Bulk Asbestos Analysis Results**

MIDD: 22005.00-IN; Twin Towers MS; 112 Grand Avenue, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|----------------------|----------------|------------|----------------------------|--------------------------------|--------------------------------|--|----------------------------|-------------------------|
|----------------------|----------------|------------|----------------------------|--------------------------------|--------------------------------|--|----------------------------|-------------------------|

Analyzed by: Feyza Gungor
Date: 1/18/2023



Reviewed by: Feyza Gungor



**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or NYSDOH ELAP 198.1 for New York friable samples or NYSDOH ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or NYSDOH ELAP 198.4; for New York samples). Analysis using Hitachi, Model H600-Noran 7 System, Microscope, Serial #: 542-26-10. NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, NJ Lab ID #NY031.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 01/17/23 **AmeriSci Job #** 223012052
Date Examined 01/18/23 **P.O. #**
ELAP # 11480 **Page** 1 of 3
RE: MIDD: 22005.00-IN; Twin Towers MS; 112 Grand Avenue,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 1 1 | 223012052-01 Location: Floor Level: 1 / Rm. 107 - Caulk At Ty Of Opening | Yes | 4.9% (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Beige, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 4.9 % Other Material: Non-fibrous 17% | | | |
| 2 1 | 223012052-02 Location: Floor Level: 1 / Rm. 107 - Caulk At Ty Of Opening | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 3 2 | 223012052-03 Location: Floor Level: 1 / Rm. 107 - Brown Sealant At Wood Opening | Yes | 7.2% (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 7.2 % Other Material: Non-fibrous 21.5% | | | |
| 4 2 | 223012052-04 Location: Floor Level: 1 / Rm. 107 - Brown Sealant At Wood Opening | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 5 3 | 223012052-05 Location: Floor Level: 1 / Rm. 107 - Caulk Under New Caulk | Yes | 7.5% (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 7.5 % Other Material: Non-fibrous 30.2% | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos ReportMIDD: 22005.00-IN; Twin Towers MS; 112 Grand Avenue,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|---|
| 6 3 | 223012052-06 Location: Floor Level: 1 / Rm. 107 - Caulk Under New Caulk | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 7 4 | 223012052-07 Location: Floor Level: 1 / Exterior - Sidewalk Concrete | No | NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100% | | | |
| 8 4 | 223012052-08 Location: Floor Level: 1 / Exterior - Sidewalk Concrete | No | NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100% | | | |
| 9 5 | 223012052-09 Location: Floor Level: 1 / Exterior - Sidewalk Sealant (Caulk) | No | NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Gray, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 13.6% | | | |
| 10 5 | 223012052-10 Location: Floor Level: 1 / Exterior - Sidewalk Sealant (Caulk) | No | NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Gray, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 20.7% | | | |
| 11 6 | 223012052-11 Location: Floor Level: 1 / Exterior - Javelin Surface | No | NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Black/Red, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 18.1% | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD: 22005.00-IN; Twin Towers MS; 112 Grand Avenue,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|--|------------------|---|
| 12 6 | 223012052-12 Location: Floor Level: 1 / Exterior - Javelin Surface | No | NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 01/18/23 |
| Analyst Description: Black/Red, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 21.6% | | | |

Reporting Notes:

Analyzed by: Ivan H. Reyes
Date: 1/18/2023



Reviewed by: Feyza Gungor



*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis using Olympus, Model BH-2 Pol Scope, Microscope, Serial #: 229915, by Appd E to Subpt E, 40 CFR 763 quantified by either CVES or 400 pt ct as noted for each analysis (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite, or ELAP 198.6 for NOB samples, or EPA 400 pt ct by EPA 600-M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054, NJ Lab ID #NY031.

_____END OF REPORT_____

Adelaide Environmental Health Associates, Inc

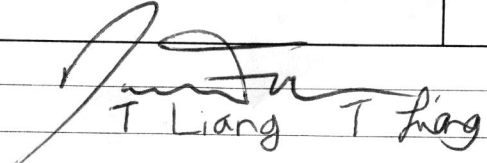
1454 Rte. 22, Suite B202
 Brewster, NY 10509
 845-278-7710
 845-278-7750 - fax

| | | |
|--|-------------------------------------|--------------------------------|
| Site Address: Twin Towers MS- 112 Grand Avenue Middletown, NY 10940 | Date: 1/16/2023 | Inspector: Jason Fullum |
| Client Project # | Project #: MIDD: 22005.00-EN | |

| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | Quantity (In Feet) | Friable Non Friable | Condition g, d, sd |
|-------------|------------------|-------------|---|--------------------|---------------------|--------------------|
| 1 | 1 | 1 | Rm. 107- Seal Top of Opening | 4LF per opening | NF | SD |
| 2 | 2 | 1 | ↓ | ↓ | ↓ | ↓ |
| 3 | 2 | 1 | - Brown Sealant at Wood Opening | 24LF/opening | ↓ | ↓ |
| 4 | 2 | 1 | ↓ | ↓ | ↓ | ↓ |
| 5 | 3 | 1 | - Caulk under New Caulk | 24LF/opening | ↓ | ↓ |
| 6 | 3 | 1 | ↓ | ↓ | ↓ | ↓ |
| 7 | 4 | 1 | Exterior - Sidewalk Concrete | 1,000SF | NF | D |
| 8 | 4 | 1 | ↓ | ↓ | ↓ | ↓ |
| 9 | 5 | 1 | - Sidewalk Sealant (Caulk) | 100LF | NF | ↓ |
| 10 | 5 | 1 | ↓ | ↓ | ↓ | ↓ |
| 11 | 6 | 1 | - Leveling Surface | 1,000SF | NF | D |
| 12 | 6 | 1 | ↓ | ↓ | ↓ | ↓ |
| | | # 223012052 | | | | |

Special Instructions/ Turnaround Time:
Stop at 1st Positive per Homogenous Area
Fax Results to 845-278-7750
E-Mail results to AdelaideLabResults@Adelaidellc.com and Jfullum@adelaidellc.com

24 HR. TAT

Relinquished by: 
 Received by: **T Liang**
 Relinquished by: **T Liang**
 Received by: **T Liang** 1/17/23 15:35



EMSL ANALYTICAL, INC.
 528 Mineola Avenue
 Carle Place, NY 11514
 Phone/Fax: (516)997-7251 / (516)997-7528
carleplacelab@emsl.com | <http://www.EMSL.com>

EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
EMSL Project ID:
Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
Email: ssoter@adelaidelc.com

Collected: 01/12/2022
Received: 01/21/2022
Analyzed: 1/26/2022
Reported: 1/26/2022

**Asbestos Analysis of NYS ELAP Method 198.8
 PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite**

| Lab Number | Client Sample Identification | Appearance | Percentage Matrix Material | Percentage non-Asbestos Fibers | Chrysotile Percentage | Amphibole Percentage | Total Percentage |
|----------------|------------------------------|-------------------------|----------------------------|--------------------------------|-----------------------|----------------------|----------------------|
| 062200925-0001 | 001-V1 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0002 | 001-V2 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0003 | 001-V3 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0004 | 001-V4 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0005 | 001-V5 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0006 | 001-V6 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| 062200925-0007 | 001-V7 | Tan Fibrous Homogeneous | 100 | 0.0 | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |



EMSL ANALYTICAL, INC.
 528 Mineola Avenue
 Carle Place, NY 11514
 Phone/Fax: (516)997-7251 / (516)997-7528
carleplacelab@emsl.com | <http://www.EMSL.com>

EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24
 Brewster, NY 10509

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaide.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

| | | | | |
|---------------------|----------------|-------------------------|--------------|----|
| EMSL Sample ID | 062200925-0001 | | Crucible ID: | V1 |
| | Analyst | Date | | |
| Gravimetric Prep | LV | 1/25/2022 | | |
| Chrysotile Analysis | SJ | 1/26/2022 | | |
| Centrifugation Date | AS | 1/27/2022 | | |
| Amphibole Analysis | SJ | 1/27/2022 | | |
| Stereoscopic | | | | |
| Color | Tan | Stereoscopic % Asbestos | 0 | |
| Texture | Fibrous | Vermiculite Detected | Yes | |
| Homogeneity | Homogeneous | | | |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 45.8263 |
| Weight of Crucible and Sub Sample | 49.0166 |
| Weight of Sub-Sample | 3.1903 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 48.5061 |
| Weight of Ash | 2.6798 |
| Weight Loss During Ashing | 0.5105 |
| Weight Percent Organic and Water | 16.0016 |

| Chrysotile Identification Optical Properties | | | | | | | Temperature (C°): | | |
|--|------|------------|------|-------------|---------------|-------------|-------------------|--|--|
| ⊥ RI | IIRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Acid Treatment/ Flotation | |
|----------------------------|---------|
| Weight of Dish for Floats | 8.2737 |
| Weight of Dish & Floats- 1 | 8.6697 |
| Weight of Dish & Floats- 2 | 8.6415 |
| Weight of Floats | 0.3678 |
| Weight Percent Floats | 11.5287 |

| Amphibole Identification Optical Properties | | | | | | | Temperature (C°) | | |
|---|------|------------|------|-------------|---------------|-------------|------------------|--|--|
| ⊥ RI | IIRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| | |
|---|---------|
| %Diff | 0.3258 |
| Criteria <3% | |
| %Diff | 0.0118 |
| Criteria <3% | |
| Weight Loss During Acid/Flotation Treatment | 1.5192 |
| Weight Percent Acid-Soluble/Float Materials | 47.6193 |
| Weight Percent Residue | 24.8503 |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | |
|--|--------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.3031 |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.3019 |
| Weight of Balance of Residue | 0.7866 |
| %Diff | 0.0129 |
| Criteria <3% | |
| Weight of Dish & Filter for Centrifugate | 8.2842 |
| Weight of Dish & Filter & Centrifugate- 1 | 8.4304 |
| Weight of Dish & Filter & Centrifugate- 2 | 8.4314 |
| Weight of Centrifugate | 0.1472 |
| Weight Percent Centrifugate | 4.6504 |
| %Diff | 0.0119 |
| Criteria <3% | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

| | |
|-------------------------------------|--------|
| Percent of Total Asbestos in Sample | 0.0000 |
|-------------------------------------|--------|

* All Weights in grams



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EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaidellc.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

EMSL Sample ID: 062200925-0002

Crucible ID: V2

| | Analyst | Date |
|---------------------|---------|-----------|
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/26/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

| Stereoscopic | | | |
|--------------|-------------|-------------------------|-----|
| Color | Tan | Stereoscopic % Asbestos | 0 |
| Texture | Fibrous | | |
| Homogeneity | Homogeneous | Vermiculite Detected | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 35.7168 |
| Weight of Crucible and Sub Sample | 39.0397 |
| Weight of Sub-Sample | 3.3229 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 38.4175 |
| Weight of Ash | 2.7007 |
| Weight Loss During Ashing | 0.6222 |
| Weight Percent Organic and Water | 18.7246 |

| Chrysotile Identification Optical Properties | | | | | | Temperature (C°): | |
|--|----|------------|------|-------------|---------------|-------------------|------------|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Acid Treatment/ Flotation | |
|----------------------------|--------|
| Weight of Dish for Floats | 8.5048 |
| Weight of Dish & Floats- 1 | 8.6033 |
| Weight of Dish & Floats- 2 | 8.6024 |
| Weight of Floats | 0.0976 |
| Weight Percent Floats | 2.9372 |

| Amphibole Identification Optical Properties | | | | | | Temperature (C°) | |
|---|----|------------|------|-------------|---------------|------------------|------------|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | |
|---|---------|
| %Diff Criteria <3% | 0.0105 |
| Weight of Dish & Filter for Residue | 8.5165 |
| Weight of Dish & Filter & Residue- 1 | 9.5692 |
| Weight of Dish & Filter & Residue- 2 | 9.5711 |
| Weight of Residue | 1.0546 |
| Weight Loss During Acid/Flotation Treatment | 1.5485 |
| Weight Percent Acid-Soluble/Float Materials | 46.6009 |
| Weight Percent Residue | 31.7373 |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|-----------------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.5683 | %Diff Criteria <3% |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.5629 | 0.0565 |
| Weight of Balance of Residue | 1.0464 | |

| | | |
|---|--------|-----------------------|
| Weight of Dish & Filter for Centrifugate | 8.5139 | %Diff Criteria <3% |
| Weight of Dish & Filter & Centrifugate- 1 | 8.7695 | 0.0103 |
| Weight of Dish & Filter & Centrifugate- 2 | 8.7704 | |
| Weight of Centrifugate | 0.2565 | |
| Weight Percent Centrifugate | 7.7797 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

Percent of Total Asbestos in Sample: 0.0000

* All Weights in grams



Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaidellc.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8 PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite Bench Sheet

| | | |
|---------------------|----------------|-----------|
| EMSL Sample ID | 062200925-0003 | |
| | Analyst | Date |
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/26/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

Crucible ID: V3

| Stereoscopic | | |
|--------------|-------------|-------------------------|
| Color | Tan | Stereoscopic % Asbestos |
| Texture | Fibrous | |
| Homogeneity | Homogeneous | Vermiculite Detected |
| | | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 38.5721 |
| Weight of Crucible and Sub Sample | 41.8748 |
| Weight of Sub-Sample | 3.3027 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 41.3344 |
| Weight of Ash | 2.7623 |
| Weight Loss During Ashing | 0.5404 |
| Weight Percent Organic and Water | 16.3624 |

| Chrysotile Identification Optical Properties | | | | | | | Temperature (C°): | | |
|--|-----|------------|------|-------------|---------------|-------------|-------------------|--|--|
| ⊥ RI | IRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Acid Treatment/ Flotation | | |
|---|---------|--------------|
| Weight of Dish for Floats | 8.2812 | %Diff |
| Weight of Dish & Floats- 1 | 8.4829 | Criteria <3% |
| Weight of Dish & Floats- 2 | 8.4813 | 0.0189 |
| Weight of Floats | 0.2001 | |
| Weight Percent Floats | 6.0587 | |
| Weight of Dish & Filter for Residue | 8.2953 | %Diff |
| Weight of Dish & Filter & Residue- 1 | 9.2801 | Criteria <3% |
| Weight of Dish & Filter & Residue- 2 | 9.2813 | 0.0129 |
| Weight of Residue | 0.9860 | |
| Weight Loss During Acid/Flotation Treatment | 1.5762 | |
| Weight Percent Acid-Soluble/Float Materials | 47.7246 | |
| Weight Percent Residue | 29.8544 | |

| Amphibole Identification Optical Properties | | | | | | | Temperature (C°) | | |
|---|-----|------------|------|-------------|---------------|-------------|------------------|--|--|
| ⊥ RI | IRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|-----------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|--------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.2751 | %Diff |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.2704 | Criteria <3% |
| Weight of Balance of Residue | 0.9751 | |
| Weight of Dish & Filter for Centrifugate | 8.2913 | %Diff |
| Weight of Dish & Filter & Centrifugate- 1 | 8.4694 | Criteria <3% |
| Weight of Dish & Filter & Centrifugate- 2 | 8.4702 | 0.0094 |
| Weight of Centrifugate | 0.1789 | |
| Weight Percent Centrifugate | 5.4773 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|-----------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

| | |
|-------------------------------------|--------|
| Percent of Total Asbestos in Sample | 0.0000 |
|-------------------------------------|--------|

* All Weights in grams



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EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaide.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

EMSL Sample ID: 062200925-0004

Crucible ID: V4

| | Analyst | Date |
|---------------------|---------|-----------|
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/26/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

| Stereoscopic | | | |
|--------------|-------------|-------------------------|-----|
| Color | Tan | Stereoscopic % Asbestos | 0 |
| Texture | Fibrous | | |
| Homogeneity | Homogeneous | Vermiculite Detected | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 34.8761 |
| Weight of Crucible and Sub Sample | 38.2640 |
| Weight of Sub-Sample | 3.3879 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 37.7257 |
| Weight of Ash | 2.8496 |
| Weight Loss During Ashing | 0.5383 |
| Weight Percent Organic and Water | 15.8889 |

| Chrysotile Identification Optical Properties | | | | | | | Temperature (C°): | | |
|--|----|------------|------|-------------|---------------|-------------|-------------------|--|--|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Acid Treatment/ Flotation | | |
|---|---------|--------------|
| Weight of Dish for Floats | 8.2486 | %Diff |
| Weight of Dish & Floats- 1 | 8.3505 | Criteria <3% |
| Weight of Dish & Floats- 2 | 8.3503 | 0.0024 |
| Weight of Floats | 0.1017 | |
| Weight Percent Floats | 3.0019 | |
| Weight of Dish & Filter for Residue | 8.2661 | %Diff |
| Weight of Dish & Filter & Residue- 1 | 9.3608 | Criteria <3% |
| Weight of Dish & Filter & Residue- 2 | 9.3470 | 0.1475 |
| Weight of Residue | 1.0809 | |
| Weight Loss During Acid/Flotation Treatment | 1.6670 | |
| Weight Percent Acid-Soluble/Float Materials | 49.2045 | |
| Weight Percent Residue | 31.9047 | |

| Amphibole Identification Optical Properties | | | | | | | Temperature (C°) | | |
|---|----|------------|------|-------------|---------------|-------------|------------------|--|--|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|-----------------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.3414 | %Diff Criteria <3% |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.3353 | 0.0653 |
| Weight of Balance of Residue | 1.0692 | |
| Weight of Dish & Filter for Centrifugate | 8.2594 | %Diff |
| Weight of Dish & Filter & Centrifugate- 1 | 8.5036 | Criteria <3% |
| Weight of Dish & Filter & Centrifugate- 2 | 8.5041 | 0.0059 |
| Weight of Centrifugate | 0.2447 | |
| Weight Percent Centrifugate | 7.3018 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

| | |
|-------------------------------------|--------|
| Percent of Total Asbestos in Sample | 0.0000 |
|-------------------------------------|--------|

* All Weights in grams



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EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaidellc.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

EMSL Sample ID: 062200925-0005

Crucible ID: V5

| | Analyst | Date |
|---------------------|---------|-----------|
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/25/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

| Stereoscopic | | | |
|--------------|-------------|-------------------------|-----|
| Color | Tan | Stereoscopic % Asbestos | 0 |
| Texture | Fibrous | | |
| Homogeneity | Homogeneous | Vermiculite Detected | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 34.5615 |
| Weight of Crucible and Sub Sample | 38.0031 |
| Weight of Sub-Sample | 3.4416 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 37.4505 |
| Weight of Ash | 2.8890 |
| Weight Loss During Ashing | 0.5526 |
| Weight Percent Organic and Water | 16.0565 |

| Chrysotile Identification Optical Properties | | | | | | Temperature (C°): | |
|--|----|------------|------|-------------|---------------|-------------------|------------|
| ⊥ RI | RI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Acid Treatment/ Flotation | |
|----------------------------|--------|
| Weight of Dish for Floats | 8.2786 |
| Weight of Dish & Floats- 1 | 8.4058 |
| Weight of Dish & Floats- 2 | 8.4063 |
| Weight of Floats | 0.1277 |
| Weight Percent Floats | 3.7105 |

%Diff
 Criteria <3%
 0.0059

| Amphibole Identification Optical Properties | | | | | | Temperature (C°) | |
|---|----|------------|------|-------------|---------------|------------------|------------|
| ⊥ RI | RI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | |
|---|---------|
| Weight of Dish & Filter for Residue | 8.2850 |
| Weight of Dish & Filter & Residue- 1 | 9.4582 |
| Weight of Dish & Filter & Residue- 2 | 9.4085 |
| Weight of Residue | 1.1235 |
| Weight Loss During Acid/Flotation Treatment | 1.6378 |
| Weight Percent Acid-Soluble/Float Materials | 47.5883 |
| Weight Percent Residue | 32.6447 |

%Diff
 Criteria <3%
 0.5269

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|-----------------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.3986 | %Diff Criteria <3% |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.3744 | 0.2578 |
| Weight of Balance of Residue | 1.0894 | |
| Weight of Dish & Filter for Centrifugate | 8.2808 | %Diff Criteria <3% |
| Weight of Dish & Filter & Centrifugate- 1 | 8.4768 | 0.0012 |
| Weight of Dish & Filter & Centrifugate- 2 | 8.4767 | |
| Weight of Centrifugate | 0.1959 | |
| Weight Percent Centrifugate | 5.8703 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

| | |
|--|---------------|
| Percent of Total Asbestos in Sample | 0.0000 |
|--|---------------|

* All Weights in grams



EMSL ANALYTICAL, INC.
 528 Mineola Avenue
 Carle Place, NY 11514
 Phone/Fax: (516)997-7251 / (516)997-7528
carleplacelab@emsl.com | <http://www.EMSL.com>

EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaidellc.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

EMSL Sample ID: 062200925-0006

Crucible ID: V6

| | Analyst | Date |
|---------------------|---------|-----------|
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/26/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

| Stereoscopic | | | |
|--------------|-------------|-------------------------|-----|
| Color | Tan | Stereoscopic % Asbestos | 0 |
| Texture | Fibrous | | |
| Homogeneity | Homogeneous | Vermiculite Detected | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 44.1528 |
| Weight of Crucible and Sub Sample | 47.6025 |
| Weight of Sub-Sample | 3.4497 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 47.0324 |
| Weight of Ash | 2.8796 |
| Weight Loss During Ashing | 0.5701 |
| Weight Percent Organic and Water | 16.5261 |

| Chrysotile Identification Optical Properties | | | | | | | Temperature (C°): | | |
|--|----|------------|------|-------------|---------------|-------------|-------------------|--|--|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Acid Treatment/ Flotation | |
|----------------------------|--------|
| Weight of Dish for Floats | 8.5020 |
| Weight of Dish & Floats- 1 | 8.5408 |
| Weight of Dish & Floats- 2 | 8.5409 |
| Weight of Floats | 0.0389 |
| Weight Percent Floats | 1.1276 |

%Diff
 Criteria <3%
 0.0012

| Amphibole Identification Optical Properties | | | | | | | Temperature (C°) | | |
|---|----|------------|------|-------------|---------------|-------------|------------------|--|--|
| ⊥ RI | RI | Morphology | Sign | Pleochroism | Birefringence | Fiber Color | Extinction | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

%Diff
 Criteria <3%
 0.0904

| | |
|---|---------|
| Weight of Dish & Filter for Residue | 8.2841 |
| Weight of Dish & Filter & Residue- 1 | 9.4050 |
| Weight of Dish & Filter & Residue- 2 | 9.3965 |
| Weight of Residue | 1.1124 |
| Weight Loss During Acid/Flotation Treatment | 1.7283 |
| Weight Percent Acid-Soluble/Float Materials | 50.1000 |
| Weight Percent Residue | 32.2463 |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|---------------------------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.3886 | %Diff Criteria <3% 0.0426 |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.3846 | |
| Weight of Balance of Residue | 1.1005 | |
| Weight of Dish & Filter for Centrifugate | 8.7784 | %Diff Criteria <3% 0.2307 |
| Weight of Dish & Filter & Centrifugate- 1 | 9.0687 | |
| Weight of Dish & Filter & Centrifugate- 2 | 9.0478 | |
| Weight of Centrifugate | 0.2694 | |
| Weight Percent Centrifugate | 7.8938 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

| | |
|-------------------------------------|--------|
| Percent of Total Asbestos in Sample | 0.0000 |
|-------------------------------------|--------|

* All Weights in grams



EMSL ANALYTICAL, INC.
 528 Mineola Avenue
 Carle Place, NY 11514
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carleplacelab@emsl.com | <http://www.EMSL.com>

EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
 EMSL Project ID:
 Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
 Email: ssoter@adelaidellc.com

Collected: 01/12/2022
 Received: 01/21/2022
 Analyzed: 1/26/2022
 Reported: 1/26/2022

Asbestos Analysis of NYS ELAP Method 198.8
PLM Analysis for Asbestos in Bulk Surfacing Materials Containing Vermiculite
Bench Sheet

EMSL Sample ID: 062200925-0007

Crucible ID: V7

| | Analyst | Date |
|---------------------|---------|-----------|
| Gravimetric Prep | LV | 1/25/2022 |
| Chrysotile Analysis | SJ | 1/26/2022 |
| Centrifugation Date | AS | 1/27/2022 |
| Amphibole Analysis | SJ | 1/27/2022 |

| Stereoscopic | | | |
|--------------|-------------|-------------------------|-----|
| Color | Tan | Stereoscopic % Asbestos | 0 |
| Texture | Fibrous | | |
| Homogeneity | Homogeneous | Vermiculite Detected | Yes |

| Initial Weights* | |
|-----------------------------------|---------|
| Weight of Crucible | 33.6725 |
| Weight of Crucible and Sub Sample | 37.1712 |
| Weight of Sub-Sample | 3.4987 |

| Non-Asbestos Fiber | Optical Property | Visual % | Calc % |
|--------------------|------------------|----------|--------|
| | | | 0 |
| | | | 0 |

| Ashing | |
|----------------------------------|---------|
| Weight of Crucible & Ash | 36.5030 |
| Weight of Ash | 2.8305 |
| Weight Loss During Ashing | 0.6682 |
| Weight Percent Organic and Water | 19.0985 |

| Chrysotile Identification Optical Properties | | | | | | Temperature (C°): | |
|--|-----|------------|------|-------------|---------------|-------------------|------------|
| ⊥ RI | IRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Acid Treatment/ Flotation | | |
|---|---------|--------------|
| Weight of Dish for Floats | 8.2710 | %Diff |
| Weight of Dish & Floats- 1 | 8.4242 | Criteria <3% |
| Weight of Dish & Floats- 2 | 8.4251 | 0.0107 |
| Weight of Floats | 0.1541 | |
| Weight Percent Floats | 4.4045 | |
| Weight of Dish & Filter for Residue | 8.2637 | %Diff |
| Weight of Dish & Filter & Residue- 1 | 9.3489 | Criteria <3% |
| Weight of Dish & Filter & Residue- 2 | 9.3485 | 0.0043 |
| Weight of Residue | 1.0848 | |
| Weight Loss During Acid/Flotation Treatment | 1.5916 | |
| Weight Percent Acid-Soluble/Float Materials | 45.4912 | |
| Weight Percent Residue | 31.0058 | |

| Amphibole Identification Optical Properties | | | | | | Temperature (C°) | |
|---|-----|------------|------|-------------|---------------|------------------|------------|
| ⊥ RI | IRI | Morphology | Sign | Pleochorism | Birefringence | Fiber Color | Extinction |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| PLM Examination of Residue (Chrysotile) | Analyzed | PTCT | Chrysotile | Non-Empty | PTCT: | Chrysotile | Non-Empty | Trace Detected? |
|---|----------|----------|------------|-----------|----------|------------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Chrysotile Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Chrysotile by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Chrysotile in Sample ¹ | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

¹ If greater than 1% no further analysis needed

| Heavy Liquid Centrifugation | | |
|--|--------|-----------------------|
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 1 | 9.3465 | %Diff Criteria <3% |
| Weight of Dish & Filter & Balance of Residue (Post Chrysotile Analysis)- 2 | 9.3428 | 0.0396 |
| Weight of Balance of Residue | 1.0791 | |
| Weight of Dish & Filter for Centrifugate | 8.0673 | %Diff |
| Weight of Dish & Filter & Centrifugate- 1 | 8.2896 | Criteria <3% |
| Weight of Dish & Filter & Centrifugate- 2 | 8.2900 | 0.0048 |
| Weight of Centrifugate | 0.2227 | |
| Weight Percent Centrifugate | 6.3988 | |

| PLM Examination of Centrifugate (Amphibole) | Analyzed | PTCT | Amphibole | Non-Empty | PTCT | Amphibole | Non-Empty | Trace Detected? |
|---|----------|----------|-----------|-----------|----------|-----------|-----------|----------------------------------|
| Number of Occupied Points | 400 | Slide 1: | 0 | 50 | Slide 5: | 0 | 50 | dropdown select No |
| Number of Amphibole Points | 0 | Slide 2: | 0 | 50 | Slide 6: | 0 | 50 | |
| Percent Amphibole by PTCT | 0.00 | Slide 3: | 0 | 50 | Slide 7: | 0 | 50 | |
| Percent Amphibole in Sample | 0.0000 | Slide 4: | 0 | 50 | Slide 8: | 0 | 50 | |

Percent of Total Asbestos in Sample: 0.0000

* All Weights in grams



EMSL ANALYTICAL, INC.
 528 Mineola Avenue
 Carle Place, NY 11514
 Phone/Fax: (516)997-7251 / (516)997-7528
carleplacelab@emsl.com | <http://www.EMSL.com>

EMSL ORDER ID: 062200925
 EMSL CUSTOMER ID: ADEL50

Attention: Stephanie Soter
 Adelaide Associates, LLC
 1511 Route 22
 Suite C-24

Customer PO:
EMSL Project ID:
Project Name: MIDD: 22005.00-IN

Phone: 845-278-7710
Email: ssoter@adelaidellc.com

Collected: 01/12/2022
Received: 01/21/2022
Analyzed: 1/26/2022
Reported: 1/26/2022

Signature Page

| <u>Report Date</u> | <u>Report Revision</u> | <u>Revision Comments</u> |
|--------------------|------------------------|--------------------------|
| 1/26/2022 | R0 | Initial Report |

Daniel Clarke, Asbestos Laboratory Manager
 or other approved signatory

NYS ELAP ID: Carle Place, NY 11469

About us



EMSL Analytical, Inc. offers a full line of analytical solutions for over 30 years across North America. For more information about our nationally accredited locations, vast line of testing services, and our food safety solutions please visit www.EMSL.com or call (800) 220-3675.



Disclaimers

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the results, it will be noted on the report.



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

062200925

Carle Place, NY 11514
PHONE: (516) 997-7251
FAX: (516) 997-7528

| Company : Adelaide Environmental Health Associates Inc. | | EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small> | |
|---|--------------------|---|-----------------------------|
| Street: 1511 Route 22, Suite C24 | | Third Party Billing requires written authorization from third party | |
| City: Brewster | State/Province: NY | Zip/Postal Code: 10509 | Country: US |
| Report To (Name): Stephanie Soter | | Telephone #: 845.278.7710 | |
| Email Address: adelaidemail@adelaidellc.com | | Fax #: 845.278.7750 | Purchase Order: |
| Project Name/Number: MIDD:22005.00-IN | | Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail | |
| U.S. State Samples Taken: NY | | CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt | |
| Turnaround Time (TAT) Options* - Please Check | | | |
| <input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week | | | |
| <small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small> | | | |
| PLM - Bulk (reporting limit) | | TEM - Bulk | |
| <input type="checkbox"/> PLM EPA 600/R-93/116 (<1%) | | <input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 | |
| <input type="checkbox"/> PLM EPA NOB (<1%) | | <input type="checkbox"/> NY ELAP Method 198.4 (TEM) | |
| Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) | | <input type="checkbox"/> Chatfield Protocol (semi-quantitative) | |
| Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) | | <input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2 | |
| <input type="checkbox"/> NIOSH 9002 (<1%) | | <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique | |
| <input type="checkbox"/> NY ELAP Method 198.1 (friable in NY) | | <input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique | |
| <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY) | | Other | |
| <input type="checkbox"/> OSHA ID-191 Modified | | <input checked="" type="checkbox"/> NYS ELAP 198.8 | |
| <input type="checkbox"/> Standard Addition Method | | | |
| <input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group | | Date Sampled: 1/12/2022 | |
| Samplers Name: Robert See | | Samplers Signature: <i>Robert See</i> | |
| Sample # | HA # | Sample Location | Material Description |
| V1 | 001 | Floor 3 Rm 324 above ceiling | Spray applied fire proofing |
| V2 | 001 | Floor 2 Hall near Rm 238 above ceiling | Spray applied fire proofing |
| V3 | 001 | Floor 2 Room 238 above ceiling | Spray applied fire proofing |
| V4 | 001 | Floor 2 Rm 234 above ceiling | Spray applied fire proofing |
| V5 | 001 | Floor 1 Room 122 above ceiling | Spray applied fire proofing |
| V6 | 001 | Floor 1 Room 119 above ceiling | Spray applied fire proofing |
| V7 | 001 | Floor 1 Hall outside rooms 119 & 120 | Spray applied fire proofing |
| Client Sample # (s): V1 - V7 | | Total # of Samples: 7 | |
| Relinquished (Client): <i>Robert See</i> | | Date: 1/20/2022 | Time: 4:00 |
| Received (Lab): <i>Office</i> | | Date: 1/21/2022 | Time: 11:00 |
| Comments/Special Instructions: | | | |

RECEIVED
 EMSL ANALYTICAL, INC.
 CARLE PLACE, NY
 22 JAN 21 AM 11:00

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results

MIDD:22005.00-IN; Twin Towers MS; 112 Grand Avenue, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 39L2 | 10 | 0.307 | 28.2 | 29.9 | 41.8 | NAD | NAD |
| Location: 3rd Floor - Room 321 - 12 x 12 White W/ Aqua FT Mastic | | | | | | | | |
| 02 | 49L2 | 15 | 0.170 | 82.3 | 6.2 | 9.8 | Chrysotile <0.25 | Chrysotile 1.7 |
| Location: 3rd Floor - Room 323 Floor - Black Mastic | | | | | | | | |
| 03 | 50L2 | 15 | 0.145 | 81.3 | 8.9 | 9.8 | Chrysotile <0.25 | NA/PS |
| Location: 3rd Floor - Room 323 Floor - Black Mastic | | | | | | | | |
| 04 | 87L2 | 32 | 0.149 | 85.0 | 11.5 | 3.5 | NAD | NAD |
| Location: 1st Floor - Cafeteria Elevator - 12 x 12 FT Off-White W/ Gray Clear Mastic On Wood | | | | | | | | |
| 05 | 88L2 | 32 | 0.098 | 91.5 | 6.6 | 1.9 | NAD | NAD |
| Location: 1st Floor - Cafeteria Elevator - 12 x 12 FT Off-White W/ Gray Clear Mastic On Wood | | | | | | | | |

Analyzed by: Khaalid W. Perine
Date: 1/26/2022



Reviewed by: Khaalid W. Perine



**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or NYSDOH ELAP 198.1 for New York friable samples or NYSDOH ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or NYSDOH ELAP 198.4; for New York samples). Analysis using Hitachi, Model H7000-Noran 7 System, Microscope, Serial #: 747-05-06. NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, NJ Lab ID #NY031.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 01/26/22 **AmeriSci Job #** 222012995
Date Examined 01/26/22 **P.O. #**
ELAP # 11480 **Page** 1 of 2
RE: MIDD:22005.00-IN; Twin Towers MS; 112 Grand Avenue,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|---|------------------|---|
| 39L2 10 | 222012995-01 Location: 3rd Floor - Room 321 - 12 x 12 White W/ Aqua FT Mastic | No | NAD (by NYS ELAP 198.6) by Jared C. Clarke on 01/26/22 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 41.8% | | | |
| 49L2 15 | 222012995-02 Location: 3rd Floor - Room 323 Floor - Black Mastic | Yes | Trace (<0.25 % pc) ¹ (ELAP 400 PC) by Jared C. Clarke on 01/26/22 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Non-fibrous 11.5% | | | |
| 50L2 15 | 222012995-03 Location: 3rd Floor - Room 323 Floor - Black Mastic | Yes | Trace (<0.25 % pc) ¹ (ELAP 400 PC) by Jared C. Clarke on 01/26/22 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Non-fibrous 9.8% | | | |
| 87L2 32 | 222012995-04 Location: 1st Floor - Cafeteria Elevator - 12 x 12 FT Off-White W/ Gray Clear Mastic On Wood | No | NAD (by NYS ELAP 198.6) by Jared C. Clarke on 01/26/22 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 3.5% | | | |
| 88L2 32 | 222012995-05 Location: 1st Floor - Cafeteria Elevator - 12 x 12 FT Off-White W/ Gray Clear Mastic On Wood | No | NAD (by NYS ELAP 198.6) by Jared C. Clarke on 01/26/22 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 1.9% | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD:22005.00-IN; Twin Towers MS; 112 Grand Avenue,
Middletown, NY 10940

Reporting Notes:

- (1) Sample prepared for analysis by ELAP 198.6 method

Analyzed by: Jared C. Clarke
Date: 1/26/2022



Reviewed by: Khaalid W. Perine



*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis using Motic, Model BA310 Pol Scope, Microscope, Serial #: 1190000326, by Appd E to Subpt E, 40 CFR 763 quantified by either CVES or 400 pt ct as noted for each analysis (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite, or ELAP 198.6 for NOB samples, or EPA 400 pt ct by EPA 600-M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054, NJ Lab ID #NY031.

_____END OF REPORT_____

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
 Brewster, NY 10509
 845-278-7710
 845-278-7750 - fax

| | | |
|-------------------------------------|-------------------------------------|------------------------------------|
| Site Address: <u>TWIN TOWERS MS</u> | Date: <u>1/25/22</u> | Inspector(s) <u>Philip J. Page</u> |
| <u>112 GRAND AVENUE (JP)</u> | | |
| <u>MIDDLETOWN, NY 10940</u> | Project #: <u>MIDD: 22005.00-IN</u> | |

| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | Quantity (In Feet) | Friable Non-Friable | Condition g, d, sd |
|-------------|------------------|-------------|--|--------------------|------------------------|-----------------------|
| 39L2 | 10 | 3RD | ROOM 321, 12x12 WHITE W/ AQUA FT - MASTIC | | | |
| 49L2 | 15 | ↓ | ROOM 323, FLOOR, BLACK - MASTIC | | | |
| 50L2 | ↓ | ↓ | ↓ ↓ ↓ ↓ | | | |
| 87L2 | 32 | 1ST | CAFETERIA ELEVATOR, 12x12 FT OFF WHITE W/ GRAY - CLEAR MASTIC ON WOODS | | | |
| 88L2 | ↓ | ↓ | ↓ ↓ ↓ | | | |
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222012995

| | |
|---|--|
| Special Instructions/ Turnaround Time: <p style="font-weight: bold; font-size: 1.2em;">Stop at 1st Positive per Homogenous Area</p> <p style="font-size: 1.5em; text-align: center;">24 HR TAT</p> <p>E-Mail Results to AdelaideLabResults@adelaidehc.com & ppage@adelaidehc.com</p> | Relinquished by: Received by: <u>El No 1-26-22 1105</u> Relinquished by: Received by: |
|---|--|

APPENDIX D
XRF READINGS

| Reading # | Date | Time | Job Number | Job Name | Space Type | Floor | Room | Component | Substrate | Color | Condition | Lead Concentration (mg/cm2) | Result | Inspector |
|-----------|-----------|----------|------------|-------------|------------|--------|-------------|--------------|-----------|-------|-----------|-----------------------------|----------|--------------|
| 1 | 1/16/2023 | 9:38:16 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.1 | Positive | Jason Fullum |
| 2 | 1/16/2023 | 9:38:49 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.1 | Positive | Jason Fullum |
| 3 | 1/16/2023 | 9:39:23 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.2 | Positive | Jason Fullum |
| 4 | 1/16/2023 | 9:41:24 | 22005.00 | Twin Towers | School | Ground | Exterior | Light Post | Metal | Brown | Intact | 0.1 | Negative | Jason Fullum |
| 5 | 1/16/2023 | 9:46:25 | 22005.00 | Twin Towers | School | Ground | Exterior | Sign Support | Metal | Green | Intact | 0.1 | Negative | Jason Fullum |
| 6 | 1/16/2023 | 10:03:40 | 22005.00 | Twin Towers | School | Ground | Exterior | Fence Post | Metal | Black | Intact | 0.2 | Negative | Jason Fullum |
| 7 | 1/16/2023 | 10:07:54 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.2 | Positive | Jason Fullum |
| 8 | 1/16/2023 | 10:08:28 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.1 | Positive | Jason Fullum |
| 9 | 1/16/2023 | 10:09:03 | 22005.00 | Twin Towers | School | | Calibration | | | | | 1.2 | Positive | Jason Fullum |

| Reading # | Date | Time | Space Type | Floor | Room | Component | Side | Substrate | Color | Condition | Lead Concentration (mg/cm ²) | Result |
|-----------|-----------|----------|------------|-----------|------------------|------------------|---------|-----------|------------|-----------|--|----------|
| 1 | 1/11/2022 | 19:24:39 | School | | Calibration | | | | | | 1.1 | Positive |
| 2 | 1/11/2022 | 19:25:07 | School | | Calibration | | | | | | 1.1 | Positive |
| 3 | 1/11/2022 | 19:25:37 | School | | Calibration | | | | | | 1.1 | Positive |
| 4 | 1/11/2022 | 19:38:16 | School | 3rd Floor | stairway D | Ceiling | Ceiling | Plaster | White | Intact | 0.1 | Negative |
| 5 | 1/11/2022 | 19:39:15 | School | 3rd Floor | stairway D | Trim | B | Wood | White | Intact | 0.4 | Negative |
| 6 | 1/11/2022 | 19:39:46 | School | 3rd Floor | stairway D | Wall | B | Plaster | White | Intact | 0.3 | Negative |
| 7 | 1/11/2022 | 19:40:59 | School | 3rd Floor | Hallway | Wall | Ceiling | Plaster | White | Intact | 0.4 | Negative |
| 8 | 1/11/2022 | 19:41:44 | School | 3rd Floor | Hallway | Wall | A | Plaster | White | Intact | -0.2 | Negative |
| 9 | 1/11/2022 | 19:42:31 | School | 3rd Floor | stairway D | Window Case | A | Metal | Beige | Intact | 0.2 | Negative |
| 10 | 1/11/2022 | 19:43:24 | School | 3rd Floor | E326 | Door Case | A | Metal | Beige | Intact | -0.2 | Negative |
| 11 | 1/11/2022 | 19:44:26 | School | 3rd Floor | 324 | Wall | D | Plaster | White | Intact | 0 | Negative |
| 12 | 1/11/2022 | 19:45:34 | School | 3rd Floor | 320 | Door Case | A | Metal | Beige | Intact | -0.1 | Negative |
| 13 | 1/11/2022 | 19:46:59 | School | 3rd Floor | 316 | Wall | A | Plaster | White | Intact | 0.1 | Negative |
| 14 | 1/11/2022 | 19:48:14 | School | 3rd Floor | Hallway | Ceiling | Ceiling | Plaster | White | Intact | 0.2 | Negative |
| 15 | 1/11/2022 | 19:48:50 | School | 3rd Floor | Hallway | Wall | D | Plaster | White | Intact | 0.4 | Negative |
| 16 | 1/11/2022 | 19:49:39 | School | 3rd Floor | 319 | Door Case | A | Metal | Beige | Intact | 0 | Negative |
| 17 | 1/11/2022 | 19:50:11 | School | 3rd Floor | 319 | Wall | C | Plaster | White | Intact | 0.1 | Negative |
| 18 | 1/11/2022 | 19:51:50 | School | 3rd Floor | 319 | Vent Cpver | A | Metal | White | Intact | 0.5 | Negative |
| 19 | 1/11/2022 | 19:52:55 | School | 3rd Floor | Hallway | Electrical Panel | B | Metal | Tan | Intact | 0.2 | Negative |
| 20 | 1/11/2022 | 19:54:53 | School | 3rd Floor | Stairway B | Stair Handrail | Main | Metal | Black | Intact | 0.4 | Negative |
| 21 | 1/11/2022 | 19:55:32 | School | 3rd Floor | Stairway B | Stair Stringer | Main | Metal | Black | Intact | 0.6 | Negative |
| 22 | 1/11/2022 | 19:56:07 | School | 3rd Floor | Stairway B | Stair Handrail | Main | Metal | Black | Intact | 0.6 | Negative |
| 23 | 1/11/2022 | 19:57:18 | School | 3rd Floor | Stairway B | Window Case | Main | Metal | Beige | Fair | 0.2 | Negative |
| 24 | 1/11/2022 | 19:59:28 | School | 3rd Floor | Custodian Closet | Ceiling | Ceiling | Plaster | White | Fair | 0.5 | Negative |
| 25 | 1/11/2022 | 19:59:58 | School | 3rd Floor | Custodian Closet | Wall Upper | B | Plaster | White | Fair | 0.5 | Negative |
| 26 | 1/11/2022 | 20:00:34 | School | 3rd Floor | Custodian Closet | Wall Lower | B | Plaster | Grey | Fair | 0.5 | Negative |
| 27 | 1/11/2022 | 20:02:25 | School | 3rd Floor | Hallway | Wall | D | Ceramic | Green | Intact | -0.2 | Negative |
| 28 | 1/11/2022 | 20:02:51 | School | 3rd Floor | Hallway | Wall | B | Ceramic | Green | Intact | -0.2 | Negative |
| 29 | 1/11/2022 | 20:04:22 | School | 3rd Floor | Girls Bathroom | Door Case | A | Metal | Beige | Intact | 0.2 | Negative |
| 30 | 1/11/2022 | 20:06:02 | School | 3rd Floor | Stairway A | Stair Newel | A | Metal | Black | Intact | 0.5 | Negative |
| 31 | 1/11/2022 | 20:06:32 | School | 3rd Floor | Stairway A | Stair Handrail | A | Metal | Black | Intact | 0.1 | Negative |
| 32 | 1/11/2022 | 20:06:57 | School | 3rd Floor | Stairway A | Stair Stringer | A | Metal | Black | Intact | 0 | Negative |
| 33 | 1/11/2022 | 20:08:02 | School | 3rd Floor | 331 | Wall | C | Plaster | Pink | Intact | 0.1 | Negative |
| 34 | 1/11/2022 | 20:09:59 | School | 3rd Floor | Hallway | Radiator Cover | B | Metal | Tan | Intact | 0.6 | Negative |
| 35 | 1/11/2022 | 20:11:32 | School | 2nd Floor | stairway D | Window Case | A | Metal | Tan | Intact | 0.4 | Negative |
| 36 | 1/11/2022 | 20:12:22 | School | 2nd Floor | Hallway | Ceiling | Ceiling | Plaster | White | Intact | 0.2 | Negative |
| 37 | 1/11/2022 | 20:13:33 | School | 2nd Floor | 240 | Wall | A | Sheetrock | Beige | Intact | -0.1 | Negative |
| 38 | 1/11/2022 | 20:13:58 | School | 2nd Floor | 240 | Wall | C | Plaster | Beige | Intact | 0.3 | Negative |
| 39 | 1/11/2022 | 20:14:53 | School | 2nd Floor | Hallway | Wall Upper | D | Plaster | White | Intact | -0.1 | Negative |
| 40 | 1/11/2022 | 20:16:10 | School | 2nd Floor | 234 | Wall | D | Plaster | White | Intact | 0 | Negative |
| 41 | 1/11/2022 | 20:18:55 | School | 2nd Floor | Stairway C | Window Case | A | Metal | Light Grey | Fair | 0.3 | Negative |
| 42 | 1/11/2022 | 20:19:32 | School | 2nd Floor | Stairway C | Stair Riser | B | Metal | Black | Intact | 2.2 | Positive |

| Reading # | Date | Time | Space Type | Floor | Room | Component | Side | Substrate | Color | Condition | Lead Concentration (mg/cm ²) | Result |
|-----------|------------------|-----------------|---------------|------------------|--------------------------|--------------------|----------|----------------|--------------|---------------|--|-----------------|
| 43 | 1/11/2022 | 20:20:00 | School | 2nd Floor | Stairway C | Stair Stringer | B | Metal | Black | Intact | 0.7 | Negative |
| 44 | 1/11/2022 | 20:20:41 | School | 2nd Floor | Stairway C | Stair Handrail | B | Metal | Black | Intact | 0.7 | Negative |
| 45 | 1/11/2022 | 20:21:42 | School | 2nd Floor | Hallway | Ceiling | Ceiling | Plaster | White | Intact | 0.1 | Negative |
| 46 | 1/11/2022 | 20:22:15 | School | 2nd Floor | Hallway | Wall | B | Plaster | White | Intact | 0.4 | Negative |
| 47 | 1/11/2022 | 20:22:47 | School | 2nd Floor | Hallway | Wall Lower | B | Ceramic | Brown | Intact | 11 | Positive |
| 48 | 1/11/2022 | 20:27:13 | School | 2nd Floor | 222 | Air Handler | D | Metal | Grey | Fair | 3 | Positive |
| 49 | 1/11/2022 | 20:28:22 | School | 2nd Floor | 222 | Column | A | Metal | Grey | Fair | 0.2 | Negative |
| 50 | 1/11/2022 | 20:33:02 | School | 2nd Floor | C1 | Wall Upper | B | Plaster | Tan | Poor | 0.3 | Negative |
| 51 | 1/11/2022 | 20:34:05 | School | 1st Floor | Cafeteria | Wall Upper | D | Plaster | White | Intact | 0.1 | Negative |
| 52 | 1/11/2022 | 20:34:39 | School | 1st Floor | Cafeteria | Wall Lower | D | Plaster | Light Blue | Intact | 0.2 | Negative |
| 53 | 1/11/2022 | 20:35:23 | School | 1st Floor | Cafeteria | Window Case | D | Wood | Light Grey | Intact | -0.3 | Negative |
| 54 | 1/11/2022 | 20:35:46 | School | 1st Floor | Cafeteria | Window Case | D | Metal | Light Grey | Intact | 0.2 | Negative |
| 55 | 1/11/2022 | 20:36:07 | School | 1st Floor | Cafeteria | Window Sash | D | Metal | Light Grey | Intact | 0.3 | Negative |
| 56 | 1/11/2022 | 20:37:43 | School | 1st Floor | Stage | Wall Upper | C | Brick | White | Intact | 0.1 | Negative |
| 57 | 1/11/2022 | 20:38:08 | School | 1st Floor | Stage | Wall Lower | C | Brick | Brown | Intact | 0.1 | Negative |
| 58 | 1/11/2022 | 20:39:46 | School | 1st Floor | Auditorium | Wall | D | Brick | Off White | Intact | 0.3 | Negative |
| 59 | 1/11/2022 | 20:40:47 | School | 1st Floor | Auditorium | Wall | B | Plaster | Off White | Intact | 0.1 | Negative |
| 60 | 1/11/2022 | 20:41:25 | School | 1st Floor | Auditorium | Vent Cprer | B | Metal | Off White | Intact | 0.2 | Negative |
| 61 | 1/11/2022 | 20:42:53 | School | 1st Floor | Auditorium Control Booth | Wall | Center | Wood | Cream | Intact | -0.5 | Negative |
| 62 | 1/11/2022 | 20:44:07 | School | 1st Floor | Auditorium | Column | A | Plaster | Off White | Intact | -0.1 | Negative |
| 63 | 1/11/2022 | 20:45:22 | School | 1st Floor | Auditorium | Door Trim | A | Plaster | Gold | Intact | 0.3 | Negative |
| 64 | 1/11/2022 | 20:46:27 | School | 1st Floor | Lobby | Ceiling | Ceiling | Plaster | White | Intact | 0.3 | Negative |
| 65 | 1/11/2022 | 20:47:08 | School | 1st Floor | Lobby | Door | D | Metal | Brown | Intact | 0.3 | Negative |
| 66 | 1/11/2022 | 20:47:34 | School | 1st Floor | Lobby | Door Case | D | Metal | Brown | Intact | 0.1 | Negative |
| 67 | 1/11/2022 | 20:48:15 | School | 1st Floor | 100 | Door Case | A | Metal | Brown | Intact | 0.1 | Negative |
| 68 | 1/11/2022 | 20:49:10 | School | 1st Floor | 100 | Wall | C | Plaster | Cream | Intact | -0.1 | Negative |
| 69 | 1/11/2022 | 20:49:45 | School | 1st Floor | 100 | Radiator Cover | C | Metal | Black | Intact | 0 | Negative |
| 70 | 1/11/2022 | 20:51:24 | School | 1st Floor | Office | Wall | C | Sheetrock | Off White | Intact | 0.1 | Negative |
| 71 | 1/11/2022 | 20:52:05 | School | 1st Floor | Office | Door Case | C | Metal | Cream | Intact | 0.2 | Negative |
| 72 | 1/11/2022 | 20:53:48 | School | 1st Floor | 104 | Wall | B | Sheetrock | Off White | Intact | 0.3 | Negative |
| 73 | 1/11/2022 | 20:54:49 | School | 1st Floor | Vault | Door Case | A | Metal | Black | Intact | 1 | Positive |
| 74 | 1/11/2022 | 20:55:27 | School | 1st Floor | Vault | Door | A | Metal | Black | Intact | 0.5 | Negative |
| 75 | 1/11/2022 | 20:57:01 | School | 1st Floor | 110 | Wall Upper | B | Sheetrock | Cream | Intact | -0.1 | Negative |
| 76 | 1/11/2022 | 20:57:30 | School | 1st Floor | 110 | Wall Lower | B | Sheetrock | Blue | Intact | 0 | Negative |
| 77 | 1/11/2022 | 20:58:14 | School | 1st Floor | 110 | Wall | C | Plaster | Cream | Intact | 0 | Negative |
| 78 | 1/11/2022 | 20:59:25 | School | 1st Floor | 110 | Radiator Cover | C | Metal | Cream | Intact | 0.2 | Negative |
| 79 | 1/11/2022 | 21:00:03 | School | 1st Floor | 110 | Window Case | C | Wood | Black | Fair | 3.3 | Positive |
| 80 | 1/11/2022 | 21:00:39 | School | 1st Floor | 110 | Window Sash | C | Metal | Off White | Fair | 0.1 | Negative |
| 81 | 1/11/2022 | 21:01:20 | School | 1st Floor | 110 | Trim | C | Wood | White | Intact | 0 | Negative |
| 82 | 1/11/2022 | 21:03:34 | School | 1st Floor | Gym | Wall Lower | B | Plaster | Brown | Intact | 0.1 | Negative |
| 83 | 1/11/2022 | 21:11:32 | School | 1st Floor | Gym | Wall Upper | B | Plaster | White | Intact | 0 | Negative |
| 84 | 1/11/2022 | 21:12:25 | School | 1st Floor | Locker Room | Ceiling | Ceiling | Sheetrock | White | Intact | 0 | Negative |

| Reading # | Date | Time | Space Type | Floor | Room | Component | Side | Substrate | Color | Condition | Lead Concentration (mg/cm2) | Result |
|------------|------------------|-----------------|---------------|---------------|--------------------|--------------|----------|--------------|-------------|---------------|-----------------------------|-----------------|
| 85 | 1/11/2022 | 21:12:54 | School | 1st Floor | Locker Room | Wall | D | Sheetrock | White | Intact | -0.1 | Negative |
| 86 | 1/11/2022 | 21:16:07 | School | 1st Floor | 118 | Wall | A | Plaster | Off White | Intact | 0.5 | Negative |
| 87 | 1/11/2022 | 21:16:49 | School | 1st Floor | 118 | Floor | Floor | Wood | Green | Poor | 0.2 | Negative |
| 88 | 1/11/2022 | 21:18:46 | School | 1st Floor | 120 | Wall | C | Plaster | White | Intact | 0 | Negative |
| 89 | 1/11/2022 | 21:19:47 | School | 1st Floor | 120 | Table | Main | Wood | Light Blue | Fair | 0 | Negative |
| 90 | 1/11/2022 | 21:20:53 | School | 1st Floor | Hallway | Ceiling | Ceiling | Plaster | White | Intact | -0.1 | Negative |
| 91 | 1/11/2022 | 21:21:35 | School | 1st Floor | Hallway | Wall | B | Plaster | White | Intact | -0.1 | Negative |
| 92 | 1/11/2022 | 21:22:05 | School | 1st Floor | Hallway | Door | B | Metal | Brown | Intact | 0.1 | Negative |
| 93 | 1/11/2022 | 21:22:26 | School | 1st Floor | Hallway | Door Case | B | Metal | Brown | Intact | 0.4 | Negative |
| 94 | 1/11/2022 | 21:23:51 | School | 1st Floor | Cafeteria | Door Case | D | Metal | Light Blue | Intact | -0.3 | Negative |
| 95 | 1/11/2022 | 21:24:23 | School | 1st Floor | Cafeteria | Door | D | Metal | Light Blue | Intact | 0.2 | Negative |
| 96 | 1/11/2022 | 21:25:15 | School | 1st Floor | Serving Area | Door | A | Metal | Dark Blue | Intact | 0.2 | Negative |
| 97 | 1/11/2022 | 21:25:37 | School | 1st Floor | Serving Area | Door Case | A | Metal | Dark Blue | Intact | 0.7 | Negative |
| 98 | 1/11/2022 | 21:26:26 | School | 1st Floor | Serving Area | Wall | A | Plaster | White | Intact | 0.3 | Negative |
| 99 | 1/11/2022 | 21:27:06 | School | 1st Floor | Serving Area | Wall | A | CMU | White | Intact | 0.2 | Negative |
| 100 | 1/11/2022 | 21:27:38 | School | 1st Floor | Serving Area | Wall | A | Sheetrock | White | Intact | 0 | Negative |
| 101 | 1/11/2022 | 21:28:30 | School | 1st Floor | Serving Area | Window Case | B | Metal | Blue | Intact | 0.4 | Negative |
| 102 | 1/11/2022 | 21:30:07 | School | Ground | Kitchen | Wall | A | CMU | Cream | Intact | 0.1 | Negative |
| 103 | 1/11/2022 | 21:30:48 | School | Ground | Kitchen | Door Case | C | Metal | Dark Blue | Intact | 0.5 | Negative |
| 104 | 1/11/2022 | 21:31:31 | School | Ground | Kitchen | Door Case | B | Metal | Dark Blue | Intact | 0.3 | Negative |
| 105 | 1/11/2022 | 21:32:03 | School | Ground | Kitchen | Window Case | B | Metal | Dark Blue | Intact | 0.1 | Negative |
| 106 | 1/11/2022 | 21:38:49 | School | Ground | LL7 | Wall | B | Concrete | White | Intact | 0.3 | Negative |
| 107 | 1/11/2022 | 21:39:21 | School | Ground | LL7 | Wall | A | Plaster | White | Intact | 0.5 | Negative |
| 108 | 1/11/2022 | 21:39:57 | School | Ground | LL7 | Door Case | A | Metal | Grey | Intact | -0.1 | Negative |
| 109 | 1/11/2022 | 21:40:38 | School | Ground | LL7 | Floor | Floor | Concrete | Grey | Poor | 0.5 | Negative |
| 110 | 1/11/2022 | 21:41:32 | School | Ground | Boiler Room | Floor | Floor | Concrete | Grey | Poor | 0.6 | Negative |
| 111 | 1/11/2022 | 21:42:21 | School | Ground | Boiler Room | Column | Main | Concrete | White | Intact | 0.3 | Negative |
| 112 | 1/11/2022 | 21:43:01 | School | Ground | Boiler Room | Wall | B | Concrete | White | Intact | 0.6 | Negative |
| 113 | 1/11/2022 | 21:43:41 | School | Ground | Boiler Room | Wall | B | Wood | Grey | Intact | -0.2 | Negative |
| 114 | 1/11/2022 | 21:44:30 | School | Ground | Boiler Room | Wall | C | CMU | White | Intact | 0.2 | Negative |
| 115 | 1/11/2022 | 21:45:35 | School | Ground | Boiler Room | Ceiling | Ceiling | Plaster | White | Intact | 0.1 | Negative |
| 116 | 1/11/2022 | 21:46:45 | School | Ground | Boiler Room | Ladder | D | Metal | Grey | Intact | 0.4 | Negative |
| 117 | 1/11/2022 | 21:47:56 | School | Ground | Boiler Room | Hatch | D | Metal | Grey | Intact | 15.3 | Positive |
| 118 | 1/11/2022 | 21:49:58 | School | Ground | LL1 | Door | B | Metal | Brown | Intact | 0.1 | Negative |
| 119 | 1/11/2022 | 21:50:28 | School | Ground | LL1 | Door Case | B | Metal | White | Intact | 0.2 | Negative |
| 120 | 1/11/2022 | 21:50:55 | School | Ground | LL1 | Wall | B | Concrete | White | Intact | 0.5 | Negative |
| 121 | 1/11/2022 | 21:53:18 | School | Ground | Hallway | Wall Upper | B | Plaster | White | Intact | 0.3 | Negative |
| 122 | 1/11/2022 | 21:54:17 | School | Ground | Library | Wall | D | Plaster | White | Intact | 0.4 | Negative |
| 123 | 1/11/2022 | 21:55:03 | School | Ground | Library | Column | Main | Metal | White | Intact | 0.1 | Negative |
| 124 | 1/11/2022 | 21:55:39 | School | Ground | Library | Wall | B | Sheetrock | White | Intact | 0 | Negative |
| 125 | 1/11/2022 | 21:55:59 | School | Ground | Library | Wall | B | Concrete | White | Intact | -0.1 | Negative |
| 126 | 1/11/2022 | 21:56:32 | School | Ground | Library | Ceiling | Ceiling | Sheetrock | White | Intact | -0.1 | Negative |

| Reading # | Date | Time | Space Type | Floor | Room | Component | Side | Substrate | Color | Condition | Lead Concentration (mg/cm ²) | Result |
|-----------|-----------|----------|------------|-----------|-------------|-----------------|---------|-----------|-------|-----------|--|----------|
| 127 | 1/11/2022 | 21:59:45 | School | | Calibration | | | | | | 1.1 | Positive |
| 128 | 1/11/2022 | 22:00:13 | School | | Calibration | | | | | | 1.1 | Positive |
| 129 | 1/11/2022 | 22:00:41 | School | | Calibration | | | | | | 1.1 | Positive |
| 130 | 1/12/2022 | 15:22:09 | School | | Calibration | | | | | | 1.1 | Positive |
| 131 | 1/12/2022 | 15:22:38 | School | | Calibration | | | | | | 1.1 | Positive |
| 132 | 1/12/2022 | 15:23:07 | School | | Calibration | | | | | | 1.1 | Positive |
| 133 | 1/12/2022 | 15:33:32 | School | 2nd Floor | Auditorium | Structural Beam | Ceiling | Metal | Black | Intact | 0.2 | Negative |
| 134 | 1/12/2022 | 16:03:22 | School | 2nd Floor | Auditorium | Ceiling | Ceiling | Plaster | Cream | Intact | -0.1 | Negative |
| 135 | 1/12/2022 | 16:04:20 | School | | Calibration | | | | | | 1.1 | Positive |
| 136 | 1/12/2022 | 16:04:56 | School | | Calibration | | | | | | 1.1 | Positive |
| 137 | 1/12/2022 | 16:05:23 | School | | Calibration | | | | | | 1.1 | Positive |

APPENDIX E
PCB ANALYTICAL RESULTS



Wednesday, January 25, 2023

Attn:
Adelaide Environmental Health Assoc, Inc
1511 Route 22, Suite C24
Brewster, NY 10509

Project ID: 22005.00 TWIN TOWERS MS
SDG ID: GCN27750
Sample ID#s: CN27750 - CN27753

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Id Cross Reference

January 25, 2023

SDG I.D.: GCN27750

Project ID: 22005.00 TWIN TOWERS MS

| Client Id | Lab Id | Matrix |
|--|---------|--------|
| PCB 1 CAULK AT TOP OF OPENING ROOM 107 | CN27750 | CAULK |
| PCB 2 BROWN SEALANT AT WOOD OPENING RO | CN27751 | CAULK |
| PCB 3 OLD PERIMETER SEALANT ROOM 107 | CN27752 | CAULK |
| PCB 4 SIDEWALK SEALANT | CN27753 | CAULK |



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

January 25, 2023

FOR: Attn: Adelaide Environmental Health Assoc, Inc
 1511 Route 22, Suite C24
 Brewster, NY 10509

Sample Information

Matrix: CAULK
 Location Code: ADELAIDE
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

01/16/23
 01/20/23

Time

16:46

Laboratory Data

SDG ID: GCN27750
 Phoenix ID: CN27750

Project ID: 22005.00 TWIN TOWERS MS
 Client ID: PCB 1 CAULK AT TOP OF OPENING ROOM 107

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-------------------------------------|-----------|------------|-------|----------|-----------|------|------------|
| Caulk Extraction for PCB | Completed | | | | 01/20/23 | L/AL | SW3540C |
| <u>PCB (Soxhlet SW3540C)</u> | | | | | | | |
| PCB-1016 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1221 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1232 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1242 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1248 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1254 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1260 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1262 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1268 | ND | 830 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| <u>QA/QC Surrogates</u> | | | | | | | |
| % DCBP | 64 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % DCBP (Confirmation) | 54 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX | 50 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX (Confirmation) | 48 | | % | 1 | 01/23/23 | SC | 30 - 150 % |

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-----------|--------|------------|-------|----------|-----------|----|-----------|
|-----------|--------|------------|-------|----------|-----------|----|-----------|

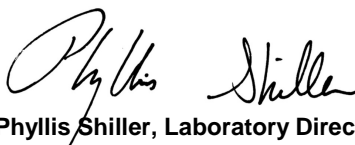
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 25, 2023

Reviewed and Released by: Anil Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

January 25, 2023

FOR: Attn: Adelaide Environmental Health Assoc, Inc
 1511 Route 22, Suite C24
 Brewster, NY 10509

Sample Information

Matrix: CAULK
 Location Code: ADELAIDE
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time

01/16/23
 01/20/23 16:46

Laboratory Data

SDG ID: GCN27750
 Phoenix ID: CN27751

Project ID: 22005.00 TWIN TOWERS MS
 Client ID: PCB 2 BROWN SEALANT AT WOOD OPENING ROOM 107

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-------------------------------------|-----------|------------|-------|----------|-----------|------|------------|
| Caulk Extraction for PCB | Completed | | | | 01/20/23 | L/AL | SW3540C |
| <u>PCB (Soxhlet SW3540C)</u> | | | | | | | |
| PCB-1016 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1221 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1232 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1242 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1248 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1254 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1260 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1262 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1268 | ND | 660 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| <u>QA/QC Surrogates</u> | | | | | | | |
| % DCBP | 59 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % DCBP (Confirmation) | 51 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX | 39 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX (Confirmation) | 41 | | % | 1 | 01/23/23 | SC | 30 - 150 % |

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-----------|--------|------------|-------|----------|-----------|----|-----------|
|-----------|--------|------------|-------|----------|-----------|----|-----------|

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 25, 2023

Reviewed and Released by: Anil Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

January 25, 2023

FOR: Attn: Adelaide Environmental Health Assoc, Inc
 1511 Route 22, Suite C24
 Brewster, NY 10509

Sample Information

Matrix: CAULK
 Location Code: ADELAIDE
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

01/16/23
 01/20/23

Time

16:46

Laboratory Data

SDG ID: GCN27750
 Phoenix ID: CN27752

Project ID: 22005.00 TWIN TOWERS MS
 Client ID: PCB 3 OLD PERIMETER SEALANT ROOM 107

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-------------------------------------|-----------|------------|-------|----------|-----------|------|------------|
| Caulk Extraction for PCB | Completed | | | | 01/20/23 | L/AL | SW3540C |
| <u>PCB (Soxhlet SW3540C)</u> | | | | | | | |
| PCB-1016 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1221 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1232 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1242 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1248 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1254 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1260 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1262 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| PCB-1268 | ND | 560 | ug/Kg | 2 | 01/23/23 | SC | SW8082A |
| <u>QA/QC Surrogates</u> | | | | | | | |
| % DCBP | 57 | | % | 2 | 01/23/23 | SC | 30 - 150 % |
| % DCBP (Confirmation) | 54 | | % | 2 | 01/23/23 | SC | 30 - 150 % |
| % TCMX | 37 | | % | 2 | 01/23/23 | SC | 30 - 150 % |
| % TCMX (Confirmation) | 38 | | % | 2 | 01/23/23 | SC | 30 - 150 % |

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-----------|--------|------------|-------|----------|-----------|----|-----------|
|-----------|--------|------------|-------|----------|-----------|----|-----------|


RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 25, 2023

Reviewed and Released by: Anil Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

January 25, 2023

FOR: Attn: Adelaide Environmental Health Assoc, Inc
 1511 Route 22, Suite C24
 Brewster, NY 10509

Sample Information

Matrix: CAULK
 Location Code: ADELAIDE
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

01/16/23

Time

16:46

Laboratory Data

SDG ID: GCN27750
 Phoenix ID: CN27753

Project ID: 22005.00 TWIN TOWERS MS
 Client ID: PCB 4 SIDEWALK SEALANT

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-------------------------------------|-----------|------------|-------|----------|-----------|------|------------|
| Caulk Extraction for PCB | Completed | | | | 01/20/23 | L/AL | SW3540C |
| <u>PCB (Soxhlet SW3540C)</u> | | | | | | | |
| PCB-1016 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1221 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1232 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1242 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1248 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1254 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1260 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1262 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| PCB-1268 | ND | 560 | ug/Kg | 1 | 01/23/23 | SC | SW8082A |
| <u>QA/QC Surrogates</u> | | | | | | | |
| % DCBP | 47 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % DCBP (Confirmation) | 42 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX | 30 | | % | 1 | 01/23/23 | SC | 30 - 150 % |
| % TCMX (Confirmation) | 32 | | % | 1 | 01/23/23 | SC | 30 - 150 % |

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-----------|--------|------------|-------|----------|-----------|----|-----------|
|-----------|--------|------------|-------|----------|-----------|----|-----------|

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 25, 2023

Reviewed and Released by: Anil Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

January 25, 2023

QA/QC Data

SDG I.D.: GCN27750


| Parameter | Blank | Blk RL | LCS % | LCSD % | LCS RPD | MS % | MSD % | MS RPD | % Rec Limits | % RPD Limits |
|--|-------|-----------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 660898 (ug/Kg), QC Sample No: CN27167 10X (CN27750, CN27751, CN27752, CN27753) | | | | | | | | | | |
| <u>Polychlorinated Biphenyls</u> | | | | | | | | | | |
| PCB-1016 | ND | 170 | 89 | 83 | 7.0 | | | | 40 - 140 | 30 |
| PCB-1221 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1232 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1242 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1248 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1254 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1260 | ND | 170 | 79 | 74 | 6.5 | | | | 40 - 140 | 30 |
| PCB-1262 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1268 | ND | 170 | | | | | | | 40 - 140 | 30 |
| % DCBP (Surrogate Rec) | 78 | % | 103 | 96 | 7.0 | | | | 30 - 150 | 30 |
| % DCBP (Surrogate Rec) (Confirm) | 68 | % | 135 | 107 | 23.1 | | | | 30 - 150 | 30 |
| % TCMX (Surrogate Rec) | 61 | % | 88 | 88 | 0.0 | | | | 30 - 150 | 30 |
| % TCMX (Surrogate Rec) (Confirm) | 63 | % | 104 | 84 | 21.3 | | | | 30 - 150 | 30 |

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 January 25, 2023

Wednesday, January 25, 2023

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCN27750 - ADELAIDE

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL Criteria | Analysis Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

January 25, 2023

SDG I.D.: GCN27750

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

PCB Narration

AU-ECD24 01/23/23-1: CN27750, CN27751, CN27752

The following Continuing Calibration compounds did not meet % deviation criteria:

Samples: CN27750, CN27751, CN27752

Preceding CC 123B018 - DCBP SURR 21%H (15%), PCB 1260 20%H (%)

Succeeding CC 123B032 - DCBP SURR 16%H (15%), PCB 1260 16%H (%)



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



NY Temperature Narration

January 25, 2023

SDG I.D.: GCN27750

The samples in this delivery group were received at 1.4°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)



NY/NJ CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Coolant: IPK ICE Yes No

Temp: 14 °C Pg of

Contact Options:

Fax: _____
 Phone: _____
 Email: adelaidelabresults@adelaidellc.com

Customer: Adelaide Environmental
 Address: 1511 Route 22, Suite C24
Brewster, NY 10509

Project: Fishkill CE Pumphouse 20191-00
 Report to: Stephanie Soter
 Invoice to: 22005.00
Twek Towers
 QUOTE #: _____

Project P.O.: _____

This section MUST be completed with Bottle Quantities.

Client Sample Information - Identification
 Sampler's Signature: [Signature] Date: 1/14/23

Matrix Code:
 DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
 OIL=Oil B=Bulk L=Liquid

| PHOENIX USE ONLY | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled | Analysis Request | GL Amber 8 oz. w/H3PO4 | Soil VOA Vials methanol H2O | GL Soil container () oz | GL Soil container () oz | 40 ml VOA Vial As is HCl | GL Amber 1000ml As is H2SO4 | PL As is 250ml 500ml 1000ml | PL H2SO4 250ml 500ml | PL NaOH 250ml | Bacteria Bottle with/wo | Bacteria Bottle as is |
|------------------|---|---------------|--------------|--------------|------------------|------------------------|-------------------------------------|--------------------------|--------------------------|----------------------------------|-------------------------------------|---|------------------------------|---------------|-------------------------|-----------------------|
| 27750 | PCB 1 Caulk at Top of Opening - Room 107 | B | 1/16/23 | | X | | | | | | | | | | | |
| 27751 | PCB 2 Brown Segmt at Wood Opening Room 107 | B | 1/16/23 | | X | | | | | | | | | | | |
| 27752 | PCB 3 Old Perimeter Sediment Room 107 | B | 1/16/23 | | X | | | | | | | | | | | |
| 27753 | PCB 4 Sidewalk Segmt | B | 1/16/23 | | X | | | | | | | | | | | |

Relinquished by: [Signature] Accepted by: [Signature]
 Date: 1/20/23 Time: 10:50
1/20/20 15:00
1/20/23 16:46

Turnaround:
 1 Day*
 2 Days*
 3 Days*
 5 Days
 10 Days
 Other
 * SURCHARGE

NJ
 Res. Criteria
 Non-Res. Criteria
 Impact to GW Cleanup Criteria
 Impact to GW soil screen Criteria
 GW Criteria

NY
 TOGS GW
 CP-51 SOIL
 375SCO Unrestricted Soil
 375SCO Residential Soil
 375SCO Residential
 375SCO Commercial Soil
 375SCO Industrial Soil
 Subpart 5 DW

Comments, Special Requirements or Regulations: _____

What State were samples collected?
NY

Data Format
 Phoenix Std Report
 Excel
 PDF
 GIS/Key
 EQUIS
 NJ Hazsite EDD
 NY EZ EDD (ASP)
 Other _____

Data Package
 NJ Reduced Deliv. *
 NY Enhanced (ASP B) *
 Other _____

APPENDIX F
PERSONNEL AND LABORATORY CERTIFICATIONS

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



ROBERT A SEE
CLASS(EXPIRES)
C ATEC(04/22) D INSP(04/22)
E MGPL(04/22) H PM (04/22)

CERT# 06-09124
DMV# 805716986

MUST BE CARRIED ON ASBESTOS PROJECTS



United States Environmental Protection Agency

This is to certify that



Robert A See

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires July 22, 2023

A blue ink signature of Susan Schulz, consisting of stylized initials and a long horizontal stroke.

Susan Schulz, Acting Chief

Chemicals and Multimedia Programs Branch

LBP-R-101137-2

Certification #

May 14, 2020

Issued On



STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



LOUIS N JOHNSON III
CLASS(EXPIRES)
C ATEC(06/22) D INSP(06/22)
E MGPL(06/22) H PM (06/22)
I PD (06/22)

CERT# 08-05954
DMV# 641924292

MUST BE CARRIED ON ASBESTOS PROJECTS



United States Environmental Protection Agency

This is to certify that



Louis N Johnson III

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires March 31, 2024

LBP-I-1151914-2

Certification #

December 07, 2020

Issued On



A handwritten signature in black ink that reads "Ben Conetta". The signature is written in a cursive style.

Ben Conetta, Chief

Chemicals and Multimedia Programs Branch

United States Environmental Protection Agency

This is to certify that



Louis N Johnson III

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires March 31, 2024

LBP-R-I151914-2

Certification #

December 07, 2020

Issued On



A handwritten signature in black ink that reads "Ben Conetta".

Ben Conetta, Chief

Chemicals and Multimedia Programs Branch

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



JASON P FULLUM
CLASS(EXPIRES)
C ATEC(02/24) D INSP(02/24)
E MGPL(02/23) H PM (02/24)
I PD (02/24)

CERT# 97-20574
DMV# 375065936

MUST BE CARRIED ON ASBESTOS PROJECTS



**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2023
Issued April 01, 2022

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL J. MUGHA
AMERICA SCIENCE TEAM NEW YORK, INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |

Serial No.: 64683

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2023
Issued April 01, 2022

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MS. PHYLLIS SHILLER
PHOENIX ENVIRONMENTAL LABS
587 EAST MIDDLE TURNPIKE
MANCHESTER, CT 06040**

NY Lab Id No: 11301

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2016) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:*

Polychlorinated Biphenyls

PCB Screen EPA 508

Trihalomethanes

Bromodichloromethane EPA 524.2
Bromoform EPA 524.2
Chloroform EPA 524.2
Dibromochloromethane EPA 524.2
Total Trihalomethanes EPA 524.2

Volatile Aromatics

1,2,3-Trichlorobenzene EPA 524.2
1,2,4-Trichlorobenzene EPA 524.2
1,2,4-Trimethylbenzene EPA 524.2
1,2-Dichlorobenzene EPA 524.2
1,3,5-Trimethylbenzene EPA 524.2
1,3-Dichlorobenzene EPA 524.2
1,4-Dichlorobenzene EPA 524.2
2-Chlorotoluene EPA 524.2
4-Chlorotoluene EPA 524.2
Benzene EPA 524.2
Bromobenzene EPA 524.2
Chlorobenzene EPA 524.2
Ethyl benzene EPA 524.2
Hexachlorobutadiene EPA 524.2
Isopropylbenzene EPA 524.2
n-Butylbenzene EPA 524.2

Volatile Aromatics

n-Propylbenzene EPA 524.2
p-Isopropyltoluene (P-Cymene) EPA 524.2
sec-Butylbenzene EPA 524.2
Styrene EPA 524.2
tert-Butylbenzene EPA 524.2
Toluene EPA 524.2
Total Xylenes EPA 524.2

Volatile Halocarbons

1,1,1,2-Tetrachloroethane EPA 524.2
1,1,1-Trichloroethane EPA 524.2
1,1,2,2-Tetrachloroethane EPA 524.2
1,1,2-Trichloroethane EPA 524.2
1,1-Dichloroethane EPA 524.2
1,1-Dichloroethene EPA 524.2
1,1-Dichloropropene EPA 524.2
1,2,3-Trichloropropane EPA 524.2
1,2-Dichloroethane EPA 524.2
1,2-Dichloropropane EPA 524.2
1,3-Dichloropropane EPA 524.2
2,2-Dichloropropane EPA 524.2
Bromochloromethane EPA 524.2
Bromomethane EPA 524.2
Carbon tetrachloride EPA 524.2
Chloroethane EPA 524.2

Serial No.: 64610

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**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2023
Issued April 01, 2022

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MS. PHYLLIS SHILLER
PHOENIX ENVIRONMENTAL LABS
587 EAST MIDDLE TURNPIKE
MANCHESTER, CT 06040**

NY Lab Id No: 11301

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2016) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Phthalate Esters

| | |
|-----------------------------|-----------|
| Bis(2-ethylhexyl) phthalate | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Diethyl phthalate | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Dimethyl phthalate | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Di-n-butyl phthalate | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Di-n-octyl phthalate | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |

Polychlorinated Biphenyls

| | |
|-------------------------|-----------|
| Aroclor 1248 (PCB-1248) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |
| Aroclor 1254 (PCB-1254) | EPA 608.3 |
| | EPA 8082A |
| | EPA 608.3 |
| Aroclor 1260 (PCB-1260) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |
| Aroclor 1262 (PCB-1262) | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| Aroclor 1268 (PCB-1268) | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 101 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 105 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 118 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 128 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 138 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 153 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 170 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 18 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 180 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 183 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 184 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 187 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 195 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 206 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 209 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |
| PCB 28 | EPA 8082A |
| | EPA 8082A |
| | EPA 8082A |

Polychlorinated Biphenyls

| | |
|-------------------------|-----------|
| Aroclor 1016 (PCB-1016) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |
| Aroclor 1221 (PCB-1221) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |
| Aroclor 1232 (PCB-1232) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |
| Aroclor 1242 (PCB-1242) | EPA 8082A |
| | EPA 608.3 |
| | EPA 8082A |

Serial No.: 64611

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Polychlorinated Biphenyls

| | |
|----------------------|-----------|
| PCB 44 | EPA 8082A |
| PCB 49 | EPA 8082A |
| PCB 52 | EPA 8082A |
| PCB 66 | EPA 8082A |
| PCB 8 | EPA 8082A |
| PCB 87 | EPA 8082A |
| PCB Congeners, Total | EPA 8082A |

Polynuclear Aromatics

| | |
|----------------------|-----------|
| Benzo(b)fluoranthene | EPA 8270D |
| | EPA 8270E |
| Benzo(g,h,i)perylene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(k)fluoranthene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |

Polynuclear Aromatics

| | |
|----------------------|-----------|
| Acenaphthene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Acenaphthylene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Anthracene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(a)anthracene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(a)pyrene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(b)fluoranthene | EPA 625.1 |

| | |
|------------------------|-----------|
| Chrysene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Dibenzo(a,h)anthracene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Fluoranthene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Fluorene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Indeno(1,2,3-cd)pyrene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Naphthalene | EPA 625.1 |

Serial No.: 64611

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Phthalate Esters

| | |
|-----------------------------|-----------|
| Bis(2-ethylhexyl) phthalate | EPA 8270D |
| | EPA 8270E |
| Diethyl phthalate | EPA 8270D |
| | EPA 8270E |
| Dimethyl phthalate | EPA 8270D |
| | EPA 8270E |
| Di-n-butyl phthalate | EPA 8270D |
| | EPA 8270E |
| Di-n-octyl phthalate | EPA 8270D |
| | EPA 8270E |

Polychlorinated Biphenyls

| | |
|--------------------------------|-----------|
| Aroclor 1260 (PCB-1260) in Oil | EPA 8082A |
| Aroclor 1262 (PCB-1262) | EPA 8082A |
| Aroclor 1262 (PCB-1262) in Oil | EPA 8082A |
| Aroclor 1268 (PCB-1268) | EPA 8082A |
| Aroclor 1268 (PCB-1268) in Oil | EPA 8082A |
| PCB 101 | EPA 8082A |
| PCB 105 | EPA 8082A |
| PCB 118 | EPA 8082A |
| PCB 128 | EPA 8082A |
| PCB 138 | EPA 8082A |
| PCB 153 | EPA 8082A |
| PCB 170 | EPA 8082A |
| PCB 18 | EPA 8082A |
| PCB 180 | EPA 8082A |
| PCB 183 | EPA 8082A |
| PCB 184 | EPA 8082A |
| PCB 187 | EPA 8082A |
| PCB 195 | EPA 8082A |
| PCB 206 | EPA 8082A |
| PCB 209 | EPA 8082A |
| PCB 28 | EPA 8082A |
| PCB 44 | EPA 8082A |
| PCB 49 | EPA 8082A |
| PCB 52 | EPA 8082A |

Polychlorinated Biphenyls

| | |
|--------------------------------|-----------|
| Aroclor 1016 (PCB-1016) | EPA 8082A |
| Aroclor 1016 (PCB-1016) in Oil | EPA 8082A |
| Aroclor 1221 (PCB-1221) | EPA 8082A |
| Aroclor 1221 (PCB-1221) in Oil | EPA 8082A |
| Aroclor 1232 (PCB-1232) | EPA 8082A |
| Aroclor 1232 (PCB-1232) in Oil | EPA 8082A |
| Aroclor 1242 (PCB-1242) | EPA 8082A |
| Aroclor 1242 (PCB-1242) in Oil | EPA 8082A |
| Aroclor 1248 (PCB-1248) | EPA 8082A |
| Aroclor 1248 (PCB-1248) in Oil | EPA 8082A |
| Aroclor 1254 (PCB-1254) | EPA 8082A |
| Aroclor 1254 (PCB-1254) in Oil | EPA 8082A |
| Aroclor 1260 (PCB-1260) | EPA 8082A |

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MANCHESTER, CT 06040**

NY Lab Id No: 11301

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Polychlorinated Biphenyls

| | |
|----------------------|-----------|
| PCB 66 | EPA 8082A |
| PCB 8 | EPA 8082A |
| PCB 87 | EPA 8082A |
| PCB Congeners, Total | EPA 8082A |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Acenaphthene | EPA 8270D |
| | EPA 8270E |
| Acenaphthylene | EPA 8270D |
| | EPA 8270E |
| Anthracene | EPA 8270D |
| | EPA 8270E |
| Benzo(a)anthracene | EPA 8270D |
| | EPA 8270E |
| Benzo(a)pyrene | EPA 8270D |
| | EPA 8270E |
| Benzo(b)fluoranthene | EPA 8270D |
| | EPA 8270E |
| Benzo(g,h,i)perylene | EPA 8270D |
| | EPA 8270E |
| Benzo(k)fluoranthene | EPA 8270D |
| | EPA 8270E |
| Chrysene | EPA 8270D |
| | EPA 8270E |
| Dibenzo(a,h)anthracene | EPA 8270D |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Dibenzo(a,h)anthracene | EPA 8270E |
| Fluoranthene | EPA 8270D |
| | EPA 8270E |
| Fluorene | EPA 8270D |
| | EPA 8270E |
| Indeno(1,2,3-cd)pyrene | EPA 8270D |
| | EPA 8270E |
| Naphthalene | EPA 8270D |
| | EPA 8270E |
| Phenanthrene | EPA 8270D |
| | EPA 8270E |
| Pyrene | EPA 8270D |
| | EPA 8270E |

Priority Pollutant Phenols

| | |
|---------------------------|-----------|
| 2,3,4,6 Tetrachlorophenol | EPA 8270D |
| | EPA 8270E |
| 2,4,5-Trichlorophenol | EPA 8270D |
| | EPA 8270E |
| 2,4,6-Trichlorophenol | EPA 8270D |
| | EPA 8270E |
| 2,4-Dichlorophenol | EPA 8270D |
| | EPA 8270E |
| 2,4-Dimethylphenol | EPA 8270D |
| | EPA 8270E |

Serial No.: 64612

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APPENDIX G
PREVIOUS REFERENCED INSPECTION REPORTS

FINAL REPORT OF ENVIRONMENTAL SERVICES

Performed at:

**TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE
MIDDLETOWN, NY 10940**



Prepared by:



Louis Berger

**565 Taxter Road, 5th Floor
Elmsford, New York 10523**

Tel. (914) 798-3710

Fax (914) 592-1734

Project No. 3001111

Submission Date: April 17, 2015



Louis Berger

565 Taxter Road, 5th Floor, Elmsford, NY 10523
Tel 914 798 3710 Fax 914 592 1734

www.louisberger.com

April 17, 2015

Mr. Thomas Scott
Enlarged City School District of Middletown
Superintendent of Buildings & Grounds
223 Wisner Avenue
Middletown, NY 10940

**Subject: Report of Environmental Inspection Services
Twin Towers Middle School
112 Grand Avenue, Middletown, NY 10940**

Dear Mr. Scott:

Louis Berger (Berger) has completed a material inspection at Twin Towers Middle School located at 112 Grand Avenue, Middletown, New York. The Inspection included visual observation, material sampling, and laboratory sample analysis of suspect Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) associated with the proposed renovations to Twin Towers Middle School.

The attached report presents descriptions and results of the material sampling procedures and visual analysis. Relevant general project information is provided, followed by our findings, assessments and recommendations. Laboratory analysis data and certifications are provided in the Appendices.

If you have any questions concerning this report or if we may be of further assistance to you, please contact us.

Sincerely,

LOUIS BERGER (Berger)

Craig Napolitano, CHMM
Vice President, Industrial Hygiene & Hazmat Services



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Appendices

- Appendix A: Asbestos Sample Analysis Results in Tabular Form
- Appendix B: Asbestos Bulk Sample Field Data Sheets with Chain of Custody & Laboratory Results
- Appendix C: Asbestos Bulk Sample Location Drawings
- Appendix D: Asbestos Containing Materials Location Drawings
- Appendix E: Adelaide Lead XRF Inspection Report
- Appendix F: PCB Bulk Sample Field Data Sheets with Chain of Custody & Laboratory Results
- Appendix G: PCB Bulk Sample Location Drawings
- Appendix H: Company License, Personnel Certifications & Laboratory Accreditations
- Appendix I: Photographic Documentation
- Appendix J: File Search Materials



1.0 EXECUTIVE SUMMARY

Berger has performed a renovation specific material Inspection for the presence or absence of Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) at the Twin Towers Middle School located at 112 Grand Avenue, Middletown, New York. The intent of this Inspection was to screen for Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) that may be impacted during the proposed renovation to Twin Towers Middle School.

Drew Cheskin & Josue Garcia of LB performed this Inspection on March 24th, March 25th, March 31st & April 1st, 2015. Mr. Cheskin is licensed as a New York State Department of Labor (NYSDOL) Asbestos Inspector (Cert# 05-04280) and New York State EPA Lead Inspector (Cert# NY-I-11931-2). Mr. Garcia is licensed as a New York State Department of Labor (NYSDOL) Asbestos Inspector (Cert# 01-04292) and New York State EPA Lead Risk Assessor (Cert# NY-R-6928-4). The results of the visual inspection and bulk sample analysis determined that the following suspect ACM, LBP and PCB materials may be impacted by the upcoming upgrade project:

A. ASBESTOS-CONTAINING MATERIAL

Analytical results of the bulk samples collected by Berger indicate that the following materials **contain asbestos** (greater than 1-percent).

- **Caulk Assoc. with Copper Deck/Coping Stone Seam**
- **Cap Flashing Caulk, Old**
- **Cap Flashing Caulk, Dark Grey**
- **Cap Flashing Caulk, White**
- **Cementitious Materials Assoc. with Boiler**
- **Water Tank Brick Mortar**

The following materials are **assumed to contain asbestos** due to inaccessibility to the materials;

- **None within known scope of work**

The following materials are **considered to contain asbestos** based on historical drawings and six month AHERA inspections conducted by the Enlarged City School District of Middletown Department of Buildings & Grounds. Copies of this paperwork is located in Appendix J:

- **Misc. Floor Tile (12"x12")**
- **9"x9" Floor Tile (Misc.) – Under Carpet**
- **TSI (wrapped)**
- **TSI**
- **Misc. Floor Tile (Under Carpet)**
- **Misc. Floor Tile (9"x9" Brown)**
- **Misc. Floor Tile (12"x12" Dark Brown)**



Analytical results of the bulk samples collected indicate that the following materials **did not contain asbestos** (less than 1-percent);

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)
- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler



- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)
- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)



- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 1770 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.

C. PCB-CONTAINING MATERIAL

Analytical results of the bulk samples collected indicate that the following materials **contain PCB** (greater than 50 PPM).

- **None**

Analytical results of the bulk samples collected indicate that the following materials **did not contain PCB** (less than 50 PPM);

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk



2.0 FIELD INSPECTION PROCEDURES AND SAMPLE ANALYSIS METHODS

ASBESTOS-CONTAINING MATERIAL

Guidelines used for the inspection were established by the Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, Doc 560/5-85-024, and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA)

Field information was organized in accordance with the AHERA methodology of homogenous area (HA). During the Inspection, reasonable effort was made to identify all locations and types of ACM materials associated with the scope of work. Sampling has included multiple samples of the same materials chosen at random. However, due to inconsistencies of a manufacturer's processes and the contractor's installation methods, materials of similar construction may contain various amounts of asbestos. Furthermore, some materials that were not originally specified to contain asbestos may in fact contain this mineral. For example, cementitious pipe insulation and plaster were frequently mixed with asbestos at the construction site for ease of application. Locating all asbestos materials can only be definitively achieved by conducting exploratory demolition and sampling every section of pipe insulation, fitting or valve covering, fireproofing, and other suspect ACM.

Bulk samples of suspect ACM are analyzed using polarized light microscopy (PLM) coupled with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS). NESHAPS is the standard industry protocol for the determination of asbestos in building materials. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The color displays that result are compared to a standardized atlas whereby the specific variety of asbestos is determined. It should also be recognized that PLM is primarily a qualitative identification method whereby asbestos percentage, if any, is estimated. While EPA, New York State, and New York City regulations governing ACM consider materials containing greater than 1-percent as asbestos, accurately quantifying asbestos content below 5-percent has been shown to be unreliable.

The New York State Department of Health has recently revised the PLM Stratified Point Counting Method. The March 25th, 2011 method, "Polarized Light Microscopy Methods for Identifying and Quantifying Asbestos in Bulk Samples" can be found as Item 198.1 in the Environmental Laboratory Approval program (ELAP) Certification manual. Whereas the procedure of analysis for bulk samples that fall into the category of "Non-friable Organically Bound" (NOB) can be found in the March 25th 2011 method "Polarized-Light Microscope Method for Identifying and Quantifying Asbestos in Non-Friable Organically Bound Bulk Samples", Item 198.6 in the ELAP Certification Manual. This category includes any sample in a flexible to rigid asphalt or vinyl matrix (floor tiles, mastic, roofing shingles, roofing felt, etc.). These samples must be "ashed" in a muffle furnace at 480-degrees Celsius (to remove organic matrix), treated with acid (to remove any mineral carbonate), and filtered through a 0.4-micron polycarbonate filter before being analyzed by PLM. The sample must be weighted between each of these steps to track the percent loss of organic matrix.

ELAP has determined that analysis of NOB materials is not reliably performed by PLM.



Therefore, if PLM analysis yields results of 1-percent asbestos or less, the result must be confirmed by TEM. For bulk samples that undergo TEM analysis, the March 25th, 2011 method "Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable organically Bound Bulk Samples" must be used and can be found as Item 198.4 in the ELAP Certification Manual. ELAP certified laboratories must include the following statement with their PLM analysis results for each "negative" (1-percent or less asbestos) NOB sample: "Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-ACM, confirmation must be made by quantitative transmission electron microscopy".

All samples are initially analyzed by Polarized Light Microscopy in accordance with Item 198.1 and 198.6 of the ELAP Certification Manual. Samples which yield a negative PLM result and which are classified as a "non-friable" material, are then re-analyzed utilizing TEM methodology in accordance with Item 198.4 of the ELAP Certification Manual. The laboratory performing both these analysis procedures is EMSL located at 307 West 38th Street, New York, NY 10018. The laboratory has received accreditation from the following agencies:

- National Voluntary Laboratory Accreditation Program (Lab Code 101048-9)
- New York State Environmental Laboratory Approval Program (Lab No. 11506)
- American Industrial Hygiene Association Accredited Laboratory (Lab No. 102581)

LEAD-BASED PAINT

LBG's U.S. EPA licensed NY State Lead Inspector performed a lead based paint inspection characterized by a surface by surface visual inspection of accessible areas which may potentially be impacted by any future renovations. Painted surfaces were visually inspected, and coatings were analyzed for lead based paint using an XRF Spectrum Analyzer.

Information obtained during the inspection is compared to the United States Department of Housing and Urban Development's lead paint threshold. HUD states that paint containing equal to or greater than 1.0 micrograms per centimeter squared ($\geq 1.0 \text{ mg/cm}^2$), or 5,000 parts per million (0.5% by weight) or more of lead is to be considered Lead Based Paint (LBP).

The readings of paint surfaces were taken using an RMD LPA-1 XRF Lead Paint Spectrum Analyzer.

The LPA-1 method of measurement is based on the spectrometric analysis of lead K-shell X-ray fluorescence within a controlled depth of interrogation. The LPA-1 Analyzer uses a Co-57 radioactive source and an advanced, solid-state, room temperature, radiation detector to generate and detect the x-ray fluorescence spectrum of a painted surface. The spectrum is then analyzed by a microprocessor to eliminate the effects of substrate and other factors such as scattering to allow an accurate determination of the amount of lead on a surface. The LPA-1 automatically analyzes spectrometric data in real time and differentiates the lead signal from the spectrum. The x-ray fluorescence properties are determined through calibration process and are used for automatic substrate correction and calculation of the lead content of a painted surface. .



Any work which disturbs painted surfaces containing lead shall be performed in accordance with the Occupational Safety and Health Administrations (OSHA) 29 CFR 1926.62 (Lead in Construction Standard) and EPA's 40 CFR 745 regulations. Personal air monitoring should be conducted when disturbing lead based paints and lead containing materials as per 29CFR1926.62 (OSHA).

In addition, all waste generated as part of this project, regardless of the lead content in the paint, should be tested in accordance with the EPA Resource Conservation and Recovery Act (RCRA) to determine the classification of the waste. Under RCRA, any waste material that, when tested by Toxicity Characteristics Leaching Procedure (TCLP), results in a leachate lead concentration of five (5) parts per million or greater must be disposed of at an EPA licensed hazardous waste facility.

The finer renovation debris and paint chips that result from renovation of components with measurable quantities of lead can be tested by TCLP, or can be assumed hazardous waste and disposed of accordingly (not applicable for this project).

The cost of the TCLP depends on the laboratory and location; but typically, a full TCLP analysis may cost from \$150 to \$350. Any waste material, that when tested by TCLP, results in a leachate lead concentration of five (5) parts per million or greater must be disposed of at an EPA licensed hazardous waste facility. Cost of disposal may range from \$5,000 to \$7,000 per ton of waste.

POLYCHLORINATED BIPHENYLS (PCBs)

PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

Although no longer commercially produced in the United States, PCBs may be present in products and materials produced before the 1979 PCB ban. Products that may contain PCBs include: Transformers and capacitors, Oil used in motors and hydraulic systems, Fluorescent light ballasts, Adhesives and tapes, Caulking, Plastics, etc. Per US EPA regulations, materials with PCB content greater than 50 ppm (mg/kg) are determined hazardous.

The PCBs used in these products were chemical mixtures made up of a variety of individual chlorinated biphenyl components, known as congeners. Most commercial PCB mixtures are known in the United States by their industrial trade names. The most common trade name is aroclor.



Polychlorinated biphenyls (PCBs) are regulated pursuant to the United States Environmental Protection Agency Code of Federal Regulations (40 CFR Part 761), the Toxic Substances Control Act (TSCA – 15 U.S.C. 2605), New York State Department of Environmental Conservation 6NYCRR 370-376 and federal Occupational Safety and Health Administration (OSHA) 29CFR 1926 & 1910. These regulations require certain testing and reporting requirements to determine management, recycling and disposal options for PCBs.



3.0 INSPECTION SCOPE AND MATERIAL ASSESSMENT

The areas inspected for ACM materials, LBP and PCB that may be impacted by the proposed renovations include:

- Twin Towers Middle School - Throughout

A. ASBESTOS-CONTAINING MATERIAL

Materials examined during the Berger Inspection included:

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)



- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Cementitious Materials Assoc. with Boiler
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler
- Water Tank Brick Mortar
- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)



- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

Based upon visual inspection and bulk sample analysis asbestos has been confirmed to exist in the following materials:

- **Caulk Assoc. with Copper Deck/Coping Stone Seam**
- **Cap Flashing Caulk, Old**
- **Cap Flashing Caulk, Dark Grey**
- **Cap Flashing Caulk, White**
- **Cementitious Materials Assoc. with Boiler**
- **Water Tank Brick Mortar**

The following materials are **assumed to contain asbestos** due to inaccessibility to the materials;

- **None within known scope of work**

The following materials are **considered to contain asbestos** based on historical drawings and six month AHERA inspections conducted by the Enlarged City School District of Middletown Department of Buildings & Grounds. Copies of this paperwork is located in Appendix J:

- **Misc. Floor Tile (12"x12")**
- **9"x9" Floor Tile (Misc.) – Under Carpet**
- **TSI (wrapped)**
- **TSI**
- **Misc. Floor Tile (Under Carpet)**
- **Misc. Floor Tile (9"x9" Brown)**
- **Misc. Floor Tile (12"x12" Dark Brown)**



Asbestos was **not detected** in the following materials via PLM and/or TEM analysis:

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)
- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler



- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)
- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)



- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 1770 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.

C. PCB-CONTAINING MATERIAL

Materials examined during the Inspection included:

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk

Analytical results of the bulk samples collected indicate that the following materials **contain PCB** (greater than 50 PPM).

- **None**

Analytical results of the bulk samples collected indicate that the following materials **did not contain PCB** (less than 50 PPM);

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan



- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk



4.0 INSPECTION RESULTS

A. ASBESTOS-CONTAINING MATERIAL

The asbestos inspection involved a thorough visual examination of all areas that may be impacted by the proposed upgrades to Twin Towers Middle School. The following suspect materials were sampled and analyzed for asbestos content by Berger:

4.1 Table 4.1 – Suspect Materials Inspected

| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------|--|--------------------------------|------------------|
| 01 | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD |
| 02 | Flashing Tar | Roof M | <1% Chrysotile |
| 03 | Coping Stone Caulk | Roof M & Roof L | NAD |
| 04 | Coping Stone Mortar | Roof M & Roof L | NAD |
| 05 | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD |
| 06 | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD |
| 07 | Tar/Vapor Barrier | Roof L & Roof K (Flat Section) | NAD |
| 08 | Insulation (“Perlite”) | Roof L & Roof K (Flat Section) | NAD |
| 09 | Tar Water Proofing | Roof L & Roof K (Flat Section) | NAD |
| 10 | Roof Membrane | Roof L & Roof K (Flat Section) | NAD |
| 11 | Tapered Edge Fiberboard | Roof L | NAD |
| 12 | Flashing Tar Paper | Roof L | NAD |
| 13 | Cap Flashing Caulk | Roof L | NAD |
| 14 | Brick Mortar | Roof L | NAD |
| 15 | Gypsum Deck | Roof K (Elevated Section) | NAD |
| 16 | Insulation (“Perlite”) | Roof K (Elevated Section) | NAD |
| 17 | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD |
| 18 | Fiber Board | Roof K (Elevated Section) | NAD |
| 19 | Tar Water Proofing | Roof K (Elevated Section) | NAD |
| 20 | Roof Membrane | Roof K (Elevated Section) | NAD |
| 21 | Tar on Mechanical Equipment Curbs | Roof K & Roof F | NAD |
| 22 | Mechanical Equipment Flashing | Roof F | NAD |
| 23 | Pre-Cast Concrete Slab Mortar | Roof F | NAD |
| 24 | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD |
| 25 | Cap Flashing Caulk, Tan | Roof O | NAD |
| 26 | Cap Flashing Caulk, Red | Roof O | NAD |
| 27 | Cap Flashing Caulk, Grey | Roof O | NAD |
| 28 | Tar on Cap Flashing | Roof O | NAD |
| 29 | Cap Flashing Caulk, White | Roof O | NAD |
| 30 | Expansion Joint Caulk | Roof Q | NAD |
| 31 | Façade Corner Joint Caulk, Black | Roof Q | NAD |



| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------|--|---|---|
| 32 | Façade Corner Joint Caulk, Brown | Roof Q | NAD |
| 33 | Insulation (“Perlite”) | Roof R | NAD |
| 34 | Vapor Barrier | Roof R | NAD |
| 35 | Tar Membrane | Roof R | NAD |
| 36 | Flashing Tar | Roof R | NAD |
| 37 | Cap Flashing Caulk, Light Grey | Roof I & Roof C | NAD |
| 38 | Tar Assoc. with Cap Flashing | Roof I & Roof C | NAD |
| 39 | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | 6.3% Chrysotile |
| 40 | Cap Flashing Caulk, Old | Roof D & Roof C | 2.9% Chrysotile |
| 41 | Cap Flashing Caulk, Dark Grey | Roof I & Roof C | 4.4% Chrysotile |
| 42 | Cap Flashing Caulk, White | Roof I & Roof C | <1% Anthophyllite 1.1% Chrysotile |
| 43 | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD |
| 44 | Cementitious Materials Assoc. with Boiler | Boiler Room | 5.06% Chrysotile |
| 45 | Rope Gasket to Boilers | Boiler Room | NAD |
| 46 | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD |
| 47 | Water Tank Brick Mortar | Boiler Room | 2.40% Chrysotile |
| 48 | Pipe Gasket, Orange | Boiler Room | NAD |
| 49 | Leveling Compound | Outside Cafeteria Entry Doors | NAD |
| 50 | Mastic to 12”x12” Floor Tiles | Cafeteria | <1% Anthophyllite |
| 51 | 12”x12” Blue Floor Tile | Cafeteria | NAD |
| 52 | 12”x12” Grey Floor Tile | Cafeteria | NAD |
| 53 | Mastic to Linoleum Flooring | Cafeteria | NAD |
| 54 | Linoleum Flooring | Cafeteria | NAD |
| 55 | Mastic to 4” Blue Cove Base | Cafeteria | NAD |
| 56 | Mastic to 4” Grey Cove Base | Cafeteria | <1% Chrysotile |
| 57 | Mudded Joints | Small Gym | NAD |
| 58 | Terrazzo Flooring | Outside Cafeteria Entry Doors & Outside Small Gym | NAD |
| 59 | Mastic to Old 4” Brown Cove Base | Small Gym | NAD |
| 60 | Old 4” Brown Cove Base | Small Gym | NAD |
| 61 | Caulking to Sinks/Toilets | Boys Locker Room & Girls Locker Room | NAD |
| 62 | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD |
| 63 | Yellow Curtain, Front Layer | Auditorium Stage | NAD |
| 64 | Yellow Curtain, Back Layer | Auditorium Stage | NAD |
| 65 | Red Curtain, Front Layer | Auditorium Stage | NAD |
| 66 | Red Curtain, Back Layer | Auditorium Stage | NAD |
| 67 | Black Curtain | Auditorium Stage | NAD |
| 68 | Asphalt Coating, Top Layer | Small Parking Lot | NAD |
| 69 | Asphalt Coating, Top Layer | Loop/Bus Turn Around | <1% Chrysotile |
| 70 | Asphalt Coating, Top Layer | Large Parking Lot | NAD |
| 71 | 2’x4’ Ceiling Tile, Pinhole | Cafeteria | NAD |



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| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------------------------|---|---|------------------|
| 72 | 2'x4' Ceiling Tile, Textured | Cafeteria | |
| Assumed Materials | | | |
| 73 | Misc. Floor Tile (12"x12") | Room 308 | Historic Data |
| 74 | 9"x9" Floor Tile (Misc.) – Under Carpet | Room 317 & 319 | Historic Data |
| 75 | TSI (wrapped) | Ceiling Storage | Historic Data |
| 76 | TSI | Multiple Locations in Basement Maintenance Areas (with Signage) | Historic Data |
| 77 | Misc. Floor Tile (Under Carpet) | Room 105, 107, 109, 111, 220, 224, 226, 300, 306. 325, 327, 329 & AS-3 Teachers Lounge/Café | Historic Data |
| 78 | Misc. Floor Tile (9"x9" Brown) | Auditorium | Historic Data |
| 79 | Misc. Floor Tile (12"x12" Dark Brown) | Room 101 & AS-4 | Historic Data |
| Previous LB Report, December 12, 2013 | | | |
| 01 | Wall Plaster, Brown Coat | Original Building | NAD |
| 02 | Wall Plaster, White Coat | Original Building | NAD |
| 03 | Ceiling Plaster, Brown Coat | Original Building | NAD |
| 04 | Ceiling Plaster, White Coat | Original Building | NAD |
| 06* | Spray-on Coating on Ceiling Plaster, White | Original Building | NAD |
| 07 | Furnace Brick Mortar | Original Building | NAD |
| 08 | Flue Wall Penetration Cementitious Seal, Gray | Original Building | NAD |
| 09 | Skim Coat on Concrete Wall | Original Building | NAD |
| 10 | Cinderblock Mortar | Original Building | NAD |
| 11 | Terracotta Wall Mortar | Original Building | NAD |
| 12 | Gypsum Board | Original Building | NAD |
| 13 | Joint Compound | Original Building | NAD |
| 14 | Terrazzo Flooring | Original Building | NAD |
| 15 | Carpet Mastic, Yellow | Original Building | NAD |
| 16 | Glazed Block Mortar | Original Building | NAD |
| 17 | Elevator Frame Caulking, Beige | Original Building | NAD |
| 18 | 4"x4" Green Ceramic Wall Tile Backing, Beige | Original Building | NAD |
| 19 | 4"x4" Green Ceramic Wall Tile Grout | Original Building | NAD |
| 20 | Wall Plaster, Brown Coat | 1970s Addition | NAD |
| 21 | Wall Plaster, White Coat | 1970s Addition | NAD |
| 22 | Spray-on Coating on Gypsum Ceiling | 1970s Addition | NAD |
| 23 | Gypsum Board | 1970s Addition | NAD |
| 24 | Joint Compound | 1970s Addition | NAD |
| 25 | 4"x4" Beige Ceramic Wall Tile Backing Yellow | 1970s Addition | NAD |
| 26 | 4"x4" Beige Ceramic Wall Tile Grout | 1970s Addition | NAD |
| 27 | Gypsum Board | Kitchen/Food Court | NAD |
| 28 | Joint Compound | Kitchen/Food Court | NAD |
| 29 | Cinderblock Mortar | Kitchen/Food Court | NAD |



Bold = Positive for ACM NAD = No Asbestos Detected

* HA 05 Not Used In Report

4.2 CONDITION AND FRIABILITY ASSESSMENT TABLE

For each inspection conducted, the inspector classifies ACM materials by friability and condition. This helps to determine the extent of damage in certain areas as well as the potential for further damage and Asbestos release due to disturbance of the material.

Table 4.2 – Condition and Friability Assessment

| LOCATION | MATERIAL | QUANTITY | FRIABILITY | CONDITION |
|---------------------------------|---|----------------|-------------|-----------|
| Roof C, Roof D, Roof H & Roof I | Caulk Assoc. with Copper Deck/Coping Stone Seam | 375 LF (94 SF) | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, Old | | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, Dark Grey | | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, White | | Non-Friable | Good |
| Boiler Room | Cementitious Materials Assoc. with Boiler | 2 SF | Friable | Good |
| Boiler Room | Water Tank Brick Mortar | 100 SF | Friable | Good |

Condition Definitions:

Good: None/Minimal apparent damage to ACM

Fair: Up to 10% localized damage or up to 25% of the entire ACM is damaged

Poor: Over 10% localized damage or over 25% of the entire ACM is damaged

4.3 SAMPLE ANALYSIS TABLE

Laboratory analysis results, in tabular form, are included in Appendix A.

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 550 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.



C. PCB-CONTAINING MATERIAL

The PCB Inspection involved a thorough visual examination of all areas that may be impacted by the proposed renovation. The following suspect materials were tested for PCB content:

| HOMOGENOUS MATERIAL | MATERIAL | LOCATION | PCB CONTENT (PPM) |
|----------------------------|---|--------------------------------------|--------------------------|
| 03 | Coping Stone Caulk | Roof M & Roof L | ND |
| 05 | Caulk to Coping Stone/Cap Flashing Joint | Roof M | ND |
| 13 | Cap Flashing Caulk | Roof L | ND |
| 25 | Cap Flashing Caulk, Tan | Roof O | ND |
| 26 | Cap Flashing Caulk, Red | Roof O | ND |
| 27 | Cap Flashing Caulk, Grey | Roof O | ND |
| 29 | Cap Flashing Caulk, White | Roof O | ND |
| 30 | Expansion Joint Caulk | Roof Q | ND |
| 31 | Façade Corner Joint Caulk, Black | Roof Q | ND |
| 32 | Façade Corner Joint Caulk, Brown | Roof Q | ND |
| 37 | Cap Flashing Caulk, Light Grey | Roof I & Roof C | ND |
| 39 | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | ND |
| 40 | Cap Flashing Caulk, Old | Roof D & Roof C | ND |
| 41 | Cap Flashing Caulk, Dark Grey | Roof I & Roof C | ND |
| 42 | Cap Flashing Caulk, White | Roof I & Roof C | ND |
| 61 | Caulking to Sinks/Toilets | Boys Locker Room & Girls Locker Room | ND |
| 62 | Expansion Joint Caulk | Exterior Auditorium Stairs | ND |

Bold = Positive for PCB ND = No PCB Detected

5.0 AREAS NOT ACCESSIBLE

During the Inspection the following areas were not accessible:

Void Spaces within Walls, Ceilings or Floors: No destructive sampling was performed on concealed spaces in walls, ceilings or floors to access plenum, chases etc. It should be assumed that asbestos, lead and PCB containing materials may exist in these spaces. Any suspect materials encountered during work should be sampled for analysis before work continues.



6.0 CONCLUSIONS AND RECOMMENDATIONS

ACM materials and LBP have been identified in this inspection that may be impacted as part of the proposed renovation to Twin Towers Middle School. These materials, reported in Section 3.0 of this report, may require complete removal prior to the start of the renovation project. No PCBs were identified during this Inspection.

The ACM, LBP & PCB Inspection was conducted at the request of Enlarged City School District of Middletown for the proposed renovation to Twin Towers Middle School. Any change in the scope of work will require further investigation to accurately classify any additional ACM, LBP or PCBs resulting from the modified or updated scope of work.

7.0 REPORT CERTIFICATIONS

This report, and the supporting data, findings, conclusions, opinions, and recommendations it contains represent the result of Berger's efforts for the environmental inspection work for Twin Towers Middle School.

Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of Berger's site visits, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Berger is unaware and has not had the opportunity to evaluate.

The conclusions presented in this report are professional opinions solely upon Berger's visual observations of accessible areas, laboratory test data, and current regulatory requirements. These conclusions are intended exclusively for the purpose stated herein and the site indicated for the project indicated.

Prepared by:

Drew Cheskin
NYS DOL Inspector

Reviewed by:

Craig Napolitano, CHMM
Vice President, Industrial
Hygiene & Hazmat Services



**APPENDIX A:
ASBESTOS SAMPLE ANALYSIS RESULTS IN TABULAR FORM**

APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|--|---------------------------|-------------------|-------------------|
| 01 | 01A | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD | N/A |
| 01 | 01B | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD | N/A |
| 02 | 02A | Flashing Tar | Roof M | NAD | <1% Chrysotile |
| 02 | 02B | Flashing Tar | Roof M | NAD | NAD |
| 03 | 03A | Coping Stone Caulk | Roof M | NAD | NAD |
| 03 | 03B | Coping Stone Caulk | Roof L | NAD | NAD |
| 04 | 04A | Coping Stone Mortar | Roof M | NAD | N/A |
| 04 | 04B | Coping Stone Mortar | Roof L | NAD | N/A |
| 05 | 05A | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD | NAD |
| 05 | 05B | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD | NAD |
| 06 | 06A | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD | NAD |
| 06 | 06B | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD | NAD |
| 07 | 07A | Tar/Vapor Barrier | Roof L | NAD | NAD |
| 07 | 07B | Tar/Vapor Barrier | Roof K (Flat Section) | NAD | NAD |
| 08 | 08A | Insulation (“Perlite”) | Roof L | NAD | N/A |
| 08 | 08B | Insulation (“Perlite”) | Roof K (Flat Section) | NAD | N/A |
| 09 | 09A | Tar Water Proofing | Roof L | NAD | NAD |
| 09 | 09B | Tar Water Proofing | Roof K (Flat Section) | NAD | NAD |
| 10 | 10A | Roof Membrane | Roof L | NAD | NAD |
| 10 | 10B | Roof Membrane | Roof K (Flat Section) | NAD | NAD |
| 11 | 11A | Tapered Edge Fiberboard | Roof L | NAD | N/A |
| 11 | 11B | Tapered Edge Fiberboard | Roof L | NAD | N/A |
| 12 | 12A | Flashing Tar Paper | Roof L | NAD | NAD |
| 12 | 12B | Flashing Tar Paper | Roof L | NAD | NAD |
| 13 | 13A | Cap Flashing Caulk | Roof L | NAD | NAD |
| 13 | 13B | Cap Flashing Caulk | Roof L | NAD | NAD |
| 14 | 14A | Brick Mortar | Roof L | NAD | N/A |
| 14 | 14B | Brick Mortar | Roof L | NAD | N/A |
| 15 | 15A | Gypsum Deck | Roof K (Elevated Section) | NAD | N/A |

Bold = Positive for ACM

NAD = No Asbestos Detected

NA/PS = Not Analyzed/Positive Stop

APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|--|---------------------------|-------------------|-------------------|
| 15 | 15B | Gypsum Deck | Roof K (Elevated Section) | NAD | N/A |
| 16 | 16A | Insulation (“Perlite”) | Roof K (Elevated Section) | NAD | N/A |
| 16 | 16B | Insulation (“Perlite”) | Roof K (Elevated Section) | NAD | N/A |
| 17 | 17A | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD | NAD |
| 17 | 17B | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD | NAD |
| 18 | 18A | Fiber Board | Roof K (Elevated Section) | NAD | N/A |
| 18 | 18B | Fiber Board | Roof K (Elevated Section) | NAD | N/A |
| 19 | 19A | Tar Water Proofing | Roof K (Elevated Section) | NAD | NAD |
| 19 | 19B | Tar Water Proofing | Roof K (Elevated Section) | NAD | NAD |
| 20 | 20A | Roof Membrane | Roof K (Elevated Section) | NAD | NAD |
| 20 | 20B | Roof Membrane | Roof K (Elevated Section) | NAD | NAD |
| 21 | 21A | Tar on Mechanical Equipment Curbs | Roof K | NAD | NAD |
| 21 | 21B | Tar on Mechanical Equipment Curbs | Roof F | NAD | NAD |
| 22 | 22A | Mechanical Equipment Flashing | Roof F | NAD | NAD |
| 22 | 22B | Mechanical Equipment Flashing | Roof F | NAD | NAD |
| 23 | 23A | Pre-Cast Concrete Slab Mortar | Roof F | NAD | N/A |
| 23 | 23B | Pre-Cast Concrete Slab Mortar | Roof F | NAD | N/A |
| 24 | 24A | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD | NAD |
| 24 | 24B | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD | NAD |
| 25 | 25A | Cap Flashing Caulk, Tan | Roof O | NAD | NAD |
| 25 | 25B | Cap Flashing Caulk, Tan | Roof O | NAD | NAD |
| 26 | 26A | Cap Flashing Caulk, Red | Roof O | NAD | NAD |
| 26 | 26B | Cap Flashing Caulk, Red | Roof O | NAD | NAD |
| 27 | 27A | Cap Flashing Caulk, Grey | Roof O | NAD | NAD |
| 27 | 27B | Cap Flashing Caulk, Grey | Roof O | NAD | NAD |
| 28 | 28A | Tar on Cap Flashing | Roof O | NAD | NAD |
| 28 | 28B | Tar on Cap Flashing | Roof O | NAD | NAD |
| 29 | 29A | Cap Flashing Caulk, White | Roof O | NAD | NAD |
| 29 | 29B | Cap Flashing Caulk, White | Roof O | NAD | NAD |

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APPENDIX A
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TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|----------------------|------------|--|---------------|--------------------------|---|
| 30 | 30A | Expansion Joint Caulk | Roof Q | NAD | NAD |
| 30 | 30B | Expansion Joint Caulk | Roof Q | NAD | NAD |
| 31 | 31A | Façade Corner Joint Caulk, Black | Roof Q | NAD | NAD |
| 31 | 31B | Façade Corner Joint Caulk, Black | Roof Q | NAD | NAD |
| 32 | 32A | Façade Corner Joint Caulk, Brown | Roof Q | NAD | NAD |
| 32 | 32B | Façade Corner Joint Caulk, Brown | Roof Q | NAD | NAD |
| 33 | 33A | Insulation ("Perlite") | Roof R | NAD | N/A |
| 33 | 33B | Insulation ("Perlite") | Roof R | NAD | N/A |
| 34 | 34A | Vapor Barrier | Roof R | NAD | NAD |
| 34 | 34B | Vapor Barrier | Roof R | NAD | NAD |
| 35 | 35A | Tar Membrane | Roof R | NAD | NAD |
| 35 | 35B | Tar Membrane | Roof R | NAD | NAD |
| 36 | 36A | Flashing Tar | Roof R | NAD | NAD |
| 36 | 36B | Flashing Tar | Roof R | NAD | NAD |
| 37 | 37A | Cap Flashing Caulk, Light Grey | Roof I | NAD | NAD |
| 37 | 37B | Cap Flashing Caulk, Light Grey | Roof C | NAD | NAD |
| 38 | 38A | Tar Assoc. with Cap Flashing | Roof I | NAD | NAD |
| 38 | 38B | Tar Assoc. with Cap Flashing | Roof C | NAD | NAD |
| 39 | 39A | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | 6.3% Chrysotile | N/A |
| 39 | 39B | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | NA/PS | N/A |
| 40 | 40A | Cap Flashing Caulk, Old | Roof D | 2.9% Chrysotile | N/A |
| 40 | 40B | Cap Flashing Caulk, Old | Roof C | NA/PS | N/A |
| 41 | 41A | Cap Flashing Caulk, Dark Grey | Roof I | 4.4% Chrysotile | N/A |
| 41 | 41B | Cap Flashing Caulk, Dark Grey | Roof C | NA/PS | N/A |
| 42 | 42A | Cap Flashing Caulk, White | Roof I | NAD | NAD |
| 42 | 42B | Cap Flashing Caulk, White | Roof C | <1% Chrysotile | <1% Anthophyllite 1.1% Chrysotile |
| 43 | 43A | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |

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APPENDIX A
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TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|--|-------------------------------|-------------------------|-------------------|
| 43 | 43B | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |
| 43 | 43C | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |
| 44 | 44A | Cementitious Materials Assoc. with Boiler | Boiler Room | 5.06% Chrysotile | N/A |
| 44 | 44B | Cementitious Materials Assoc. with Boiler | Boiler Room | NA/PS | N/A |
| 44 | 44C | Cementitious Materials Assoc. with Boiler | Boiler Room | NA/PS | N/A |
| 45 | 45A | Rope Gasket to Boilers | Boiler Room | NAD | N/A |
| 45 | 45B | Rope Gasket to Boilers | Boiler Room | NAD | N/A |
| 46 | 46A | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD | NAD |
| 46 | 46B | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD | NAD |
| 47 | 47A | Water Tank Brick Mortar | Boiler Room | 2.40% Chrysotile | N/A |
| 47 | 47B | Water Tank Brick Mortar | Boiler Room | NA/PS | N/A |
| 48 | 48A | Pipe Gasket, Orange | Boiler Room | NAD | NAD |
| 48 | 48B | Pipe Gasket, Orange | Boiler Room | NAD | NAD |
| 49 | 49A | Leveling Compound | Outside Cafeteria Entry Doors | NAD | N/A |
| 49 | 49B | Leveling Compound | Outside Cafeteria Entry Doors | NAD | N/A |
| 50 | 50A | Mastic to 12"x12" Floor Tiles | Cafeteria | NAD | NAD |
| 50 | 50B | Mastic to 12"x12" Floor Tiles | Cafeteria | NAD | <1% Anthophyllite |
| 51 | 51A | 12"x12" Blue Floor Tile | Cafeteria | NAD | NAD |
| 51 | 51B | 12"x12" Blue Floor Tile | Cafeteria | NAD | NAD |
| 52 | 52A | 12"x12" Grey Floor Tile | Cafeteria | NAD | NAD |
| 52 | 52B | 12"x12" Grey Floor Tile | Cafeteria | NAD | NAD |
| 53 | 53A | Mastic to Linoleum Flooring | Cafeteria | NAD | NAD |
| 53 | 53B | Mastic to Linoleum Flooring | Cafeteria | NAD | NAD |
| 54 | 54A | Linoleum Flooring | Cafeteria | NAD | NAD |
| 54 | 54B | Linoleum Flooring | Cafeteria | NAD | NAD |
| 55 | 55A | Mastic to 4" Blue Cove Base | Cafeteria | NAD | NAD |

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APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|----------------------------------|-------------------------------|-------------------|-------------------|
| 55 | 55B | Mastic to 4" Blue Cove Base | Cafeteria | NAD | NAD |
| 56 | 56A | Mastic to 4" Grey Cove Base | Cafeteria | NAD | NAD |
| 56 | 56B | Mastic to 4" Grey Cove Base | Cafeteria | NAD | <1% Chrysotile |
| 57 | 57A | Mudded Joints | Small Gym | NAD | N/A |
| 57 | 57B | Mudded Joints | Small Gym | NAD | N/A |
| 57 | 57C | Mudded Joints | Small Gym | NAD | N/A |
| 58 | 58A | Terrazzo Flooring | Outside Cafeteria Entry Doors | NAD | N/A |
| 58 | 58B | Terrazzo Flooring | Outside Small Gym | NAD | N/A |
| 59 | 59A | Mastic to Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 59 | 59B | Mastic to Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 60 | 60A | Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 60 | 60B | Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 61 | 61A | Caulking to Sinks/Toilets | Boys Locker Room | NAD | NAD |
| 61 | 61B | Caulking to Sinks/Toilets | Girls Locker Room | NAD | NAD |
| 62 | 62A | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD | NAD |
| 62 | 62B | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD | NAD |
| 63 | 63A | Yellow Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 63 | 63B | Yellow Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 64 | 64A | Yellow Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 64 | 64B | Yellow Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 65 | 65A | Red Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 65 | 65B | Red Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 66 | 66A | Red Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 66 | 66B | Red Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 67 | 67A | Black Curtain | Auditorium Stage | NAD | N/A |
| 67 | 67B | Black Curtain | Auditorium Stage | NAD | N/A |
| 68 | 68A | Asphalt Coating, Top Layer | Small Parking Lot | NAD | NAD |
| 68 | 68B | Asphalt Coating, Top Layer | Small Parking Lot | NAD | NAD |
| 69 | 69A | Asphalt Coating, Top Layer | Loop/Bus Turn Around | NAD | <1% Chrysotile |
| 69 | 69B | Asphalt Coating, Top Layer | Loop/Bus Turn Around | NAD | NAD |
| 70 | 70A | Asphalt Coating, Top Layer | Large Parking Lot | NAD | NAD |

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**APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940**

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|------------------------------|-------------------|-------------------|-------------------|
| 70 | 70B | Asphalt Coating, Top Layer | Large Parking Lot | NAD | NAD |
| 71 | 71A | 2'x4' Ceiling Tile, Pinhole | Cafeteria | NAD | NAD |
| 71 | 71B | 2'x4' Ceiling Tile, Pinhole | Cafeteria | NAD | NAD |
| 72 | 72A | 2'x4' Ceiling Tile, Textured | Cafeteria | NAD | NAD |
| 72 | 72B | 2'x4' Ceiling Tile, Textured | Cafeteria | NAD | NAD |

Bold = Positive for ACM

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NA/PS = Not Analyzed/Positive Stop



**APPENDIX B:
ASBESTOS BULK SAMPLE FIELD DATA SHEETS
WITH CHAIN OF CUSTODY
& LABORATORY RESULTS**



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

OrderID: 031509020

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs
PROPOSED PROJECT: Roof Renovation
DATE(S) OF INSPECTION: 3/24-25/2015
Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|-----------------|--------------------------|---|
| 01 | 01A | Structural Wood Fiber Deck ("Tectum") | Roof M | | |
| 01 | 01B | Structural Wood Fiber Deck ("Tectum") | Roof M | | EMSC MANHATTAN LAB RECEIVED 15 MAR 26 PM 6:00 |
| 02 | 02A | Flashing Tar | Roof M | | |
| 02 | 02B | Flashing Tar | Roof M | | |
| 03 | 03A | Coping Stone Caulk | Roof M | | |
| 03 | 03B | Coping Stone Caulk | Roof L | | |
| 04 | 04A | Coping Stone Mortar | Roof M | | |
| 04 | 04B | Coping Stone Mortar | Roof L | | |
| 05 | 05A | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| 05 | 05B | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| 06 | 06A | Tar on Skylight/Mechanical Equipment Curbs | Roof M | | |
| 06 | 06B | Tar on Skylight/Mechanical Equipment Curbs | Roof M | | |

J 3/29/15
 11p

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|--|---------------------------|----------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> (Sign) | <i>D Co</i> (Sign) | 3/26/15 (Date) | 5:02 PM (Time) | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mend</i> (Sign) | <i>Samuel Mend</i> (Sign) | 3/26/15 (Date) | 6:00 PM (Time) | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Samuel Mend 3/29/15 8:20am

Page 1 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 2 OF 7

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs
PROPOSED PROJECT: Roof Renovation
DATE(S) OF INSPECTION: 3/24-25/2015
Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

Page 2 of 7

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-------------------------|-----------------------|--------------------------|------------------------------|
| 07 | 07A | Tar/Vapor Barrier | Roof L | | Above Concrete Deck |
| 07 | 07B | Tar/Vapor Barrier | Roof K (Flat Section) | | Above Concrete Deck |
| 08 | 08A | Insulation ("Perlite") | Roof L | | Above Foam Layer |
| 08 | 08B | Insulation ("Perlite") | Roof K (Flat Section) | | Above Foam Layer |
| 09 | 09A | Tar Water Proofing | Roof L | | Above Insulation ("Perlite") |
| 09 | 09B | Tar Water Proofing | Roof K (Flat Section) | | Above Insulation ("Perlite") |
| 10 | 10A | Roof Membrane | Roof L | | Top Layer |
| 10 | 10B | Roof Membrane | Roof K (Flat Section) | | Top Layer |
| 11 | 11A | Tapered Edge Fiberboard | Roof L | | Assoc. with Flashing |
| 11 | 11B | Tapered Edge Fiberboard | Roof L | | Assoc. with Flashing |
| 12 | 12A | Flashing Tar Paper | Roof L | | |
| 12 | 12B | Flashing Tar Paper | Roof L | | |

INSPECTION RECEIVED
 15 MAR 2015 10:06:00
 C. NAPOLITANO

CHAIN OF CUSTODY

| | | | | | | | | | | |
|---|-----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D. Cheskin</i> (Sign) | (Date) <i>3/24/15</i> | (Time) <i>5:00 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mend...</i> (Sign) | (Date) <i>3/28/15</i> | (Time) <i>6:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

[Signature] 3/29/15 8:20 AM

OrderID: 031509020



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 3 OF 7

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs
PROPOSED PROJECT: Roof Renovation
DATE(S) OF INSPECTION: 3/24-25/2015
Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
 TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
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RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|------------------------|---------------------------|--------------------------|----------------------------------|
| 13 | 13A | Cap Flashing Caulk | Roof L | | |
| 13 | 13B | Cap Flashing Caulk | Roof L | | |
| 14 | 14A | Brick Mortar | Roof L | | |
| 14 | 14B | Brick Mortar | Roof L | | |
| 15 | 15A | Gypsum Deck | Roof K (Elevated Section) | | Bottom Layer of Elevated Section |
| 15 | 15B | Gypsum Deck | Roof K (Elevated Section) | | Bottom Layer of Elevated Section |
| 16 | 16A | Insulation ("Perlite") | Roof K (Elevated Section) | | Above Gypsum Deck |
| 16 | 16B | Insulation ("Perlite") | Roof K (Elevated Section) | | Above Gypsum Deck |
| 17 | 17A | Tar/Vapor Barrier | Roof K (Elevated Section) | | Above Insulation ("Perlite") |
| 17 | 17B | Tar/Vapor Barrier | Roof K (Elevated Section) | | Above Insulation ("Perlite") |
| 18 | 18A | Fiber Board | Roof K (Elevated Section) | | Above Foam Layer |
| 18 | 18B | Fiber Board | Roof K (Elevated Section) | | Above Foam Layer |

15 MAR 26 6:00 PM
 EMSL MANHATTAN RECEIVED

CHAIN OF CUSTODY

| | | | | | | | | |
|--|----------------|----------------|-------------------------|--------|--------|-------------------------|--------|--------|
| Requested by: <i>D Cheskin</i> (Sign) | (Date) 3/26/15 | (Time) 5:22 PM | Relinquished by: (Sign) | (Date) | (Time) | Relinquished by: (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mendel</i> (Sign) | (Date) 3/26/15 | (Time) 6:00 PM | Received by: (Sign) | (Date) | (Time) | Received by: (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Samuel Mendel 3/26/15 3:20 PM

Order ID: 031509020

Page 3 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 4 OF 7

OrderID: 031509020

031509020

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|---------------------------|--------------------------|--|
| 19 | 19A | Tar Water Proofing | Roof K (Elevated Section) | | Above Fiber Board |
| 19 | 19B | Tar Water Proofing | Roof K (Elevated Section) | | Above Fiber Board |
| 20 | 20A | Roof Membrane | Roof K (Elevated Section) | | Top Layer |
| 20 | 20B | Roof Membrane | Roof K (Elevated Section) | | Top Layer |
| 21 | 21A | Tar on Mechanical Equipment Curbs | Roof K | | |
| 21 | 21B | Tar on Mechanical Equipment Curbs | Roof F | | |
| 22 | 22A | Mechanical Equipment Flashing | Roof F | | |
| 22 | 22B | Mechanical Equipment Flashing | Roof F | | |
| 23 | 23A | Pre-Cast Concrete Slab Mortar | Roof F | | Assoc. with Towers |
| 23 | 23B | Pre-Cast Concrete Slab Mortar | Roof F | | Assoc. with Towers |
| 24 | 24A | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | | No Other Suspect Materials in Roofing System |
| 24 | 24B | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | | No Other Suspect Materials in Roofing System |

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15 MAR 26 PM 6:00
ENSI
MAINTAN LAB

CHAIN OF CUSTODY

| | | | | | |
|--|-----------------------|-----------------------|-------------------------------|--------------|--------------|
| Relinquished by: <i>D Cheskin</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:20 PM</i> | Relinquished by: _____ (Sign) | (Date) _____ | (Time) _____ |
| Received by: <i>Samuel Mem...</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:00 PM</i> | Received by: _____ (Sign) | (Date) _____ | (Time) _____ |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Samuel Mem... 3/26/15 8:20 PM

Page 4 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

OrderID: 031509020

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|---------------------------|-----------------|--------------------------|---|
| 25 | 25A | Cap Flashing Caulk, Tan | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 25 | 25B | Cap Flashing Caulk, Tan | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 26 | 26A | Cap Flashing Caulk, Red | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 26 | 26B | Cap Flashing Caulk, Red | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 27 | 27A | Cap Flashing Caulk, Grey | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 27 | 27B | Cap Flashing Caulk, Grey | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 28 | 28A | Tar on Cap Flashing | Roof O | | |
| 28 | 28B | Tar on Cap Flashing | Roof O | | |
| 29 | 29A | Cap Flashing Caulk, White | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 29 | 29B | Cap Flashing Caulk, White | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 30 | 30A | Expansion Joint Caulk | Roof Q | | |
| 30 | 30B | Expansion Joint Caulk | Roof Q | | |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|--|---------------------------|-----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> (Sign) | <i>DA</i> (Sign) | <i>3/26/15</i> (Date) | <i>5:20 PM</i> (Time) | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mark</i> (Sign) | <i>Samuel Mark</i> (Sign) | <i>3/26/15</i> (Date) | <i>6:00 PM</i> (Time) | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

3/24/15
8:20 AM

Page 5 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 6 OF 7

OrderID: 031509020

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR.
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|-----------------|--------------------------|---|
| 31 | 31A | Façade Corner Joint Caulk, Black | Roof Q | | |
| 31 | 31B | Façade Corner Joint Caulk, Black | Roof Q | | |
| 32 | 32A | Façade Corner Joint Caulk, Brown | Roof Q | | |
| 32 | 32B | Façade Corner Joint Caulk, Brown | Roof Q | | |
| 33 | 33A | Insulation ("Perlite") | Roof R | | Above Metal Deck |
| 33 | 33B | Insulation ("Perlite") | Roof R | | Above Metal Deck |
| 34 | 34A | Vapor Barrier | Roof R | | Above Insulation ("Perlite") |
| 34 | 34B | Vapor Barrier | Roof R | | Above Insulation ("Perlite") |
| 35 | 35A | Tar Membrane | Roof R | | Top Layer, Above Second Layer of Insulation ("Perlite") |
| 35 | 35B | Tar Membrane | Roof R | | Top Layer, Above Second Layer of Insulation ("Perlite") |
| 36 | 36A | Flashing Tar | Roof R | | Assoc. with Structural Wood along Roof Edges |
| 36 | 36B | Flashing Tar | Roof R | | Assoc. with Structural Wood along Roof Edges |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|-------------------------------------|--------|-----------------------|-----------------------|---------------|--------|--------|--------|---------------|--------|--------|--------|
| Requested by: <i>D Cheskin</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:02 PM</i> | Requested by: | (Sign) | (Date) | (Time) | Requested by: | (Sign) | (Date) | (Time) |
| Received by: <i>Shirley Mend...</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:56 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

[Signature]
3/24/15
8:20 AM

Page 6 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 7 OF 7

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR.
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|---|-----------------|--------------------------|---|
| 37 | 37A | Cap Flashing Caulk, Light Grey | Roof I | | EMSL-MANHATTAN LAB RECEIVED 15 MAR 26 PM 6:00 |
| 37 | 37B | Cap Flashing Caulk, Light Grey | Roof C | | |
| 38 | 38A | Tar Assoc. with Cap Flashing | Roof I | | |
| 38 | 38B | Tar Assoc. with Cap Flashing | Roof C | | |
| 39 | 39A | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| 39 | 39B | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| 40 | 40A | Cap Flashing Caulk, Old | Roof D | | |
| 40 | 40B | Cap Flashing Caulk, Old | Roof C | | |
| 41 | 41A | Cap Flashing Caulk, Dark Grey | Roof I | | |
| 41 | 41B | Cap Flashing Caulk, Dark Grey | Roof C | | |
| 42 | 42A | Cap Flashing Caulk, White | Roof I | | |
| 42 | 42B | Cap Flashing Caulk, White | Roof C | | |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|------------------------------------|--------|-----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:22 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mend...</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:00 pm</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

3/26/15
8:20 AM

Order ID: 031509020

Page 7 of 7

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018
 Phone/Fax: (212) 290-0051 / (212) 290-0058
<http://www.EMSL.com> manhattanlab@emsl.com

EMSL Order: 031509020
 CustomerID: LBAP78
 CustomerPO: 3001111.00
 ProjectID:

Attn: **Craig Napolitano**
Louis Berger & Associates, PC
48 Wall St.
New York, NY 10005

Phone: (212) 612-7900
 Fax:
 Received: 03/26/15 6:00 PM
 Analysis Date: 3/29/2015
 Collected: 3/24/2015

Project: 3001111.00/ MIDDLETOWN SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL MIDDLETOWN, NY/ ROOFS/ ROOF RENOVATION

Test Report:Asbestos Analysis of Bulk Material

| Test | Analyzed Date | Color | Non Asbestos | | Asbestos |
|--|---------------|--------------------|---|----------------------------|---|
| | | | Fibrous | Non-Fibrous | |
| Sample ID 01A 031509020-0001 | | Description | ROOF M - STRUCTURAL WOOD FIBER DECK/ TECTUM | | |
| | | Homogeneity | Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | White | 82.00% Cellulose | 18.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 01B 031509020-0002 | | Description | ROOF M - STRUCTURAL WOOD FIBER DECK/ TECTUM | | |
| | | Homogeneity | Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Tan/White | 75.00% Cellulose | 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 02A 031509020-0003 | | Description | ROOF M - FLASHING TAR | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | | <1% Chrysotile <1% Total |
| Sample ID 02B 031509020-0004 | | Description | ROOF M - FLASHING TAR | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | | None Detected |
| Sample ID 03A 031509020-0005 | | Description | ROOF M - COPING STONE CAULK | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Gray | | | None Detected |

**EMSL Analytical, Inc.**

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Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 03B 031509020-0006 | Description Homogeneity | ROOF L - COPING STONE CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 04A 031509020-0007 | Description Homogeneity | ROOF M - COPING STONE MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 45.00% Quartz 3.00% Mica 52.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 04B 031509020-0008 | Description Homogeneity | ROOF L - COPING STONE MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 55.00% Quartz 45.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 05A 031509020-0009 | Description Homogeneity | ROOF M - CAULK TO COPING STONE/ CAP FLASHING JOINT Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 05B 031509020-0010 | Description Homogeneity | ROOF M - CAULK TO COPING STONE/ CAP FLASHING JOINT Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 06A 031509020-0011 | Description Homogeneity | ROOF M - TAR ON SKYLIGHT/ MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

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Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 06B 031509020-0012 | Description Homogeneity | ROOF M - TAR ON SKYLIGHT/ MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 07A 031509020-0013 | Description Homogeneity | ROOF L - TAR/ VABOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 07B 031509020-0014 | Description Homogeneity | ROOF K/ FLAT SECTION - TAR/ VABOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 08A 031509020-0015 | Description Homogeneity | ROOF L - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 45.00% Cellulose | 42.00% Perlite 13.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 08B 031509020-0016 | Description Homogeneity | ROOF K/ FLAT SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Tan | 75.00% Cellulose | 18.00% Perlite 7.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 09A 031509020-0017 | Description Homogeneity | ROOF L - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

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<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---------------------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 09B 031509020-0018 | Description Homogeneity | ROOF K/ FLAT SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 10A 031509020-0019 | Description Homogeneity | ROOF L - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 10B 031509020-0020 | Description Homogeneity | ROOF K/ FLAT SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 11A 031509020-0021 | Description Homogeneity | ROOF L - TAPERED EDGE FIBERBOARD Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 94.00% Cellulose | 6.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 11B 031509020-0022 | Description Homogeneity | ROOF L - TAPERED EDGE FIBERBOARD Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 97.00% Cellulose | 3.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 12A 031509020-0023 | Description Homogeneity | ROOF L - FLASHING TAR PAPER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

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<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 12B 031509020-0024 | Description Homogeneity | ROOF L - FLASHING TAR PAPER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 13A 031509020-0025 | Description Homogeneity | ROOF L - CAP FLASHING CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 13B 031509020-0026 | Description Homogeneity | ROOF L - CAP FLASHING CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 14A 031509020-0027 | Description Homogeneity | ROOF L - BRICK MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 42.00% Quartz 58.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 14B 031509020-0028 | Description Homogeneity | ROOF L - BRICK MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray/White | | 45.00% Quartz 55.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 15A 031509020-0029 | Description Homogeneity | ROOF K/ ELEVATED SECTION - GYPSUM DECK Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 10.00% Quartz 55.00% Gypsum 35.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

Initial Report From 03/29/2015 23:21:47

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 15B 031509020-0030 | Description Homogeneity | ROOF K/ ELEVATED SECTION - GYPSUM DECK Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Gray | | 8.00% Quartz 64.00% Gypsum 28.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 16A 031509020-0031 | Description Homogeneity | ROOF K/ ELEVATED SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 52.00% Cellulose | 30.00% Perlite 18.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 16B 031509020-0032 | Description Homogeneity | ROOF K/ ELEVATED SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 45.00% Cellulose | 35.00% Perlite 20.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 17A 031509020-0033 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR/ VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |
| Sample ID 17B 031509020-0034 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR/ VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 18A 031509020-0035 | Description Homogeneity | ROOF K/ ELEVATED SECTION - FIBER BOARD Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 58.00% Cellulose | 20.00% Perlite 22.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 18B 031509020-0036 | Description Homogeneity | ROOF K/ ELEVATED SECTION - FIBER BOARD Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 80.00% Cellulose | 12.00% Perlite 8.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 19A 031509020-0037 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |
| Sample ID 19B 031509020-0038 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |
| Sample ID 20A 031509020-0039 | Description Homogeneity | ROOF K/ ELEVATED SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |
| Sample ID 20B 031509020-0040 | Description Homogeneity | ROOF K/ ELEVATED SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |



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| EMSL Order: | 031509020 |
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| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 21A 031509020-0041 | Description Homogeneity | ROOF K - TAR ON MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 21B 031509020-0042 | Description Homogeneity | ROOF F - TAR ON MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 22A 031509020-0043 | Description Homogeneity | ROOF F - MECHANICAL EQUIPMENT FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 22B 031509020-0044 | Description Homogeneity | ROOF F - MECHANICAL EQUIPMENT FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 23A 031509020-0045 | Description Homogeneity | ROOF F - PRE-CAST CONCRETE SLAB MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 52.00% Quartz 48.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 23B 031509020-0046 | Description Homogeneity | ROOF F - PRE-CAST CONCRETE SLAB MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 35.00% Quartz 15.00% Ca Carbonate 50.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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| EMSL Order: | 031509020 |
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Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 24A 031509020-0047 | Description Homogeneity | ROOF O - TAR ASSOC. WITH FIBERGLASS LAYERS IN BUILT UP ROOFING SYSTEM Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 24B 031509020-0048 | Description Homogeneity | ROOF O - TAR ASSOC. WITH FIBERGLASS LAYERS IN BUILT UP ROOFING SYSTEM Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 25A 031509020-0049 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ TAN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 25B 031509020-0050 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ TAN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 26A 031509020-0051 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ RED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Red | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Red | | | None Detected |
| Sample ID 26B 031509020-0052 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ RED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Red | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Red | | | None Detected |

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| EMSL Order: | 031509020 |
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| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 27A 031509020-0053 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 27B 031509020-0054 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 28A 031509020-0055 | Description Homogeneity | ROOF O - TAR ON CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 28B 031509020-0056 | Description Homogeneity | ROOF O - TAR ON CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 29A 031509020-0057 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 29B 031509020-0058 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |

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| EMSL Order: | 031509020 |
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| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 30A 031509020-0059 | Description Homogeneity | ROOF Q - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 30B 031509020-0060 | Description Homogeneity | ROOF Q - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 31A 031509020-0061 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BLACK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 31B 031509020-0062 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BLACK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 32A 031509020-0063 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BROWN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 32B 031509020-0064 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BROWN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 33A 031509020-0065 | Description Homogeneity | ROOF Q - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 50.00% Cellulose 25.00% Perlite 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 33B 031509020-0066 | Description Homogeneity | ROOF Q - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 40.00% Cellulose 40.00% Perlite 20.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 34A 031509020-0067 | Description Homogeneity | ROOF Q - VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 34B 031509020-0068 | Description Homogeneity | ROOF Q - VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 35A 031509020-0069 | Description Homogeneity | ROOF Q - TAR MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 35B 031509020-0070 | Description Homogeneity | ROOF Q - TAR MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 36A 031509020-0071 | Description Homogeneity | ROOF Q - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 36B 031509020-0072 | Description Homogeneity | ROOF Q - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 37A 031509020-0073 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ LIGHT GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 37B 031509020-0074 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ LIGHT GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 38A 031509020-0075 | Description Homogeneity | ROOF I - TAR ASSOC. WITH CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 38B 031509020-0076 | Description Homogeneity | ROOF C - TAR ASSOC. WITH CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018

Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|-------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 39A 031509020-0077 | Description Homogeneity | ROOF H - CAULK ASSOC. WITH COPPER DECK/ COPING STONE SEAM | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 6.3% Chrysotile 6.3% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 39B 031509020-0078 | Description Homogeneity | ROOF H - CAULK ASSOC. WITH COPPER DECK/ COPING STONE SEAM | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 40A 031509020-0079 | Description Homogeneity | ROOF D - CAP FLASHING CAULK/ OLD | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 2.9% Chrysotile 2.9% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 40B 031509020-0080 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ OLD | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 41A 031509020-0081 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ DARK GREY | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 4.4% Chrysotile 4.4% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 41B 031509020-0082 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ DARK GREY | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |

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| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|--|
| | | Fibrous | Non-Fibrous | |
| Sample ID 42A 031509020-0083 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 42B 031509020-0084 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive : <1%Chrysotile Inconclusive - <1% Total |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | <1% Anthophyllite 1.1% Chrysotile 1.1% Total |



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EMSL Order: 031509020
CustomerID: LBAP78
CustomerPO: 3001111.00
ProjectID:

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|---|-------|--------------|-------------|----------|
| | | Fibrous | Non-Fibrous | |
| Leica #8 Ser. 9640013810UN0022 /Leica #11 Ser. 9640113773VM0031/ Leica #10 Ser. 964009735MW0103 | | | | |

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via NYS ELAP Approved Methods. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

| | | | |
|--------------------------|-----------|--------------------------|---------|
| Sample Receipt Date:: | 3/26/2015 | Sample Receipt Time: | 6:00 PM |
| Analysis Completed Date: | 3/29/2015 | Analysis Completed Time: | 7:50 PM |

Analyst(s):

Jon Williams PLM NYS 198.1 Friable (7)

Shahrakur Mahmud PLM NYS 198.1 Friable (13)

Emmanuel Alberto PLM NYS 198.6 NOB (61)

Feng Liang TEM NYS 198.4 NOB (34)

Helen Polanco TEM NYS 198.4 NOB (24)

Samples reviewed and approved by:

James Hall, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing. All samples examined for the presence of vermiculite when analyzed via NYS 198.1.
-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. New York, NY NYS ELAP 11506



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|-----------------|--------------------------|---|
| 43 | 43A | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 43 | 43B | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 43 | 43C | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 44 | 44A | Cementitious Materials Assoc. with Boiler | Boiler Room | | 2015 APR -2 PM 6:02 ENCL MANHATTAN LLC RECEIVED |
| 44 | 44B | Cementitious Materials Assoc. with Boiler | Boiler Room | | |
| 44 | 44C | Cementitious Materials Assoc. with Boiler | Boiler Room | | |
| 45 | 45A | Rope Gasket to Boilers | Boiler Room | | [Signature] |
| 45 | 45B | Rope Gasket to Boilers | Boiler Room | | |
| 46 | 46A | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | | [Signature] |
| 46 | 46B | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | | |
| 47 | 47A | Water Tank Brick Mortar | Boiler Room | | [Signature] |
| 47 | 47B | Water Tank Brick Mortar | Boiler Room | | |

CHAIN OF CUSTODY

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|-------------------------------------|--------|---------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: [Signature] | (Sign) | (Date) 4/2/15 | (Time) 5:02 PM | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: A. SWANSON [Signature] | (Sign) | (Date) 4/2/15 | (Time) 6:02 PM | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBS to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 2 OF 6

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-------------------------------|-------------------------------|--------------------------|--|
| 48 | 48A | Pipe Gasket, Orange | Boiler Room | | |
| 48 | 48B | Pipe Gasket, Orange | Boiler Room | | |
| 49 | 49A | Leveling Compound | Outside Cafeteria Entry Doors | | |
| 49 | 49B | Leveling Compound | Outside Cafeteria Entry Doors | | |
| 50 | 50A | Mastic to 12"x12" Floor Tiles | Cafeteria | | 2015 APR -2 PM 6:02 DIST. HANNAH... RECEIVED |
| 50 | 50B | Mastic to 12"x12" Floor Tiles | Cafeteria | | |
| 51 | 51A | 12"x12" Blue Floor Tile | Cafeteria | | |
| 51 | 51B | 12"x12" Blue Floor Tile | Cafeteria | | |
| 52 | 52A | 12"x12" Grey Floor Tile | Cafeteria | | |
| 52 | 52B | 12"x12" Grey Floor Tile | Cafeteria | | |
| 53 | 53A | Mastic to Linoleum Flooring | Cafeteria | | |
| 53 | 53B | Mastic to Linoleum Flooring | Cafeteria | | |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|-----------------------------------|--------|----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> | (Sign) | (Date) <i>4/2/15</i> | (Time) <i>5:02 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>F SWANSON</i> | (Sign) | (Date) <i>4/2/15</i> | (Time) <i>6:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Order ID: 031509799

Page 1 OF 13



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 3 OF 6

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia 031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME. 4 HR 12 HR
 24 HR. 48 HR. 72 HR. 96 HR

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|-------------------------------|--------------------------|---------------------------------------|
| 54 | 54A | Linoleum Flooring | Cafeteria | | |
| 54 | 54B | Linoleum Flooring | Cafeteria | | |
| 55 | 55A | Mastic to 4" Blue Cove Base | Cafeteria | | |
| 55 | 55B | Mastic to 4" Blue Cove Base | Cafeteria | | |
| 56 | 56A | Mastic to 4" Grey Cove Base | Cafeteria | | |
| 56 | 56B | Mastic to 4" Grey Cove Base | Cafeteria | | |
| 57 | 57A | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 57 | 57B | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 57 | 55C | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 58 | 58A | Terrazzo Flooring | Outside Cafeteria Entry Doors | | |
| 58 | 58B | Terrazzo Flooring | Outside Small Gym | | |
| 59 | 59A | Mastic to Old 4" Brown Cove Base | Small Gym | | |

ENCL. RECEIVED
 2015 APR - 21 11:50 AM

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|------------------|--------|--------|----------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| <i>D Cheskin</i> | | 4/2/15 | 3:02 PM | | | | | | | | |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| <i>J SWANSON</i> | | 4/2/15 | 02:21 PM | | | | | | | | |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 4 OF 6

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/31 – 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|----------------------------|--------------------------|---|
| 59 | 59B | Mastic to Old 4" Brown Cove Base | Small Gym | | |
| 60 | 60A | Old 4" Brown Cove Base | Small Gym | | <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> RECEIVED 2015 APR - 2 PM 6:02 J. SWANSON </div> |
| 60 | 60B | Old 4" Brown Cove Base | Small Gym | | |
| 61 | 61A | Caulking to Sinks/Toilets | Boys Locker Room | | |
| 61 | 61B | Caulking to Sinks/Toilets | Girls Locker Room | | |
| 62 | 62A | Expansion Joint Caulk | Exterior Auditorium Stairs | | Assoc. only with bottom step and bottom of ramp |
| 62 | 62B | Expansion Joint Caulk | Exterior Auditorium Stairs | | Assoc. only with bottom step and bottom of ramp |
| 63 | 63A | Yellow Curtain, Front Layer | Auditorium Stage | | |
| 63 | 63B | Yellow Curtain, Front Layer | Auditorium Stage | | |
| 64 | 64A | Yellow Curtain, Back Layer | Auditorium Stage | | |
| 64 | 64B | Yellow Curtain, Back Layer | Auditorium Stage | | |
| 65 | 65A | Red Curtain, Front Layer | Auditorium Stage | | |

CHAIN OF CUSTODY

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|------------------|--------------------------|---------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) <i>D. Cheskin</i> | (Date) 4/9/15 | (Time) 5:00 pm | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) <i>J. Swanson</i> | (Date) 4/2/15 | (Time) 6:02 pm | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 5 OF 6

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-----------------------------|----------------------|--------------------------|-------------|
| 65 | 65B | Red Curtain, Front Layer | Auditorium Stage | | |
| 66 | 66A | Red Curtain, Back Layer | Auditorium Stage | | |
| 66 | 66B | Red Curtain, Back Layer | Auditorium Stage | | |
| 67 | 67A | Black Curtain | Auditorium Stage | | |
| 67 | 67B | Black Curtain | Auditorium Stage | | |
| 68 | 68A | Asphalt Coating, Top Layer | Small Parking Lot | | |
| 68 | 68B | Asphalt Coating, Top Layer | Small Parking Lot | | |
| 69 | 69A | Asphalt Coating, Top Layer | Loop/Bus Turn Around | | |
| 69 | 69B | Asphalt Coating, Top Layer | Loop/Bus Turn Around | | |
| 70 | 70A | Asphalt Coating, Top Layer | Large Parking Lot | | |
| 70 | 70B | Asphalt Coating, Top Layer | Large Parking Lot | | |
| 71 | 71A | 2'x4' Ceiling Tile, Pinhole | Cafeteria | | |

2015 APR -2 PM 6:02

ENGINEERING RECEIPT

CHAIN OF CUSTODY

| | | | | | | | |
|------------------|--------|--------|---------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| D Cheskin | | 4/2/15 | 5:30 PM | | | | |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| J Swanson | | 4/2/15 | 6:02 PM | | | | |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 – 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|------------------------------|-----------------|--------------------------|-------------|
| 71 | 71B | 2'x4' Ceiling Tile, Pinhole | Cafeteria | | |
| 72 | 72A | 2'x4' Ceiling Tile, Textured | Cafeteria | | |
| 72 | 72B | 2'x4' Ceiling Tile, Textured | Cafeteria | | |
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2015 APR -2 PM 6:02

Handwritten signature and date: 4/1/15

CHAIN OF CUSTODY

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|------------------|-----------------------------|---------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) <i>D. Cheskin</i> | (Date) 4/2/15 | (Time) 5:00 pm | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) <i>C. Napolitano</i> | (Date) 4/2/15 | (Time) 6:02 pm | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Bolmanska, Emilia

From: EMSL Lab - Manhattan
Sent: Thursday, April 02, 2015 10:13 PM
To: Craig Napolitano; SANDRA SANTANA
Cc: EMSL Lab - Manhattan; Manhattan Login
Subject: EMSL receipt confirmation, COC for order(s) 031509799 (031509799 - 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE RENOVATIONS RENOVATION)
Attachments: 031509799_coc.pdf; 031509799_conf.pdf

Good evening,

Please note there is an error on the COC on page 3, homogeneous group #57. We received sample #57C, not 55C. We will list it as #57C on the report, if you would like to change it please contact the lab and reply to all.

Thank you,

Emilia

Receipt confirmation, COC for:
031509799 - 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE RENOVATIONS RENOVATION

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Emilia Bolmanska | Admin/ Data Entry
EMSL Analytical, Inc. | 307 West 38th Street | New York, NY 10018
Phone: 212-290-0051 | Fax: 212-290-0058 | Toll Free: 866-448-3675
Lab Hours: 24 Hours 7 Days a week

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<http://www.EMSL.com> manhattanlab@emsl.com

EMSL Order: 031509799
 CustomerID: LBAP78
 CustomerPO: 3001111.00
 ProjectID:

Attn: **Craig Napolitano**
Louis Berger & Associates, PC
48 Wall St.
New York, NY 10005

Phone: (212) 612-7900
 Fax:
 Received: 04/02/15 6:02 PM
 Analysis Date: 4/4/2015
 Collected: 3/31/2015

Project: 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE

Test Report:Asbestos Analysis of Bulk Material

| Test | Analyzed Date | Color | Non Asbestos | | Asbestos |
|--|---------------|-------|---|--|------------------------------------|
| | | | Fibrous | Non-Fibrous | |
| Sample ID 43A 031509799-0001 | | | Description BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | | Homogeneity Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 43B 031509799-0002 | | | Description BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | | Homogeneity Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 43C 031509799-0003 | | | Description BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | | Homogeneity Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 44A 031509799-0004 | | | Description BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| | | | Homogeneity Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | | 40.00% Quartz 20.00% Ca Carbonate 34.94% Non-fibrous (other) | 5.06% Chrysotile |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 44B 031509799-0005 | | | Description BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| | | | Homogeneity | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |



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|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 44C 031509799-0006 | Description Homogeneity | BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 45A 031509799-0007 | Description Homogeneity | BOILER ROOM - ROPE GASKET TO BOILERS | | |
| PLM NYS 198.1 Friable | 4/4/2015 | White | 98.00% Glass 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 45B 031509799-0008 | Description Homogeneity | BOILER ROOM - ROPE GASKET TO BOILERS | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Tan/White | 98.00% Glass 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 46A 031509799-0009 | Description Homogeneity | BOILER ROOM - TAR ASSOC. WITH ROPE GASKET TO BOILER | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Black | | None Detected |
| Sample ID 46B 031509799-0010 | Description Homogeneity | BOILER ROOM - TAR ASSOC. WITH ROPE GASKET TO BOILER | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Black | | None Detected |
| Sample ID 47A 031509799-0011 | Description Homogeneity | BOILER ROOM - WATER TANK BRICK MORTAR | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | 63.00% Quartz 34.60% Non-fibrous (other) | 2.40% Chrysotile |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 47B 031509799-0012 | Description Homogeneity | BOILER ROOM - WATER TANK BRICK MORTAR | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 48A 031509799-0013 | Description Homogeneity | BOILER ROOM - PIPE GASKET, ORANGE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Red | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Red | | None Detected |
| Sample ID 48B 031509799-0014 | Description Homogeneity | BOILER ROOM - PIPE GASKET, ORANGE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Red | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Red | | None Detected |
| Sample ID 49A 031509799-0015 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - LEVELING COMPOUND Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | 15.00% Cellulose 25.00% Quartz 35.00% Ca Carbonate 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 49B 031509799-0016 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - LEVELING COMPOUND Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray/Tan | 18.00% Cellulose 40.00% Ca Carbonate 42.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |



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| EMSL Order: | 031509799 |
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| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|--|
| | | Fibrous | Non-Fibrous | |
| Sample ID 50A 031509799-0017 | Description Homogeneity | CAFETERIA - MASTIC TO 12"X12" FLOOR TILES Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Yellow | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Yellow | | | None Detected |
| Sample ID 50B 031509799-0018 | Description Homogeneity | CAFETERIA - MASTIC TO 12"X12" FLOOR TILES Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Yellow | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Yellow | | | <1% Anthophyllite <1% Total |
| Sample ID 51A 031509799-0019 | Description Homogeneity | CAFETERIA - 12"X12" BLUE FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Blue | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Blue | | | None Detected |
| Sample ID 51B 031509799-0020 | Description Homogeneity | CAFETERIA - 12"X12" BLUE FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Blue | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Blue | | | None Detected |
| Sample ID 52A 031509799-0021 | Description Homogeneity | CAFETERIA - 12"X12" GREY FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |
| Sample ID 52B 031509799-0022 | Description Homogeneity | CAFETERIA - 12"X12" GREY FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |

Initial Report From 04/05/2015 17:36:16

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 53A <i>031509799-0023</i> | Description Homogeneity | CAFETERIA - MASTIC TO LINOLEUM FLOORING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Yellow No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Yellow | | | | None Detected |
| Sample ID 53B <i>031509799-0024</i> | Description Homogeneity | CAFETERIA - MASTIC TO LINOLEUM FLOORING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Yellow No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Yellow | | | | None Detected |
| Sample ID 54A <i>031509799-0025</i> | Description Homogeneity | CAFETERIA - LINOLEUM FLOORING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |
| Sample ID 54B <i>031509799-0026</i> | Description Homogeneity | CAFETERIA - LINOLEUM FLOORING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |
| Sample ID 55A <i>031509799-0027</i> | Description Homogeneity | CAFETERIA - MASTIC TO 4" BLUE COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |
| Sample ID 55B <i>031509799-0028</i> | Description Homogeneity | CAFETERIA - MASTIC TO 4" BLUE COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |

Initial Report From 04/05/2015 17:36:16

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
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| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---|---|
| | | Fibrous | Non-Fibrous | |
| Sample ID 56A 031509799-0029 | Description Homogeneity | CAFETERIA - MASTIC TO 4" GREY COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Yellow | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/4/2015 Yellow | | | None Detected |
| Sample ID 56B 031509799-0030 | Description Homogeneity | CAFETERIA - MASTIC TO 4" GREY COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Yellow | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 Yellow | | | <1% Chrysotile <1% Total |
| Sample ID 57A 031509799-0031 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 45.00% Min. Wool | 55.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 57B 031509799-0032 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 48.00% Min. Wool | 52.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 57C 031509799-0033 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 10.00% Cellulose 22.00% Min. Wool | 15.00% Ca Carbonate 53.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |



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| EMSL Order: | 031509799 |
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| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 58A 031509799-0034 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - TERRAZZO FLOORING Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gray | 40.00% Quartz 35.00% Ca Carbonate 25.00% Non-fibrous (other) | | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 58B 031509799-0035 | Description Homogeneity | OUTSIDE SMALL GYM - TERRAZZO FLOORING Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gray/Green | 20.00% Ca Carbonate 80.00% Non-fibrous (other) | | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 59A 031509799-0036 | Description Homogeneity | SMALL GYM - MASTIC TO OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 Brown | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 Brown | | | None Detected |
| Sample ID 59B 031509799-0037 | Description Homogeneity | SMALL GYM - MASTIC TO OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 Brown | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 Brown | | | None Detected |
| Sample ID 60A 031509799-0038 | Description Homogeneity | SMALL GYM - OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 White | | | None Detected |

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| CustomerID: | LBAP78 |
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| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|---|--|--|---------------------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 60B <i>031509799-0039</i> | Description Homogeneity | BOYS LOCKER ROOM - OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Brown | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Brown | | | None Detected |
| Sample ID 61A <i>031509799-0040</i> | Description Homogeneity | GIRLS LOCKER ROOM - CAULKING TO SINKS/ TOILETS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | White | | | None Detected |
| Sample ID 61B <i>031509799-0041</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - CAULKING TO SINKS/ TOILETS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | White | | | None Detected |
| Sample ID 62A <i>031509799-0042</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 62B <i>031509799-0043</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 63A <i>031509799-0044</i> | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable 4/4/2015 | Tan | 92.00% Cellulose | 8.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018

Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|----------------------------|----------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 63B 031509799-0045 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gold | 80.00% Cellulose 8.00% Synthetic | 12.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 64A 031509799-0046 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Tan | 94.00% Cellulose | 6.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 64B 031509799-0047 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Tan | 97.00% Cellulose | 3.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 65A 031509799-0048 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Red/Black | 40.00% Cellulose 45.00% Synthetic | 15.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 65B 031509799-0049 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Red/Black | 98.00% Synthetic | 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |



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manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|----------------------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 66A 031509799-0050 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Brown/Red | 60.00% Synthetic | 40.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 66B 031509799-0051 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Brown/Red | 98.00% Synthetic | 2.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 67A 031509799-0052 | Description Homogeneity | AUDITORIUM STAGE - BLACK CURTAIN Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Black | 85.00% Synthetic | 15.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 67B 031509799-0053 | Description Homogeneity | AUDITORIUM STAGE - BLACK CURTAIN Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Black | 98.00% Synthetic | 2.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 68A 031509799-0054 | Description Homogeneity | SMALL PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 Black | | | None Detected |
| Sample ID 68B 031509799-0055 | Description Homogeneity | SMALL PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 Black | | | None Detected |



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<http://www.EMSL.com> manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|---|--|---|-------------|---|
| | | Fibrous | Non-Fibrous | |
| Sample ID 69A <i>031509799-0056</i> | Description Homogeneity | LOOP/ BUS TURN AROUND - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | <1% Chrysotile <1% Total |
| Sample ID 69B <i>031509799-0057</i> | Description Homogeneity | LOOP/ BUS TURN AROUND - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 70A <i>031509799-0058</i> | Description Homogeneity | LARGE PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 70B <i>031509799-0059</i> | Description Homogeneity | LARGE PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 71A <i>031509799-0060</i> | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, PINHOLE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 71B <i>031509799-0061</i> | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, PINHOLE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |

Initial Report From 04/05/2015 17:36:16

**EMSL Analytical, Inc.**

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| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--------------------|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 72A 031509799-0062 | Description | CAFETERIA - 2'X4' CEILING TILE, TEXTURED | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 72B 031509799-0063 | Description | CAFETERIA - 2'X4' CEILING TILE, TEXTURED | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |



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EMSL Order: 031509799
CustomerID: LBAP78
CustomerPO: 3001111.00
ProjectID:

Test Report: Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|------|-------|--------------|-------------|----------|
| | | Fibrous | Non-Fibrous | |

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via NYS ELAP Approved Methods. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

| | | | |
|--------------------------|----------|--------------------------|----------|
| Sample Receipt Date:: | 4/2/2015 | Sample Receipt Time: | 6:02 PM |
| Analysis Completed Date: | 4/4/2015 | Analysis Completed Time: | 10:21 PM |

Analyst(s):

Jon Williams PLM NYS 198.1 Friable (9)

Noel Anderson PLM NYS 198.1 Friable (12)

Kamel Alawawda PLM NYS 198.6 NOB (39)

Feng Liang TEM NYS 198.4 NOB (19)

Wioletta Bis TEM NYS 198.4 NOB (20)

Samples reviewed and approved by:

James Hall, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing. All samples examined for the presence of vermiculite when analyzed via NYS 198.1.

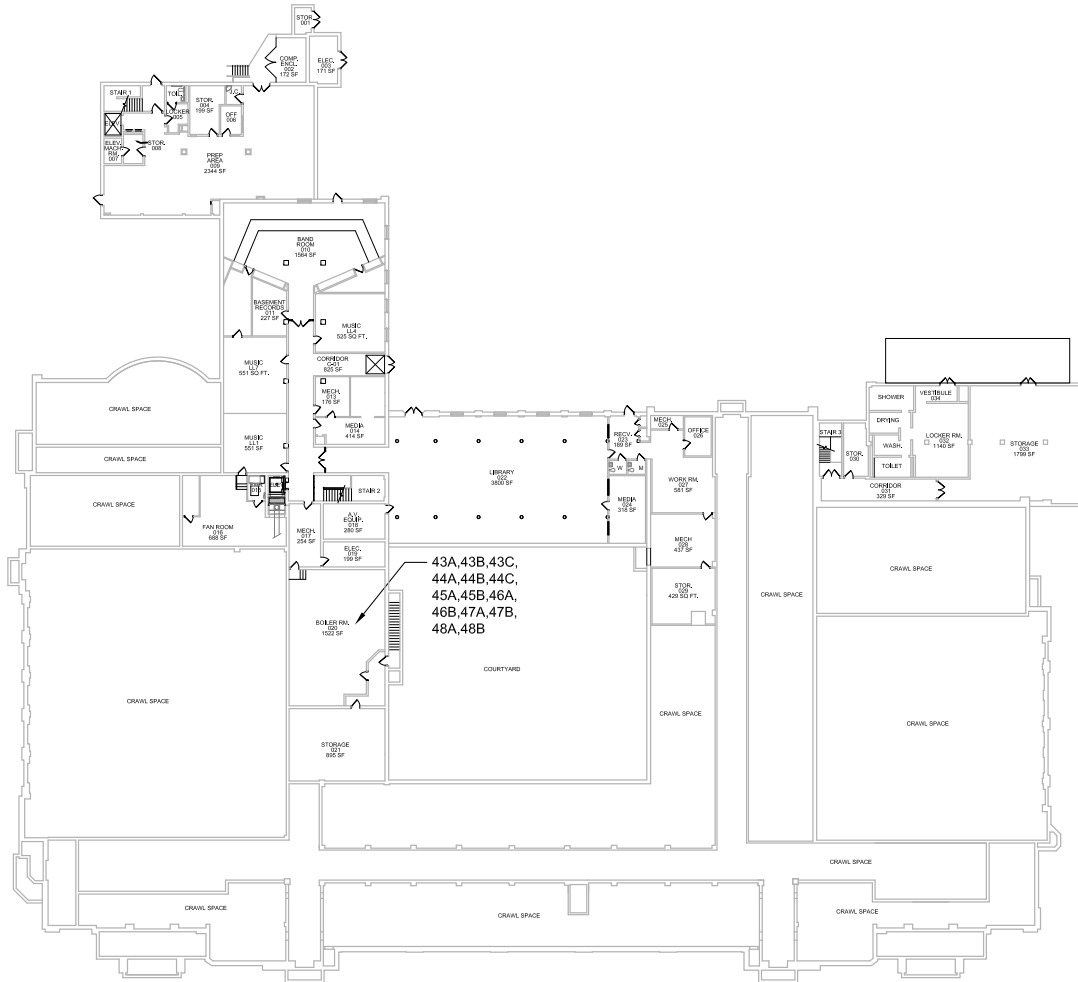
-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. New York, NY NYS ELAP 11506



**APPENDIX C:
ASBESTOS BULK SAMPLE LOCATION DRAWINGS**



43A, 43B, 43C,
 44A, 44B, 44C,
 45A, 45B, 46A,
 46B, 47A, 47B,
 48A, 48B

GROUND FLOOR PLAN
 0' 4' 8' 16'
 PROJECT NORTH

REVISIONS

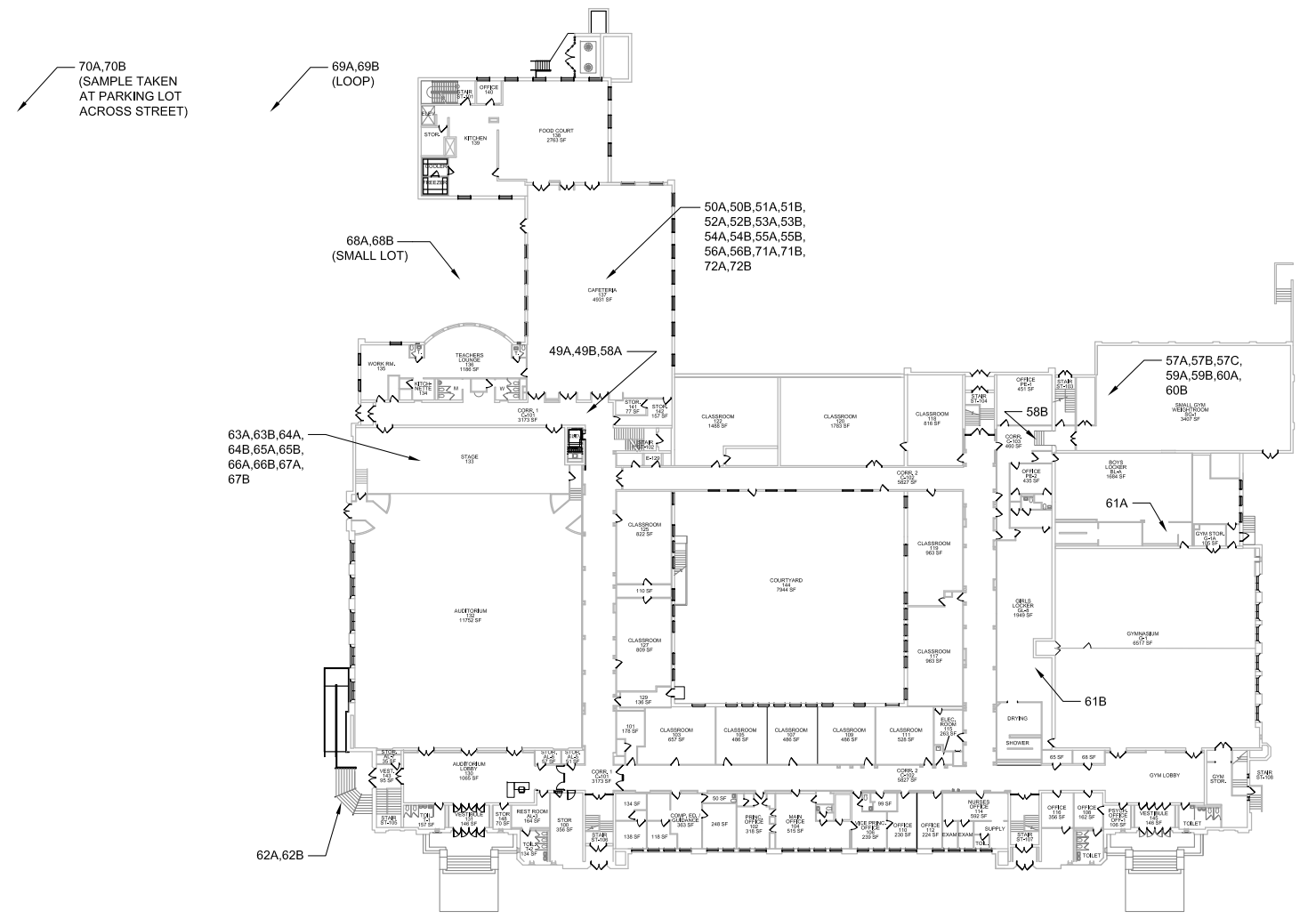
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
 MIDDLE SCHOOL**

DRAWING TITLE

**BULK SAMPLE LOCATIONS
 GROUND FLOOR PLAN**

| | |
|--------------------------|-----------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHESNIN | DATE: 04/10/15 |
| CORRECTED BY: J. HERRZ | DRAWN BY: HERRZ |
| CHECKED BY: G. WENDEL | |
| BSL001 | |
| DRAWING NUMBER 1 OF 3 | |



FIRST FLOOR PLAN
 0" = 1/4" = 1/8" = 1/2" = 1" = 2" = 4" = 8" = 16"
 PROJECT NORTH

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

TWIN TOWERS MIDDLE SCHOOL

DRAWING TITLE

BULK SAMPLE LOCATIONS FIRST FLOOR PLAN

| | |
|--------------------------|-----------------|
| DRAWN BY: J. HENZ | SCALE: AS SHOWN |
| INSPECTED BY: D. CHEW | DATE: 04/10/15 |
| COORDINATE: MIDDLETOWN | DRAWN: HENRY |
| CHECKED BY: G. WENDEL | |
| BSL002 | |
| DRAWING NUMBER 2 OF 2 | |

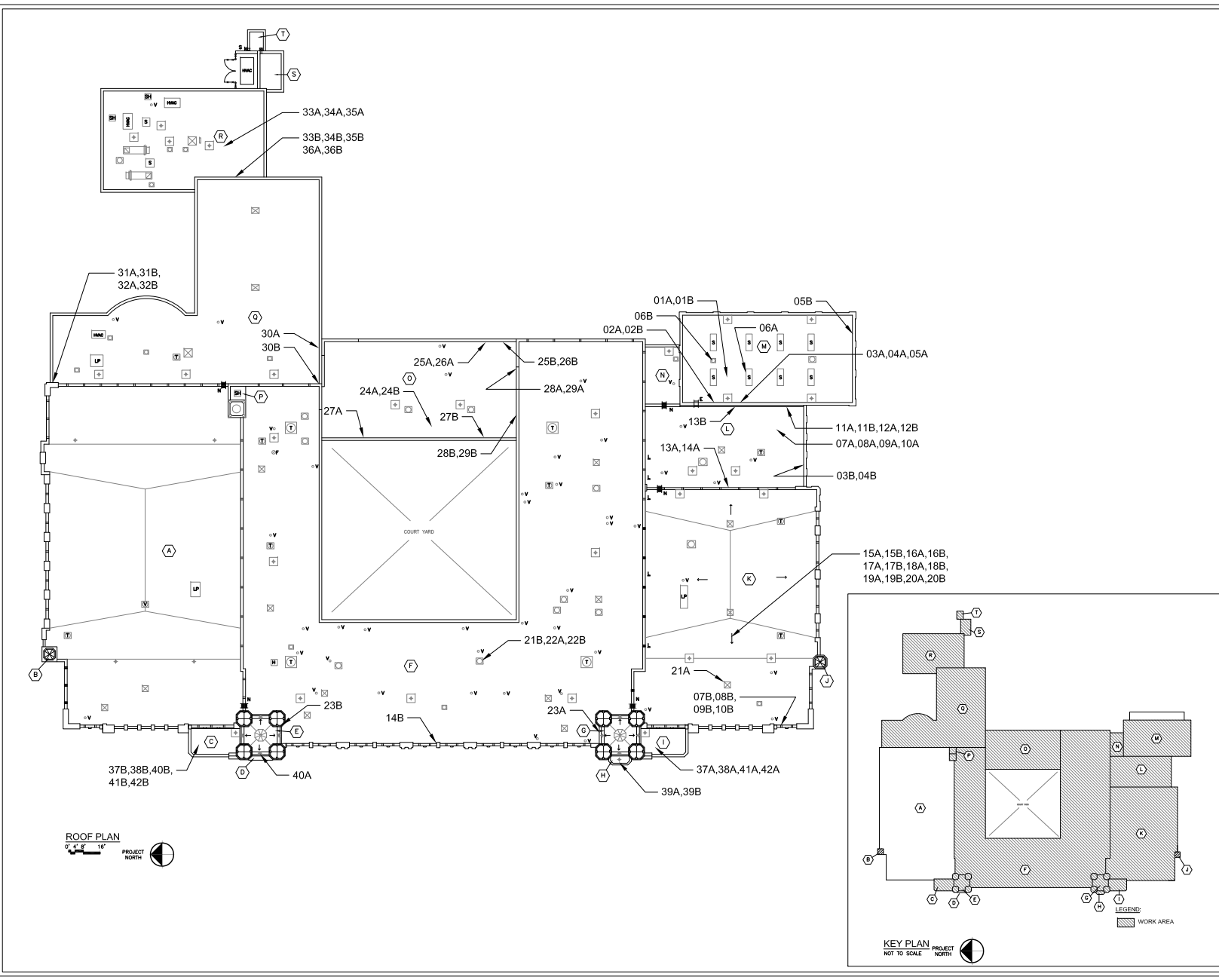
REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

DRAWING TITLE
**BULK SAMPLE LOCATIONS
ROOF PLAN**

| | |
|--------------------------|-----------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHEN | DATE: 04/10/15 |
| CORPORATE REPRESENTATIVE | DRAWN BY: HERRZ |
| CHECKED BY: G. WENDEL | |
| BSL003 | |
| DRAWING NUMBER 3 OF 3 | |





**APPENDIX D:
ASBESTOS CONTAINING MATERIALS LOCATION
DRAWINGS**

REVISIONS

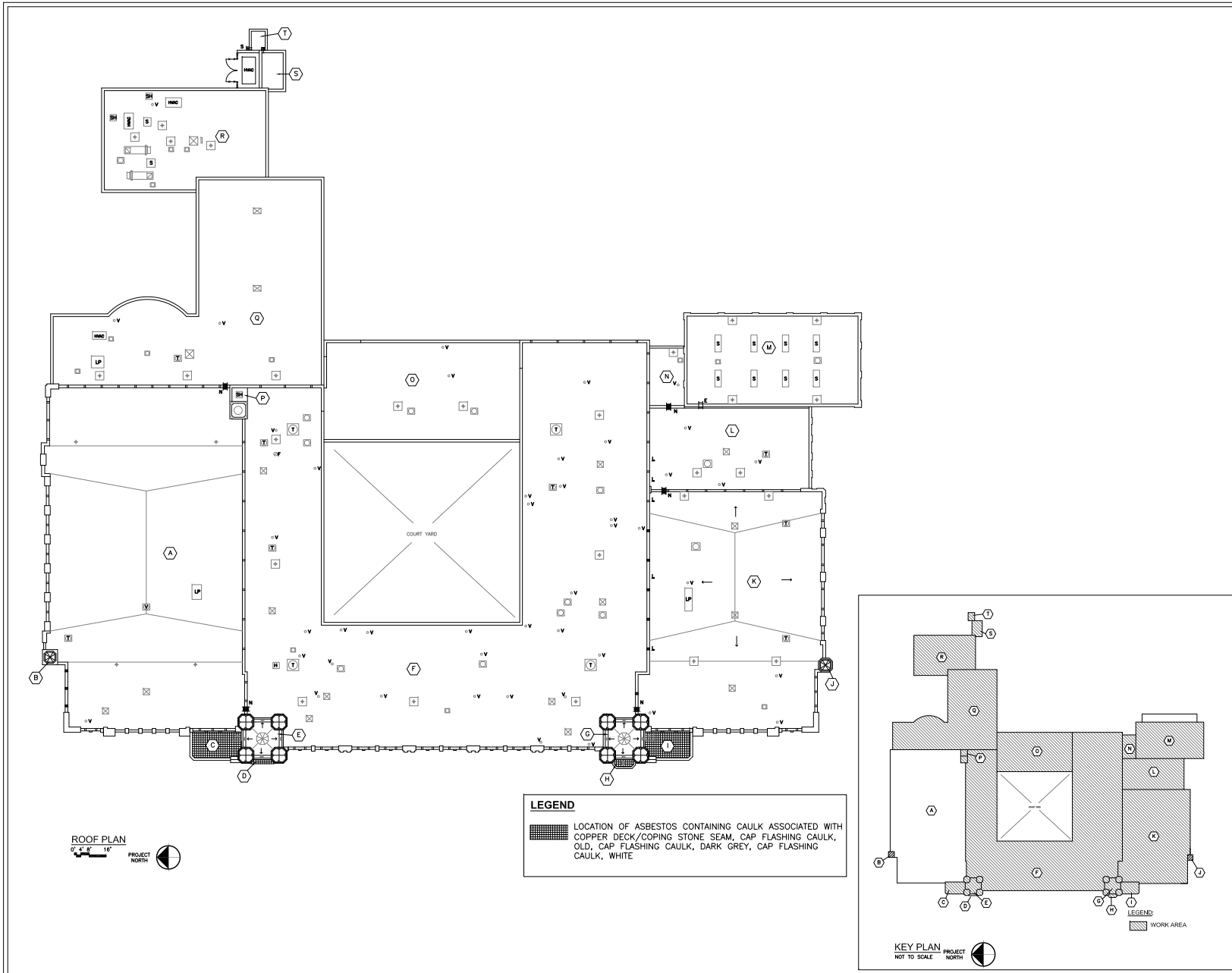
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

**DRAWING TITLE
ASBESTOS CONTAINING
MATERIALS - ROOF PLAN**

| | |
|---------------------------|-----------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHERRIN | DATE: 04/10/15 |
| CHECKED BY: M. SHERIDAN | DRAWN: J. HERRZ |
| CHECKED BY: G. WENDELBAUM | |

ACM002
DRAWING NUMBER
2 OF 2





**APPENDIX E:
ADELAIDE LEAD XRF INSPECTION REPORT**

**LIMITED INSPECTION
FOR
LEAD BASED PAINT**

PERFORMED AT:

**TWIN TOWERS MIDDLE SCHOOL
MIDDLETOWN, NEW YORK**

ADELAIDE PROJECT#: MDDL-BA01684-LS

PREPARED FOR:

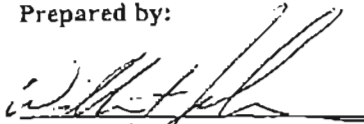
**MIDDLETOWN ENLARGED SCHOOL DISTRICT
223 WISNER AVENUE
MIDDLETOWN, NEW YORK 10940-3240**

PREPARED BY:

**ADELAIDE ASSOCIATES, LLC
111 - 115 COURT STREET
BINGHAMTON, NEW YORK 13901**

***DATED*
JANUARY 24TH, 2001**

Prepared by:



William T. Johnson
Senior Construction Inspector
EPA Inspector # NY-06-082004-367

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| 2.0 | Applicable Standards/Guidelines | 1 |
| 3.0 | Results | 1 |
| | Appendix A XRF Lead Paint Report Form | 4 |

1.0 EXECUTIVE SUMMARY

Adelaide Associates, LLC conducted a limited Lead-Based Paint Survey on October 26th, 2001 at the Twin Towers Middle School located at Middletown, New York. The survey was requested by Thomas Scott. Adelaide Associates took one thousand seven hundred and sixtysix (1766) assays of various painted surfaces utilizing the XRF analyzer to determine the presence of lead-based paint.

2.0 APPLICABLE STANDARDS/GUIDELINES:

The U.S. Department of Housing and Urban Development (HUD) defines the action level for lead-based paint as a lead content equal to or greater than 1.0 milligrams of lead per square centimeter of painted surface ($\geq 1.0 \text{ mg Pb/cm}^2$) when measured with an XRF analyzer, or 0.5 percent by weight when chemically tested. This definition is described in the HUD "Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990." The State of New York's definition of the action level for lead-based paint is consistent with the level established by HUD.

3.0 RESULTS:

Adelaide took 1766 individual assays of various paint surfaces and components of which 242 was positive for the presence of lead as per the HUD Guidelines referenced above. The remaining 1524 assays were negative for the presence of lead. Those items with lead-based paint include the following:

Brown Vinyl Baseboard in Rm: Music Office, Music Sto., LL-3,
Music Directors, Music Room, LL-4, Copy Area Office,
Cafeteria, AS-4, Auditorium, 122, 122 Closet, 120, 118,
PEM #2, PEF #1, 119, 117, 114, 129, 125, 103, 112, Guidance
Conference Room, Guidance Offices, 219, 208, 210, 215, 217,
226, 228, 232, 234, 236, 238,

Tan Vinyl Baseboard in Rm: Library, A/V Room, Copy Area, AS-3,
108, 110, 302, 304, 317, 310, 319, 312, 314, 321, 316, 318, 320,
322, 324,

3.0 RESULTS CONT:

Yellow Painted Wood Window Frames in Rm: LL-3, AS-3 (Mens),
100, 103, 105, 107, 109, Guidance Offices, 218, 215, 217, 230,
300, 305, 307, 315, 310, 319, 316, 327, 329,

Yellow Painted Metal Window Frames in Rm: LL-3,

Brown Painted Wood Window Frames in Rm: Pem #4, PEF #1, 117,
AL 3, 108A, Speech Office, Boys Room, 110, 104,

Brown Painted Metal Window Frames in Rm: 108A,

Purple Painted Wood Window Frame in Rm: 228,

Grey Painted Wood Window Frames in Rm: Boiler Room

Blue Painted Wood Window Frame: LL-4, 114(Bathroom), 148,
Office by Gym, 223, 225, 204, 204, 205, 212, 216, 226, 202,
304, 306, 308, 317, 325,

Green Painted Wood Window Frames in Rm: 208, 210, 214, 200

White Painted Wood Window Frame: 150, 111, 112, Guidance Conf.
Rm., Guidance Offices, 203, 209, Hallways and Stairways, 309,

White Painted Wood Window Panel in Rm: Auditorium,

Pink Painted Wood Window Frame in Rm: AS-3 (Women)

Green 6"x12" Ceramic Tile: LL-3, All Hallways, All Stairways,

Grey Ceramic Tile in Rm: Mens Room, Women Room,
114(Bathroom),

Green 4"x4" Ceramic Tile in Rm: Hall #2 (girls room), Hall #2 (Boys)

White Ceramic Tile in Rm: PEM #4 (Shower),

Orange Painted Lockers in Rm: PEM #4,

3.0 RESULTS CONT:

Green Painted Fan in Fan Room

Green Painted Duct Work in Rm: Fan Room

Grey Painted Metal Stair Components in Rm: Fan Room

Grey Painted Metal Elevator Door and Frame

Please reference Appendix A for the Lead Paint Report Form which shows locations and details for the individual assays.

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1 | | | Calibration | | | | 2.00 | Positive |
| 2 | | | Calibration | | | | 1.90 | Positive |
| 3 | | | Calibration | | | | 1.90 | Positive |
| 4 | LL-7 | 1 | Wall A | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 5 | LL-7 | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 6 | LL-7 | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 7 | LL-7 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.20 | Negative |
| 8 | LL-7 | 1 | Wall C | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 9 | LL-7 | 1 | Wall D | Yellow | Intact | Cinderblock | 0.30 | Negative |
| 10 | LL-7 | 1 | Steps | Gray | Intact | Concrete | 0.40 | Negative |
| 11 | LL-7 | 1 | Railing | Gray | Intact | Metal | 0.30 | Negative |
| 12 | LL-7 | 1 | Ceiling | Yellow | Intact | Concrete | 0.00 | Negative |
| 13 | LL-7 | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 14 | Boiler Room | 1 | Wall A | White | Intact | Concrete | 0.20 | Negative |
| 15 | Boiler Room | | Wall A Door | Gray | Intact | Metal | 0.10 | Negative |
| 16 | Boiler Room | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 17 | Boiler Room | 1 | Wall B | White | Intact | Concrete | 0.10 | Negative |
| 18 | Boiler Room | 1 | Wall B | White | Intact | Wood | 0.20 | Negative |
| 19 | Boiler Room | 1 | Wall B Window | Yellow | Intact | Metal | 0.00 | Negative |



LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 20 | Boiler Room | 1 | Wall B Window Frame | Gray | Intact | Wood | >9.9 | Positive |
| 21 | Boiler Room | 1 | Wall B Door | Green | Intact | Metal | -0.10 | Negative |
| 22 | Boiler Room | 1 | Wall B Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 23 | Boiler Room | 1 | Wall C | White | Intact | Concrete | 0.10 | Negative |
| 24 | Boiler Room | 1 | Wall D | White | Intact | Concrete | 0.10 | Negative |
| 25 | Boiler Room | 1 | Boiler | Gray | Intact | Metal | 0.00 | Negative |
| 26 | Boiler Room | 1 | Burner | Blue | Intact | Metal | 0.30 | Negative |
| 27 | Boiler Room | 1 | Expansion Tank | Red | Intact | Metal | -0.10 | Negative |
| 28 | Boiler Room | 1 | Column | White | Intact | Concrete | 0.20 | Negative |
| 29 | Boiler Room | 1 | Steps | Red | Intact | Concrete | -0.10 | Negative |
| 30 | Boiler Room | 1 | Railing | Red | Intact | Metal | 0.10 | Negative |
| 31 | Boiler Room | 1 | Ceiling | White | Intact | Concrete | 0.10 | Negative |
| 32 | Boiler Room | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 33 | LL-1 | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 34 | LL-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 35 | LL-1 | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.40 | Negative |
| 36 | LL-1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 0.30 | Negative |
| 37 | LL-1 | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 38 | LL-1 | 1 | Wall B Soffit Wall | Blue | Intact | Sheetrock | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 39 | LL-1 | 1 | Wall B Door | Blue | Intact | Metal | 0.00 | Negative |
| 40 | LL-1 | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 41 | LL-1 | 1 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 42 | LL-1 | 1 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 43 | LL-1 | 1 | Floor | Brown | Intact | Concrete | -0.10 | Negative |
| 44 | Music Office | 1 | Wall A | Yellow | Intact | Sheetrock | -0.10 | Negative |
| 45 | Music Office | 1 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 46 | Music Office | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 47 | Music Office | 1 | Wall A Baseboard | Brown | Intact | vinyl | 4.20 | Positive |
| 48 | Music Office | 1 | Wall B | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 49 | Music Office | 1 | Wall C | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 50 | Music Office | 1 | Wall D | Yellow | Intact | Sheetrock | -0.20 | Negative |
| 51 | Music Office | 1 | Floor | Brown | Intact | Concrete | 0.10 | Negative |
| 52 | Music Storage | 1 | Wall A | Yellow | Intact | Sheetrock | -0.10 | Negative |
| 53 | Music Storage | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 54 | Music Storage | 1 | Wall A Door Frame | Stained | Intact | Wood | 0.10 | Negative |
| 55 | Music Storage | 1 | Wall A Baseboard | Brown | Intact | vinyl | 3.10 | Positive |
| 56 | Music Storage | 1 | Wall B | Yellow | Intact | Sheetrock | 0.00 | Negative |
| 57 | Music Storage | 1 | Wall C | Yellow | Intact | Sheetrock | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 58 | Music Storage | 1 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 59 | Music Storage | 1 | Wall C Door Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 60 | Music Storage | 1 | Wall D | Yellow | Intact | Sheetrock | 0.00 | Negative |
| 61 | Music Storage | 1 | Floor | Brown | Intact | Concrete | 0.00 | Negative |
| 62 | LL-3 | 1 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 63 | LL-3 | 1 | Wall A Door | Gray | Intact | Metal | -0.10 | Negative |
| 64 | LL-3 | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 65 | LL-3 | 1 | Wall A Baseboard | Brown | Intact | vinyl | 3.20 | Positive |
| 66 | LL-3 | 1 | Wall B | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 67 | LL-3 | 1 | Wall B | Green | Intact | Ceramic | 8.50 | Positive |
| 68 | LL-3 | 1 | Wall B Lockers | Gray | Intact | Metal | 0.00 | Negative |
| 69 | LL-3 | 1 | Wall C | Yellow | Intact | Plaster | -0.20 | Negative |
| 70 | LL-3 | 1 | Wall C Door | Yellow | Intact | Metal | 0.00 | Negative |
| 71 | LL-3 | 1 | Wall C Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 72 | LL-3 | 1 | Wall C Window | Yellow | Intact | Metal | 0.50 | Negative |
| 73 | LL-3 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 6.60 | Positive |
| 74 | LL-3 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 75 | LL-3 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 76 | LL-3 | 1 | Wall D Window | Yellow | Intact | Metal | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|-----------------|------------------------|----------------------------|
| 77 | LL-3 | 1 | Wall D Window Frame | Yellow | Intact | Metal | 4.80 | Positive |
| 78 | LL-3 | 1 | Ceiling | Yellow | Intact | Sheetrock | 0.30 | Negative |
| 79 | LL-3 | 1 | Floor | Brown | Intact | Carpet/Concrete | 0.40 | Negative |
| 80 | Music Directors | 1 | Wall A | Blue | Intact | Sheetrock | 0.10 | Negative |
| 81 | Music Directors | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 82 | Music Directors | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 83 | Music Directors | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 84 | Music Directors | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 85 | Music Directors | 1 | Wall B Window | Yellow | Intact | Metal | -0.10 | Negative |
| 86 | Music Directors | 1 | Wall B Window Frame | Blue | Intact | Wood | -0.20 | Negative |
| 87 | Music Directors | 1 | Wall B Radialor | Tan | Intact | Metal | 0.30 | Negative |
| 88 | Music Directors | 1 | Wall C | Blue | Intact | Sheetrock | 0.10 | Negative |
| 89 | Music Directors | 1 | Wall D | Blue | Intact | Sheetrock | 0.10 | Negative |
| 90 | Music Room | 1 | Wall A | Blue | Intact | Sheetrock | 0.20 | Negative |
| 91 | Music Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 92 | Music Room | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.00 | Negative |
| 93 | Music Room | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 94 | Music Room | 1 | Wall B | Blue | Intact | Sheetrock | -0.10 | Negative |
| 95 | Music Room | 1 | Wall C | Blue | Intact | Sheetrock | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|-----------------|------------------------|----------------------------|
| 96 | Music Room | 1 | Wall D | Blue | Intact | Sheetrock | 0.30 | Negative |
| 97 | Music Room | 1 | Floor | Brown | Intact | Carpet/Concrete | 0.20 | Negative |
| 98 | Fan Room | 1 | Wall A | Green | Intact | Concrete | 0.00 | Negative |
| 99 | Fan Room | 1 | Wall A Door | Brown | Intact | Metal | 0.30 | Negative |
| 100 | Fan Room | 1 | Wall A Door Frame | Green | Intact | Metal | 0.60 | Negative |
| 101 | Fan Room | 1 | Wall A Steps | Gray | Intact | Concrete | -0.10 | Negative |
| 102 | Fan Room | 1 | Wall A Railing | Gray | Intact | Metal | 1.90 | Positive |
| 103 | Fan Room | 1 | Wall B | Green | Intact | Concrete | 0.20 | Negative |
| 104 | Fan Room | 1 | Wall C | Green | Intact | Concrete | 0.20 | Negative |
| 105 | Fan Room | 1 | Wall D | Green | Intact | Concrete | 0.10 | Negative |
| 106 | Fan Room | 1 | Ductwork | Green | Intact | Metal | 4.60 | Positive |
| 107 | LL-4 | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 108 | LL-4 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 109 | LL-4 | 1 | Wall A Door Frame | White | Intact | Metal | 0.00 | Negative |
| 110 | LL-4 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 111 | LL-4 | 1 | Wall B | Blue | Intact | Sheetrock | 0.20 | Negative |
| 112 | LL-4 | 1 | Wall B Door | Stained | Intact | Wood | 0.10 | Negative |
| 113 | LL-4 | 1 | Wall B Door Frame | White | Intact | Metal | 0.10 | Negative |
| 114 | LL-4 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------|-------------|---|--------|-----------|----------------|------------------------|----------------------------|
| 115 | LL-4 | 1 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 116 | LL-4 | 1 | Wall C Window Frame | Blue | Intact | Wood | 2.30 | Positive |
| 117 | LL-4 | 1 | Wall C Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 118 | LL-4 | 1 | Wall D | Blue | Intact | Plaster | -0.10 | Negative |
| 119 | Storage | 1 | Wall A Door | Silver | Intact | Metal | 0.40 | Negative |
| 120 | Storage | 1 | Wall A Door Frame | Green | Intact | Metal | 0.60 | Negative |
| 121 | Storage | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 122 | Boiler Storage | 1 | Wall A | Green | Intact | Concrete | 0.20 | Negative |
| 123 | Boiler Storage | 1 | Wall A Door | Green | Intact | Metal | -0.10 | Negative |
| 124 | Boiler Storage | 1 | Wall A Door Frame | Green | Intact | Metal | 0.10 | Negative |
| 125 | Boiler Storage | 1 | Wall B | Green | Intact | Concrete | 0.10 | Negative |
| 126 | Boiler Storage | 1 | Wall B Railing | Black | Intact | Metal | -0.10 | Negative |
| 127 | Boiler Storage | 1 | Wall C | Green | Intact | Concrete | 0.30 | Negative |
| 128 | Boiler Storage | 1 | Wall D | Green | Intact | Concrete | 0.10 | Negative |
| 129 | Library | 1 | Wall A | White | Intact | Sheetrock | 0.00 | Negative |
| 130 | Library | 1 | Wall A Door | Tan | Intact | Metal | -0.30 | Negative |
| 131 | Library | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 132 | Library | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 2.80 | Positive |
| 133 | Library | 1 | Wall B | White | Intact | Sheetrock | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|-----------------|-------------------------------------|----------------------------|
| 134 | Library | 1 | Wall B Door | Tan | Intact | Metal | 0.20 | Negative |
| 135 | Library | 1 | Wall B Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 136 | Library | 1 | Wall B Window | Yellow | Intact | Metal | -0.10 | Negative |
| 137 | Library | 1 | Wall B Window Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 138 | Library | 1 | Wall C | White | Intact | Sheetrock | -0.10 | Negative |
| 139 | Library | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 140 | Library | 1 | Wall C Window Frame | White | Intact | Metal | 0.10 | Negative |
| 141 | Library | 1 | Wall D | White | Intact | Sheetrock | 0.10 | Negative |
| 142 | Library | 1 | Ceiling | White | Intact | Sheetrock | 0.10 | Negative |
| 143 | Library | 1 | Soffit | White | Intact | Sheetrock | 0.20 | Negative |
| 144 | Library | 1 | Column | White | Intact | Metal | 0.40 | Negative |
| 145 | Library | 1 | Floor | Green | Intact | Carpet/Concrete | -0.20 | Negative |
| 146 | Library | 1 | Book Shelves | Stained | Intact | Wood | -0.10 | Negative |
| 147 | A/V Room | 1 | Wall A | White | Intact | Sheetrock | 0.40 | Negative |
| 148 | A/V Room | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 149 | A/V Room | 1 | Wall A Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 150 | A/V Room | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 4.10 | Positive |
| 151 | A/V Room | 1 | Wall A Window Frame | Tan | Intact | Metal | 0.20 | Negative |
| 152 | A/V Room | 1 | Wall B | White | Intact | Sheetrock | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|-----------------|------------------------|----------------------------|
| 153 | A/V Room | 1 | Wall C | White | Intact | Sheetrock | -0.10 | Negative |
| 154 | A/V Room | 1 | Wall D | White | Intact | Sheetrock | 0.30 | Negative |
| 155 | A/V Room | 1 | Column | White | Intact | Sheetrock | 0.10 | Negative |
| 156 | A/V Room | 1 | Floor | Green | Intact | Carpet/Concrete | 0.10 | Negative |
| 157 | Copy Area | 1 | Wall A | White | Intact | Sheetrock | -0.10 | Negative |
| 158 | Copy Area | 1 | Wall A Door | Tan | Intact | Wood | 0.30 | Negative |
| 159 | Copy Area | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 160 | Copy Area | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 2.90 | Positive |
| 161 | Copy Area | 1 | Wall B | White | Intact | Sheetrock | -0.10 | Negative |
| 162 | Copy Area | 1 | Wall B | White | Intact | Sheetrock | 0.10 | Negative |
| 163 | Copy Area | 1 | Wall B Door | Tan | Intact | Metal | 0.00 | Negative |
| 164 | Copy Area | 1 | Wall B Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 165 | Copy Area | 1 | Wall C | White | Intact | Sheetrock | 0.20 | Negative |
| 166 | Copy Area | 1 | Wall C | White | Intact | Concrete | 0.30 | Negative |
| 167 | Copy Area | 1 | Wall D | White | Intact | Sheetrock | -0.10 | Negative |
| 168 | Copy Area Office | 1 | Wall A | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 169 | Copy Area Office | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 170 | Copy Area Office | 1 | Wall A Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 171 | Copy Area Office | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF-Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 172 | Copy Area Office | 1 | Wall B | Yellow | Intact | Sheetrock | 0.20 | Negative |
| 173 | Copy Area Office | 1 | Wall B Shelves | Stained | Intact | Wood | -0.10 | Negative |
| 174 | Copy Area Office | 1 | Wall C | Yellow | Intact | Sheetrock | 0.30 | Negative |
| 175 | Copy Area Office | 1 | Wall D | Yellow | Intact | Sheetrock | -0.20 | Negative |
| 176 | Womens Room | 1 | Wall A | White | Intact | Sheetrock | 0.10 | Negative |
| 177 | Womens Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 178 | Womens Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 179 | Womens Room | 1 | Wall B | White | Intact | Sheetrock | 0.10 | Negative |
| 180 | Womens Room | 1 | Wall B | Gray | Intact | Ceramic | >9.9 | Positive |
| 181 | Womens Room | 1 | Wall C | White | Intact | Sheetrock | 0.30 | Negative |
| 182 | Womens Room | 1 | Wall C | Gray | Intact | Ceramic | >9.9 | Positive |
| 183 | Womens Room | | Wall D | White | Intact | Sheetrock | 0.10 | Negative |
| 184 | Womens Room | 1 | Wall D | Gray | Intact | Ceramic | >9.9 | Positive |
| 185 | Womens Room | | Floor | Green | Intact | Ceramic | 0.10 | Negative |
| 186 | Mens Room | 1 | Wall A | White | Intact | Sheetrock | 0.30 | Negative |
| 187 | Mens Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 188 | Mens Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 189 | Mens Room | 1 | Wall B | White | Intact | Sheetrock | 0.20 | Negative |
| 190 | Mens Room | 1 | Wall B | Gray | Intact | Ceramic | >9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|-------------------------------------|----------------------------|
| 191 | Mens Room | 1 | Wall C | White | Intact | Sheetrock | 0.10 | Negative |
| 192 | Mens Room | 1 | Wall C | Gray | Intact | Ceramic | >9.9 | Positive |
| 193 | Mens Room | 1 | Wall D | White | Intact | Sheetrock | 0.30 | Negative |
| 194 | Mens Room | 1 | Wall D | Gray | Intact | Ceramic | >9.9 | Positive |
| 195 | Mens Room | 1 | Floor | Green | Intact | Ceramic | 0.20 | Negative |
| 196 | Hall #1 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 197 | Hall #1 | 1 | Wall A | Green | Intact | Ceramic | >9.9 | Positive |
| 198 | Hall #1 | 1 | Wall B | Tan | Intact | Plaster | 0.10 | Negative |
| 199 | Hall #1 | 1 | Wall B | Green | Intact | Ceramic | >9.9 | Positive |
| 200 | Hall #1 | 1 | Wall B Elevator Door | Gray | Intact | Metal | 1.70 | Positive |
| 201 | Hall #1 | 1 | Wall B Elevator Door Frame | Gray | Intact | Metal | 2.60 | Positive |
| 202 | Hall #1 | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 203 | Hall #1 | 1 | Wall C | Green | Intact | Ceramic | >9.9 | Positive |
| 204 | Hall #1 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 205 | Hall #1 | 1 | Wall D | Green | Intact | Ceramic | >9.9 | Positive |
| 206 | Hall #1 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 207 | Hall #1 | 1 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 208 | Hall #1 | 1 | Wall D Door | Tan | Intact | Metal | -0.10 | Negative |
| 209 | Hall #1 | 1 | Wall D Door Frame | Tan | Intact | Metal | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 210 | Stair #1 | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 211 | Stair #1 | 1 | Wall A | Green | Intact | Ceramic | >9.9 | Positive |
| 212 | Stair #1 | 1 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 213 | Stair #1 | 1 | Wall B | Green | Intact | Ceramic | >9.9 | Positive |
| 214 | Stair #1 | 1 | Wall C | White | Intact | Plaster | -0.10 | Negative |
| 215 | Stair #1 | 1 | Wall C | Green | Intact | Ceramic | >9.9 | Positive |
| 216 | Stair #1 | 1 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 217 | Stair #1 | 1 | Wall C Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 218 | Stair #1 | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 219 | Stair #1 | 1 | Wall D | Green | Intact | Ceramic | >9.9 | Positive |
| 220 | Stair #1 | 1 | Wall D Railing | Gray | Intact | Metal | 0.00 | Negative |
| 221 | Stair #1 | 1 | Stair Riser | Gray | Intact | Metal | -0.10 | Negative |
| 222 | Stair #1 | 1 | Stair Stringer | Gray | Intact | Metal | 3.10 | Positive |
| 223 | Stair #1 | 1 | Stair Railing | Gray | Intact | Metal | 0.60 | Negative |
| 224 | Stair #1 | 1 | Stair Baluster | Gray | Intact | Metal | 0.40 | Negative |
| 225 | Cafeteria | 1 | Wall A | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 226 | Cafeteria | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 227 | Cafeteria | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 228 | Cafeteria | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.50 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA016B4-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 176B
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|-------------------------------------|----------------------------|
| 229 | Cafeteria | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 230 | Cafeteria | 1 | Wall B Window | Yellow | | Metal | 0.10 | Negative |
| 231 | Cafeteria | 1 | Wall B Window Frame | Brown | | Wood | 0.20 | Negative |
| 232 | Cafeteria | 1 | Wall B Chair Rail | Brown | | Wood | 0.10 | Negative |
| 233 | Cafeteria | 1 | Wall B Radiator | Tan | | Metal | 0.00 | Negative |
| 234 | Cafeteria | 1 | Wall B Door | Yellow | | Metal | 0.10 | Negative |
| 235 | Cafeteria | 1 | Wall B Door Frame | Yellow | | Metal | -0.10 | Negative |
| 236 | Cafeteria | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 237 | Cafeteria | 1 | Wall C | Yellow | | Cinderblock | 0.20 | Negative |
| 238 | Cafeteria | 1 | Wall C Window | Yellow | | Metal | 0.30 | Negative |
| 239 | Cafeteria | 1 | Wall C Window Frame | Brown | Intact | Wood | 0.00 | Negative |
| 240 | Cafeteria | 1 | Wall C Chair Rail | Brown | Intact | Wood | -0.10 | Negative |
| 241 | Cafeteria | 1 | Wall D | Yellow | Intact | Plaster | -0.30 | Negative |
| 242 | Cafeteria | 1 | Wall D Window | Yellow | Intact | Metal | 0.20 | Negative |
| 243 | Cafeteria | 1 | Wall D Window Frame | Brown | Intact | Wood | 0.10 | Negative |
| 244 | Cafeteria | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 245 | Cafeteria | 1 | Column | Yellow | Intact | Concrete | 0.30 | Negative |
| 246 | Cafeteria | 1 | Floor | Gray | Intact | VCT | 0.10 | Negative |
| 247 | C-1 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 248 | C-1 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 249 | C-1 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 250 | C-1 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 251 | C-1 | 1 | Wall B | Tan | Intact | Ceramic | -0.20 | Negative |
| 252 | C-1 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.00 | Negative |
| 253 | C-1 | 1 | Wall B Door | Blue | Intact | Metal | 0.30 | Negative |
| 254 | C-1 | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 255 | C-1 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 256 | C-1 | 1 | Wall C | Tan | Intact | Ceramic | 0.20 | Negative |
| 257 | C-1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 258 | C-1 | 1 | Wall D | Tan | Intact | Ceramic | 0.20 | Negative |
| 259 | C-1 | 1 | Ceiling | Yellow | Intact | Plaster | 0.10 | Negative |
| 260 | C-1 | 1 | Floor | Tan | Intact | Ceramic | -0.10 | Negative |
| 261 | C-1 | 1 | Floor | Gray | Intact | Ceramic | 0.10 | Negative |
| 262 | AS-3 | 1 | Wall A | Beige | Intact | Plaster | -0.10 | Negative |
| 263 | AS-3 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 264 | AS-3 | 1 | Wall A Door Frame | White | Intact | Metal | -0.10 | Negative |
| 265 | AS-3 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 3.60 | Positive |
| 266 | AS-3 | 1 | Wall B | Pink | Intact | Sheetrock | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 267 | AS-3 | 1 | Wall B | Beige | Intact | Sheetrock | -0.10 | Negative |
| 268 | AS-3 | 1 | Wall C | Beige | Intact | Sheetrock | 0.20 | Negative |
| 269 | AS-3 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 270 | AS-3 | 1 | Wall C Window Frame | Beige | Intact | Wood | 0.20 | Negative |
| 271 | AS-3 | 1 | Wall D | Beige | Intact | Sheetrock | -0.10 | Negative |
| 272 | AS-3 | 1 | Wall D Window | Yellow | | Metal | 0.00 | Negative |
| 273 | AS-3 | 1 | Wall D Window Frame | Beige | Intact | Wood | 0.10 | Negative |
| 274 | AS-3 | 1 | Wall D Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 275 | AS-3 Womens' Room | 1 | Wall A | Pink | Intact | Plaster | 0.30 | Negative |
| 276 | AS-3 Womens' Room | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 277 | AS-3 Womens' Room | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.20 | Negative |
| 278 | AS-3 Womens' Room | 1 | Wall B | Pink | Intact | Plaster | 0.10 | Negative |
| 279 | AS-3 Womens' Room | 1 | Wall C | Pink | Intact | Plaster | 0.00 | Negative |
| 280 | AS-3 Womens' Room | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 281 | AS-3 Womens' Room | 1 | Wall C Window Frame | Pink | Intact | Wood | 3.20 | Positive |
| 282 | AS-3 Womens' Room | 1 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 283 | AS-3 Mens' Room | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 284 | AS-3 Mens' Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 285 | AS-3 Mens' Room | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 286 | AS-3 Mens' Room | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 287 | AS-3 Mens' Room | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 288 | AS-3 Mens' Room | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 289 | AS-3 Mens' Rm | 1 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 290 | AS-3 Mens' Room | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 291 | Hall #2 Girls' Room | 1 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 292 | Hall #2 Girls' Room | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 293 | Hall #2 Girls' Room | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 294 | Hall #2 Girls' Room | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 295 | Hall #2 Girls' Room | 1 | Wall C | White | Intact | Wood | -0.10 | Negative |
| 296 | Hall #2 Girls' Room | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 297 | Hall #2 Girls' Room | 1 | Wall C Stall Wall | Green | Intact | Metal | 0.00 | Negative |
| 298 | Hall #2 Girls' Room | 1 | Wall D | White | Intact | Plaster | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 299 | Hall #2 Girls' Room | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 300 | Hall #2 Girls' Room | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 301 | Hall #2 Girls' Room | 1 | Floor | Green | Intact | Terrazzo | -0.20 | Negative |
| 302 | Hall #2 Boys' Room | 1 | Wall A | White | intact | Plaster | 0.10 | Negative |
| 303 | Hall #2 Boys' Room | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 304 | Hall #2 Boys' Room | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 305 | Hall #2 Boys' Room | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 306 | Hall #2 Boys' Room | 1 | Wall C | White | Intact | Wood | -0.10 | Negative |
| 307 | Hall #2 Boys' Room | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 308 | Hall #2 Boys' Room | 1 | Wall C Stall Wall | Green | Intact | Metal | 0.00 | Negative |
| 309 | Hall #2 Boys' Room | 1 | Wall D | White | intact | Plaster | -0.10 | Negative |
| 310 | Hall #2 Boys' Room | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 311 | Hall #2 Boys' Room | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 312 | Hall #2 Boys' Room | 1 | Floor | Green | Intact | Terrazzo | -0.20 | Negative |
| 313 | AS-4 | 1 | Wall A | Tan | Intact | Plaster | 0.00 | Negative |
| 314 | AS-4 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 315 | AS-4 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 316 | AS-4 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.30 | Positive |
| 317 | AS-4 | 1 | Wall B | Tan | Intact | Plaster | 0.10 | Negative |
| 318 | AS-4 | 1 | Wall B Locker | Yellow | Intact | Metal | 0.30 | Negative |
| 319 | AS-4 | 1 | Wall C | Tan | Intact | Plaster | 0.10 | Negative |
| 320 | AS-4 | 1 | Wall D | Tan | Intact | Plaster | 0.10 | Negative |
| 321 | Auditorium | 1 | Wall A | Silver | Intact | Brick | -0.10 | Negative |
| 322 | Auditorium | 1 | Wall A | Tan | Intact | Brick | 0.20 | Negative |
| 323 | Auditorium | 1 | Wall A Door | Tan | Intact | Wood | -0.20 | Negative |
| 324 | Auditorium | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 325 | Auditorium | 1 | Wall A | Tan | Intact | Plaster | 0.00 | Negative |
| 326 | Auditorium | 1 | Wall A Crown Molding | White | Intact | Metal | 0.30 | Negative |
| 327 | Auditorium | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 328 | Auditorium | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.20 | Negative |
| 329 | Auditorium | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 330 | Auditorium | 1 | Wall A Column | White | Intact | Concrete | -0.20 | Negative |



LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 331 | Auditorium | 1 | Wall A Decorative Molding | Pink | Intact | Plaster | 0.00 | Negative |
| 332 | Auditorium | 1 | Wall A Sconce | Pink | Intact | Plaster | 0.10 | Negative |
| 333 | Auditorium | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 334 | Auditorium | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 335 | Auditorium | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 336 | Auditorium | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 337 | Auditorium | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 338 | Auditorium | 1 | Wall B Column | White | Intact | Concrete | 0.10 | Negative |
| 339 | Auditorium | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 340 | Auditorium | 1 | Wall C Decorative Molding | Pink | Intact | Plaster | 0.20 | Negative |
| 341 | Auditorium | 1 | Wall C Window Panel | White | Intact | Wood | 2.80 | Positive |
| 342 | Auditorium | 1 | Wall C Window Frame | White | Intact | Wood | 3.60 | Positive |
| 343 | Auditorium | 1 | Wall C Radiator | White | Intact | Metal | 0.40 | Negative |
| 344 | Auditorium | 1 | Wall C Sconces | Pink | Intact | Plaster | 0.10 | Negative |
| 345 | Auditorium | 1 | Wall C Column | White | Intact | Concrete | -0.10 | Negative |
| 346 | Auditorium | 1 | Wall C Door | Yellow | Intact | Metal | 0.20 | Negative |
| 347 | Auditorium | 1 | Wall C Door Frame | White | Intact | Metal | 0.40 | Negative |
| 348 | Auditorium | 1 | Wall C Radiator | White | Intact | Metal | 0.10 | Negative |
| 349 | Auditorium | 1 | Wall C Stage Column | White | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 350 | Auditorium | 1 | Wall C | Silver | Intact | Brick | 0.10 | Negative |
| 351 | Auditorium | 1 | Wall C Covebase | Brown | Intact | Vinyl | 4.20 | Positive |
| 352 | Auditorium | 1 | Wall D | White | Intact | Brick | 0.10 | Negative |
| 353 | Auditorium | 1 | Wall D Door | Stained | Intact | Wood | -0.20 | Negative |
| 354 | Auditorium | 1 | Wall D Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 355 | Auditorium | 1 | Stage Floor | Stained | Intact | Wood | 0.00 | Negative |
| 356 | Auditorium | 1 | Stage Front | Stained | Intact | Wood | 0.10 | Negative |
| 357 | Auditorium | 1 | Auditorium Chair Back | Green | Intact | Metal | 0.40 | Negative |
| 358 | Auditorium | 1 | Auditorium Chair Bottom | Green | Intact | Metal | 0.10 | Negative |
| 359 | Auditorium | 1 | Auditorium Chair Frame | Green | Intact | Metal | 0.60 | Negative |
| 360 | Auditorium | 1 | Lower Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 361 | Auditorium | 1 | Lower Ceiling | Pink | Intact | Plaster | 0.20 | Negative |
| 362 | Auditorium | 1 | Floor | Brown | Intact | VAT | 0.10 | Negative |
| 363 | Upper Auditorium | 1 | Ceiling | White | Intact | Plaster | 0.70 | Negative |
| 364 | Upper Auditorium | 1 | Ceiling | Pink | Intact | Plaster | 0.10 | Negative |
| 365 | Upper Auditorium | 1 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 366 | Upper Auditorium | 1 | Railing | Black | Intact | Metal | 0.10 | Negative |
| 367 | Room 122 | 1 | Wall A | Green | Intact | Plaster | 0.10 | Negative |
| 368 | Room 122 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 369 | Room 122 | 1 | Wall A Door Frame | Green | Intact | Metal | 0.40 | Negative |
| 370 | Room 122 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 371 | Room 122 | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 372 | Room 122 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 373 | Room 122 | 1 | Wall C Door | Green | Intact | Plaster | 0.00 | Negative |
| 374 | Room 122 | 1 | Wall C Cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 375 | Room 122 | 1 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 376 | Room 122 | 1 | Wall C Window Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 377 | Room 122 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 378 | Room 122 | 1 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 379 | Room 122 Closet | 1 | Wall A | Green | Intact | Plaster | -0.10 | Negative |
| 380 | Room 122 Closet | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 381 | Room 122 Closet | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 382 | Rm 122 Closet | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.40 | Positive |
| 383 | Room 122 Closet | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 384 | Room 122 Closet | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 385 | Room 122 Closet | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 386 | Room 122 Closet | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 387 | Room 120 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 388 | Room 120 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 389 | Room 120 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 390 | Room 120 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 391 | Room 120 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 392 | Room 120 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 393 | Room 120 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 394 | Room 120 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 395 | Room 120 | 1 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 396 | Room 120 | 1 | Wall C Rail | Tan | Intact | Metal | 0.40 | Negative |
| 397 | Room 120 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 398 | Room 120 | 1 | Wall D Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 399 | Room 120 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 400 | Room 118 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 401 | Room 118 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 402 | Room 118 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 403 | Room 118 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 404 | Room 118 | 1 | Wall B | Yellow | Intact | Plaster | -0.20 | Negative |
| 405 | Room 118 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 406 | Room 118 | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 407 | Room 118 | 1 | Wall C Door Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 408 | Room 118 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 409 | Room 118 | 1 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |
| 410 | Room 118 | 1 | Wall D Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 411 | Room 118 | 1 | Wall D Radiator | Green | Intact | Metal | 0.10 | Negative |
| 412 | Room 118 | 1 | Floor | Blue | Intact | Wood | 0.00 | Negative |
| 413 | PE-1 | 1 | Wall A | Purple | Intact | Plaster | 0.10 | Negative |
| 414 | PE-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 415 | PE-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 416 | PE-1 | 1 | Wall A Baseboard | Purple | Intact | Wood | -0.20 | Negative |
| 417 | PE-1 | 1 | Wall B | Purple | Intact | Plaster | 0.10 | Negative |
| 418 | PE-1 | 1 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 419 | PE-1 | 1 | Wall C | Purple | Intact | Wood | -0.10 | Negative |
| 420 | PE-1 | 1 | Wall D | Purple | Intact | Plaster | 0.00 | Negative |
| 421 | PE-1 | 1 | Floor | Stained | Intact | Wood | -0.10 | Negative |
| 422 | PEM #2 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 423 | PEM #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 424 | PEM #2 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 425 | PEM #2 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 426 | PEM #2 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 427 | PEM #2 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 428 | PEM #2 | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |
| 429 | PEM #2 | 1 | Wall C Door Frame | Brown | Intact | Metal | 0.20 | Negative |
| 430 | PEM #2 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 431 | PEM #2 Bath | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 432 | PEM #2 Bath | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 433 | PEM #2 Bath | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 434 | PEM #2 Bath | 1 | Wall A Baseboard | White | Intact | Ceramic | -0.10 | Negative |
| 435 | PEM #2 Bath | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 436 | PEM #2 Bath | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 437 | PEM #2 Bath | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 438 | PEM #2 Bath | 1 | Floor | Tan | Intact | Ceramic | 0.00 | Negative |
| 439 | PEM #2 Bath | 1 | Ceiling | White | Intact | Plaster | -0.10 | Negative |
| 440 | PEM #4 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 441 | PEM #4 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 442 | PEM #4 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 443 | PEM #4 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 444 | PEM #4 | 1 | Wall B Locker | Orange | Intact | Metal | 2.70 | Positive |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 445 | PEM #4 | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 446 | PEM #4 | 1 | Wall C Locker | Orange | Intact | Metal | 1.90 | Positive |
| 447 | PEM #4 | 1 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 448 | PEM #4 | 1 | Wall C Window Frame | Brown | Intact | Wood | 4.00 | Positive |
| 449 | PEM #4 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 450 | PEM #4 | 1 | Wall D Stall Wall | White | Intact | Metal | 0.10 | Negative |
| 451 | PEM #4 | 1 | Wall D Locker | Orange | Intact | Metal | 2.80 | Positive |
| 452 | PEM #4 Shower | 1 | Wall A | White | Intact | Ceramic | 2.00 | Positive |
| 453 | PEM #4 Shower | 1 | Wall A Door Frame | White | Intact | wood | -0.10 | Negative |
| 454 | PEM #4 Shower | 1 | Wall B | White | Intact | Ceramic | 3.40 | Positive |
| 455 | PEM #4 Shower | 1 | Wall C | White | Intact | Ceramic | 2.60 | Positive |
| 456 | PEM #4 Shower | 1 | Wall D | White | Intact | Ceramic | 3.10 | Positive |
| 457 | PEM #4 Shower | 1 | Ceiling | White | Intact | Ceramic | 3.80 | Positive |
| 458 | PEM #4 Shower | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 459 | PEF-1 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 460 | PEF-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 461 | PEF-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 462 | PEF-1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.40 | Positive |
| 483 | PEF-1 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 464 | PEF-1 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 465 | PEF-1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 466 | PEF-1 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 467 | PEF-1 | 1 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 468 | SG-1 | 1 | Wall A | Yellow | Intact | Cinderblock | -0.20 | Negative |
| 469 | SG-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 470 | SG-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 471 | SG-1 | 1 | Wall A Baseboard | Brown | Intact | Wood | 0.30 | Negative |
| 472 | SG-1 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 473 | SG-1 | 1 | Wall C | Yellow | Intact | Cinderblock | 0.20 | Negative |
| 474 | SG-1 | 1 | Wall D | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 475 | SG-1 | 1 | Floor | Stained | Intact | Wood | 0.20 | Negative |
| 476 | SG-1 Gym Storage | 1 | Wall A | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 477 | SG-1 Gym Storage | 1 | Wall A Door | Green | Intact | Metal | 0.30 | Negative |
| 478 | SG-1 Gym Storage | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 479 | SG-1 Gym Storage | 1 | Wall B | Orange | Intact | Cinderblock | 0.10 | Negative |
| 480 | SG-1 Gym Storage | 1 | Wall C | Yellow | Intact | Cinderblock | 0.00 | Negative |
| 481 | SG-1 Gym Storage | 1 | Wall D | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 482 | Room 119 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 483 | Room 119 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 484 | Room 119 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 485 | Room 119 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.40 | Positive |
| 486 | Room 119 | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 487 | Room 119 | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 488 | Room 119 | 1 | Wall B Door | Stained | Intact | Wood | -0.20 | Negative |
| 489 | Room 119 | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.10 | Negative |
| 490 | Room 119 | 1 | Wall C | Yellow | Intact | Plaster | 0.3 | Negative |
| 491 | Room 119 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 492 | Room 119 | 1 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 493 | Room 119 | 1 | Wall D Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 494 | Room 119 | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 495 | Room 119 | 1 | Floor | Gray | Intact | Concrete | 0.10 | Negative |
| 496 | Room 119 | 1 | Floor | Gray | Intact | Wood | 0.00 | Negative |
| 497 | Room 117 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 498 | Room 117 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 499 | Room 117 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 500 | Room 117 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.80 | Positive |
| 501 | Room 117 | 1 | Wall A Cabinet | Stained | Intact | Wood | -0.20 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 502 | Room 117 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 503 | Room 117 | 1 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 504 | Room 117 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 505 | Room 117 | 1 | Wall C Window Frame | Brown | Intact | Wood | 6.20 | Positive |
| 506 | Room 117 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 507 | Room 117 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 508 | Room 117 | 1 | Floor | Gray | Intact | Wood | 0.10 | Negative |
| 509 | Room 115 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 510 | Room 115 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 511 | Room 115 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 512 | Room 115 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 513 | Room 115 | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 514 | Room 115 | 1 | Wall D | White | Intact | Plaster | -0.10 | Negative |
| 515 | Room 115 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 516 | Room 115 | 1 | Floor | Gray | Intact | Concrete | -0.10 | Negative |
| 517 | Room 116 | 1 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 518 | Room 116 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 519 | Room 116 | 1 | Wall A Door Frame | Beige | Intact | Metal | 0.60 | Negative |
| 520 | Room 116 | 1 | Wall A Baseboard | Gray | Intact | Vinyl | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 521 | Room 116 | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 522 | Room 116 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 523 | Room 116 | 1 | Wall C Window | White | Intact | Metal | 0.10 | Negative |
| 524 | Room 116 | 1 | Wall C Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 525 | Room 116 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 526 | Room 116 | 1 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 527 | Room 114 Nurse's Office | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 528 | Room 114 Nurse's Office | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 529 | Room 114 Nurse's Office | 1 | Wall A Door Frame | Beige | Intact | Metal | 0.50 | Negative |
| 530 | Room 114 Nurse's Office | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.40 | Positive |
| 531 | Room 114 Nurse's Office | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 532 | Room 114 Nurse's Office | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 533 | Room 114 Nurse's Office | 1 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 534 | Room 114 Nurse's Office | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 535 | Room 114 Nurse's Office | 1 | Floor | Tan | Intact | VCT | -0.30 | Negative |

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 536 | Room 114 Exam | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 537 | Room 114 Exam | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 538 | Room 114 Exam | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.30 | Negative |
| 539 | Room 114 Exam | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 540 | Room 114 Exam | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 541 | Room 114 Exam | 1 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 542 | Room 114 Exam | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 543 | Room 114 Exam | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 544 | Room 114 Exam | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 545 | Room 114 Exam | 1 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 546 | Room 114 Bathroom | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 547 | Room 114 Bathroom | 1 | Wall A | Gray | Intact | Ceramic | > 9.9 | Positive |
| 548 | Room 114 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 549 | Room 114 Bathroom | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 550 | Room 114 Bathroom | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 551 | Room 114 Bathroom | 1 | Wall B | Gray | Intact | Ceramic | > 9.9 | Positive |

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 552 | Room 114 Bathroom | 1 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 553 | Room 114 Bathroom | 1 | Wall C | Gray | Intact | Ceramic | > 9.9 | Positive |
| 554 | Room 114 Bathroom | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 555 | Room 114 Bathroom | 1 | Wall C Radiator | Tan | Intact | Metal | 0.40 | Negative |
| 556 | Room 114 Bathroom | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 557 | Room 114 Bathroom | 1 | Wall D | Gray | Intact | Ceramic | > 9.9 | Positive |
| 558 | Room 114 Bathroom | 1 | Wall C Window Frame | Blue | Intact | Wood | 3.40 | Positive |
| 559 | Room 127 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 560 | Room 127 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 561 | Room 127 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 562 | Room 127 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.00 | Positive |
| 563 | Room 127 | 1 | Wall B | White | Intact | Plaster | 0.10 | Negative |
| 564 | Room 127 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 565 | Room 127 | 1 | Wall B Door Frame | White | Intact | Metal | 0.40 | Negative |
| 566 | Room 127 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 567 | Room 127 | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 568 | Room 127 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 569 | Room 127 | 1 | Wall C Window Frame | White | Intact | Wood | 0.30 | Negative |
| 570 | Room 127 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 571 | Room 127 | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 572 | Room 129 | 1 | Wall A | Tan | Intact | Plaster | 0.10 | Negative |
| 573 | Room 129 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 574 | Room 129 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.50 | Negative |
| 575 | Room 129 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 576 | Room 129 | 1 | Wall B | Tan | Intact | Plaster | 0.20 | Negative |
| 577 | Room 129 | 1 | Wall C | Tan | Intact | Metal | 0.10 | Negative |
| 578 | Room 129 | 1 | Wall C Door | Tan | Intact | Metal | -0.10 | Negative |
| 579 | Room 129 | 1 | Wall C Door Frame | Tan | Intact | Plaster | -0.10 | Negative |
| 580 | Room 129 | 1 | Wall D | Tan | Intact | Plaster | 0.00 | Negative |
| 581 | Room 125 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 582 | Room 125 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 583 | Room 125 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 584 | Room 125 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 585 | Room 125 | 1 | Wall B | Yellow | Intact | Plaster | 0.50 | Negative |
| 586 | Room 125 | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 587 | Room 125 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 588 | Room 125 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 589 | Room 125 | 1 | Wall C Window Frame | Yellow | Intact | Wood | -0.10 | Negative |
| 590 | Room 125 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 591 | Room 125 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 592 | Room 125 | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 593 | Room 125 | 1 | Wall D Door Frame | White | Intact | Metal | 0.60 | Negative |
| 594 | Room 125 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 595 | Mens Room, #150 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 596 | Mens Room, #150 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 597 | Mens Room, #150 | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 598 | Mens Room, #150 | 1 | Wall B | White | Intact | Plaster | 0.10 | Negative |
| 599 | Mens Room, #150 | 1 | Wall B | White | Intact | Cinderblock | 0.20 | Negative |
| 600 | Mens Room, #150 | 1 | Wall C | White | Intact | Plaster | 0.20 | Negative |
| 601 | Mens Room, #150 | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 602 | Mens Rm #150 | 1 | Wall C Window Frame | White | Intact | Wood | 2.20 | Positive |
| 603 | Mens Room, #150 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 604 | Mens Room, #150 | 1 | Wall D | White | Intact | Cinderblock | 0.00 | Negative |
| 605 | Mens Room, #150 | 1 | Wall D Stall Wall | Blue | Intact | Metal | 0.20 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 606 | Mens Room, #150 | 1 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 607 | Mens Room, #150 | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 608 | Foyer | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 609 | Foyer | 1 | Wall A Decorative Trim | White | Intact | Plaster | 0.30 | Negative |
| 610 | Foyer | 1 | Wall A Door | Yellow | Intact | Metal | 0.10 | Negative |
| 611 | Foyer | 1 | Wall A Door Frame | White | Intact | Wood | 0.30 | Negative |
| 612 | Foyer | 1 | Wall A Window | White | Intact | Wood | 0.20 | Negative |
| 613 | Foyer | 1 | Wall A Window Frame | White | Intact | Wood | 0.20 | Negative |
| 614 | Foyer | 1 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 615 | Foyer | 1 | Wall B Decorative Trim | White | Intact | Plaster | 0.20 | Negative |
| 616 | Foyer | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |
| 617 | Foyer | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |
| 618 | Foyer | 1 | Wall C Door Frame | Brown | Intact | Metal | 0.00 | Negative |
| 619 | Foyer | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 620 | Foyer | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 621 | Foyer | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 622 | Room 148 | 1 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 623 | Room 148 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 624 | Room 148 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 625 | Room 148 | 1 | Wall A Baseboard | Blue | Intact | Wood | 0.40 | Negative |
| 626 | Room 148 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 627 | Room 148 | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 628 | Room 148 | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 629 | Room 148 | 1 | Wall C Window Frame | Blue | Intact | Wood | 3.10 | Positive |
| 630 | Room 148 | 1 | Wall D | White | Intact | Plaster | 0.00 | Negative |
| 631 | AL 3 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 632 | AL 3 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 633 | AL 3 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 634 | AL 3 | 1 | Wall B | Yellow | Intact | Plaster | -0.10 | Negative |
| 635 | AL 3 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 636 | AL 3 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 637 | AL 3 | 1 | Ceiling | White | Fair | Plaster | 0.10 | Negative |
| 638 | AL 3 Bath | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 639 | AL 3 Bath | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 640 | AL 3 Bath | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 641 | AL 3 Bath | 1 | Wall A Stall Wall | Gray | Intact | Metal | 0.10 | Negative |
| 642 | AL 3 Bath | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 643 | AL 3 Bath | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 644 | AL 3 Bath | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 645 | AL 3 Bath | 1 | Wall C Window Frame | Brown | Intact | Wood | 4.10 | Positive |
| 646 | AL 3 Bath | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 647 | AL 3 Bath | 1 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 648 | AL 3 Bath | 1 | Ceiling | White | Fair | Plaster | 0.20 | Negative |
| 649 | Room 100 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 650 | Room 100 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 651 | Room 100 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 652 | Room 100 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 653 | Room 100 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 654 | Room 100 | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 655 | Room 100 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.10 | Positive |
| 656 | Room 100 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 657 | Room 100 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 658 | Room 100 | 1 | Floor | Brown | Intact | Carpet | -0.20 | Negative |
| 659 | Room 101 | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 660 | Room 101 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 661 | Room 101 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 662 | Room 101 | 1 | Wall A Baseboard | Brown | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 663 | Room 101 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 664 | Room 101 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 665 | Room 101 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 666 | Room 101 | 1 | Floor | Brown | Intact | VAT | -0.20 | Negative |
| 667 | Room 103 | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 668 | Room 103 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 669 | Room 103 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 670 | Room 103 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 671 | Room 103 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 672 | Room 103 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 673 | Room 103 | 1 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 674 | Room 103 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.60 | Positive |
| 675 | Room 103 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 676 | Room 103 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 677 | Room 103 | 1 | Floor | Gray | Intact | VCT | -0.20 | Negative |
| 678 | Rooms 105/107/109 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 679 | Rooms 105/107/109 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 680 | Rooms 105/107/109 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 681 | Rooms 105/107/109 | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 682 | Rooms 105/107/109 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 683 | Rooms 105/107/109 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 684 | Rooms 105/107/109 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 685 | Rooms 105/107/109 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 686 | Rooms 105/107/109 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 687 | Rooms 105/107/109 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 688 | Rooms 105/107/109 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 689 | Room 111 | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 690 | Room 111 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 691 | Room 111 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 692 | Room 111 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.90 | Positive |
| 693 | Room 111 | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 694 | Room 111 | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |
| 695 | Room 111 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 696 | Room 111 | 1 | Wall C Window Frame | White | Intact | Wood | 1.90 | Positive |
| 697 | Room 111 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 698 | Room 111 | 1 | Wall D | White | Intact | Plaster | 0.10 | Negative |
| 699 | Room 111 | 1 | Floor | Brown | Intact | Carpet | 0.20 | Negative |
| 700 | Room 108 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 701 | Room 108 | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 702 | Room 108 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 703 | Room 108 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 704 | Room 108 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 705 | Room 108 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 706 | Room 108 | 1 | Ceiling | Yellow | Intact | Plaster | 0.20 | Negative |
| 707 | Room 108 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 708 | Room 108A | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 709 | Room 108A | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 710 | Room 108A | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 711 | Room 108A | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 712 | Room 108A | 1 | Wall B Window | White | Intact | Metal | -0.10 | Negative |
| 713 | Room 108A | 1 | Wall B Window Frame | Brown | Intact | Metal | 2.90 | Positive |
| 714 | Room 108A | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 715 | Room 108A | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 716 | Room 108A | 1 | Wall C Window Frame | Brown | Intact | Wood | 1.80 | Positive |
| 717 | Room 108A | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 718 | Room 108A | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 719 | Room 108A | 1 | Wall D Stall Wall | Gray | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|---------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 720 | Speech & Language Offices | 1 | Wall A | Blue | Intact | Plaster | 0.50 | Negative |
| 721 | Speech & Language Offices | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 722 | Speech & Language Offices | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 723 | Speech & Language Offices | 1 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 724 | Speech & Language Offices | 1 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 725 | Speech & Language Offices | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 726 | Speech & Language Offices | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.60 | Positive |
| 727 | Speech & Language Offices | 1 | Wall C Radiator | Tan | Intact | Metal | 0.50 | Negative |
| 728 | Speech & Language Offices | 1 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 729 | Speech & Language Offices | 1 | Floor | Gray | Intact | Concrete | 0.30 | Negative |
| 730 | Boys Room | 1 | Wall A | Yellow | Intact | Plaster | 0.50 | Negative |
| 731 | Boys Room | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 732 | Boys Room | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 733 | Boys Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 734 | Boys Room | 1 | Wall C | Yellow | Intact | Plaster | 0.50 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 735 | Boys Room | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 736 | Boys Room | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 737 | Boys Room | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 738 | Boys Room | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 739 | Office by Gym | 1 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 740 | Office by Gym | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 741 | Office by Gym | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 742 | Office by Gym | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 743 | Office by Gym | 1 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 744 | Office by Gym | 1 | Wall C | Blue | Intact | Cinderblock | 0.10 | Negative |
| 745 | Office by Gym | 1 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 746 | Office by Gym | 1 | Wall C Window Frame | Blue | Intact | Wood | 2.90 | Positive |
| 747 | Office by Gym | 1 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 748 | Office by Gym | 1 | Wall D Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 749 | Room 112 Conference Room | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 750 | Room 112 Conference Room | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 751 | Room 112 Conference Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 752 | Room 112 Conference Rm. | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.80 | Positive |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 753 | Room 112 Conference Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 754 | Room 112 Conference Room | 1 | Wall C | Yellow | Intact | Plaster | 0.50 | Negative |
| 755 | Room 112 Conference Room | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 756 | Room 112 Conference rm. | 1 | Wall C Window Frame | White | Intact | Wood | 1.80 | Positive |
| 757 | Room 112 Conference Room | 1 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 758 | Room 112 Conference Room | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 759 | Room 112 Conference Room | 1 | Wall D Door Frame | Brown | Intact | Metal | 0.10 | Negative |
| 760 | Room 110 | 1 | Wall A | Blue | Intact | Plaster | 0.20 | Negative |
| 761 | Room 110 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 762 | Room 110 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.70 | Negative |
| 763 | Room 110 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 3.70 | Positive |
| 764 | Room 110 | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 765 | Room 110 | 1 | Wall B Chair Rail | Stained | Intact | Wood | 0.00 | Negative |
| 766 | Room 110 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 767 | Room 110 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 768 | Room 110 | 1 | Wall C Window Frame | Brown | Intact | Wood | 3.10 | Positive |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 769 | Room 110 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 770 | Room 110 | 1 | Floor | Blue | Intact | Carpet | 0.10 | Negative |
| 771 | Room 106 | 1 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 772 | Room 106 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 773 | Room 106 | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 774 | Room 106 | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 775 | Room 106 | 1 | Wall B | Blue | Intact | Plaster | 0.40 | Negative |
| 776 | Room 106 | 1 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 777 | Room 106 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 778 | Room 106 | 1 | Wall C Window Frame | Stained | Intact | Wood | -0.10 | Negative |
| 779 | Room 106 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 780 | Room 106 | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 781 | Room 106 | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 782 | Room 106 | 1 | Wall D Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 783 | Room 106 Bathroom | 1 | Wall A | Pink | Intact | Plaster | 0.60 | Negative |
| 784 | Room 106 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 785 | Room 106 Bathroom | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.40 | Negative |
| 786 | Room 106 Bathroom | 1 | Wall B | Pink | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 787 | Room 106 Bathroom | 1 | Wall C | Pink | Intact | Plaster | 0.50 | Negative |
| 788 | Room 106 Bathroom | 1 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |
| 789 | Room 106 Bathroom | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 790 | Room 106 Bathroom | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 791 | Room 108 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 792 | Room 108 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 793 | Room 108 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 794 | Room 108 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 4.10 | Positive |
| 795 | Room 108 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 796 | Room 108 | 1 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 797 | Room 108 | 1 | Wall C Window | White | Intact | Metal | 0.10 | Negative |
| 798 | Room 108 | 1 | Wall C Window Frame | Yellow | Intact | Metal | -0.30 | Negative |
| 799 | Room 108 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 800 | Room 108 | 1 | Floor | Blue | Intact | Carpet | -0.10 | Negative |
| 801 | Room 104 Main Office | 1 | Wall A | Beige | Intact | Wood | 0.30 | Negative |
| 802 | Room 104 Main Office | 1 | Wall A Door | Stained | Intact | Plaster | -0.20 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 803 | Room 104 Main Office | 1 | Wall A Door Frame | Tan | Intact | Wood | 0.60 | Negative |
| 804 | Room 104 Main Office | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 805 | Room 104 Main Office | 1 | Wall B | Beige | Intact | Plaster | 0.40 | Negative |
| 806 | Room 104 Main Office | 1 | Wall C | Beige | Intact | Plaster | 0.50 | Negative |
| 807 | Room 104 Main Office | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 808 | Room 104 Main Office | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 809 | Room 104 Main Office | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 810 | Room 104 Main Office | 1 | Wall D | Beige | Intact | Plaster | 0.50 | Negative |
| 811 | Room 104 Main Office | 1 | Wall D Door | Stained | Intact | Wood | -0.10 | Negative |
| 812 | Room 104 Main Office | 1 | Wall D Door Frame | Beige | Intact | Metal | 0.70 | Negative |
| 813 | Room 104 Main Office | 1 | Floor | Blue | Intact | Carpet | 0.00 | Negative |
| 814 | Room 104 Main Office | 1 | Counter | Green | Intact | Metal | 0.50 | Negative |
| 815 | Room 102 Principals Office | 1 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|----------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 816 | Room 102 Principals Office | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 817 | Room 102 Principals Office | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 818 | Room 102 Principals Office | 1 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 819 | Room 102 Principals Office | 1 | Wall B | Blue | Intact | Plaster | 0.40 | Negative |
| 820 | Room 102 Principals Office | 1 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 821 | Room 102 Principals Office | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.60 | Negative |
| 822 | Room 102 Principals Office | 1 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 823 | Room 102 Principals Office | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 824 | Room 102 Principals Office | 1 | Wall C Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 825 | Room 102 Principals Office | 1 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 826 | Room 102 Principals Office | 1 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 827 | Room 102 Bathroom | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 828 | Room 102 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 829 | Room 102 Bathroom | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.60 | Negative |
| 830 | Room 102 Bathroom | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 831 | Room 102 Bathroom | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 832 | Room 102 Bathroom | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 833 | Room 102 Bathroom | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 834 | Room 102 Bathroom | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 835 | Guidance Conference Room | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 836 | Guidance Conference Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 837 | Guidance Conference Room | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 838 | Guidance Conference Rm. | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 839 | Guidance Conference Room | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 840 | Guidance Conference Room | 1 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 841 | Guidance Conference Room | 1 | Wall B Door Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 842 | Guidance Conference Room | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 843 | Guidance Conference Room | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 844 | Guidance Conference Room | 1 | Wall D Window | White | Intact | Metal | -0.30 | Negative |
| 845 | Guidance Conference Rm. | 1 | Wall D Window Frame | White | Intact | Wood | 3.40 | Positive |
| 846 | Guidance Conference Room | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 847 | Guidance Conference Room | 1 | Floor | Brown | Intact | Carpet | -0.20 | Negative |
| 848 | Guidance Room | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 849 | Guidance Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 850 | Guidance Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 851 | Guidance Room | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.10 | Positive |
| 852 | Guidance Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 853 | Guidance Room | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 854 | Guidance Room | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 855 | Guidance Room | 1 | Wall C Window Frame | White | Intact | Wood | 3.80 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 856 | Guidance Room | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 857 | Guidance Room | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 858 | Guidance #1 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 859 | Guidance #1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 860 | Guidance #1 | 1 | Wall A Door Frame | White | Intact | Metal | 0.40 | Negative |
| 861 | Guidance #1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.10 | Positive |
| 862 | Guidance #1 | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 863 | Guidance #1 | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 864 | Guidance #1 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 865 | Guidance #1 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.40 | Positive |
| 866 | Guidance #1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 867 | Guidance #1 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 868 | Guidance #2 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 869 | Guidance #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 870 | Guidance #2 | 1 | Wall A Door Frame | White | Intact | Metal | 0.30 | Negative |
| 871 | Guidance #2 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 872 | Guidance #2 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 873 | Guidance #2 | 1 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 874 | Guidance #2 | 1 | Wall C Window | White | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 875 | Guidance #2 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.40 | Positive |
| 876 | Guidance #2 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 877 | Guidance #2 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 878 | Guidance #3 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 879 | Guidance #3 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 880 | Guidance #3 | 1 | Wall A Door Frame | White | Intact | Metal | 0.40 | Negative |
| 881 | Guidance #3 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 882 | Guidance #3 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 883 | Guidance #3 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 884 | Guidance #3 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 885 | Guidance #3 | 1 | Floor | Brown | Intact | Carpet | -0.10 | Negative |
| 886 | Large Gym | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 887 | Large Gym | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 888 | Large Gym | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 889 | Large Gym | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 890 | Large Gym | 1 | Wall A Baseboard | Gray | Intact | Metal | 0.30 | Negative |
| 891 | Large Gym | 1 | Wall B | Yellow | Intact | Plaster | 0.40 | Negative |
| 892 | Large Gym | 1 | Wall B Bleachers | Stained | Intact | Wood | -0.10 | Negative |
| 893 | Large Gym | 1 | Wall B Partition Door | White | Intact | Wood | 0.00 | Negative |



Je Associates, LLC

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
Project Location: Middletown Enlarged School District
TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
SAMPLE COLLECTOR(S): William T. Johnson
XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 894 | Large Gym | 1 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 895 | Large Gym | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 896 | Large Gym | 1 | Wall D Window Grate | White | Intact | Metal | 0.60 | Negative |
| 897 | Large Gym | 1 | Wall D Window | White | Intact | Metal | -0.20 | Negative |
| 898 | Large Gym | 1 | Wall D Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 899 | Girls Locker Room | 1 | Wall A | Green | Intact | Plaster | 0.30 | Negative |
| 900 | Girls Locker Room | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 901 | Girls Locker Room | 1 | Wall A Door Frame | Green | Intact | Metal | 0.40 | Negative |
| 902 | Girls Locker Room | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 903 | Girls Locker Room | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 904 | Girls Locker Room | 1 | Wall C Locker | Blue | Intact | Metal | 0.20 | Negative |
| 905 | Girls Locker Room | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 906 | Girls Locker Room | 1 | Wall A Stall Wall | Blue | Intact | Metal | 0.20 | Negative |
| 907 | Girls Locker Room | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 908 | Girls Locker Room | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 909 | Hall #2 | 1 | Wall A | Green | Intact | Plaster | 0.40 | Negative |
| 910 | Hall #2 | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 911 | Hall #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 912 | Hall #2 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 913 | Hall #2 | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 914 | Hall #2 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 915 | Hall #2 | 1 | Wall B Bath Entrance | Green | Intact | Ceramic | > 9.9 | Positive |
| 916 | Hall #2 | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 917 | Hall #2 | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 918 | Hall #2 | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 919 | Hall #2 | 1 | Wall D | Green | Intact | Ceramic | 8.80 | Positive |
| 920 | Hall #2 | 1 | Wall D Radiator | Gray | Intact | Metal | 0.40 | Negative |
| 921 | Hall #2 | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 922 | Hall #2 | 1 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 923 | Hall #3 | 1 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 924 | Hall #3 | 1 | Wall A | Green | Intact | Ceramic | 6.80 | Positive |
| 925 | Hall #3 | 1 | Wall A Door | Tan | Intact | Wood | 0.10 | Negative |
| 926 | Hall #3 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 927 | Hall #3 | 1 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 928 | Hall #3 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 929 | Hall #3 | 1 | Wall B Locker | Tan | Intact | Metal | 0.40 | Negative |
| 930 | Hall #3 | 1 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 931 | Hall #3 | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|-------------------------------------|----------------------------|
| 932 | Hall #3 | 1 | Wall D | Green | Intact | Plaster | 0.10 | Negative |
| 933 | Hall #3 | 1 | Wall D | Green | Intact | Concrete | > 9.9 | Positive |
| 934 | Hall #3 | 1 | Wall D Locker | Tan | Intact | Metal | 0.20 | Negative |
| 935 | Hall #3 | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 936 | Hall #3 | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 937 | Hall #3 | 1 | Wall D Fire Exit Box | Tan | Intact | Metal | 0.30 | Negative |
| 938 | Hall #3 | 1 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | -0.20 | Negative |
| 939 | Hall #3 | 1 | Wall D 1" x 1" Tile | Tan | Intact | Ceramic | -0.40 | Negative |
| 940 | Hall #4 | 1 | Wall A Door | Tan | Intact | Metal | 0.20 | Negative |
| 941 | Hall #4 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 942 | Hall #4 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 943 | Hall #4 | 1 | Wall B 4x4 | Gold | Intact | Ceramic | 0.20 | Negative |
| 944 | Hall #4 | 1 | Wall D | Gold | Intact | Ceramic | 0.20 | Negative |
| 945 | Hall #4 | 1 | Wall D | White | Intact | Plaster | 0.10 | Negative |
| 946 | Hall #4 | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 947 | Hall #4 | 1 | Floor | Tan | Intact | Terrazzo | 0.20 | Negative |
| 948 | Hall #4 | 1 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |
| 949 | Hall #4 | 1 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 950 | Hall #4 | 1 | Wall D Door | Tan | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 951 | Hall #4 | 1 | Wall D Door Frame | Tan | Intact | Metal | 0.20 | Negative |
| 952 | Hall #5 | 1 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 953 | Hall #5 | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 954 | Hall #5 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 955 | Hall #5 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 956 | Hall #5 | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 957 | Hall #5 | 1 | Wall B | Green | Intact | Ceramic | 8.40 | Positive |
| 958 | Hall #5 | 1 | Wall B 4"x4" | Green | Intact | Ceramic | 0.20 | Negative |
| 959 | Hall #5 | 1 | Wall B Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 960 | Hall #5 | 1 | Wall B Lockers | Tan | Intact | Metal | 0.40 | Negative |
| 961 | Hall #5 | 1 | Wall B Panel Box | Tan | Intact | Metal | 0.10 | Negative |
| 962 | Hall #5 | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 963 | Hall #5 | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 964 | Hall #5 | 1 | Wall D Locker | Tan | Intact | Metal | 0.10 | Negative |
| 965 | Hall #5 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 966 | Hall #5 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 967 | Hall #6 | 1 | Wall A Door | Tan | Intact | Metal | 0.20 | Negative |
| 968 | Hall #6 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 969 | Hall #6 | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 970 | Hall #6 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 971 | Hall #6 | 1 | Wall B 4"x4" | Green | Intact | Ceramic | 0.20 | Negative |
| 972 | Hall #6 | 1 | Wall B Locker | Tan | Intact | Metal | 0.20 | Negative |
| 973 | Hall #6 | 1 | Wall B Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 974 | Hall #6 | 1 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 975 | Hall #6 | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 976 | Hall #6 | 1 | Wall D Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 977 | Hall #6 | 1 | Wall D Panel Box | Tan | Intact | Metal | 0.30 | Negative |
| 978 | Hall #6 | 1 | Ceiling | White | Intact | Plaster | 0.50 | Negative |
| 979 | Hall #6 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 980 | Hall #7 | 1 | Wall A Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 981 | Hall #7 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 982 | Hall #7 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 983 | Hall #7 | 1 | Wall B Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 984 | Hall #7 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 985 | Hall #7 | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 986 | Hall #7 | 1 | Wall C Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 987 | Hall #7 | 1 | Wall D Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 988 | Hall #7 | 1 | Ceiling | White | Intact | x | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 989 | Hall #7 | 1 | Floor | Brown | Intact | Terrazzo | -0.30 | Negative |
| 990 | Hall #8 | 1 | Wall A Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 991 | Hall #8 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 992 | Hall #8 | 1 | Wall A Door Frame | Brown | Intact | Metal | -0.20 | Negative |
| 993 | Hall #8 | 1 | Wall B Decorative Plaster | White | Intact | Plaster | 0.00 | Negative |
| 994 | Hall #8 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 995 | Hall #8 | 1 | Wall B Door Frame | Brown | Intact | Metal | -0.40 | Negative |
| 996 | Hall #8 | 1 | Wall C Decorative Plaster | White | Intact | Plaster | 0.50 | Negative |
| 997 | Hall #8 | 1 | Wall D Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 998 | Hall #8 | 1 | Ceiling | White | Intact | Plastic | 0.00 | Negative |
| 999 | Hall #8 | 1 | Floor | Brown | Intact | Terrazzo | -0.30 | Negative |
| 1000 | Room 219 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1001 | Room 219 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1002 | Room 219 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1003 | Room 219 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.00 | Positive |
| 1004 | Room 219 | 2 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1005 | Room 219 | 2 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1006 | Room 219 | 2 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1007 | Room 219 | 2 | Floor | Tan | Intact | VCT | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1008 | Room 223 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1009 | Room 223 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1010 | Room 223 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1011 | Room 223 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1012 | Room 223 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1013 | Room 223 | 2 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1014 | Room 223 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1015 | Room 223 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1016 | Room 223 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1017 | Room 223 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1018 | Room 223 | 2 | Floor | Brown | Intact | Carpet | -0.10 | Negative |
| 1019 | Room 225 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1020 | Room 225 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1021 | Room 225 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1022 | Room 225 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1023 | Room 225 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1024 | Room 225 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 1025 | Room 225 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1026 | Room 225 | 2 | Wall C Window Frame | Blue | Intact | Wood | 3.60 | Positive |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1027 | Room 225 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1028 | Room 225 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1029 | Room 227 | 2 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1030 | Room 227 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1031 | Room 227 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1032 | Room 227 | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1033 | Room 227 | 2 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 1034 | Room 227 | 2 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 1035 | Room 227 | 2 | Wall D | Yellow | Intact | Plaster | -0.10 | Negative |
| 1036 | Room 227 | 2 | Ceiling | Yellow | Intact | Plaster | 0.40 | Negative |
| 1037 | Room 227 | 2 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1038 | Room 227 Bathroom | 2 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1039 | Room 227 Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1040 | Room 227 Bathroom | 2 | Wall A Door Frame | Yellow | Intact | Wood | -0.20 | Negative |
| 1041 | Room 227 Bathroom | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1042 | Room 227 Bathroom | 2 | Wall B | Yellow | Intact | Plaster | 0.40 | Negative |
| 1043 | Room 227 Bathroom | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |



LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1044 | Room 227 Bathroom | 2 | Wall D | Yellow | Intact | Plaster | -0.10 | Negative |
| 1045 | Room 227 Bathroom | 2 | Ceiling | Yellow | Intact | Plaster | -0.10 | Negative |
| 1046 | Room 227 Bathroom | 2 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1047 | Room 204 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1048 | Room 204 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1049 | Room 204 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.70 | Negative |
| 1050 | Room 204 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.20 | Negative |
| 1051 | Room 204 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1052 | Room 204 | 2 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1053 | Room 204 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1054 | Room 204 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.50 | Positive |
| 1055 | Room 204 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1056 | Room 204 | 2 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 1057 | Room 201 Custodian | 2 | Wall A | Gray | Intact | Plaster | 0.10 | Negative |
| 1058 | Room 201 Custodian | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1059 | Room 201 Custodian | 2 | Wall A Door Frame | Gray | Intact | Metal | -0.30 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1060 | Room 201 Custodian | 2 | Wall B | Gray | Intact | Plaster | 0.40 | Negative |
| 1061 | Room 201 Custodian | 2 | Wall C | Gray | Intact | Plaster | 0.10 | Negative |
| 1062 | Room 201 Custodian | 2 | Wall D | Gray | Intact | Plaster | 0.20 | Negative |
| 1063 | Room 201 Custodian | 2 | Floor | Gray | Intact | Concrete | -0.10 | Negative |
| 1064 | Room 203 Girls' Bathroom | 2 | Wall A | White | Intact | Ceramic | 0.00 | Negative |
| 1065 | Room 203 Girls' Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 1066 | Room 203 Girls' Bathroom | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1067 | Room 203 Girls' Bathroom | 2 | Wall B | White | Intact | Ceramic | 0.00 | Negative |
| 1068 | Room 203 Girls' Bathroom | 2 | Wall C | White | Intact | Ceramic | 0.00 | Negative |
| 1069 | Room 203 Girls' Bathroom | 2 | Wall C Stall Wall | Pink | Intact | Wood | -0.10 | Negative |
| 1070 | Room 203 Girls' Bathroom | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1071 | Room 203 Girls' Bathroom | 2 | Wall C Window Frame | White | Intact | Wood | 2.60 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1072 | Room 203 Girls' Bathroom | 2 | Wall D | White | Intact | Ceramic | 0.10 | Negative |
| 1073 | Room 203 Girls' Bathroom | 2 | Floor | Gray | Intact | Ceramic | -0.20 | Negative |
| 1074 | Room 208 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1075 | Room 208 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1076 | Room 208 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1077 | Room 208 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1078 | Room 208 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1079 | Room 208 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1080 | Room 208 | 2 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1081 | Room 208 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1082 | Room 208 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1083 | Room 208 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1084 | Room 208 | 2 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1085 | Room 208 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1086 | Room 208 | 2 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 1087 | Room 210 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1088 | Room 210 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1089 | Room 210 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1090 | Room 210 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1091 | Room 210 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1092 | Room 210 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1093 | Room 210 | 2 | Wall C | Green | Intact | Plaster | 0.40 | Negative |
| 1094 | Room 210 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1095 | Room 210 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1096 | Room 210 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.30 | Negative |
| 1097 | Room 210 | 2 | Wall D | Green | Intact | Plaster | -0.20 | Negative |
| 1098 | Room 210 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1099 | Room 210 | 2 | Floor | Tan | Intact | VCT | 0.40 | Negative |
| 1100 | Room 205 | 2 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1101 | Room 205 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1102 | Room 205 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1103 | Room 205 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1104 | Room 205 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1105 | Room 205 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 1106 | Room 205 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1107 | Room 205 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1108 | Room 205 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1109 | Room 205 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1110 | Room 204 | 2 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1111 | Room 204 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1112 | Room 204 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1113 | Room 204 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.40 | Negative |
| 1114 | Room 204 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1115 | Room 204 | 2 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 1116 | Room 204 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1117 | Room 204 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1118 | Room 204 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.00 | Negative |
| 1119 | Room 204 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1120 | Room 209 Boys' Bathroom | 2 | Wall A | White | Intact | Ceramic | 0.00 | Negative |
| 1121 | Room 209 Boys' Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 1122 | Room 209 Boys' Bathroom | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1123 | Room 209 Boys' Bathroom | 2 | Wall B | White | Intact | Ceramic | 0.00 | Negative |
| 1124 | Room 209 Boys' Bathroom | 2 | Wall C | White | Intact | Ceramic | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1125 | Room 209 Boys' Bathroom | 2 | Wall C Stall Wall | Blue | Intact | Wood | -0.10 | Negative |
| 1126 | Room 209 Boys' Bathroom | 2 | Wall C Window | Yellow | Intact | Metal | 0.00 | Negative |
| 1127 | Room 209 Boys' Bathroom | 2 | Wall C Window Frame | White | Intact | Wood | 2.60 | Positive |
| 1128 | Room 209 Boys' Bathroom | 2 | Wall D | White | Intact | Ceramic | 0.10 | Negative |
| 1129 | Room 209 Boys' Bathroom | 2 | Floor | Gray | Intact | Ceramic | -0.20 | Negative |
| 1130 | Room 212 | 2 | Wall A | Purple | Intact | Plaster | 0.10 | Negative |
| 1131 | Room 212 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1132 | Room 212 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1133 | Room 212 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1134 | Room 212 | 2 | Wall B | Purple | Intact | Plaster | 0.00 | Negative |
| 1135 | Room 212 | 2 | Wall C | Purple | Intact | Plaster | 0.30 | Negative |
| 1136 | Room 212 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1137 | Room 212 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1138 | Room 212 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1139 | Room 212 | 2 | Wall D | Purple | Intact | Plaster | -0.10 | Negative |
| 1140 | Room 212 | 2 | Floor | Brown | Intact | Carpet | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1141 | Room 214 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1142 | Room 214 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1143 | Room 214 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1144 | Room 214 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1145 | Room 214 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1146 | Room 214 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1147 | Room 214 | 2 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1148 | Room 214 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1149 | Room 214 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1150 | Room 214 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1151 | Room 214 | 2 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1152 | Room 214 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1153 | Room 214 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1154 | Room 216 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1155 | Room 216 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1156 | Room 216 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1157 | Room 216 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1158 | Room 216 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1159 | Room 216 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1160 | Room 216 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1161 | Room 216 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1162 | Room 216 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1163 | Room 216 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1164 | Room 218 | 2 | Wall A | Yellow | Intact | Plaster | -0.30 | Negative |
| 1165 | Room 218 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1166 | Room 218 | 2 | Wall A Door Frame | Gray | Intact | Metal | -0.20 | Negative |
| 1167 | Room 218 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1168 | Room 218 | 2 | Wall B | Yellow | Intact | Plaster | 0.60 | Negative |
| 1169 | Room 218 | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1170 | Room 218 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1171 | Room 218 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 2.80 | Positive |
| 1172 | Room 218 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1173 | Room 218 | 2 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 1174 | Room 218 | 2 | Wall D Door | Stained | Intact | Wood | -0.10 | Negative |
| 1175 | Room 218 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 1176 | Room 218 | 2 | Floor | Brown | Intact | Carpet | 0.10 | Negative |
| 1177 | Room 213 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1178 | Room 213 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1179 | Room 213 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1180 | Room 213 | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1181 | Room 213 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1182 | Room 213 | 2 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 1183 | Room 213 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1184 | Room 213 | 2 | Wall D Door | Stained | Intact | Wood | 0.10 | Negative |
| 1185 | Room 213 | 2 | Wall D Door Frame | Blue | Intact | Metal | 0.60 | Negative |
| 1186 | Room 213 | 2 | Wall D shelf | Blue | Intact | Wood | 0.10 | Negative |
| 1187 | Room 213 | 2 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 1188 | Room 213 | 2 | Floor | Gray | Intact | Concrete | 0.10 | Negative |
| 1189 | Room 220 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1190 | Room 220 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1191 | Room 220 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 1192 | Room 220 | 2 | Wall A Baseboard | Brown | Intact | Metal | -0.10 | Negative |
| 1193 | Room 220 | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1194 | Room 220 | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1195 | Room 220 | 2 | Wall C Locker | Green | Intact | Metal | 0.30 | Negative |
| 1196 | Room 220 | 2 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1197 | Room 220 | 2 | Floor | Brown | Intact | VAT | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1198 | Room 220 Bathroom | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1199 | Room 220 Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1200 | Room 220 Bathroom | 2 | Wall A Door Frame | Brown | Intact | Metal | 0.70 | Negative |
| 1201 | Room 220 Bathroom | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1202 | Room 220 Bathroom | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1203 | Room 220 Bathroom | 2 | Wall D | Yellow | Intact | Plaster | 0.1 | Negative |
| 1204 | Room 220 Bathroom | 2 | Floor | Tan | Intact | Terrazzo | 0.1 | Negative |
| 1205 | Fan Room #222 | 2 | Wall A Door | Gray | Intact | Metal | -0.20 | Negative |
| 1206 | Fan Room #222 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1207 | Fan Room #222 | 2 | Fan Unit | Green | Intact | Metal | 2.80 | Positive |
| 1208 | Room 224 | 2 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 1209 | Room 224 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1210 | Room 224 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.50 | Negative |
| 1211 | Room 224 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1212 | Room 224 | 2 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1213 | Room 224 | 2 | Wall C | White | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1214 | Room 224 | 2 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1215 | Room 224 | 2 | Floor | Brown | Intact | VAT | 0.10 | Negative |
| 1216 | Room 215 | 2 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 1217 | Room 215 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1218 | Room 215 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1219 | Room 215 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 1220 | Room 215 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1221 | Room 215 | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1222 | Room 215 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1223 | Room 215 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1224 | Room 215 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 6.20 | Positive |
| 1225 | Room 215 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1226 | Room 215 | 2 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1227 | Room 215 | 2 | Floor | Tan | Intact | VCT | 0.10 | Negative |
| 1228 | Room 217 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1229 | Room 217 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1230 | Room 217 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1231 | Room 217 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 1232 | Room 217 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |

LEAD PAINT REPORT FORM

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TOTAL ASSAY COUNT: 1766
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1233 | Room 217 | 2 | Wall B | Yellow | Intact | Plaster | -0.10 | Negative |
| 1234 | Room 217 | 2 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1235 | Room 217 | 2 | Wall C Window | Yellow | Intact | Metal | 0.30 | Negative |
| 1236 | Room 217 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 6.10 | Positive |
| 1237 | Room 217 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1238 | Room 217 | 2 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 1239 | Room 217 | 2 | Floor | Tan | Intact | VCT | 0.10 | Negative |
| 1240 | Room 226 | 2 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 1241 | Room 226 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1242 | Room 226 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1243 | Room 226 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 1244 | Room 226 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1245 | Room 226 | 2 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1246 | Room 226 | 2 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1247 | Room 226 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1248 | Room 226 | 2 | Wall C Window Frame | Blue | Intact | Wood | 3.80 | Positive |
| 1249 | Room 226 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1250 | Room 226 | 2 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1251 | Room 226 | 2 | Floor | Brown | Intact | Carpet | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
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TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1252 | Room 228 | 2 | Wall A | Purple | Intact | Plaster | 0.00 | Negative |
| 1253 | Room 228 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1254 | Room 228 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1255 | Room 228 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1256 | Room 228 | 2 | Wall B | Purple | Intact | Plaster | 0.20 | Negative |
| 1257 | Room 228 | 2 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 1258 | Room 228 | 2 | Wall C Window | Yellow | Intact | Metal | -0.02 | Negative |
| 1259 | Room 228 | 2 | Wall C Window Frame | Purple | Intact | Wood | 3.90 | Positive |
| 1260 | Room 228 | 2 | Wall C Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 1261 | Room 228 | 2 | Wall D | Purple | Intact | Plaster | 0.40 | Negative |
| 1262 | Room 228 | 2 | Floor | Brown | Intact | Concrete | 0.20 | Negative |
| 1263 | Room 230 | 2 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 1264 | Room 230 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1265 | Room 230 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1266 | Room 230 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1267 | Room 230 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1268 | Room 230 | 2 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1269 | Room 230 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1270 | Room 230 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 3.10 | Positive |

LEAD PAINT REPORT FORM

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TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1271 | Room 230 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1272 | Room 230 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1273 | Room 232 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1274 | Room 232 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1275 | Room 232 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1276 | Room 232 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 1277 | Room 232 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1278 | Room 232 | 2 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1279 | Room 232 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1280 | Room 232 | 2 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1281 | Room 232 | 2 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1282 | Room 232 | 2 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1283 | Room 234 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1284 | Room 234 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1285 | Room 234 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1286 | Room 234 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 1287 | Room 234 | 2 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1288 | Room 234 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1289 | Room 234 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1290 | Room 234 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1291 | Room 234 | 2 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 1292 | Room 234 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1293 | Room 234 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1294 | Room 234 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1295 | Room 234 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1296 | Room 236 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1297 | Room 236 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1298 | Room 236 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.00 | Negative |
| 1299 | Room 236 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 1300 | Room 236 | 2 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1301 | Room 236 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1302 | Room 236 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1303 | Room 236 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1304 | Room 236 | 2 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 1305 | Room 236 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1306 | Room 236 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1307 | Room 236 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1308 | Room 238 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1309 | Room 238 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1310 | Room 238 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1311 | Room 238 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.30 | Positive |
| 1312 | Room 238 | 2 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 1313 | Room 238 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1314 | Room 238 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1315 | Room 238 | 2 | Wall C Window | Yellow | Intact | Metal | 0.00 | Negative |
| 1316 | Room 238 | 2 | Wall C Window Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 1317 | Room 238 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1318 | Room 238 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1319 | Room 238 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1320 | Room 238 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1321 | Room 202 | 2 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 1322 | Room 202 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1323 | Room 202 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1324 | Room 202 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1325 | Room 202 | 2 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1326 | Room 202 | 2 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 1327 | Room 202 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1328 | Room 202 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.10 | Positive |
| 1329 | Room 202 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1330 | Room 202 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1331 | Room 202 | 2 | Wall D Door | Stained | Intact | Wood | -0.20 | Negative |
| 1332 | Room 202 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 1333 | Room 200 | 2 | Wall A | Green | Intact | Plaster | 0.40 | Negative |
| 1334 | Room 200 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1335 | Room 200 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1336 | Room 200 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1337 | Room 200 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1338 | Room 200 | 2 | Wall C | Green | Intact | Plaster | -0.30 | Negative |
| 1339 | Room 200 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1340 | Room 200 | 2 | Wall C Window Frame | Green | Intact | Wood | 2.10 | Positive |
| 1341 | Room 200 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1342 | Room 200 | 2 | Wall D | Green | Intact | Plaster | 0.10 | Negative |
| 1343 | Room 200 | 2 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 1344 | Room 200 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 1345 | Hall #9 | 2 | Wall A | Green | Intact | Plaster | 0.10 | Negative |
| 1346 | Hall #9 | 2 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1347 | Hall #9 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1348 | Hall #9 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1349 | Hall #9 | 2 | Wall B | Green | Intact | Plaster | 0.30 | Negative |
| 1350 | Hall #9 | 2 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1351 | Hall #9 | 2 | Wall B Locker | Gray | Intact | Metal | 0.50 | Negative |
| 1352 | Hall #9 | 2 | Wall C | Green | Intact | Plaster | 0.30 | Negative |
| 1353 | Hall #9 | 2 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1354 | Hall #9 | 2 | Wall C Door | Stained | Intact | Wood | 0.00 | Negative |
| 1355 | Hall #9 | 2 | Wall C Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1356 | Hall #9 | 2 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1357 | Hall #9 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1358 | Hall #9 | 2 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | -0.10 | Negative |
| 1359 | Hall #9 | 2 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 1360 | Hall #9 | 2 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 1361 | Hall #10 | 2 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 1362 | Hall #10 | 2 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1363 | Hall #10 | 2 | Wall A Window | White | Intact | Metal | -0.30 | Negative |
| 1364 | Hall #10 | 2 | Wall A Window Frame | White | Intact | Wood | 2.40 | Positive |
| 1365 | Hall #10 | 2 | Wall A Radiator | Gray | Intact | Metal | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1366 | Hall #10 | 2 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 1367 | Hall #10 | 2 | Wall B | Green | Intact | Ceramic | 8.20 | Positive |
| 1368 | Hall #10 | 2 | Wall B Door | Stained | Intact | Wood | -0.20 | Negative |
| 1369 | Hall #10 | 2 | Wall B Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1370 | Hall #10 | 2 | Wall B 1" x 1" Tile | Green | Intact | Ceramic | -0.40 | Negative |
| 1371 | Hall #10 | 2 | Wall B 4" x 4" Tile | Green | Intact | Ceramic | -0.10 | Negative |
| 1372 | Hall #10 | 2 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1373 | Hall #10 | 2 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 1374 | Hall #10 | 2 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1375 | Hall #10 | 2 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 1376 | Hall #10 | 2 | Wall C Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1377 | Hall #10 | 2 | Wall D | Green | Intact | Plaster | -0.10 | Negative |
| 1378 | Hall #10 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1379 | Hall #10 | 2 | Wall D Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1380 | Hall #11 | 2 | Wall B | White | Intact | Plaster | 0.40 | Negative |
| 1381 | Hall #11 | 2 | Wall B | Gold | Intact | Ceramic | -0.20 | Negative |
| 1382 | Hall #11 | 2 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1383 | Hall #11 | 2 | Wall D | Gold | Intact | Ceramic | -0.40 | Negative |
| 1384 | Hall #11 | 2 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1385 | Hall #11 | 2 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1386 | Hall #12 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1387 | Hall #12 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1388 | Hall #12 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1389 | Hall #12 | 2 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1390 | Hall #12 | 2 | Wall B 4" x 4" Tile | Green | Intact | Ceramic | 0.10 | Negative |
| 1391 | Hall #12 | 2 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1392 | Hall #12 | 2 | Wall B Panel Box | Gray | Intact | Metal | 0.30 | Negative |
| 1393 | Hall #12 | 2 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1394 | Hall #12 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1395 | Hall #12 | 2 | Wall D Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1396 | Hall #12 | 2 | Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 1397 | Hall #12 | 2 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 1398 | Room 300 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1399 | Room 300 | 3 | Wall A Door | Stained | Intact | Wood | -0.30 | Negative |
| 1400 | Room 300 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1401 | Room 300 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1402 | Room 300 | 3 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1403 | Room 300 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|----------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1404 | Room 300 | 3 | Wall C | Yellow | Intact | Metal | -0.20 | Negative |
| 1405 | Room 300 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.10 | Positive |
| 1406 | Room 300 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1407 | Room 300 | 3 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1408 | Room 300 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1409 | Room 303 Girls' Room | 3 | Wall A | White | Intact | Ceramic | 0.10 | Negative |
| 1410 | Room 303 Girls' Room | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1411 | Room 303 Girls' Room | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1412 | Room 303 Girls' Room | 3 | Wall B | White | Intact | Ceramic | -0.10 | Negative |
| 1413 | Room 303 Girls' Room | 3 | Wall C | White | Intact | Ceramic | 0.20 | Negative |
| 1414 | Room 303 Girls' Room | 3 | Wall D | White | Intact | Ceramic | -0.10 | Negative |
| 1415 | Room 303 Girls' Room | 3 | Floor | Gray | Intact | Ceramic | 0.10 | Negative |
| 1416 | Room 302 | 3 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1417 | Room 302 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1418 | Room 302 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1419 | Room 302 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1420 | Room 302 | 3 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1421 | Room 302 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1422 | Room 302 | 3 | Wall C Window | Yellow | Intact | Metal | 2.60 | Positive |
| 1423 | Room 302 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 0.10 | Negative |
| 1424 | Room 302 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1425 | Room 302 | 3 | Wall D | Green | Intact | Plaster | -0.20 | Negative |
| 1426 | Room 302 | 3 | Floor | Gray | Intact | VCT | 0.10 | Negative |
| 1427 | Room 305 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1428 | Room 305 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1429 | Room 305 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1430 | Room 305 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1431 | Room 305 | 3 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1432 | Room 305 | 3 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 1433 | Room 305 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1434 | Room 305 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.80 | Positive |
| 1435 | Room 305 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1436 | Room 305 | 3 | Wall D | Purple | Intact | Plaster | 0.30 | Negative |
| 1437 | Room 304 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1438 | Room 304 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1439 | Room 304 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1440 | Room 304 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.60 | Positive |
| 1441 | Room 304 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1442 | Room 304 | 3 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 1443 | Room 304 | 3 | Wall C Window | Yellow | Intact | Metal | -0.21 | Negative |
| 1444 | Room 304 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.10 | Positive |
| 1445 | Room 304 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1446 | Room 304 | 3 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 1447 | Room 304 | 3 | Floor | Gray | Intact | VCT | -0.20 | Negative |
| 1448 | Room 307 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1449 | Room 307 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1450 | Room 307 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1451 | Room 307 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1452 | Room 307 | 3 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1453 | Room 307 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1454 | Room 307 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1455 | Room 307 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 2.80 | Positive |
| 1456 | Room 307 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1457 | Room 307 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1458 | Room 306 | 3 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1459 | Room 306 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1460 | Room 306 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1461 | Room 306 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.20 | Negative |
| 1462 | Room 306 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1463 | Room 306 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1464 | Room 306 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1465 | Room 306 | 3 | Wall C Window Frame | Blue | Intact | Wood | 3.90 | Positive |
| 1466 | Room 306 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1467 | Room 306 | 3 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 1468 | Room 306 | 3 | Floor | Gray | Intact | Carpet | 0.20 | Negative |
| 1469 | #309 Boys' Room | 3 | Wall A | White | Intact | Ceramic | 0.10 | Negative |
| 1470 | #309 Boys' Room | 3 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1471 | #309 Boys' Room | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1472 | #309 Boys' Room | 3 | Wall B | White | Intact | Ceramic | -0.10 | Negative |
| 1473 | #309 Boys' Room | 3 | Wall C | White | Intact | Ceramic | -0.10 | Negative |
| 1474 | #309 Boys' Room | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1475 | #309 Boys' Room | 3 | Wall C Window Frame | White | Intact | Wood | 1.80 | Positive |
| 1476 | #309 Boys' Room | 3 | Wall D | White | Intact | Ceramic | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1477 | #309 Boys' Room | 3 | Wall D Stall Wall | Blue | Intact | Wood | -0.10 | Negative |
| 1478 | #309 Boys' Room | 3 | Floor | Gray | Intact | Ceramic | 0.20 | Negative |
| 1479 | Room 308 | 3 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1480 | Room 308 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1481 | Room 308 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1482 | Room 308 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1483 | Room 308 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1484 | Room 308 | 3 | Wall B Door | Blue | Intact | Wood | -0.30 | Negative |
| 1485 | Room 308 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 1486 | Room 308 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1487 | Room 308 | 3 | Wall C Window | Tan | Intact | Metal | -0.20 | Negative |
| 1488 | Room 308 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.70 | Positive |
| 1489 | Room 308 | 3 | Wall C Radiator | Yellow | Intact | Plaster | 0.00 | Negative |
| 1490 | Room 308 | 3 | Wall D | Stained | Intact | Wood | 0.30 | Negative |
| 1491 | Room 315 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1492 | Room 315 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1493 | Room 315 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.70 | Negative |
| 1494 | Room 315 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1495 | Room 315 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1496 | Room 315 | 3 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1497 | Room 315 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1498 | Room 315 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 1499 | Room 315 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1500 | Room 315 | 3 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1501 | Room 315 | 3 | Floor | Gray | Intact | Carpet | 0.20 | Negative |
| 1502 | Room 315 Bath | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1503 | Room 315 Bath | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1504 | Room 315 Bath | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1505 | Room 315 Bath | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1506 | Room 315 Bath | 3 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1507 | Room 315 Bath | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1508 | Room 315 Bath | 3 | Ceiling | Yellow | Intact | Plaster | 0.20 | Negative |
| 1509 | Room 315 Bath | 3 | Floor | Tan | Intact | Terrazzo | 0.00 | Negative |
| 1510 | Room 317 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1511 | Room 317 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1512 | Room 317 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1513 | Room 317 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.90 | Positive |
| 1514 | Room 317 | 3 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1515 | Room 317 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1516 | Room 317 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1517 | Room 317 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.80 | Positive |
| 1518 | Room 317 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1519 | Room 317 | 3 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 1520 | Room 310 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1521 | Room 310 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1522 | Room 310 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1523 | Room 310 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1524 | Room 310 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1525 | Room 310 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1526 | Room 310 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1527 | Room 310 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 1.90 | Positive |
| 1528 | Room 310 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1529 | Room 310 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1530 | Room 310 | 3 | Floor | Gray | Intact | Carpet | -0.10 | Negative |
| 1531 | Room 319 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1532 | Room 319 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1533 | Room 319 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1534 | Room 319 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 2.80 | Positive |
| 1535 | Room 319 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1536 | Room 319 | 3 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 1537 | Room 319 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1538 | Room 319 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.80 | Positive |
| 1539 | Room 319 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1540 | Room 319 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1541 | Room 312 | 3 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1542 | Room 312 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1543 | Room 312 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.50 | Negative |
| 1544 | Room 312 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1545 | Room 312 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1546 | Room 312 | 3 | Wall C | Blue | Intact | Plaster | -0.20 | Negative |
| 1547 | Room 312 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1548 | Room 312 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1549 | Room 312 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1550 | Room 312 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1551 | Room 314 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1552 | Room 314 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1553 | Room 314 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1554 | Room 314 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1555 | Room 314 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1556 | Room 314 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1557 | Room 314 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1558 | Room 314 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1559 | Room 314 | 3 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1560 | Room 314 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1561 | Room 321 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1562 | Room 321 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1563 | Room 321 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1564 | Room 321 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1565 | Room 321 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1566 | Room 321 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1567 | Room 321 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1568 | Room 321 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1569 | Room 321 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1570 | Room 321 | 3 | Floor | Gray | Intact | Carpet | -0.10 | Negative |
| 1571 | Room 316 | 3 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1572 | Room 316 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1573 | Room 316 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1574 | Room 316 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.80 | Positive |
| 1575 | Room 316 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1576 | Room 316 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1577 | Room 316 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1578 | Room 316 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 1.80 | Positive |
| 1579 | Room 316 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1580 | Room 316 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1581 | Room 318 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1582 | Room 318 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1583 | Room 318 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1584 | Room 318 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.90 | Positive |
| 1585 | Room 318 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1586 | Room 318 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1587 | Room 318 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1588 | Room 318 | 3 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1589 | Room 318 | 3 | Wall D Window Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 1590 | Room 320 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1591 | Room 320 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1592 | Room 320 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.60 | Negative |
| 1593 | Room 320 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.40 | Positive |
| 1594 | Room 320 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1595 | Room 320 | 3 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 1596 | Room 320 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1597 | Room 320 | 3 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 1598 | Room 320 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1599 | Room 320 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1600 | Room 320 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1601 | Room 320 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1602 | Room 322 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1603 | Room 322 | 3 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1604 | Room 322 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1605 | Room 322 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.30 | Positive |
| 1606 | Room 322 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1607 | Room 322 | 3 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 1608 | Room 322 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1609 | Room 322 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1610 | Room 322 | 3 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 1611 | Room 322 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1612 | Room 322 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1613 | Room 322 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1614 | Room 324 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1615 | Room 324 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1616 | Room 324 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1617 | Room 324 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.00 | Positive |
| 1618 | Room 324 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1619 | Room 324 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1620 | Room 324 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1621 | Room 324 | 3 | Wall C Window Frame | Yellow | Intact | Metal | 0.00 | Negative |
| 1622 | Room 324 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1623 | Room 324 | 3 | Floor | Gray | Intact | Carpet | 0.10 | Negative |
| 1624 | Room 323 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1625 | Room 323 | 3 | Wall A Door | Gray | Intact | Metal | 0.20 | Negative |
| 1626 | Room 323 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1627 | Room 323 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1628 | Room 323 | 3 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1629 | Room 323 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1630 | Room 323 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1631 | Room 323 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1632 | Room 323 | 3 | Floor | Gray | Intact | VCT | -0.10 | Negative |
| 1633 | Room 325 | 3 | Wall A | Blue | Intact | Plaster | -0.10 | Negative |
| 1634 | Room 325 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1635 | Room 325 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1636 | Room 325 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1637 | Room 325 | 3 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1638 | Room 325 | 3 | Wall B cabinet | White | Intact | Wood | 0.10 | Negative |
| 1639 | Room 325 | 3 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1640 | Room 325 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1641 | Room 325 | 3 | Wall C Window Frame | Blue | Intact | Wood | 4.10 | Positive |
| 1642 | Room 325 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1643 | Room 325 | 3 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1644 | Room 327 | 3 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 1645 | Room 327 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1646 | Room 327 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1647 | Room 327 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1786
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1648 | Room 327 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1649 | Room 327 | 3 | Wall B cabinet | White | Intact | Wood | 0.00 | Negative |
| 1650 | Room 327 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1651 | Room 327 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1652 | Room 327 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.10 | Positive |
| 1653 | Room 327 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1654 | Room 327 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1655 | Room 329 | 3 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 1656 | Room 329 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1657 | Room 329 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1658 | Room 329 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1659 | Room 329 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1660 | Room 329 | 3 | Wall B cabinet | White | Intact | Wood | 0.00 | Negative |
| 1661 | Room 329 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1662 | Room 329 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1663 | Room 329 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.10 | Positive |
| 1664 | Room 329 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1665 | Room 329 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1666 | Room 331 | 3 | Wall A | Pink | Intact | Plaster | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1667 | Room 331 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1668 | Room 331 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1669 | Room 331 | 3 | Wall B | Pink | Intact | Plaster | 0.30 | Negative |
| 1670 | Room 331 | 3 | Wall C | Pink | Intact | Plaster | 0.40 | Negative |
| 1671 | Room 331 | 3 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |
| 1672 | Room 331 | 3 | Ceiling | Pink | Intact | Plaster | 0.40 | Negative |
| 1673 | Room 331 | 3 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1674 | Room 331 | 3 | Locker Wall A | Pink | Intact | Metal | 0.10 | Negative |
| 1675 | Hall #13 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1676 | Hall #13 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1677 | Hall #13 | 3 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 1678 | Hall #13 | 3 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1679 | Hall #13 | 3 | Wall B Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1680 | Hall #13 | 3 | Wall B Window Frame | White | Intact | Wood | 2.50 | Positive |
| 1681 | Hall #13 | 3 | Wall B Radialor cover | Gray | Intact | Metal | 0.20 | Negative |
| 1682 | Hall #13 | 3 | Wall B Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1683 | Hall #13 | 3 | Wall B Locker Door | Gray | Intact | Metal | 0.20 | Negative |
| 1684 | Hall #13 | 3 | Wall B Locker Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1685 | Hall #13 | 3 | Wall C | Green | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1686 | Hall #13 | 3 | Wall C | Green | Intact | Ceramic | 8.60 | Positive |
| 1687 | Hall #13 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1688 | Hall #13 | 3 | Wall C Window Frame | White | Intact | Wood | 3.80 | Positive |
| 1689 | Hall #13 | 3 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1690 | Hall #13 | 3 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1691 | Hall #13 | 3 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | 0.10 | Negative |
| 1692 | Hall #13 | 3 | Wall D Door | Stained | Intact | Wood | 0.10 | Negative |
| 1693 | Hall #13 | 3 | Wall D Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1694 | Hall #13 | 3 | Wall D Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1695 | Hall #13 | 3 | Ceiling | White | Intact | Plaster | 0.60 | Negative |
| 1696 | Hall #13 | 3 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 1697 | Hall #14 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1698 | Hall #14 | 3 | Wall B | Yellow | Intact | Ceramic | 0.20 | Negative |
| 1699 | Hall #14 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1700 | Hall #14 | 3 | Wall C | Yellow | Intact | Ceramic | 0.20 | Negative |
| 1701 | Hall #14 | 3 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1702 | Hall #14 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1703 | Hall #14 | 3 | Ceiling | White | Intact | Plaster | -0.20 | Negative |
| 1704 | Hall #14 | 3 | Floor | Tan | Intact | Terrazzo | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1705 | Hall #15 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1706 | Hall #15 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1707 | Hall #15 | 3 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 1708 | Hall #15 | 3 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1709 | Hall #15 | 3 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1710 | Hall #15 | 3 | Wall B Panel Box | Gray | Intact | Metal | 0.20 | Negative |
| 1711 | Hall #15 | 3 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1712 | Hall #15 | 3 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1713 | Hall #15 | 3 | Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 1714 | Hall #15 | 3 | Floor | Tan | Intact | Terrazzo | 0.00 | Negative |
| 1715 | Hall #16 | 3 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 1716 | Hall #16 | 3 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1717 | Hall #16 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1718 | Hall #16 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1719 | Hall #16 | 3 | Wall A 4" x 4" Tile | Green | Intact | Ceramic | 0.20 | Negative |
| 1720 | Hall #16 | 3 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1721 | Hall #16 | 3 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1722 | Hall #16 | 3 | Wall C 4" x 4" Tile | Green | Intact | Ceramic | 0.20 | Negative |
| 1723 | Hall #16 | 3 | Wall C Locker | Gray | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 1724 | Hall #16 | 3 | Wall C Fire Box | Gray | Intact | Metal | 0.10 | Negative |
| 1725 | Stair #1 | NA | Wall A | White | Intact | Plaster | 0.40 | Negative |
| 1726 | Stair #1 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1727 | Stair #1 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1728 | Stair #1 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1729 | Stair #1 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1730 | Stair #1 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1731 | Stair #1 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1732 | Stair #1 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1733 | Stair #1 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1734 | Stair #1 | NA | Stair Riser | Grey | Intact | Metal | 6.10 | Positive |
| 1735 | Stair #1 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1736 | Stair #1 | NA | Stair Railing | Grey | Intact | Metal | 8.90 | Positive |
| 1737 | Stair #2 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1738 | Stair #2 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1739 | Stair #2 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1740 | Stair #2 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1741 | Stair #2 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1742 | Stair #2 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|-------------------------------------|----------------------------|
| 1743 | Stair #2 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1744 | Stair #2 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1745 | Stair #2 | NA | Stair Riser | Grey | Intact | Metal | 4.60 | Positive |
| 1746 | Stair #2 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1747 | Stair #2 | NA | Stair Railing | Grey | Intact | Metal | 8.20 | Positive |
| 1748 | Stair #3 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1749 | Stair #3 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1750 | Stair #3 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1751 | Stair #3 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1752 | Stair #3 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1753 | Stair #3 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1754 | Stair #3 | NA | Wall D | Green | Intact | Ceramic | 7.60 | Positive |
| 1755 | Stair #3 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1756 | Stair #3 | NA | Stair Riser | Grey | Intact | Metal | 8.60 | Positive |
| 1757 | Stair #3 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1758 | Stair #3 | NA | Stair Railing | Grey | Intact | Metal | > 9.9 | Positive |
| 1759 | Stair #4 | NA | Wall A | Green | Intact | Ceramic | 7.20 | Positive |
| 1760 | Stair #4 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1761 | Stair #4 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

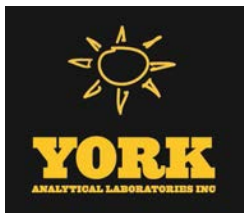
TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 1762 | Stair #4 | NA | Wall C | White | Intact. | Plaster | 0.40 | Negative |
| 1763 | Stair #4 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1764 | Stair #4 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1765 | Stair #4 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1766 | Stair #4 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1767 | Stair #4 | NA | Stair Riser | Grey | Intact | Metal | 4.60 | Positive |
| 1768 | Stair #4 | NA | Stair Stringer | Grey | Intact | Metal | 8.60 | Positive |
| 1769 | Stair #4 | NA | Stair Railing | Grey | Intact | Metal | 3.90 | Positive |



**APPENDIX F:
PCB BULK SAMPLE FIELD DATA SHEETS
WITH CHAIN OF CUSTODY
AND LABORATORY RESULTS**



Technical Report

prepared for:

Louis Berger & Associates, P.C.
48 Wall Street, 16th Floor
New York NY, 10005
Attention: Craig Napolitano

Report Date: 04/13/2015
Client Project ID: 3001111.00
York Project (SDG) No.: 15D0196

CT Cert. No. PH-0723

New Jersey Cert. No. CT-005



New York Cert. No. 10854

PA Cert. No. 68-04440

Report Date: 04/13/2015
Client Project ID: 3001111.00
York Project (SDG) No.: 15D0196

Louis Berger & Associates, P.C.
48 Wall Street, 16th Floor
New York NY, 10005
Attention: Craig Napolitano

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 06, 2015 and listed below. The project was identified as your project: **3001111.00**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| <u>York Sample ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Date Collected</u> | <u>Date Received</u> |
|-----------------------|-------------------------|---------------|-----------------------|----------------------|
| 15D0196-01 | 03-03A/03B/03C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-02 | 05-05A/05B/05C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-03 | 13-13A/13B/13C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-04 | 25-25A/25B/25C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-05 | 26-26A/26B/26C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-06 | 27-27A/27B/27C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-07 | 29-29A/29B/29C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-08 | 30-30A/30B/30C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-09 | 31-31A/31B/31C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-10 | 32-32A/32B/32C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-11 | 37-37A/37B/37C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-12 | 39-39A/39B/39C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-13 | 40-40A/40B/40C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-14 | 41-41A/41B/41C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-15 | 42-42A/42B/42C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-16 | 61-61A/61B/61C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-17 | 62-62A/62B/62C | Caulk | 04/01/2015 | 04/06/2015 |

General Notes for York Project (SDG) No.: 15D0196

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 04/13/2015





Sample Information

Client Sample ID: 03-03A/03B/03C

York Sample ID: 15D0196-01

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |

Surrogate Recoveries

| | Surrogate | Result | Flag | Acceptance Range |
|-----------|---------------------------------|--------|--------|------------------|
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 98.5 % | | 30-140 |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 159 % | GC-Sur | 30-140 |

Sample Information

Client Sample ID: 05-05A/05B/05C

York Sample ID: 15D0196-02

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |



Sample Information

Client Sample ID: 05-05A/05B/05C

York Sample ID: 15D0196-02

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 86.7 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 159 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 13-13A/13B/13C

York Sample ID: 15D0196-03

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 102 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 160 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 25-25A/25B/25C

York Sample ID: 15D0196-04

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.6 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 156 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 26-26A/26B/26C

York Sample ID: 15D0196-05

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |



Sample Information

Client Sample ID: 26-26A/26B/26C

York Sample ID: 15D0196-05

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 101 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 170 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 27-27A/27B/27C

York Sample ID: 15D0196-06

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 99.0 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 163 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 29-29A/29B/29C

York Sample ID: 15D0196-07

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 100 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 170 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 30-30A/30B/30C

York Sample ID: 15D0196-08

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |



Sample Information

Client Sample ID: 30-30A/30B/30C

York Sample ID: 15D0196-08

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 100 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 163 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 31-31A/31B/31C

York Sample ID: 15D0196-09

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.6 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 154 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 32-32A/32B/32C

York Sample ID: 15D0196-10

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 73.4 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 109 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 37-37A/37B/37C

York Sample ID: 15D0196-11

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |



Sample Information

Client Sample ID: 37-37A/37B/37C

York Sample ID: 15D0196-11

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|------------------------------|--------------------|--------------------|---------|
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 81.3 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 169 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 39-39A/39B/39C

York Sample ID: 15D0196-12

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.1 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 165 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 40-40A/40B/40C

York Sample ID: 15D0196-13

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 88.7 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 87.1 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 41-41A/41B/41C

York Sample ID: 15D0196-14

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |



Sample Information

Client Sample ID: 41-41A/41B/41C

York Sample ID: 15D0196-14

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|--------------------|----------|------------------------------|-----------------------|-----------------------|---------|
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 87.2 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 85.6 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 42-42A/42B/42C

York Sample ID: 15D0196-15

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|--------------------|----------|--|-----------------------|-----------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 85.2 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 82.1 % | 30-140 | | | | | | | | |



Sample Information

Client Sample ID: 61-61A/61B/61C

York Sample ID: 15D0196-16

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 80.8 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 60.2 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 62-62A/62B/62C

York Sample ID: 15D0196-17

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |



Sample Information

Client Sample ID: 62-62A/62B/62C

York Sample ID: 15D0196-17

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

15D0196

3001111.00

Caulk

April 1, 2015 3:00 pm

04/06/2015

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|--------------------|----------|------------------------------|-----------------------|-----------------------|---------|
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 80.8 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 71.1 % | 30-140 | | | | | | | | |



Analytical Batch Summary

Batch ID: BD50417

Preparation Method: EPA 3550C

Prepared By: SA

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 15D0196-01 | 03-03A/03B/03C | 04/08/15 |
| 15D0196-02 | 05-05A/05B/05C | 04/08/15 |
| 15D0196-03 | 13-13A/13B/13C | 04/08/15 |
| 15D0196-04 | 25-25A/25B/25C | 04/08/15 |
| 15D0196-05 | 26-26A/26B/26C | 04/08/15 |
| 15D0196-06 | 27-27A/27B/27C | 04/08/15 |
| 15D0196-07 | 29-29A/29B/29C | 04/08/15 |
| 15D0196-08 | 30-30A/30B/30C | 04/08/15 |
| 15D0196-09 | 31-31A/31B/31C | 04/08/15 |
| 15D0196-10 | 32-32A/32B/32C | 04/08/15 |
| 15D0196-11 | 37-37A/37B/37C | 04/08/15 |
| 15D0196-12 | 39-39A/39B/39C | 04/08/15 |
| 15D0196-13 | 40-40A/40B/40C | 04/08/15 |
| 15D0196-14 | 41-41A/41B/41C | 04/08/15 |
| 15D0196-15 | 42-42A/42B/42C | 04/08/15 |
| 15D0196-16 | 61-61A/61B/61C | 04/08/15 |
| 15D0196-17 | 62-62A/62B/62C | 04/08/15 |
| BD50417-BLK1 | Blank | 04/08/15 |
| BD50417-BS1 | LCS | 04/08/15 |
| BD50417-BSD1 | LCS Dup | 04/08/15 |



Polychlorinated Biphenyls by GC/ECD - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|--|--------|-----------------|-------|-------------|----------------|------|-------------|------|-------|---|------|
| Batch BD50417 - EPA 3550C | | | | | | | | | | | |
| Blank (BD50417-BLK1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | ND | 0.500 | mg/kg | | | | | | | | |
| Aroclor 1221 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1232 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1242 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1248 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1254 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1260 | ND | 0.500 | " | | | | | | | | |
| Total PCBs | ND | 0.500 | " | | | | | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.39 | | " | 2.03 | | 68.5 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.53 | | " | 2.01 | | 76.1 | 30-140 | | | | |
| LCS (BD50417-BS1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | 10.6 | 0.500 | mg/kg | 10.0 | | 106 | 40-130 | | | | |
| Aroclor 1260 | 10.5 | 0.500 | " | 10.0 | | 105 | 40-130 | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.83 | | " | 2.03 | | 90.1 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.83 | | " | 2.01 | | 91.0 | 30-140 | | | | |
| LCS Dup (BD50417-BSD1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | 10.7 | 0.500 | mg/kg | 10.0 | | 107 | 40-130 | | 0.917 | 25 | |
| Aroclor 1260 | 10.4 | 0.500 | " | 10.0 | | 104 | 40-130 | | 0.556 | 25 | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.90 | | " | 2.03 | | 93.6 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.74 | | " | 2.01 | | 86.6 | 30-140 | | | | |



Notes and Definitions

GC-Surr Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the alternate surrogate.

| | |
|-------------|--|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111-00 **LOCATION(S) SURVEYED:** Throughout **15D0196**
CLIENT: Middletown Schools **PROPOSED PROJECT:** School Wide Renovations Renovation
PROJECT SITE: Twin Towers Middle School, Middletown, NY **DATE(S) OF INSPECTION:** 3/24, 3/25, 3/31 – 4/01/2015
Project Manager: Craig Napolitano **Inspector(s):** Drew Cheskin & Josue Garcia

LOUIS BERGER
 TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
 cnapolitano@louisberger.com
 jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (L/FSF) | FIELD NOTES |
|----------------|----|------------|------------------|--|-----------------|--------------------------|-------------|
| | 03 | 03A | | Coping Stone Caulk | Roof M | | |
| | 03 | 03B | | Coping Stone Caulk | Roof L | | |
| | 03 | 03C | | Coping Stone Caulk | Roof L | | |
| | 05 | 05A | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 05 | 05B | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 05 | 05C | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 13 | 13A | | Cap Flashing Caulk | Roof L | | |
| | 13 | 13B | | Cap Flashing Caulk | Roof L | | |
| | 13 | 13B | | Cap Flashing Caulk | Roof L | | |
| | 25 | 25A | | Cap Flashing Caulk, Tan | Roof O | | |
| | 25 | 25B | | Cap Flashing Caulk, Tan | Roof O | | |
| | 25 | 25C | | Cap Flashing Caulk, Tan | Roof O | | |

CHAIN OF CUSTODY

| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
|------------------|--------|--------|------------------|--------|--------|
| Relinquished by: | | | Relinquished by: | | |
| Relinquished by: | | | Relinquished by: | | |
| Relinquished by: | | | Relinquished by: | | |
| Relinquished by: | | | Relinquished by: | | |
| Relinquished by: | | | Relinquished by: | | |

INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlors 1016, Arochlors 1221, Arochlors 1232, Arochlors 1242, Arochlors 1248, Arochlors 1254, Arochlors 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

1500196

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|---------------------------|-----------------|--------------------------|-------------|
| 26 | | 26A | | Cap Flashing Caulk, Red | Roof O | | |
| 26 | | 26B | | Cap Flashing Caulk, Red | Roof O | | |
| 26 | | 26C | | Cap Flashing Caulk, Red | Roof O | | |
| 27 | | 27A | | Cap Flashing Caulk, Grey | Roof O | | |
| 27 | | 27B | | Cap Flashing Caulk, Grey | Roof O | | |
| 27 | | 27C | | Cap Flashing Caulk, Grey | Roof O | | |
| 29 | | 29A | | Cap Flashing Caulk, White | Roof O | | |
| 29 | | 29B | | Cap Flashing Caulk, White | Roof O | | |
| 29 | | 29C | | Cap Flashing Caulk, White | Roof O | | |
| 30 | | 30A | | Expansion Joint Caulk | Roof Q | | |
| 30 | | 30B | | Expansion Joint Caulk | Roof Q | | |
| 30 | | 30C | | Expansion Joint Caulk | Roof Q | | |

CHAIN OF CUSTODY

| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
|--------------------------------|--------|--------|----------------------------------|--------|--------|
| Relinquished by: | | | Relinquished by: | | |
| Received by: | (Date) | (Time) | Received by: | (Date) | (Time) |
| Received by: <i>Kyle Baker</i> | 4/6/15 | | Received by: <i>TL Czubinski</i> | 4/6/15 | 18:30 |

LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions ($\pm 5\%$) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 3 OF 5

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

15D0196

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5 Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|---|-----------------|--------------------------|-------------|
| | 31 | 31A | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 31 | 31B | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 31 | 31C | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 32 | 32A | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 32 | 32B | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 32 | 32C | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 37 | 37A | | Cap Flashing Caulk, Light Grey | Roof I | | |
| | 37 | 37B | | Cap Flashing Caulk, Light Grey | Roof C | | |
| | 37 | 37C | | Cap Flashing Caulk, Light Grey | Roof C | | |
| | 39 | 39A | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| | 39 | 39B | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| | 39 | 39C | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |

CHAIN OF CUSTODY

| | | | | | | | |
|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Time) | (Date) | Relinquished by: | (Sign) | (Time) | (Date) |
| Received by: | (Sign) | (Time) | (Date) | Received by: | (Sign) | (Time) | (Date) |
| | | | | | | | |
| | | | | | | | |

LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

15D0196

PROJECT NO.: 3001111.00

LOCATION(S) SURVEYED: Throughout

CLIENT: Middletown Schools

PROPOSED PROJECT: School Wide Renovations Renovation

PROJECT SITE: Twin Towers Middle School, Middletown, NY

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Project Manager: Craig Napolitano

Inspector(s): Drew Cheskin & Josue Garcia

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|-------------------------------|-------------------|--------------------------|-------------|
| | 40 | 40A | | Cap Flashing Caulk, Old | Roof D | | |
| | 40 | 40B | | Cap Flashing Caulk, Old | Roof C | | |
| | 40 | 40C | | Cap Flashing Caulk, Old | Roof C | | |
| | 41 | 41A | | Cap Flashing Caulk, Dark Grey | Roof I | | |
| | 41 | 41B | | Cap Flashing Caulk, Dark Grey | Roof C | | |
| | 41 | 41C | | Cap Flashing Caulk, Dark Grey | Roof C | | |
| | 42 | 42A | | Cap Flashing Caulk, White | Roof I | | |
| | 42 | 42B | | Cap Flashing Caulk, White | Roof C | | |
| | 42 | 42C | | Cap Flashing Caulk, White | Roof C | | |
| | 61 | 61A | | Caulking to Sinks/Toilets | Boys Locker Room | | |
| | 61 | 61B | | Caulking to Sinks/Toilets | Girls Locker Room | | |
| | 61 | 61C | | Caulking to Sinks/Toilets | Girls Locker Room | | |

CHAIN OF CUSTODY

| | | | | | | | |
|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| | | | | | | | |
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LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: **5-Day**

15 D0196

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|-----------------------|----------------------------|--------------------------|-------------|
| | 62 | 62A | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | 62 | 62B | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | 62 | 62C | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | | | | | | | |
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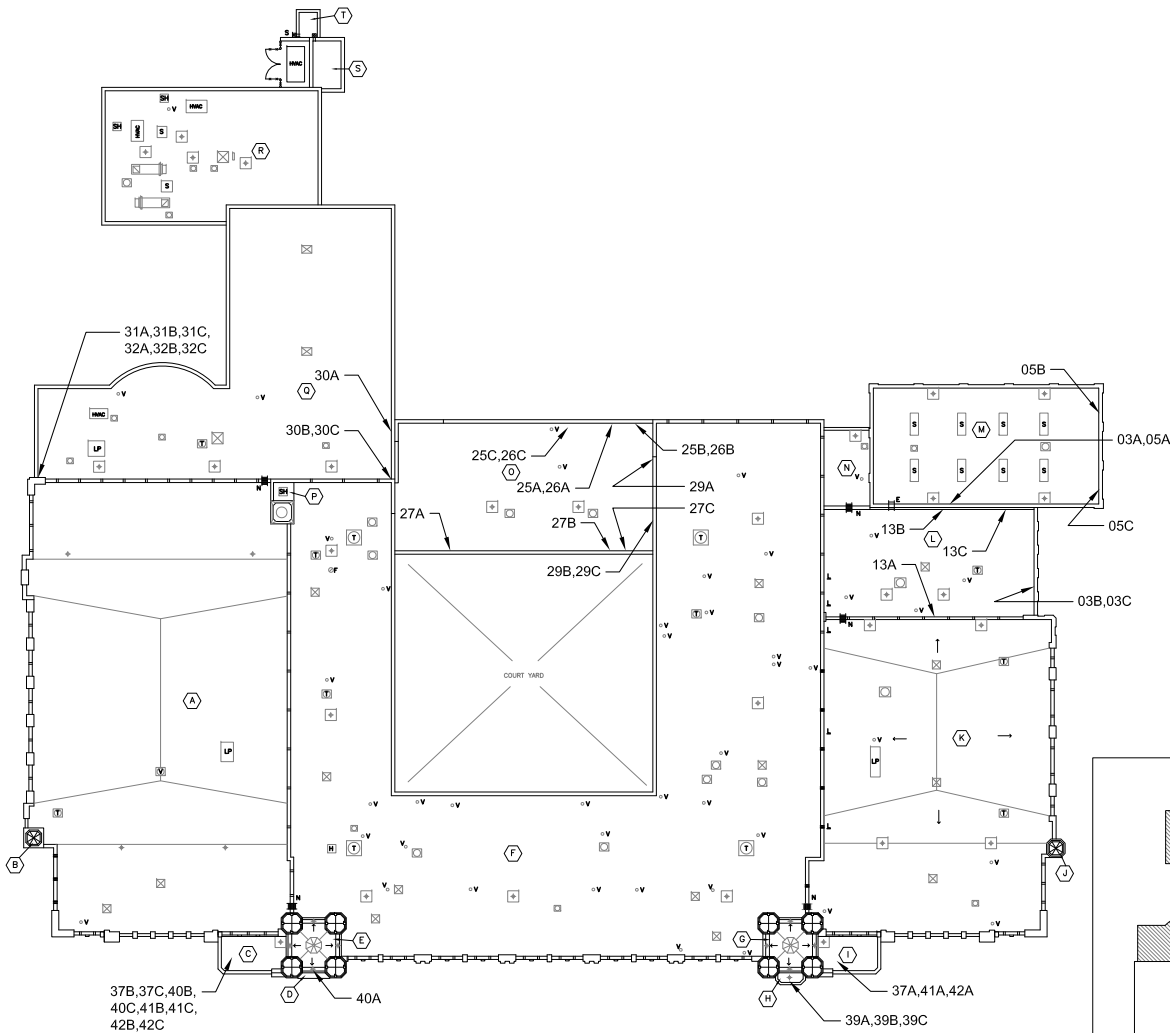
CHAIN OF CUSTODY

| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
|------------------|--------|--------|------------------|--------|--------|
| (Sign) | (Date) | (Time) | (Sign) | (Date) | (Time) |
| Received by: | (Date) | (Time) | Received by: | (Date) | (Time) |
| (Sign) | (Date) | (Time) | (Sign) | (Date) | (Time) |
| Drew Cheskin | 4/6/15 | 9:00A | Josue Garcia | 4/6/15 | 18:30 |

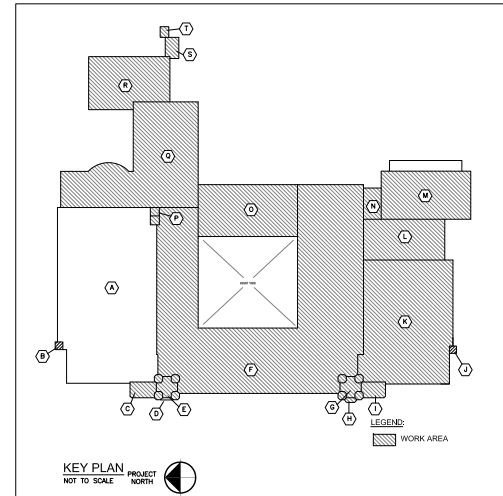
INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions ($\pm 5\%$) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



**APPENDIX G:
PCB BULK SAMPLE LOCATION DRAWINGS**



ROOF PLAN
0" 4" 8" 16"
PROJECT NORTH



KEY PLAN
NOT TO SCALE
PROJECT NORTH

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

DRAWING TITLE
PCBSAMPLE LOCATIONS
ROOF PLAN

| | |
|------------------------|-----------------|
| DRAWN BY: J. HREZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHEN | DATE: 04/15/15 |
| CHECKED BY: M. STANLEY | DRAWN: J. HREZ |
| CHECKED BY: C. WENSTRA | |

PCB002
DRAWING NUMBER
2 OF 2



**APPENDIX H:
COMPANY LICENSE, PERSONNEL CERTIFICATIONS
& LABORATORY ACCREDITATIONS**

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Louis Berger & Assoc., P.C.
16th Floor
48 Wall Street


New York, NY 10005

FILE NUMBER: 09-46778
LICENSE NUMBER: 46778
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 06/19/2014
EXPIRATION DATE: 07/31/2015

Duly Authorized Representative – Prakash Saha:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Acting Director
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



ANDREW B CHESKIN

CLASS(EXPIRES)

C ATEC(09/15) D INSP(09/15)

E MGPL(09/15) H PM (09/15)

I PD (09/15)

CERT# 09-04280
DMV# 3D4231776

MUST BE CARRIED ON ASBESTOS PROJECTS

**New York
INSPECTOR**



**Certified Lead-Based
Paint Professional**

| | |
|--|--------------------------------------|
| Certification No NY-I-11881-2 | |
| Date of Birth 06/30/1973 | Expiration Date 06/26/2016 |
| Address 142 Garth Rd., Apt. 6B Scarsdale, NY 10583 | |
| Badge Holder's Name Andrew Brian Cheskin | |
| Badge Holder's Signature <i>AB</i> | |



If found, drop in any mailbox
Postmaster: Please return to:
**US EPA
1200 Pennsylvania Ave, NW
(MC-74040T)
Washington, DC 20460
or call 1-800-424-LEAD**

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



JOSUE GARCIA
CLASS(EXPIRES)
C ATEC(08/15) D INSP(08/15)
H PM (08/15) I PD (08/15)

CERT# 01-04292
DMV# 816004194

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 000287824 70

EYES BLK
HAIR BLK
HGT 5' 06"

IF FOUND RETURN TO:
NYSOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

New York
RISK ASSESSOR



**Certified Lead-Based
Paint Professional**

| | |
|---|-----------------|
| Certification No. | NY-R-6928-4 |
| Date of Birth | Expiration Date |
| 03/07/1970 | 04/09/2017 |
| Address | |
| | |
| Badge Holder's Name | |
| Josue Garcia | |
| Badge Holder's Signature | |
|  | |



If found, drop in any mailbox
Postmaster: Please return to:

US EPA
1200 Pennsylvania Ave, NW
(MC-7404T)
Washington, DC 20460
or Call 1-800-424-LEAD

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2015
Issued April 01, 2014

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JAMES HALL
EMSL ANALYTICAL, INC
307 WEST 38TH STREET
NEW YORK, NY 10018

NY Lab Id No: 11506

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |
| Lead in Dust Wipes | EPA 7000B |
| Lead in Paint | EPA 7000B |

Sample Preparation Methods

EPA 3050B
APP. 14.2, HUD JUNE 1995

Serial No.: 50665

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2016
Issued April 01, 2015

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JAMES HALL
EMSL ANALYTICAL, INC
307 WEST 38TH STREET
NEW YORK, NY 10018

NY Lab Id No: 11506

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |
| Lead in Dust Wipes | EPA 7000B |
| Lead in Paint | EPA 7000B |

Sample Preparation Methods

EPA 3050B

Serial No.: 52401

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-9

EMSL Analytical, Inc.
New York, NY

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2014-07-01 through 2015-06-30

Effective dates



A handwritten signature in black ink, appearing to read 'William R. Mudd', is written over a horizontal line.

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.

307 W. 38th Street
New York, NY 10018
Jim Hall

Phone: 212-290-0051 Fax: 212-290-0058

E-Mail: ssiegel@emsl.com

URL: <http://www.emsl.com>

BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101048-9

| <i>NVLAP Code</i> | <i>Designation / Description</i> |
|-------------------|--|
| 18/A01 | EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples |
| 18/A03 | EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials |

2014-07-01 through 2015-06-30

Effective dates

For the National Institute of Standards and Technology

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Metals II

| | |
|-----------------|-----------------------|
| Vanadium, Total | EPA 6020 |
| Zinc, Total | EPA 6010B EPA 6020 |

Nitrosoamines

| | |
|---------------------------|------------------------|
| N-Nitrosodimethylamine | EPA 8270D |
| N-Nitrosodi-n-propylamine | EPA 8270C EPA 8270D |
| N-Nitrosodiphenylamine | EPA 8270D |

Metals III

| | |
|-------------------|-----------------------|
| Cobalt, Total | EPA 6010B EPA 6020 |
| Molybdenum, Total | EPA 6010B EPA 6020 |
| Thallium, Total | EPA 6010B EPA 6020 |
| Tin, Total | EPA 6010B |

Petroleum Hydrocarbons

| | |
|-------------------------|-----------|
| Diesel Range Organics | EPA 8015B |
| Gasoline Range Organics | EPA 8260B |

Phthalate Esters

| | |
|-----------------------------|------------------------|
| Benzyl butyl phthalate | EPA 8270C EPA 8270D |
| Bis(2-ethylhexyl) phthalate | EPA 8270C EPA 8270D |
| Diethyl phthalate | EPA 8270C EPA 8270D |
| Dimethyl phthalate | EPA 8270C EPA 8270D |
| Di-n-butyl phthalate | EPA 8270C EPA 8270D |
| Di-n-octyl phthalate | EPA 8270C EPA 8270D |

Miscellaneous

| | |
|-----------------------------|----------|
| Extractable Organic Halides | EPA 9023 |
|-----------------------------|----------|

Nitroaromatics and Isophorone

| | |
|--------------------|------------------------|
| 2,4-Dinitrotoluene | EPA 8270C EPA 8270D |
| 2,6-Dinitrotoluene | EPA 8270C EPA 8270D |
| Isophorone | EPA 8270C EPA 8270D |
| Nitrobenzene | EPA 8270C EPA 8270D |
| Pyridine | EPA 8270D |

Polychlorinated Biphenyls

| | |
|----------|----------|
| PCB-1016 | EPA 8082 |
| PCB-1221 | EPA 8082 |
| PCB-1232 | EPA 8082 |

Serial No.: 48422

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Polychlorinated Biphenyls

| | |
|----------|----------|
| PCB-1242 | EPA 8082 |
| PCB-1248 | EPA 8082 |
| PCB-1254 | EPA 8082 |
| PCB-1260 | EPA 8082 |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Acenaphthene | EPA 8270C |
| | EPA 8270D |
| Acenaphthylene | EPA 8270C |
| | EPA 8270D |
| Anthracene | EPA 8270C |
| | EPA 8270D |
| Benzo(a)anthracene | EPA 8270C |
| | EPA 8270D |
| Benzo(a)pyrene | EPA 8270C |
| | EPA 8270D |
| Benzo(b)fluoranthene | EPA 8270C |
| | EPA 8270D |
| Benzo(ghi)perylene | EPA 8270C |
| | EPA 8270D |
| Chrysene | EPA 8270C |
| | EPA 8270D |
| Dibenzo(a,h)anthracene | EPA 8270C |
| | EPA 8270D |
| Fluoranthene | EPA 8270C |
| | EPA 8270D |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Fluorene | EPA 8270C |
| | EPA 8270D |
| Indeno(1,2,3-cd)pyrene | EPA 8270C |
| | EPA 8270D |
| Naphthalene | EPA 8270C |
| | EPA 8270D |
| Phenanthrene | EPA 8270C |
| | EPA 8270D |
| Pyrene | EPA 8270C |
| | EPA 8270D |

Priority Pollutant Phenols

| | |
|----------------------------|-----------|
| 2,4,5-Trichlorophenol | EPA 8270D |
| 2,4,6-Trichlorophenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dichlorophenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dimethylphenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dinitrophenol | EPA 8270C |
| | EPA 8270D |
| 2-Chlorophenol | EPA 8270C |
| | EPA 8270D |
| 2-Methyl-4,6-dinitrophenol | EPA 8270C |
| | EPA 8270D |
| 2-Methylphenol | EPA 8270C |

Serial No.: 48422

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2016
Issued April 01, 2015



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
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NY Lab Id No: 10854

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Metals II

| | |
|-----------------|------------------------|
| Vanadium, Total | EPA 6020A |
| Zinc, Total | EPA 6010C EPA 6020A |

Metals III

| | |
|-------------------|------------------------|
| Cobalt, Total | EPA 6010C EPA 6020A |
| Molybdenum, Total | EPA 6020A |
| Thallium, Total | EPA 6010C EPA 6020A |
| Tin, Total | EPA 6020A |
| Titanium, Total | EPA 6020A |

Miscellaneous

| | |
|-----------------------------|-----------|
| Boron, Total | EPA 6020A |
| Cyanide, Total | EPA 9014 |
| Extractable Organic Halides | EPA 9023 |

Nitroaromatics and Isophorone

| | |
|--------------------|-----------|
| 2,4-Dinitrotoluene | EPA 8270D |
| 2,6-Dinitrotoluene | EPA 8270D |
| Isophorone | EPA 8270D |
| Nitrobenzene | EPA 8270D |
| Pyridine | EPA 8270D |

Nitrosoamines

| | |
|---------------------------|-----------|
| N-Nitrosodimethylamine | EPA 8270D |
| N-Nitrosodi-n-propylamine | EPA 8270D |

Nitrosoamines

| | |
|------------------------|-----------|
| N-Nitrosodiphenylamine | EPA 8270D |
|------------------------|-----------|

Petroleum Hydrocarbons

| | |
|-------------------------|-----------|
| Diesel Range Organics | EPA 8015D |
| Gasoline Range Organics | EPA 8015D |

Phthalate Esters

| | |
|-----------------------------|-----------|
| Benzyl butyl phthalate | EPA 8270D |
| Bis(2-ethylhexyl) phthalate | EPA 8270D |
| Diethyl phthalate | EPA 8270D |
| Dimethyl phthalate | EPA 8270D |
| Di-n-butyl phthalate | EPA 8270D |
| Di-n-octyl phthalate | EPA 8270D |

Polychlorinated Biphenyls

| | |
|-------------|-----------|
| PCB-1016 | EPA 8082A |
| PCB-1221 | EPA 8082A |
| PCB-1232 | EPA 8082A |
| PCB-1242 | EPA 8082A |
| PCB-1248 | EPA 8082A |
| PCB-1254 | EPA 8082A |
| PCB-1260 | EPA 8082A |
| PCB-1262 | EPA 8082A |
| PCB-1268 | EPA 8082A |
| PCBs in Oil | EPA 8082A |

Polynuclear Aromatic Hydrocarbons

| | |
|--------------|-----------|
| Acenaphthene | EPA 8270D |
|--------------|-----------|

Serial No.: 52148

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**APPENDIX I:
PHOTOGRAPHIC DOCUMENTATION**

**FINAL REPORT OF ENVIRONENMTAL ASBESTOS SERVICES
FOR
TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE, MIDDLETOWN NY
PHOTODOCUMENTATION LOG**



Photograph 1: Caulk Assoc. with Copper Deck/Coping Stone Seam, Cap Flashing Caulk, Old, Cap Flashing Caulk, Dark Grey & Cap Flashing Caulk, White



Photograph 2: Cementitious Materials Assoc. with Boiler

**FINAL REPORT OF ENVIRONENMTAL ASBESTOS SERVICES
FOR
TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE, MIDDLETOWN NY
PHOTODOCUMENTATION LOG**



Photograph 3: Water Tank Brick Mortar



**APPENDIX J:
FILE SEARCH MATERIALS**

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 1/7/15

Building Twin Towers

Homogenous Area _____ Floor 3rd Room 308

Types of ACM Misc Floor tile 12x12

Location of ACM Classroom

Amount LF or SF 1

Condition Broken Changes Broken

Homogenous Area _____ Floor 3rd Room 319 & 317

Types of ACM 9x9 Floor tile (misc)

Location of ACM Under Carpet (Tom S. said it will be addressed in 2015-16)

Amount LF or SF 50+

Condition Loose (Broken) Changes Needs Attention! ^{NOT exposed to} Staff & Students ^{construction project}

Homogenous Area _____ Floor _____ Room _____
Floor _____ Room _____

Types of ACM _____

Location of ACM _____

Amount LF or SF _____

Condition _____ Changes _____

Person Conducting Surveillance George Pema License# 90-07253

Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 11/7/15
Building Twin Tower 112 Grand Ave
Homogenous Area _____ Floor Basement Room Storage (Boiler RM)
Types of ACM TSI
Location of ACM Ceiling Storage (WRAPPED)
Amount LF or SF _____
Condition OK Changes NONE

Homogenous Area _____ Floor Basement Room Fallout
Types of ACM TSI - All Entrances with Proper Surge
ACCESS TO RPTS + MAINTENANCE STOP, Boiler RM
Location of ACM Fallout Shelter Behind Library, By elevator Electric RM
Amount LF or SF _____
Condition Good to Poor Changes NONE

Homogenous Area _____ Floor _____ Room _____
Floor _____ Room _____
Types of ACM _____
Location of ACM _____
Amount LF or SF _____
Condition _____ Changes _____

Person Conducting Surveillance George Perna License# 90-07253
Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 1/7/15

Building TWIN TOWERS 112 Grand Ave

Homogenous Area _____ Floor _____ Room _____

Types of ACM Misc Floor tile
Covered w/ carpet

Location of ACM Kms - 105, 107, 109, 111 (new) 226, 224 (ART storage) 220 Teacher Rm

Amount LF or SF _____ 325, 327 (new) 324 (new) 300 (new) (206 new)
AS-3 Teacher lounge Cafe

Condition OK Changes none

Homogenous Area _____ Floor 1st Room 1st Aud.

Types of ACM Misc. Floor tile

Location of ACM Auditorium 9x9 Brown

Amount LF or SF _____

Condition OK Changes none

Homogenous Area _____ Floor 1st Room AS-4, 101
Floor _____ Room _____

Types of ACM Misc. Floor tile

Location of ACM Room 101, AS-4 12x12 DARK Brown tile







Amount LF or SF _____

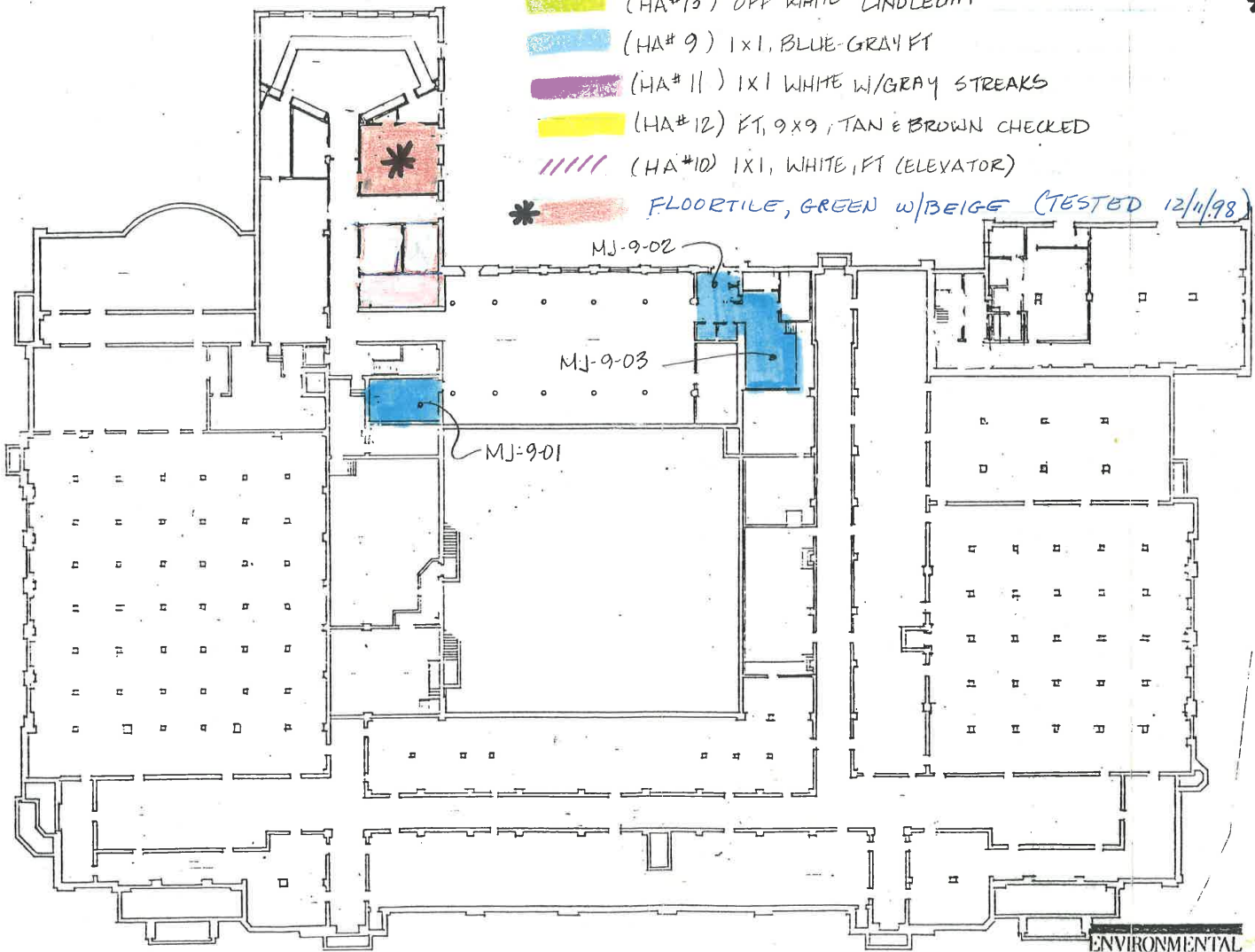
Condition OK Changes none

Person Conducting Surveillance George Perna License# 90-07253

Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

* Asbestos

-  (HA#13) OFF WHITE LINDLEUM
-  (HA#9) 1x1, BLUE-GRAY FT
-  (HA#11) 1x1 WHITE W/GRAY STREAKS
-  (HA#12) FT, 9x9, TAN & BROWN CHECKED
-  (HA#10) 1x1, WHITE, FT (ELEVATOR)
-  * FLOORTILE, GREEN W/BEIGE (TESTED 12/1/98)



BASEMENT FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

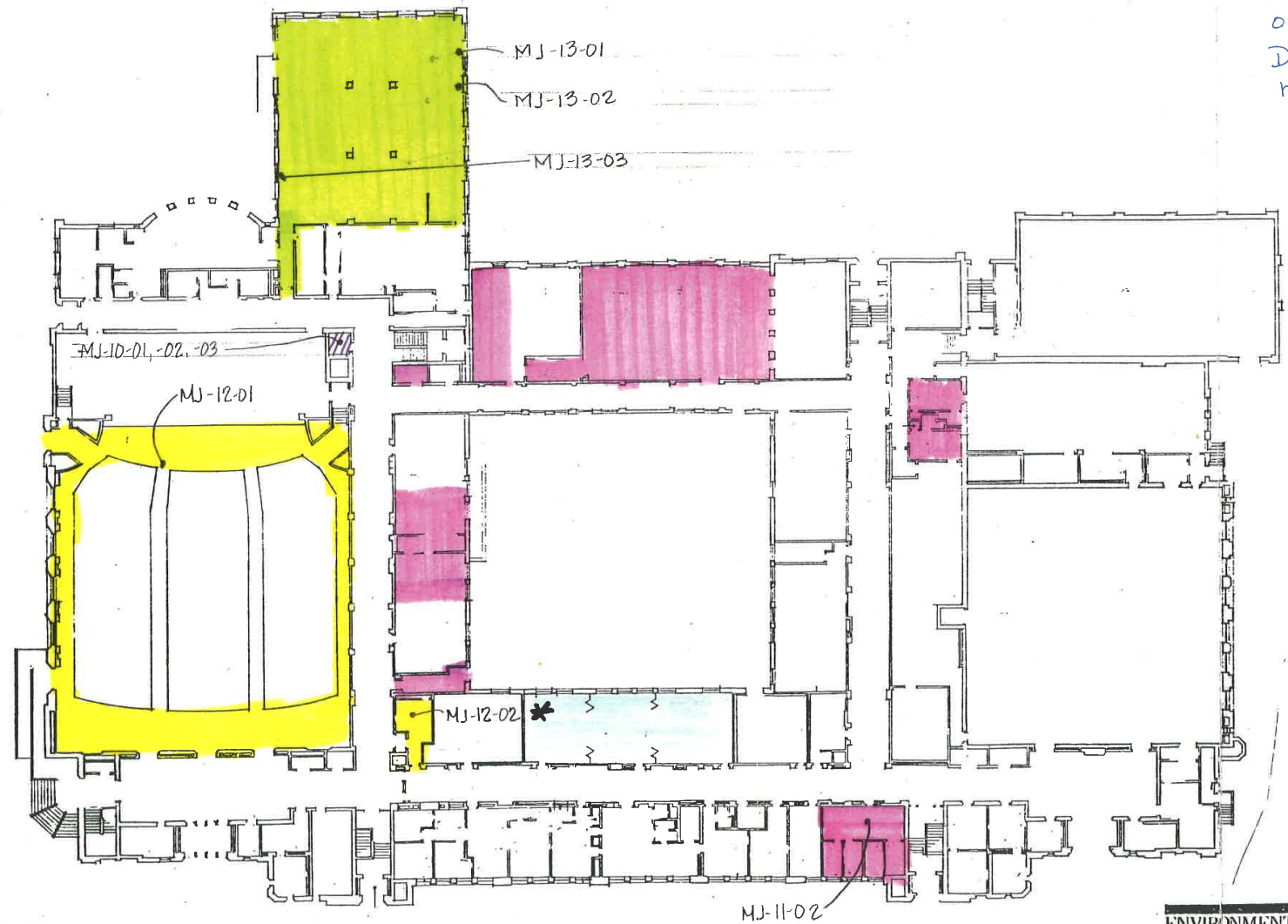
2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 3034

MATERIALS SHOWN: FLOORS

DRAWING NO. 1 DRAWN BY: CR

D.C. BY: MD DATE: 10-21-88

misc. - asbestos in wiring
on stage lighting.
Discovered 9/95 - See lab
results.



* 12x12" asbestos floortile
discovered 8/98 (under
carpet)

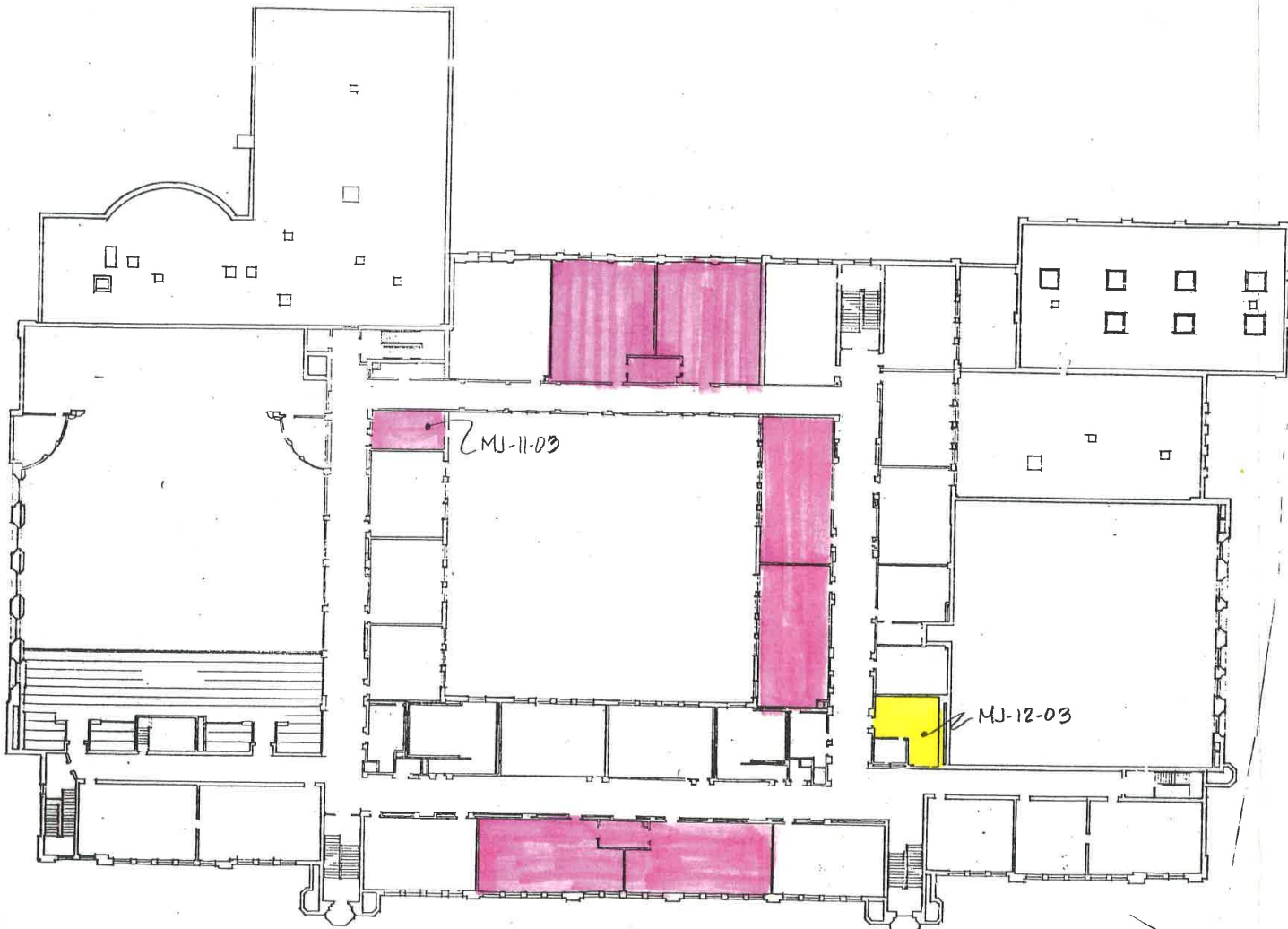
FIRST FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 2 DRAWN BY: CR
Q.C. BY: ME DATE: 10-31-88



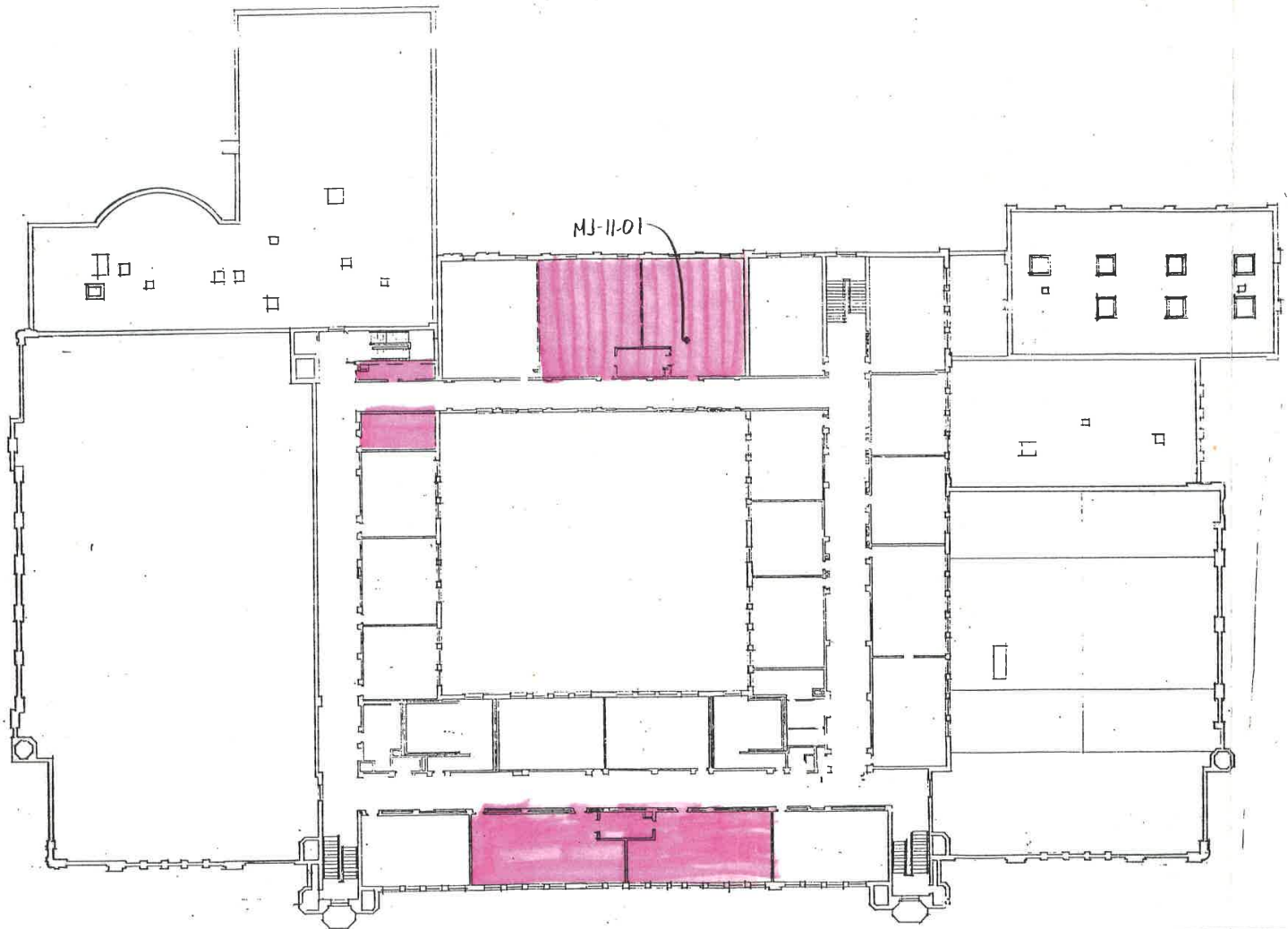
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

2690 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 3 DRAWN BY: CR
O.C. BY: *mm* DATE: 10-31-88



MJ-11-01

THIRD FLOOR PLAN

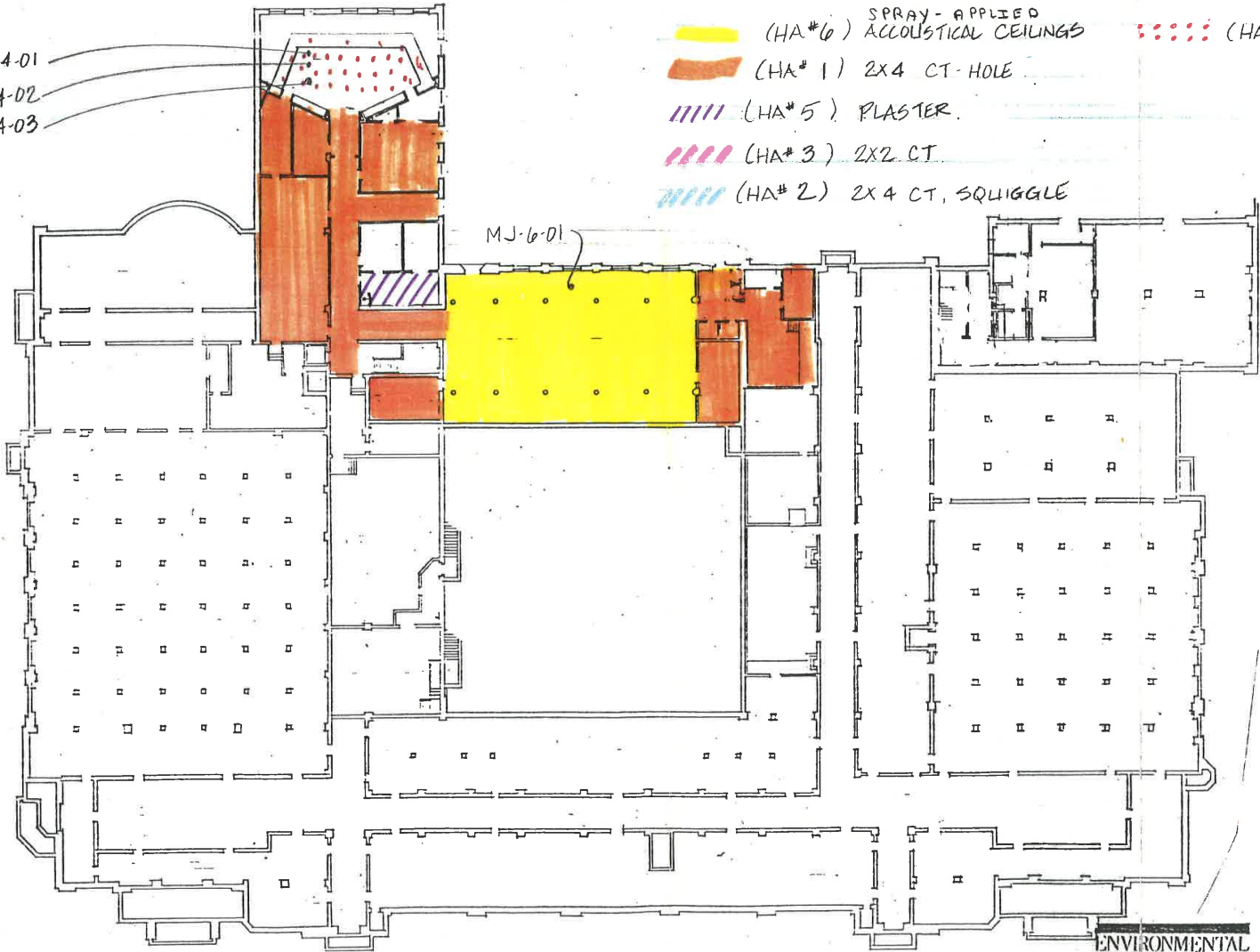
MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
INC

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 4 DRAWN BY: CR
Q.C. BY: MJ DATE: 10-31-88

MJ-4-01
MJ-4-02
MJ-4-03



- (HA#6) SPRAY-APPLIED ACOUSTICAL CEILINGS
- (HA#1) 2X4 CT-HOLE
- (HA#5) PLASTER
- (HA#3) 2X2 CT
- (HA#2) 2X4 CT, SQUIGGLE
- (HA#4) GYP CEILING

MJ-6-01

BASEMENT FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

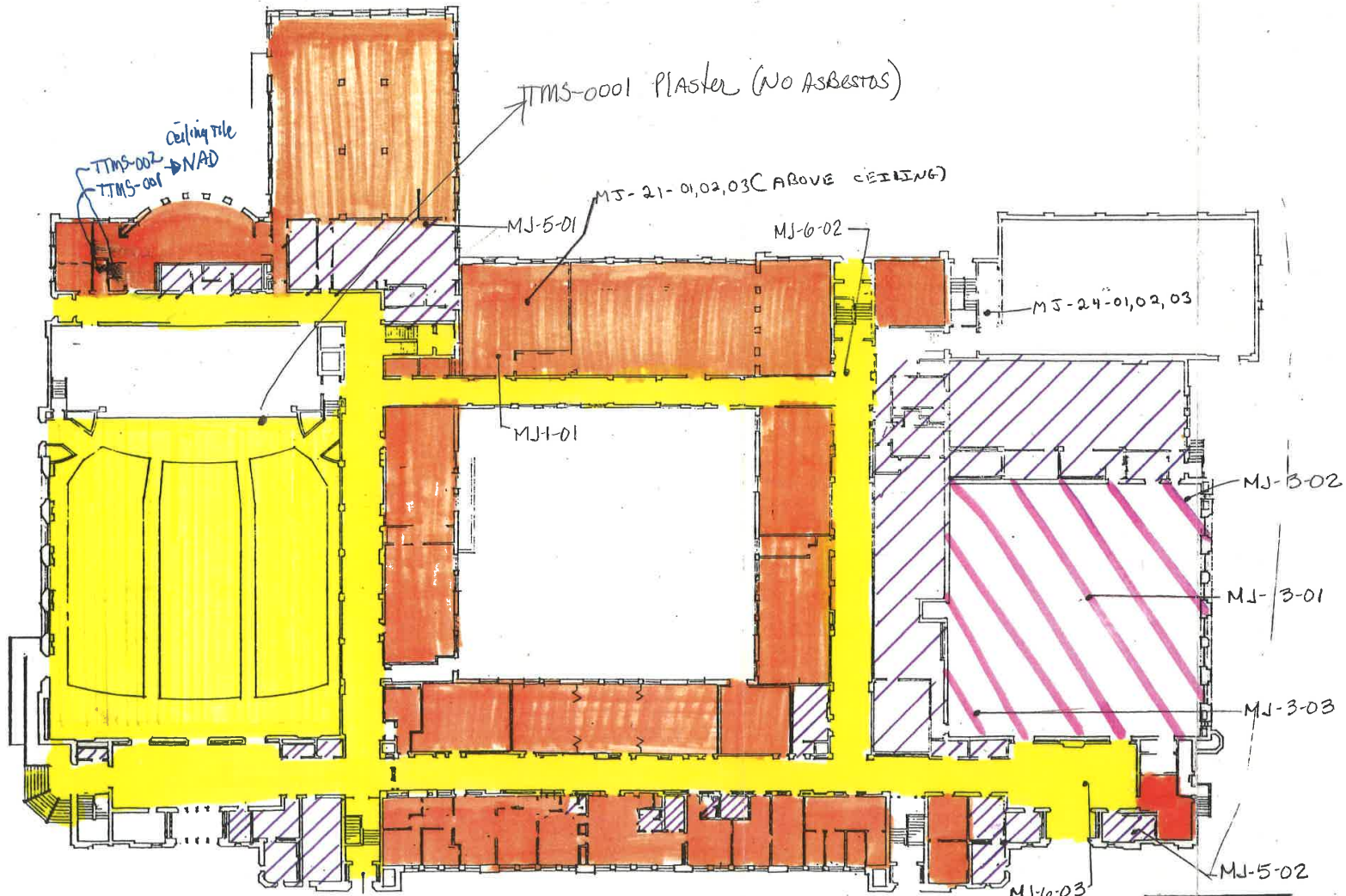
ENVIRONMENTAL
MANAGEMENT
INC

2699 Johnson Road, N.E
Suite Three Hundred
Atlanta, Georgia 3034

MATERIALS SHOWN: CEILING

DRAWING NO. 5 DRAWN BY: CR

O.C. BY: MJ DATE: 10-31-88



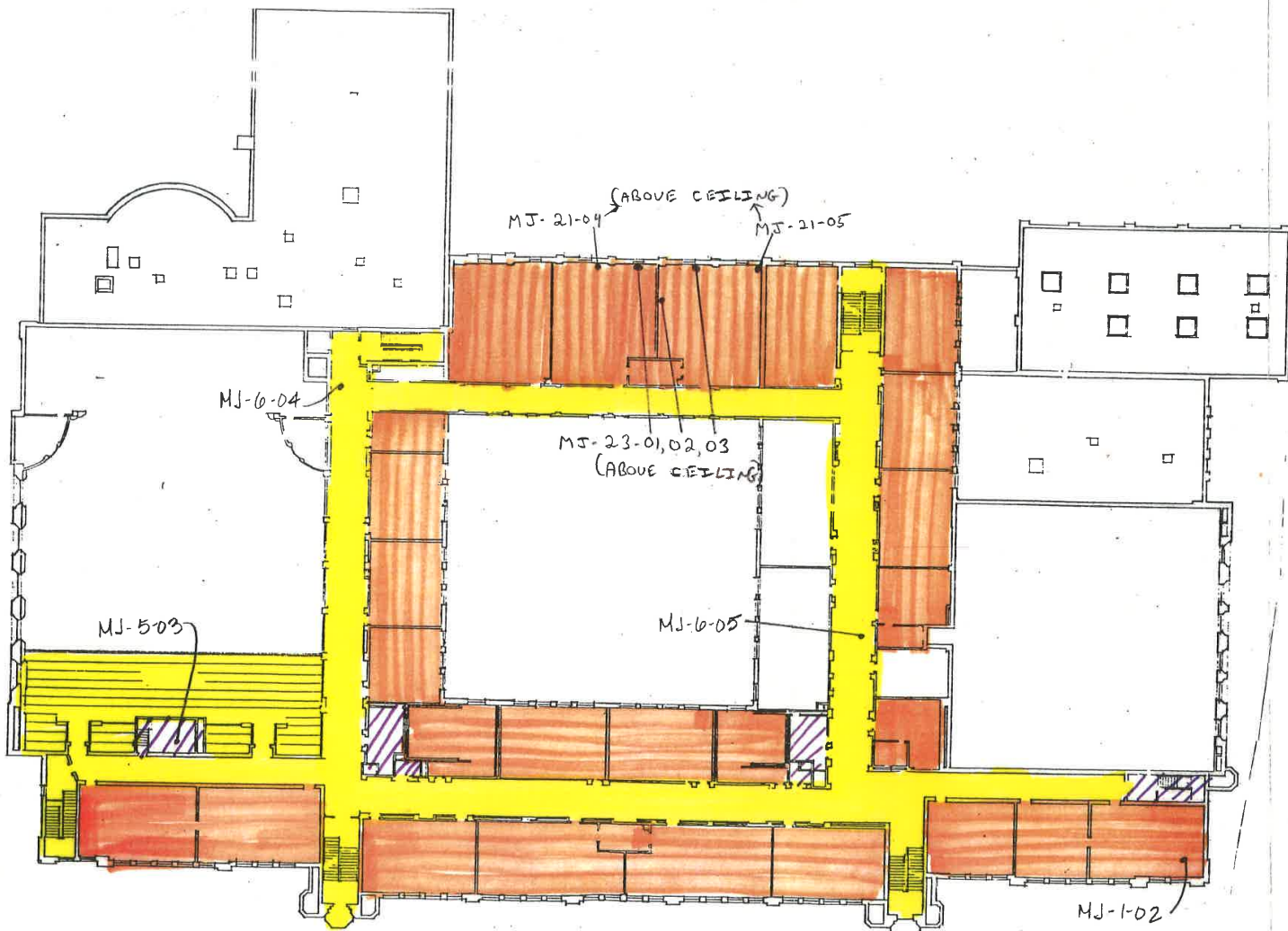
FIRST FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
DRAWING NO. 6 DRAWN BY: CR
Q.C. BY: MJ DATE: 10-31-88



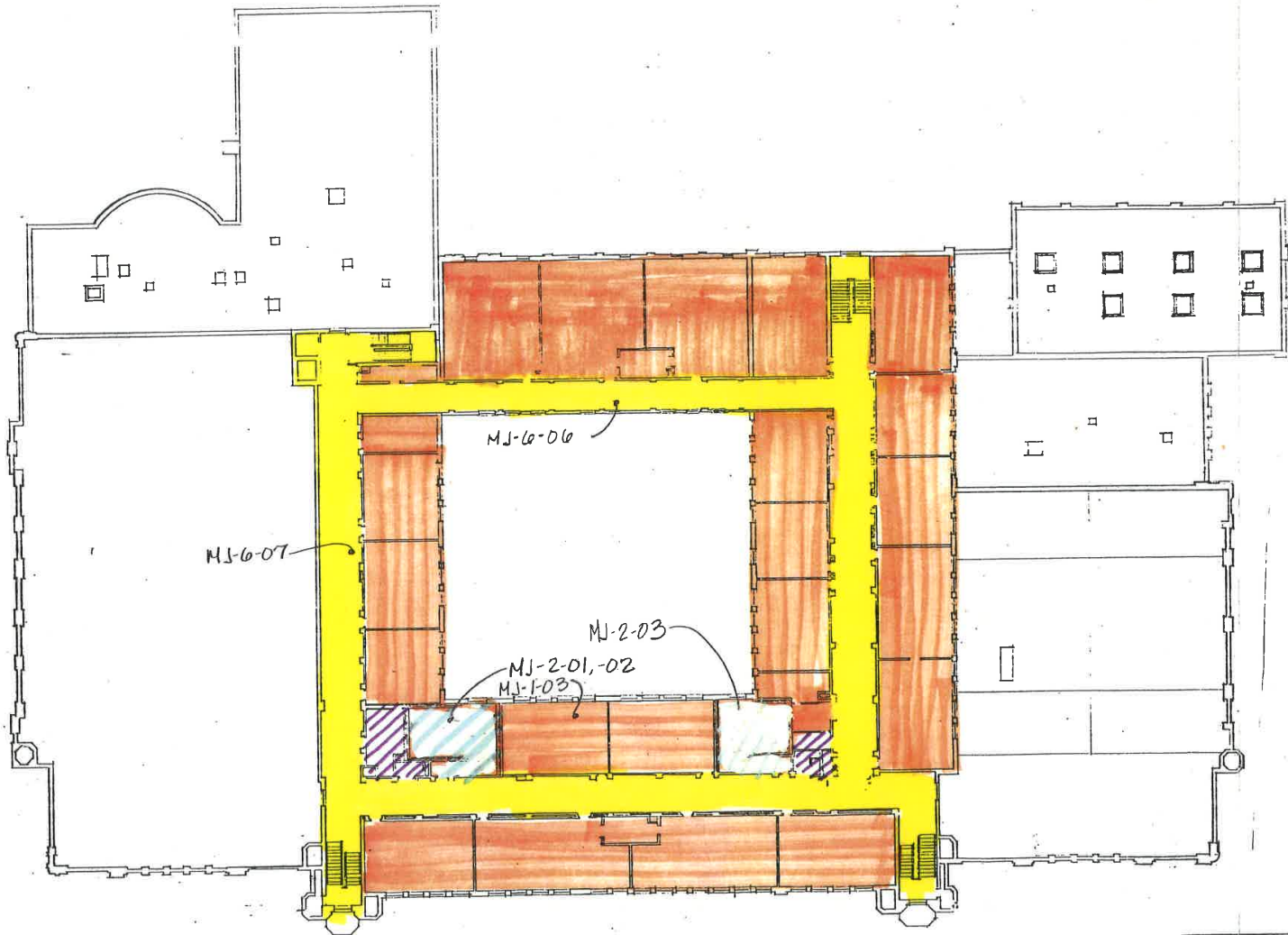
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
 DRAWING NO. 2 DRAWN BY: CR
 Q.C. BY: MJ DATE: 10-31-88



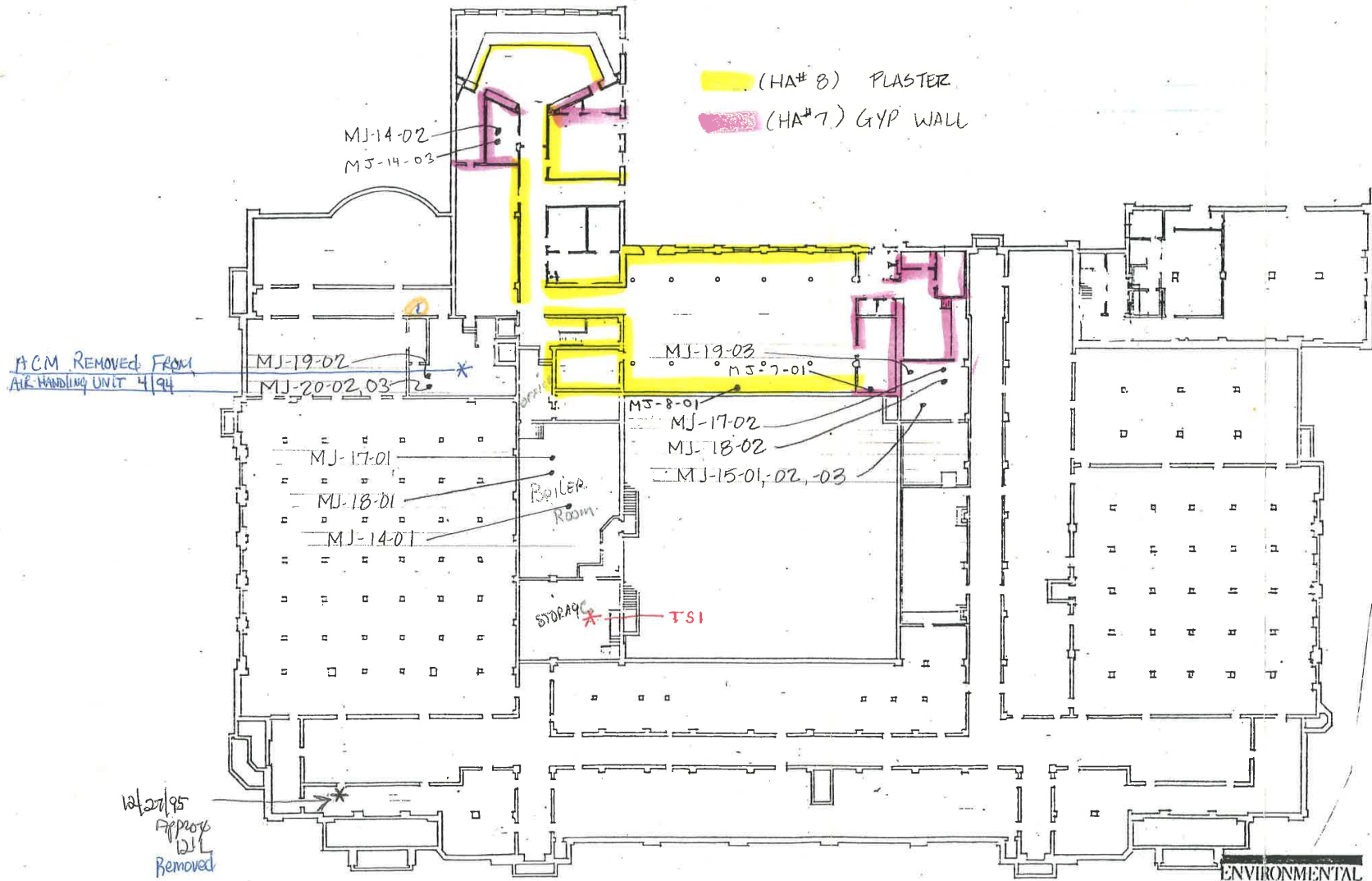
THIRD FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
DRAWING NO. 8 DRAWN BY: CR
O.C. BY: MJ DATE: 10-31-88

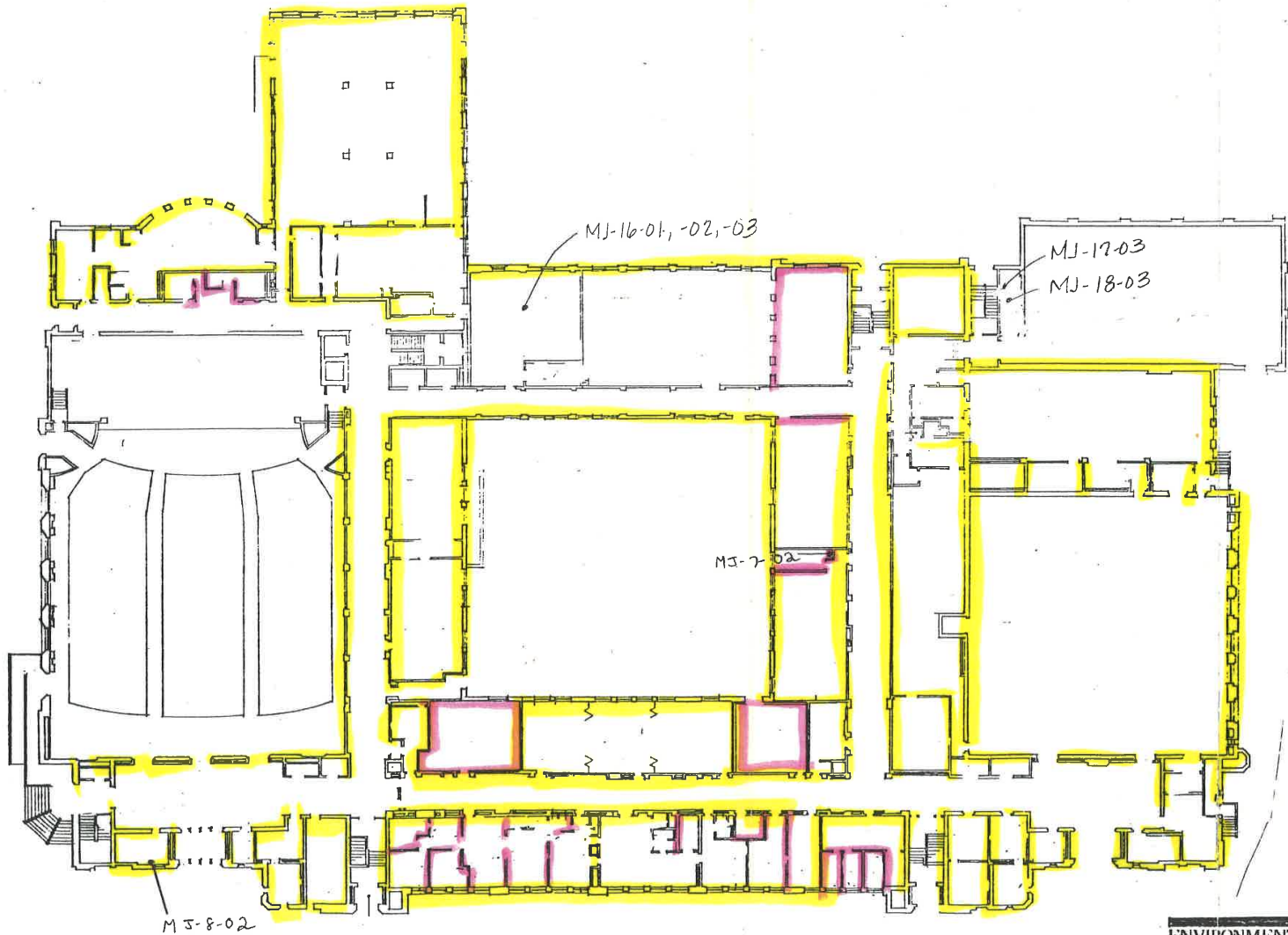


BASEMENT FLOOR PLAN
 MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
 MANAGEMENT
 I N C

2699 Johnson Road, N.E.
 Suite Three Hundred
 Atlanta, Georgia 3034

MATERIALS SHOWN: WALLS & T&I
 DRAWING NO. 9 DRAWN BY: CR
 O.C. BY: *ML* DATE: 10-31-98



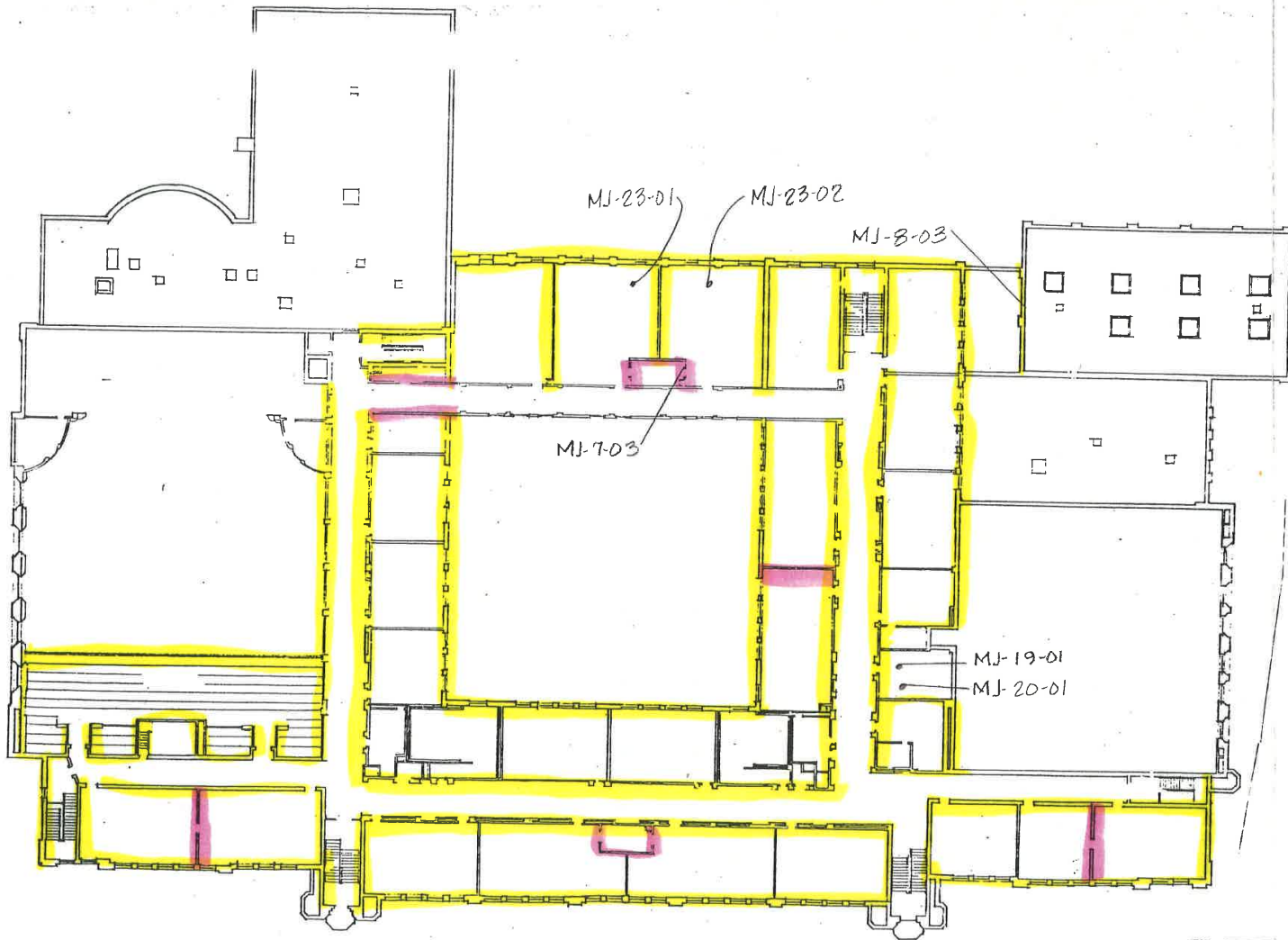
FIRST FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & TSI
DRAWING NO. 10 DRAWN BY: CP
DATE: 10-31-88



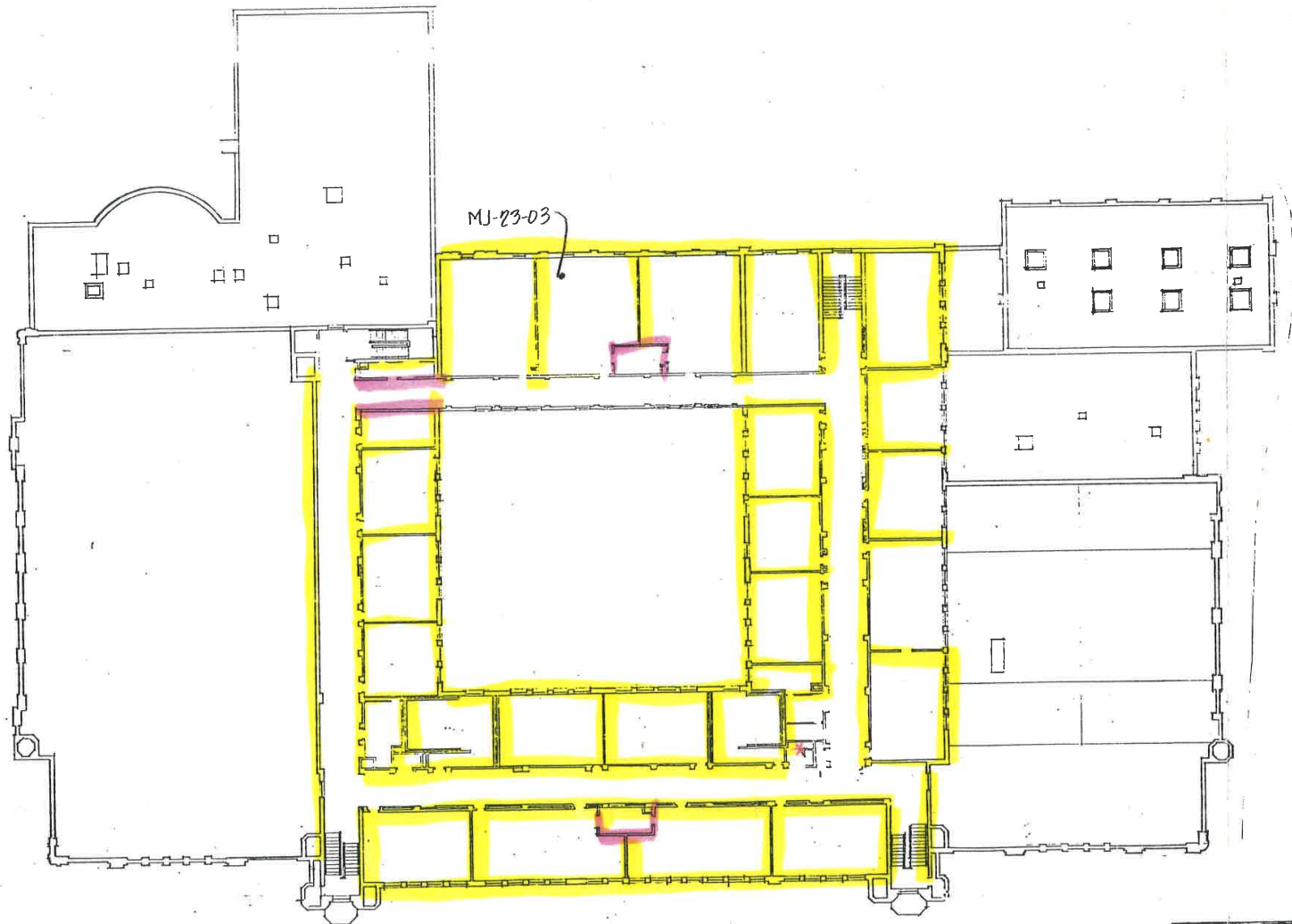
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & T&I
DRAWING NO. 11 DRAWN BY: CR
O.C. BY: MJ DATE: 10-31-88



MJ-23-03

THIRD FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

* - 3 - Vertical Pipe RUNS
 Approx 9 LIN FT. (TSI)
 Found 7/28/97
 REMOVED 4/1/99

ENVIRONMENTAL
 MANAGEMENT
 I N C

2699 Johnson Road, N.E.
 Suite Three Hundred
 Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & TSI

DRAWING NO. 12 DRAWN BY: CR

Q.C. BY: *MO* DATE: 10-31-88



1511 Route 22, Suite C24
Brewster, NY 10509 845.278.7710

90 State Street, Suite 700
Albany, NY 12207 518.874.0617

1967 Wehrle Drive, Suite One
Buffalo, NY 14221 716.402.4580

E-mail: adelaidemail@adelaidellc.com
Fax: 845.278.7750

LIMITED SURVEY FOR ASBESTOS CONTAINING MATERIALS

PERFORMED AT:

Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940
Adelaide Project No. MIDD: 17031.01-IN

PREPARED FOR:

Thomas Scott
Superintendent of Buildings and Grounds
Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

PREPARED BY:

David Seddon
February 6, 2017
May 8, 2017 (Amended)
August 22, 2017 (Amended)

REVIEWED BY:

A handwritten signature in blue ink, appearing to read 'Stephanie A. Soter', is written over a light gray rectangular background.

Stephanie A. Soter
President

LIMITED SURVEY FOR ASBESTOS CONTAINING MATERIALS

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APPENDICES

| | |
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| Asbestos Analytical Results and Chain of Custody Forms | Appendix A |
| Personnel and Laboratory Certifications | Appendix B |
| Sample Location Map and Photos | Appendix C |
| Affected Area Maps | Appendix D |
| NYS DOL Guidelines for Contaminated Areas | Appendix E |

1.0 BACKGROUND/PURPOSE

Adelaide Environmental Health Associates, Inc. (Adelaide) was retained by Thomas Scott of the Enlarged City School District of Middletown to perform an investigative asbestos survey at Twin Towers Middle School in Middletown, New York. This survey was based on the information provided by the schools architect for plumbing work that will be performed in the basement. The inspection was performed on January 26, 2017 by Adelaide representative Philip J. Page (NYS Asbestos Inspector). Adelaide returned to Twin Towers Middle School to perform sampling within the crawlspace under the auditorium, as per information provided by Triton for the running of conduit through the crawlspace. The inspection was performed on May 2, 2017 by Adelaide representative Philip J. Page (NYS Asbestos Inspector). Adelaide returned on August 11, 2017 for additional sampling due to the finding of damage pipe insulation that was found when workers were removing lockers in the hallways on all three floors. The inspection was performed by Adelaide representative David Seddon (NYS Asbestos Inspector).

2.0 EXECUTIVE SUMMARY OF INSPECTION RESULTS

Following the scope of work that was given to us, Adelaide inspected the crawlspaces that will have plumbing work performed in them. Adelaide collected sixteen (16) asbestos samples from the above mentioned areas. Nine (9) samples/homogenous areas tested positive for asbestos. On May 2, 2017, Adelaide inspected the crawlspace under the auditorium. Adelaide collected thirteen (13) asbestos samples from the above mentioned area. Seven (7) samples/homogenous areas tested positive for asbestos. On August 11, 2017 Adelaide collected eight (8) asbestos samples from the above mentioned area. Two (2) samples/homogenous areas tested positive for asbestos.

The crawlspace is contaminated and needs to be vacated and isolated. A contamination assessment needs to be performed along with a site specific variance for the decontamination of the area. See Appendix E.

Adelaide found that the aircell pipe insulation was previously tested for the crawlspace inspection and is a known positive.

2.1 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Samples collected by Adelaide January 26, 2017

| Sample # | Material Sampled | Approximate Quantity | Condition | Areas Affected (as per scope) |
|------------------------|----------------------------------|----------------------|-----------------------|--|
| 1 | Air Cell Insulation on 6" Piping | 150 LF | Significantly Damaged | Crawlspace Area under Girls Locker Room |
| 4 | Layered Paper Pipe Insulation | 300 LF | Damaged | Crawlspace under Locker Rooms (NOTE: Material Observed Throughout Entire Crawlspace Areas) |
| 7 | Mudded Fittings | 100 Fittings | Damaged | Crawlspace under Locker Rooms (NOTE: Material Observed Throughout Entire Crawlspace Areas) |
| 10, 11, 12, 13, 14, 15 | Debris | 3,000 SF | Significantly Damaged | Crawlspaces Vacate and Isolate Areas See Appendix E |

Samples collected by Adelaide May 2, 2017

| Sample # | Material Sampled | Approximate Quantity | Condition | Areas Affected (as per scope) |
|----------------|-------------------------------|----------------------|-----------------------|--|
| 1 | Air Cell Insulation | 100 LF | Good | Crawlspace Area under Auditorium |
| 4 | Layered Paper Pipe Insulation | 60 LF | Good | Crawlspace Area under Auditorium |
| 7 | Mudded Fittings | 8 Fittings | Good | Crawlspace Area under Auditorium |
| 10, 11, 12, 13 | Debris | 112 SF | Significantly Damaged | Crawlspace Area under Auditorium Vacate and Isolate Areas See Appendix E |

Samples collected by Adelaide August 11, 2017

| Sample # | Material Sampled | Approximate Quantity | Condition | Areas Affected |
|-----------------|-----------------------------|-----------------------------|------------------|---|
| 3 | Brown Paper Pipe Insulation | 120 LF | Damaged | 3rd Floor Hallway Outside Room 315 2nd Floor Hallway Outside Rooms 215,226 and 228 1st Floor Hallway Outside Girls Locker Room |
| 4 | Mudded Material | 2 LF | Damaged | 3rd Floor Hallway Outside Room 315 |
| Known Positive | Air Cell Pipe Insulation | 48 LF | Damaged | 3rd Floor Hallway Outside Room 321 2nd Floor Hallway Outside Rooms 217, and 222 1st Floor Hallway Outside Girls Locker Room |

2.2 NEGATIVE MATERIALS LIST:

Samples collected by Adelaide January 26, 2017

- Debris Sample in Crawlspace by Work Shop Entrance

Samples collected by Adelaide August 11, 2017

- Black Water Proofing on Bricks

3.0 ASBESTOS FIELD PROCEDURES AND ANALYSIS METHODOLOGY

3.1 INSPECTION

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA). Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos Containing

Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous.

Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster).

Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue).

Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

3.2 SAMPLING

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.
- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply
- Chilled water supply
- Steam supply and/or return

- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

3.3 ANALYSIS

Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

The New York State (NYS) Department of Health has recently revised the PLM Stratified Point Counting Method. The new method, Polarized Light Microscopy for Identifying and Quantitating Asbestos in Bulk Samples can be found as Item 198.1 in the Environmental Laboratory Accreditation Program (ELAP) Certification manual.

The State of New York ELAP has determined that analysis of NOB materials is not reliably performed by PLM. Therefore, if PLM yields negative results for a non-friable material, it must be confirmed by Transmission Electron Microscopy (TEM) analysis.

All NOB samples were initially analyzed by utilizing TEM methodology.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This survey concluded that the materials listed in Section 2.0 Executive Summary tested ***positive for asbestos.***

Asbestos: These areas must be abated prior to building demolition or renovation if they are to be disturbed. Contaminated areas need to be vacated and isolated. See Appendix E.

5.0 AREAS NOT ACCESSIBLE

Adelaide Environmental Health Associates inspected and sampled materials which were visible and/or accessible to the survey team. Adelaide does not inspect physically inaccessible areas, such as between walls, above fixed ceilings, under concrete slabs, etc. This report makes no representations as to the content of these areas or materials.

All materials present in those not accessible areas shall be assumed positive until tested.

6.0 REPORT CERTIFICATIONS

Adelaide Environmental Health Associates certifies that the information contained herein is based on the physical and visual inspections conducted by Adelaide and data collected during the inspection survey. This survey report does not constitute a NYS Asbestos Abatement Design and should not be used for bidding purposes. A NYS Abatement Design should be prepared by a NYS Asbestos Designer working for a NYS Asbestos Company (as required by NYS Code Rule 56).

7.0 TRANSMITTAL OF BUILDING/STRUCTURE ASBESTOS SURVEY

One (1) copy of the results of the building/structure asbestos survey shall be immediately transmitted by the building/structure owner as follows:

- (1) One (1) copy of the completed asbestos survey shall be sent by the owner or their agent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling or repair work under applicable State or local laws.
- (2) The completed asbestos survey for controlled demolition (as per Subpart 56-11.5) or pre-demolition asbestos projects shall also be submitted to the appropriate Asbestos Control Bureau district office.
- (3) The completed asbestos survey shall be kept on the construction site with the asbestos notification and variance, if required, throughout the duration of the asbestos project and any associated demolition, renovation, remodeling or repair project.

APPENDIX A


ASBESTOS ANALYTICAL RESULTS

AND CHAIN OF CUSTODY FORMS

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results
MIDD:17031.01-IN; Twin Towers MS - 112 Grand Ave., Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|---|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 1 | 1 | --- | --- | --- | --- | Chrysotile 0.3 | NA |
| Location: Fl. 1 - Hallway - Brown Paper Pipe Insulation | | | | | | | | |
| 02 | 2 | 1 | --- | --- | --- | --- | Chrysotile 0.8 | NA |
| Location: Fl. 2 - Hallway - Brown Paper Pipe Insulation | | | | | | | | |
| 03 | 3 | 1 | --- | --- | --- | --- | Chrysotile 2.5 | NA |
| Location: Fl. 3 - Hallway - Brown Paper Pipe Insulation | | | | | | | | |
| 04 | 4 | 2 | --- | --- | --- | --- | Chrysotile 33.3 | NA |
| Location: Fl. 3 - Hallway - Mudded Material | | | | | | | | |
| 05 | 5 | 2 | --- | --- | --- | --- | NA/PS | NA |
| Location: Fl. 3 - Hallway - Mudded Material | | | | | | | | |
| 06 | 6 | 2 | --- | --- | --- | --- | NA/PS | NA |
| Location: Fl. 3 - Hallway - Mudded Material | | | | | | | | |
| 07 | 7 | 3 | 0.192 | 54.2 | 13.0 | 32.8 | NAD | NAD |
| Location: Fl. 3 - Hallway - Water Barrier On Bricks | | | | | | | | |
| 08 | 8 | 3 | 0.303 | 55.4 | 12.5 | 32.0 | NAD | NAD |
| Location: Fl. 3 - Hallway - Water Barrier On Bricks | | | | | | | | |

Analyzed by: Samuel X. Zhang ; Date Analyzed 8/12/2017

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation) or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By: _____



AmeriSci New York

117 EAST 30TH ST.
 NEW YORK, NY 10016
 TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
 Attn: John Soter
 1511 Rte. 22 Suite C24
 Brewster, NY 10509

Date Received 08/12/17 **AmeriSci Job #** 217082957
Date Examined 08/12/17 **P.O. #**
ELAP # 11480 **Page** 1 of 2
RE: MIDD:17031.01-IN; Twin Towers MS - 112 Grand Ave.,
 Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|---|------------------|--|
| 1 1 | 217082957-01 Location: Fl. 1 - Hallway - Brown Paper Pipe Insulation | Yes | 0.3 % (EPA 400 PC) by Ella Babayeva on 08/12/17 |
| Analyst Description: Brown/White, Heterogeneous, Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 0.3 % | | | |
| Other Material: Cellulose 98 %, Non-fibrous 1.7 % | | | |
| 2 1 | 217082957-02 Location: Fl. 2 - Hallway - Brown Paper Pipe Insulation | Yes | 0.8 % (EPA 400 PC) by Ella Babayeva on 08/12/17 |
| Analyst Description: Brown/White, Heterogeneous, Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 0.8 % | | | |
| Other Material: Cellulose 97 %, Non-fibrous 2.2 % | | | |
| 3 1 | 217082957-03 Location: Fl. 3 - Hallway - Brown Paper Pipe Insulation | Yes | 2.5 % (EPA 400 PC) by Ella Babayeva on 08/12/17 |
| Analyst Description: White/Off-Wht/Brown, Heterogeneous, Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 2.5 % | | | |
| Other Material: Cellulose 90 %, Non-fibrous 7.5 % | | | |
| 4 2 | 217082957-04 Location: Fl. 3 - Hallway - Mudded Material | Yes | 33.3 % (by NYS ELAP 198.1) by Ella Babayeva on 08/12/17 |
| Analyst Description: OffWhite, Homogeneous, Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 33.3 % | | | |
| Other Material: Non-fibrous 66.7 % | | | |
| 5 2 | 217082957-05 Location: Fl. 3 - Hallway - Mudded Material | | NA/PS |
| Analyst Description: Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD:17031.01-IN; Twin Towers MS - 112 Grand Ave.,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|------------------|---|------------------|------------------|
| 6 2 | 217082957-06 Location: Fl. 3 - Hallway - Mudded Material | | NA/PS |

Analyst Description: Bulk Material
Asbestos Types:
Other Material:

| | | | |
|--------|---|----|---|
| 7 3 | 217082957-07 Location: Fl. 3 - Hallway - Water Barrier On Bricks | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 08/12/17 |
|--------|---|----|---|

Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material
Asbestos Types:
Other Material: Non-fibrous 32.8 %

| | | | |
|--------|---|----|---|
| 8 3 | 217082957-08 Location: Fl. 3 - Hallway - Water Barrier On Bricks | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 08/12/17 |
|--------|---|----|---|

Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material
Asbestos Types:
Other Material: Non-fibrous 32 %

Reporting Notes:

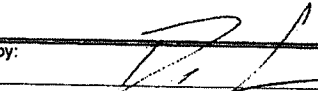
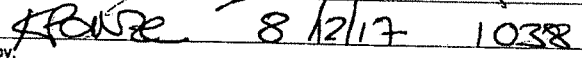
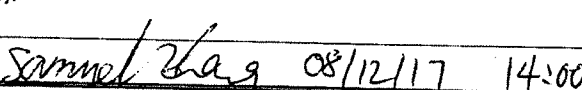
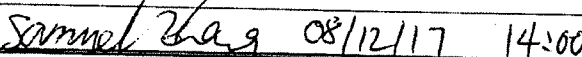
Analyzed by: Ella Babayeva 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS =not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

| Site Address: Twin Towers MS | | | Date: 01/31/17 | Inspector(s) David Seddon | | |
|--|------------------|-------------|---------------------------------------|---|-----------------------|-----------------------|
| 112 Grand Ave | | | | | | |
| Middletown, NY 10940 | | | Project #: MIDD:17031.01-IN | | | |
| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd |
| 1 | 1 | 1 | Hallway - Brown Paper Pipe Insulation | 1176 ^{ft} | | D |
| 2 | 1 | 2 | - ↓ ↓ ↓ | ↓ | | ↓ |
| 3 | 1 | 3 | - ↓ ↓ ↓ | ↓ | | ↓ |
| 4 | 2 | 3 | - Muddied Material | 2CF | | D |
| 5 | 2 | 3 | - ↓ ↓ | ↓ | | ↓ |
| 6 | 2 | 3 | - ↓ ↓ | ↓ | | ↓ |
| 7 | 3 | 3 | - Water Barrier on Buckets | | | G |
| 8 | 3 | 3 | ↓ - ↓ ↓ ↓ | | | ↓ |
| | | | | #217082957 | | |
| Special Instructions/ Turnaround Time: | | | | Relinquished by:  | | |
| Stop at 1st Positive per Homogenous Area E-Mail Results to AdelaideLabResults@adelaidellc.com | | | | Received by:  8/12/17 1038 | | |
| | | | | Relinquished by:  | | |
| | | | | Received by:  08/12/17 14:00 | | |

RUSH TAT



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 01/27/17 AmeriSci Job # 217013572
Date Examined 01/27/17 P.O. #
ELAP # 11480 Page 1 of 4
RE: MIDD.17031.01-IN; Twin Towers MS; 112 Grand Ave.,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 1 1 | 217013572-01 Location: Crawl. - Girls Crawlspace, On 6" Piping, Air Cell Insulation | Yes | 44.4 % (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 44.4 % Other Material: Cellulose 45 %, Non-fibrous 10.6 % | | | |
| 2 1 | 217013572-02 Location: Crawl. - Girls Crawlspace, On 6" Piping, Air Cell Insulation | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 3 1 | 217013572-03 Location: Crawl. - Girls Crawlspace, On 6" Piping, Air Cell Insulation | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 4 2 | 217013572-04 Location: Crawl. - Boys Crawlspace, On Piping, Layered Paper Insulation | Yes | 2 % (EPA 400 PC) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey/White, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 2.0 % Other Material: Cellulose 88 %, Non-fibrous 10 % | | | |
| 5 2 | 217013572-05 Location: Crawl. - Boys Crawlspace, On Piping, Layered Paper Insulation | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD.17031.01-IN; Twin Towers MS; 112 Grand Ave.,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|---|
| 6 2 | 217013572-06 Location: Crawl. - Boys Crawlspace, On Piping, Layered Paper Insulation | | NA/PS |
| <p>Analyst Description: Bulk Material Asbestos Types: Other Material:</p> | | | |
| 7 3 | 217013572-07 Location: Crawl. - Boys Crawlspace, On Pipe Fittings, Mudded Fittings | Yes | 23.5 % (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| <p>Analyst Description: Grey, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 23.5 % Other Material: Non-fibrous 76.5 %</p> | | | |
| 8 3 | 217013572-08 Location: Crawl. - Boys Crawlspace, On Pipe Fittings, Mudded Fittings | | NA/PS |
| <p>Analyst Description: Bulk Material Asbestos Types: Other Material:</p> | | | |
| 9 3 | 217013572-09 Location: Crawl. - Boys Crawlspace, On Pipe Fittings, Mudded Fittings | | NA/PS |
| <p>Analyst Description: Bulk Material Asbestos Types: Other Material:</p> | | | |
| 10 4 | 217013572-10 Location: Crawl. - Location 1 (See Map) - Debris | Yes | 44.4 % ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| <p>Analyst Description: Grey, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 44.4 % Other Material: Cellulose 45 %, Non-fibrous 10.6 %</p> | | | |
| 11 5 | 217013572-11 Location: Crawl. - Location 2 (See Map) - Debris | Yes | 30.8 % ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| <p>Analyst Description: Grey/Brown, Heterogeneous, Fibrous, Cementitious, Bulk Material Asbestos Types: Chrysotile 30.8 % Other Material: Cellulose 59.2 %, Non-fibrous 10 %</p> | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD.17031.01-IN; Twin Towers MS; 112 Grand Ave.,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|--|------------------|--|
| 12 6 | 217013572-12 Location: Crawl. - Location 3 (See Map) - Debris | Yes | 57.1 % ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 57.1 % Other Material: Cellulose 32 %, Non-fibrous 10.9 % | | | |
| 13 7 | 217013572-13 Location: Crawl. - Location 4 (See Map) - Debris | Yes | 36.4 % ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey/Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 36.4 % Other Material: Cellulose 53.6 %, Non-fibrous 10 % | | | |
| 14 8 | 217013572-14 Location: Crawl. - Location 5 (See Map) - Debris | Yes | 36.4 % ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey/Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 36.4 % Other Material: Cellulose 53.6 %, Non-fibrous 10 % | | | |
| 15 9 | 217013572-15 Location: Crawl. - Location 6 (See Map) - Debris | Yes | Trace (<0.25 % pc) ¹ (EPA 400 PC) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Grey/Brown, Heterogeneous, Fibrous, Cementitious, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Cellulose 30 %, Non-fibrous 70 % | | | |
| 16 10 | 217013572-16 Location: Crawl. - Location 7 (See Map) - Debris | No | NAD ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 01/27/17 |
| Analyst Description: Brown/Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % | | | |

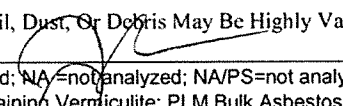
Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD.17031.01-IN; Twin Towers MS; 112 Grand Ave.,
Middletown, NY 10940

Reporting Notes:

(1) Analysis Results For Soil, Dust, Or Debris May Be Highly Variable Because Of The Heterogeneous Nature Of These Samples

Analyzed by: Jared C. Clarke 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop. (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59.146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
 Brewster, NY 10509
 845-278-7710
 845-278-7750 - fax

| Site Address: Twin Towers MS | | | Date: 01/26/17 | | Inspector(s) Philip Page | | | |
|--|------------------|-------------|--|---|---|--------------------|--------------------|----|
| 112 Grand Ave | | | | | | | | |
| Middletown, NY 10940 | | | Project #: MIDD:17031.01-IN | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd | |
| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | | | | | |
| 1 | 1 | CRAWL | GIRLS CRAWLSPACE, ON 6" PIPING, AIRCELL INSULATION | | | 150CF | | SD |
| 2 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 3 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 4 | 2 | | BOYS CRAWLSPACE, ON PIPING, LAYERED PAPER INSULATION | | | 300CF | | D |
| 5 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 6 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 7 | 3 | | ON PIPE FITTINGS, MUDDIED FITTINGS | | | | | |
| 8 | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ |
| 9 | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ |
| 10 | 4 | | LOCATION 1 (SEE MAP) - DEBRIS | | | | | |
| 11 | 5 | | 2 | ↓ | ↓ | | | |
| 12 | 6 | | 3 | ↓ | ↓ | | | |
| 13 | 7 | | 4 | ↓ | ↓ | | | |
| Special Instructions/ Turnaround Time: | | | | | Relinquished by: <i>[Signature]</i> | | | |
| #217013572 | | | | | Received by: <i>[Signature]</i> 1/27/17 KOC | | | |
| Stop at 1st Positive per Homogenous Area | | | | | Relinquished by: | | | |
| 24 hr TAT | | | | | Received by: | | | |
| E-Mail Results to AdelaideLabResults@adelaidellc.com | | | | | | | | |

APPENDIX B

PERSONNEL AND LABORATORY CERTIFICATIONS

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Adelaide Environmental Health Associates, Inc.
Suite C24
1511 Route 22

Brewster, NY 10509

FILE NUMBER: 99-0656
LICENSE NUMBER: 29305
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 06/30/2017
EXPIRATION DATE: 07/31/2018

Duly Authorized Representative – John Soter:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director
For the Commissioner of Labor

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2018
Issued April 01, 2017

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |

Serial No.: 56034

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

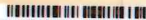
STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



DAVID SEDDON
CLASS(EXPIRES)
C ATEC(12/17) D INSP(12/17)
E MGPL(12/17) H PM (12/17)

CERT# 09-08546
DMV# 879533539

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 004009447 63

EYES BRO
HAIR BRO
HGT 5' 10"

IF FOUND RETURN TO:
NYSOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S



PHILIP J PAGE
CLASS(EXPIRES)
C ATEC(05/18) D INSP(05/18)
H PM (05/18)

CERT# 12-10888
DMV# 216687928

MUST BE CARRIED ON ASBESTOS PROJECTS



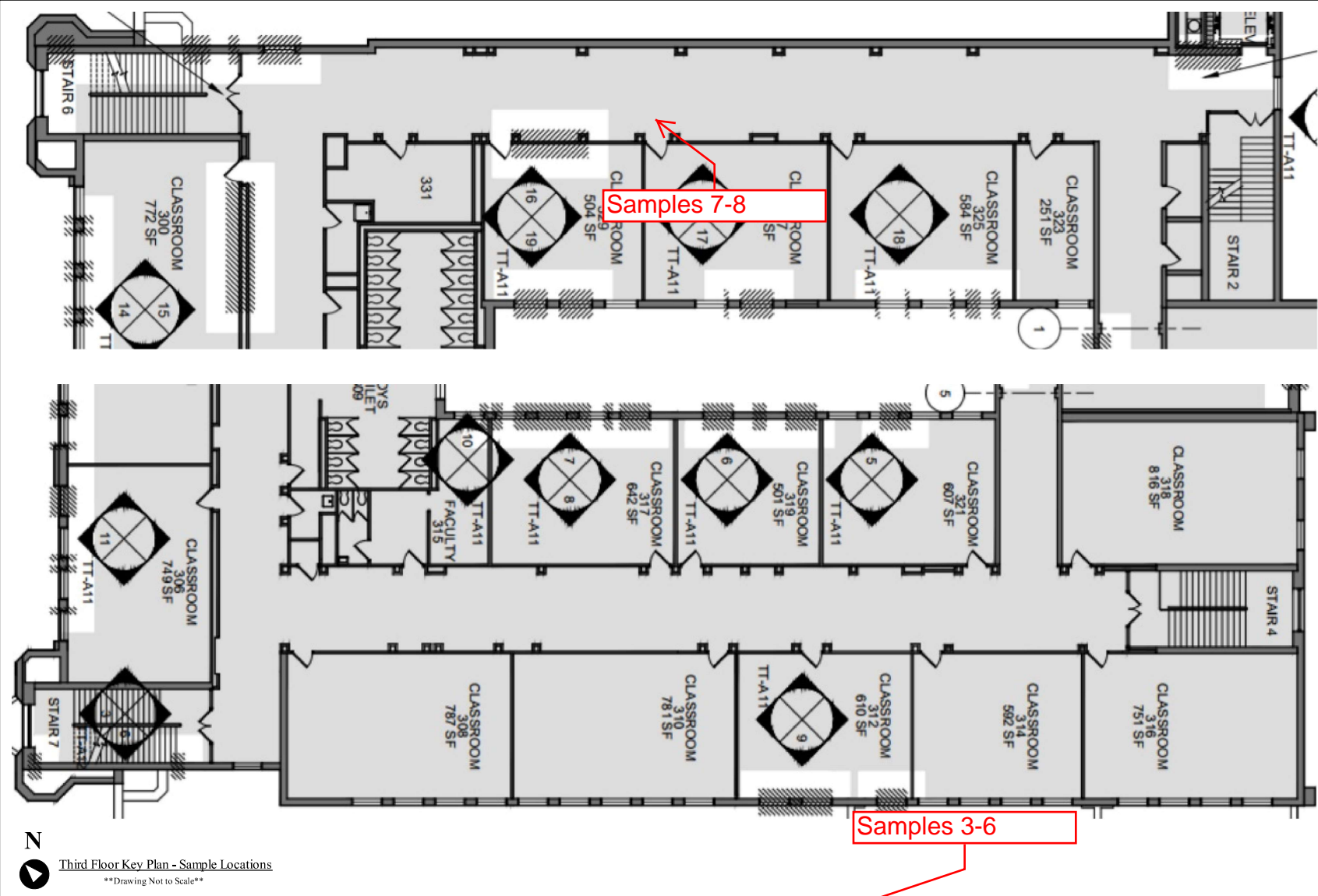
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EYES BRO
HAIR BLN
HGT 6' 00"

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ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

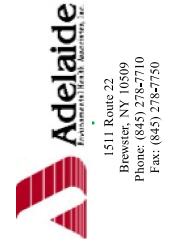
APPENDIX C

SAMPLE LOCATION MAP AND PHOTOS



Third Floor Key Plan - Sample Locations
 Drawing Not to Scale

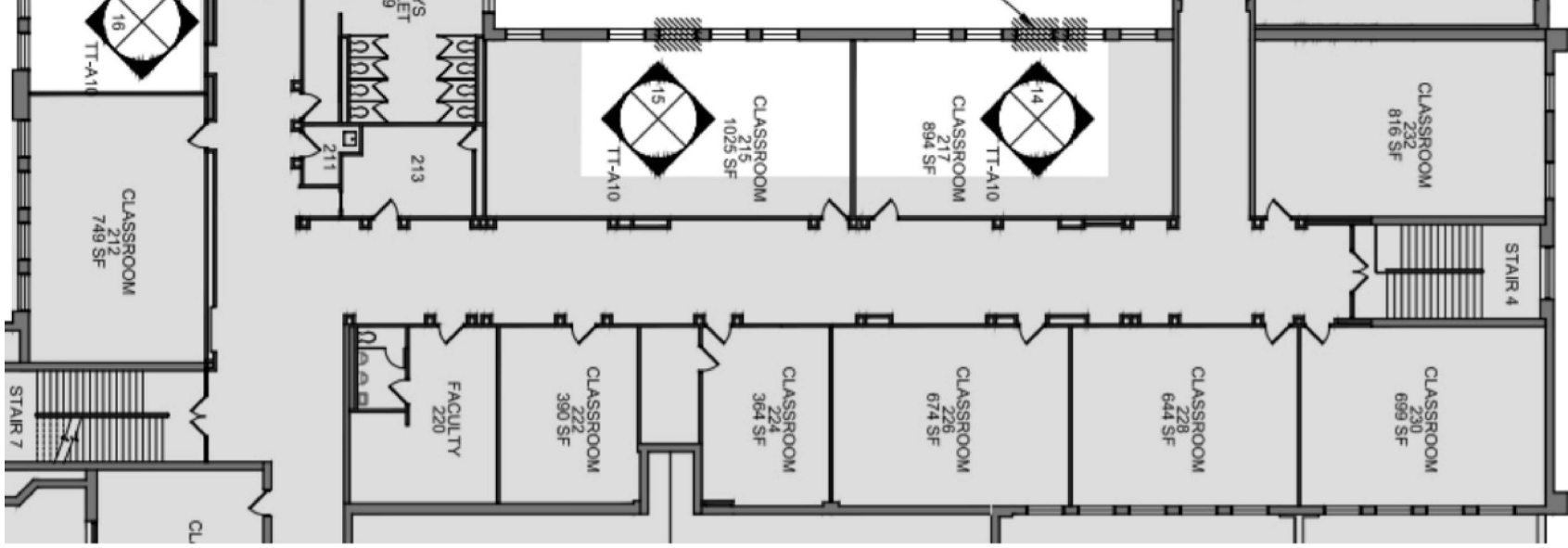
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| <p>Twin Towers Middle School 112 Grand Avenue Middletown, New York 10940</p> | | <p>Enlarged City School District of Middletown 223 Wisner Avenue Middletown, New York 10940</p> | |
| <p>Client Project No.</p> | | | |
| <p>Date: 08/22/2017</p> | | <p>Version # 1</p> | |
| <p>Issued For: Limited Asbestos Survey</p> | | | |
| <p>Adelaide Project NO. MIDD: 17031.01-IN</p> | | | |
| <p>Drawing Prepared By: David Seddon</p> | | | |
| <p>SLM -03</p> | | | |





Second Floor Key Plan - Sample Locations

Drawing Not to Scale



Date: 08/22/2017
Version # 1

Issued For:
Limited Asbestos Survey

Adelaide Project NO.
MIDD: 17031.01-IN

Drawing Prepared By:
David Seddon

SLM -02



151
Rte 92
Brewster, NY 10509
Phone: (845) 278-7710
Fax: (845) 278-7750

Client Project No.

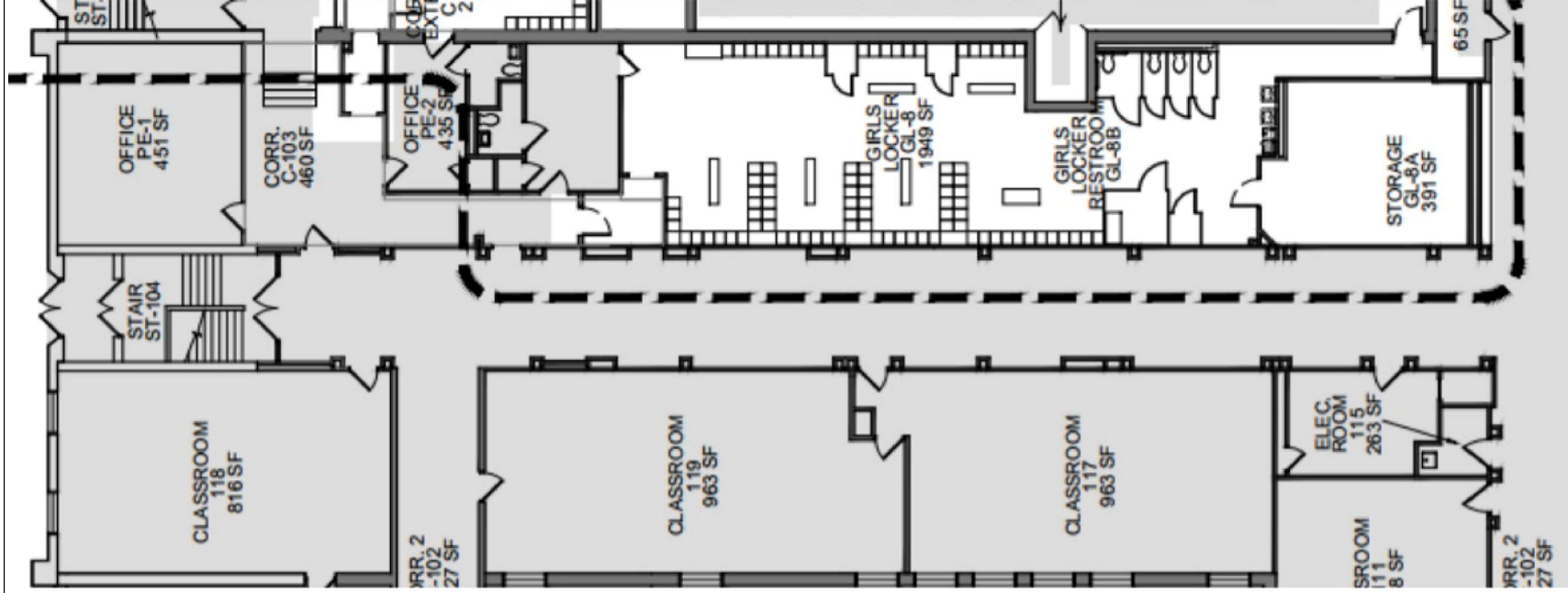
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940



First Floor Key Plan - Sample Locations

Drawing Not to Scale



Date: 08/22/2017

Version # 1

Issued For:

Limited Asbestos Survey

Adelaide Project NO.

MIDD: 17031.01-IN

Drawing Prepared By:

David Seddon

SLM -01

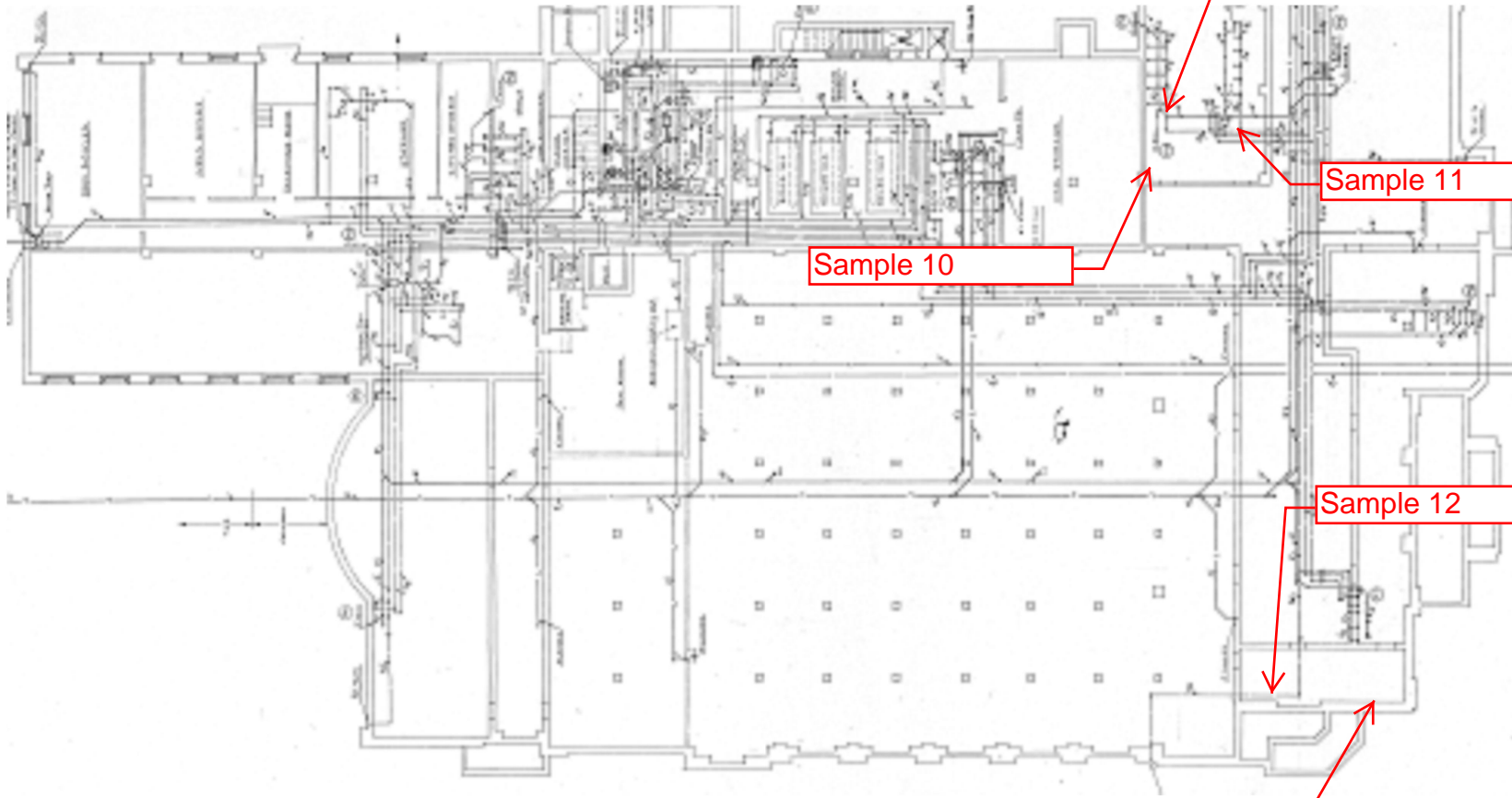


1511 Route 22
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 Fax: (845) 278-7750

Client Project No.


Twin Towers Middle School
 112 Grand Avenue
 Middletown, New York 10940

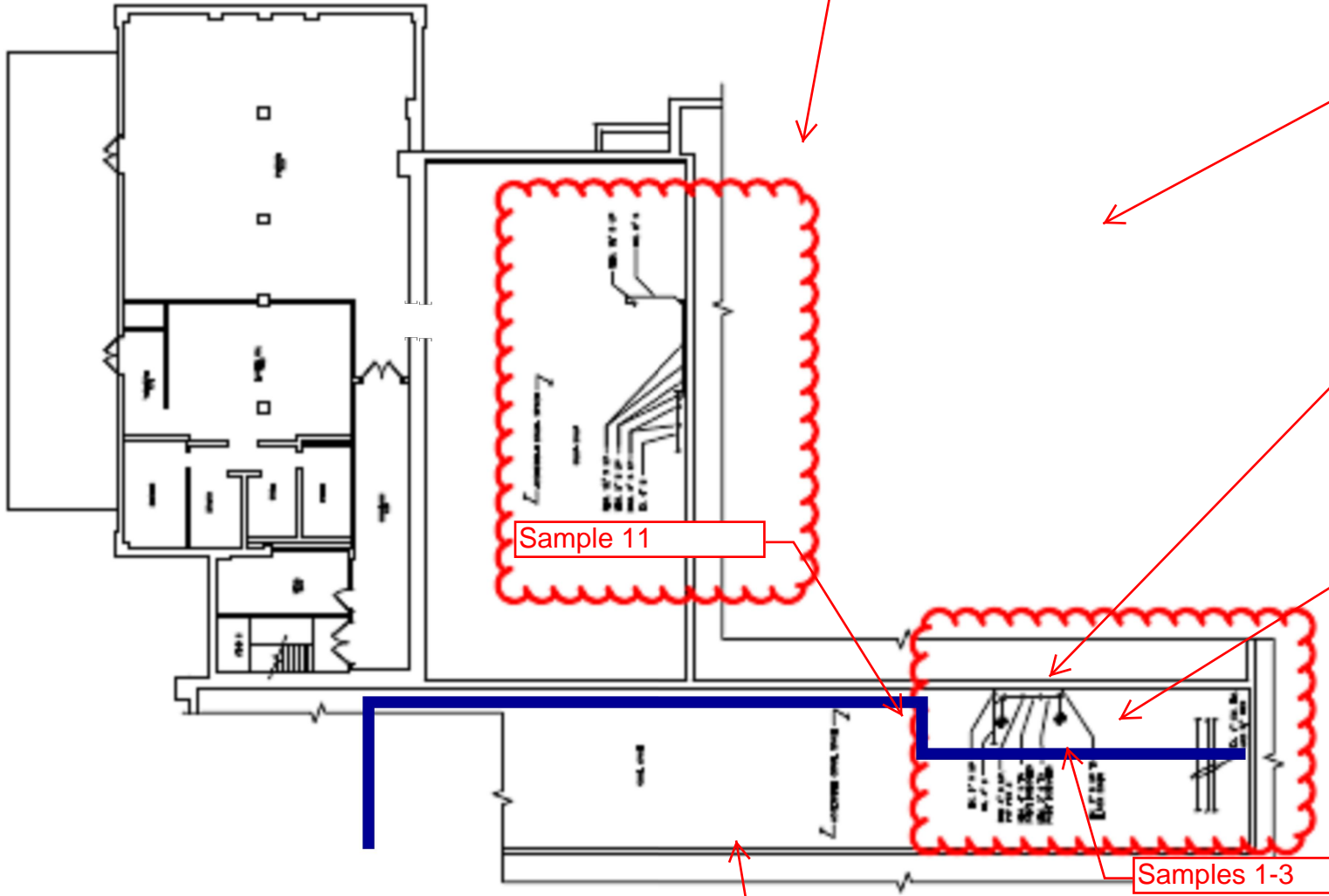
Enlarged City School District of Middletown
 223 Wisner Avenue
 Middletown, New York 10940



Crawlspace Detailed Key Plan - Sample Locations

Drawing Not to Scale

| | | | |
|--|----------------------------|--|---|
| <p>Twin Towers Middle School 112 Grand Avenue Middletown, NY 10940</p> | | <p>Enlarged City School District of Middletown 223 Wisner Avenue Middletown, New York 10940</p> | |
|  <p>Ade Environmental Services, Inc. 1511 Route 2 Brewster, NY 11715 Phone: (845) 278-2782 Fax: (845) 278-2783</p> | | <p>Samples 7, 8</p> | |
| <p>Date: 05-08-2017</p> | <p>Version #: 1</p> | <p>Issued For: Limited Asbestos Inspection</p> | <p>Adelaide Project NO: MIDD:17031.01-IN</p> |
| <p>SL-02</p> | | <p>Drawing Prepared By: PIP</p> | <p>Drawing Prepared By: PIP</p> |



Sample 11

Samples 1-3

Samples 4-9, 15

Sample 14

Sample 10

Sample 12

Crawlspace Detailed Plan - Sample Locations

Drawing Not to Scale

| | | | | |
|---|--|---|---|---|
| Date: 02-02-2017 Version #: 1 Issued For: Limited Asbestos Inspection Adelaide Project NO: MIDD:17031.01-IN Drawn/Prepared By: PIP | | Adelaide <small>An Asbestos Associates, Inc.</small> 15 Brewster Ave Suite 22 Middletown, NY 10809 Phone: 845-778-7710 Fax: 845-778-7750 | Twin Towers Middle School 112 Grand Ave Middletown, NY | Enlarged City School District 223 Wisner Ave Middletown, New York 1340 |
| SL-01 | | | | |

January 26, 2017 Photos



Sample#1 - Air Cell Pipe Insulation - 44.4% Chrysotile



Sample #4 - Layered Pipe Insulation - 2.0% Chrysotile



Sample #7 - Mudded Fittings - 23.5% Chrysotile



Sample #10 - Debris Location 1 (See Map) - 44.4% Chrysotile



Sample #11 - Debris Location 2 (See Map) - 30.8% Chrysotile



Sample #12 - Debris Location 3 (See Map) - 57.1% Chrysotile



Sample #13 - Debris Location 4 (See Map) - 36.4% Chrysotile



Sample #14 - Debris Location 5 (See Map) - 36.4% Chrysotile



Sample #15 - Debris Location 6 (See Map) - Trace Chrysotile

May 2, 2017 Photos



Sample#1 - Air Cell Pipe Insulation - 44.4% Chrysotile



Sample #4 - Layered Pipe Insulation - 1.8% Chrysotile



Sample #7 - Mudded Fittings - 66.7% Chrysotile



Sample #10 - Debris Location 1 (See Map) - 57.1% Chrysotile



**Sample #11 - Debris Location 2 (See Map) -
36.4% Chrysotile & 9.1% Amosite**



Sample #12 - Debris Location 3 (See Map) - 50.0% Chrysotile



Sample #13 - Debris Location 4 (See Map) - 57.1% Chrysotile

August 11, 2017 Photos

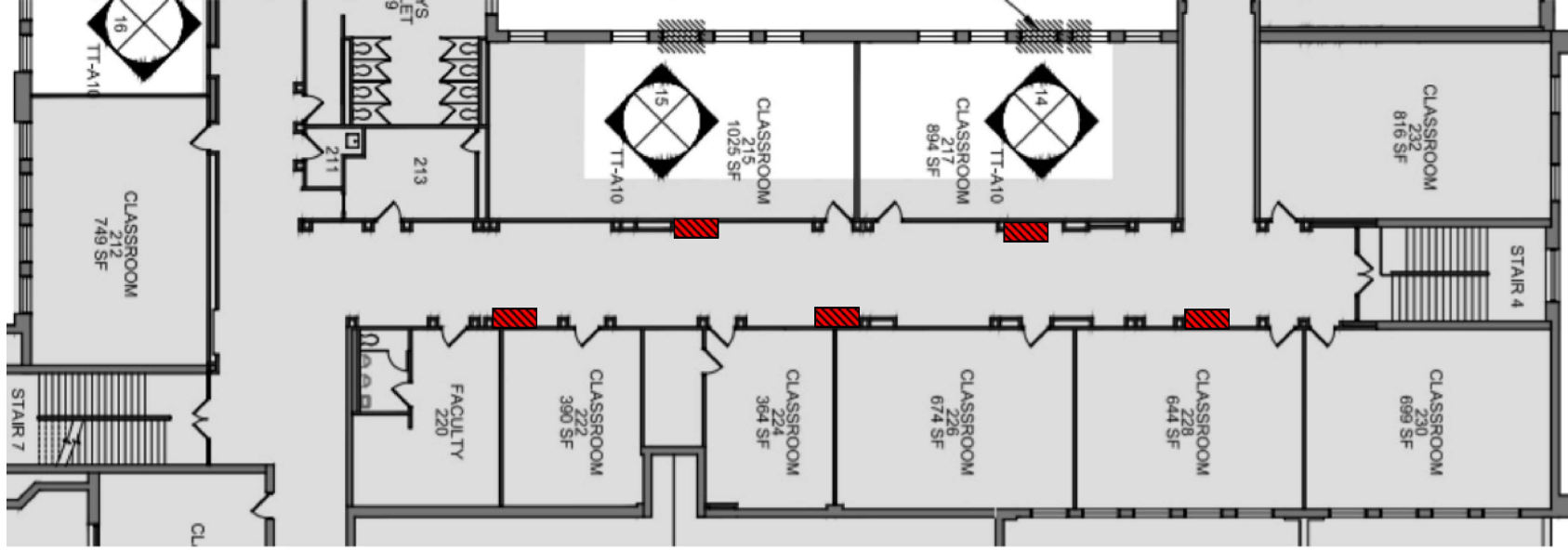


Sample#3 - Brown Paper Insulation - 2.5% Chrysotile




Sample #4 - Mudded Material - 33.3% Chrysotile

APPENDIX D
AFFECTED AREA MAP



Second Floor Key Plan - ACM Locations

Drawing Not to Scale

| | |
|---|---------------------------|
| ACM LEGEND: (see report for details) | |
|  | Positive: Pipe Insulation |

Date: 08/22/2017
Version # 1

Issued For:
Limited Asbestos Survey

Adelaide Project NO.
MIDD: 17031.01-IN

Drawing Prepared By:
David Seddon

ASB -02



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Client Project No.

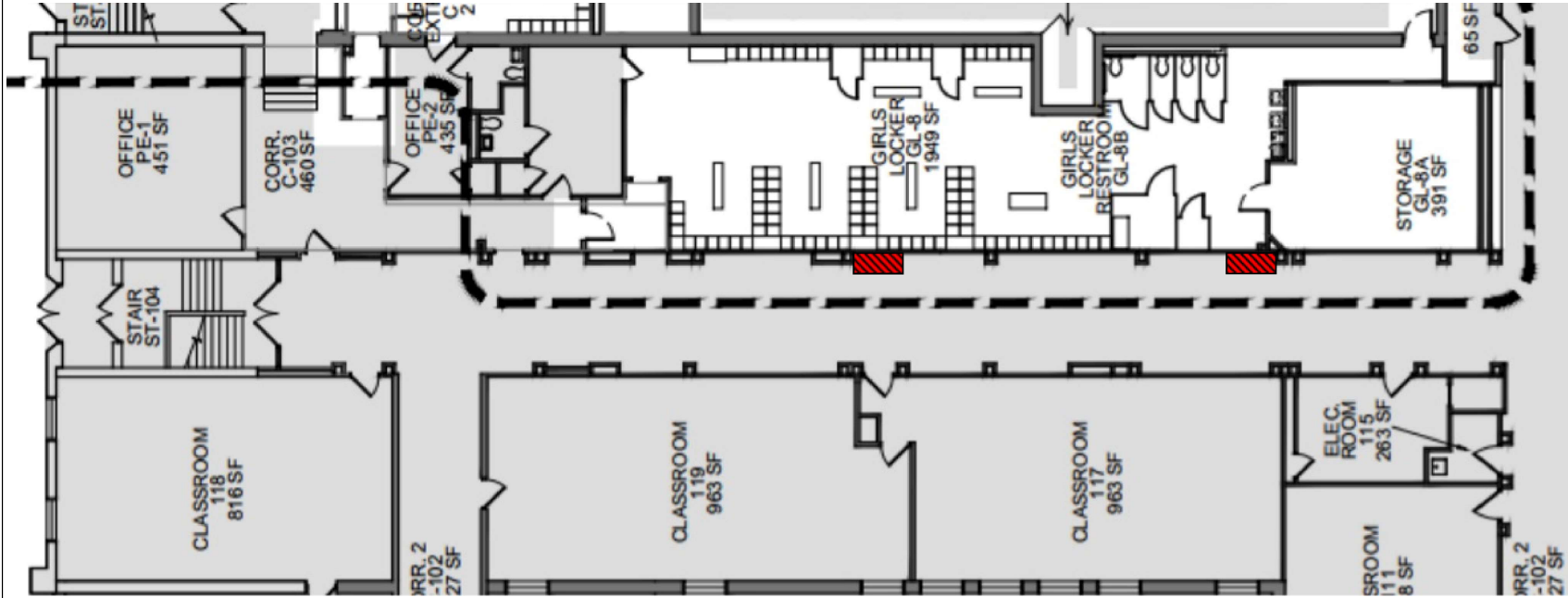
Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940


Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940



First Floor Key Plan - ACM Locations

Drawing Not to Scale



| | |
|---|---------------------------|
| ACM LEGEND: (see report for details) | |
|  | Positive: Pipe Insulation |

Date: 08/22/2017

Version # 1

Issued For:
Limited Asbestos Survey

Adelaide Project NO.
MIDD: 17031.01-IN

Drawing Prepared By:
David Seddon



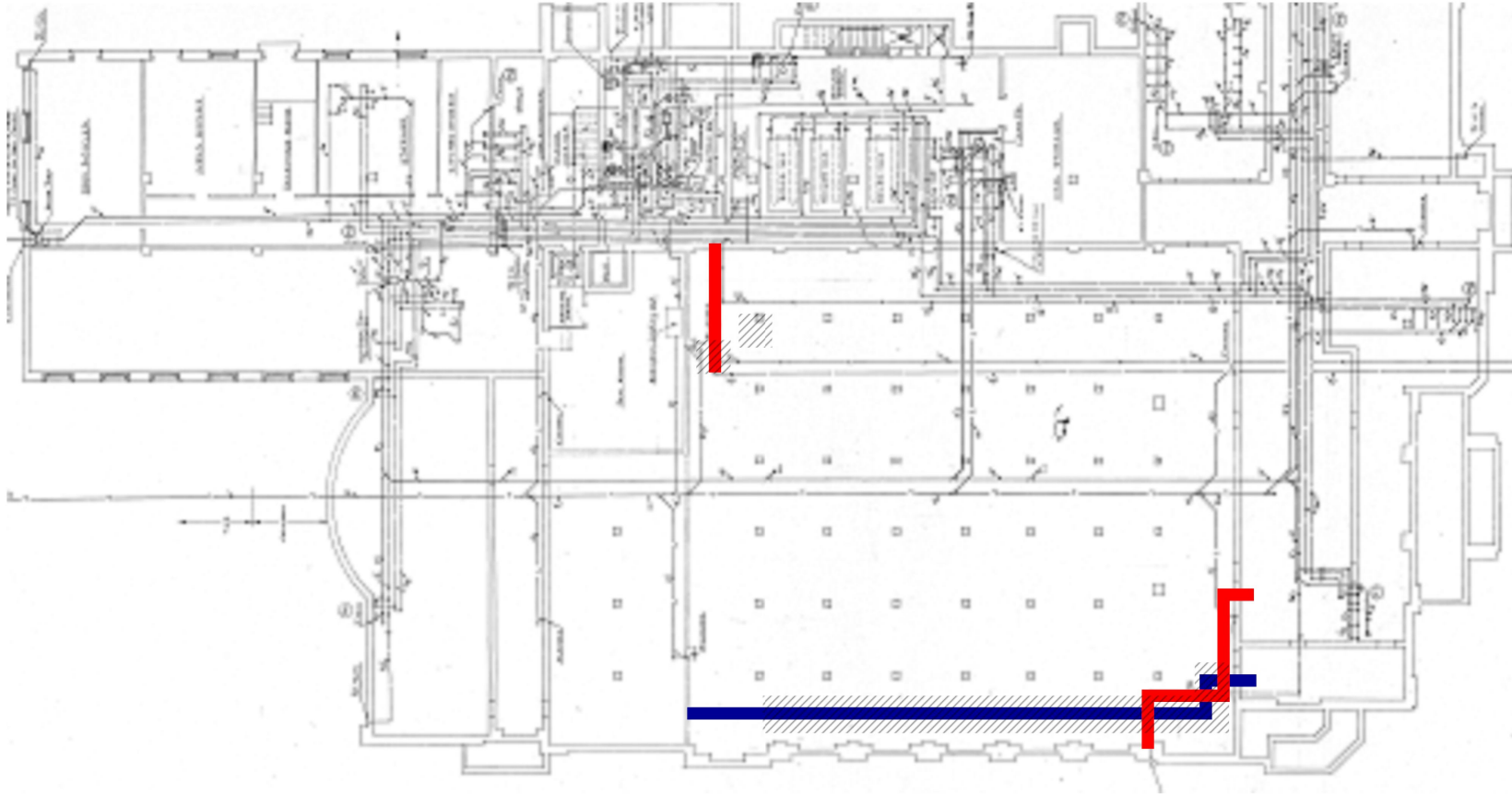
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Brewster, NY 10509
Phone: (845) 278-7710
Fax: (845) 278-7750

Client Project No.




Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

ASB -01



ACM LEGEND: (see report for details)

| | |
|---|---|
|  | ACM Aircell Pipe Insulation & Mudded Fittings |
|  | ACM Layered Paper Pipe Insulation & Mudded Fittings |
|  | ACM Debris |
| NOTE | ACM TSI Observed Throughout Entire Crawlspace Areas |

Crawlspace Detailed Key Plan - ACM Locations

Drawing Not to Scale

Date: 05-08-2017
Version # 1

Issued For:
Limited Asbestos Inspection

Adelaide Project NO
MIDD:17031.01-IN

Drawing Prepared By:
PIP

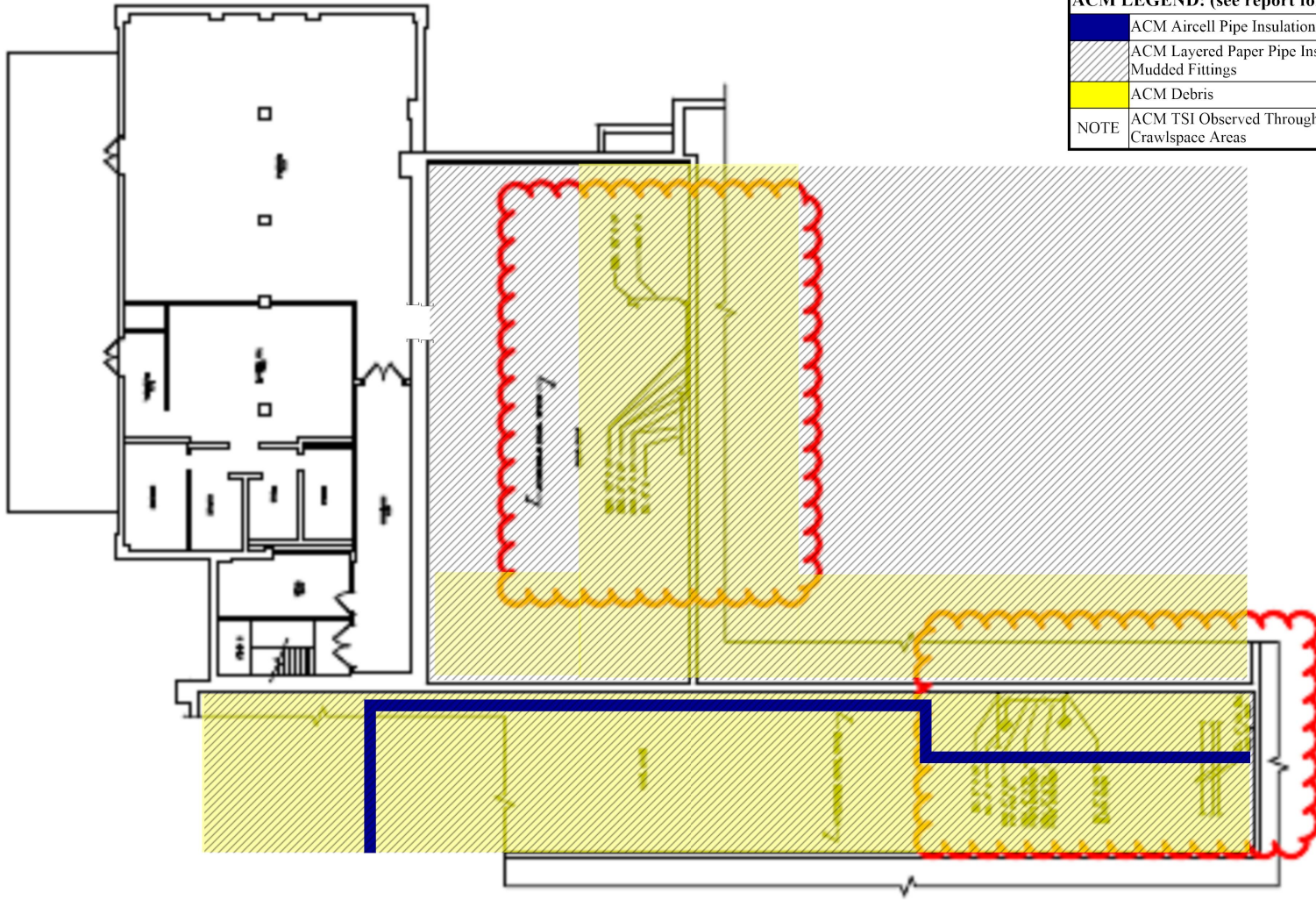





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Twin Towers Middle School
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Middletown, NY 10940

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

ASB-02




| ACM LEGEND: (see report for details) | |
|---|---|
|  | ACM Aircell Pipe Insulation |
|  | ACM Layered Paper Pipe Insulation & Mudded Fittings |
|  | ACM Debris |
| NOTE | ACM TSI Observed Throughout Entire Crawlspace Areas |

Crawlspace Detailed Key Plan - ACM Locations

Drawing Not to Scale

| | |
|---|-------------|
| Date: 02-06-2017 | Version # 1 |
| Issued For: Limited Asbestos Inspection | |
| Adelaide Project NO. MIDD:17031.01-IN | |
| Drawing Prepared By: PJP | |



Adelaide
Environmental Health Resources, Inc.

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Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

ASB-01

APPENDIX E

NYS DOL GUIDELINES FOR CONTAMINATED AREAS

56-1.5 Responsibility for Cleanup of Uncontrolled Disturbance. If there is an incidental disturbance or other disturbance (not as part of a controlled asbestos project) of ACM, PACM, asbestos material, or suspect miscellaneous ACM assumed to be ACM at a building or structure, upon discovery of the disturbance, the property owner shall be responsible for contracting with a licensed asbestos contractor for immediate isolation of the disturbance and cleanup in accordance with all provisions of this Part.

DOL Guidance Document

56-1.5 Question: Responsibility for Cleanup of Uncontrolled Disturbance. Are property owners subject to a potential violation of ICR 56 if ACM or PACM is disturbed by a trade's contractor or other entity unbeknownst to the owner and the damaged material or debris fallout is subsequently discovered by an Asbestos Control Bureau inspector? Is the party who disturbed the ACM or PACM required to notify the property owner, to aid the owner in complying with this requirement?

Answer/Guidance: Similar to US OSHA, any contractor performing a general supervisory role on any renovation, remodeling, demolition, or repair project is responsible for informing all contractors under their direct general supervision and control that any disturbance to ACM, PACM and asbestos material (known or assumed) at the site is prohibited by any contractor other than the asbestos contractor.

Also, the contractor performing the general supervisory role shall require all asbestos contractors under their direct general supervision and control to be in compliance with Code Rule 56. (This requirement does not include entering asbestos project work areas to check on the asbestos contractor.)

In addition, Section 1.4 includes contractor notification requirements to the building/structure owner or their representative for newly discovered materials and any disturbances to ACM, PACM or suspect miscellaneous materials.

Once a disturbance is discovered, it must be cleaned up as soon as possible. For all disturbances, the room/space/area must be vacated and isolated immediately, and an asbestos contractor must be hired for appropriate cleanup of affected room/area/space. A site-specific variance is necessary for cleanup of any disturbance other than a Minor size incidental disturbance.



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E-mail: adelaidemail@adelaidellc.com
Fax: 845.278.7750

**LIMITED SURVEY
FOR
ASBESTOS-CONTAINING MATERIALS, LEAD-BASED PAINT & PCBs**

PERFORMED AT:

Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940
Adelaide Project# MIDD:18116.06-IN

PREPARED FOR:

Mr. Thomas Scott
Superintendent of Buildings and Grounds
Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940-3240

PREPARED BY:

Robert See
December 20, 2018

REVIEWED BY:

A handwritten signature in blue ink, appearing to read "Stephanie A. Soter".

Stephanie A. Soter
President

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1.0 Introduction

1.1 Scope of Work / Project Personnel

Adelaide Environmental Health Associates, Inc. (**Adelaide**) performed an Asbestos, Lead and PCB Survey for Building/Structure Demolition, Renovation, Remodeling and/or Repair, in conformance with ALL Federal, State and Local regulations, on December 7th & 8th, 2018 for Enlarged City School District of Middletown throughout the exterior façade elevations of the Twin Towers Middle School, 112 Grand Avenue, Middletown, New York 10940. The survey included a visual inspection/assessment for hazardous materials throughout accessible exterior spaces of the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired. Certified **Adelaide** personnel (Appendix F), Robert See (NYS Asbestos Inspector/Cert. #06-09124 and EPA Lead-based Paint Risk Assessor/Cert. #LBP-R-101137-1), performed the visual assessment throughout inspection area(s) identified.

1.2 Executive Summary

Adelaide inspected all areas that will be affected by the scope of work to repair the façade for suspect ACM, LBP and PCBs. **Adelaide** collected twenty (20) suspect asbestos samples/layers, nineteen (19) XRF readings [including calibrations] and nine (9) suspect PCB samples from the above-mentioned area(s). Two (2) samples/homogenous areas tested positive for asbestos, five (5) XRF readings tested positive for lead-based paint and zero (0) samples tested positive for PCBs.

1.2.1 Conclusions and Recommendations

The following conclusions and recommendations are prepared by **Adelaide** as per the provided scope of work for Building/Structure Demolition, Renovation, Remodeling and/or Repair. Should the scope of work change, it is recommended that the findings be revisited to determine if additional sampling will be required to satisfy ALL Federal, State and Local regulations.

1.2.2 Asbestos-containing Materials (ACM)

- This survey concluded that the materials listed in Section 2.1 tested ***positive for asbestos***.
- Subpart 56-5(h) of 12 NYCRR Part 56 requires that no demolition, renovation, remodeling, or repair work be commenced by any owner or the owner's agent prior to the completion of asbestos abatement. Asbestos abatement must be performed by an asbestos abatement contractor that maintains a current asbestos handling license, and employs NYSDOL/NYCDEP certified asbestos handlers and supervisors. It is recommended that a 12 NYCRR 56 certified Project Monitor oversee abatement activities.
- Subpart 56-5(g) of 12 NYCRR Part 56 specifies requirements for transmittal of asbestos survey information by the owner or owner's agent. (1) One copy of the asbestos survey report shall be sent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling, or repair work under applicable State or local laws. (2) If controlled demolition or pre-demolition activities will be performed, one copy of the asbestos survey report shall be submitted to the appropriate Asbestos Control Bureau district office. (3) One copy of the asbestos survey

report must be kept on the construction site throughout the duration of the asbestos project and any associated demolition, renovation, remodeling, or repair project.

1.2.3 Lead-based Paint (LBP)

- This survey concluded that the materials listed in Section 2.4 tested **positive for lead-based paint**.
- These areas must be either abated or Lead safe work practices must be implemented during the demolition, renovation, remodeling, or repair activities if these areas are to be disturbed.

1.2.4 PolyChlorinated Biphenyls (PCB)

- This survey concluded that the materials listed in Appendix E tested **negative for PCBs**.

2.0 Summary of Hazardous Materials

2.1 Summary of Identified ACM/PACM

KEY: **ACM** = Materials containing greater than 1% of asbestos; **HA** = Homogeneous Area; **LF** = Linear Feet; **SF** = Square Feet; **PACM** = Presumed Asbestos-containing Materials; **Friable** = ACM capable of being released into air, and which can be crumbled, pulverized, powdered, crushed or exposed by hand-pressure.

Samples collected by **Adelaide** December 7th, & 8th, 2018

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|-----|---|--|--------------|-----------------------|----------------------|
| 009 | Older Hard Brown Caulk under Gray caulk | West side windows | 2,400 LF | Significantly Damaged | No |
| 010 | Caulk Hard Gray | West side under stone lintels above wood frame | 304 LF | Significantly Damaged | No |

2.2 Summary of Identified Non-ACM

Samples collected by **Adelaide** December 7th, & 8th, 2018

| Identified Non-ACM | Sample Location(s) & HA's |
|--|--------------------------------------|
| Window Caulk Newer Hard Gray | HA 001/ East side windows |
| Lintel Caulk on Steel Newer Beige | HA 002/ East side windows |
| Lintel Caulk on Steel Older Beige | HA 003/ East side windows |
| Brick and Sandstone Mortar | HA 004/ Throughout |
| Door Caulk Soft Gray | HA 005/ Throughout |
| Patch Caulk in Stonework | HA 006/ North side windows |
| Window Caulk Soft White | HA 007/ North and south side windows |
| Medium Hard Gray caulk over Positive older Caulk | HA 008/ West side windows |

2.3 ACM Photos

HA 009
Hard Brown Caulk under Gray
Caulk
3.9% Chrysotile



HA 010
Hard Gray Caulk above wood
frame under stone lintel
4.4% Chrysotile



Overall Photo of Space/Building



2.4 Summary of Identified LBP

Based on review of the data generated by the Thermo Scientific Niton XLp 300A Analyzer, the following surfaces tested were identified as lead-based, as defined by HUD/EPA (equal to or in excess of 1.0 milligram per square centimeter):

Readings collected by **Adelaide** December 7th, & 8th, 2018

| Location of LBP | LBP Component | Substrate | Color | Condition | Readings (mg/cm ²) |
|-----------------|---------------|-----------|-----------|-----------|--------------------------------|
| West side | Window Case | Vinyl | Off White | Intact | 3.80-4.90 |
| West Side | Window Case | Vinyl | Off White | Intact | 1.00-2.00 |

2.5 Summary of Identified PCB-containing Materials

Samples collected by **Adelaide** December 7th, & 8th, 2018

| Sample # | Location / Description | Material Matrix | Color | Substrate | Analytical Result |
|---|------------------------|-----------------|-------|-----------|-------------------|
| <i>NO PCB-containing materials were identified above the USEPA 40 CFR 761 threshold of 50 ppm(mg/kg) of samples collected/analyzed in reference to the above-mentioned scope of work.</i> | | | | | |

2.6 Observations

ASBESTOS-CONTAINING MATERIALS (ACM)

A visual inspection was performed and homogeneous material types were established based on appearance, color and texture. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

Representative bulk sampling was performed on suspect building materials for laboratory analysis and the following is a summary of installed building materials sampled as per the scope of work provided:

- Miscellaneous Materials – Caulk Multiple Types, Stone And Brick Mortar, .
- Non-suspect Materials (not sampled) – Fiberglass Insulation, Silicone, Wood, Glass, Metal.

LEAD-BASED PAINT (LBP)

XRF testing for lead-based paint was performed during this site visit; and, it was observed that Off White painted window cases could be disturbed by the façade repair activities and lead safe practices should be employed if these surfaces are to be disturbed.

POLYCHLORINATED BIPHENYLS (PCB)

It was observed that no suspect pcb-containing materials were to be disturbed by the proposed repair activities.

3.0 Asbestos-containing Materials (ACM)

3.1 Field Procedures and Analysis Methodology

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA) and Title 12 NYCRR Part 56-5.1. Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos-containing Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous. 1) Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster). 2) Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue). 3) Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.
- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply
- Chilled water supply
- Steam supply and/or return
- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

3.2 Regulatory Guidelines and Requirements for ACM

FEDERAL

In accordance with the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Emission Standards for hazardous Air Pollutants (NESHAP) to protect the public from exposure to airborne pollutants. Asbestos was one of the air pollutants, which was addressed under the NESHAP 40 CFR Part 61. The purpose of asbestos NESHAP regulations is to protect the public health by minimizing the release of asbestos when facilities, which contain ACM, are being renovated or demolished. EPA is responsible for enforcing regulations related to asbestos during renovations and demolition, however, the CAA allows the EPA to delegate this authority to State and Local Agencies. Even after EPA delegate's responsibility to a state or Local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

NEW YORK STATE

Asbestos in New York State is regulated under the Labor Law Section 906, Part 56 of Title 12 of the Official Compilation of Codes, Rules, and Regulations. Within the department and for the purpose of the Department of Labor, this part (rule) is known as Industrial Code Rule No. 56 (ICR 56) relating to hazards to the public safety and health, during the removal, encapsulation, or disturbance of friable asbestos, or any handling of ACM that may result in the release of asbestos fiber.

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set

forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part...All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM...Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part." All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

NEW YORK CITY

Asbestos Control Program (ACP), Title 15, Chapter 1 of the New York City Department of Environmental Protection (NYCDEP) regulates all asbestos abatement activities occurring within the City of New York. The ACR regulations also require asbestos surveys and abatement work to be performed by a NYCDEP certified asbestos investigator and asbestos workers, respectively.

The New York City Department of Buildings (NYCDOB) requires an ACP notification to be included with the renovation/demolition permit applications. The notification is performed using an ACP 5 or ACP 20/21 forms.

All confirmed ACM will need to be removed prior to any building renovation or demolition. The removal and disposal of ACM must be performed by a NYS-DOL licensed asbestos handling contractor in accordance with Federal, state, and local regulations. Proper notifications must be filed with the US-EPA, NYS-DOL, NYC-DEP and other regulatory agencies prior to performing such activities.

As required by the NYS-DOL and NYC-DEP regulations, the abatement project must be monitored by a NYS-DOL certified project monitor. The project monitor oversees contractor's work practices and also performs pre, during, and final clearance post abatement air sampling in accordance with the state and city regulations.

CONCEALED ACM

In addition to the ACMs identified at the site, there is a possibility that concealed suspect ACM may exist at the building/structure. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should either be 1) Sampled by an appropriately-certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

4.0 Lead-based Paint (LBP)

4.1 Applicable Standards/Guidelines for LBP

The U.S Department of Housing and Urban Development (HUD) defines the action level for lead-based paint as a lead content equal to or greater than 1.0 milligrams of lead per square centimeter of painted surface ($\geq 1.0 \text{ mg Pb/cm}^2$) when measured with an XRF analyzer or 0.5 percent by weight when chemically tested. This definition is described in the HUD "Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990". The state of New York's definition of the action level for lead-based paint is consistent with the level established by HUD.

Please note that although the HUD defines lead based paint as paint having lead concentrations equal or greater than 1.0 mg/cm², the Occupational Safety and Health Administration (OSHA) considers any concentration of lead in paint to be lead containing paint. Regardless of the lead concentrations in paint, the contractor shall comply with 29 CFR 1926.62, OSHA regulations, and take precautionary measures for dust control and limit employee exposure to lead dust during the renovations.

Painted surfaces that would be impacted by planned activities such as drilling, cutting, scrapping, etc. and create dust should be properly addressed by following safe work practices, good housekeeping procedures and/or following proper abatement procedures. Grinding and sanding of paint without HEPA filter exhaust, open flame gas fired torch, unconfined abrasive blasting, and chemical strippers containing methylene chloride or other human carcinogenic chemicals are not recommended.

The Federal Resource Conservation and Recovery Act (RCRA) regulation governs the handling, transportation, and disposal of hazardous materials. Every demolition/renovation debris generator has the responsibility to determine whether the debris exhibits one or more of the characteristic wastes listed in subpart C of 40 CFR Part 261. In the case of demolition debris, lead in LBP is a characteristic waste, and therefore, it is the responsibility of the renovation/demolition debris generator to characterize the waste prior to its disposal and, if found to be hazardous waste as defined by Federal Statutes, to be properly handled and disposed.

Metal objects painted with LBP are exempt from disposal regulations applicable to lead, provided they are properly recycled. All metal objects that are painted with LBP should be sent to a certified recycling facility.

This report is not Lead-based Paint abatement specification and should not be used for specifying removal methods or techniques.

4.2 XRF Information

Thermo Scientific Niton XLP 300A X-Ray Fluorescence (XRF) Analyzer(s) were used to survey the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired for the presence of LBP. The XRF analyzers are using a sealed source of Cd109 with 40mCi sources, meeting HUD requirements for the analysis of paint films. During the analysis, the intensity of the x-rays is converted by the instrument's internal software into an estimate of the concentration of lead in the substance being analyzed. The results are interpreted as concentrations of lead in milligrams per square centimeter. This device is a field-screening tool, used to collect multiple readings in a short period of time. The method of measurement is based on spectrometric analysis of lead x-ray fluorescence within a

controlled depth of interrogation. The reading is an estimate of lead content in all layers of paint. The results are displayed in milligrams per square centimeter (mg/cm²). The device(s) used for this inspection were the Thermo Scientific Niton XLp 300A Analyzer(s), Serial number 90719, Source date 3/15/14, Serial number 102951, Source date 9/15/17 and/or Serial number 101094, Source date 2/15/17.

5.0 PolyChlorinated Biphenyls (PCB)

5.1 Background and Protocol for PCBs

PolyChlorinated Biphenyls (PCB) are a group of manmade chemicals. PCBs were widely used in building materials and electrical products in the past. The U.S. Environmental Protection Agency banned the manufacturing and certain uses of PCBs in 1978, but buildings constructed or renovated between 1950 and 1978 may still have building materials and electrical products that contain PCBs. Examples of products that may contain PCBs include caulk, paint, glues, plastics, fluorescent lighting ballasts, transformers and capacitors.

PCBs are currently prohibited from being used in caulk and other commodities (U.S. EPA, 40 CFR 761). However, prior to 1977, PCBs were present in some caulking materials used in the construction of schools and other buildings. Studies have shown that concentrations of PCB can exceed 1% (10,000 ppm) by weight in some caulk materials. An investigation of 24 buildings in the Greater Boston Area revealed that one-third of the buildings tested (8 of 24) contained caulking materials with polychlorinated biphenyl (PCB) content exceeding 50 ppm by weight with an average concentration of 15,600 ppm or 1.5% (Herrick et al., 2004). These buildings included schools and other public buildings.

The U.S. EPA regulates the disposal of caulk, as well as soil and other materials contaminated with PCBs from caulk, if the concentration of PCBs exceeds 50 ppm. Such materials must be disposed at an appropriate approved or permitted facility.

U.S. EPA regulation 40 CFR 761 defines "PCB remediation waste" to include contaminated soil, and specifies a clean-up level of <1ppm without further conditions for unrestricted use in "high occupancy areas" (i.e., areas where individuals may be present for 335 hours or more per year). PCB caulk is defined as a PCB bulk product waste, and its disposal is subject to U.S. EPA regulations under the Toxic Substances Control Act (40 CFR761.62).

This protocol has been developed in consultation with the New York State Department of Health, Division of Environmental Health Assessment, Bureau of Toxic Substance Assessment to address concerns about properly managing caulk containing PCBs that will be disturbed during building renovation and maintenance.

CAULK SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977 have a potential to contain PCBs in existing caulk. Representative samples of caulking materials from these buildings prior to renovation or demolition work should be tested to determine whether the caulk is contaminated with PCBs. Professional judgement should be used to design the sampling plan for characterizing caulk throughout the building. The consultant should pay particular attention to construction and maintenance records and to the appearance of caulking materials (likenesses and differences). Samples should be taken from window frames or expansion joints that have not been repaired or replaced since 1977. Depending on specific information

provided in the workplan developed by the project manager, such as window placement, compositing of some caulk samples might be appropriate. Caulk from different time periods or that have a different appearance should not be composited together.

It is important to note that caulk used during the time period of interest may also contain asbestos or lead. Therefore, the work plan should include testing, handling and disposal requirements appropriate for such regulated materials.

SOIL SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977, which have undergone further renovation after 1977, may have residual PCB contamination in adjacent soils. An adequate representation of surface soils should be tested to assess the potential for residual PCB contamination.

When designing a representative soil sampling plan, the likelihood of soil contamination from deteriorated or deteriorating caulk should be considered. Caulk that has in the past dried out and fallen to the ground is the most important source of soil contamination. Thus, sampling should include soil beneath windows where caulk has obviously deteriorated or been replaced because of previous deterioration. Areas subject to the stress of sun and prevailing weather (typically the southern and western side of each structure) should be included for sampling. These samples would provide a conservative evaluation of soil conditions due to an increased potential for material failure, possibly resulting in contamination of soil. Also, if earlier renovation or demolition work may have stockpiled potentially contaminated caulk in other school areas, the school should consider having soils in those areas tested as well.

Soil sampling should focus on areas of the building where "banks" or "gangs" of windows exist/were replaced and areas of the structure where large expansion joints are located. This would provide a conservative evaluation of potential soil contamination and permit efficient sampling.

Any obvious pieces of caulk encountered during the collection of soil samples should be removed from the soil, categorized (with respect to location and depth) and treated as a separate potential sample.

Depth – At each soil sample location, soil should be collected in depth intervals of 0-2 inches, 2-6 inches and 6-12 inches. The surface soil sample (0-2 inches) should be collected from below the vegetative surface layer, if present.

Distance from Structure – Samples should be collected within 1 foot of the building and 5 feet from the building.

Samples should be collected in a manner that prevents cross-contamination. Augers or driven core samplers should be avoided, as any caulk caught on the edge of this type of tool could be driven to lower intervals. Using a designated trowel for each sample location and each interval of depth is encouraged. If the sampling tool is field cleaned between samples, do so in a manner that does not add solvent contamination to the environment.

NOTE

Sampling was performed by **Adelaide** in compliance with protocols outlined by New York State Education Department (NYSED) and USEPA 40 CFR 761, as described above. Only one sample per homogeneous area was required for analysis of suspect PCB-containing materials. Bulk sample(s) were properly packaged

and forwarded, with associated Chain of Custody (COC), to York Analytical Laboratories, Inc., for analysis using method SW846-3550B/8082. The analysis will determine if the suspect material will be classified as PCB-containing at or above 50 ppm or mg/kg as per the EPA regulations. Copies of the analytical results are contained within attached appendices for review.

6.0 General Discussion

All construction personnel as well as individuals who have access to locations where asbestos-containing materials (ACM), lead-based paints (LBP) and/or polychlorinated biphenyls (PCB) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel is adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities; as defined in 29 CFR 1910.1001.

7.0 Disclaimers

Adelaide certifies that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected during this survey/assessment. These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local regulations. **Adelaide** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **Adelaide** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions. No other warranties are expressed or implied.

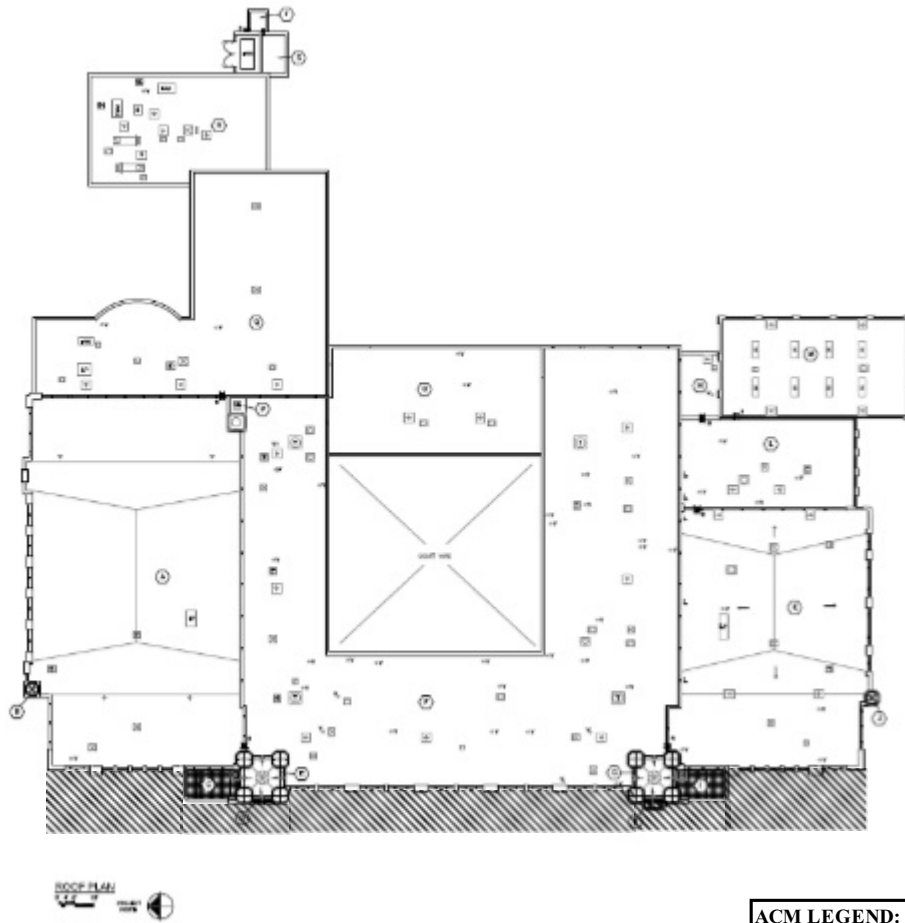
Due to the potential for concealed Asbestos-containing Materials (ACM) and/or other regulated materials, this report should not be construed to represent all ACM and/or regulated materials within the site(s). All quantities of ACM and/or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.


NYSDOH issued an Interim Guidance Letter, on July 9, 2013, which outlined the approved testing alternative for materials containing vermiculite. Specifically, "...Where TSI, surfacing materials, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer: *"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."* On July 22, 2014, NYSDOH issued a Regulatory Guidance Letter outlining the new approved analytical methods for testing sprayed-on fireproofing (SOF) that contains vermiculite. NYSDOH authorized the use of **two** analytical methods to evaluate the asbestos content of SOF that contains vermiculite. As per NYSDOH Guidelines, *"After October 31, 2014, one of the new methods **must** be used to test SOF-V, regardless of the*

percent of vermiculite.” On May 6, 2016, NYSDOH issued a Regulatory Guidance Letter outlining the new protocol for analytical procedure for surfacing materials (ie. plaster, stucco, etc.) that contain vermiculite. As per NYSDOH Guidelines, “The original July 2013 and July 2014 letters addressed SOF-V only. Both NYS DOH’s Item 198.8 and Rj Lee Group Method 055 shall now be applied to test for vermiculite in other Surfacing Material (SM) as defined in 12 NYCRR Part 56 (NYS Industrial Code Rule 56).”

APPENDIX A
ACM LOCATION MAP(S)

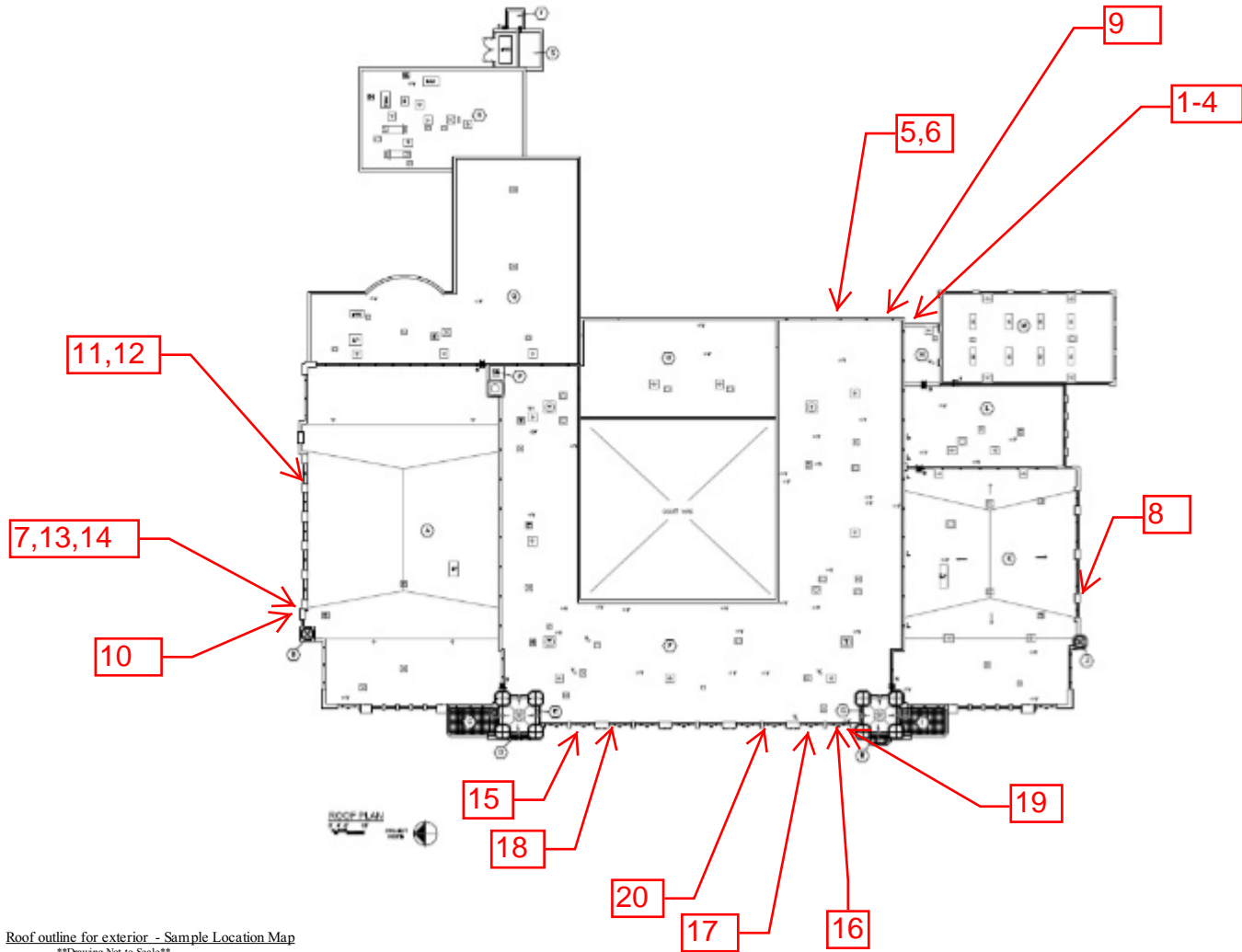


Roof outline for exterior - Asbestos Location Map
 Drawing Not to Scale

| | |
|---|---|
| ACM LEGEND: (see report for details) | |
|  | Older Hard Brown Caulk under Gray caulk around frames, Caulk Hard Gray under stone lintels above wood frame |
| ACM caulking present on all floors at exterior windows on west side of building. | |

| | | | |
|--|---|---|---|
| Twin Towers Middle School 112 Grand Avenue Middletown, New York 10940 | | Mr. Thomas Scott Superintendent of Buildings and Grounds Enlarged City School District of Middletown 223 Wisner Avenue Middletown, New York 10940-3240 | |
| Client Project No. | | | |
|  Adelaide <small>Environmental Services</small> | | 1511 Route 22 Bessier, NY 10509 Phone: (845)278-7710 Fax: (845)278-7750 | |
| Date: 02/05/2019 Version # 1 | Issued For: Limited Asbestos Survey | Adelaide Project NO: MIDD18116.06-IN | Drawing Prepared By: Robert See |
| ASB - 01 | | | |

APPENDIX B
SAMPLE LOCATION MAP(S)



Roof outline for exterior - Sample Location Map
 Drawing Not to Scale

| | | | |
|---|---|---|---|
| Twin Towers Middle School 112 Grand Avenue Middletown, New York 10940 | | Mr. Thomas Scott Superintendent of Buildings and Grounds Enlarged City School District of Middletown 223 Wisner Avenue Middletown, New York 10940-3240 | |
| Client Project No. | | | |
|  | | 1511 Route 22 Bellerose, NY 10509 Phone: (845)278-7710 Fax: (845)278-7750 | |
| Date: 02/05/2019 Version # 1 | Issued For: Limited Asbestos Survey | Adelaide Project NO. MIDD18116.06-IN | Drawing Prepared By: Robert See |
| SLM - 01 | | | |

APPENDIX C
ASBESTOS ANALYTICAL RESULTS

AmeriSci Job #: 218121850

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results
MIDD-18116.06-IN; Twin Towers Middle School - 112 Grand Avenue, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|---|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 1 | 1 | 0.232 | 22.8 | 72.4 | 4.7 | NAD | NAD |
| Location: 1st Fl. - Exterior / Near Door 18 - Window Caulk (Gray / Hard) | | | | | | | | |
| 02 | 2 | 1 | 0.203 | 23.2 | 71.4 | 5.4 | NAD | NAD |
| Location: 3rd Fl. - Exterior / Near Door 18 - Window Caulk (Gray / Hard) | | | | | | | | |
| 03 | 3 | 2 | 0.184 | 34.2 | 44.0 | 21.7 | NAD | NAD |
| Location: 2nd Fl. - Exterior / Above Stair Near Door 18 - Lintel Caulk (On Steel / Beige) | | | | | | | | |
| 04 | 4 | 2 | 0.149 | 32.2 | 34.9 | 32.9 | NAD | NAD |
| Location: 2nd Fl. - Exterior / Above Stair Near Door 18 - Lintel Caulk (On Steel / Beige) | | | | | | | | |
| 05 | 5 | 3 | 0.237 | 58.2 | 28.7 | 12.9 | Chrysotile <0.25 | Chrysotile <1.0 |
| Location: 2nd Fl. - Exterior / East Side - Frame & Lintel Caulk (Older / Beige) | | | | | | | | |
| 06 | 6 | 3 | 0.153 | 65.4 | 24.2 | 10.5 | NAD | NAD |
| Location: 2nd Fl. - Exterior / East Side - Frame & Lintel Caulk (Older / Beige) | | | | | | | | |
| 07 | 7 | 4 | ---- | ---- | ---- | ---- | NAD | NA |
| Location: 1st Fl. - Exterior / North Side - Brick & Sandstone Block Mortar | | | | | | | | |
| 08 | 8 | 4 | ---- | ---- | ---- | ---- | NAD | NA |
| Location: 1st Fl. - Exterior / West Side - Brick & Sandstone Block Mortar | | | | | | | | |
| 09 | 9 | 5 | 0.138 | 63.8 | 22.5 | 13.8 | NAD | NAD |
| Location: 1st Fl. - East Side - Door Caulk (Old Gray / Soft) | | | | | | | | |
| 10 | 10 | 5 | 0.136 | 64.7 | 25.7 | 9.4 | NAD | Chrysotile <1.0 |
| Location: 1st Fl. - North Side - Door Caulk (Old Gray / Soft) | | | | | | | | |
| 11 | 11 | 6 | 0.227 | 37.9 | 61.7 | 0.4 | NAD | NAD |
| Location: 3rd Fl. - Exterior / North Side - Patch Caulk (In Stonework) | | | | | | | | |
| 12 | 12 | 6 | 0.259 | 37.1 | 60.6 | 2.3 | NAD | NAD |
| Location: 3rd Fl. - Exterior / North Side - Patch Caulk (In Stonework) | | | | | | | | |
| 13 | 13 | 7 | 0.088 | 60.2 | 15.9 | 23.9 | NAD | NAD |
| Location: 3rd Fl. - North Side - Window Caulk (Soft / White) | | | | | | | | |
| 14 | 14 | 7 | 0.151 | 64.9 | 17.9 | 17.2 | NAD | NAD |
| Location: 3rd Fl. - North Side - Window Caulk (Soft / White) | | | | | | | | |
| 15 | 15 | 8 | 0.181 | 59.7 | 24.9 | 15.5 | NAD | NAD |
| Location: 3rd Fl. - West Side - Medium / Hard Gray Caulk Over Old Caulk | | | | | | | | |
| 16 | 16 | 8 | 0.228 | 64.5 | 22.8 | 12.7 | NAD | NAD |
| Location: 1st Fl. - West Side - Medium / Hard Gray Caulk Over Old Caulk | | | | | | | | |

AmeriSci Job #: 218121850

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results
MIDD-18116.06-IN; Twin Towers Middle School - 112 Grand Avenue, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 17 | 17 | 9 | 0.191 | 53.4 | 22.0 | 20.7 | Chrysotile 3.9 | NA |
| Location: 2nd Fl. - West Side - Older Hard Brown Caulk Under Gray Caulk | | | | | | | | |
| 18 | 18 | 9 | 0.157 | 45.9 | 31.2 | 22.9 | NA/PS | NA |
| Location: 2nd Fl. - West Side - Older Hard Brown Caulk Under Gray Caulk | | | | | | | | |
| 19 | 19 | 10 | 0.228 | 23.2 | 53.5 | 18.8 | Chrysotile 4.4 | NA |
| Location: 2nd Fl. - West Side - Under Stone Lintel Above Wood Frame - Type 2 Caulk (Hard / Gray) | | | | | | | | |
| 20 | 20 | 10 | 0.245 | 21.2 | 51.4 | 27.3 | NA/PS | NA |
| Location: 2nd Fl. - West Side - Under Stone Lintel Above Wood Frame - Type 2 Caulk (Hard / Gray) | | | | | | | | |

Analyzed by: Feyza Gungor ; Date Analyzed 12/11/2018

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By: _____



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24
Brewster, NY 10509

Date Received 12/10/18 **AmeriSci Job #** 218121850
Date Examined 12/10/18 **P.O. #**
ELAP # 11480 **Page** 1 of 4
RE: MIDD-18116.06-IN; Twin Towers Middle School - 112 Grand Avenue, Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 1 1 | 218121850-01 Location: 1st Fl. - Exterior / Near Door 18 - Window Caulk (Gray / Hard) | No | NAD ¹ (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 4.7 % | | | |
| 2 1 | 218121850-02 Location: 3rd Fl. - Exterior / Near Door 18 - Window Caulk (Gray / Hard) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 5.4 % | | | |
| 3 2 | 218121850-03 Location: 2nd Fl. - Exterior / Above Stair Near Door 18 - Lintel Caulk (On Steel / Beige) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 21.7 % | | | |
| 4 2 | 218121850-04 Location: 2nd Fl. - Exterior / Above Stair Near Door 18 - Lintel Caulk (On Steel / Beige) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 32.9 % | | | |
| 5 3 | 218121850-05 Location: 2nd Fl. - Exterior / East Side - Frame & Lintel Caulk (Older / Beige) | Yes | Trace (<0.25 % pc) ² (EPA 400 PC) by Ella Babayeva on 12/10/18 |
| Analyst Description: Beige/Brown, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Non-fibrous 13.1 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD-18116.06-IN; Twin Towers Middle School - 112 Grand Avenue, Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|---|------------------|---|
| 6 3 | 218121850-06 Location: 2nd Fl. - Exterior / East Side - Frame & Lintel Caulk (Older / Beige) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 10.5 % | | | |
| 7 4 | 218121850-07 Location: 1st Fl. - Exterior / North Side - Brick & Sandstone Block Mortar | No | NAD (by NYS ELAP 198.1) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % Comment: Mortar Submitted Only | | | |
| 8 4 | 218121850-08 Location: 1st Fl. - Exterior / West Side - Brick & Sandstone Block Mortar | No | NAD (by NYS ELAP 198.1) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % Comment: Mortar | | | |
| 9 5 | 218121850-09 Location: 1st Fl. - East Side - Door Caulk (Old Gray / Soft) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 13.8 % | | | |
| 10 5 | 218121850-10 Location: 1st Fl. - North Side - Door Caulk (Old Gray / Soft) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 9.6 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos ReportMIDD-18116.06-IN; Twin Towers Middle School - 112 Grand
Avenue, Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|---|------------------|---|
| 11 6 | 218121850-11 Location: 3rd Fl. - Exterior / North Side - Patch Caulk (In Stonework) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 0.4 % | | | |
| 12 6 | 218121850-12 Location: 3rd Fl. - Exterior / North Side - Patch Caulk (In Stonework) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 2.3 % | | | |
| 13 7 | 218121850-13 Location: 3rd Fl. - North Side - Window Caulk (Soft / White) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 23.9 % | | | |
| 14 7 | 218121850-14 Location: 3rd Fl. - North Side - Window Caulk (Soft / White) | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 17.2 % | | | |
| 15 8 | 218121850-15 Location: 3rd Fl. - West Side - Medium / Hard Gray Caulk Over Old Caulk | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 15.5 % | | | |
| 16 8 | 218121850-16 Location: 1st Fl. - West Side - Medium / Hard Gray Caulk Over Old Caulk | No | NAD (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 12.7 % | | | |

Client Name: Adelaide Environmental Health

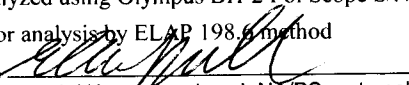
PLM Bulk Asbestos Report

MIDD-18116.06-IN; Twin Towers Middle School - 112 Grand Avenue, Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|--|------------------|---|
| 17 9 | 218121850-17 Location: 2nd Fl. - West Side - Older Hard Brown Caulk Under Gray Caulk | Yes | 3.9 % (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 3.9 % Other Material: Non-fibrous 20.7 % | | | |
| 18 9 | 218121850-18 Location: 2nd Fl. - West Side - Older Hard Brown Caulk Under Gray Caulk | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 19 10 | 218121850-19 Location: 2nd Fl. - West Side - Under Stone Lintel Above Wood Frame - Type 2 Caulk (Hard / Gray) | Yes | 4.4 % (by NYS ELAP 198.6) by Ella Babayeva on 12/10/18 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 4.4 % Other Material: Non-fibrous 18.8 % | | | |
| 20 10 | 218121850-20 Location: 2nd Fl. - West Side - Under Stone Lintel Above Wood Frame - Type 2 Caulk (Hard / Gray) | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |

Reporting Notes:

- (1) This job was - Analyzed using Olympus BH-2 Pol Scope S/N 229003
- (2) Sample prepared for analysis by ELAP 198.6 method

Analyzed by: Ella Babayeva 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by Appd E to Subpt E, 40 CFR 763 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

Adelaide Environmental Health Associates, Inc

1454 Rte. 22, Suite B202
 Brewster, NY 10509
 845-278-7710
 845-278-7750 - fax

#218121850

| Site Address: Twin Towers Middle School | | | Date: 12/7/2018 - 12/8/2018 | | Inspector(s) Robert See | | |
|---|------------------|-------------|--|---|-------------------------|--------------------|--|
| 112 Grand Avenue | | | | | | | |
| Middletown, NY 10940 | | | Project #: MIDD-18116.06-IN | | | | |
| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | Quantity (In Feet) | Friable Non-Friable | Condition g. d. sd | |
| 1 | 1 | 1 | Exterior near Door 18 / Window caulk gray hard | Through out | | D | |
| 2 | 1 | 3 | ✓ ✓ ✓ ✓ ✓ | | | | |
| 3 | 2 | 2 | Exterior above stair near door 18 / ^{on stone} lintel caulk beige | 3 L per Lintel | | D | |
| 4 | 2 | | ✓ ✓ ✓ ✓ | ✓ | | | |
| 5 | 3 | 2 | Exterior East side / older beige caulk frame lintel | 12 LF per window | | SD | |
| 6 | 3 | | | | | | |
| 7 | 4 | 1 | Exterior North side Brick sandstone Block mortar | Through out | | D | |
| 8 | 4 | 1 | ✓ West side ✓ ✓ | ✓ | | D | |
| 9 | 5 | 1 | East side Door caulk old gray soft | 30 LF per door | | SD | |
| 10 | 5 | 1 | North side ✓ ✓ | ✓ | | SD | |
| 11 | 6 | 3 | Exterior North side Patch caulk in stonework | 100 LF | | SD | |
| 12 | 6 | 3 | ✓ ✓ ✓ ✓ | ✓ | | SD | |
| 13 | 7 | 3 | North side window caulk soft white | 250 LF | | G | |
| Special Instructions/ Turnaround Time: | | | | Relinquished by: Robert See | | | |
| Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail results to AdelaideLabResults@Adelaidellc.com | | | | 24 Hrs TAT | | | |
| | | | | Received by: [Signature] 12/10/18 11:42 | | | |
| | | | | Relinquished by: | | | |
| | | | | Received by: | | | |

Adelaide Environmental Health Associates, Inc

1454 Rte. 22, Suite B202
 Brewster, NY 10509
 845-278-7710
 845-278-7750 - fax

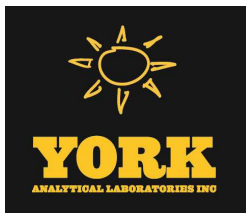
#218121850

| Site Address: Twin Towers Middle School | | | Date: 12/7/2018 | | Inspector(s) Robert See | | | |
|--|------------------|-------------|---|--|--|----------------------------|--------------------|----|
| 112 Grand Avenue | | | | | | | | |
| Middletown, NY 10940 | | | Project #: MIDD-18116.06-IN | | Quantity (In Feet) | Friable NonFriable | Condition g. d. sd | |
| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | | | | | |
| 14 | 7 | 3 | North side Window caulk soft white | | | 250LF | | G |
| 15 | 8 | 3 | West side ^{medium hard} Gray caulk over old caulk | | | 1800LF 750LF | | SD |
| 16 | 8 | 1 | V V V | | | V | | SD |
| 17 | 9 | 2 | Older hard brown caulk under gray caulk | | | 1800LF | | SD |
| 18 | 9 | 2 | V V V V | | | V | | SD |
| 19 | 10 | 2 | West side under stone lintel above wood frame ^{TYPE 2 caulk} hard gray | | | Thru out | | SD |
| 20 | 10 | 2 | V V V V V | | | V | | SD |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Special Instructions/ Turnaround Time: | | | | | Relinquished by: <i>Robert See</i> | | | |
| 24 Hrs TAT Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail results to AdelaideLabResults@Adelaidellc.com | | | | | Received by: <i>[Signature]</i> 12/10/18 11:42 | | | |
| | | | | | Relinquished by: | | | |
| | | | | | Received by: | | | |

APPENDIX D
XRF READINGS

| Index | Time | Type | Project Name | Project Number | Space Type | Floor | Room | Component | Side | Color | Substrate | Paint Condition | PbC | PbL | PbN | Results | Units | Inspector |
|-------|------------------|-------|----------------|----------------|------------|-----------|-----------|-------------|-------|-----------|-----------|-----------------|---------------|---------------|---------------|----------|----------------------|------------|
| 1 | 2018-12-07 10:18 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 0.90 +/- 0.10 | 0.90 +/- 0.10 | 0.90 +/- 0.60 | Negative | mg / cm ² | Robert See |
| 2 | 2018-12-07 10:19 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 1.10 +/- 0.10 | 1.10 +/- 0.10 | 0.40 +/- 0.50 | Positive | mg / cm ² | Robert See |
| 3 | 2018-12-07 10:19 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 1.10 +/- 0.10 | 1.10 +/- 0.10 | 0.40 +/- 0.50 | Positive | mg / cm ² | Robert See |
| 4 | 2018-12-07 11:24 | Paint | Twin Towers MS | 18116.06-IN | School | 1st Floor | Exterior | Window Case | East | Yellow | Metal | Intact | 0.50 +/- 0.50 | 0.00 +/- 0.02 | 0.50 +/- 0.50 | Negative | mg / cm ² | Robert See |
| 5 | 2018-12-07 11:25 | Paint | Twin Towers MS | 18116.06-IN | School | 1st Floor | Exterior | Lintel | East | Yellow | Metal | Intact | 0.00 +/- 0.03 | 0.00 +/- 0.03 | 0.30 +/- 2.70 | Negative | mg / cm ² | Robert See |
| 6 | 2018-12-07 11:29 | Paint | Twin Towers MS | 18116.06-IN | School | 2nd Floor | Exterior | Lintel | East | Yellow | Metal | Intact | 0.01 +/- 0.04 | 0.01 +/- 0.04 | 1.20 +/- 2.60 | Negative | mg / cm ² | Robert See |
| 7 | 2018-12-07 11:45 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Lintel | East | Yellow | Metal | Intact | 0.00 +/- 0.03 | 0.00 +/- 0.03 | 0.30 +/- 2.84 | Negative | mg / cm ² | Robert See |
| 8 | 2018-12-07 14:18 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Door Frame | East | Yellow | Metal | Intact | 0.00 +/- 0.02 | 0.00 +/- 0.02 | 0.26 +/- 2.97 | Negative | mg / cm ² | Robert See |
| 9 | 2018-12-07 14:19 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Door Frame | North | Yellow | Metal | Intact | 0.01 +/- 0.03 | 0.01 +/- 0.03 | 0.41 +/- 2.81 | Negative | mg / cm ² | Robert See |
| 10 | 2018-12-07 14:29 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Calibrate | Door Frame | North | Yellow | Metal | Intact | 1.10 +/- 0.10 | 1.10 +/- 0.10 | 0.50 +/- 0.50 | Positive | mg / cm ² | Robert See |
| 11 | 2018-12-07 14:29 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Calibrate | Door Frame | North | Yellow | Metal | Intact | 1.10 +/- 0.10 | 1.10 +/- 0.10 | 0.70 +/- 0.50 | Positive | mg / cm ² | Robert See |
| 12 | 2018-12-07 14:29 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Calibrate | Door Frame | North | Yellow | Metal | Intact | 1.20 +/- 0.10 | 1.20 +/- 0.10 | 0.40 +/- 0.60 | Positive | mg / cm ² | Robert See |
| 13 | 2018-12-07 16:00 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Window Case | North | White | Wood | Intact | 0.00 +/- 0.02 | 0.00 +/- 0.02 | 0.02 +/- 0.84 | Negative | mg / cm ² | Robert See |
| 14 | 2018-12-07 17:28 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Door Frame | West | Off White | Wood | Intact | 0.00 +/- 0.02 | 0.00 +/- 0.02 | 0.06 +/- 1.27 | Negative | mg / cm ² | Robert See |
| 15 | 2018-12-07 17:29 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Window Case | West | Off White | Vinyl | Intact | 4.90 +/- 3.80 | 0.80 +/- 0.82 | 4.90 +/- 3.80 | Positive | mg / cm ² | Robert See |
| 16 | 2018-12-07 17:29 | Paint | Twin Towers MS | 18116.06-IN | School | 3rd Floor | Exterior | Window Case | West | Off White | Vinyl | Intact | 2.00 +/- 1.00 | 0.80 +/- 0.82 | 2.00 +/- 1.00 | Positive | mg / cm ² | Robert See |
| 17 | 2018-12-07 17:35 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 1.20 +/- 0.10 | 1.20 +/- 0.10 | 0.90 +/- 1.00 | Positive | mg / cm ² | Robert See |
| 18 | 2018-12-07 17:35 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 1.20 +/- 0.20 | 1.20 +/- 0.20 | 0.25 +/- 0.99 | Positive | mg / cm ² | Robert See |
| 19 | 2018-12-07 17:35 | Paint | Twin Towers MS | 18116.06-IN | | | Calibrate | | | | | | 1.20 +/- 0.20 | 1.20 +/- 0.20 | 0.70 +/- 1.00 | Positive | mg / cm ² | Robert See |

APPENDIX E
PCB ANALYTICAL RESULTS



Technical Report

prepared for:

Adelaide Environmental Health Associates, Inc.

1511 Route 22, Suite C24

Brewster NY, 10509

Attention: Mr. John Soter

Report Date: 12/14/2018

Client Project ID: MIDD:18116.06-IN

York Project (SDG) No.: 18L0368

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE
www.YORKLAB.com

STRATFORD, CT 06615
(203) 325-1371

132-02 89th AVENUE
FAX (203) 357-0166

RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 12/14/2018
Client Project ID: MIDD:18116.06-IN
York Project (SDG) No.: 18L0368

Adelaide Environmental Health Associates, Inc.
1511 Route 22, Suite C24
Brewster NY, 10509
Attention: Mr. John Soter

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 10, 2018 and listed below. The project was identified as your project: **MIDD:18116.06-IN**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| <u>York Sample ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Date Collected</u> | <u>Date Received</u> |
|-----------------------|-------------------------|---------------|-----------------------|----------------------|
| 18L0368-01 | PCB 1 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-02 | PCB 2 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-03 | PCB 3 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-04 | PCB 4 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-05 | PCB 5 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-06 | PCB 6 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-07 | PCB 7 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-08 | PCB 8 | Caulk | 12/07/2018 | 12/10/2018 |
| 18L0368-09 | PCB 9 | Caulk | 12/07/2018 | 12/10/2018 |

General Notes for York Project (SDG) No.: 18L0368

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 12/14/2018





Sample Information

| | | | | | |
|--|--|------------------------|---|------------------------------------|-----------------------------------|
| Client Sample ID: PCB 1 | | | | | York Sample ID: 18L0368-01 |
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 | |

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 00:18 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 77.7 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 58.7 % | 30-140 | | | | | | | |

Sample Information

| | | | | | |
|--|--|------------------------|---|------------------------------------|-----------------------------------|
| Client Sample ID: PCB 2 | | | | | York Sample ID: 18L0368-02 |
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 | |

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |



Sample Information

Client Sample ID: PCB 2

York Sample ID: 18L0368-02

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.463 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 00:31 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 75.7 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 68.2 % | 30-140 | | | | | | | |

Sample Information

Client Sample ID: PCB 3

York Sample ID: 18L0368-03

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.617 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 00:45 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 70.8 % | 30-140 | | | | | | | |



Sample Information

| | | | | | |
|--|--|------------------------|---|------------------------------------|-----------------------------------|
| Client Sample ID: PCB 3 | | | | | York Sample ID: 18L0368-03 |
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 | |

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-------------------------------|--------|------|-------|-----------------|----------|------------------|--------------------|--------------------|---------|
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 67.7 % | | | 30-140 | | | | | |

Sample Information

| | | | | | |
|--|--|------------------------|---|------------------------------------|-----------------------------------|
| Client Sample ID: PCB 4 | | | | | York Sample ID: 18L0368-04 |
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 | |

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.556 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 00:58 | TJD |

Surrogate Recoveries

| | Surrogate | Result | Acceptance Range |
|-----------|---------------------------------|--------|------------------|
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 75.2 % | 30-140 |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 65.7 % | 30-140 |

Sample Information

| | | | | | |
|--|--|------------------------|---|------------------------------------|-----------------------------------|
| Client Sample ID: PCB 5 | | | | | York Sample ID: 18L0368-05 |
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 | |



Sample Information

Client Sample ID: PCB 5

York Sample ID: 18L0368-05

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.388 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 01:12 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 85.6 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 69.7 % | 30-140 | | | | | | | |

Sample Information

Client Sample ID: PCB 6

York Sample ID: 18L0368-06

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |



Sample Information

Client Sample ID: PCB 6

York Sample ID: 18L0368-06

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.704 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 01:25 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 81.7 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 69.7 % | 30-140 | | | | | | | |

Sample Information

Client Sample ID: PCB 7

York Sample ID: 18L0368-07

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.439 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 01:39 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 80.2 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 80.6 % | 30-140 | | | | | | | |



Sample Information

Client Sample ID: PCB 8

York Sample ID: 18L0368-08

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.400 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 01:52 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 92.1 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 70.1 % | 30-140 | | | | | | | |

Sample Information

Client Sample ID: PCB 9

York Sample ID: 18L0368-09

| | | | | |
|--|--|------------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 18L0368 | <u>Client Project ID</u> MIDD:18116.06-IN | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> December 7, 2018 3:00 pm | <u>Date Received</u> 12/10/2018 |
|--|--|------------------------|---|------------------------------------|

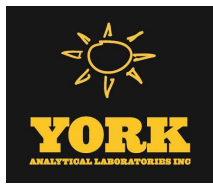
Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |



Sample Information

Client Sample ID: PCB 9 **York Sample ID:** 18L0368-09

York Project (SDG) No. 18L0368 Client Project ID MIDD:18116.06-IN Matrix Caulk Collection Date/Time December 7, 2018 3:00 pm Date Received 12/10/2018

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|-----------------|----------|--|--------------------|--------------------|---------|
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.397 | 1 | EPA 8082A Certifications: | 12/13/2018 07:44 | 12/14/2018 02:06 | TJD |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 94.1 % | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 70.1 % | 30-140 | | | | | | | |



Sample and Data Qualifiers Relating to This Work Order

Definitions and Other Explanations

| | |
|-------------|--|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

York Analytical Laboratories, Inc.

120 Research Drive
 Stratford, CT 06615
 ph. (203) 325-1371
 fx. (203) 357-0166

Field Chain-of-Custody Record

YORK Project No. 18L0368

Analysis Turnaround: 5-7 Day

Company: Adelaide Environmental
1511 Route 22, Suite C24
Brewster, NY 10509

Sampled By (Print): Robert See
 Sampled By (Sign): [Signature]

Invoice to: Stephanie Soter
 Results Send Via: AdelaideLabResults@adelaideinc.com
 Cc Results:

Project #: MIDD:18116.06-IN
 Project ID: Twin Towers Middle School

| SAMPLE # | LOCATION | SAMPLE DATE | MATRIX | ANALYSIS REQUESTED | CONTAINER |
|----------|--|-------------|--------|--------------------|-----------|
| PCB1 | near door 18 Window caulk gray | 12/7/18 | caulk | PCB | BAG |
| PCB2 | East side on intel Beige | 12/7/18 | caulk | PCB | Bag |
| PCB3 | East side on frame & intel older Beige | 12/7/18 | caulk | PCB | Bag |
| PCB4 | North side Door older soft gray | 12/7/18 | caulk | PCB | Bag |
| PCB5 | North side Patch in stone work | 12/7/18 | caulk | PCB | Bag |
| PCB6 | North side on large white windows soft white | 12/7/18 | caulk | PCB | Bag |
| PCB7 | West side med hard gray over older caulk | 12/8/18 | caulk | PCB | Bag |
| PCB8 | West side under gray caulk hard Brown | 12/8/18 | caulk | PCB | Bag |
| PCB9 | West side under stone intel Hard gray type 2 | 12/8/18 | caulk | PCB | Bag |

Comments

Cool 4°C HNO3 H2SO4 NaOH NONE FROZEN

Samples Relinquished By: [Signature] Date/Time: 12/8/18/1500
 Samples Received By Lab: [Signature] Date/Time: 12-10-18 0900
 Temperature on Receipt: 4.5 °C

APPENDIX F
PERSONNEL AND LABORATORY CERTIFICATIONS

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Adelaide Environmental Health Associates, Inc.
Suite C24
1511 Route 22

Brewster, NY 10509

FILE NUMBER: 99-0656
LICENSE NUMBER: 29305
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 07/03/2018
EXPIRATION DATE: 07/31/2019

Duly Authorized Representative – John Soter:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director
For the Commissioner of Labor

United States Environmental Protection Agency

This is to certify that



Adelaide Environmental Health Associates, Inc

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint renovation, repair, and painting activities pursuant to 40 CFR Part 745.89

In the Jurisdiction of:

All EPA Administered States, Tribes, and Territories

This certification is valid from the date of issuance and expires December 05, 2022

NAT-15081-2

Certification #

June 21, 2017

Issued On



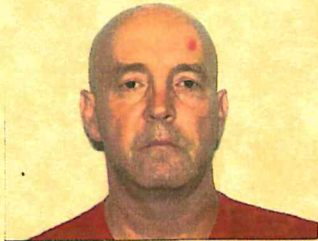
A handwritten signature in black ink that reads "Michelle Price".

Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch

United States Environmental Protection Agency

This is to certify that



Robert Alan See

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires July 22, 2020

LBP-R-101137-1

Certification #

June 05, 2017

Issued On

A handwritten signature in black ink, appearing to read "John Gorman". The signature is fluid and cursive.

John Gorman, Chief

Pesticides & Toxic Substances Branch



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019
Issued April 01, 2018

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK, INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |

Serial No.: 57809

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2019
Issued April 01, 2018
Revised April 11, 2018

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category*
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Acrylates

| | |
|---------------------|-----------|
| Acrolein (Propenal) | EPA 8260C |
| Acrylonitrile | EPA 8260C |
| Methyl methacrylate | EPA 8260C |

Amines

| | |
|-----------------------|-----------|
| 1,2-Diphenylhydrazine | EPA 8270D |
| 2-Nitroaniline | EPA 8270D |
| 3-Nitroaniline | EPA 8270D |
| 4-Chloroaniline | EPA 8270D |
| 4-Nitroaniline | EPA 8270D |
| Aniline | EPA 8270D |
| Carbazole | EPA 8270D |
| Diphenylamine | EPA 8270D |

Benzidines

| | |
|------------------------|-----------|
| 3,3'-Dichlorobenzidine | EPA 8270D |
| Benzidine | EPA 8270D |

Characteristic Testing

| | |
|--|-----------|
| Corrosivity | EPA 9045D |
| Free Liquids | EPA 9095B |
| Ignitability | EPA 1010A |
| Synthetic Precipitation Leaching Proc. | EPA 1312 |
| TCLP | EPA 1311 |

Chlorinated Hydrocarbon Pesticides

| | |
|----------|-----------|
| 4,4'-DDD | EPA 8081B |
| 4,4'-DDE | EPA 8081B |

Chlorinated Hydrocarbon Pesticides

| | |
|--------------------|-----------|
| 4,4'-DDT | EPA 8081B |
| Aldrin | EPA 8081B |
| alpha-BHC | EPA 8081B |
| alpha-Chlordane | EPA 8081B |
| Atrazine | EPA 8270D |
| beta-BHC | EPA 8081B |
| Chlordane Total | EPA 8081B |
| delta-BHC | EPA 8081B |
| Dieldrin | EPA 8081B |
| Endosulfan I | EPA 8081B |
| Endrin aldehyde | EPA 8081B |
| Endrin Ketone | EPA 8081B |
| gamma-Chlordane | EPA 8081B |
| Heptachlor | EPA 8081B |
| Heptachlor epoxide | EPA 8081B |
| Lindane | EPA 8081B |
| Methoxychlor | EPA 8081B |
| Mirex | EPA 8081B |
| Toxaphene | EPA 8081B |

Chlorinated Hydrocarbons

| | |
|----------------------------|-----------|
| 1,2,3-Trichlorobenzene | EPA 8260C |
| 1,2,4,5-Tetrachlorobenzene | EPA 8270D |
| 1,2,4-Trichlorobenzene | EPA 8270D |
| 2-Chloronaphthalene | EPA 8270D |
| Hexachlorobenzene | EPA 8270D |

Serial No.: 58282

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**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



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MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Chlorinated Hydrocarbons

Hexachlorobutadiene EPA 8270D
Hexachlorocyclopentadiene EPA 8270D
Hexachloroethane EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T EPA 8151A
2,4,5-TP (Silvex) EPA 8151A
2,4-D EPA 8151A
Dicamba EPA 8151A

Haloethers

2,2'-Oxybis(1-chloropropane) EPA 8270D
4-Bromophenylphenyl ether EPA 8270D
4-Chlorophenylphenyl ether EPA 8270D
Bis(2-chloroethoxy)methane EPA 8270D
Bis(2-chloroethyl)ether EPA 8270D

Metals I

Barium, Total EPA 6010C
EPA 6020A
Cadmium, Total EPA 6010C
EPA 6020A
Calcium, Total EPA 6010C
Chromium, Total EPA 6010C
EPA 6020A
Copper, Total EPA 6010C
EPA 6020A

Metals I

Iron, Total EPA 6010C
Lead, Total EPA 6010C
EPA 6020A
Magnesium, Total EPA 6010C
Manganese, Total EPA 6010C
EPA 6020A
Nickel, Total EPA 6010C
EPA 6020A
Potassium, Total EPA 6010C
Silver, Total EPA 6010C
EPA 6020A
Sodium, Total EPA 6010C

Metals II

Aluminum, Total EPA 6010C
EPA 6020A
Antimony, Total EPA 6010C
EPA 6020A
Arsenic, Total EPA 6010C
EPA 6020A
Beryllium, Total EPA 6010C
EPA 6020A
Chromium VI EPA 7196A
Mercury, Total EPA 7471B
EPA 7473
Selenium, Total EPA 6010C

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| | | | |
|--------------------------------------|-----------|-----------------------------------|-----------|
| Metals II | | Nitrosoamines | |
| Selenium, Total | EPA 6020A | N-Nitrosodimethylamine | EPA 8270D |
| Vanadium, Total | EPA 6010C | N-Nitrosodi-n-propylamine | EPA 8270D |
| | EPA 6020A | N-Nitrosodiphenylamine | EPA 8270D |
| Zinc, Total | EPA 6010C | | |
| | EPA 6020A | Organophosphate Pesticides | |
| | | Parathion ethyl | EPA 8270D |
| Metals III | | Petroleum Hydrocarbons | |
| Cobalt, Total | EPA 6010C | Diesel Range Organics | EPA 8015D |
| | EPA 6020A | Gasoline Range Organics | EPA 8015D |
| Molybdenum, Total | EPA 6020A | | |
| Thallium, Total | EPA 6010C | Phthalate Esters | |
| | EPA 6020A | Benzyl butyl phthalate | EPA 8270D |
| Tin, Total | EPA 6020A | Bis(2-ethylhexyl) phthalate | EPA 8270D |
| Titanium, Total | EPA 6020A | Diethyl phthalate | EPA 8270D |
| | | Dimethyl phthalate | EPA 8270D |
| Miscellaneous | | Di-n-butyl phthalate | EPA 8270D |
| Boron, Total | EPA 6020A | Di-n-octyl phthalate | EPA 8270D |
| Cyanide, Total | EPA 9014 | | |
| Extractable Organic Halides | EPA 9023 | Polychlorinated Biphenyls | |
| Nitroaromatics and Isophorone | | PCB-1016 | EPA 8082A |
| 2,4-Dinitrotoluene | EPA 8270D | PCB-1221 | EPA 8082A |
| 2,6-Dinitrotoluene | EPA 8270D | PCB-1232 | EPA 8082A |
| Isophorone | EPA 8270D | PCB-1242 | EPA 8082A |
| Nitrobenzene | EPA 8270D | PCB-1248 | EPA 8082A |
| Pyridine | EPA 8270D | PCB-1254 | EPA 8082A |
| | | PCB-1260 | EPA 8082A |
| | | PCB-1262 | EPA 8082A |

Serial No.: 58282

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Polychlorinated Biphenyls

PCB-1268 EPA 8082A
PCBs in Oil EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene EPA 8270D
Acenaphthylene EPA 8270D
Anthracene EPA 8270D
Benzo(a)anthracene EPA 8270D
Benzo(a)pyrene EPA 8270D
Benzo(b)fluoranthene EPA 8270D
Benzo(ghi)perylene EPA 8270D
Benzo(k)fluoranthene EPA 8270D
Chrysene EPA 8270D
Dibenzo(a,h)anthracene EPA 8270D
Fluoranthene EPA 8270D
Fluorene EPA 8270D
Indeno(1,2,3-cd)pyrene EPA 8270D
Naphthalene EPA 8270D
Phenanthrene EPA 8270D
Pyrene EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol EPA 8270D
2,4,5-Trichlorophenol EPA 8270D
2,4,6-Trichlorophenol EPA 8270D
2,4-Dichlorophenol EPA 8270D
2,4-Dimethylphenol EPA 8270D

Priority Pollutant Phenols

2,4-Dinitrophenol EPA 8270D
2-Chlorophenol EPA 8270D
2-Methyl-4,6-dinitrophenol EPA 8270D
2-Methylphenol EPA 8270D
2-Nitrophenol EPA 8270D
4-Chloro-3-methylphenol EPA 8270D
4-Methylphenol EPA 8270D
4-Nitrophenol EPA 8270D
Pentachlorophenol EPA 8270D
Phenol EPA 8270D

Semi-Volatile Organics

1,1'-Biphenyl EPA 8270D
1,2-Dichlorobenzene, Semi-volatile EPA 8270D
1,3-Dichlorobenzene, Semi-volatile EPA 8270D
1,4-Dichlorobenzene, Semi-volatile EPA 8270D
2-Methylnaphthalene EPA 8270D
Acetophenone EPA 8270D
Benzaldehyde EPA 8270D
Benzoic Acid EPA 8270D
Benzyl alcohol EPA 8270D
Caprolactam EPA 8270D
Dibenzofuran EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, Volatile EPA 8260C
1,2,4-Trimethylbenzene EPA 8260C

Serial No.: 58282

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120 RESEARCH DRIVE
STRATFORD, CT 06615

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Volatile Aromatics

| | |
|-------------------------------|-----------|
| 1,2-Dichlorobenzene | EPA 8260C |
| 1,3,5-Trimethylbenzene | EPA 8260C |
| 1,3-Dichlorobenzene | EPA 8260C |
| 1,4-Dichlorobenzene | EPA 8260C |
| 2-Chlorotoluene | EPA 8260C |
| 4-Chlorotoluene | EPA 8260C |
| Benzene | EPA 8260C |
| Bromobenzene | EPA 8260C |
| Chlorobenzene | EPA 8260C |
| Ethyl benzene | EPA 8260C |
| Isopropylbenzene | EPA 8260C |
| m/p-Xylenes | EPA 8260C |
| Naphthalene, Volatile | EPA 8260C |
| n-Butylbenzene | EPA 8260C |
| n-Propylbenzene | EPA 8260C |
| o-Xylene | EPA 8260C |
| p-Isopropyltoluene (P-Cymene) | EPA 8260C |
| sec-Butylbenzene | EPA 8260C |
| Styrene | EPA 8260C |
| tert-Butylbenzene | EPA 8260C |
| Toluene | EPA 8260C |
| Total Xylenes | EPA 8260C |

Volatile Halocarbons

| | |
|---------------------------------------|-----------|
| 1,1,2,2-Tetrachloroethane | EPA 8260C |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | EPA 8260C |
| 1,1,2-Trichloroethane | EPA 8260C |
| 1,1-Dichloroethane | EPA 8260C |
| 1,1-Dichloroethene | EPA 8260C |
| 1,1-Dichloropropene | EPA 8260C |
| 1,2,3-Trichloropropane | EPA 8260C |
| 1,2-Dibromo-3-chloropropane | EPA 8260C |
| 1,2-Dibromoethane | EPA 8260C |
| 1,2-Dichloroethane | EPA 8260C |
| 1,2-Dichloropropane | EPA 8260C |
| 1,3-Dichloropropane | EPA 8260C |
| 2,2-Dichloropropane | EPA 8260C |
| 2-Chloroethylvinyl ether | EPA 8260C |
| Bromochloromethane | EPA 8260C |
| Bromodichloromethane | EPA 8260C |
| Bromoform | EPA 8260C |
| Bromomethane | EPA 8260C |
| Carbon tetrachloride | EPA 8260C |
| Chloroethane | EPA 8260C |
| Chloroform | EPA 8260C |
| Chloromethane | EPA 8260C |
| cis-1,2-Dichloroethene | EPA 8260C |
| cis-1,3-Dichloropropene | EPA 8260C |
| Dibromochloromethane | EPA 8260C |
| Dibromomethane | EPA 8260C |

Volatile Halocarbons

| | |
|---------------------------|-----------|
| 1,1,1,2-Tetrachloroethane | EPA 8260C |
| 1,1,1-Trichloroethane | EPA 8260C |

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Volatile Halocarbons

| | |
|-------------------------------|-----------|
| Dichlorodifluoromethane | EPA 8260C |
| Hexachlorobutadiene, Volatile | EPA 8260C |
| Methylene chloride | EPA 8260C |
| Tetrachloroethene | EPA 8260C |
| trans-1,2-Dichloroethene | EPA 8260C |
| trans-1,3-Dichloropropene | EPA 8260C |
| Trichloroethene | EPA 8260C |
| Trichlorofluoromethane | EPA 8260C |
| Vinyl chloride | EPA 8260C |

Sample Preparation Methods

| |
|-----------|
| EPA 3580A |
| EPA 3010A |
| EPA 3050B |
| EPA 3550C |
| EPA 3546 |
| EPA 3545A |
| EPA 3060A |
| EPA 9010C |

Volatile Organics

| | |
|---------------------------------|-----------|
| 1,4-Dioxane | EPA 8260C |
| 2-Butanone (Methylethyl ketone) | EPA 8260C |
| 2-Hexanone | EPA 8260C |
| 4-Methyl-2-Pentanone | EPA 8260C |
| Acetone | EPA 8260C |
| Carbon Disulfide | EPA 8260C |
| Cyclohexane | EPA 8260C |
| Methyl acetate | EPA 8260C |
| Methyl cyclohexane | EPA 8260C |
| Methyl tert-butyl ether | EPA 8260C |
| tert-butyl alcohol | EPA 8260C |
| Vinyl acetate | EPA 8260C |

Sample Preparation Methods

| |
|-------------|
| EPA 5035A-L |
| EPA 5035A-H |

Serial No.: 58282

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YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Lead in Dust Wipes EPA 6010C

Lead in Paint EPA 6010C

Sample Preparation Methods

EPA 3050B

NEW YORK
HEALTH

Serial No.: 57584

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1511 Route 22, Suite C24
Brewster, NY 10509 845.278.7710
90 State Street, Suite 700
Albany, NY 12207 518.874.0617
1967 Wehrle Drive, Suite One
Buffalo, NY 14221 716.402.4580
E-mail: adelaidemail@adelaidellc.com
Fax: 845.278.7750

RENOVATION SURVEY FOR ASBESTOS-CONTAINING MATERIALS

PERFORMED AT:

Twin Towers Middle School
233 Wisner Avenue
Middletown, New York 10940
Adelaide Project# MIDD: 20068.00-IN

PREPARED FOR:

Thomas Scott
Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

PREPARED BY:

David Seddon
March 6, 2020

REVIEWED BY:

A handwritten signature in blue ink, appearing to read "Stephanie A. Soter".

Stephanie A. Soter
President



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1.0 Introduction

1.1 Scope of Work / Project Personnel

Adelaide Environmental Health Associates, Inc. (**Adelaide**) performed an Asbestos Survey for Building/Structure Demolition, Renovation, Remodeling and/or Repair, in conformance with ALL Federal, State and Local regulations, on February 28, 2020 for Enlarged City School District of Middletown throughout select rooms of the school, located at Twin Towers Middle School in Middletown, New York. The survey included a visual inspection/assessment for hazardous materials throughout accessible interior and/or exterior spaces of the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired. Certified **Adelaide** personnel (Appendix D), David Seddon (NYS Asbestos Inspector/Cert. #09-08546), performed the visual assessment throughout inspection area(s) identified.

1.2 Executive Summary

Adelaide inspected all areas that will be affected by the renovation work for suspect ACM. **Adelaide** collected thirty four (34) suspect asbestos samples/layers from the above-mentioned area(s). Eight (8) samples/homogenous areas tested positive for asbestos.

The following indicates assumed materials due to insufficient material at the time of the inspection. One (1) homogeneous area is assumed positive for asbestos.

1.2.1 Conclusions and Recommendations

The following conclusions and recommendations are prepared by **Adelaide** as per the provided scope of work for Building/Structure Demolition, Renovation, Remodeling and/or Repair. Should the scope of work change, it is recommended that the findings be revisited to determine if additional sampling will be required to satisfy ALL Federal, State and Local regulations.

1.2.2 Asbestos-containing Materials (ACM)

- This survey concluded that the materials listed in Section 2.1 tested or is assumed ***positive for asbestos***.
- Subpart 56-5(h) of 12 NYCRR Part 56 requires that no demolition, renovation, remodeling, or repair work be commenced by any owner or the owner's agent prior to the completion of asbestos abatement. Asbestos abatement must be performed by an asbestos abatement contractor that maintains a current asbestos handling license, and employs NYSDOL/NYCDEP certified asbestos handlers and supervisors. It is recommended that a 12 NYCRR 56 certified Project Monitor oversee abatement activities.
- Subpart 56-5(g) of 12 NYCRR Part 56 specifies requirements for transmittal of asbestos survey information by the owner or owner's agent. (1) One copy of the asbestos survey report shall be sent to the local government entity charged with issuing a permit for such demolition, renovation, remodeling, or repair work under applicable State or local laws. (2) If controlled demolition or pre-demolition activities will be performed, one copy of the asbestos survey report shall be submitted

to the appropriate Asbestos Control Bureau district office. (3) One copy of the asbestos survey report must be kept on the construction site throughout the duration of the asbestos project and any associated demolition, renovation, remodeling, or repair project.

2.0 Summary of Hazardous Materials

2.1 Summary of Identified ACM/PACM

KEY: **ACM** = Materials containing greater than 1% of asbestos; **HA** = Homogeneous Area; **LF** = Linear Feet; **SF** = Square Feet; **PACM** = Presumed Asbestos-containing Materials; **Friable** = ACM capable of being released into air, and which can be crumbled, pulverized, powdered, crushed or exposed by hand-pressure.

Samples collected by **Adelaide** February 28, 2020

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|---------|----------------------|--|--------------|-----------|----------------------|
| 001 | Brown Border Tile | Rooms 100,101,107,111,135,148, 220,300,306,317,319, 324,325,327,329, Teachers Lounge | 1,000 SF | Damaged | No |
| 002 | 9x9 Light Brown Tile | Rooms 100,101,107,111,135,148, 220,300,306,317,319, 324,325,327,329, Teachers Lounge | 9,506 SF | Damaged | No |
| 003 | 9x9 Dark Brown Tile | Rooms 100,101,107,111,135,148, 220,300,306,317,319, 324,325,327,329, Teachers Lounge | 9,506 SF | Damaged | No |
| 005 | 9x9 Black Tile | Rooms 105,316 | 1,237 SF | Damaged | No |
| 006 | 9x9 Dark Green Tile | Room 316 | 200 SF | Damaged | No |
| 007 | 9x9 Light Green Tile | Room 226 | 674 SF | Damaged | No |
| 012 | 12x12 Black Tile | Room 109 | 486 SF | Damaged | No |
| 013 | 12x12 Tile Mastic | Room 109 | 486 SF | Damaged | No |
| Assumed | Paint on Concrete | Rooms 213,227 | 356 SF | Damaged | No |

2.2 Summary of Identified Non-ACM

Samples collected by **Adelaide** February 28, 2020

| Identified Non-ACM | Sample Location(s) & HA's |
|-----------------------|--|
| 9x9 Floor Tile Mastic | Rooms 100,105,107,109,111,135,148, 220,226,300,306,317,319, 324,325,327,329, Teachers Lounge |
| 9x9 Tan with Mottles | Room 226 |

| Identified Non-ACM | Sample Location(s) & HA's |
|--|--|
| Yellow Carpet Mastic | Rooms 100,107,111,135,148, 300,306,317,319, 324,325,327,329, Teachers Lounge |
| Leveling Compound | Rooms 100,105,107,109,111,135,148, 220,226,300,306,317,319, 324,325,327,329, Teachers Lounge |
| 12x12 Replacement Floor Tile – Tan and Brown | Room 101 |
| Concrete | Rooms 100,105,107,109,111,135,148, 220,226,300,306,317,319, 324,325,327,329, Teachers Lounge |
| Black Covebase and Adhesive | Rooms 100,105,107,109,111,135,148, 220,226,300,306,317,319, 324,325,327,329, Teachers Lounge |
| Gray Covebase and Adhesive | Rooms 100,105,107,109,111,135,148, 220,226,300,306,317,319, 324,325,327,329, Teachers Lounge |

2.3 ACM Photos

| | |
|---|---|
| <p>HA 001 Brown Border Tile 3.0% Chrysotile</p> |  |
|---|---|

HA 002
9x9 Light Brown Tile
3.3% Chrysotile



HA 003
9x9 Dark Brown Tile
3.6% Chrysotile



HA 005
9x9 Black Tile
2.8% Chrysotile



HA 006
9x9 Dark Green Tile
3.0% Chrysotile



HA 007
9x9 Light Green Tile
4.6% Chrysotile



HA 012 & 013
12x12 Black Tile and Mastic
4.2-5.9% Chrysotile



2.4 Observations

ASBESTOS-CONTAINING MATERIALS (ACM)

A visual inspection was performed and homogeneous material types were established based on appearance, color and texture. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

Representative bulk sampling was performed on suspect building materials for laboratory analysis and the following is a summary of installed building materials sampled as per the scope of work provided:

- Wall Materials – Cove Base Molding & Adhesive (multiple types).
- Flooring Materials – Concrete, Paint, Floor Tile and Mastic (multiple types), Leveling Compound, Carpet Mastic.

3.0 Asbestos-containing Materials (ACM)

3.1 Field Procedures and Analysis Methodology

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA) and Title 12 NYCRR Part 56-5.1. Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos-containing Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous. 1) Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster). 2) Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue). 3) Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.

- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply
- Chilled water supply
- Steam supply and/or return
- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

3.2 Regulatory Guidelines and Requirements for ACM

FEDERAL

In accordance with the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Emission Standards for hazardous Air Pollutants (NESHAP) to protect the public from exposure to airborne pollutants. Asbestos was one of the air pollutants, which was addressed under the NESHAP 40 CFR Part 61. The purpose of asbestos NESHAP regulations is to protect the public health by minimizing the release of asbestos when facilities, which contain ACM, are being renovated or demolished. EPA is

responsible for enforcing regulations related to asbestos during renovations and demolition, however, the CAA allows the EPA to delegate this authority to State and Local Agencies. Even after EPA delegate's responsibility to a state or Local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

NEW YORK STATE

Asbestos in New York State is regulated under the Labor Law Section 906, Part 56 of Title 12 of the Official Compilation of Codes, Rules, and Regulations. Within the department and for the purpose of the Department of Labor, this part (rule) is known as Industrial Code Rule No. 56 (ICR 56) relating to hazards to the public safety and health, during the removal, encapsulation, or disturbance of friable asbestos, or any handling of ACM that may result in the release of asbestos fiber.

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part...All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM...Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part." All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

NEW YORK CITY

Asbestos Control Program (ACP), Title 15, Chapter 1 of the New York City Department of Environmental Protection (NYCDEP) regulates all asbestos abatement activities occurring within the City of New York. The ACP regulations also require asbestos surveys and abatement work to be performed by a NYCDEP certified asbestos investigator and asbestos workers, respectively.

The New York City Department of Buildings (NYCDOB) requires an ACP notification to be included with the renovation/demolition permit applications. The notification is performed using an ACP 5 or ACP 20/21 forms.

All confirmed ACM will need to be removed prior to any building renovation or demolition. The removal and disposal of ACM must be performed by a NYS-DOL licensed asbestos handling contractor in accordance

with Federal, state, and local regulations. Proper notifications must be filed with the US-EPA, NYS-DOL, NYC-DEP and other regulatory agencies prior to performing such activities.

As required by the NYS-DOL and NYC-DEP regulations, the abatement project must be monitored by a NYS-DOL certified project monitor. The project monitor oversees contractor's work practices and also performs pre, during, and final clearance post abatement air sampling in accordance with the state and city regulations.

CONCEALED ACM

In addition to the ACMs identified at the site, there is a possibility that concealed suspect ACM may exist at the building/structure. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should either be 1) Sampled by an appropriately-certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

4.0 General Discussion

All construction personnel as well as individuals who have access to locations where asbestos-containing materials (ACM), lead-based paints (LBP) and/or polychlorinated biphenyls (PCB) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel is adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities; as defined in 29 CFR 1910.1001.

5.0 Disclaimers

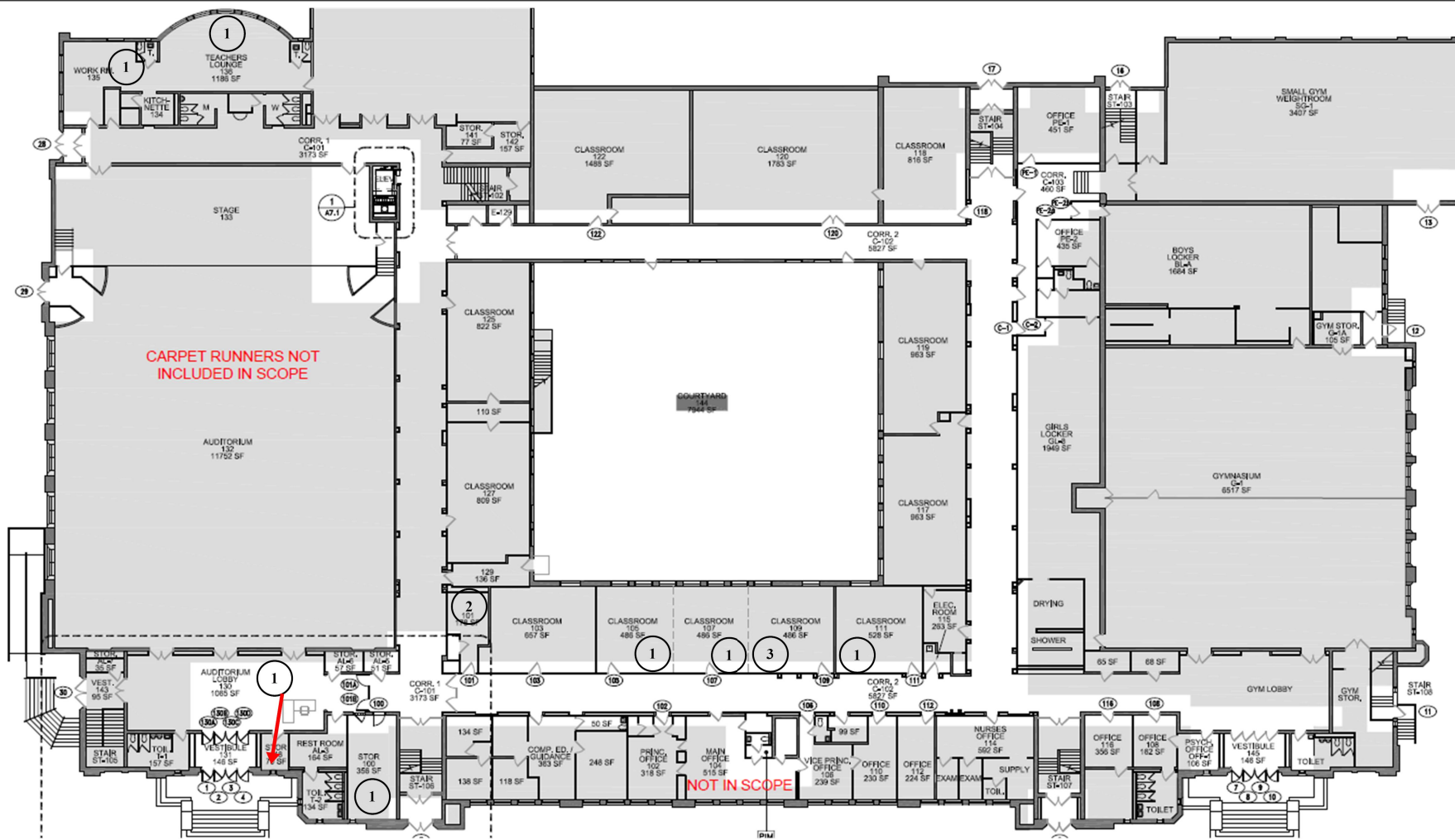
Adelaide certifies that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected during this survey/assessment. These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local regulations. **Adelaide** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **Adelaide** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions. No other warranties are expressed or implied.

Due to the potential for concealed Asbestos-containing Materials (ACM) and/or other regulated materials, this report should not be construed to represent all ACM and/or regulated materials within the site(s). All quantities of ACM and/or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.

NYSDOH issued an Interim Guidance Letter, on July 9, 2013, which outlined the approved testing alternative for materials containing vermiculite. Specifically, "...Where TSI, surfacing materials, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer: *"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."* On July 22, 2014, NYSDOH issued a Regulatory Guidance Letter outlining the new approved analytical methods for testing sprayed-on fireproofing (SOF-P) that contains vermiculite. NYSDOH authorized the use of ***two*** analytical methods to evaluate the asbestos content of SOFP that contains vermiculite. As per NYSDOH Guidelines, *"After October 31, 2014, one of the new methods **must** be used to test SOF-V, regardless of the percent of vermiculite."* On May 6, 2016, NYSDOH issued a Regulatory Guidance Letter outlining the new protocol for analytical procedure for surfacing materials (ie. plaster, stucco, etc.) that contain vermiculite. As per NYSDOH Guidelines, *"The original July 2013 and July 2014 letters addressed SOF-V only. Both NYS DOH's Item 198.8 and RJ Lee Group Method 055 shall now be applied to test for vermiculite in other Surfacing Material (SM) as defined in 12 NYCRR Part 56 (NYS Industrial Code Rule 56)."*

APPENDIX A
ACM LOCATION MAP(S)



First Floor Key Plan - ACM Locations.

Drawing Not to Scale

ACM LEGEND: (see report for details)

| | |
|---|---------------------------------------|
| 1 | POSITIVE: 9x9 Floor Tile under Carpet |
| 2 | POSITIVE: 9x9 Floor Tile |
| 3 | POSITIVE: 12x12 Floor Tile and Mastic |

Twin Towers Middle School
233 Wisner Avenue
Middletown, New York 10940

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940

Client Project No.
N/A



Adelaide
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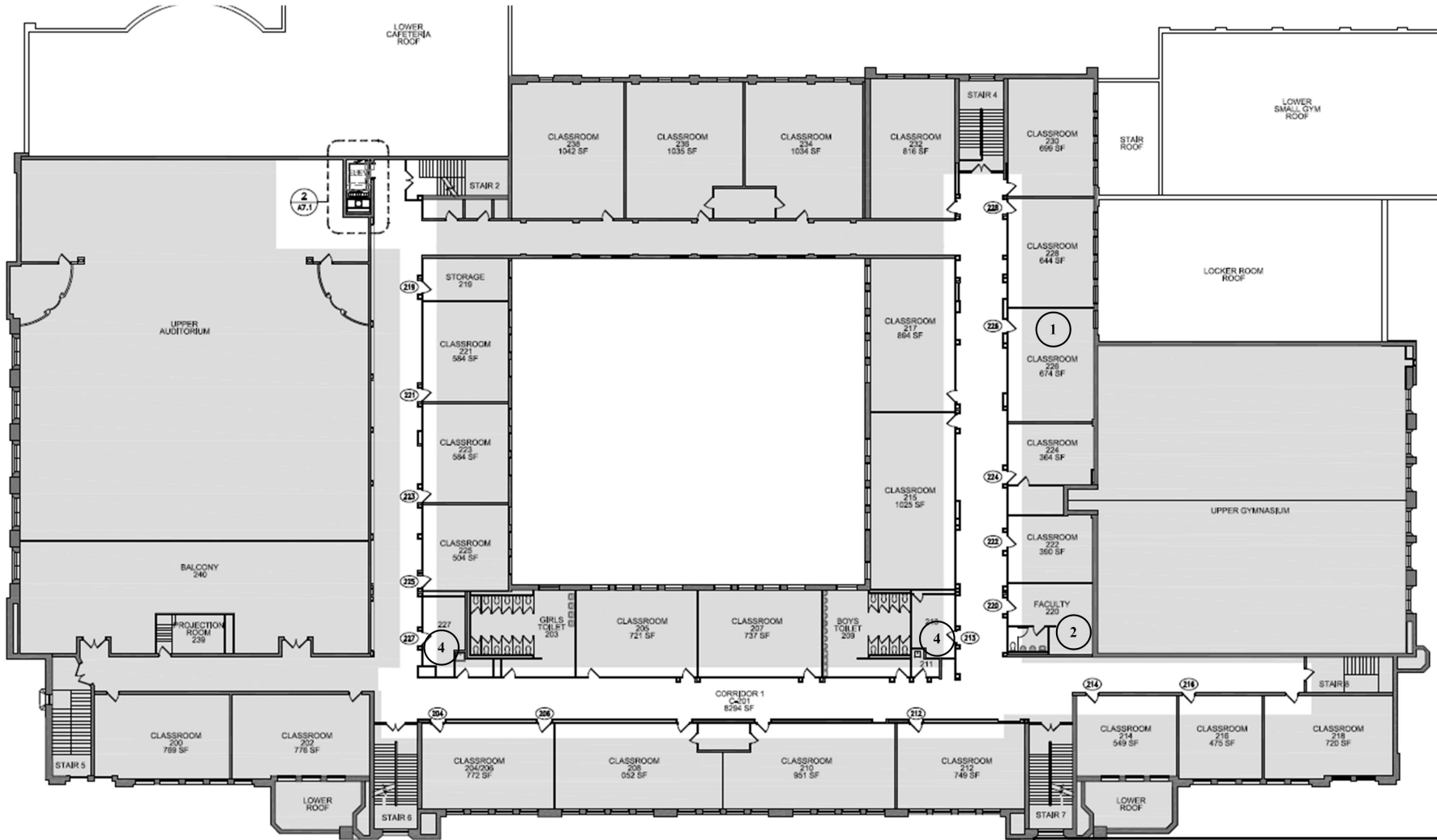
Date: Version #
03-06-2020 1

Issued For:
Asbestos Survey

Adelaide Project NO.
MIDD:20068.00-IN

Drawing Prepared By:
David Seddon

ASB -01



Second Floor Key Plan - ACM Locations
 Drawing Not to Scale

ACM LEGEND: (see report for details)

| | |
|---|---------------------------------------|
| 1 | POSITIVE: 9x9 Floor Tile under Carpet |
| 2 | POSITIVE: 9x9 Floor Tile |
| 4 | ASSUMED: Paint on Concrete |

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 223 Wisner Avenue
 Middletown, New York 10940

Client Project No.
 N/A

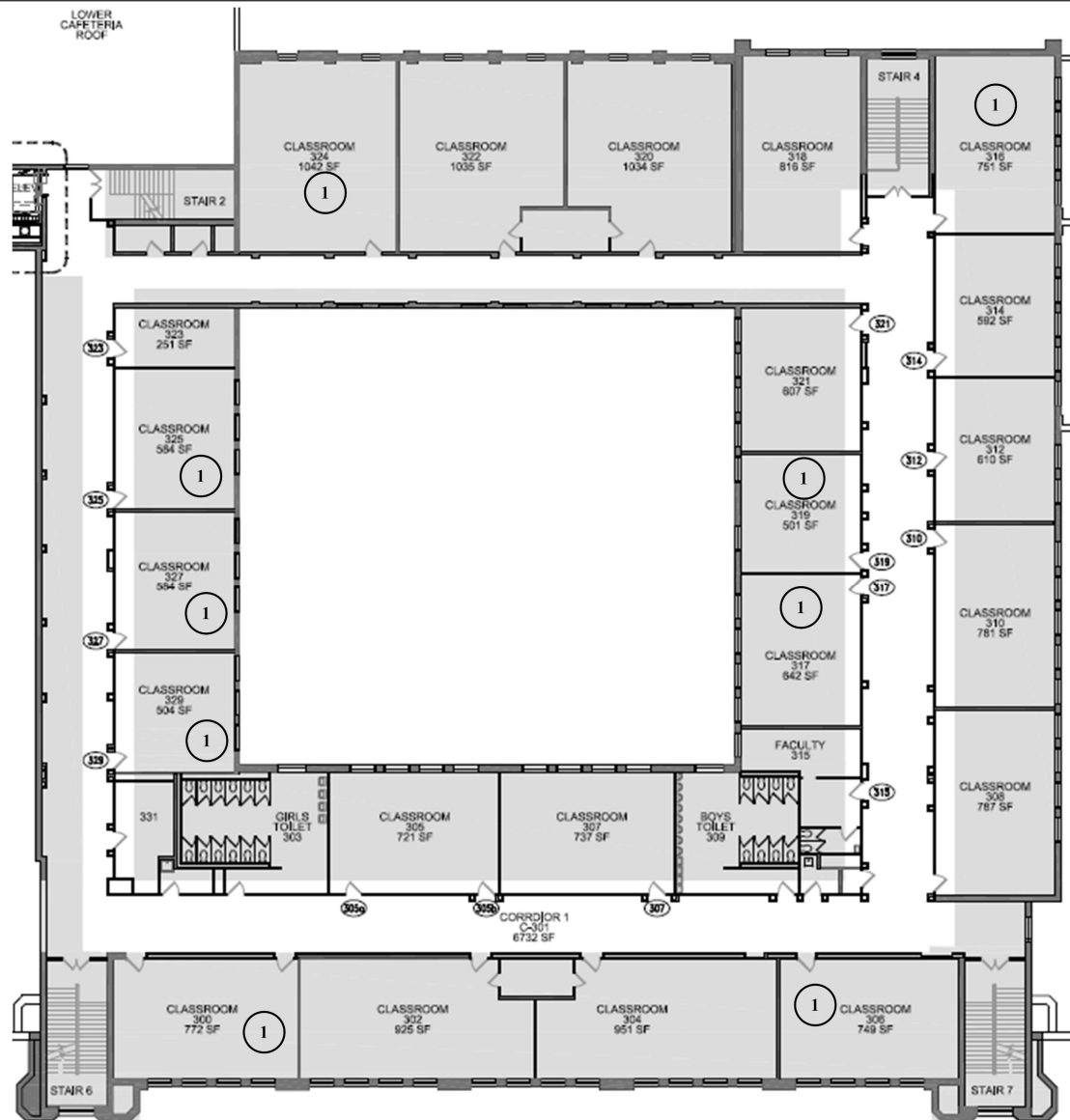
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| Adelaide Project NO. MIDD:20068.00-IN | |
| Drawing Prepared By: David Seddon | |

ASB -02

| | |
|---|---------------------------------------|
| ACM LEGEND: (see report for details) | |
| 1 | POSITIVE: 9x9 Floor Tile under Carpet |



Twin Towers Middle School
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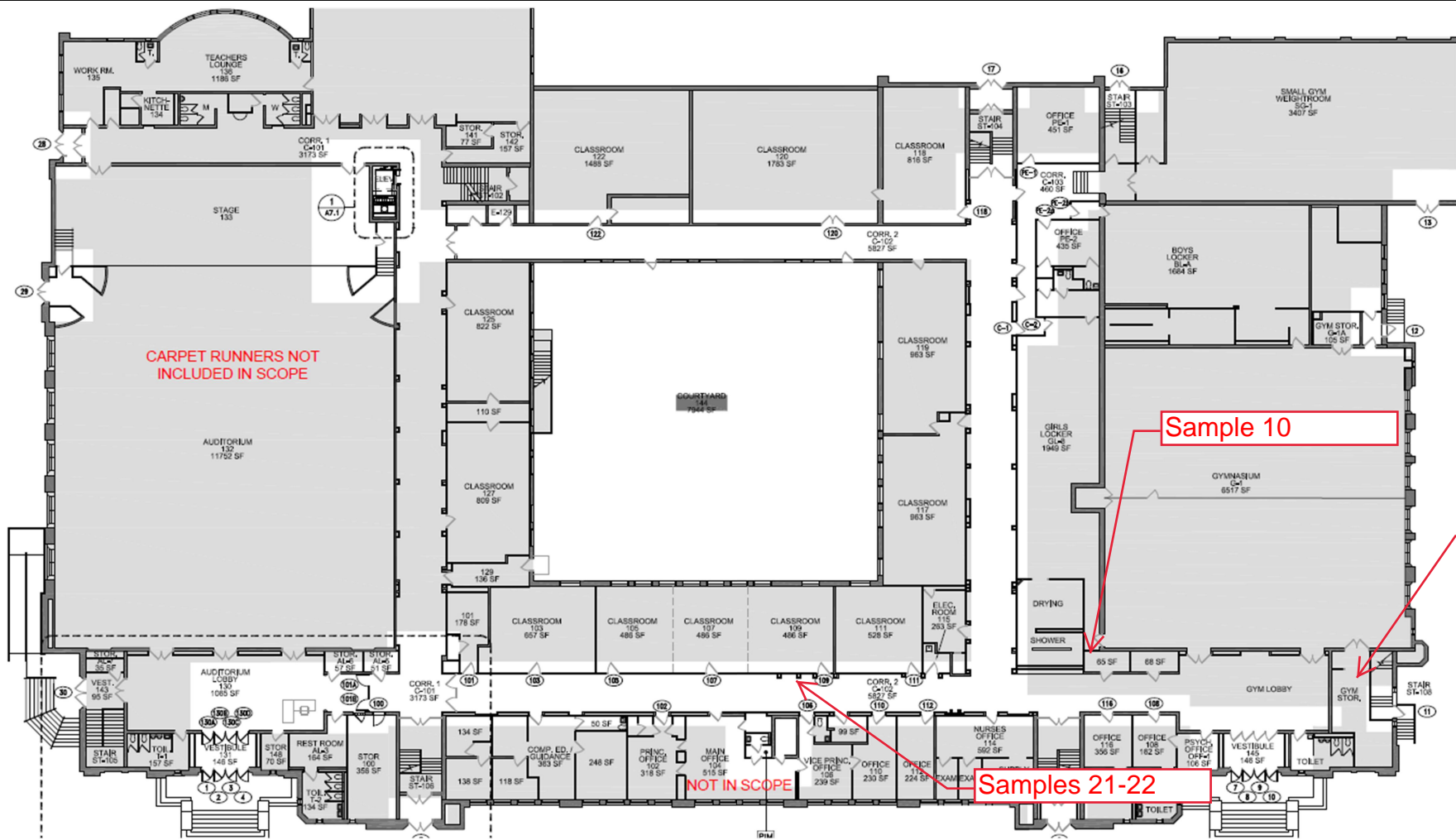
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| Drawing Prepared By: David Seddon | |

ASB -03

APPENDIX B
SAMPLE LOCATION MAP(S)



Twin Towers Middle School
 233 Wisner Avenue
 Middletown, New York 10940

Enlarged City School District of Middletown
 223 Wisner Avenue
 Middletown, New York 10940

Client Project No.
 N/A

Adelaide
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Route 22
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Samples 23-26

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Version #: 1

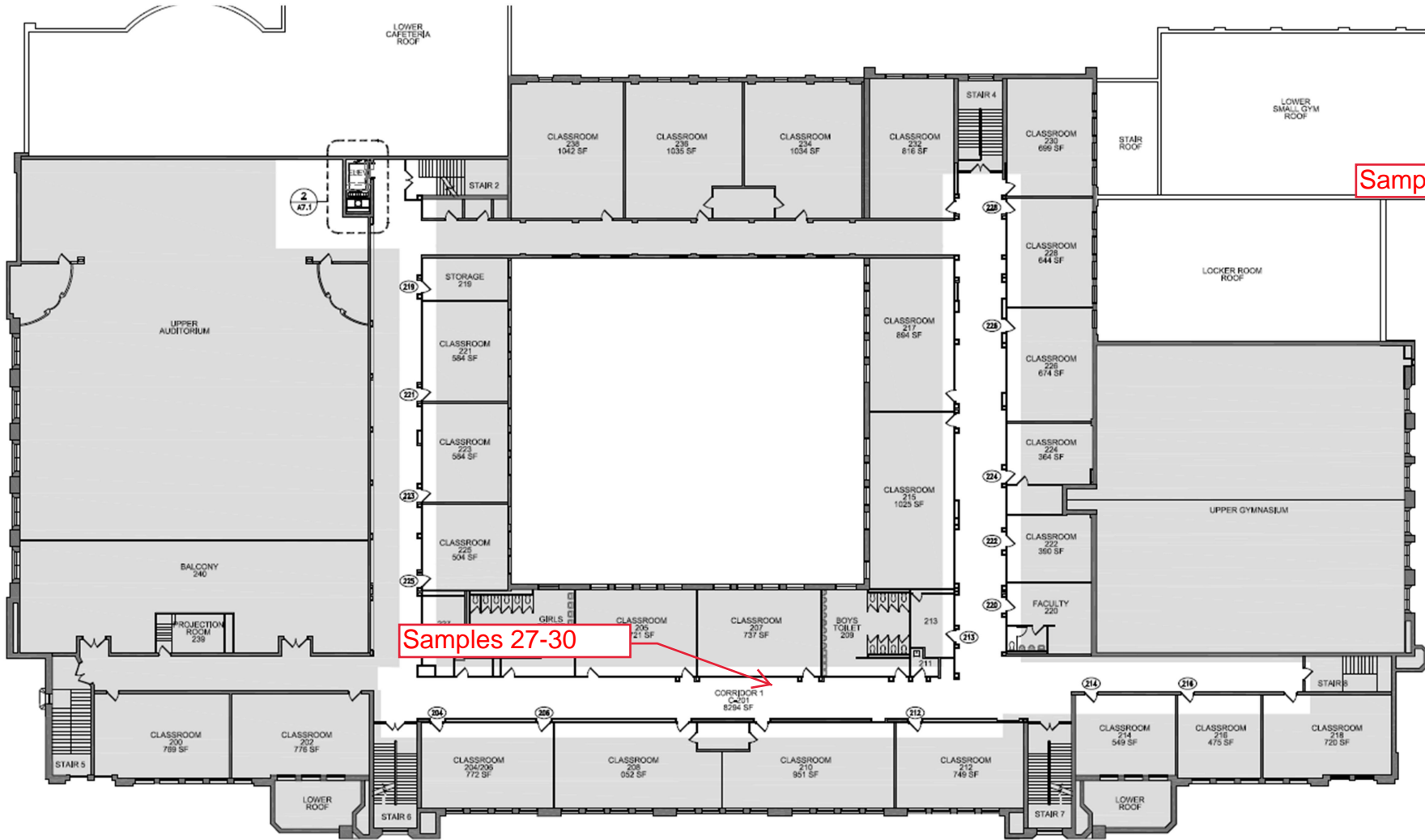
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Adelaide Project NO.
 MIDD-20068-00-IN

Drawing Prepared By:
 David Seddon

SLM -01

First Floor Key Plan - Sample Locations.
 Drawing Not to Scale



Samples 13-16

Samples 27-30

Twin Towers Middle School
 223 Wisner Avenue
 Middletown, New York 10940

Enlarged City of Middletown
 223 Wisner Avenue
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Client Project No.
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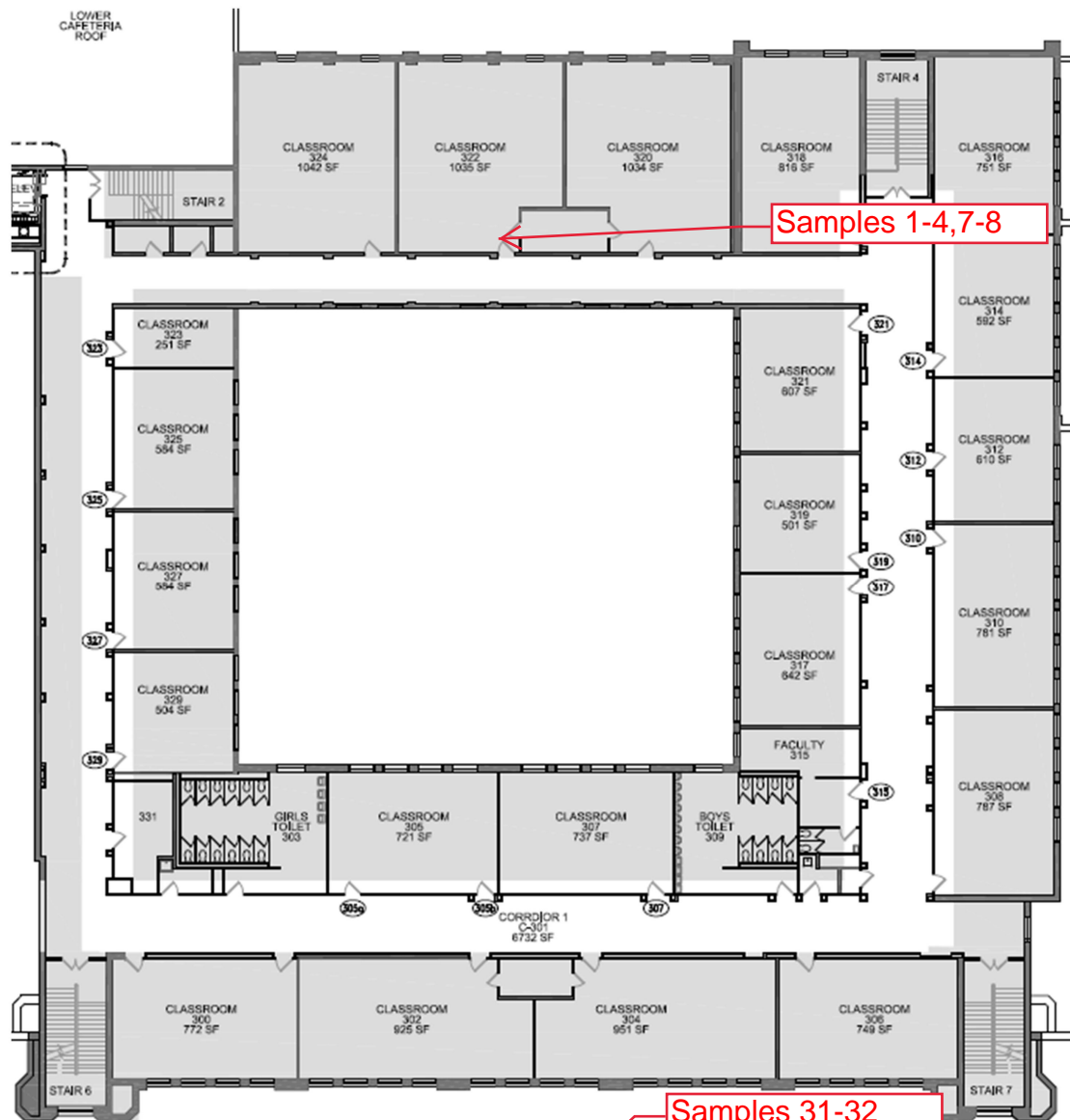
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Adelaide Project NO.: MIDD:20068.00-IN
Drawing Prepared By: David Seddon

SLM -02

Second Floor Key Plan - Sample Locations.
 Drawing Not to Scale



Third Floor Key Plan - Sample Locations.
 Drawing Not to Scale

Twin Towers Middle School
 233 Wisner Avenue
 Middletown, New York 10940

Enlarged City School District of Middletown
 223 Wisner Avenue
 Middletown, New York 10940

Client Project No.
 N/A

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Samples 33-34

| | |
|---|-----------------------|
| Date: 03-06-2020 | Version # 1 |
| Issued For: Asbestos Survey | |
| Adelaide Project NO. MIDD:20068.00-IN | |
| Drawing Prepared By: David Seddon | |

SLM -03

Samples 31-32

Samples 19-20

APPENDIX C
ASBESTOS ANALYTICAL RESULTS

Table I

Summary of Bulk Asbestos Analysis Results

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 1 | 1 | 0.213 | 25.2 | 24.0 | 47.8 | Chrysotile 3.0 | NA |
| Location: Floor 3, Room 325 - Brown Border Tile | | | | | | | | |
| 02 | 2 | 1 | 0.253 | 25.0 | 24.5 | 50.4 | NA/PS | NA |
| Location: Floor 3, Room 325 - Brown Border Tile | | | | | | | | |
| 03 | 3 | 2 | 0.198 | 26.1 | 21.0 | 49.6 | Chrysotile 3.3 | NA |
| Location: Floor 3, Room 325 - 9 x 9 Lt Brown | | | | | | | | |
| 04 | 4 | 2 | 0.165 | 25.9 | 20.5 | 53.6 | NA/PS | NA |
| Location: Floor 3, Room 325 - 9 x 9 Lt Brown | | | | | | | | |
| 05 | 5 | 3 | 0.278 | 26.4 | 24.5 | 45.5 | Chrysotile 3.6 | NA |
| Location: Floor 1, Teachers Lounge - 9 x 9 Dk Brown | | | | | | | | |
| 06 | 6 | 3 | 0.253 | 26.9 | 26.5 | 46.6 | NA/PS | NA |
| Location: Floor 1, Teachers Lounge - 9 x 9 Dk Brown | | | | | | | | |
| 07 | 7 | 4 | 0.276 | 9.3 | 14.4 | 76.2 | NAD | NAD |
| Location: Floor 3, Room 325 - Black Mastic For 9 x 9 & Border Tile | | | | | | | | |
| 08 | 8 | 4 | 0.283 | 15.0 | 20.6 | 64.4 | NAD | NAD |
| Location: Floor 3, Room 325 - Black Mastic For 9 x 9 & Border Tile | | | | | | | | |
| 09 | 9 | 5 | 0.167 | 29.0 | 28.2 | 40.0 | Chrysotile 2.8 | NA |
| Location: Floor 3, Room 316 - 9 x 9 Tile - Black | | | | | | | | |
| 10 | 10 | 5 | 0.223 | 28.1 | 30.3 | 41.6 | NA/PS | NA |
| Location: Floor 1, Room 105 - 9 x 9 Tile - Black | | | | | | | | |
| 11 | 11 | 6 | 0.177 | 26.0 | 30.9 | 40.2 | Chrysotile 3.0 | NA |
| Location: Floor 3, Room 316 - 9 x 9 Tile - Dark Green | | | | | | | | |
| 12 | 12 | 6 | 0.251 | 25.6 | 26.8 | 47.6 | NA/PS | NA |
| Location: Floor 3, Room 316 - 9 x 9 Tile - Dark Green | | | | | | | | |
| 13 | 13 | 7 | 0.350 | 24.6 | 21.7 | 49.1 | Chrysotile 4.6 | NA |
| Location: Floor 2, Room 226 - 9 x 9 Tile - Light Green | | | | | | | | |
| 14 | 14 | 7 | 0.200 | 25.3 | 24.9 | 49.7 | NA/PS | NA |
| Location: Floor 2, Room 226 - 9 x 9 Tile - Light Green | | | | | | | | |
| 15 | 15 | 8 | 0.276 | 19.2 | 54.6 | 26.1 | NAD | NAD |
| Location: Floor 2, Room 226 - 9 x 9 Tan W/ Mottles | | | | | | | | |
| 16 | 16 | 8 | 0.221 | 19.5 | 57.1 | 23.3 | NAD | NAD |
| Location: Floor 2, Room 226 - 9 x 9 Tan W/ Mottles | | | | | | | | |

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 17 | 17 | 9 | 0.154 | 62.8 | 11.6 | 25.6 | NAD | NAD |
| Location: Floor 3, Room 316 - Yellow Carpet Mastic | | | | | | | | |
| 18 | 18 | 9 | 0.265 | 49.9 | 15.9 | 34.3 | NAD | NAD |
| Location: Floor 3, Room 316 - Yellow Carpet Mastic | | | | | | | | |
| 19 | 19 | 10 | --- | --- | --- | --- | NAD | NA |
| Location: Floor 3, Room 306 - Leveling Compound | | | | | | | | |
| 20 | 20 | 10 | --- | --- | --- | --- | NAD | NA |
| Location: Floor 3, Room 306 - Leveling Compound | | | | | | | | |
| 21 | 21 | 11 | 0.182 | 25.1 | 63.2 | 11.7 | NAD | NAD |
| Location: Floor 1, Room 101 - 12 x 12 Replacement Tile - Tan & Brown | | | | | | | | |
| 22 | 22 | 11 | 0.203 | 23.6 | 64.8 | 11.6 | NAD | NAD |
| Location: Floor 1, Room 101 - 12 x 12 Replacement Tile - Tan & Brown | | | | | | | | |
| 23 | 23 | 12 | 0.172 | 26.0 | 34.1 | 35.8 | Chrysotile 4.2 | NA |
| Location: Floor 1, Room 109 - 12 x 12 Black Tile | | | | | | | | |
| 24 | 24 | 12 | 0.225 | 26.7 | 29.9 | 43.4 | NA/PS | NA |
| Location: Floor 1, Room 109 - 12 x 12 Black Tile | | | | | | | | |
| 25 | 25 | 13 | 0.106 | 60.7 | 24.6 | 8.8 | Chrysotile <0.25 | Chrysotile 5.9 |
| Location: Floor 1, Room 109 - 12 x 12 Mastic | | | | | | | | |
| 26 | 26 | 13 | 0.089 | 74.7 | 16.7 | 8.6 | Chrysotile <0.25 | NA/PS |
| Location: Floor 1, Room 109 - 12 x 12 Mastic | | | | | | | | |
| 27 | 27 | 14 | --- | --- | --- | --- | NA | NA |
| Location: Floor 2, Room 227 - Paint For Concrete Floor "Insufficient Material Submitted For Preparation" | | | | | | | | |
| 28 | 28 | 14 | 0.051 | 76.1 | 14.6 | 9.3 | NAD | NAD |
| Location: Floor 2, Room 227 - Paint For Concrete Floor | | | | | | | | |
| 29 | 29 | 15 | --- | --- | --- | --- | NAD | NA |
| Location: Floor 2, Room 227 - Concrete | | | | | | | | |
| 30 | 30 | 15 | --- | --- | --- | --- | NAD | NA |
| Location: Floor 2, Room 227 - Concrete | | | | | | | | |
| 31L1 | 31 | 16 | 0.166 | 57.2 | 42.1 | 0.8 | NAD | NAD |
| Location: Floor 3, Room 300 - Cove Base Black | | | | | | | | |
| 31L2 | 31 | 16 | 0.190 | 50.8 | 42.5 | 6.7 | NAD | NAD |
| Location: Floor 3, Room 300 - Adhesive | | | | | | | | |

See Reporting notes on last page

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave, Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|---|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 32L1 | 32 | 16 | 0.163 | 53.3 | 45.6 | 1.1 | NAD | NAD |
| Location: Floor 3, Room 300 - Cove Base Black | | | | | | | | |
| 32L2 | 32 | 16 | 0.261 | 45.2 | 44.1 | 10.7 | NAD | NAD |
| Location: Floor 3, Room 300 - Adhesive | | | | | | | | |
| 33L1 | 33 | 17 | 0.242 | 35.0 | 64.3 | 0.7 | NAD | NAD |
| Location: Floor 3, Room 317 - Cove Base Grey | | | | | | | | |
| 33L2 | 33 | 17 | 0.172 | 25.3 | 64.4 | 10.2 | NAD | NAD |
| Location: Floor 3, Room 317 - Adhesive | | | | | | | | |
| 34L1 | 34 | 17 | 0.298 | 35.8 | 63.3 | 0.9 | NAD | NAD |
| Location: Floor 3, Room 317 - Cove Base Grey | | | | | | | | |
| 34L2 | 34 | 17 | 0.233 | 18.4 | 75.3 | 6.3 | NAD | NAD |
| Location: Floor 3, Room 317 - Adhesive | | | | | | | | |

Analyzed by: M Peysakhov-Hitachi#747/Noran; Date Analyzed 3/3/2020

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or NYSDOH ELAP 198.1 for New York friable samples or NYSDOH ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or NYSDOH ELAP 198.4; for New York samples); NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogeneous materials).

Reviewed By: 



PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 03/02/20 **AmeriSci Job #** 220031092
Date Examined 03/03/20 **P.O. #**
ELAP # 11480 **Page** 1 of 8
RE: MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|---|------------------|--|
| 1 1 | 220031092-01 Location: Floor 3, Room 325 - Brown Border Tile | Yes | 3 % ^{1,2} (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Black/Brown, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 3.0 % Other Material: Non-fibrous 47.8 % | | | |
| 2 1 | 220031092-02 Location: Floor 3, Room 325 - Brown Border Tile | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 3 2 | 220031092-03 Location: Floor 3, Room 325 - 9 x 9 Lt Brown | Yes | 3.3 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 3.3 % Other Material: Non-fibrous 49.6 % | | | |
| 4 2 | 220031092-04 Location: Floor 3, Room 325 - 9 x 9 Lt Brown | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
 Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 5 3 | 220031092-05 Location: Floor 1, Teachers Lounge - 9 x 9 Dk Brown | Yes | 3.6 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Dark Brown, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 3.6 % | | | |
| Other Material: Non-fibrous 45.5 % | | | |
| 6 3 | 220031092-06 Location: Floor 1, Teachers Lounge - 9 x 9 Dk Brown | | NA/PS |
| Analyst Description: Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: | | | |
| 7 4 | 220031092-07 Location: Floor 3, Room 325 - Black Mastic For 9 x 9 & Border Tile | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 76.2 % | | | |
| 8 4 | 220031092-08 Location: Floor 3, Room 325 - Black Mastic For 9 x 9 & Border Tile | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 64.4 % | | | |
| 9 5 | 220031092-09 Location: Floor 3, Room 316 - 9 x 9 Tile - Black | Yes | 2.8 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 2.8 % | | | |
| Other Material: Non-fibrous 40 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
 Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|--|------------------|--|
| 10 5 | 220031092-10 Location: Floor 1, Room 105 - 9 x 9 Tile - Black | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 11 6 | 220031092-11 Location: Floor 3, Room 316 - 9 x 9 Tile - Dark Green | Yes | 3 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Green, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 3.0 % Other Material: Non-fibrous 40.2 % | | | |
| 12 6 | 220031092-12 Location: Floor 3, Room 316 - 9 x 9 Tile - Dark Green | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 13 7 | 220031092-13 Location: Floor 2, Room 226 - 9 x 9 Tile - Light Green | Yes | 4.6 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Green, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 4.6 % Other Material: Non-fibrous 49.1 % | | | |
| 14 7 | 220031092-14 Location: Floor 2, Room 226 - 9 x 9 Tile - Light Green | | NA/PS |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos ReportMIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|---|
| 15 8 | 220031092-15 Location: Floor 2, Room 226 - 9 x 9 Tan W/ Mottles | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 26.1 % | | | |
| 16 8 | 220031092-16 Location: Floor 2, Room 226 - 9 x 9 Tan W/ Mottles | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 23.3 % | | | |
| 17 9 | 220031092-17 Location: Floor 3, Room 316 - Yellow Carpet Mastic | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 25.6 % | | | |
| 18 9 | 220031092-18 Location: Floor 3, Room 316 - Yellow Carpet Mastic | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 34.3 % | | | |
| 19 10 | 220031092-19 Location: Floor 3, Room 306 - Leveling Compound | No | NAD (by NYS ELAP 198.1) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos ReportMIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 20 10 | 220031092-20 Location: Floor 3, Room 306 - Leveling Compound | No | NAD (by NYS ELAP 198.1) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 100 % | | | |
| 21 11 | 220031092-21 Location: Floor 1, Room 101 - 12 x 12 Replacement Tile - Tan & Brown | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 11.7 % | | | |
| 22 11 | 220031092-22 Location: Floor 1, Room 101 - 12 x 12 Replacement Tile - Tan & Brown | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 11.6 % | | | |
| 23 12 | 220031092-23 Location: Floor 1, Room 109 - 12 x 12 Black Tile | Yes | 4.2 % ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: Chrysotile 4.2 % | | | |
| Other Material: Non-fibrous 35.8 % | | | |
| 24 12 | 220031092-24 Location: Floor 1, Room 109 - 12 x 12 Black Tile | | NA/PS |
| Analyst Description: Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
 Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|--|------------------|---|
| 25 13 | 220031092-25 Location: Floor 1, Room 109 - 12 x 12 Mastic | Yes | Trace (<0.25 % pc) ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Non-fibrous 14.7 % | | | |
| 26 13 | 220031092-26 Location: Floor 1, Room 109 - 12 x 12 Mastic | Yes | Trace (<0.25 % pc) ¹ (EPA 400 PC) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile <0.25 % pc Other Material: Non-fibrous 8.6 % | | | |
| 27 14 | 220031092-27 Location: Floor 2, Room 227 - Paint For Concrete Floor "Insufficient Material Submitted For Preparation" | | NA |
| Analyst Description: Bulk Material Asbestos Types: Other Material: | | | |
| 28 14 | 220031092-28 Location: Floor 2, Room 227 - Paint For Concrete Floor | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 9.3 % | | | |
| 29 15 | 220031092-29 Location: Floor 2, Room 227 - Concrete | No | NAD (by NYS ELAP 198.1) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
 Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|--|
| 30 15 | 220031092-30 Location: Floor 2, Room 227 - Concrete | No | NAD (by NYS ELAP 198.1) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 % | | | |
| 31 16 | 220031092-31L1 Location: Floor 3, Room 300 - Cove Base Black | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.8 % | | | |
| 31 16 | 220031092-31L2 Location: Floor 3, Room 300 - Adhesive | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: White/Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 6.7 % | | | |
| 32 16 | 220031092-32L1 Location: Floor 3, Room 300 - Cove Base Black | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 1.1 % | | | |
| 32 16 | 220031092-32L2 Location: Floor 3, Room 300 - Adhesive | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: White/Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 10.7 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD Z0068.00-IN; Twin Towers MS; 233 Wisner Ave,
Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|--|--|------------------|--|
| 33 17 | 220031092-33L1 Location: Floor 3, Room 317 - Cove Base Grey | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.7 % | | | |
| 33 17 | 220031092-33L2 Location: Floor 3, Room 317 - Adhesive | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 10.2 % | | | |
| 34 17 | 220031092-34L1 Location: Floor 3, Room 317 - Cove Base Grey | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.9 % | | | |
| 34 17 | 220031092-34L2 Location: Floor 3, Room 317 - Adhesive | No | NAD (by NYS ELAP 198.6) by Bo Sun on 03/03/20 |
| Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 6.3 % | | | |

Reporting Notes:

- (1) Sample prepared for analysis by ELAP 198.6 method
- (2) This PLM job was analyzed using Motic BA310 Pol Scope S/N 1190000538

Analyzed by: Bo Sun Bo Sun

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or ELAP 198.6 for NOB samples or EPA 400 pt ct by EPA 600-M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By:  END OF REPORT _____

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710

220031092

| Site Address: <u>Twin Towers MS</u> | | Date: <u>2/28/2020</u> | Inspector(s) <u>David Seddon</u> | | | | | |
|---|------------------|------------------------------------|---|--|---|--------------------|--------------------|--------------------|
| <u>233 WINDY AVE</u> | | Start: | End: | | | | | |
| <u>Middle Town, NY 10940</u> | | Project #: <u>MIDD 20068.00-IN</u> | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd | |
| Sample ID # | Homogeneous Area | Floor | Sample Location/Description | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd |
| 1 | 1 | 3 | Room 325 - Brown Border Tile | | | | | h |
| 2 | 1 | 3 | 325 - b ↓ | | | | | |
| 3 | 2 | 3 | 325 - 9x9 Lt Brown | | | | | |
| 4 | 2 | 3 | ↓ 325 - b ↓ | | | | | |
| 5 | 3 | 1 | Teachers Lounge - 9x9 DK Brown | | | | | |
| 6 | 3 | 1 | Teachers Lounge - b ↓ | | | | | |
| 7 | 4 | 3 | Room 325 - Black Marble for 9x9 b Border Tile | | | | | |
| 8 | 4 | 3 | b - ↓ b | | | | | |
| 9 | 5 | 3 | 316 - 9x9 Tile - Black | | | | | |
| 10 | 5 | 1 | 105 - b - ↓ | | | | | |
| 11 | 6 | 3 | 316 - - DARK GREEN | | | | | |
| 12 | 6 | 3 | 316 - - b | | | | | |
| 13 | 7 | 2 | 226 - - Light Green | | | | | |
| 14 | 7 | 2 | ↓ 226 - ↓ - b | | | | | ↓ |
| Special Instructions/ Turnaround Time: | | | | | Relinquished by: | | | |
| Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail Results to AdelaideLabResults@adelaideinc.com | | | | | Received by: <u>Michael [Signature]</u> 3/2/20 1930 | | | |
| | | | | | Relinquished by: | | | |
| | | | | | Received by: | | | |

24 hr
TAT

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710

220031092

| Site Address: TWIN TOWNS MS | | Date: 2/28/2020 | | Inspector(s) David Seddon | | | | |
|---|------------------|-----------------------------------|---|--|--------------------|--------------------|--------------------|---|
| 233 WINSSEL AVE | | Start: _____ End: _____ | | | | | | |
| Middle Town NY 10940 | | Project #: M100 2008.00-10 | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd | |
| Sample ID # | Homogeneous Area | Floor | Sample Location/Description | | | | | |
| 15 | 8 | 2 | Room 226 - 9x9 TAN w/ MOTTLES | | | | | ✓ |
| 16 | 8 | 2 | b - b | | | | | |
| 17 | 9 | 3 | 316 - Yellow Carpet Mastic | | | | | |
| 18 | 9 | 3 | b - b | | | | | |
| 19 | 10 | 3 | 306 - Leveling Compound | | | | | |
| 20 | 10 | 3 | b - b | | | | | |
| 21 | 11 | 1 | 101 - 12x12 Replacement Tile - Tan; Brown | | | | | |
| 22 | 11 | 1 | b - b | | | | | |
| 23 | 12 | 1 | 109 - 12x12 Black Tile | | | | | |
| 24 | 12 | 1 | 109 - b | | | | | |
| 25 | 13 | 1 | 109 - Mastic | | | | | |
| 26 | 13 | 1 | 109 - b | | | | | |
| 27 | 14 | 2 | 227 - PAINT for Concrete Floor | | | | | |
| 28 | 14 | 2 | b - b | | | | | |
| Special Instructions/ Turnaround Time: | | | | Relinquished by: _____ | | | | |
| Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail Results to AdelaideLabResults@adelaidellc.com | | | | Received by: Neeraj 3/2/20 1930 | | | | |
| | | | | Relinquished by: _____ | | | | |
| | | | | Received by: _____ | | | | |

24h
TAT

Adelaide Environmental Health Associates, Inc

1511 Route 22, Suite C24
Brewster, NY 10509
845-278-7710

220031092

| Site Address: <i>Twin Towers MS</i> | | Date: <i>2/28/2020</i> | Inspector(s) David Seddon | | | | | |
|---|------------------|-----------------------------------|--|--|--------------------|--------------------|--------------------|--------------------|
| <i>233 Winsen Ave</i> | | Start: | End: | | | | | |
| <i>Middletown NY 10940</i> | | Project #: <i>MIDO 2008.00-FN</i> | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd | |
| Sample ID # | Homogeneous Area | Floor | Sample Location/Description | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd |
| <i>29</i> | <i>15</i> | <i>2</i> | <i>Room 227 - Concrete</i> | | | | | <i>G</i> |
| <i>30</i> | <i>15</i> | <i>2</i> | <i>b - b</i> | | | | | <i> </i> |
| <i>31</i> | <i>16</i> | <i>3</i> | <i>300 - Concrete Block & Adhesive</i> | | | | | <i> </i> |
| <i>32</i> | <i>16</i> | <i>3</i> | <i>b - b</i> | | | | | <i> </i> |
| <i>33</i> | <i>17</i> | <i>3</i> | <i>317 - Gray</i> | | | | | <i> </i> |
| <i>34</i> | <i>17</i> | <i>3</i> | <i>b - b</i> | | | | | <i> </i> |
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| Special Instructions/ Turnaround Time: | | | Relinquished by: | | | | | |
| Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail Results to AdelaideLabResults@adelaidellc.com | | | Received by: <i>[Signature]</i> <i>3/2/20 1930</i> | | | | | |
| | | | Relinquished by: | | | | | |
| | | | Received by: | | | | | |

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APPENDIX D
PERSONNEL AND LABORATORY CERTIFICATIONS

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Adelaide Environmental Health Associates, Inc.
Suite C24
1511 Route 22
Brewster, NY 10509

FILE NUMBER: 99-0656
LICENSE NUMBER: 29305
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 07/18/2019
EXPIRATION DATE: 07/31/2020

Duly Authorized Representative – John Soter:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



DAVID W SEDDON

CLASS(EXPIRES)

C ATEC(12/20) D INSP(12/20)

E MGPL(12/20) H PM (12/20)

CERT# 09-08546
DMV# 879533539

MUST BE CARRIED ON ASBESTOS PROJECTS



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EYES BRO
HAIR BRO
HGT 5' 10"

IF FOUND RETURN TO:
NYS DOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2020
Issued April 01, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK, INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |

Serial No.: 59674

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**LIMITED SURVEY
FOR
ASBESTOS-CONTAINING MATERIALS, LEAD-BASED PAINT & PCBs**

PERFORMED AT:

Twin Towers Middle School
112 Grand Avenue
Middletown, New York 10940
Adelaide Project# MIDD:18116.04-IN

PREPARED FOR:

Mr. William Bartlett
Superintendent of Buildings and Grounds
Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, New York 10940-3240

PREPARED BY:

Robert See

December 26, 2021(Amended)

REVIEWED BY:



Stephanie A. Soter
President

| Version | Date | Prepared by |
|---------|----------|-------------|
| 1 | 12/11/18 | Robert See |
| 2 | 03/07/19 | Robert See |
| 3 | 12/26/21 | Robert See |



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1.0 Introduction

1.1 Scope of Work / Project Personnel

Adelaide Environmental Health Associates, Inc. (**Adelaide**) performed an Asbestos, Lead and PCB Survey for Building/Structure Demolition, Renovation, Remodeling and/or Repair, in conformance with ALL Federal, State and Local regulations, on December 5th, 2018, February 27th, 2019 and December 17th, 2021 for Enlarged City School District of Middletown throughout roof area of the Twin Towers Middle School, 112 Grand Avenue, Middletown, New York 10940. The survey included 1) review of building/structure plans, provided by KG&D Architects and comparison to an existing Louis Berger report dated April 17, 2015 to existing conditions for references to the scope of work potentially affecting hazardous materials used in construction, renovation or repair; and, 2) a visual inspection/assessment for hazardous materials throughout accessible interior and/or exterior spaces of the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired. Certified **Adelaide** personnel (Appendix C), Robert See (NYS Asbestos Inspector/Cert. #06-09124 and EPA Lead-based Paint Risk Assessor/Cert. #LBP-R-101137-1), performed the visual assessment throughout inspection area(s) identified.

Adelaide returned on December 17th, 2021 utilizing drawings from Ryan Biggs Clark Davis dated November 1, 2021. The drawings detailed various areas needing repair on the façade and parapets of the building.

1.2 Executive Summary

For comparison of the existing site survey from Louis Berger 565 Taxter Road, 5th Floor, Elmsford, New York 10523, for completeness to existing conditions and to check the roof drain bowls for any suspect material, **Adelaide** inspected all areas that will be affected by the proposed scope of work for suspect ACM, LBP and PCBs. **Adelaide** collected zero (0) suspect asbestos samples/layers, zero (0) XRF readings [including calibrations] and zero (0) suspect PCB samples from the above-mentioned area(s). Adelaide found that the existing survey report was accurate. Adelaide returned on February 27th, 2019 for a change of scope that removed the roofs C, D H & I from the proposed work plan and requested that the caulking for the spires on roofs E and G be verified therefore Adelaide collected four (4) suspect asbestos samples/layers and two (2) suspect PCB samples from the above-mentioned area(s). Zero (0) samples/homogenous areas tested positive for asbestos and zero (0) samples tested positive for PCBs.

Adelaide found that the roof drain bowls above the ceiling areas had no suspect materials that would impede the replacement of the drain bowls if necessary.

Adelaide returned on December 17th, 2021 to conduct further investigation for additional scope of repair work on roof parapet walls. **Adelaide** collected two (2) suspect asbestos samples/layers and one (1) suspect PCB sample from the above-mentioned area(s). Zero (0) samples/homogenous areas tested positive for asbestos and zero (0) samples tested positive for PCBs.

1.2.1 Conclusions and Recommendations

The following conclusions and recommendations are prepared by **Adelaide** as per the provided scope of work for Building/Structure Demolition, Renovation, Remodeling and/or Repair. Should the scope of work change, it is recommended that the findings be revisited to determine if additional sampling will be required to satisfy ALL Federal, State and Local regulations.

1.2.2 Asbestos-containing Materials (ACM)

- This survey concluded that the materials listed in Section 2.2 tested **negative for asbestos**. See Louis Berger report in **Appendix A**

1.2.3 Lead-based Paint (LBP)

- This survey concluded that no painted surfaces were observed to be impacted by the above-mentioned scope of work.

1.2.4 PolyChlorinated Biphenyls (PCB)

- This survey concluded that the materials listed in Appendix B tested **negative for PCBs**. See Louis Berger report **Appendix A**

2.0 Summary of Hazardous Materials

2.1 Summary of Identified ACM/PACM

Samples collected by **Adelaide** February 27th, 2019, December 17th, 2021

| HA | Identified ACM | ACM Location(s) | Approx. Qty. | Condition | Friable? (Yes or No) |
|---|----------------|-----------------|--------------|-----------|----------------------|
| <i>NO Asbestos-containing Materials (ACM) identified upon PLM, PLM-NOB, QTEM and/or PLM-SM-V analysis, by a laboratory approved under the NYSDOH ELAP, of samples collected/analyzed in reference to the above-mentioned scope of work.</i> | | | | | |

2.2 Summary of Identified Non-ACM

See Louis Berger Report **Appendix A**

- Structural Wood Fiber Deck (“Tectum”) - Roof M
- Flashing Tar - Roof M
- Coping Stone Caulk – Roofs L & M
- Coping Stone Mortar – Roofs L & M
- Caulk to Coping Stone/ Cap Flashing Joint - Roof M
- Tar on Skylight/ Mechanical Equipment Curbs – Roofs F, K, L
- Tar/ Vapor Barrier – Roofs L & K (Flat Sections) , Roof K (Elevated Section), Roof R
- Insulation (Perlite) – Roofs L & K (Flat Sections), Roof K (Elevated Section), Roof R
- Tar Waterproofing – Roofs L & K (Flat Sections) , Roof K (Elevated Section)

- Roof Membrane – Roofs L & K (Flat Section) , Roof K (Elevated Section)
- Tapered Edge Fiberboard - Roof L
- Flashing Tar Paper – Roof L
- Cap Flashing Caulk – Roof L
- Brick Mortar - Throughout
- Gypsum Deck – Roof K (Elevated Section)
- Mechanical Equipment Flashing – Roof F
- Pre-Cast Concrete Slab Mortar – Roof F
- Tar Associated with Fiberglass layers in Built Up Roofing System – Roof O
- Cap Flashing Caulk Tan, Red Grey and White – Roof O
- Tar on Cap Flashing – Roof O
- Expansion Joint Caulk – Throughout
- Façade Corner Joint Caulk Black, Brown – Roof Q
- Tar Membrane – Roof R
- Cap Flashing Caulk Light Grey – Roof I & Roof C
- Tar Associated with Cap Flashing – Roof I & Roof C
- Caulking between metal and masonry - Spires roofs E and G

Collected by Adelaide December 17, 2021

- Patch Caulk Beige

2.3 Summary of Identified LBP

Site Visit by **Adelaide** December 5th, 2018

| Location of LBP | LBP Component | Substrate | Color | Condition | Readings (mg/cm ²) |
|---|---------------|-----------|-------|-----------|--------------------------------|
| <i>NO painted surfaces were observed to be impacted by the above-mentioned scope of work.</i> | | | | | |

2.4 Summary of Identified PCB-containing Materials

Samples collected by **Adelaide** February 27th, 2019, December 17th, 2021

| Sample # | Location / Description | Material Matrix | Color | Substrate | Analytical Result |
|---|------------------------|-----------------|-------|-----------|-------------------|
| <i>NO PCB-containing materials were identified above the USEPA 40 CFR 761 threshold of 50 ppm(mg/kg) of samples collected/analyzed in reference to the above-mentioned scope of work.</i> | | | | | |

2.5 Observations

ASBESTOS-CONTAINING MATERIALS (ACM)

A visual inspection was performed comparing the existing conditions to the existing Survey report from Louis Berger dated April 17, 2015. The findings presented in this report are based upon reasonably available information and observed site conditions at the time the assessment was performed. The findings and conclusions of this report are not meant to be indicative of future conditions at the site and does not warrant against conditions that were not evident from visual observations or historical information obtained from others.

Representative bulk sampling was performed on suspect building materials for laboratory analysis and the following is a summary of installed building materials sampled as per the scope of work provided:

- Miscellaneous Materials – Caulk on spires between metal and masonry.
- Non-suspect Materials (not sampled) – Metal.

3.0 Asbestos-containing Materials (ACM)

3.1 Field Procedures and Analysis Methodology

Guidelines used for the inspection were established by the U.S. Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC# 560/5-85-024 and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA) and Title 12 NYCRR Part 56-5.1. Field information was organized as per the AHERA concept of a homogeneous area (HA); that is, suspect Asbestos-containing Materials (ACM) with similar age, appearance, and texture were grouped together, sampled and assessed for condition.

For the purposes of this inspection, suspect ACM has been placed in three material categories: thermal, surfacing, and miscellaneous. 1) Surfacing materials are those that are sprayed on, troweled on or otherwise applied to surfaces for fireproofing, acoustical, or decorative purposes (e.g., wall and ceiling plaster). 2) Thermal materials are those applied to heat pipes or other structural components to prevent heat loss or gain or prevent water condensation (e.g., pipe and fitting insulation, duct insulation, boiler flue). 3) Miscellaneous materials are interior building materials on structural components, structural members or fixtures, such as floor and ceiling tiles, etc. and do not include surfacing material or thermal system insulation.

SURFACING MATERIALS

Surfacing materials were grouped into homogeneous sampling areas. A homogeneous area contains material that is uniform in color and texture and appears identical in every other respect. Materials installed at different times belong to different sampling areas. Homogeneous areas were determined on per floor basis.

The following protocol was used for determining the number of samples to be collected:

- At least three bulk samples were collected from each homogeneous area that is 1,000 square feet or less.
- At least five bulk samples were collected from each homogeneous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
- At least seven bulk samples were collected from each homogeneous area that is greater than 5,000 square feet.

THERMAL SYSTEM INSULATION (TSI)

The concept of homogeneous sampling areas applies equally well to thermal insulation as to surfacing material. A "typical" building may contain multiple insulated pipe runs from any combination of the following categories:

- Hot water supply and/or return
- Cold water supply

- Chilled water supply
- Steam supply and/or return
- Roof or system drain

The following protocol was used for determining the number of samples to be collected.

- Collect at least three bulk samples from each homogeneous area of thermal system insulation.
- Collect at least one bulk sample from each homogeneous area of patched thermal system insulation if the patched section is less than 6 linear or square feet.
- In a manner sufficient to determine whether the material is ACM or not ACM, collect a minimum of three bulk samples from each homogeneous insulated mechanical system tee, elbow, and valve.

Bulk samples are not collected from any homogeneous area where the certified inspector has determined that the thermal system insulation is fiberglass, foam glass, or rubber.

MISCELLANEOUS MATERIALS

Miscellaneous materials are grouped into different homogeneous areas and at least two bulk samples are collected from each homogeneous area as per the clarification letter from the EPA and the Professional Abatement Contractors of New York, Inc in November of 2007.

Samples collected were analyzed by a laboratory approved under the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP). Samples were analyzed in the laboratory by Polarized Light Microscopy (PLM), Polarized Light Microscopy-NOB (PLM-NOB) and/or Quantitative Transmission Electron Microscopy (QTEM), as required. Sample collection and laboratory analysis were conducted in compliance with the requirements of Title 12 NYCRR Part 56-5.1, 29 CFR 1926.1101 and standard EPA & OSHA accepted methods. Samples consisting of multiple layers were separated and analyzed independently in the laboratory.

3.2 Regulatory Guidelines and Requirements for ACM

FEDERAL

In accordance with the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Emission Standards for hazardous Air Pollutants (NESHAP) to protect the public from exposure to airborne pollutants. Asbestos was one of the air pollutants, which was addressed under the NESHAP 40 CFR Part 61. The purpose of asbestos NESHAP regulations is to protect the public health by minimizing the release of asbestos when facilities, which contain ACM, are being renovated or demolished. EPA is responsible for enforcing regulations related to asbestos during renovations and demolition, however, the CAA allows the EPA to delegate this authority to State and Local Agencies. Even after EPA delegate's responsibility to a state or Local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

NEW YORK STATE

Asbestos in New York State is regulated under the Labor Law Section 906, Part 56 of Title 12 of the Official Compilation of Codes, Rules, and Regulations. Within the department and for the purpose of the Department of Labor, this part (rule) is known as Industrial Code Rule No. 56 (ICR 56) relating to hazards to the public safety and health, during the removal, encapsulation, or disturbance of friable asbestos, or any handling of ACM that may result in the release of asbestos fiber.

As specified in Title 12 NYCRR Part 56-5.1 (h) and (i), "If the building/structure asbestos survey finds that the portion of the building/structure to be demolished, renovated, remodeled, or have repair work contains ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material, which is impacted by the work, the owner or the owner's agent shall conduct, or cause to have conducted, asbestos removal performed by a licensed asbestos abatement contractor in conformance with all standards set forth in this Part. All ACM, PACM, suspect miscellaneous ACM assumed to be ACM, or asbestos material impacted by the demolition, renovation, remodeling or repair project shall be removed as per this Part, prior to access or disturbance by other uncertified trades or personnel. No demolition, renovation, remodeling or repair work shall be commenced by any owner or the owner's agent prior to the completion of the asbestos abatement in accordance with the notification requirements of this Part...All building/structure owners and asbestos abatement contractors on a demolition, renovation, remodeling, or repair project, which includes work covered by this part, shall inform all trades on the work site about PACM, ACM, asbestos material and suspect miscellaneous ACM...Bids may be advertised and contracts awarded for demolition, remodeling, renovation, or repair work, but no work on the current intermediate portion of the project shall commence on the demolition, renovation, remodeling or repair work by any owner or agent prior to completion of all necessary asbestos abatement work for the current intermediate portion of the entire project, in conformance with all standards set forth in this Part." All work conducted should be in accordance with all legal requirements, including but not limited to U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61], New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and Chapter 1 of Title 15 of the Rules of the City of New York Regulations, as applicable. Advance notification of the asbestos project to the USEPA, NYSDOL, and NYCDEP may be required.

NEW YORK CITY

Asbestos Control Program (ACP), Title 15, Chapter 1 of the New York City Department of Environmental Protection (NYCDEP) regulates all asbestos abatement activities occurring within the City of New York. The ACR regulations also require asbestos surveys and abatement work to be performed by a NYCDEP certified asbestos investigator and asbestos workers, respectively.

The New York City Department of Buildings (NYCDOB) requires an ACP notification to be included with the renovation/demolition permit applications. The notification is performed using an ACP 5 or ACP 20/21 forms.

All confirmed ACM will need to be removed prior to any building renovation or demolition. The removal and disposal of ACM must be performed by a NYS-DOL licensed asbestos handling contractor in accordance with Federal, state, and local regulations. Proper notifications must be filed with the US-EPA, NYS-DOL, NYC-DEP and other regulatory agencies prior to performing such activities.

As required by the NYS-DOL and NYC-DEP regulations, the abatement project must be monitored by a NYS-DOL certified project monitor. The project monitor oversees contractor's work practices and also performs pre, during, and final clearance post abatement air sampling in accordance with the state and city regulations.

CONCEALED ACM

In addition to the ACMs identified at the site, there is a possibility that concealed suspect ACM may exist at the building/structure. As such, if any concealed suspect ACM is encountered during future construction related activities, the work should immediately stop. Prior to resuming the work, the suspect ACM should

either be 1) Sampled by an appropriately-certified asbestos professional and submitted to an Approved NYSDOH ELAP laboratory for asbestos analysis or 2) Presumed to be ACM (PACM) and removed by a licensed asbestos abatement contractor for disposal in accordance with all applicable regulations.

4.0 Lead-based Paint (LBP)

4.1 Applicable Standards/Guidelines for LBP

The U.S Department of Housing and Urban Development (HUD) defines the action level for lead-based paint as a lead content equal to or greater than 1.0 milligrams of lead per square centimeter of painted surface ($\geq 1.0 \text{ mg Pb/cm}^2$) when measured with an XRF analyzer or 0.5 percent by weight when chemically tested. This definition is described in the HUD "Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990". The state of New York's definition of the action level for lead-based paint is consistent with the level established by HUD.

Please note that although the HUD defines lead based paint as paint having lead concentrations equal or greater than 1.0 mg/cm², the Occupational Safety and Health Administration (OSHA) considers any concentration of lead in paint to be lead containing paint. Regardless of the lead concentrations in paint, the contractor shall comply with 29 CFR 1926.62, OSHA regulations, and take precautionary measures for dust control and limit employee exposure to lead dust during the renovations.

Painted surfaces that would be impacted by planned activities such as drilling, cutting, scrapping, etc. and create dust should be properly addressed by following safe work practices, good housekeeping procedures and/or following proper abatement procedures. Grinding and sanding of paint without HEPA filter exhaust, open flame gas fired torch, unconfined abrasive blasting, and chemical strippers containing methylene chloride or other human carcinogenic chemicals are not recommended.

The Federal Resource Conservation and Recovery Act (RCRA) regulation governs the handling, transportation, and disposal of hazardous materials. Every demolition/renovation debris generator has the responsibility to determine whether the debris exhibits one or more of the characteristic wastes listed in subpart C of 40 CFR Part 261. In the case of demolition debris, lead in LBP is a characteristic waste, and therefore, it is the responsibility of the renovation/demolition debris generator to characterize the waste prior to its disposal and, if found to be hazardous waste as defined by Federal Statutes, to be properly handled and disposed.

Metal objects painted with LBP are exempt from disposal regulations applicable to lead, provided they are properly recycled. All metal objects that are painted with LBP should be sent to a certified recycling facility.

This report is not Lead-based Paint abatement specification and should not be used for specifying removal methods or techniques.

4.2 XRF Information

Thermo Scientific Niton XLp 300A X-Ray Fluorescence (XRF) Analyzer(s) were used to survey the building/structure or portion thereof identified to be demolished, renovated, remodeled or repaired for the presence of LBP. The XRF analyzers are using a sealed source of Cd109 with 40mCi sources, meeting HUD requirements for the analysis of paint films. During the analysis, the intensity of the x-rays is converted by the instrument's internal software into an estimate of the concentration of lead in the substance being analyzed. The results are interpreted as concentrations of lead in milligrams per square centimeter. This device is a field-screening tool, used to collect multiple readings in a short period of time. The method of measurement is based on spectrometric analysis of lead x-ray fluorescence within a controlled depth of interrogation. The reading is an estimate of lead content in all layers of paint. The results are displayed in milligrams per square centimeter (mg/cm²). The device(s) used for this inspection were the Thermo Scientific Niton XLp 300A Analyzer(s), Serial number 90719, Source date 3/15/14, Serial number 102951, Source date 9/15/17 and/or Serial number 101094, Source date 2/15/17.

5.0 PolyChlorinated Biphenyls (PCB)

5.1 Background and Protocol for PCBs

PolyChlorinated Biphenyls (PCB) are a group of manmade chemicals. PCBs were widely used in building materials and electrical products in the past. The U.S. Environmental Protection Agency banned the manufacturing and certain uses of PCBs in 1978, but buildings constructed or renovated between 1950 and 1978 may still have building materials and electrical products that contain PCBs. Examples of products that may contain PCBs include caulk, paint, glues, plastics, fluorescent lighting ballasts, transformers and capacitors.

PCBs are currently prohibited from being used in caulk and other commodities (U.S. EPA, 40 CFR 761). However, prior to 1977, PCBs were present in some caulking materials used in the construction of schools and other buildings. Studies have shown that concentrations of PCB can exceed 1% (10,000 ppm) by weight in some caulk materials. An investigation of 24 buildings in the Greater Boston Area revealed that one-third of the buildings tested (8 of 24) contained caulking materials with polychlorinated biphenyl (PCB) content exceeding 50 ppm by weight with an average concentration of 15,600 ppm or 1.5% (Herrick et al., 2004). These buildings included schools and other public buildings.

The U.S. EPA regulates the disposal of caulk, as well as soil and other materials contaminated with PCBs from caulk, if the concentration of PCBs exceeds 50 ppm. Such materials must be disposed at an appropriate approved or permitted facility.

U.S. EPA regulation 40 CFR 761 defines "PCB remediation waste" to include contaminated soil, and specifies a clean-up level of <1ppm without further conditions for unrestricted use in "high occupancy areas" (i.e., areas where individuals may be present for 335 hours or more per year). PCB caulk is defined as a PCB bulk product waste, and its disposal is subject to U.S. EPA regulations under the Toxic Substances Control Act (40 CFR761.62).

This protocol has been developed in consultation with the New York State Department of Health, Division of Environmental Health Assessment, Bureau of Toxic Substance Assessment to address concerns about properly managing caulk containing PCBs that will be disturbed during building renovation and maintenance.

CAULK SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977 have a potential to contain PCBs in existing caulk. Representative samples of caulking materials from these buildings prior to renovation or demolition work should be tested to determine whether the caulk is contaminated with PCBs. Professional judgement should be used to design the sampling plan for characterizing caulk throughout the building. The consultant should pay particular attention to construction and maintenance records and to the appearance of caulking materials (likenesses and differences). Samples should be taken from window frames or expansion joints that have not been repaired or replaced since 1977. Depending on specific information provided in the workplan developed by the project manager, such as window placement, compositing of some caulk samples might be appropriate. Caulk from different time periods or that have a different appearance should not be composited together.

It is important to note that caulk used during the time period of interest may also contain asbestos or lead. Therefore, the work plan should include testing, handling and disposal requirements appropriate for such regulated materials.

SOIL SAMPLE COLLECTION

Buildings constructed or renovated between 1950 and 1977, which have undergone further renovation after 1977, may have residual PCB contamination in adjacent soils. An adequate representation of surface soils should be tested to assess the potential for residual PCB contamination.

When designing a representative soil sampling plan, the likelihood of soil contamination from deteriorated or deteriorating caulk should be considered. Caulk that has in the past dried out and fallen to the ground is the most important source of soil contamination. Thus, sampling should include soil beneath windows where caulk has obviously deteriorated or been replaced because of previous deterioration. Areas subject to the stress of sun and prevailing weather (typically the southern and western side of each structure) should be included for sampling. These samples would provide a conservative evaluation of soil conditions due to an increased potential for material failure, possibly resulting in contamination of soil. Also, if earlier renovation or demolition work may have stockpiled potentially contaminated caulk in other school areas, the school should consider having soils in those areas tested as well.

Soil sampling should focus on areas of the building where "banks" or "gangs" of windows exist/were replaced and areas of the structure where large expansion joints are located. This would provide a conservative evaluation of potential soil contamination and permit efficient sampling.

Any obvious pieces of caulk encountered during the collection of soil samples should be removed from the soil, categorized (with respect to location and depth) and treated as a separate potential sample.

Depth – At each soil sample location, soil should be collected in depth intervals of 0-2 inches, 2-6 inches and 6-12 inches. The surface soil sample (0-2 inches) should be collected from below the vegetative surface layer, if present.

Distance from Structure – Samples should be collected within 1 foot of the building and 5 feet from the building.

Samples should be collected in a manner that prevents cross-contamination. Augers or driven core samplers should be avoided, as any caulk caught on the edge of this type of tool could be driven to lower intervals. Using a designated trowel for each sample location and each interval of depth is encouraged. If the sampling tool is field cleaned between samples, do so in a manner that does not add solvent contamination to the environment.

NOTE

Sampling was performed by **Adelaide** in compliance with protocols outlined by New York State Education Department (NYSED) and USEPA 40 CFR 761, as described above. Only one sample per homogeneous area was required for analysis of suspect PCB-containing materials. Bulk sample(s) were properly packaged and forwarded, with associated Chain of Custody (COC), to York Analytical Laboratories, Inc., for analysis using method SW846-3550B/8082. The analysis will determine if the suspect material will be classified as PCB-containing at or above 50 ppm or mg/kg as per the EPA regulations. Copies of the analytical results are contained within attached appendices for review.

6.0 General Discussion

All construction personnel as well as individuals who have access to locations where asbestos-containing materials (ACM), lead-based paints (LBP) and/or polychlorinated biphenyls (PCB) exists should be informed of its presence and the proper work practices in these areas. Conspicuous labeling of all ACM is suggested to ensure personnel is adequately informed. Personnel should be informed not to rest, lean or store material or equipment on or near these surfaces and not to cut, saw, drill, sand or disturb ACM. All removal, disturbance, and repair of ACM should be performed in compliance with Title 12 NYCRR Part 56 by persons properly trained to handle ACM. Facility custodial and maintenance personnel should receive training commensurate with their work activities; as defined in 29 CFR 1910.1001.

7.0 Disclaimers

Adelaide certifies that the information contained within this report is based solely upon site observations and the results of laboratory analysis for samples collected during this survey/assessment. These observations and results are time dependent, subject to changing site conditions and revisions to Federal, State and Local regulations. **Adelaide** warrants that these findings have been promulgated after being prepared in general accordance with generally accepted practices in the abatement industries. **Adelaide** also recognizes that inspection laboratory data is not usually sufficient to make all abatement and management decisions. No other warranties are expressed or implied.

Due to the potential for concealed Asbestos-containing Materials (ACM) and/or other regulated materials, this report should not be construed to represent all ACM and/or regulated materials within the site(s). All quantities of ACM and/or other regulated materials identified, and all dimensions listed within this report are approximate and should be verified On-site.

This inspection report is not intended to be used as the sole basis for soliciting pricing for asbestos abatement. An abatement plan, specification, drawing and/or Variances should be developed to identify scope, timing, phasing and remediation means & methods for any asbestos project. The Linear and/or Square Footages (LF / SF) listed within this Report are only approximates. Abatement Contractor(s) are required to visit the building(s) in order to take actual field measurements within each listed location.

NYSDOH issued an Interim Guidance Letter, on July 9, 2013, which outlined the approved testing alternative for materials containing vermiculite. Specifically, "...Where TSI, surfacing materials, or other PACM or miscellaneous suspect ACM contain greater than 10% vermiculite, Item 198.6 may be used to evaluate the asbestos content of the material; provided, however, that any test results using this method must be reported with the following conspicuous disclaimer: *"This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite."* On July 22, 2014, NYSDOH issued a Regulatory Guidance Letter outlining the new approved analytical methods for testing sprayed-on fireproofing (SOF-P) that contains vermiculite. NYSDOH authorized the use of **two** analytical methods to evaluate the asbestos content of SOFP that contains vermiculite. As per NYSDOH Guidelines, *"After October 31, 2014, one of the new methods **must** be used to test SOF-V, regardless of the percent of vermiculite."* On May 6, 2016, NYSDOH issued a Regulatory Guidance Letter outlining the new protocol for analytical procedure for surfacing materials (ie. plaster, stucco, etc.) that contain vermiculite. As per NYSDOH Guidelines, *"The original July 2013 and July 2014 letters addressed SOF-V only. Both NYS DOH's Item 198.8 and Rj Lee Group Method 055 shall now be applied to test for vermiculite in other Surfacing Material (SM) as defined in 12 NYCRR Part 56 (NYS Industrial Code Rule 56)."*

APPENDIX A
ASBESTOS ANALYTICAL RESULTS & LOUIS BERGER REPORT

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results

MIDD:18116.04-IN; Twin Towers Middle School; 112 Grand Ave., Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|--|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 2-1 | 1 | 0.080 | 50.9 | 44.4 | 4.8 | NAD | NAD |
| Location: R Fl. - Parapet Wall - Patch Caulk (Beige) | | | | | | | | |
| 02 | 2-2 | 1 | 0.164 | 47.6 | 43.4 | 9.0 | NAD | NAD |
| Location: R Fl. - Parapet Wall - Patch Caulk (Beige) | | | | | | | | |

Analyzed by: Marik Peysakhov
 Date: 12/19/2021



Reviewed by: Marik Peysakhov



**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or NYSDOH ELAP 198.1 for New York friable samples or NYSDOH ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or NYSDOH ELAP 198.4; for New York samples). Analysis using Hitachi, Model H7000-Noran 7 System, Microscope, Serial #: 747-05-06. NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, NJ Lab ID #NY031.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 12/18/21 **AmeriSci Job #** 221122662
Date Examined 12/18/21 **P.O. #**
ELAP # 11480 **Page** 1 of 1
RE: MIDD:18116.04-IN; Twin Towers Middle School; 112 Grand Ave., Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|---|------------------|---|
| 2-1 1 | 221122662-01 Location: R Fl. - Parapet Wall - Patch Caulk (Beige) | No | NAD (by NYS ELAP 198.6) by Khaalid W. Perine on 12/18/21 |
| Analyst Description: Lt. Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 4.8% | | | |
| 2-2 1 | 221122662-02 Location: R Fl. - Parapet Wall - Patch Caulk (Beige) | No | NAD (by NYS ELAP 198.6) by Khaalid W. Perine on 12/18/21 |
| Analyst Description: Lt. Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 9% | | | |

Reporting Notes:

Analyzed by: Khaalid W. Perine
Date: 12/18/2021

Reviewed by: Marik Peysakhov

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis using Leicia, Model DMEP Pol Scope, Microscope, Serial #: 13595, by Appd E to Subpt E, 40 CFR 763 quantified by either CVES or 400 pt ct as noted for each analysis (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite, or ELAP 198.6 for NOB samples, or EPA 400 pt ct by EPA 600-M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054, NJ Lab ID #NY031.

Client Name: Adelaide Environmental Health

Table I
Summary of Bulk Asbestos Analysis Results

MIDD-18116.04; Twin Towers Middle School; 112 Grand Ave., Middletown, NY 10940

| AmeriSci Sample # | Client Sample# | HG Area | Sample Weight (gram) | Heat Sensitive Organic % | Acid Soluble Inorganic % | Insoluble Non-Asbestos Inorganic % | ** Asbestos % by PLM/DS | ** Asbestos % by TEM |
|---|----------------|---------|----------------------|--------------------------|--------------------------|------------------------------------|-------------------------|----------------------|
| 01 | 1 | 1 | 0.189 | 68.8 | 21.7 | 9.5 | NAD | NAD |
| Location: Floor R - Spire E - Caulk Between Metal And Masonry | | | | | | | | |
| 02 | 2 | 1 | 0.183 | 67.2 | 24.6 | 8.2 | NAD | NAD |
| Location: Floor R - Spire G - Caulk Between Metal And Masonry | | | | | | | | |
| 03 | 3 | 2 | 0.151 | 66.9 | 22.5 | 10.6 | NAD | NAD |
| Location: Floor R - Spire E - Patch Caulk Weathered | | | | | | | | |
| 04 | 4 | 2 | 0.165 | 72.1 | 21.8 | 6.1 | NAD | NAD |
| Location: Floor R - Spire G - Patch Caulk Weathered | | | | | | | | |

Analyzed by: Karol H. Lu ; Date Analyzed 3/1/2019

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By: _____



PLM Bulk Asbestos Report

Adelaide Environmental Health
Attn: John Soter
1511 Rte. 22 Suite C24

Brewster, NY 10509

Date Received 02/28/19 **AmeriSci Job #** 219023882
Date Examined 02/28/19 **P.O. #**
ELAP # 11480 **Page** 1 of 2
RE: MIDD-18116.04; Twin Towers Middle School; 112 Grand Ave., Middletown, NY 10940

| Client No. / HGA | Lab No. | Asbestos Present | Total % Asbestos |
|---|--|------------------|---|
| 1 1 | 219023882-01 Location: Floor R - Spire E - Caulk Between Metal And Masonry | No | NAD ¹ (by NYS ELAP 198.6) by Kensen Caro on 02/28/19 |
| Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 9.5 % | | | |
| 2 1 | 219023882-02 Location: Floor R - Spire G - Caulk Between Metal And Masonry | No | NAD (by NYS ELAP 198.6) by Kensen Caro on 02/28/19 |
| Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 8.2 % | | | |
| 3 2 | 219023882-03 Location: Floor R - Spire E - Patch Caulk Weathered | No | NAD (by NYS ELAP 198.6) by Kensen Caro on 02/28/19 |
| Analyst Description: Light Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 10.6 % | | | |
| 4 2 | 219023882-04 Location: Floor R - Spire G - Patch Caulk Weathered | No | NAD (by NYS ELAP 198.6) by Kensen Caro on 02/28/19 |
| Analyst Description: Light Grey, Homogeneous, Non-Fibrous, Bulk Material | | | |
| Asbestos Types: | | | |
| Other Material: Non-fibrous 6.1 % | | | |

Client Name: Adelaide Environmental Health

PLM Bulk Asbestos Report

MIDD-18116.04; Twin Towers Middle School; 112 Grand Ave.,
Middletown, NY 10940

Reporting Notes:

(1) This job was - Analyzed using Motic BA310 Pol Scope S/N 1190000538

Analyzed by: Kensen Caro 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by Appd E to Subpt E, 40 CFR 763 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

Adelaide Environmental Health Associates, Inc

1454 Rte. 22, Suite B202
Brewster, NY 10509
845-278-7710
845-278-7750 - fax

| Site Address: Twin Towers Middle School | | | Date: 2/27/2019 | | Inspector(s) Robert See | | | |
|--|------------------|-------------|---|-----------|--|--------------------|--------------------|--------------------|
| 112 Grand Ave | | | Start Time | Stop Time | Kyle Harrington | | | |
| Middletown, NY 10940 | | | Project #: MIDD-18116.04 | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd |
| Sample ID # | Homogeneous Area | Floor Level | Sample Location/Description | | | Quantity (In Feet) | Friable NonFriable | Condition g, d, sd |
| 1 | 1 | R | SPIRE E caulk between metal and masonry | | | 200LF | | D |
| 2 | 1 | R | SPIRE G V V V | | | 200LF | | D |
| 3 | 2 | R | E Patch caulk weathered | | | 20LF | | D |
| 4 | 2 | R | G V V | | | 20LF | | D |
| <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 1px solid black; transform: rotate(-15deg); opacity: 0.5;"></div> <div style="position: absolute; bottom: 0; left: 0; width: 100%; text-align: left; font-size: 2em; font-weight: bold; transform: rotate(-15deg);"> #219023882 </div> | | | | | | | | |
| Special Instructions/ Turnaround Time: | | | | | Relinquished by: <i>Robert See</i> | | | |
| 24 Hrs TAT | | | | | Received by: <i>MVell</i> 2/28/19 1200 | | | |
| | | | | | Relinquished by: | | | |
| Stop at 1st Positive per Homogenous Area Fax Results to 845-278-7750 E-Mail results to AdelaideLabResults@Adelaidellc.com | | | | | Received by: | | | |

FINAL REPORT OF ENVIRONMENTAL SERVICES

Performed at:

**TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE
MIDDLETOWN, NY 10940**



Prepared by:



Louis Berger

**565 Taxter Road, 5th Floor
Elmsford, New York 10523**

Tel. (914) 798-3710

Fax (914) 592-1734

Project No. 3001111

Submission Date: April 17, 2015



Louis Berger

565 Taxter Road, 5th Floor, Elmsford, NY 10523
Tel 914 798 3710 Fax 914 592 1734

www.louisberger.com

April 17, 2015

Mr. Thomas Scott
Enlarged City School District of Middletown
Superintendent of Buildings & Grounds
223 Wisner Avenue
Middletown, NY 10940

**Subject: Report of Environmental Inspection Services
Twin Towers Middle School
112 Grand Avenue, Middletown, NY 10940**

Dear Mr. Scott:

Louis Berger (Berger) has completed a material inspection at Twin Towers Middle School located at 112 Grand Avenue, Middletown, New York. The Inspection included visual observation, material sampling, and laboratory sample analysis of suspect Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) associated with the proposed renovations to Twin Towers Middle School.

The attached report presents descriptions and results of the material sampling procedures and visual analysis. Relevant general project information is provided, followed by our findings, assessments and recommendations. Laboratory analysis data and certifications are provided in the Appendices.

If you have any questions concerning this report or if we may be of further assistance to you, please contact us.

Sincerely,

LOUIS BERGER (Berger)

Craig Napolitano, CHMM
Vice President, Industrial Hygiene & Hazmat Services



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Appendices

- Appendix A: Asbestos Sample Analysis Results in Tabular Form
- Appendix B: Asbestos Bulk Sample Field Data Sheets with Chain of Custody & Laboratory Results
- Appendix C: Asbestos Bulk Sample Location Drawings
- Appendix D: Asbestos Containing Materials Location Drawings
- Appendix E: Adelaide Lead XRF Inspection Report
- Appendix F: PCB Bulk Sample Field Data Sheets with Chain of Custody & Laboratory Results
- Appendix G: PCB Bulk Sample Location Drawings
- Appendix H: Company License, Personnel Certifications & Laboratory Accreditations
- Appendix I: Photographic Documentation
- Appendix J: File Search Materials



1.0 EXECUTIVE SUMMARY

Berger has performed a renovation specific material Inspection for the presence or absence of Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) at the Twin Towers Middle School located at 112 Grand Avenue, Middletown, New York. The intent of this Inspection was to screen for Asbestos-Containing Materials (ACM), Lead Based Paints (LBP) and Polychlorinated Biphenyls (PCBs) that may be impacted during the proposed renovation to Twin Towers Middle School.

Drew Cheskin & Josue Garcia of LB performed this Inspection on March 24th, March 25th, March 31st & April 1st, 2015. Mr. Cheskin is licensed as a New York State Department of Labor (NYSDOL) Asbestos Inspector (Cert# 05-04280) and New York State EPA Lead Inspector (Cert# NY-I-11931-2). Mr. Garcia is licensed as a New York State Department of Labor (NYSDOL) Asbestos Inspector (Cert# 01-04292) and New York State EPA Lead Risk Assessor (Cert# NY-R-6928-4). The results of the visual inspection and bulk sample analysis determined that the following suspect ACM, LBP and PCB materials may be impacted by the upcoming upgrade project:

A. ASBESTOS-CONTAINING MATERIAL

Analytical results of the bulk samples collected by Berger indicate that the following materials **contain asbestos** (greater than 1-percent).

- **Caulk Assoc. with Copper Deck/Coping Stone Seam**
- **Cap Flashing Caulk, Old**
- **Cap Flashing Caulk, Dark Grey**
- **Cap Flashing Caulk, White**
- **Cementitious Materials Assoc. with Boiler**
- **Water Tank Brick Mortar**

The following materials are **assumed to contain asbestos** due to inaccessibility to the materials;

- **None within known scope of work**

The following materials are **considered to contain asbestos** based on historical drawings and six month AHERA inspections conducted by the Enlarged City School District of Middletown Department of Buildings & Grounds. Copies of this paperwork is located in Appendix J:

- **Misc. Floor Tile (12"x12")**
- **9"x9" Floor Tile (Misc.) – Under Carpet**
- **TSI (wrapped)**
- **TSI**
- **Misc. Floor Tile (Under Carpet)**
- **Misc. Floor Tile (9"x9" Brown)**
- **Misc. Floor Tile (12"x12" Dark Brown)**



Analytical results of the bulk samples collected indicate that the following materials **did not contain asbestos** (less than 1-percent);

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)
- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler



- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)
- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)



- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 1770 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.

C. PCB-CONTAINING MATERIAL

Analytical results of the bulk samples collected indicate that the following materials **contain PCB** (greater than 50 PPM).

- **None**

Analytical results of the bulk samples collected indicate that the following materials **did not contain PCB** (less than 50 PPM);

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk



2.0 FIELD INSPECTION PROCEDURES AND SAMPLE ANALYSIS METHODS

ASBESTOS-CONTAINING MATERIAL

Guidelines used for the inspection were established by the Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, Doc 560/5-85-024, and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA)

Field information was organized in accordance with the AHERA methodology of homogenous area (HA). During the Inspection, reasonable effort was made to identify all locations and types of ACM materials associated with the scope of work. Sampling has included multiple samples of the same materials chosen at random. However, due to inconsistencies of a manufacturer's processes and the contractor's installation methods, materials of similar construction may contain various amounts of asbestos. Furthermore, some materials that were not originally specified to contain asbestos may in fact contain this mineral. For example, cementitious pipe insulation and plaster were frequently mixed with asbestos at the construction site for ease of application. Locating all asbestos materials can only be definitively achieved by conducting exploratory demolition and sampling every section of pipe insulation, fitting or valve covering, fireproofing, and other suspect ACM.

Bulk samples of suspect ACM are analyzed using polarized light microscopy (PLM) coupled with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS). NESHAPS is the standard industry protocol for the determination of asbestos in building materials. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The color displays that result are compared to a standardized atlas whereby the specific variety of asbestos is determined. It should also be recognized that PLM is primarily a qualitative identification method whereby asbestos percentage, if any, is estimated. While EPA, New York State, and New York City regulations governing ACM consider materials containing greater than 1-percent as asbestos, accurately quantifying asbestos content below 5-percent has been shown to be unreliable.

The New York State Department of Health has recently revised the PLM Stratified Point Counting Method. The March 25th, 2011 method, "Polarized Light Microscopy Methods for Identifying and Quantifying Asbestos in Bulk Samples" can be found as Item 198.1 in the Environmental Laboratory Approval program (ELAP) Certification manual. Whereas the procedure of analysis for bulk samples that fall into the category of "Non-friable Organically Bound" (NOB) can be found in the March 25th 2011 method "Polarized-Light Microscope Method for Identifying and Quantifying Asbestos in Non-Friable Organically Bound Bulk Samples", Item 198.6 in the ELAP Certification Manual. This category includes any sample in a flexible to rigid asphalt or vinyl matrix (floor tiles, mastic, roofing shingles, roofing felt, etc.). These samples must be "ashed" in a muffle furnace at 480-degrees Celsius (to remove organic matrix), treated with acid (to remove any mineral carbonate), and filtered through a 0.4-micron polycarbonate filter before being analyzed by PLM. The sample must be weighted between each of these steps to track the percent loss of organic matrix.

ELAP has determined that analysis of NOB materials is not reliably performed by PLM.



Therefore, if PLM analysis yields results of 1-percent asbestos or less, the result must be confirmed by TEM. For bulk samples that undergo TEM analysis, the March 25th, 2011 method "Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable organically Bound Bulk Samples" must be used and can be found as Item 198.4 in the ELAP Certification Manual. ELAP certified laboratories must include the following statement with their PLM analysis results for each "negative" (1-percent or less asbestos) NOB sample: "Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-ACM, confirmation must be made by quantitative transmission electron microscopy".

All samples are initially analyzed by Polarized Light Microscopy in accordance with Item 198.1 and 198.6 of the ELAP Certification Manual. Samples which yield a negative PLM result and which are classified as a "non-friable" material, are then re-analyzed utilizing TEM methodology in accordance with Item 198.4 of the ELAP Certification Manual. The laboratory performing both these analysis procedures is EMSL located at 307 West 38th Street, New York, NY 10018. The laboratory has received accreditation from the following agencies:

- National Voluntary Laboratory Accreditation Program (Lab Code 101048-9)
- New York State Environmental Laboratory Approval Program (Lab No. 11506)
- American Industrial Hygiene Association Accredited Laboratory (Lab No. 102581)

LEAD-BASED PAINT

LBG's U.S. EPA licensed NY State Lead Inspector performed a lead based paint inspection characterized by a surface by surface visual inspection of accessible areas which may potentially be impacted by any future renovations. Painted surfaces were visually inspected, and coatings were analyzed for lead based paint using an XRF Spectrum Analyzer.

Information obtained during the inspection is compared to the United States Department of Housing and Urban Development's lead paint threshold. HUD states that paint containing equal to or greater than 1.0 micrograms per centimeter squared ($\geq 1.0 \text{ mg/cm}^2$), or 5,000 parts per million (0.5% by weight) or more of lead is to be considered Lead Based Paint (LBP).

The readings of paint surfaces were taken using an RMD LPA-1 XRF Lead Paint Spectrum Analyzer.

The LPA-1 method of measurement is based on the spectrometric analysis of lead K-shell X-ray fluorescence within a controlled depth of interrogation. The LPA-1 Analyzer uses a Co-57 radioactive source and an advanced, solid-state, room temperature, radiation detector to generate and detect the x-ray fluorescence spectrum of a painted surface. The spectrum is then analyzed by a microprocessor to eliminate the effects of substrate and other factors such as scattering to allow an accurate determination of the amount of lead on a surface. The LPA-1 automatically analyzes spectrometric data in real time and differentiates the lead signal from the spectrum. The x-ray fluorescence properties are determined through calibration process and are used for automatic substrate correction and calculation of the lead content of a painted surface. .



Any work which disturbs painted surfaces containing lead shall be performed in accordance with the Occupational Safety and Health Administrations (OSHA) 29 CFR 1926.62 (Lead in Construction Standard) and EPA's 40 CFR 745 regulations. Personal air monitoring should be conducted when disturbing lead based paints and lead containing materials as per 29CFR1926.62 (OSHA).

In addition, all waste generated as part of this project, regardless of the lead content in the paint, should be tested in accordance with the EPA Resource Conservation and Recovery Act (RCRA) to determine the classification of the waste. Under RCRA, any waste material that, when tested by Toxicity Characteristics Leaching Procedure (TCLP), results in a leachate lead concentration of five (5) parts per million or greater must be disposed of at an EPA licensed hazardous waste facility.

The finer renovation debris and paint chips that result from renovation of components with measurable quantities of lead can be tested by TCLP, or can be assumed hazardous waste and disposed of accordingly (not applicable for this project).

The cost of the TCLP depends on the laboratory and location; but typically, a full TCLP analysis may cost from \$150 to \$350. Any waste material, that when tested by TCLP, results in a leachate lead concentration of five (5) parts per million or greater must be disposed of at an EPA licensed hazardous waste facility. Cost of disposal may range from \$5,000 to \$7,000 per ton of waste.

POLYCHLORINATED BIPHENYLS (PCBs)

PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

Although no longer commercially produced in the United States, PCBs may be present in products and materials produced before the 1979 PCB ban. Products that may contain PCBs include: Transformers and capacitors, Oil used in motors and hydraulic systems, Fluorescent light ballasts, Adhesives and tapes, Caulking, Plastics, etc. Per US EPA regulations, materials with PCB content greater than 50 ppm (mg/kg) are determined hazardous.

The PCBs used in these products were chemical mixtures made up of a variety of individual chlorinated biphenyl components, known as congeners. Most commercial PCB mixtures are known in the United States by their industrial trade names. The most common trade name is aroclor.



Polychlorinated biphenyls (PCBs) are regulated pursuant to the United States Environmental Protection Agency Code of Federal Regulations (40 CFR Part 761), the Toxic Substances Control Act (TSCA – 15 U.S.C. 2605), New York State Department of Environmental Conservation 6NYCRR 370-376 and federal Occupational Safety and Health Administration (OSHA) 29CFR 1926 & 1910. These regulations require certain testing and reporting requirements to determine management, recycling and disposal options for PCBs.



3.0 INSPECTION SCOPE AND MATERIAL ASSESSMENT

The areas inspected for ACM materials, LBP and PCB that may be impacted by the proposed renovations include:

- Twin Towers Middle School - Throughout

A. ASBESTOS-CONTAINING MATERIAL

Materials examined during the Berger Inspection included:

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)



- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Cementitious Materials Assoc. with Boiler
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler
- Water Tank Brick Mortar
- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)



- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

Based upon visual inspection and bulk sample analysis asbestos has been confirmed to exist in the following materials:

- **Caulk Assoc. with Copper Deck/Coping Stone Seam**
- **Cap Flashing Caulk, Old**
- **Cap Flashing Caulk, Dark Grey**
- **Cap Flashing Caulk, White**
- **Cementitious Materials Assoc. with Boiler**
- **Water Tank Brick Mortar**

The following materials are **assumed to contain asbestos** due to inaccessibility to the materials;

- **None within known scope of work**

The following materials are **considered to contain asbestos** based on historical drawings and six month AHERA inspections conducted by the Enlarged City School District of Middletown Department of Buildings & Grounds. Copies of this paperwork is located in Appendix J:

- **Misc. Floor Tile (12"x12")**
- **9"x9" Floor Tile (Misc.) – Under Carpet**
- **TSI (wrapped)**
- **TSI**
- **Misc. Floor Tile (Under Carpet)**
- **Misc. Floor Tile (9"x9" Brown)**
- **Misc. Floor Tile (12"x12" Dark Brown)**



Asbestos was **not detected** in the following materials via PLM and/or TEM analysis:

- Structural Wood Fiber Deck (“Tectum”)
- Flashing Tar
- Coping Stone Caulk
- Coping Stone Mortar
- Caulk to Coping Stone/Cap Flashing Joint
- Tar on Skylight/Mechanical Equipment Curbs
- Tar/Vapor Barrier
- Insulation (“Perlite”)
- Tar Water Proofing
- Roof Membrane
- Tapered Edge Fiberboard
- Flashing Tar Paper
- Cap Flashing Caulk
- Brick Mortar
- Gypsum Deck
- Insulation (“Perlite”)
- Tar/Vapor Barrier
- Fiber Board
- Tar Water Proofing
- Roof Membrane
- Tar on Mechanical Equipment Curbs
- Mechanical Equipment Flashing
- Pre-Cast Concrete Slab Mortar
- Tar Assoc. with Fiberglass Layers in Built up Roofing System
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Tar on Cap Flashing
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Insulation (“Perlite”)
- Vapor Barrier
- Tar Membrane
- Flashing Tar
- Cap Flashing Caulk, Light Grey
- Tar Assoc. with Cap Flashing
- Canvas Wrap to Fiberglass Insulation on Water Tank
- Rope Gasket to Boilers
- Tar Assoc. with Rope Gasket to Boiler



- Pipe Gasket, Orange
- Leveling Compound
- Mastic to 12"x12" Floor Tiles
- 12"x12" Blue Floor Tile
- 12"x12" Grey Floor Tile
- Mastic to Linoleum Flooring
- Linoleum Flooring
- Mastic to 4" Blue Cove Base
- Mastic to 4" Grey Cove Base
- Mudded Joints
- Terrazzo Flooring
- Mastic to Old 4" Brown Cove Base
- Old 4" Brown Cove Base
- Caulking to Sinks/Toilets
- Expansion Joint Caulk
- Yellow Curtain, Front Layer
- Yellow Curtain, Back Layer
- Red Curtain, Front Layer
- Red Curtain, Back Layer
- Black Curtain
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- Asphalt Coating, Top Layer
- 2'x4' Ceiling Tile, Pinhole
- 2'x4' Ceiling Tile, Textured
- Wall Plaster, Brown Coat (Previous LB Report, December 2013)
- Wall Plaster, White Coat (Previous LB Report, December 2013)
- Ceiling Plaster, Brown Coat (Previous LB Report, December 2013)
- Ceiling Plaster, White Coat (Previous LB Report, December 2013)
- Spray-on Coating on Ceiling Plaster, White (Previous LB Report, December 2013)
- Furnace Brick Mortar (Previous LB Report, December 2013)
- Flue Wall Penetration Cementitious Seal, Gray (Previous LB Report, December 2013)
- Skim Coat on Concrete Wall (Previous LB Report, December 2013)
- Cinderblock Mortar (Previous LB Report, December 2013)
- Terracotta Wall Mortar (Previous LB Report, December 2013)
- Gypsum Board (Previous LB Report, December 2013)
- Joint Compound (Previous LB Report, December 2013)
- Terrazzo Flooring (Previous LB Report, December 2013)
- Carpet Mastic, Yellow (Previous LB Report, December 2013)
- Glazed Block Mortar (Previous LB Report, December 2013)
- Elevator Frame Caulking, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Backing, Beige (Previous LB Report, December 2013)
- 4"x4" Green Ceramic Wall Tile Grout (Previous LB Report, December 2013)



- 4"x4" Beige Ceramic Wall Tile Backing, Yellow (Previous LB Report, December 2013)
- 4"x4" Beige Ceramic Wall Tile Grout (Previous LB Report, December 2013)

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 1770 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.

C. PCB-CONTAINING MATERIAL

Materials examined during the Inspection included:

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan
- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk

Analytical results of the bulk samples collected indicate that the following materials **contain PCB** (greater than 50 PPM).

- **None**

Analytical results of the bulk samples collected indicate that the following materials **did not contain PCB** (less than 50 PPM);

- Coping Stone Caulk
- Caulk to Coping Stone/Cap Flashing Joint
- Cap Flashing Caulk
- Cap Flashing Caulk, Tan



- Cap Flashing Caulk, Red
- Cap Flashing Caulk, Grey
- Cap Flashing Caulk, White
- Expansion Joint Caulk
- Façade Corner Joint Caulk, Black
- Façade Corner Joint Caulk, Brown
- Cap Flashing Caulk, Light Grey
- Caulk Assoc. with Copper Deck/Coping Stone Seam
- Cap Flashing Caulk, Old
- Cap Flashing Caulk, Dark Grey
- Cap Flashing Caulk, White
- Caulking to Sinks/Toilets
- Expansion Joint Caulk



4.0 INSPECTION RESULTS

A. ASBESTOS-CONTAINING MATERIAL

The asbestos inspection involved a thorough visual examination of all areas that may be impacted by the proposed upgrades to Twin Towers Middle School. The following suspect materials were sampled and analyzed for asbestos content by Berger:

4.1 Table 4.1 – Suspect Materials Inspected

| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------|--|--------------------------------|------------------|
| 01 | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD |
| 02 | Flashing Tar | Roof M | <1% Chrysotile |
| 03 | Coping Stone Caulk | Roof M & Roof L | NAD |
| 04 | Coping Stone Mortar | Roof M & Roof L | NAD |
| 05 | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD |
| 06 | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD |
| 07 | Tar/Vapor Barrier | Roof L & Roof K (Flat Section) | NAD |
| 08 | Insulation (“Perlite”) | Roof L & Roof K (Flat Section) | NAD |
| 09 | Tar Water Proofing | Roof L & Roof K (Flat Section) | NAD |
| 10 | Roof Membrane | Roof L & Roof K (Flat Section) | NAD |
| 11 | Tapered Edge Fiberboard | Roof L | NAD |
| 12 | Flashing Tar Paper | Roof L | NAD |
| 13 | Cap Flashing Caulk | Roof L | NAD |
| 14 | Brick Mortar | Roof L | NAD |
| 15 | Gypsum Deck | Roof K (Elevated Section) | NAD |
| 16 | Insulation (“Perlite”) | Roof K (Elevated Section) | NAD |
| 17 | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD |
| 18 | Fiber Board | Roof K (Elevated Section) | NAD |
| 19 | Tar Water Proofing | Roof K (Elevated Section) | NAD |
| 20 | Roof Membrane | Roof K (Elevated Section) | NAD |
| 21 | Tar on Mechanical Equipment Curbs | Roof K & Roof F | NAD |
| 22 | Mechanical Equipment Flashing | Roof F | NAD |
| 23 | Pre-Cast Concrete Slab Mortar | Roof F | NAD |
| 24 | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD |
| 25 | Cap Flashing Caulk, Tan | Roof O | NAD |
| 26 | Cap Flashing Caulk, Red | Roof O | NAD |
| 27 | Cap Flashing Caulk, Grey | Roof O | NAD |
| 28 | Tar on Cap Flashing | Roof O | NAD |
| 29 | Cap Flashing Caulk, White | Roof O | NAD |
| 30 | Expansion Joint Caulk | Roof Q | NAD |
| 31 | Façade Corner Joint Caulk, Black | Roof Q | NAD |



| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------|--|---|---|
| 32 | Façade Corner Joint Caulk, Brown | Roof Q | NAD |
| 33 | Insulation (“Perlite”) | Roof R | NAD |
| 34 | Vapor Barrier | Roof R | NAD |
| 35 | Tar Membrane | Roof R | NAD |
| 36 | Flashing Tar | Roof R | NAD |
| 37 | Cap Flashing Caulk, Light Grey | Roof I & Roof C | NAD |
| 38 | Tar Assoc. with Cap Flashing | Roof I & Roof C | NAD |
| 39 | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | 6.3% Chrysotile |
| 40 | Cap Flashing Caulk, Old | Roof D & Roof C | 2.9% Chrysotile |
| 41 | Cap Flashing Caulk, Dark Grey | Roof I & Roof C | 4.4% Chrysotile |
| 42 | Cap Flashing Caulk, White | Roof I & Roof C | <1% Anthophyllite 1.1% Chrysotile |
| 43 | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD |
| 44 | Cementitious Materials Assoc. with Boiler | Boiler Room | 5.06% Chrysotile |
| 45 | Rope Gasket to Boilers | Boiler Room | NAD |
| 46 | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD |
| 47 | Water Tank Brick Mortar | Boiler Room | 2.40% Chrysotile |
| 48 | Pipe Gasket, Orange | Boiler Room | NAD |
| 49 | Leveling Compound | Outside Cafeteria Entry Doors | NAD |
| 50 | Mastic to 12”x12” Floor Tiles | Cafeteria | <1% Anthophyllite |
| 51 | 12”x12” Blue Floor Tile | Cafeteria | NAD |
| 52 | 12”x12” Grey Floor Tile | Cafeteria | NAD |
| 53 | Mastic to Linoleum Flooring | Cafeteria | NAD |
| 54 | Linoleum Flooring | Cafeteria | NAD |
| 55 | Mastic to 4” Blue Cove Base | Cafeteria | NAD |
| 56 | Mastic to 4” Grey Cove Base | Cafeteria | <1% Chrysotile |
| 57 | Mudded Joints | Small Gym | NAD |
| 58 | Terrazzo Flooring | Outside Cafeteria Entry Doors & Outside Small Gym | NAD |
| 59 | Mastic to Old 4” Brown Cove Base | Small Gym | NAD |
| 60 | Old 4” Brown Cove Base | Small Gym | NAD |
| 61 | Caulking to Sinks/Toilets | Boys Locker Room & Girls Locker Room | NAD |
| 62 | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD |
| 63 | Yellow Curtain, Front Layer | Auditorium Stage | NAD |
| 64 | Yellow Curtain, Back Layer | Auditorium Stage | NAD |
| 65 | Red Curtain, Front Layer | Auditorium Stage | NAD |
| 66 | Red Curtain, Back Layer | Auditorium Stage | NAD |
| 67 | Black Curtain | Auditorium Stage | NAD |
| 68 | Asphalt Coating, Top Layer | Small Parking Lot | NAD |
| 69 | Asphalt Coating, Top Layer | Loop/Bus Turn Around | <1% Chrysotile |
| 70 | Asphalt Coating, Top Layer | Large Parking Lot | NAD |
| 71 | 2’x4’ Ceiling Tile, Pinhole | Cafeteria | NAD |



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| HOMOGENOUS MATERIAL | MATERIAL | SAMPLE LOCATIONS | ASBESTOS CONTENT |
|---------------------------------------|---|---|------------------|
| 72 | 2'x4' Ceiling Tile, Textured | Cafeteria | |
| Assumed Materials | | | |
| 73 | Misc. Floor Tile (12"x12") | Room 308 | Historic Data |
| 74 | 9"x9" Floor Tile (Misc.) – Under Carpet | Room 317 & 319 | Historic Data |
| 75 | TSI (wrapped) | Ceiling Storage | Historic Data |
| 76 | TSI | Multiple Locations in Basement Maintenance Areas (with Signage) | Historic Data |
| 77 | Misc. Floor Tile (Under Carpet) | Room 105, 107, 109, 111, 220, 224, 226, 300, 306, 325, 327, 329 & AS-3 Teachers Lounge/Café | Historic Data |
| 78 | Misc. Floor Tile (9"x9" Brown) | Auditorium | Historic Data |
| 79 | Misc. Floor Tile (12"x12" Dark Brown) | Room 101 & AS-4 | Historic Data |
| Previous LB Report, December 12, 2013 | | | |
| 01 | Wall Plaster, Brown Coat | Original Building | NAD |
| 02 | Wall Plaster, White Coat | Original Building | NAD |
| 03 | Ceiling Plaster, Brown Coat | Original Building | NAD |
| 04 | Ceiling Plaster, White Coat | Original Building | NAD |
| 06* | Spray-on Coating on Ceiling Plaster, White | Original Building | NAD |
| 07 | Furnace Brick Mortar | Original Building | NAD |
| 08 | Flue Wall Penetration Cementitious Seal, Gray | Original Building | NAD |
| 09 | Skim Coat on Concrete Wall | Original Building | NAD |
| 10 | Cinderblock Mortar | Original Building | NAD |
| 11 | Terracotta Wall Mortar | Original Building | NAD |
| 12 | Gypsum Board | Original Building | NAD |
| 13 | Joint Compound | Original Building | NAD |
| 14 | Terrazzo Flooring | Original Building | NAD |
| 15 | Carpet Mastic, Yellow | Original Building | NAD |
| 16 | Glazed Block Mortar | Original Building | NAD |
| 17 | Elevator Frame Caulking, Beige | Original Building | NAD |
| 18 | 4"x4" Green Ceramic Wall Tile Backing, Beige | Original Building | NAD |
| 19 | 4"x4" Green Ceramic Wall Tile Grout | Original Building | NAD |
| 20 | Wall Plaster, Brown Coat | 1970s Addition | NAD |
| 21 | Wall Plaster, White Coat | 1970s Addition | NAD |
| 22 | Spray-on Coating on Gypsum Ceiling | 1970s Addition | NAD |
| 23 | Gypsum Board | 1970s Addition | NAD |
| 24 | Joint Compound | 1970s Addition | NAD |
| 25 | 4"x4" Beige Ceramic Wall Tile Backing Yellow | 1970s Addition | NAD |
| 26 | 4"x4" Beige Ceramic Wall Tile Grout | 1970s Addition | NAD |
| 27 | Gypsum Board | Kitchen/Food Court | NAD |
| 28 | Joint Compound | Kitchen/Food Court | NAD |
| 29 | Cinderblock Mortar | Kitchen/Food Court | NAD |



Bold = Positive for ACM NAD = No Asbestos Detected

* HA 05 Not Used In Report

4.2 CONDITION AND FRIABILITY ASSESSMENT TABLE

For each inspection conducted, the inspector classifies ACM materials by friability and condition. This helps to determine the extent of damage in certain areas as well as the potential for further damage and Asbestos release due to disturbance of the material.

Table 4.2 – Condition and Friability Assessment

| LOCATION | MATERIAL | QUANTITY | FRIABILITY | CONDITION |
|---------------------------------|---|----------------|-------------|-----------|
| Roof C, Roof D, Roof H & Roof I | Caulk Assoc. with Copper Deck/Coping Stone Seam | 375 LF (94 SF) | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, Old | | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, Dark Grey | | Non-Friable | Good |
| Roof C, Roof D, Roof H & Roof I | Cap Flashing Caulk, White | | Non-Friable | Good |
| Boiler Room | Cementitious Materials Assoc. with Boiler | 2 SF | Friable | Good |
| Boiler Room | Water Tank Brick Mortar | 100 SF | Friable | Good |

Condition Definitions:

Good: None/Minimal apparent damage to ACM

Fair: Up to 10% localized damage or up to 25% of the entire ACM is damaged

Poor: Over 10% localized damage or over 25% of the entire ACM is damaged

4.3 SAMPLE ANALYSIS TABLE

Laboratory analysis results, in tabular form, are included in Appendix A.

B. LEAD-BASED PAINT

Adelaide performed an extensive XRF Lead survey of Twin Towers Middle School in 2001. The report consists of roughly 550 XRF shots distributed throughout the school. Due to the discovery of this report during file searches at the Enlarged City School District of Middletown Department of Buildings & Grounds Offices, LB did not perform further XRF lead testing at this location. A copy of the report and results are located in Appendix E.



C. PCB-CONTAINING MATERIAL

The PCB Inspection involved a thorough visual examination of all areas that may be impacted by the proposed renovation. The following suspect materials were tested for PCB content:

| HOMOGENOUS MATERIAL | MATERIAL | LOCATION | PCB CONTENT (PPM) |
|----------------------------|---|--------------------------------------|--------------------------|
| 03 | Coping Stone Caulk | Roof M & Roof L | ND |
| 05 | Caulk to Coping Stone/Cap Flashing Joint | Roof M | ND |
| 13 | Cap Flashing Caulk | Roof L | ND |
| 25 | Cap Flashing Caulk, Tan | Roof O | ND |
| 26 | Cap Flashing Caulk, Red | Roof O | ND |
| 27 | Cap Flashing Caulk, Grey | Roof O | ND |
| 29 | Cap Flashing Caulk, White | Roof O | ND |
| 30 | Expansion Joint Caulk | Roof Q | ND |
| 31 | Façade Corner Joint Caulk, Black | Roof Q | ND |
| 32 | Façade Corner Joint Caulk, Brown | Roof Q | ND |
| 37 | Cap Flashing Caulk, Light Grey | Roof I & Roof C | ND |
| 39 | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | ND |
| 40 | Cap Flashing Caulk, Old | Roof D & Roof C | ND |
| 41 | Cap Flashing Caulk, Dark Grey | Roof I & Roof C | ND |
| 42 | Cap Flashing Caulk, White | Roof I & Roof C | ND |
| 61 | Caulking to Sinks/Toilets | Boys Locker Room & Girls Locker Room | ND |
| 62 | Expansion Joint Caulk | Exterior Auditorium Stairs | ND |

Bold = Positive for PCB ND = No PCB Detected

5.0 AREAS NOT ACCESSIBLE

During the Inspection the following areas were not accessible:

Void Spaces within Walls, Ceilings or Floors: No destructive sampling was performed on concealed spaces in walls, ceilings or floors to access plenum, chases etc. It should be assumed that asbestos, lead and PCB containing materials may exist in these spaces. Any suspect materials encountered during work should be sampled for analysis before work continues.



6.0 CONCLUSIONS AND RECOMMENDATIONS

ACM materials and LBP have been identified in this inspection that may be impacted as part of the proposed renovation to Twin Towers Middle School. These materials, reported in Section 3.0 of this report, may require complete removal prior to the start of the renovation project. No PCBs were identified during this Inspection.

The ACM, LBP & PCB Inspection was conducted at the request of Enlarged City School District of Middletown for the proposed renovation to Twin Towers Middle School. Any change in the scope of work will require further investigation to accurately classify any additional ACM, LBP or PCBs resulting from the modified or updated scope of work.

7.0 REPORT CERTIFICATIONS

This report, and the supporting data, findings, conclusions, opinions, and recommendations it contains represent the result of Berger's efforts for the environmental inspection work for Twin Towers Middle School.

Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of Berger's site visits, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Berger is unaware and has not had the opportunity to evaluate.

The conclusions presented in this report are professional opinions solely upon Berger's visual observations of accessible areas, laboratory test data, and current regulatory requirements. These conclusions are intended exclusively for the purpose stated herein and the site indicated for the project indicated.

Prepared by:

Drew Cheskin
NYS DOL Inspector

Reviewed by:

Craig Napolitano, CHMM
Vice President, Industrial
Hygiene & Hazmat Services



**APPENDIX A:
ASBESTOS SAMPLE ANALYSIS RESULTS IN TABULAR FORM**

APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|----------------------|------------|--|---------------------------|------------|----------------|
| 01 | 01A | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD | N/A |
| 01 | 01B | Structural Wood Fiber Deck (“Tectum”) | Roof M | NAD | N/A |
| 02 | 02A | Flashing Tar | Roof M | NAD | <1% Chrysotile |
| 02 | 02B | Flashing Tar | Roof M | NAD | NAD |
| 03 | 03A | Coping Stone Caulk | Roof M | NAD | NAD |
| 03 | 03B | Coping Stone Caulk | Roof L | NAD | NAD |
| 04 | 04A | Coping Stone Mortar | Roof M | NAD | N/A |
| 04 | 04B | Coping Stone Mortar | Roof L | NAD | N/A |
| 05 | 05A | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD | NAD |
| 05 | 05B | Caulk to Coping Stone/Cap Flashing Joint | Roof M | NAD | NAD |
| 06 | 06A | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD | NAD |
| 06 | 06B | Tar on Skylight/Mechanical Equipment Curbs | Roof M | NAD | NAD |
| 07 | 07A | Tar/Vapor Barrier | Roof L | NAD | NAD |
| 07 | 07B | Tar/Vapor Barrier | Roof K (Flat Section) | NAD | NAD |
| 08 | 08A | Insulation (“Perlite”) | Roof L | NAD | N/A |
| 08 | 08B | Insulation (“Perlite”) | Roof K (Flat Section) | NAD | N/A |
| 09 | 09A | Tar Water Proofing | Roof L | NAD | NAD |
| 09 | 09B | Tar Water Proofing | Roof K (Flat Section) | NAD | NAD |
| 10 | 10A | Roof Membrane | Roof L | NAD | NAD |
| 10 | 10B | Roof Membrane | Roof K (Flat Section) | NAD | NAD |
| 11 | 11A | Tapered Edge Fiberboard | Roof L | NAD | N/A |
| 11 | 11B | Tapered Edge Fiberboard | Roof L | NAD | N/A |
| 12 | 12A | Flashing Tar Paper | Roof L | NAD | NAD |
| 12 | 12B | Flashing Tar Paper | Roof L | NAD | NAD |
| 13 | 13A | Cap Flashing Caulk | Roof L | NAD | NAD |
| 13 | 13B | Cap Flashing Caulk | Roof L | NAD | NAD |
| 14 | 14A | Brick Mortar | Roof L | NAD | N/A |
| 14 | 14B | Brick Mortar | Roof L | NAD | N/A |
| 15 | 15A | Gypsum Deck | Roof K (Elevated Section) | NAD | N/A |

Bold = Positive for ACM

NAD = No Asbestos Detected

NA/PS = Not Analyzed/Positive Stop

APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|----------------------|------------|--|---------------------------|------------|------------|
| 15 | 15B | Gypsum Deck | Roof K (Elevated Section) | NAD | N/A |
| 16 | 16A | Insulation ("Perlite") | Roof K (Elevated Section) | NAD | N/A |
| 16 | 16B | Insulation ("Perlite") | Roof K (Elevated Section) | NAD | N/A |
| 17 | 17A | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD | NAD |
| 17 | 17B | Tar/Vapor Barrier | Roof K (Elevated Section) | NAD | NAD |
| 18 | 18A | Fiber Board | Roof K (Elevated Section) | NAD | N/A |
| 18 | 18B | Fiber Board | Roof K (Elevated Section) | NAD | N/A |
| 19 | 19A | Tar Water Proofing | Roof K (Elevated Section) | NAD | NAD |
| 19 | 19B | Tar Water Proofing | Roof K (Elevated Section) | NAD | NAD |
| 20 | 20A | Roof Membrane | Roof K (Elevated Section) | NAD | NAD |
| 20 | 20B | Roof Membrane | Roof K (Elevated Section) | NAD | NAD |
| 21 | 21A | Tar on Mechanical Equipment Curbs | Roof K | NAD | NAD |
| 21 | 21B | Tar on Mechanical Equipment Curbs | Roof F | NAD | NAD |
| 22 | 22A | Mechanical Equipment Flashing | Roof F | NAD | NAD |
| 22 | 22B | Mechanical Equipment Flashing | Roof F | NAD | NAD |
| 23 | 23A | Pre-Cast Concrete Slab Mortar | Roof F | NAD | N/A |
| 23 | 23B | Pre-Cast Concrete Slab Mortar | Roof F | NAD | N/A |
| 24 | 24A | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD | NAD |
| 24 | 24B | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | NAD | NAD |
| 25 | 25A | Cap Flashing Caulk, Tan | Roof O | NAD | NAD |
| 25 | 25B | Cap Flashing Caulk, Tan | Roof O | NAD | NAD |
| 26 | 26A | Cap Flashing Caulk, Red | Roof O | NAD | NAD |
| 26 | 26B | Cap Flashing Caulk, Red | Roof O | NAD | NAD |
| 27 | 27A | Cap Flashing Caulk, Grey | Roof O | NAD | NAD |
| 27 | 27B | Cap Flashing Caulk, Grey | Roof O | NAD | NAD |
| 28 | 28A | Tar on Cap Flashing | Roof O | NAD | NAD |
| 28 | 28B | Tar on Cap Flashing | Roof O | NAD | NAD |
| 29 | 29A | Cap Flashing Caulk, White | Roof O | NAD | NAD |
| 29 | 29B | Cap Flashing Caulk, White | Roof O | NAD | NAD |

Bold = Positive for ACM

NAD = No Asbestos Detected

NA/PS = Not Analyzed/Positive Stop

APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|----------------------|------------|--|---------------|--------------------------|---|
| 30 | 30A | Expansion Joint Caulk | Roof Q | NAD | NAD |
| 30 | 30B | Expansion Joint Caulk | Roof Q | NAD | NAD |
| 31 | 31A | Façade Corner Joint Caulk, Black | Roof Q | NAD | NAD |
| 31 | 31B | Façade Corner Joint Caulk, Black | Roof Q | NAD | NAD |
| 32 | 32A | Façade Corner Joint Caulk, Brown | Roof Q | NAD | NAD |
| 32 | 32B | Façade Corner Joint Caulk, Brown | Roof Q | NAD | NAD |
| 33 | 33A | Insulation (“Perlite”) | Roof R | NAD | N/A |
| 33 | 33B | Insulation (“Perlite”) | Roof R | NAD | N/A |
| 34 | 34A | Vapor Barrier | Roof R | NAD | NAD |
| 34 | 34B | Vapor Barrier | Roof R | NAD | NAD |
| 35 | 35A | Tar Membrane | Roof R | NAD | NAD |
| 35 | 35B | Tar Membrane | Roof R | NAD | NAD |
| 36 | 36A | Flashing Tar | Roof R | NAD | NAD |
| 36 | 36B | Flashing Tar | Roof R | NAD | NAD |
| 37 | 37A | Cap Flashing Caulk, Light Grey | Roof I | NAD | NAD |
| 37 | 37B | Cap Flashing Caulk, Light Grey | Roof C | NAD | NAD |
| 38 | 38A | Tar Assoc. with Cap Flashing | Roof I | NAD | NAD |
| 38 | 38B | Tar Assoc. with Cap Flashing | Roof C | NAD | NAD |
| 39 | 39A | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | 6.3% Chrysotile | N/A |
| 39 | 39B | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | NA/PS | N/A |
| 40 | 40A | Cap Flashing Caulk, Old | Roof D | 2.9% Chrysotile | N/A |
| 40 | 40B | Cap Flashing Caulk, Old | Roof C | NA/PS | N/A |
| 41 | 41A | Cap Flashing Caulk, Dark Grey | Roof I | 4.4% Chrysotile | N/A |
| 41 | 41B | Cap Flashing Caulk, Dark Grey | Roof C | NA/PS | N/A |
| 42 | 42A | Cap Flashing Caulk, White | Roof I | NAD | NAD |
| 42 | 42B | Cap Flashing Caulk, White | Roof C | <1% Chrysotile | <1% Anthophyllite 1.1% Chrysotile |
| 43 | 43A | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |

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APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|--|-------------------------------|-------------------------|-------------------|
| 43 | 43B | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |
| 43 | 43C | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | NAD | NAD |
| 44 | 44A | Cementitious Materials Assoc. with Boiler | Boiler Room | 5.06% Chrysotile | N/A |
| 44 | 44B | Cementitious Materials Assoc. with Boiler | Boiler Room | NA/PS | N/A |
| 44 | 44C | Cementitious Materials Assoc. with Boiler | Boiler Room | NA/PS | N/A |
| 45 | 45A | Rope Gasket to Boilers | Boiler Room | NAD | N/A |
| 45 | 45B | Rope Gasket to Boilers | Boiler Room | NAD | N/A |
| 46 | 46A | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD | NAD |
| 46 | 46B | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | NAD | NAD |
| 47 | 47A | Water Tank Brick Mortar | Boiler Room | 2.40% Chrysotile | N/A |
| 47 | 47B | Water Tank Brick Mortar | Boiler Room | NA/PS | N/A |
| 48 | 48A | Pipe Gasket, Orange | Boiler Room | NAD | NAD |
| 48 | 48B | Pipe Gasket, Orange | Boiler Room | NAD | NAD |
| 49 | 49A | Leveling Compound | Outside Cafeteria Entry Doors | NAD | N/A |
| 49 | 49B | Leveling Compound | Outside Cafeteria Entry Doors | NAD | N/A |
| 50 | 50A | Mastic to 12"x12" Floor Tiles | Cafeteria | NAD | NAD |
| 50 | 50B | Mastic to 12"x12" Floor Tiles | Cafeteria | NAD | <1% Anthophyllite |
| 51 | 51A | 12"x12" Blue Floor Tile | Cafeteria | NAD | NAD |
| 51 | 51B | 12"x12" Blue Floor Tile | Cafeteria | NAD | NAD |
| 52 | 52A | 12"x12" Grey Floor Tile | Cafeteria | NAD | NAD |
| 52 | 52B | 12"x12" Grey Floor Tile | Cafeteria | NAD | NAD |
| 53 | 53A | Mastic to Linoleum Flooring | Cafeteria | NAD | NAD |
| 53 | 53B | Mastic to Linoleum Flooring | Cafeteria | NAD | NAD |
| 54 | 54A | Linoleum Flooring | Cafeteria | NAD | NAD |
| 54 | 54B | Linoleum Flooring | Cafeteria | NAD | NAD |
| 55 | 55A | Mastic to 4" Blue Cove Base | Cafeteria | NAD | NAD |

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APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|----------------------------------|-------------------------------|-------------------|-------------------|
| 55 | 55B | Mastic to 4" Blue Cove Base | Cafeteria | NAD | NAD |
| 56 | 56A | Mastic to 4" Grey Cove Base | Cafeteria | NAD | NAD |
| 56 | 56B | Mastic to 4" Grey Cove Base | Cafeteria | NAD | <1% Chrysotile |
| 57 | 57A | Mudded Joints | Small Gym | NAD | N/A |
| 57 | 57B | Mudded Joints | Small Gym | NAD | N/A |
| 57 | 57C | Mudded Joints | Small Gym | NAD | N/A |
| 58 | 58A | Terrazzo Flooring | Outside Cafeteria Entry Doors | NAD | N/A |
| 58 | 58B | Terrazzo Flooring | Outside Small Gym | NAD | N/A |
| 59 | 59A | Mastic to Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 59 | 59B | Mastic to Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 60 | 60A | Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 60 | 60B | Old 4" Brown Cove Base | Small Gym | NAD | NAD |
| 61 | 61A | Caulking to Sinks/Toilets | Boys Locker Room | NAD | NAD |
| 61 | 61B | Caulking to Sinks/Toilets | Girls Locker Room | NAD | NAD |
| 62 | 62A | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD | NAD |
| 62 | 62B | Expansion Joint Caulk | Exterior Auditorium Stairs | NAD | NAD |
| 63 | 63A | Yellow Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 63 | 63B | Yellow Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 64 | 64A | Yellow Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 64 | 64B | Yellow Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 65 | 65A | Red Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 65 | 65B | Red Curtain, Front Layer | Auditorium Stage | NAD | N/A |
| 66 | 66A | Red Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 66 | 66B | Red Curtain, Back Layer | Auditorium Stage | NAD | N/A |
| 67 | 67A | Black Curtain | Auditorium Stage | NAD | N/A |
| 67 | 67B | Black Curtain | Auditorium Stage | NAD | N/A |
| 68 | 68A | Asphalt Coating, Top Layer | Small Parking Lot | NAD | NAD |
| 68 | 68B | Asphalt Coating, Top Layer | Small Parking Lot | NAD | NAD |
| 69 | 69A | Asphalt Coating, Top Layer | Loop/Bus Turn Around | NAD | <1% Chrysotile |
| 69 | 69B | Asphalt Coating, Top Layer | Loop/Bus Turn Around | NAD | NAD |
| 70 | 70A | Asphalt Coating, Top Layer | Large Parking Lot | NAD | NAD |

Bold = Positive for ACM

NAD = No Asbestos Detected

NA/PS = Not Analyzed/Positive Stop

**APPENDIX A
SAMPLE ANALYSIS RESULTS IN TABULAR FORM
TWIN TOWERS MIDDLE SCHOOL
RENOVATION PROJECT
112 GRAND AVENUE
MIDDLETOWN, NY 10940**

| Homogeneous Area No. | Sample No. | Material | Location | PLM Result | TEM Result |
|-----------------------------|-------------------|------------------------------|-------------------|-------------------|-------------------|
| 70 | 70B | Asphalt Coating, Top Layer | Large Parking Lot | NAD | NAD |
| 71 | 71A | 2'x4' Ceiling Tile, Pinhole | Cafeteria | NAD | NAD |
| 71 | 71B | 2'x4' Ceiling Tile, Pinhole | Cafeteria | NAD | NAD |
| 72 | 72A | 2'x4' Ceiling Tile, Textured | Cafeteria | NAD | NAD |
| 72 | 72B | 2'x4' Ceiling Tile, Textured | Cafeteria | NAD | NAD |

Bold = Positive for ACM

NAD = No Asbestos Detected

NA/PS = Not Analyzed/Positive Stop



**APPENDIX B:
ASBESTOS BULK SAMPLE FIELD DATA SHEETS
WITH CHAIN OF CUSTODY
& LABORATORY RESULTS**



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

OrderID: 031509020

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs
PROPOSED PROJECT: Roof Renovation
DATE(S) OF INSPECTION: 3/24-25/2015
Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|-----------------|--------------------------|-------------|
| 01 | 01A | Structural Wood Fiber Deck ("Tectum") | Roof M | | |
| 01 | 01B | Structural Wood Fiber Deck ("Tectum") | Roof M | | |
| 02 | 02A | Flashing Tar | Roof M | | |
| 02 | 02B | Flashing Tar | Roof M | | |
| 03 | 03A | Coping Stone Caulk | Roof M | | |
| 03 | 03B | Coping Stone Caulk | Roof L | | |
| 04 | 04A | Coping Stone Mortar | Roof M | | |
| 04 | 04B | Coping Stone Mortar | Roof L | | |
| 05 | 05A | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| 05 | 05B | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| 06 | 06A | Tar on Skylight/Mechanical Equipment Curbs | Roof M | | |
| 06 | 06B | Tar on Skylight/Mechanical Equipment Curbs | Roof M | | |

EMSC MANHATTAN LAB
 RECEIVED
 15 MAR 26 PM 6:00

J 3/29/15
 11p

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|--|---------------------------|----------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> (Sign) | <i>D Co</i> (Sign) | 3/26/15 (Date) | 5:02 PM (Time) | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mend</i> (Sign) | <i>Samuel Mend</i> (Sign) | 3/26/15 (Date) | 6:00 PM (Time) | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Samuel Mend 3/29/15 8:20am

Page 1 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 2 OF 7

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs
PROPOSED PROJECT: Roof Renovation
DATE(S) OF INSPECTION: 3/24-25/2015
Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

Page 2 of 7

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-------------------------|-----------------------|--------------------------|------------------------------|
| 07 | 07A | Tar/Vapor Barrier | Roof L | | Above Concrete Deck |
| 07 | 07B | Tar/Vapor Barrier | Roof K (Flat Section) | | Above Concrete Deck |
| 08 | 08A | Insulation ("Perlite") | Roof L | | Above Foam Layer |
| 08 | 08B | Insulation ("Perlite") | Roof K (Flat Section) | | Above Foam Layer |
| 09 | 09A | Tar Water Proofing | Roof L | | Above Insulation ("Perlite") |
| 09 | 09B | Tar Water Proofing | Roof K (Flat Section) | | Above Insulation ("Perlite") |
| 10 | 10A | Roof Membrane | Roof L | | Top Layer |
| 10 | 10B | Roof Membrane | Roof K (Flat Section) | | Top Layer |
| 11 | 11A | Tapered Edge Fiberboard | Roof L | | Assoc. with Flashing |
| 11 | 11B | Tapered Edge Fiberboard | Roof L | | Assoc. with Flashing |
| 12 | 12A | Flashing Tar Paper | Roof L | | |
| 12 | 12B | Flashing Tar Paper | Roof L | | |

INSPECTION RECEIVED
 15 MAR 26 PM 6:00
 CRAIG NAPOLITANO

CHAIN OF CUSTODY

| | | | | | | | | | | |
|---|-----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D. Cheskin</i> (Sign) | (Date) <i>3/24/15</i> | (Time) <i>5:00 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mendez</i> (Sign) | (Date) <i>3/28/15</i> | (Time) <i>6:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

[Signature] 3/29/15 8:20 AM

OrderID: 031509020



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 3 OF 7

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|------------------------|---------------------------|--------------------------|----------------------------------|
| 13 | 13A | Cap Flashing Caulk | Roof L | | |
| 13 | 13B | Cap Flashing Caulk | Roof L | | |
| 14 | 14A | Brick Mortar | Roof L | | |
| 14 | 14B | Brick Mortar | Roof L | | |
| 15 | 15A | Gypsum Deck | Roof K (Elevated Section) | | Bottom Layer of Elevated Section |
| 15 | 15B | Gypsum Deck | Roof K (Elevated Section) | | Bottom Layer of Elevated Section |
| 16 | 16A | Insulation ("Perlite") | Roof K (Elevated Section) | | Above Gypsum Deck |
| 16 | 16B | Insulation ("Perlite") | Roof K (Elevated Section) | | Above Gypsum Deck |
| 17 | 17A | Tar/Vapor Barrier | Roof K (Elevated Section) | | Above Insulation ("Perlite") |
| 17 | 17B | Tar/Vapor Barrier | Roof K (Elevated Section) | | Above Insulation ("Perlite") |
| 18 | 18A | Fiber Board | Roof K (Elevated Section) | | Above Foam Layer |
| 18 | 18B | Fiber Board | Roof K (Elevated Section) | | Above Foam Layer |

EMSL
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15 MAR 26 6:00 PM '15

CHAIN OF CUSTODY

| | | | | | | | | |
|--|----------------|----------------|-------------------------|--------|--------|-------------------------|--------|--------|
| Requested by: <i>D Cheskin</i> (Sign) | (Date) 3/26/15 | (Time) 5:22 PM | Relinquished by: (Sign) | (Date) | (Time) | Relinquished by: (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mendel</i> (Sign) | (Date) 3/26/15 | (Time) 6:00 PM | Received by: (Sign) | (Date) | (Time) | Received by: (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Samuel Mendel 3/26/15 3:20 PM

Order ID: 031509020

Page 3 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 4 OF 7

OrderID: 031509020

031509020

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|---------------------------|--------------------------|--|
| 19 | 19A | Tar Water Proofing | Roof K (Elevated Section) | | Above Fiber Board |
| 19 | 19B | Tar Water Proofing | Roof K (Elevated Section) | | Above Fiber Board |
| 20 | 20A | Roof Membrane | Roof K (Elevated Section) | | Top Layer |
| 20 | 20B | Roof Membrane | Roof K (Elevated Section) | | Top Layer |
| 21 | 21A | Tar on Mechanical Equipment Curbs | Roof K | | |
| 21 | 21B | Tar on Mechanical Equipment Curbs | Roof F | | |
| 22 | 22A | Mechanical Equipment Flashing | Roof F | | |
| 22 | 22B | Mechanical Equipment Flashing | Roof F | | |
| 23 | 23A | Pre-Cast Concrete Slab Mortar | Roof F | | Assoc. with Towers |
| 23 | 23B | Pre-Cast Concrete Slab Mortar | Roof F | | Assoc. with Towers |
| 24 | 24A | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | | No Other Suspect Materials in Roofing System |
| 24 | 24B | Tar Assoc. with Fiberglass Layers in Built up Roofing System | Roof O | | No Other Suspect Materials in Roofing System |

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 MAR 26 PM 6:00
 MIDDLETOWN LAB
 ENSTEAD

CHAIN OF CUSTODY

| | | | | | |
|---|-----------------------|-----------------------|-------------------------------|--------------|--------------|
| Relinquished by: <i>D Cheskin</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:20 PM</i> | Relinquished by: _____ (Sign) | (Date) _____ | (Time) _____ |
| Received by: <i>Samuel Mend...</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:00 PM</i> | Received by: _____ (Sign) | (Date) _____ | (Time) _____ |

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Samuel Mend... 3/26/15 8:20 PM

Page 4 of 7



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 5 OF 7

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|---------------------------|-----------------|--------------------------|---|
| 25 | 25A | Cap Flashing Caulk, Tan | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 25 | 25B | Cap Flashing Caulk, Tan | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 26 | 26A | Cap Flashing Caulk, Red | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 26 | 26B | Cap Flashing Caulk, Red | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 27 | 27A | Cap Flashing Caulk, Grey | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 27 | 27B | Cap Flashing Caulk, Grey | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 28 | 28A | Tar on Cap Flashing | Roof O | | |
| 28 | 28B | Tar on Cap Flashing | Roof O | | |
| 29 | 29A | Cap Flashing Caulk, White | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 29 | 29B | Cap Flashing Caulk, White | Roof O | | All Cap Flashing Caulks Present Throughout Roof |
| 30 | 30A | Expansion Joint Caulk | Roof Q | | |
| 30 | 30B | Expansion Joint Caulk | Roof Q | | |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|--|---------------------------|-----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> (Sign) | <i>DA</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:20 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>Samuel Mark</i> (Sign) | <i>Samuel Mark</i> (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

OrderID: 031509020

Page 5 of 7

3/24/15
8:20 AM



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ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 6 OF 7

OrderID: 031509020

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Roofs

PROPOSED PROJECT: Roof Renovation

DATE(S) OF INSPECTION: 3/24-25/2015

Inspector(s): Drew Cheskin

031509020

LOUIS BERGER & ASSOC., P.C.
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR.
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|-----------------|--------------------------|---|
| 31 | 31A | Façade Corner Joint Caulk, Black | Roof Q | | |
| 31 | 31B | Façade Corner Joint Caulk, Black | Roof Q | | |
| 32 | 32A | Façade Corner Joint Caulk, Brown | Roof Q | | |
| 32 | 32B | Façade Corner Joint Caulk, Brown | Roof Q | | |
| 33 | 33A | Insulation ("Perlite") | Roof R | | Above Metal Deck |
| 33 | 33B | Insulation ("Perlite") | Roof R | | Above Metal Deck |
| 34 | 34A | Vapor Barrier | Roof R | | Above Insulation ("Perlite") |
| 34 | 34B | Vapor Barrier | Roof R | | Above Insulation ("Perlite") |
| 35 | 35A | Tar Membrane | Roof R | | Top Layer, Above Second Layer of Insulation ("Perlite") |
| 35 | 35B | Tar Membrane | Roof R | | Top Layer, Above Second Layer of Insulation ("Perlite") |
| 36 | 36A | Flashing Tar | Roof R | | Assoc. with Structural Wood along Roof Edges |
| 36 | 36B | Flashing Tar | Roof R | | Assoc. with Structural Wood along Roof Edges |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|--------------------------------------|--------|-----------------------|-----------------------|--------------|--------|--------|--------|---------------|--------|--------|--------|
| Requested by: <i>D Cheskin</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>5:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Requested by: | (Sign) | (Date) | (Time) |
| Requested by: <i>Shirley Mend...</i> | (Sign) | (Date) <i>3/26/15</i> | (Time) <i>6:56 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

[Signature]
3/24/15
8:20 PM

Page 6 of 7

| | |
|---|---|
| PROJECT NO.: 3001111.00 CLIENT: Middletown Schools PROJECT SITE: Twin Towers Middle School, Middletown, NY Project Manager: Craig Napolitano | LOCATION(S) SURVEYED: Roofs PROPOSED PROJECT: Roof Renovation DATE(S) OF INSPECTION: 3/24-25/2015 Inspector(s): Drew Cheskin |
|---|---|

031509020

| | | |
|---|---|--|
| LOUIS BERGER & ASSOC., P.C. TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005 | RESULTS TO: acheskin@louisberger.com cnapolitano@louisberger.com | TURNAROUND TIME: <input type="checkbox"/> 4 HR. <input type="checkbox"/> 12 HR. <input type="checkbox"/> 24 HR. <input type="checkbox"/> 48 HR. <input checked="" type="checkbox"/> 72 HR. <input type="checkbox"/> 96 HR. |
|---|---|--|

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|---|-----------------|--------------------------|---|
| 37 | 37A | Cap Flashing Caulk, Light Grey | Roof I | | EMUL-MANHATTAN LAB RECEIVED 15 MAR 26 PM 6:00 |
| 37 | 37B | Cap Flashing Caulk, Light Grey | Roof C | | |
| 38 | 38A | Tar Assoc. with Cap Flashing | Roof I | | |
| 38 | 38B | Tar Assoc. with Cap Flashing | Roof C | | |
| 39 | 39A | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| 39 | 39B | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| 40 | 40A | Cap Flashing Caulk, Old | Roof D | | |
| 40 | 40B | Cap Flashing Caulk, Old | Roof C | | |
| 41 | 41A | Cap Flashing Caulk, Dark Grey | Roof I | | |
| 41 | 41B | Cap Flashing Caulk, Dark Grey | Roof C | | |
| 42 | 42A | Cap Flashing Caulk, White | Roof I | | |
| 42 | 42B | Cap Flashing Caulk, White | Roof C | | |

CHAIN OF CUSTODY

| | | | | | | | |
|--|--|---------|---------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Drew Cheskin Received by: Samuel Mendonca |   | 3/26/15 | 5:22 PM | | | | |
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| | | | | | | | |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

3/26/15
8:20 AM

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018
 Phone/Fax: (212) 290-0051 / (212) 290-0058
<http://www.EMSL.com> manhattanlab@emsl.com

EMSL Order: 031509020
 CustomerID: LBAP78
 CustomerPO: 3001111.00
 ProjectID:

Attn: **Craig Napolitano**
Louis Berger & Associates, PC
48 Wall St.
New York, NY 10005

Phone: (212) 612-7900
 Fax:
 Received: 03/26/15 6:00 PM
 Analysis Date: 3/29/2015
 Collected: 3/24/2015

Project: 3001111.00/ MIDDLETOWN SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL MIDDLETOWN, NY/ ROOFS/ ROOF RENOVATION

Test Report:Asbestos Analysis of Bulk Material

| Test | Analyzed Date | Color | Non Asbestos | | Asbestos |
|--|---------------|--|--|----------------------------|---|
| | | | Fibrous | Non-Fibrous | |
| Sample ID 01A 031509020-0001 | | Description Homogeneity | ROOF M - STRUCTURAL WOOD FIBER DECK/ TECTUM Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | White | 82.00% Cellulose | 18.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 01B 031509020-0002 | | Description Homogeneity | ROOF M - STRUCTURAL WOOD FIBER DECK/ TECTUM Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Tan/White | 75.00% Cellulose | 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 02A 031509020-0003 | | Description Homogeneity | ROOF M - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | | <1% Chrysotile <1% Total |
| Sample ID 02B 031509020-0004 | | Description Homogeneity | ROOF M - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | | None Detected |
| Sample ID 03A 031509020-0005 | | Description Homogeneity | ROOF M - COPING STONE CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Gray | | | None Detected |

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| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 03B 031509020-0006 | Description Homogeneity | ROOF L - COPING STONE CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 04A 031509020-0007 | Description Homogeneity | ROOF M - COPING STONE MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 45.00% Quartz 3.00% Mica 52.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 04B 031509020-0008 | Description Homogeneity | ROOF L - COPING STONE MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 55.00% Quartz 45.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 05A 031509020-0009 | Description Homogeneity | ROOF M - CAULK TO COPING STONE/ CAP FLASHING JOINT Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 05B 031509020-0010 | Description Homogeneity | ROOF M - CAULK TO COPING STONE/ CAP FLASHING JOINT Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 06A 031509020-0011 | Description Homogeneity | ROOF M - TAR ON SKYLIGHT/ MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |



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| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 06B 031509020-0012 | Description Homogeneity | ROOF M - TAR ON SKYLIGHT/ MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 07A 031509020-0013 | Description Homogeneity | ROOF L - TAR/ VABOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 07B 031509020-0014 | Description Homogeneity | ROOF K/ FLAT SECTION - TAR/ VABOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 08A 031509020-0015 | Description Homogeneity | ROOF L - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 45.00% Cellulose | 42.00% Perlite 13.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 08B 031509020-0016 | Description Homogeneity | ROOF K/ FLAT SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Tan | 75.00% Cellulose | 18.00% Perlite 7.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 09A 031509020-0017 | Description Homogeneity | ROOF L - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

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| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---------------------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 09B 031509020-0018 | Description Homogeneity | ROOF K/ FLAT SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 10A 031509020-0019 | Description Homogeneity | ROOF L - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 10B 031509020-0020 | Description Homogeneity | ROOF K/ FLAT SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 11A 031509020-0021 | Description Homogeneity | ROOF L - TAPERED EDGE FIBERBOARD Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 94.00% Cellulose | 6.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 11B 031509020-0022 | Description Homogeneity | ROOF L - TAPERED EDGE FIBERBOARD Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Brown | 97.00% Cellulose | 3.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 12A 031509020-0023 | Description Homogeneity | ROOF L - FLASHING TAR PAPER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 12B 031509020-0024 | Description Homogeneity | ROOF L - FLASHING TAR PAPER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 13A 031509020-0025 | Description Homogeneity | ROOF L - CAP FLASHING CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 13B 031509020-0026 | Description Homogeneity | ROOF L - CAP FLASHING CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 14A 031509020-0027 | Description Homogeneity | ROOF L - BRICK MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 42.00% Quartz 58.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 14B 031509020-0028 | Description Homogeneity | ROOF L - BRICK MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray/White | | 45.00% Quartz 55.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 15A 031509020-0029 | Description Homogeneity | ROOF K/ ELEVATED SECTION - GYPSUM DECK Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 10.00% Quartz 55.00% Gypsum 35.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

Initial Report From 03/29/2015 23:21:47

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 15B 031509020-0030 | Description Homogeneity | ROOF K/ ELEVATED SECTION - GYPSUM DECK Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Gray | | 8.00% Quartz 64.00% Gypsum 28.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 16A 031509020-0031 | Description Homogeneity | ROOF K/ ELEVATED SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 52.00% Cellulose | 30.00% Perlite 18.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 16B 031509020-0032 | Description Homogeneity | ROOF K/ ELEVATED SECTION - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 Brown | 45.00% Cellulose | 35.00% Perlite 20.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 17A 031509020-0033 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR/ VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |
| Sample ID 17B 031509020-0034 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR/ VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 Black | | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 18A 031509020-0035 | Description Homogeneity | ROOF K/ ELEVATED SECTION - FIBER BOARD Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 58.00% Cellulose 20.00% Perlite 22.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 18B 031509020-0036 | Description Homogeneity | ROOF K/ ELEVATED SECTION - FIBER BOARD Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 80.00% Cellulose 12.00% Perlite 8.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 19A 031509020-0037 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 19B 031509020-0038 | Description Homogeneity | ROOF K/ ELEVATED SECTION - TAR WATER PROOFING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 20A 031509020-0039 | Description Homogeneity | ROOF K/ ELEVATED SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 20B 031509020-0040 | Description Homogeneity | ROOF K/ ELEVATED SECTION - ROOF MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 21A 031509020-0041 | Description Homogeneity | ROOF K - TAR ON MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 21B 031509020-0042 | Description Homogeneity | ROOF F - TAR ON MECHANICAL EQUIPMENT CURBS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 22A 031509020-0043 | Description Homogeneity | ROOF F - MECHANICAL EQUIPMENT FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 22B 031509020-0044 | Description Homogeneity | ROOF F - MECHANICAL EQUIPMENT FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 23A 031509020-0045 | Description Homogeneity | ROOF F - PRE-CAST CONCRETE SLAB MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 52.00% Quartz 48.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 23B 031509020-0046 | Description Homogeneity | ROOF F - PRE-CAST CONCRETE SLAB MORTAR Homogeneous | | |
| PLM NYS 198.1 Friable 3/29/2015 | Gray | | 35.00% Quartz 15.00% Ca Carbonate 50.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 24A 031509020-0047 | Description Homogeneity | ROOF O - TAR ASSOC. WITH FIBERGLASS LAYERS IN BUILT UP ROOFING SYSTEM Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 24B 031509020-0048 | Description Homogeneity | ROOF O - TAR ASSOC. WITH FIBERGLASS LAYERS IN BUILT UP ROOFING SYSTEM Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 25A 031509020-0049 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ TAN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 25B 031509020-0050 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ TAN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 26A 031509020-0051 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ RED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Red | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Red | | | None Detected |
| Sample ID 26B 031509020-0052 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ RED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Red | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Red | | | None Detected |

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| EMSL Order: | 031509020 |
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| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 27A 031509020-0053 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 27B 031509020-0054 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 28A 031509020-0055 | Description Homogeneity | ROOF O - TAR ON CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 28B 031509020-0056 | Description Homogeneity | ROOF O - TAR ON CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 29A 031509020-0057 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 29B 031509020-0058 | Description Homogeneity | ROOF O - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |

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| EMSL Order: | 031509020 |
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| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 30A 031509020-0059 | Description Homogeneity | ROOF Q - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 30B 031509020-0060 | Description Homogeneity | ROOF Q - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 31A 031509020-0061 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BLACK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 31B 031509020-0062 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BLACK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 32A 031509020-0063 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BROWN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 32B 031509020-0064 | Description Homogeneity | ROOF Q - FAÇADE CORNER JOINT CAULK/ BROWN Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 33A 031509020-0065 | Description Homogeneity | ROOF Q - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 50.00% Cellulose 25.00% Perlite 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 33B 031509020-0066 | Description Homogeneity | ROOF Q - INSULATION/ PERLITE Homogeneous | | |
| PLM NYS 198.1 Friable | 3/29/2015 | Brown | 40.00% Cellulose 40.00% Perlite 20.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 34A 031509020-0067 | Description Homogeneity | ROOF Q - VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 34B 031509020-0068 | Description Homogeneity | ROOF Q - VAPOR BARRIER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 35A 031509020-0069 | Description Homogeneity | ROOF Q - TAR MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |
| Sample ID 35B 031509020-0070 | Description Homogeneity | ROOF Q - TAR MEMBRANE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Black | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 3/29/2015 | Black | | None Detected |

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| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 36A 031509020-0071 | Description Homogeneity | ROOF Q - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 36B 031509020-0072 | Description Homogeneity | ROOF Q - FLASHING TAR Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 37A 031509020-0073 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ LIGHT GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 37B 031509020-0074 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ LIGHT GREY Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Gray | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Gray | | | None Detected |
| Sample ID 38A 031509020-0075 | Description Homogeneity | ROOF I - TAR ASSOC. WITH CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |
| Sample ID 38B 031509020-0076 | Description Homogeneity | ROOF C - TAR ASSOC. WITH CAP FLASHING Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | Black | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | Black | | | None Detected |

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018

Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|-------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 39A 031509020-0077 | Description Homogeneity | ROOF H - CAULK ASSOC. WITH COPPER DECK/ COPING STONE SEAM | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 6.3% Chrysotile 6.3% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 39B 031509020-0078 | Description Homogeneity | ROOF H - CAULK ASSOC. WITH COPPER DECK/ COPING STONE SEAM | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 40A 031509020-0079 | Description Homogeneity | ROOF D - CAP FLASHING CAULK/ OLD | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 2.9% Chrysotile 2.9% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 40B 031509020-0080 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ OLD | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 41A 031509020-0081 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ DARK GREY | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | Gray | | 4.4% Chrysotile 4.4% Total |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| Sample ID 41B 031509020-0082 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ DARK GREY | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |
| TEM NYS 198.4 NOB | 3/28/2015 | | | Positive Stop (Not Analyzed) |

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| | |
|-------------|------------|
| EMSL Order: | 031509020 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|--|
| | | Fibrous | Non-Fibrous | |
| Sample ID 42A 031509020-0083 | Description Homogeneity | ROOF I - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | None Detected |
| Sample ID 42B 031509020-0084 | Description Homogeneity | ROOF C - CAP FLASHING CAULK/ WHITE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 3/28/2015 | White | | | Inconclusive : <1%Chrysotile Inconclusive - <1% Total |
| TEM NYS 198.4 NOB 3/29/2015 | White | | | <1% Anthophyllite 1.1% Chrysotile 1.1% Total |



EMSL Analytical, Inc.

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<http://www.EMSL.com> manhattanlab@emsl.com

EMSL Order: 031509020
CustomerID: LBAP78
CustomerPO: 3001111.00
ProjectID:

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|---|-------|--------------|-------------|----------|
| | | Fibrous | Non-Fibrous | |
| Leica #8 Ser. 9640013810UN0022 /Leica #11 Ser. 9640113773VM0031/ Leica #10 Ser. 964009735MW0103 | | | | |

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via NYS ELAP Approved Methods. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

| | | | |
|--------------------------|-----------|--------------------------|---------|
| Sample Receipt Date:: | 3/26/2015 | Sample Receipt Time: | 6:00 PM |
| Analysis Completed Date: | 3/29/2015 | Analysis Completed Time: | 7:50 PM |

Analyst(s):

Jon Williams PLM NYS 198.1 Friable (7)

Shahrakur Mahmud PLM NYS 198.1 Friable (13)

Emmanuel Alberto PLM NYS 198.6 NOB (61)

Feng Liang TEM NYS 198.4 NOB (34)

Helen Polanco TEM NYS 198.4 NOB (24)

Samples reviewed and approved by:

James Hall, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing. All samples examined for the presence of vermiculite when analyzed via NYS 198.1.
-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. New York, NY NYS ELAP 11506



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|--|-----------------|--------------------------|---|
| 43 | 43A | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 43 | 43B | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 43 | 43C | Canvas Wrap to Fiberglass Insulation on Water Tank | Boiler Room | | |
| 44 | 44A | Cementitious Materials Assoc. with Boiler | Boiler Room | | ENCL MANHATTAN LLC RECEIVED 2015 APR -2 PM 6:02 |
| 44 | 44B | Cementitious Materials Assoc. with Boiler | Boiler Room | | |
| 44 | 44C | Cementitious Materials Assoc. with Boiler | Boiler Room | | |
| 45 | 45A | Rope Gasket to Boilers | Boiler Room | | |
| 45 | 45B | Rope Gasket to Boilers | Boiler Room | | |
| 46 | 46A | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | | |
| 46 | 46B | Tar Assoc. with Rope Gasket to Boiler | Boiler Room | | |
| 47 | 47A | Water Tank Brick Mortar | Boiler Room | | |
| 47 | 47B | Water Tank Brick Mortar | Boiler Room | | |

CHAIN OF CUSTODY

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|---------------------------------------|--------|------------------|-------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D. Cheskin</i> | (Sign) | (Date) 4/2/15 | (Time) 5:02 PM | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>A. SWANSON</i> | (Sign) | (Date) 4/2/15 | (Time) 6:02 PM | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBS to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 2 OF 6

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-------------------------------|-------------------------------|--------------------------|--|
| 48 | 48A | Pipe Gasket, Orange | Boiler Room | | |
| 48 | 48B | Pipe Gasket, Orange | Boiler Room | | |
| 49 | 49A | Leveling Compound | Outside Cafeteria Entry Doors | | |
| 49 | 49B | Leveling Compound | Outside Cafeteria Entry Doors | | |
| 50 | 50A | Mastic to 12"x12" Floor Tiles | Cafeteria | | 2015 APR -2 PM 6:02 DISPATCH RECEIVED |
| 50 | 50B | Mastic to 12"x12" Floor Tiles | Cafeteria | | |
| 51 | 51A | 12"x12" Blue Floor Tile | Cafeteria | | |
| 51 | 51B | 12"x12" Blue Floor Tile | Cafeteria | | |
| 52 | 52A | 12"x12" Grey Floor Tile | Cafeteria | | |
| 52 | 52B | 12"x12" Grey Floor Tile | Cafeteria | | |
| 53 | 53A | Mastic to Linoleum Flooring | Cafeteria | | |
| 53 | 53B | Mastic to Linoleum Flooring | Cafeteria | | |

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|-----------------------------------|--------|----------------------|-----------------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: <i>D Cheskin</i> | (Sign) | (Date) <i>4/2/15</i> | (Time) <i>5:02 PM</i> | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: <i>F SWANSON</i> | (Sign) | (Date) <i>4/2/15</i> | (Time) <i>6:00 PM</i> | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

OrderID: 031509799

Page 1 OF 13



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 3 OF 6

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR 12 HR
 24 HR. 48 HR. 72 HR. 96 HR

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|-------------------------------|--------------------------|---------------------------------------|
| 54 | 54A | Linoleum Flooring | Cafeteria | | |
| 54 | 54B | Linoleum Flooring | Cafeteria | | |
| 55 | 55A | Mastic to 4" Blue Cove Base | Cafeteria | | |
| 55 | 55B | Mastic to 4" Blue Cove Base | Cafeteria | | |
| 56 | 56A | Mastic to 4" Grey Cove Base | Cafeteria | | |
| 56 | 56B | Mastic to 4" Grey Cove Base | Cafeteria | | |
| 57 | 57A | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 57 | 57B | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 57 | 55C | Mudded Joints | Small Gym | | Associated with Piping to Roof Drains |
| 58 | 58A | Terrazzo Flooring | Outside Cafeteria Entry Doors | | |
| 58 | 58B | Terrazzo Flooring | Outside Small Gym | | |
| 59 | 59A | Mastic to Old 4" Brown Cove Base | Small Gym | | |

2015 APR - 22 PM 5:00
 ENCL. RECEIVED

J. Napolitano

CHAIN OF CUSTODY

| | | | | | | | | | | | |
|-------------------|--------|--------|----------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| <i>D. Cheskin</i> | | 4/2/15 | 3:02 PM | | | | | | | | |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| <i>J. Swanson</i> | | 4/2/15 | 02:28 PM | | | | | | | | |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 – 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR.
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|----------------------------------|----------------------------|--------------------------|---|
| 59 | 59B | Mastic to Old 4" Brown Cove Base | Small Gym | | |
| 60 | 60A | Old 4" Brown Cove Base | Small Gym | | 2015 APR - 2 PM 6:02 RECEIVED INSULATED MATERIALS |
| 60 | 60B | Old 4" Brown Cove Base | Small Gym | | |
| 61 | 61A | Caulking to Sinks/Toilets | Boys Locker Room | | |
| 61 | 61B | Caulking to Sinks/Toilets | Girls Locker Room | | |
| 62 | 62A | Expansion Joint Caulk | Exterior Auditorium Stairs | | Assoc. only with bottom step and bottom of ramp |
| 62 | 62B | Expansion Joint Caulk | Exterior Auditorium Stairs | | Assoc. only with bottom step and bottom of ramp |
| 63 | 63A | Yellow Curtain, Front Layer | Auditorium Stage | | |
| 63 | 63B | Yellow Curtain, Front Layer | Auditorium Stage | | |
| 64 | 64A | Yellow Curtain, Back Layer | Auditorium Stage | | |
| 64 | 64B | Yellow Curtain, Back Layer | Auditorium Stage | | |
| 65 | 65A | Red Curtain, Front Layer | Auditorium Stage | | |

CHAIN OF CUSTODY

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|------------------|-------------------------|---------------|----------------|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) <i>D Cheskin</i> | (Date) 4/9/15 | (Time) 5:00 pm | Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) <i>A SWANSON</i> | (Date) 4/2/15 | (Time) 6:02 pm | Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 5 OF 6

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 - 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|-----------------------------|----------------------|--------------------------|-------------|
| 65 | 65B | Red Curtain, Front Layer | Auditorium Stage | | |
| 66 | 66A | Red Curtain, Back Layer | Auditorium Stage | | |
| 66 | 66B | Red Curtain, Back Layer | Auditorium Stage | | |
| 67 | 67A | Black Curtain | Auditorium Stage | | |
| 67 | 67B | Black Curtain | Auditorium Stage | | |
| 68 | 68A | Asphalt Coating, Top Layer | Small Parking Lot | | |
| 68 | 68B | Asphalt Coating, Top Layer | Small Parking Lot | | |
| 69 | 69A | Asphalt Coating, Top Layer | Loop/Bus Turn Around | | |
| 69 | 69B | Asphalt Coating, Top Layer | Loop/Bus Turn Around | | |
| 70 | 70A | Asphalt Coating, Top Layer | Large Parking Lot | | |
| 70 | 70B | Asphalt Coating, Top Layer | Large Parking Lot | | |
| 71 | 71A | 2'x4' Ceiling Tile, Pinhole | Cafeteria | | |

2015 APR -2 PM 6:02
 ENGINEERING RECEIVED

CHAIN OF CUSTODY

| | | | | | | | |
|------------------|--------|--------|---------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| D Cheskin | | 4/2/15 | 5:30 PM | | | | |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| J Swanson | | 4/2/15 | 6:02 PM | | | | |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.



Louis Berger

ASBESTOS SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00
CLIENT: Middletown Schools
PROJECT SITE: Twin Towers Middle School, Middletown, NY
Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout
PROPOSED PROJECT: School Wide Renovations Renovation
DATE(S) OF INSPECTION: 3/31 – 4/01/2015
Inspector(s): Drew Cheskin & Josue Garcia

031509799

LOUIS BERGER
 TELEPHONE NO. : (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
 cnapolitano@louisberger.com
 jgarcia@louisberger.com

TURNAROUND TIME: 4 HR. 12 HR
 24 HR. 48 HR. 72 HR. 96 HR.

| HA | SAMPLE NO. | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----|------------|------------------------------|-----------------|--------------------------|-------------|
| 71 | 71B | 2'x4' Ceiling Tile, Pinhole | Cafeteria | | |
| 72 | 72A | 2'x4' Ceiling Tile, Textured | Cafeteria | | |
| 72 | 72B | 2'x4' Ceiling Tile, Textured | Cafeteria | | |
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 2015 APR -2 PM 6:02

[Handwritten signature]
 4/1/15

CHAIN OF CUSTODY

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|--|---------------------------------------|---------------------------------------|---------------------------------------|
| Relinquished by: <i>D Cheskin</i> (Sign) <i>DC</i> (Date) <i>4/2/15</i> (Time) <i>5:00 pm</i> | Relinquished by: (Sign) (Date) (Time) | Relinquished by: (Sign) (Date) (Time) | Relinquished by: (Sign) (Date) (Time) |
| Received by: <i>A SWANSON</i> (Sign) <i>Swanson</i> (Date) <i>4/2/15</i> (Time) <i>6:02 pm</i> | Received by: (Sign) (Date) (Time) | Received by: (Sign) (Date) (Time) | Received by: (Sign) (Date) (Time) |

General Notes: All inconclusive NOBs to be analyzed by TEM. Please stop at 1st positive in any homogeneous group.

Bolmanska, Emilia

From: EMSL Lab - Manhattan
Sent: Thursday, April 02, 2015 10:13 PM
To: Craig Napolitano; SANDRA SANTANA
Cc: EMSL Lab - Manhattan; Manhattan Login
Subject: EMSL receipt confirmation, COC for order(s) 031509799 (031509799 - 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE RENOVATIONS RENOVATION)
Attachments: 031509799_coc.pdf; 031509799_conf.pdf

Good evening,

Please note there is an error on the COC on page 3, homogeneous group #57. We received sample #57C, not 55C. We will list it as #57C on the report, if you would like to change it please contact the lab and reply to all.

Thank you,

Emilia

Receipt confirmation, COC for:
031509799 - 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE RENOVATIONS RENOVATION

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EMSL Order: 031509799
 CustomerID: LBAP78
 CustomerPO: 3001111.00
 ProjectID:

Attn: **Craig Napolitano**
Louis Berger & Associates, PC
48 Wall St.
New York, NY 10005

Phone: (212) 612-7900
 Fax:
 Received: 04/02/15 6:02 PM
 Analysis Date: 4/4/2015
 Collected: 3/31/2015

Project: 3001111.00/ MIDDLETON SCHOOLS/ TWIN TOWERS MIDDLE SCHOOL/ MIDDLETON, NY/ THROUGHOUT/ SCHOOL WIDE

Test Report:Asbestos Analysis of Bulk Material

| Test | Analyzed Date | Color | Non Asbestos | | Asbestos |
|--|---------------|--------------------|--|-------------|------------------------------------|
| | | | Fibrous | Non-Fibrous | |
| Sample ID 43A 031509799-0001 | | Description | BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 43B 031509799-0002 | | Description | BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 43C 031509799-0003 | | Description | BOILER ROOM - CANVAS WRAP TO FIBERGLASS INSULATION ON WATER TANK | | |
| | | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | White | | | None Detected |
| Sample ID 44A 031509799-0004 | | Description | BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| | | Homogeneity | Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | 40.00% Quartz 20.00% Ca Carbonate 34.94% Non-fibrous (other) | | 5.06% Chrysotile |
| No Vermiculite Detected. | | | | | |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |
| Sample ID 44B 031509799-0005 | | Description | BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| | | Homogeneity | | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | | Not Analyzed |

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|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 44C 031509799-0006 | Description Homogeneity | BOILER ROOM - CEMENTITIOUS MATERIALS ASSOC. WITH BOILER | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 45A 031509799-0007 | Description Homogeneity | BOILER ROOM - ROPE GASKET TO BOILERS | | |
| PLM NYS 198.1 Friable | 4/4/2015 | White | 98.00% Glass 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 45B 031509799-0008 | Description Homogeneity | BOILER ROOM - ROPE GASKET TO BOILERS | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Tan/White | 98.00% Glass 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 46A 031509799-0009 | Description Homogeneity | BOILER ROOM - TAR ASSOC. WITH ROPE GASKET TO BOILER | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Black | | None Detected |
| Sample ID 46B 031509799-0010 | Description Homogeneity | BOILER ROOM - TAR ASSOC. WITH ROPE GASKET TO BOILER | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Black | | None Detected |
| Sample ID 47A 031509799-0011 | Description Homogeneity | BOILER ROOM - WATER TANK BRICK MORTAR | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | 63.00% Quartz 34.60% Non-fibrous (other) | 2.40% Chrysotile |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|--|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 47B 031509799-0012 | Description Homogeneity | BOILER ROOM - WATER TANK BRICK MORTAR | | |
| PLM NYS 198.1 Friable | 4/4/2015 | | | Positive Stop |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 48A 031509799-0013 | Description Homogeneity | BOILER ROOM - PIPE GASKET, ORANGE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Red | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Red | | None Detected |
| Sample ID 48B 031509799-0014 | Description Homogeneity | BOILER ROOM - PIPE GASKET, ORANGE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 | Red | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/4/2015 | Red | | None Detected |
| Sample ID 49A 031509799-0015 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - LEVELING COMPOUND Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray | 15.00% Cellulose 25.00% Quartz 35.00% Ca Carbonate 25.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 49B 031509799-0016 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - LEVELING COMPOUND Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Gray/Tan | 18.00% Cellulose 40.00% Ca Carbonate 42.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|--|
| | | Fibrous | Non-Fibrous | |
| Sample ID 50A <i>031509799-0017</i> | Description Homogeneity | CAFETERIA - MASTIC TO 12"X12" FLOOR TILES Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Yellow No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Yellow | | | | None Detected |
| Sample ID 50B <i>031509799-0018</i> | Description Homogeneity | CAFETERIA - MASTIC TO 12"X12" FLOOR TILES Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Yellow No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Yellow | | | | <1% Anthophyllite <1% Total |
| Sample ID 51A <i>031509799-0019</i> | Description Homogeneity | CAFETERIA - 12"X12" BLUE FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Blue No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Blue | | | | None Detected |
| Sample ID 51B <i>031509799-0020</i> | Description Homogeneity | CAFETERIA - 12"X12" BLUE FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Blue No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Blue | | | | None Detected |
| Sample ID 52A <i>031509799-0021</i> | Description Homogeneity | CAFETERIA - 12"X12" GREY FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |
| Sample ID 52B <i>031509799-0022</i> | Description Homogeneity | CAFETERIA - 12"X12" GREY FLOOR TILE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 Gray No Vermiculite detected. | | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB 4/4/2015 Gray | | | | None Detected |

Initial Report From 04/05/2015 17:36:16

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|---|--------------------|---|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 53A <i>031509799-0023</i> | Description | CAFETERIA - MASTIC TO LINOLEUM FLOORING | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Yellow | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Yellow | | | None Detected |
| Sample ID 53B <i>031509799-0024</i> | Description | CAFETERIA - MASTIC TO LINOLEUM FLOORING | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Yellow | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Yellow | | | None Detected |
| Sample ID 54A <i>031509799-0025</i> | Description | CAFETERIA - LINOLEUM FLOORING | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |
| Sample ID 54B <i>031509799-0026</i> | Description | CAFETERIA - LINOLEUM FLOORING | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |
| Sample ID 55A <i>031509799-0027</i> | Description | CAFETERIA - MASTIC TO 4" BLUE COVE BASE | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |
| Sample ID 55B <i>031509799-0028</i> | Description | CAFETERIA - MASTIC TO 4" BLUE COVE BASE | | |
| | Homogeneity | Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/4/2015 | Gray | | | None Detected |



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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---|---|
| | | Fibrous | Non-Fibrous | |
| Sample ID 56A 031509799-0029 | Description Homogeneity | CAFETERIA - MASTIC TO 4" GREY COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Yellow | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/4/2015 Yellow | | | None Detected |
| Sample ID 56B 031509799-0030 | Description Homogeneity | CAFETERIA - MASTIC TO 4" GREY COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 Yellow | | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 Yellow | | | <1% Chrysotile <1% Total |
| Sample ID 57A 031509799-0031 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 45.00% Min. Wool | 55.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 57B 031509799-0032 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 48.00% Min. Wool | 52.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 57C 031509799-0033 | Description Homogeneity | SMALL GYM - MUDDERED JOINTS Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 Gray | 10.00% Cellulose 22.00% Min. Wool | 15.00% Ca Carbonate 53.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 58A 031509799-0034 | Description Homogeneity | OUTSIDE CAFETERIA ENTRY DOORS - TERRAZZO FLOORING Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gray | 40.00% Quartz 35.00% Ca Carbonate 25.00% Non-fibrous (other) | | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 58B 031509799-0035 | Description Homogeneity | OUTSIDE SMALL GYM - TERRAZZO FLOORING Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gray/Green | 20.00% Ca Carbonate 80.00% Non-fibrous (other) | | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 59A 031509799-0036 | Description Homogeneity | SMALL GYM - MASTIC TO OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 Brown | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 Brown | | | None Detected |
| Sample ID 59B 031509799-0037 | Description Homogeneity | SMALL GYM - MASTIC TO OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 Brown | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 Brown | | | None Detected |
| Sample ID 60A 031509799-0038 | Description Homogeneity | SMALL GYM - OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | 4/4/2015 White | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 White | | | None Detected |

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| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|--|---|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 60B <i>031509799-0039</i> | Description Homogeneity | BOYS LOCKER ROOM - OLD 4" BROWN COVE BASE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 | Brown | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 | Brown | | None Detected |
| Sample ID 61A <i>031509799-0040</i> | Description Homogeneity | GIRLS LOCKER ROOM - CAULKING TO SINKS/ TOILETS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 | White | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 | White | | None Detected |
| Sample ID 61B <i>031509799-0041</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - CAULKING TO SINKS/ TOILETS Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 | White | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 | White | | None Detected |
| Sample ID 62A <i>031509799-0042</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 | Gray | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 | Gray | | None Detected |
| Sample ID 62B <i>031509799-0043</i> | Description Homogeneity | EXTERIOR AUDITORIUM STAIRS - EXPANSION JOINT CAULK Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB No Vermiculite detected. | 4/4/2015 | Gray | | Inconclusive: None Detected |
| TEM NYS 198.4 NOB | 4/5/2015 | Gray | | None Detected |
| Sample ID 63A <i>031509799-0044</i> | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable No Vermiculite Detected. | 4/4/2015 | Tan | 92.00% Cellulose 8.00% Non-fibrous (other) | None Detected |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

**EMSL Analytical, Inc.**

307 West 38th Street, New York, NY 10018

Phone/Fax: (212) 290-0051 / (212) 290-0058

<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|----------------------------|----------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 63B 031509799-0045 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Gold | 80.00% Cellulose 8.00% Synthetic | 12.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 64A 031509799-0046 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Tan | 94.00% Cellulose | 6.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 64B 031509799-0047 | Description Homogeneity | AUDITORIUM STAGE - YELLOW CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Tan | 97.00% Cellulose | 3.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 65A 031509799-0048 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Red/Black | 40.00% Cellulose 45.00% Synthetic | 15.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |
| Sample ID 65B 031509799-0049 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, FRONT LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 Red/Black | 98.00% Synthetic | 2.00% Non-fibrous (other) | None Detected |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB | | | | Not Analyzed |
| TEM NYS 198.4 NOB | | | | Not Analyzed |

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<http://www.EMSL.com>manhattanlab@emsl.com

| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|------------------------------------|----------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 66A 031509799-0050 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Brown/Red | 60.00% Synthetic | 40.00% Non-fibrous (other) |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | Not Analyzed | | | |
| TEM NYS 198.4 NOB | Not Analyzed | | | |
| Sample ID 66B 031509799-0051 | Description Homogeneity | AUDITORIUM STAGE - RED CURTAIN, BACK LAYER Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Brown/Red | 98.00% Synthetic | 2.00% Non-fibrous (other) |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | Not Analyzed | | | |
| TEM NYS 198.4 NOB | Not Analyzed | | | |
| Sample ID 67A 031509799-0052 | Description Homogeneity | AUDITORIUM STAGE - BLACK CURTAIN Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Black | 85.00% Synthetic | 15.00% Non-fibrous (other) |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | Not Analyzed | | | |
| TEM NYS 198.4 NOB | Not Analyzed | | | |
| Sample ID 67B 031509799-0053 | Description Homogeneity | AUDITORIUM STAGE - BLACK CURTAIN Homogeneous | | |
| PLM NYS 198.1 Friable | 4/4/2015 | Black | 98.00% Synthetic | 2.00% Non-fibrous (other) |
| No Vermiculite Detected. | | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | Not Analyzed | | | |
| TEM NYS 198.4 NOB | Not Analyzed | | | |
| Sample ID 68A 031509799-0054 | Description Homogeneity | SMALL PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | Not Analyzed | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | Inconclusive: None Detected | |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 | Black | None Detected | |
| Sample ID 68B 031509799-0055 | Description Homogeneity | SMALL PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | Not Analyzed | | | |
| PLM NYS 198.6 VCM | Not Analyzed | | | |
| PLM NYS 198.6 NOB | 4/4/2015 | Black | Inconclusive: None Detected | |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB | 4/5/2015 | Black | None Detected | |



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 Phone/Fax: (212) 290-0051 / (212) 290-0058
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| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|---|
| | | Fibrous | Non-Fibrous | |
| Sample ID 69A 031509799-0056 | Description Homogeneity | LOOP/ BUS TURN AROUND - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | <1% Chrysotile <1% Total |
| Sample ID 69B 031509799-0057 | Description Homogeneity | LOOP/ BUS TURN AROUND - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 70A 031509799-0058 | Description Homogeneity | LARGE PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 70B 031509799-0059 | Description Homogeneity | LARGE PARKING LOT - ASPHALT COATING, TOP LAYER Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Black | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Black | | | None Detected |
| Sample ID 71A 031509799-0060 | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, PINHOLE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 71B 031509799-0061 | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, PINHOLE Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |

Initial Report From 04/05/2015 17:36:16

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| | |
|-------------|------------|
| EMSL Order: | 031509799 |
| CustomerID: | LBAP78 |
| CustomerPO: | 3001111.00 |
| ProjectID: | |

Test Report:Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|--|--|---|-------------|------------------------------------|
| | | Fibrous | Non-Fibrous | |
| Sample ID 72A 031509799-0062 | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, TEXTURED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |
| Sample ID 72B 031509799-0063 | Description Homogeneity | CAFETERIA - 2'X4' CEILING TILE, TEXTURED Heterogeneous | | |
| PLM NYS 198.1 Friable | | | | Not Analyzed |
| PLM NYS 198.6 VCM | | | | Not Analyzed |
| PLM NYS 198.6 NOB 4/4/2015 | Gray | | | Inconclusive: None Detected |
| No Vermiculite detected. | | | | |
| TEM NYS 198.4 NOB 4/5/2015 | Gray | | | None Detected |



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Phone/Fax: (212) 290-0051 / (212) 290-0058
<http://www.EMSL.com> manhattanlab@emsl.com

EMSL Order: 031509799
CustomerID: LBAP78
CustomerPO: 3001111.00
ProjectID:

Test Report: Asbestos Analysis of Bulk Material

| Test | Color | Non Asbestos | | Asbestos |
|------|-------|--------------|-------------|----------|
| | | Fibrous | Non-Fibrous | |

The samples in this report were submitted to EMSL for analysis by Asbestos Analysis of Bulk Materials via NYS ELAP Approved Methods. The reference number for these samples is the EMSL Order ID above. Please use this reference number when calling about these samples.

Report Comments:

| | | | |
|--------------------------|----------|--------------------------|----------|
| Sample Receipt Date:: | 4/2/2015 | Sample Receipt Time: | 6:02 PM |
| Analysis Completed Date: | 4/4/2015 | Analysis Completed Time: | 10:21 PM |

Analyst(s):

Jon Williams PLM NYS 198.1 Friable (9)

Noel Anderson PLM NYS 198.1 Friable (12)

Kamel Alawawda PLM NYS 198.6 NOB (39)

Feng Liang TEM NYS 198.4 NOB (19)

Wioletta Bis TEM NYS 198.4 NOB (20)

Samples reviewed and approved by:

James Hall, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing. All samples examined for the presence of vermiculite when analyzed via NYS 198.1.

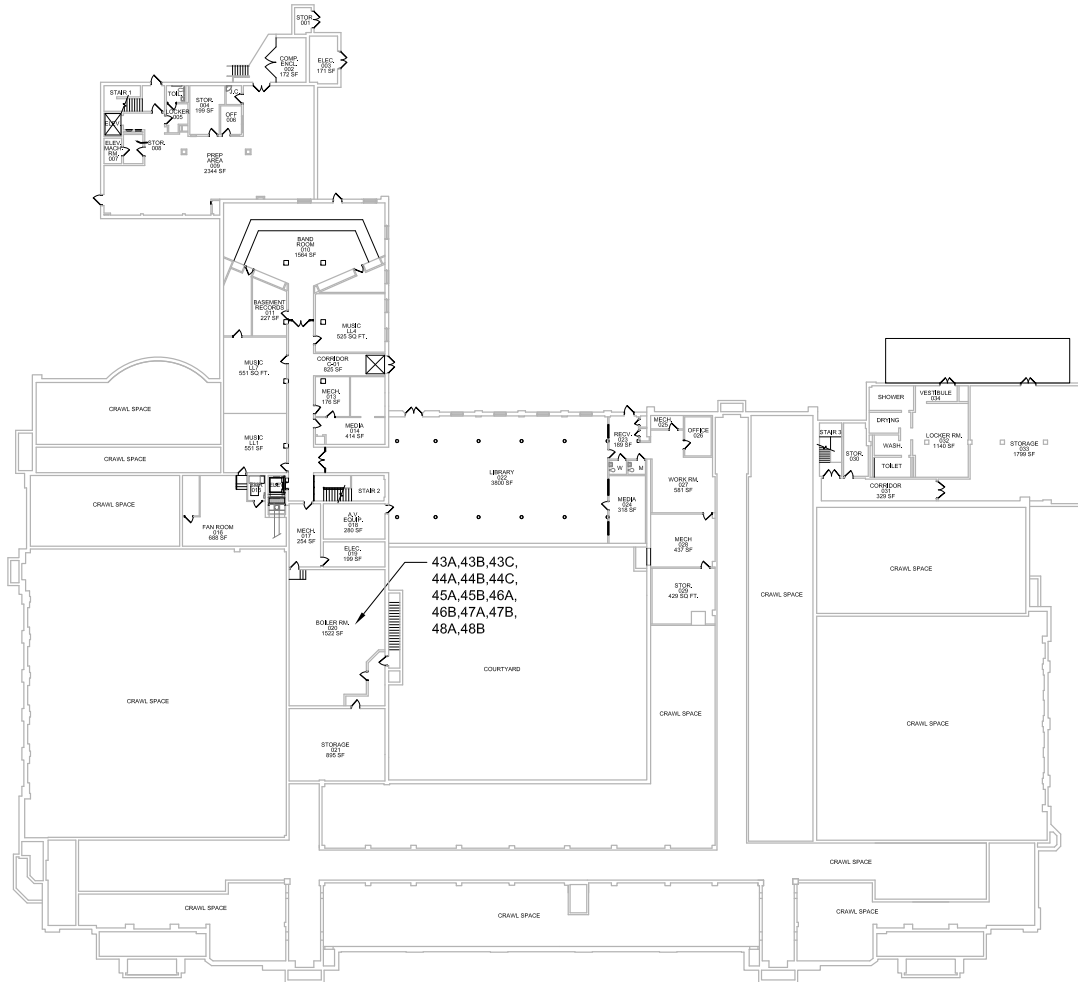
-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. New York, NY NYS ELAP 11506



**APPENDIX C:
ASBESTOS BULK SAMPLE LOCATION DRAWINGS**



43A, 43B, 43C,
44A, 44B, 44C,
45A, 45B, 46A,
46B, 47A, 47B,
48A, 48B

GROUND FLOOR PLAN
0' 4' 8' 16'
PROJECT NORTH

REVISIONS

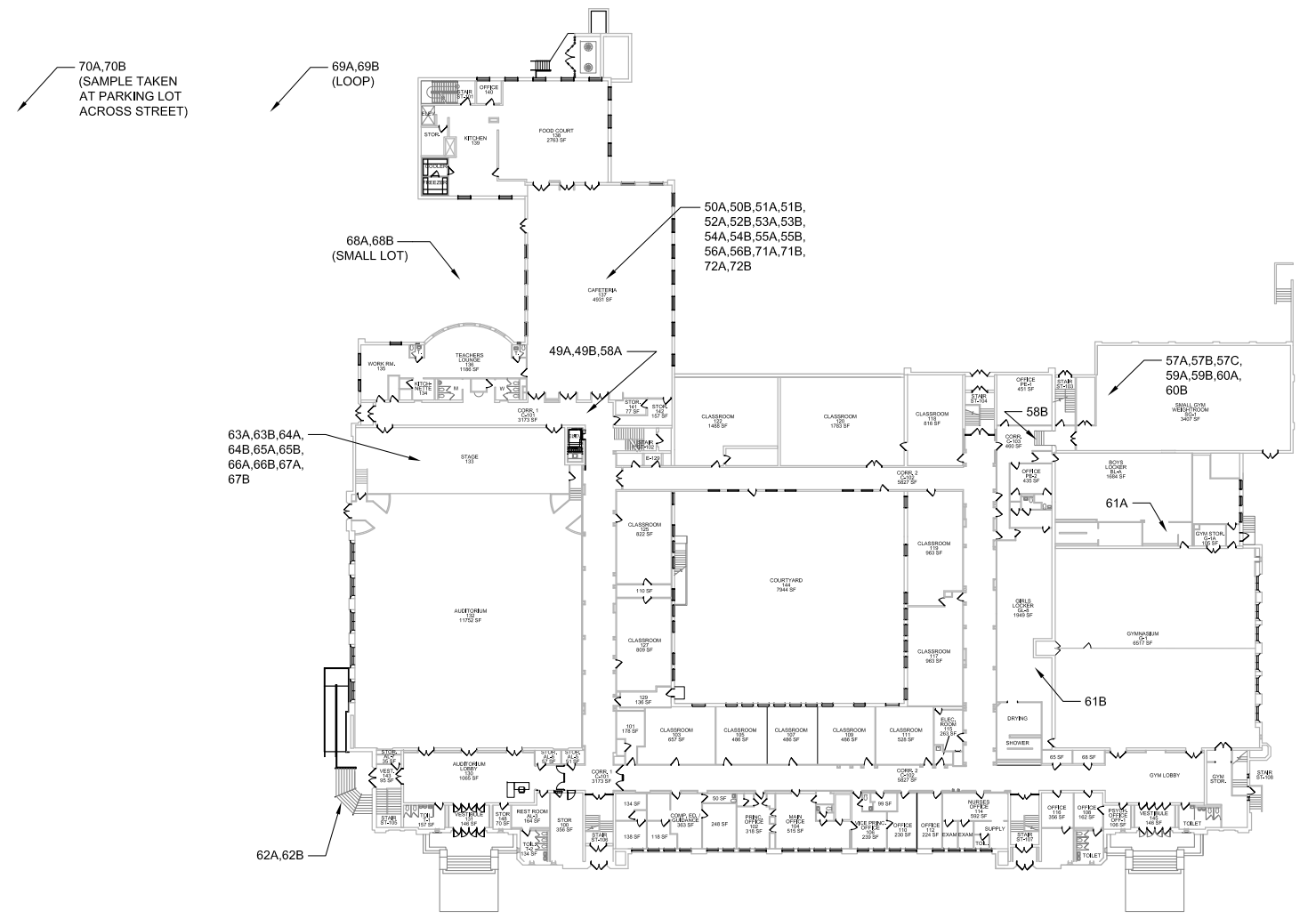
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

DRAWING TITLE

**BULK SAMPLE LOCATIONS
GROUND FLOOR PLAN**

| | |
|--------------------------|---------------------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| INSPECTED BY: D. CHESNIN | DATE: 04/10/15 |
| COORDINATE: MIDDLETOWN | DRAWING NUMBER: |
| CHECKED BY: G. WATKINSON | BSL001 |
| | DRAWING NUMBER: 1 OF 3 |



FIRST FLOOR PLAN
0" = 4' 0" 16" PROJECT NORTH

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

DRAWING TITLE

**BULK SAMPLE LOCATIONS
FIRST FLOOR PLAN**

| | |
|--------------------------|-----------------|
| DRAWN BY: J. HENZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHEW | DATE: 04/10/15 |
| CORRECTED BY: J. HENZ | DRAWN BY: HENRY |
| CHECKED BY: G. WENDEL | |
| BSL002 | |
| DRAWING NUMBER 2 OF 2 | |

REVISIONS

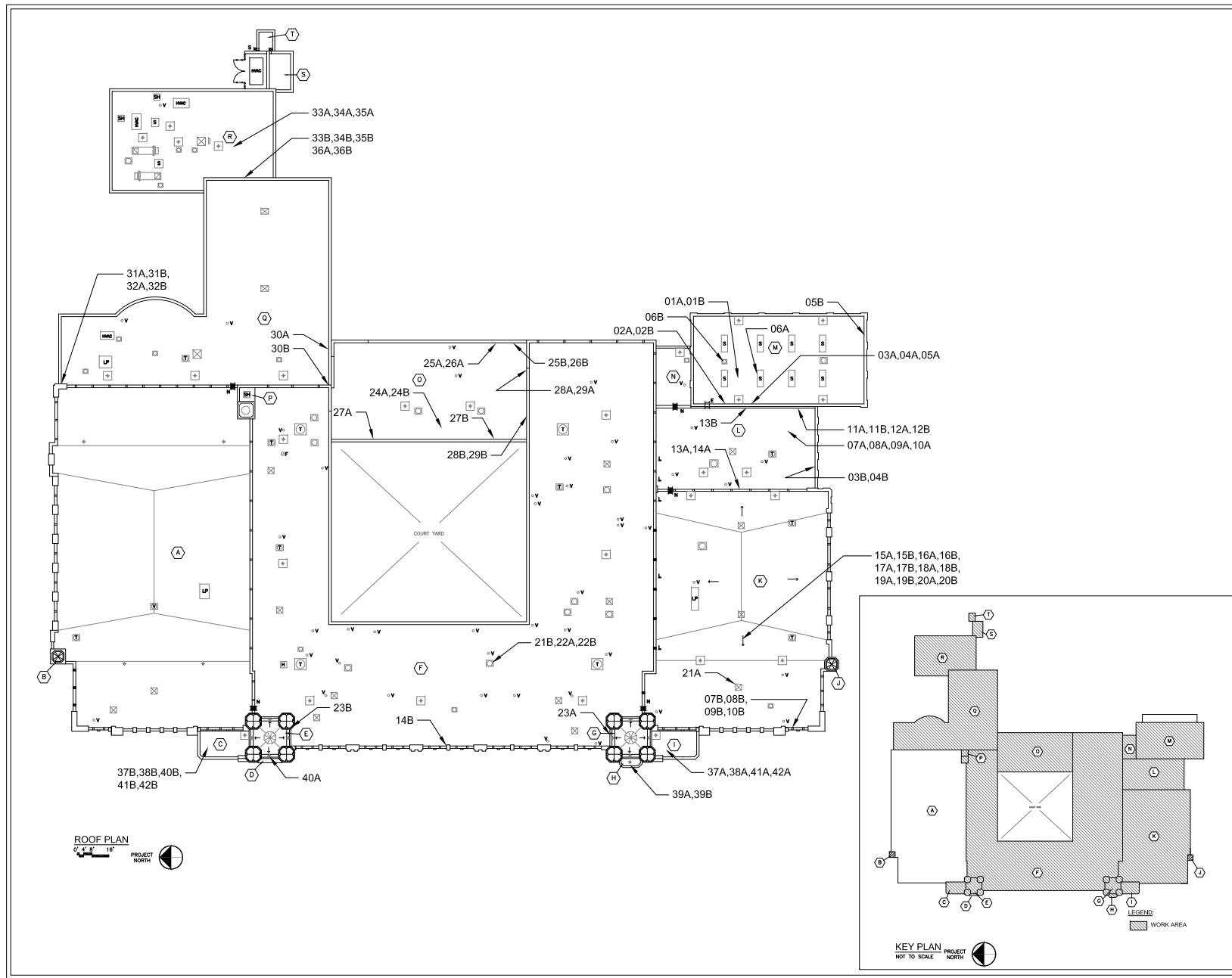
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

**DRAWING TITLE
BULK SAMPLE LOCATIONS
ROOF PLAN**

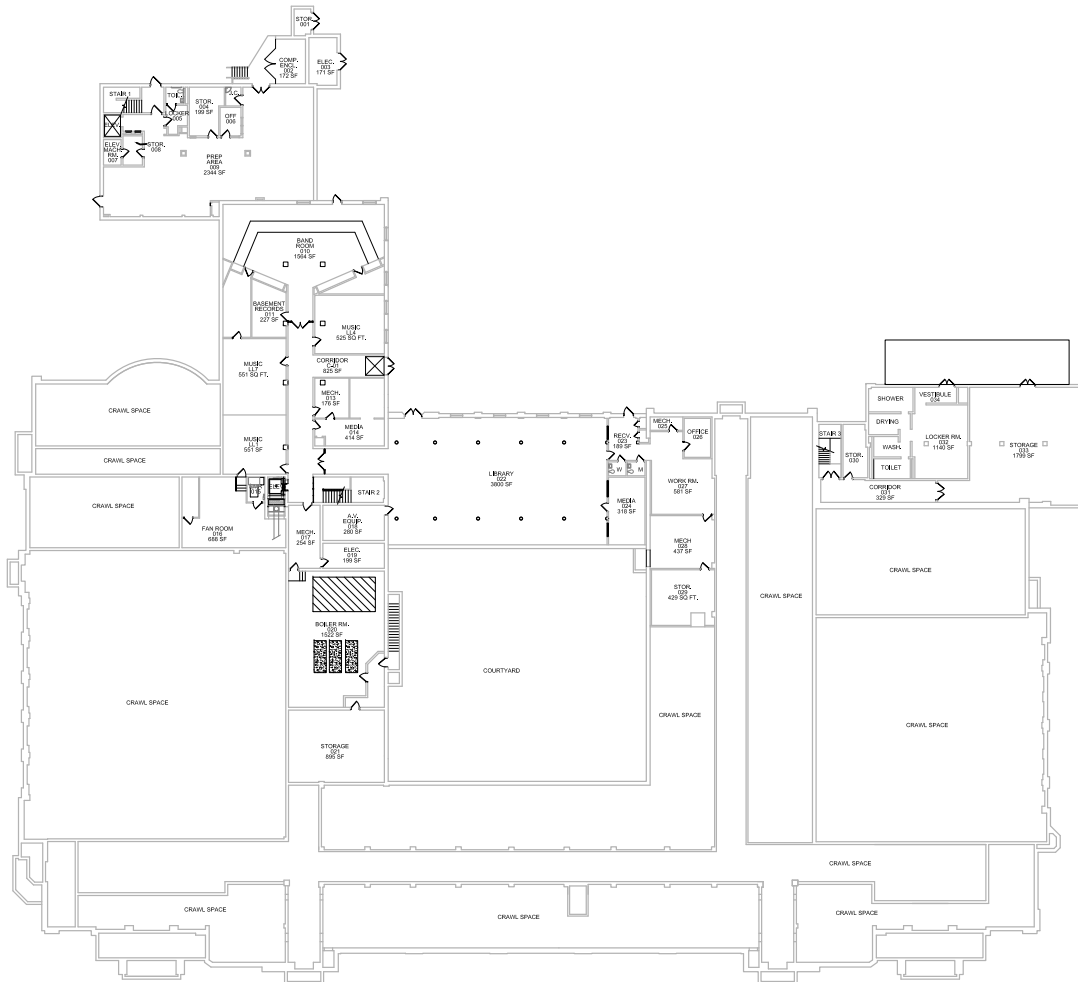
| | |
|-----------------------|-----------------|
| DRAWN BY: J. REBEZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHEW | DATE: 04/10/15 |
| CORPORATE: MIDDLETOWN | DRAWN: J. REBEZ |
| CHECKED BY: G. WENDEL | |

BSL003
DRAWING NUMBER
3 OF 3

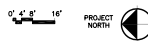




**APPENDIX D:
ASBESTOS CONTAINING MATERIALS LOCATION
DRAWINGS**



GROUND FLOOR PLAN



LEGEND

- LOCATION OF ASBESTOS CONTAINING CEMENTITIOUS MATERIALS ASSOCIATED WITH BOILERS
- LOCATION OF ASBESTOS CONTAINING WATER TANK BRICK MORTAR

Enlarged City School District of Middletown

Twin Towers Middle School
112 Grand Avenue
Middletown, New York, 10940

M Enlarged City School District of Middletown
233 HUBBARD AVENUE, MIDDLETOWN, NY

K&D Engineering & Architecture
Kasper, Garmann & Davidson architects, pc
250 Main Street, Mount Kisco, New York, 10549
P 914.866.2900 F 914.866.2051 [info@kdca.com](http://info.kdca.com)

Louis Berger
48 Wall Street, 10th Floor, New York, New York, 10005
Tel: 212.312.7300 Fax: 212.312.6100 www.louisberger.com

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

TWIN TOWERS MIDDLE SCHOOL

DRAWING TITLE
ASBESTOS CONTAINING MATERIALS GROUND FLOOR PLAN

DRAWN BY: J. HERRZ SCALED AS SHOWN
 INSPECTED BY: D. CHESNIN DATE: 04/24/15
 CONFIRMED BY: [Signature] DRAWN BY: HERRZ
 CHECKED BY: G. WENDELAND

ACM001

DRAWING NUMBER
1 OF 2

REVISIONS

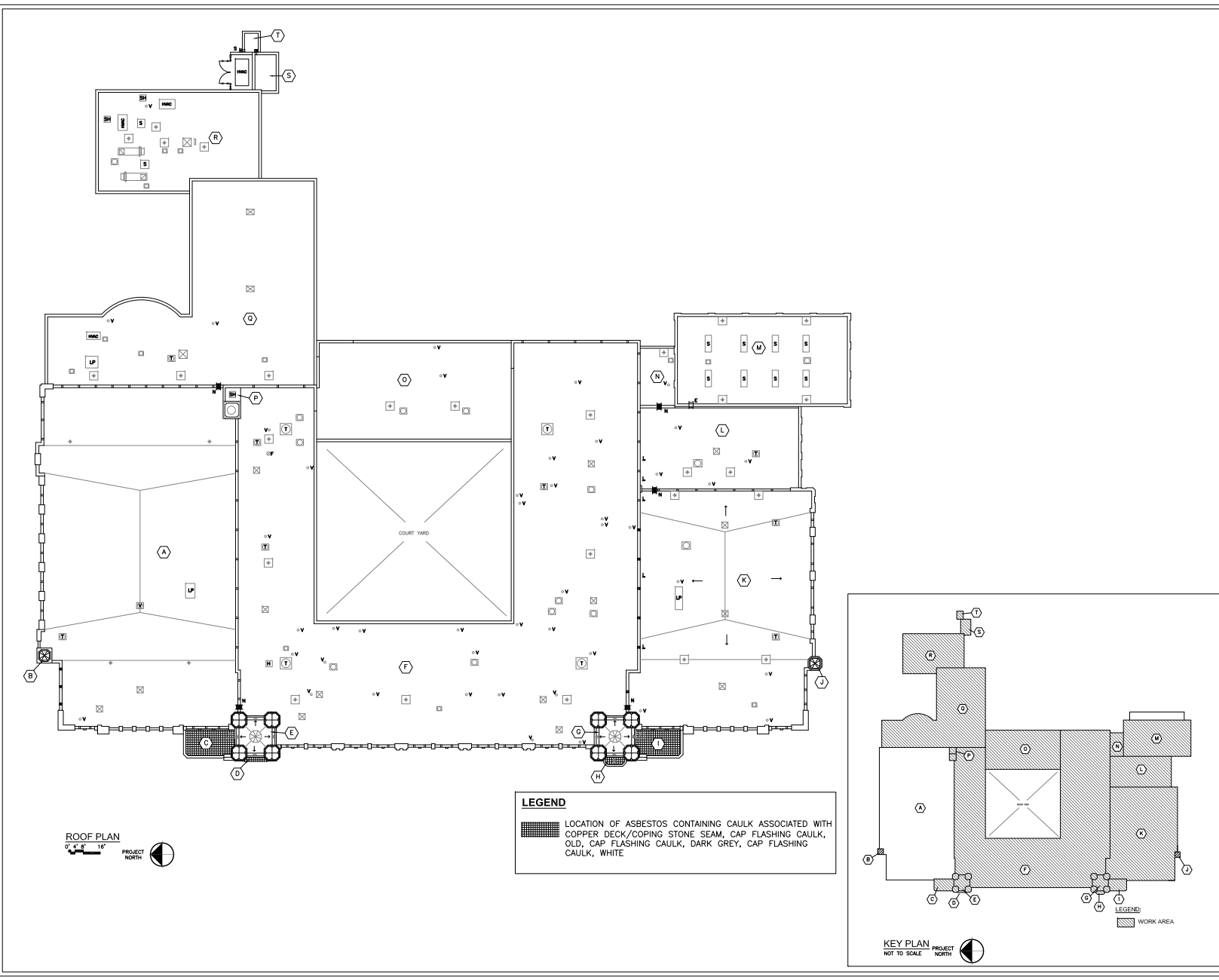
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

**DRAWING TITLE
ASBESTOS CONTAINING
MATERIALS - ROOF PLAN**

| | |
|-------------------------|-----------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| DESIGNED BY: D. CHEWEN | DATE: 04/10/15 |
| CHECKED BY: G. BELLOCCO | DRAWING NUMBER: |
| CHECKED BY: G. BELLOCCO | |

ACM002
DRAWING NUMBER:
2 OF 2



ROOF PLAN
 0" 4" 8" 16"
 PROJECT NORTH

KEY PLAN
 NOT TO SCALE
 PROJECT NORTH



**APPENDIX E:
ADELAIDE LEAD XRF INSPECTION REPORT**

**LIMITED INSPECTION
FOR
LEAD BASED PAINT**

PERFORMED AT:

**TWIN TOWERS MIDDLE SCHOOL
MIDDLETOWN, NEW YORK**

ADELAIDE PROJECT#: MDDL-BA01684-LS

PREPARED FOR:

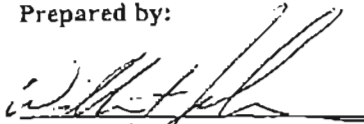
**MIDDLETOWN ENLARGED SCHOOL DISTRICT
223 WISNER AVENUE
MIDDLETOWN, NEW YORK 10940-3240**

PREPARED BY:

**ADELAIDE ASSOCIATES, LLC
111 - 115 COURT STREET
BINGHAMTON, NEW YORK 13901**

***DATED*
JANUARY 24TH, 2001**

Prepared by:



William T. Johnson
Senior Construction Inspector
EPA Inspector # NY-06-082004-367

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| 1.0 | Executive Summary | 1 |
| 2.0 | Applicable Standards/Guidelines | 1 |
| 3.0 | Results | 1 |
| | Appendix A XRF Lead Paint Report Form | 4 |

1.0 EXECUTIVE SUMMARY

Adelaide Associates, LLC conducted a limited Lead-Based Paint Survey on October 26th, 2001 at the Twin Towers Middle School located at Middletown, New York. The survey was requested by Thomas Scott. Adelaide Associates took one thousand seven hundred and sixtysix (1766) assays of various painted surfaces utilizing the XRF analyzer to determine the presence of lead-based paint.

2.0 APPLICABLE STANDARDS/GUIDELINES:

The U.S. Department of Housing and Urban Development (HUD) defines the action level for lead-based paint as a lead content equal to or greater than 1.0 milligrams of lead per square centimeter of painted surface ($\geq 1.0 \text{ mg Pb/cm}^2$) when measured with an XRF analyzer, or 0.5 percent by weight when chemically tested. This definition is described in the HUD "Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing, September 1990." The State of New York's definition of the action level for lead-based paint is consistent with the level established by HUD.

3.0 RESULTS:

Adelaide took 1766 individual assays of various paint surfaces and components of which 242 was positive for the presence of lead as per the HUD Guidelines referenced above. The remaining 1524 assays were negative for the presence of lead. Those items with lead-based paint include the following:

Brown Vinyl Baseboard in Rm: Music Office, Music Sto., LL-3,
Music Directors, Music Room, LL-4, Copy Area Office,
Cafeteria, AS-4, Auditorium, 122, 122 Closet, 120, 118,
PEM #2, PEF #1, 119, 117, 114, 129, 125, 103, 112, Guidance
Conference Room, Guidance Offices, 219, 208, 210, 215, 217,
226, 228, 232, 234, 236, 238,

Tan Vinyl Baseboard in Rm: Library, A/V Room, Copy Area, AS-3,
108, 110, 302, 304, 317, 310, 319, 312, 314, 321, 316, 318, 320,
322, 324,

3.0 RESULTS CONT:

Yellow Painted Wood Window Frames in Rm: LL-3, AS-3 (Mens),
100, 103, 105, 107, 109, Guidance Offices, 218, 215, 217, 230,
300, 305, 307, 315, 310, 319, 316, 327, 329,

Yellow Painted Metal Window Frames in Rm: LL-3,

Brown Painted Wood Window Frames in Rm: Pem #4, PEF #1, 117,
AL 3, 108A, Speech Office, Boys Room, 110, 104,

Brown Painted Metal Window Frames in Rm: 108A,

Purple Painted Wood Window Frame in Rm: 228,

Grey Painted Wood Window Frames in Rm: Boiler Room

Blue Painted Wood Window Frame: LL-4, 114(Bathroom), 148,
Office by Gym, 223, 225, 204, 204, 205, 212, 216, 226, 202,
304, 306, 308, 317, 325,

Green Painted Wood Window Frames in Rm: 208, 210, 214, 200

White Painted Wood Window Frame: 150, 111, 112, Guidance Conf.
Rm., Guidance Offices, 203, 209, Hallways and Stairways, 309,

White Painted Wood Window Panel in Rm: Auditorium,

Pink Painted Wood Window Frame in Rm: AS-3 (Women)

Green 6"x12" Ceramic Tile: LL-3, All Hallways, All Stairways,

Grey Ceramic Tile in Rm: Mens Room, Women Room,
114(Bathroom),

Green 4"x4" Ceramic Tile in Rm: Hall #2 (girls room), Hall #2 (Boys)

White Ceramic Tile in Rm: PEM #4 (Shower),

Orange Painted Lockers in Rm: PEM #4,

3.0 RESULTS CONT:

Green Painted Fan in Fan Room

Green Painted Duct Work in Rm: Fan Room

Grey Painted Metal Stair Components in Rm: Fan Room

Grey Painted Metal Elevator Door and Frame

Please reference Appendix A for the Lead Paint Report Form which shows locations and details for the individual assays.

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1 | | | Calibration | | | | 2.00 | Positive |
| 2 | | | Calibration | | | | 1.90 | Positive |
| 3 | | | Calibration | | | | 1.90 | Positive |
| 4 | LL-7 | 1 | Wall A | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 5 | LL-7 | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 6 | LL-7 | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 7 | LL-7 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.20 | Negative |
| 8 | LL-7 | 1 | Wall C | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 9 | LL-7 | 1 | Wall D | Yellow | Intact | Cinderblock | 0.30 | Negative |
| 10 | LL-7 | 1 | Steps | Gray | Intact | Concrete | 0.40 | Negative |
| 11 | LL-7 | 1 | Railing | Gray | Intact | Metal | 0.30 | Negative |
| 12 | LL-7 | 1 | Ceiling | Yellow | Intact | Concrete | 0.00 | Negative |
| 13 | LL-7 | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 14 | Boiler Room | 1 | Wall A | White | Intact | Concrete | 0.20 | Negative |
| 15 | Boiler Room | | Wall A Door | Gray | Intact | Metal | 0.10 | Negative |
| 16 | Boiler Room | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 17 | Boiler Room | 1 | Wall B | White | Intact | Concrete | 0.10 | Negative |
| 18 | Boiler Room | 1 | Wall B | White | Intact | Wood | 0.20 | Negative |
| 19 | Boiler Room | 1 | Wall B Window | Yellow | Intact | Metal | 0.00 | Negative |



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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 20 | Boiler Room | 1 | Wall B Window Frame | Gray | Intact | Wood | >9.9 | Positive |
| 21 | Boiler Room | 1 | Wall B Door | Green | Intact | Metal | -0.10 | Negative |
| 22 | Boiler Room | 1 | Wall B Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 23 | Boiler Room | 1 | Wall C | White | Intact | Concrete | 0.10 | Negative |
| 24 | Boiler Room | 1 | Wall D | White | Intact | Concrete | 0.10 | Negative |
| 25 | Boiler Room | 1 | Boiler | Gray | Intact | Metal | 0.00 | Negative |
| 26 | Boiler Room | 1 | Burner | Blue | Intact | Metal | 0.30 | Negative |
| 27 | Boiler Room | 1 | Expansion Tank | Red | Intact | Metal | -0.10 | Negative |
| 28 | Boiler Room | 1 | Column | White | Intact | Concrete | 0.20 | Negative |
| 29 | Boiler Room | 1 | Steps | Red | Intact | Concrete | -0.10 | Negative |
| 30 | Boiler Room | 1 | Railing | Red | Intact | Metal | 0.10 | Negative |
| 31 | Boiler Room | 1 | Ceiling | White | Intact | Concrete | 0.10 | Negative |
| 32 | Boiler Room | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 33 | LL-1 | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 34 | LL-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 35 | LL-1 | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.40 | Negative |
| 36 | LL-1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 0.30 | Negative |
| 37 | LL-1 | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 38 | LL-1 | 1 | Wall B Soffit Wall | Blue | Intact | Sheetrock | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 39 | LL-1 | 1 | Wall B Door | Blue | Intact | Metal | 0.00 | Negative |
| 40 | LL-1 | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 41 | LL-1 | 1 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 42 | LL-1 | 1 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 43 | LL-1 | 1 | Floor | Brown | Intact | Concrete | -0.10 | Negative |
| 44 | Music Office | 1 | Wall A | Yellow | Intact | Sheetrock | -0.10 | Negative |
| 45 | Music Office | 1 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 46 | Music Office | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 47 | Music Office | 1 | Wall A Baseboard | Brown | Intact | vinyl | 4.20 | Positive |
| 48 | Music Office | 1 | Wall B | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 49 | Music Office | 1 | Wall C | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 50 | Music Office | 1 | Wall D | Yellow | Intact | Sheetrock | -0.20 | Negative |
| 51 | Music Office | 1 | Floor | Brown | Intact | Concrete | 0.10 | Negative |
| 52 | Music Storage | 1 | Wall A | Yellow | Intact | Sheetrock | -0.10 | Negative |
| 53 | Music Storage | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 54 | Music Storage | 1 | Wall A Door Frame | Stained | Intact | Wood | 0.10 | Negative |
| 55 | Music Storage | 1 | Wall A Baseboard | Brown | Intact | vinyl | 3.10 | Positive |
| 56 | Music Storage | 1 | Wall B | Yellow | Intact | Sheetrock | 0.00 | Negative |
| 57 | Music Storage | 1 | Wall C | Yellow | Intact | Sheetrock | 0.10 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 58 | Music Storage | 1 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 59 | Music Storage | 1 | Wall C Door Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 60 | Music Storage | 1 | Wall D | Yellow | Intact | Sheetrock | 0.00 | Negative |
| 61 | Music Storage | 1 | Floor | Brown | Intact | Concrete | 0.00 | Negative |
| 62 | LL-3 | 1 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 63 | LL-3 | 1 | Wall A Door | Gray | Intact | Metal | -0.10 | Negative |
| 64 | LL-3 | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 65 | LL-3 | 1 | Wall A Baseboard | Brown | Intact | vinyl | 3.20 | Positive |
| 66 | LL-3 | 1 | Wall B | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 67 | LL-3 | 1 | Wall B | Green | Intact | Ceramic | 8.50 | Positive |
| 68 | LL-3 | 1 | Wall B Lockers | Gray | Intact | Metal | 0.00 | Negative |
| 69 | LL-3 | 1 | Wall C | Yellow | Intact | Plaster | -0.20 | Negative |
| 70 | LL-3 | 1 | Wall C Door | Yellow | Intact | Metal | 0.00 | Negative |
| 71 | LL-3 | 1 | Wall C Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 72 | LL-3 | 1 | Wall C Window | Yellow | Intact | Metal | 0.50 | Negative |
| 73 | LL-3 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 6.60 | Positive |
| 74 | LL-3 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 75 | LL-3 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 76 | LL-3 | 1 | Wall D Window | Yellow | Intact | Metal | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|-----------------|-------------------------------------|----------------------------|
| 77 | LL-3 | 1 | Wall D Window Frame | Yellow | Intact | Metal | 4.80 | Positive |
| 78 | LL-3 | 1 | Ceiling | Yellow | Intact | Sheetrock | 0.30 | Negative |
| 79 | LL-3 | 1 | Floor | Brown | Intact | Carpet/Concrete | 0.40 | Negative |
| 80 | Music Directors | 1 | Wall A | Blue | Intact | Sheetrock | 0.10 | Negative |
| 81 | Music Directors | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 82 | Music Directors | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 83 | Music Directors | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 84 | Music Directors | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 85 | Music Directors | 1 | Wall B Window | Yellow | Intact | Metal | -0.10 | Negative |
| 86 | Music Directors | 1 | Wall B Window Frame | Blue | Intact | Wood | -0.20 | Negative |
| 87 | Music Directors | 1 | Wall B Radialor | Tan | Intact | Metal | 0.30 | Negative |
| 88 | Music Directors | 1 | Wall C | Blue | Intact | Sheetrock | 0.10 | Negative |
| 89 | Music Directors | 1 | Wall D | Blue | Intact | Sheetrock | 0.10 | Negative |
| 90 | Music Room | 1 | Wall A | Blue | Intact | Sheetrock | 0.20 | Negative |
| 91 | Music Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 92 | Music Room | 1 | Wall A Door Frame | Gray | Intact | Metal | 0.00 | Negative |
| 93 | Music Room | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 94 | Music Room | 1 | Wall B | Blue | Intact | Sheetrock | -0.10 | Negative |
| 95 | Music Room | 1 | Wall C | Blue | Intact | Sheetrock | -0.10 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|-----------------|------------------------|----------------------------|
| 96 | Music Room | 1 | Wall D | Blue | Intact | Sheetrock | 0.30 | Negative |
| 97 | Music Room | 1 | Floor | Brown | Intact | Carpet/Concrete | 0.20 | Negative |
| 98 | Fan Room | 1 | Wall A | Green | Intact | Concrete | 0.00 | Negative |
| 99 | Fan Room | 1 | Wall A Door | Brown | Intact | Metal | 0.30 | Negative |
| 100 | Fan Room | 1 | Wall A Door Frame | Green | Intact | Metal | 0.60 | Negative |
| 101 | Fan Room | 1 | Wall A Steps | Gray | Intact | Concrete | -0.10 | Negative |
| 102 | Fan Room | 1 | Wall A Railing | Gray | Intact | Metal | 1.90 | Positive |
| 103 | Fan Room | 1 | Wall B | Green | Intact | Concrete | 0.20 | Negative |
| 104 | Fan Room | 1 | Wall C | Green | Intact | Concrete | 0.20 | Negative |
| 105 | Fan Room | 1 | Wall D | Green | Intact | Concrete | 0.10 | Negative |
| 106 | Fan Room | 1 | Ductwork | Green | Intact | Metal | 4.60 | Positive |
| 107 | LL-4 | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 108 | LL-4 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 109 | LL-4 | 1 | Wall A Door Frame | White | Intact | Metal | 0.00 | Negative |
| 110 | LL-4 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 111 | LL-4 | 1 | Wall B | Blue | Intact | Sheetrock | 0.20 | Negative |
| 112 | LL-4 | 1 | Wall B Door | Stained | Intact | Wood | 0.10 | Negative |
| 113 | LL-4 | 1 | Wall B Door Frame | White | Intact | Metal | 0.10 | Negative |
| 114 | LL-4 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------|-------------|---|--------|-----------|----------------|------------------------|----------------------------|
| 115 | LL-4 | 1 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 116 | LL-4 | 1 | Wall C Window Frame | Blue | Intact | Wood | 2.30 | Positive |
| 117 | LL-4 | 1 | Wall C Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 118 | LL-4 | 1 | Wall D | Blue | Intact | Plaster | -0.10 | Negative |
| 119 | Storage | 1 | Wall A Door | Silver | Intact | Metal | 0.40 | Negative |
| 120 | Storage | 1 | Wall A Door Frame | Green | Intact | Metal | 0.60 | Negative |
| 121 | Storage | 1 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 122 | Boiler Storage | 1 | Wall A | Green | Intact | Concrete | 0.20 | Negative |
| 123 | Boiler Storage | 1 | Wall A Door | Green | Intact | Metal | -0.10 | Negative |
| 124 | Boiler Storage | 1 | Wall A Door Frame | Green | Intact | Metal | 0.10 | Negative |
| 125 | Boiler Storage | 1 | Wall B | Green | Intact | Concrete | 0.10 | Negative |
| 126 | Boiler Storage | 1 | Wall B Railing | Black | Intact | Metal | -0.10 | Negative |
| 127 | Boiler Storage | 1 | Wall C | Green | Intact | Concrete | 0.30 | Negative |
| 128 | Boiler Storage | 1 | Wall D | Green | Intact | Concrete | 0.10 | Negative |
| 129 | Library | 1 | Wall A | White | Intact | Sheetrock | 0.00 | Negative |
| 130 | Library | 1 | Wall A Door | Tan | Intact | Metal | -0.30 | Negative |
| 131 | Library | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 132 | Library | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 2.80 | Positive |
| 133 | Library | 1 | Wall B | White | Intact | Sheetrock | 0.40 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|-----------------|-------------------------------------|----------------------------|
| 134 | Library | 1 | Wall B Door | Tan | Intact | Metal | 0.20 | Negative |
| 135 | Library | 1 | Wall B Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 136 | Library | 1 | Wall B Window | Yellow | Intact | Metal | -0.10 | Negative |
| 137 | Library | 1 | Wall B Window Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 138 | Library | 1 | Wall C | White | Intact | Sheetrock | -0.10 | Negative |
| 139 | Library | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 140 | Library | 1 | Wall C Window Frame | White | Intact | Metal | 0.10 | Negative |
| 141 | Library | 1 | Wall D | White | Intact | Sheetrock | 0.10 | Negative |
| 142 | Library | 1 | Ceiling | White | Intact | Sheetrock | 0.10 | Negative |
| 143 | Library | 1 | Soffit | White | Intact | Sheetrock | 0.20 | Negative |
| 144 | Library | 1 | Column | White | Intact | Metal | 0.40 | Negative |
| 145 | Library | 1 | Floor | Green | Intact | Carpet/Concrete | -0.20 | Negative |
| 146 | Library | 1 | Book Shelves | Stained | Intact | Wood | -0.10 | Negative |
| 147 | A/V Room | 1 | Wall A | White | Intact | Sheetrock | 0.40 | Negative |
| 148 | A/V Room | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 149 | A/V Room | 1 | Wall A Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 150 | A/V Room | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 4.10 | Positive |
| 151 | A/V Room | 1 | Wall A Window Frame | Tan | Intact | Metal | 0.20 | Negative |
| 152 | A/V Room | 1 | Wall B | White | Intact | Sheetrock | -0.10 | Negative |

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|-----------------|------------------------|----------------------------|
| 153 | A/V Room | 1 | Wall C | White | Intact | Sheetrock | -0.10 | Negative |
| 154 | A/V Room | 1 | Wall D | White | Intact | Sheetrock | 0.30 | Negative |
| 155 | A/V Room | 1 | Column | White | Intact | Sheetrock | 0.10 | Negative |
| 156 | A/V Room | 1 | Floor | Green | Intact | Carpet/Concrete | 0.10 | Negative |
| 157 | Copy Area | 1 | Wall A | White | Intact | Sheetrock | -0.10 | Negative |
| 158 | Copy Area | 1 | Wall A Door | Tan | Intact | Wood | 0.30 | Negative |
| 159 | Copy Area | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 160 | Copy Area | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 2.90 | Positive |
| 161 | Copy Area | 1 | Wall B | White | Intact | Sheetrock | -0.10 | Negative |
| 162 | Copy Area | 1 | Wall B | White | Intact | Sheetrock | 0.10 | Negative |
| 163 | Copy Area | 1 | Wall B Door | Tan | Intact | Metal | 0.00 | Negative |
| 164 | Copy Area | 1 | Wall B Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 165 | Copy Area | 1 | Wall C | White | Intact | Sheetrock | 0.20 | Negative |
| 166 | Copy Area | 1 | Wall C | White | Intact | Concrete | 0.30 | Negative |
| 167 | Copy Area | 1 | Wall D | White | Intact | Sheetrock | -0.10 | Negative |
| 168 | Copy Area Office | 1 | Wall A | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 169 | Copy Area Office | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 170 | Copy Area Office | 1 | Wall A Door Frame | Tan | Intact | Metal | -0.10 | Negative |
| 171 | Copy Area Office | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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 XRF-Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 172 | Copy Area Office | 1 | Wall B | Yellow | Intact | Sheetrock | 0.20 | Negative |
| 173 | Copy Area Office | 1 | Wall B Shelves | Stained | Intact | Wood | -0.10 | Negative |
| 174 | Copy Area Office | 1 | Wall C | Yellow | Intact | Sheetrock | 0.30 | Negative |
| 175 | Copy Area Office | 1 | Wall D | Yellow | Intact | Sheetrock | -0.20 | Negative |
| 176 | Womens Room | 1 | Wall A | White | Intact | Sheetrock | 0.10 | Negative |
| 177 | Womens Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 178 | Womens Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 179 | Womens Room | 1 | Wall B | White | Intact | Sheetrock | 0.10 | Negative |
| 180 | Womens Room | 1 | Wall B | Gray | Intact | Ceramic | >9.9 | Positive |
| 181 | Womens Room | 1 | Wall C | White | Intact | Sheetrock | 0.30 | Negative |
| 182 | Womens Room | 1 | Wall C | Gray | Intact | Ceramic | >9.9 | Positive |
| 183 | Womens Room | | Wall D | White | Intact | Sheetrock | 0.10 | Negative |
| 184 | Womens Room | 1 | Wall D | Gray | Intact | Ceramic | >9.9 | Positive |
| 185 | Womens Room | | Floor | Green | Intact | Ceramic | 0.10 | Negative |
| 186 | Mens Room | 1 | Wall A | White | Intact | Sheetrock | 0.30 | Negative |
| 187 | Mens Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 188 | Mens Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 189 | Mens Room | 1 | Wall B | White | Intact | Sheetrock | 0.20 | Negative |
| 190 | Mens Room | 1 | Wall B | Gray | Intact | Ceramic | >9.9 | Positive |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|------------------------|----------------------------|
| 191 | Mens Room | 1 | Wall C | White | Intact | Sheetrock | 0.10 | Negative |
| 192 | Mens Room | 1 | Wall C | Gray | Intact | Ceramic | >9.9 | Positive |
| 193 | Mens Room | 1 | Wall D | White | Intact | Sheetrock | 0.30 | Negative |
| 194 | Mens Room | 1 | Wall D | Gray | Intact | Ceramic | >9.9 | Positive |
| 195 | Mens Room | 1 | Floor | Green | Intact | Ceramic | 0.20 | Negative |
| 196 | Hall #1 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 197 | Hall #1 | 1 | Wall A | Green | Intact | Ceramic | >9.9 | Positive |
| 198 | Hall #1 | 1 | Wall B | Tan | Intact | Plaster | 0.10 | Negative |
| 199 | Hall #1 | 1 | Wall B | Green | Intact | Ceramic | >9.9 | Positive |
| 200 | Hall #1 | 1 | Wall B Elevator Door | Gray | Intact | Metal | 1.70 | Positive |
| 201 | Hall #1 | 1 | Wall B Elevator Door Frame | Gray | Intact | Metal | 2.60 | Positive |
| 202 | Hall #1 | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 203 | Hall #1 | 1 | Wall C | Green | Intact | Ceramic | >9.9 | Positive |
| 204 | Hall #1 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 205 | Hall #1 | 1 | Wall D | Green | Intact | Ceramic | >9.9 | Positive |
| 206 | Hall #1 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 207 | Hall #1 | 1 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 208 | Hall #1 | 1 | Wall D Door | Tan | Intact | Metal | -0.10 | Negative |
| 209 | Hall #1 | 1 | Wall D Door Frame | Tan | Intact | Metal | -0.10 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 210 | Stair #1 | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 211 | Stair #1 | 1 | Wall A | Green | Intact | Ceramic | >9.9 | Positive |
| 212 | Stair #1 | 1 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 213 | Stair #1 | 1 | Wall B | Green | Intact | Ceramic | >9.9 | Positive |
| 214 | Stair #1 | 1 | Wall C | White | Intact | Plaster | -0.10 | Negative |
| 215 | Stair #1 | 1 | Wall C | Green | Intact | Ceramic | >9.9 | Positive |
| 216 | Stair #1 | 1 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 217 | Stair #1 | 1 | Wall C Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 218 | Stair #1 | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 219 | Stair #1 | 1 | Wall D | Green | Intact | Ceramic | >9.9 | Positive |
| 220 | Stair #1 | 1 | Wall D Railing | Gray | Intact | Metal | 0.00 | Negative |
| 221 | Stair #1 | 1 | Stair Riser | Gray | Intact | Metal | -0.10 | Negative |
| 222 | Stair #1 | 1 | Stair Stringer | Gray | Intact | Metal | 3.10 | Positive |
| 223 | Stair #1 | 1 | Stair Railing | Gray | Intact | Metal | 0.60 | Negative |
| 224 | Stair #1 | 1 | Stair Baluster | Gray | Intact | Metal | 0.40 | Negative |
| 225 | Cafeteria | 1 | Wall A | Yellow | Intact | Sheetrock | 0.10 | Negative |
| 226 | Cafeteria | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 227 | Cafeteria | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 228 | Cafeteria | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.50 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA016B4-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 176B
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|-------------------------------------|----------------------------|
| 229 | Cafeteria | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 230 | Cafeteria | 1 | Wall B Window | Yellow | | Metal | 0.10 | Negative |
| 231 | Cafeteria | 1 | Wall B Window Frame | Brown | | Wood | 0.20 | Negative |
| 232 | Cafeteria | 1 | Wall B Chair Rail | Brown | | Wood | 0.10 | Negative |
| 233 | Cafeteria | 1 | Wall B Radiator | Tan | | Metal | 0.00 | Negative |
| 234 | Cafeteria | 1 | Wall B Door | Yellow | | Metal | 0.10 | Negative |
| 235 | Cafeteria | 1 | Wall B Door Frame | Yellow | | Metal | -0.10 | Negative |
| 236 | Cafeteria | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 237 | Cafeteria | 1 | Wall C | Yellow | | Cinderblock | 0.20 | Negative |
| 238 | Cafeteria | 1 | Wall C Window | Yellow | | Metal | 0.30 | Negative |
| 239 | Cafeteria | 1 | Wall C Window Frame | Brown | Intact | Wood | 0.00 | Negative |
| 240 | Cafeteria | 1 | Wall C Chair Rail | Brown | Intact | Wood | -0.10 | Negative |
| 241 | Cafeteria | 1 | Wall D | Yellow | Intact | Plaster | -0.30 | Negative |
| 242 | Cafeteria | 1 | Wall D Window | Yellow | Intact | Metal | 0.20 | Negative |
| 243 | Cafeteria | 1 | Wall D Window Frame | Brown | Intact | Wood | 0.10 | Negative |
| 244 | Cafeteria | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 245 | Cafeteria | 1 | Column | Yellow | Intact | Concrete | 0.30 | Negative |
| 246 | Cafeteria | 1 | Floor | Gray | Intact | VCT | 0.10 | Negative |
| 247 | C-1 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 248 | C-1 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 249 | C-1 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 250 | C-1 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 251 | C-1 | 1 | Wall B | Tan | Intact | Ceramic | -0.20 | Negative |
| 252 | C-1 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.00 | Negative |
| 253 | C-1 | 1 | Wall B Door | Blue | Intact | Metal | 0.30 | Negative |
| 254 | C-1 | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 255 | C-1 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 256 | C-1 | 1 | Wall C | Tan | Intact | Ceramic | 0.20 | Negative |
| 257 | C-1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 258 | C-1 | 1 | Wall D | Tan | Intact | Ceramic | 0.20 | Negative |
| 259 | C-1 | 1 | Ceiling | Yellow | Intact | Plaster | 0.10 | Negative |
| 260 | C-1 | 1 | Floor | Tan | Intact | Ceramic | -0.10 | Negative |
| 261 | C-1 | 1 | Floor | Gray | Intact | Ceramic | 0.10 | Negative |
| 262 | AS-3 | 1 | Wall A | Beige | Intact | Plaster | -0.10 | Negative |
| 263 | AS-3 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 264 | AS-3 | 1 | Wall A Door Frame | White | Intact | Metal | -0.10 | Negative |
| 265 | AS-3 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 3.60 | Positive |
| 266 | AS-3 | 1 | Wall B | Pink | Intact | Sheetrock | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 267 | AS-3 | 1 | Wall B | Beige | Intact | Sheetrock | -0.10 | Negative |
| 268 | AS-3 | 1 | Wall C | Beige | Intact | Sheetrock | 0.20 | Negative |
| 269 | AS-3 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 270 | AS-3 | 1 | Wall C Window Frame | Beige | Intact | Wood | 0.20 | Negative |
| 271 | AS-3 | 1 | Wall D | Beige | Intact | Sheetrock | -0.10 | Negative |
| 272 | AS-3 | 1 | Wall D Window | Yellow | | Metal | 0.00 | Negative |
| 273 | AS-3 | 1 | Wall D Window Frame | Beige | Intact | Wood | 0.10 | Negative |
| 274 | AS-3 | 1 | Wall D Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 275 | AS-3 Womens' Room | 1 | Wall A | Pink | Intact | Plaster | 0.30 | Negative |
| 276 | AS-3 Womens' Room | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 277 | AS-3 Womens' Room | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.20 | Negative |
| 278 | AS-3 Womens' Room | 1 | Wall B | Pink | Intact | Plaster | 0.10 | Negative |
| 279 | AS-3 Womens' Room | 1 | Wall C | Pink | Intact | Plaster | 0.00 | Negative |
| 280 | AS-3 Womens' Room | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 281 | AS-3 Womens' Room | 1 | Wall C Window Frame | Pink | Intact | Wood | 3.20 | Positive |
| 282 | AS-3 Womens' Room | 1 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 283 | AS-3 Mens' Room | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 284 | AS-3 Mens' Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 285 | AS-3 Mens' Room | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 286 | AS-3 Mens' Room | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 287 | AS-3 Mens' Room | 1 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 288 | AS-3 Mens' Room | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 289 | AS-3 Mens' Rm | 1 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 290 | AS-3 Mens' Room | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 291 | Hall #2 Girls' Room | 1 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 292 | Hall #2 Girls' Room | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 293 | Hall #2 Girls' Room | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 294 | Hall #2 Girls' Room | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 295 | Hall #2 Girls' Room | 1 | Wall C | White | Intact | Wood | -0.10 | Negative |
| 296 | Hall #2 Girls' Room | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 297 | Hall #2 Girls' Room | 1 | Wall C Stall Wall | Green | Intact | Metal | 0.00 | Negative |
| 298 | Hall #2 Girls' Room | 1 | Wall D | White | Intact | Plaster | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 299 | Hall #2 Girls' Room | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 300 | Hall #2 Girls' Room | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 301 | Hall #2 Girls' Room | 1 | Floor | Green | Intact | Terrazzo | -0.20 | Negative |
| 302 | Hall #2 Boys' Room | 1 | Wall A | White | intact | Plaster | 0.10 | Negative |
| 303 | Hall #2 Boys' Room | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 304 | Hall #2 Boys' Room | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 305 | Hall #2 Boys' Room | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 306 | Hall #2 Boys' Room | 1 | Wall C | White | Intact | Wood | -0.10 | Negative |
| 307 | Hall #2 Boys' Room | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 308 | Hall #2 Boys' Room | 1 | Wall C Stall Wall | Green | Intact | Metal | 0.00 | Negative |
| 309 | Hall #2 Boys' Room | 1 | Wall D | White | intact | Plaster | -0.10 | Negative |
| 310 | Hall #2 Boys' Room | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 311 | Hall #2 Boys' Room | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 312 | Hall #2 Boys' Room | 1 | Floor | Green | Intact | Terrazzo | -0.20 | Negative |
| 313 | AS-4 | 1 | Wall A | Tan | Intact | Plaster | 0.00 | Negative |
| 314 | AS-4 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 315 | AS-4 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 316 | AS-4 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.30 | Positive |
| 317 | AS-4 | 1 | Wall B | Tan | Intact | Plaster | 0.10 | Negative |
| 318 | AS-4 | 1 | Wall B Locker | Yellow | Intact | Metal | 0.30 | Negative |
| 319 | AS-4 | 1 | Wall C | Tan | Intact | Plaster | 0.10 | Negative |
| 320 | AS-4 | 1 | Wall D | Tan | Intact | Plaster | 0.10 | Negative |
| 321 | Auditorium | 1 | Wall A | Silver | Intact | Brick | -0.10 | Negative |
| 322 | Auditorium | 1 | Wall A | Tan | Intact | Brick | 0.20 | Negative |
| 323 | Auditorium | 1 | Wall A Door | Tan | Intact | Wood | -0.20 | Negative |
| 324 | Auditorium | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 325 | Auditorium | 1 | Wall A | Tan | Intact | Plaster | 0.00 | Negative |
| 326 | Auditorium | 1 | Wall A Crown Molding | White | Intact | Metal | 0.30 | Negative |
| 327 | Auditorium | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 328 | Auditorium | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.20 | Negative |
| 329 | Auditorium | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 330 | Auditorium | 1 | Wall A Column | White | Intact | Concrete | -0.20 | Negative |



LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 331 | Auditorium | 1 | Wall A Decorative Molding | Pink | Intact | Plaster | 0.00 | Negative |
| 332 | Auditorium | 1 | Wall A Sconce | Pink | Intact | Plaster | 0.10 | Negative |
| 333 | Auditorium | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 334 | Auditorium | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 335 | Auditorium | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 336 | Auditorium | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 337 | Auditorium | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 338 | Auditorium | 1 | Wall B Column | White | Intact | Concrete | 0.10 | Negative |
| 339 | Auditorium | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 340 | Auditorium | 1 | Wall C Decorative Molding | Pink | Intact | Plaster | 0.20 | Negative |
| 341 | Auditorium | 1 | Wall C Window Panel | White | Intact | Wood | 2.80 | Positive |
| 342 | Auditorium | 1 | Wall C Window Frame | White | Intact | Wood | 3.60 | Positive |
| 343 | Auditorium | 1 | Wall C Radiator | White | Intact | Metal | 0.40 | Negative |
| 344 | Auditorium | 1 | Wall C Sconces | Pink | Intact | Plaster | 0.10 | Negative |
| 345 | Auditorium | 1 | Wall C Column | White | Intact | Concrete | -0.10 | Negative |
| 346 | Auditorium | 1 | Wall C Door | Yellow | Intact | Metal | 0.20 | Negative |
| 347 | Auditorium | 1 | Wall C Door Frame | White | Intact | Metal | 0.40 | Negative |
| 348 | Auditorium | 1 | Wall C Radiator | White | Intact | Metal | 0.10 | Negative |
| 349 | Auditorium | 1 | Wall C Stage Column | White | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 350 | Auditorium | 1 | Wall C | Silver | Intact | Brick | 0.10 | Negative |
| 351 | Auditorium | 1 | Wall C Covebase | Brown | Intact | Vinyl | 4.20 | Positive |
| 352 | Auditorium | 1 | Wall D | White | Intact | Brick | 0.10 | Negative |
| 353 | Auditorium | 1 | Wall D Door | Stained | Intact | Wood | -0.20 | Negative |
| 354 | Auditorium | 1 | Wall D Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 355 | Auditorium | 1 | Stage Floor | Stained | Intact | Wood | 0.00 | Negative |
| 356 | Auditorium | 1 | Stage Front | Stained | Intact | Wood | 0.10 | Negative |
| 357 | Auditorium | 1 | Auditorium Chair Back | Green | Intact | Metal | 0.40 | Negative |
| 358 | Auditorium | 1 | Auditorium Chair Bottom | Green | Intact | Metal | 0.10 | Negative |
| 359 | Auditorium | 1 | Auditorium Chair Frame | Green | Intact | Metal | 0.60 | Negative |
| 360 | Auditorium | 1 | Lower Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 361 | Auditorium | 1 | Lower Ceiling | Pink | Intact | Plaster | 0.20 | Negative |
| 362 | Auditorium | 1 | Floor | Brown | Intact | VAT | 0.10 | Negative |
| 363 | Upper Auditorium | 1 | Ceiling | White | Intact | Plaster | 0.70 | Negative |
| 364 | Upper Auditorium | 1 | Ceiling | Pink | Intact | Plaster | 0.10 | Negative |
| 365 | Upper Auditorium | 1 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 366 | Upper Auditorium | 1 | Railing | Black | Intact | Metal | 0.10 | Negative |
| 367 | Room 122 | 1 | Wall A | Green | Intact | Plaster | 0.10 | Negative |
| 368 | Room 122 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 369 | Room 122 | 1 | Wall A Door Frame | Green | Intact | Metal | 0.40 | Negative |
| 370 | Room 122 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 371 | Room 122 | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 372 | Room 122 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 373 | Room 122 | 1 | Wall C Door | Green | Intact | Plaster | 0.00 | Negative |
| 374 | Room 122 | 1 | Wall C Cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 375 | Room 122 | 1 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 376 | Room 122 | 1 | Wall C Window Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 377 | Room 122 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 378 | Room 122 | 1 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 379 | Room 122 Closet | 1 | Wall A | Green | Intact | Plaster | -0.10 | Negative |
| 380 | Room 122 Closet | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 381 | Room 122 Closet | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 382 | Rm 122 Closet | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.40 | Positive |
| 383 | Room 122 Closet | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 384 | Room 122 Closet | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 385 | Room 122 Closet | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 386 | Room 122 Closet | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 387 | Room 120 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 388 | Room 120 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 389 | Room 120 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 390 | Room 120 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 391 | Room 120 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 392 | Room 120 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 393 | Room 120 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 394 | Room 120 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 395 | Room 120 | 1 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 396 | Room 120 | 1 | Wall C Rail | Tan | Intact | Metal | 0.40 | Negative |
| 397 | Room 120 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 398 | Room 120 | 1 | Wall D Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 399 | Room 120 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 400 | Room 118 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 401 | Room 118 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 402 | Room 118 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 403 | Room 118 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 404 | Room 118 | 1 | Wall B | Yellow | Intact | Plaster | -0.20 | Negative |
| 405 | Room 118 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 406 | Room 118 | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 407 | Room 118 | 1 | Wall C Door Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 408 | Room 118 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 409 | Room 118 | 1 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |
| 410 | Room 118 | 1 | Wall D Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 411 | Room 118 | 1 | Wall D Radiator | Green | Intact | Metal | 0.10 | Negative |
| 412 | Room 118 | 1 | Floor | Blue | Intact | Wood | 0.00 | Negative |
| 413 | PE-1 | 1 | Wall A | Purple | Intact | Plaster | 0.10 | Negative |
| 414 | PE-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 415 | PE-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 416 | PE-1 | 1 | Wall A Baseboard | Purple | Intact | Wood | -0.20 | Negative |
| 417 | PE-1 | 1 | Wall B | Purple | Intact | Plaster | 0.10 | Negative |
| 418 | PE-1 | 1 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 419 | PE-1 | 1 | Wall C | Purple | Intact | Wood | -0.10 | Negative |
| 420 | PE-1 | 1 | Wall D | Purple | Intact | Plaster | 0.00 | Negative |
| 421 | PE-1 | 1 | Floor | Stained | Intact | Wood | -0.10 | Negative |
| 422 | PEM #2 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 423 | PEM #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 424 | PEM #2 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 425 | PEM #2 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 426 | PEM #2 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 427 | PEM #2 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 428 | PEM #2 | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |
| 429 | PEM #2 | 1 | Wall C Door Frame | Brown | Intact | Metal | 0.20 | Negative |
| 430 | PEM #2 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 431 | PEM #2 Bath | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 432 | PEM #2 Bath | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 433 | PEM #2 Bath | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 434 | PEM #2 Bath | 1 | Wall A Baseboard | White | Intact | Ceramic | -0.10 | Negative |
| 435 | PEM #2 Bath | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 436 | PEM #2 Bath | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 437 | PEM #2 Bath | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 438 | PEM #2 Bath | 1 | Floor | Tan | Intact | Ceramic | 0.00 | Negative |
| 439 | PEM #2 Bath | 1 | Ceiling | White | Intact | Plaster | -0.10 | Negative |
| 440 | PEM #4 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 441 | PEM #4 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 442 | PEM #4 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 443 | PEM #4 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 444 | PEM #4 | 1 | Wall B Locker | Orange | Intact | Metal | 2.70 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 445 | PEM #4 | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 446 | PEM #4 | 1 | Wall C Locker | Orange | Intact | Metal | 1.90 | Positive |
| 447 | PEM #4 | 1 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 448 | PEM #4 | 1 | Wall C Window Frame | Brown | Intact | Wood | 4.00 | Positive |
| 449 | PEM #4 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 450 | PEM #4 | 1 | Wall D Stall Wall | White | Intact | Metal | 0.10 | Negative |
| 451 | PEM #4 | 1 | Wall D Locker | Orange | Intact | Metal | 2.80 | Positive |
| 452 | PEM #4 Shower | 1 | Wall A | White | Intact | Ceramic | 2.00 | Positive |
| 453 | PEM #4 Shower | 1 | Wall A Door Frame | White | Intact | wood | -0.10 | Negative |
| 454 | PEM #4 Shower | 1 | Wall B | White | Intact | Ceramic | 3.40 | Positive |
| 455 | PEM #4 Shower | 1 | Wall C | White | Intact | Ceramic | 2.60 | Positive |
| 456 | PEM #4 Shower | 1 | Wall D | White | Intact | Ceramic | 3.10 | Positive |
| 457 | PEM #4 Shower | 1 | Ceiling | White | Intact | Ceramic | 3.80 | Positive |
| 458 | PEM #4 Shower | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 459 | PEF-1 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 460 | PEF-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 461 | PEF-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 462 | PEF-1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.40 | Positive |
| 483 | PEF-1 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 464 | PEF-1 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 465 | PEF-1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 466 | PEF-1 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 467 | PEF-1 | 1 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 468 | SG-1 | 1 | Wall A | Yellow | Intact | Cinderblock | -0.20 | Negative |
| 469 | SG-1 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 470 | SG-1 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 471 | SG-1 | 1 | Wall A Baseboard | Brown | Intact | Wood | 0.30 | Negative |
| 472 | SG-1 | 1 | Wall B | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 473 | SG-1 | 1 | Wall C | Yellow | Intact | Cinderblock | 0.20 | Negative |
| 474 | SG-1 | 1 | Wall D | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 475 | SG-1 | 1 | Floor | Stained | Intact | Wood | 0.20 | Negative |
| 476 | SG-1 Gym Storage | 1 | Wall A | Yellow | Intact | Cinderblock | 0.10 | Negative |
| 477 | SG-1 Gym Storage | 1 | Wall A Door | Green | Intact | Metal | 0.30 | Negative |
| 478 | SG-1 Gym Storage | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 479 | SG-1 Gym Storage | 1 | Wall B | Orange | Intact | Cinderblock | 0.10 | Negative |
| 480 | SG-1 Gym Storage | 1 | Wall C | Yellow | Intact | Cinderblock | 0.00 | Negative |
| 481 | SG-1 Gym Storage | 1 | Wall D | Yellow | Intact | Cinderblock | -0.10 | Negative |
| 482 | Room 119 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 483 | Room 119 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 484 | Room 119 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 485 | Room 119 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.40 | Positive |
| 486 | Room 119 | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 487 | Room 119 | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 488 | Room 119 | 1 | Wall B Door | Stained | Intact | Wood | -0.20 | Negative |
| 489 | Room 119 | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.10 | Negative |
| 490 | Room 119 | 1 | Wall C | Yellow | Intact | Plaster | 0.3 | Negative |
| 491 | Room 119 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 492 | Room 119 | 1 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 493 | Room 119 | 1 | Wall D Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 494 | Room 119 | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 495 | Room 119 | 1 | Floor | Gray | Intact | Concrete | 0.10 | Negative |
| 496 | Room 119 | 1 | Floor | Gray | Intact | Wood | 0.00 | Negative |
| 497 | Room 117 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 498 | Room 117 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 499 | Room 117 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 500 | Room 117 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.80 | Positive |
| 501 | Room 117 | 1 | Wall A Cabinet | Stained | Intact | Wood | -0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 502 | Room 117 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 503 | Room 117 | 1 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 504 | Room 117 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 505 | Room 117 | 1 | Wall C Window Frame | Brown | Intact | Wood | 6.20 | Positive |
| 506 | Room 117 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 507 | Room 117 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 508 | Room 117 | 1 | Floor | Gray | Intact | Wood | 0.10 | Negative |
| 509 | Room 115 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 510 | Room 115 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 511 | Room 115 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |
| 512 | Room 115 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 513 | Room 115 | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 514 | Room 115 | 1 | Wall D | White | Intact | Plaster | -0.10 | Negative |
| 515 | Room 115 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 516 | Room 115 | 1 | Floor | Gray | Intact | Concrete | -0.10 | Negative |
| 517 | Room 116 | 1 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 518 | Room 116 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 519 | Room 116 | 1 | Wall A Door Frame | Beige | Intact | Metal | 0.60 | Negative |
| 520 | Room 116 | 1 | Wall A Baseboard | Gray | Intact | Vinyl | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 521 | Room 116 | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 522 | Room 116 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 523 | Room 116 | 1 | Wall C Window | White | Intact | Metal | 0.10 | Negative |
| 524 | Room 116 | 1 | Wall C Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 525 | Room 116 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 526 | Room 116 | 1 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 527 | Room 114 Nurse's Office | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 528 | Room 114 Nurse's Office | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 529 | Room 114 Nurse's Office | 1 | Wall A Door Frame | Beige | Intact | Metal | 0.50 | Negative |
| 530 | Room 114 Nurse's Office | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.40 | Positive |
| 531 | Room 114 Nurse's Office | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 532 | Room 114 Nurse's Office | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 533 | Room 114 Nurse's Office | 1 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 534 | Room 114 Nurse's Office | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 535 | Room 114 Nurse's Office | 1 | Floor | Tan | Intact | VCT | -0.30 | Negative |

LEAD PAINT REPORT FORM

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 536 | Room 114 Exam | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 537 | Room 114 Exam | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 538 | Room 114 Exam | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.30 | Negative |
| 539 | Room 114 Exam | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 540 | Room 114 Exam | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 541 | Room 114 Exam | 1 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 542 | Room 114 Exam | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 543 | Room 114 Exam | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 544 | Room 114 Exam | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 545 | Room 114 Exam | 1 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 546 | Room 114 Bathroom | 1 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 547 | Room 114 Bathroom | 1 | Wall A | Gray | Intact | Ceramic | > 9.9 | Positive |
| 548 | Room 114 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 549 | Room 114 Bathroom | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 550 | Room 114 Bathroom | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 551 | Room 114 Bathroom | 1 | Wall B | Gray | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 552 | Room 114 Bathroom | 1 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 553 | Room 114 Bathroom | 1 | Wall C | Gray | Intact | Ceramic | > 9.9 | Positive |
| 554 | Room 114 Bathroom | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 555 | Room 114 Bathroom | 1 | Wall C Radiator | Tan | Intact | Metal | 0.40 | Negative |
| 556 | Room 114 Bathroom | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 557 | Room 114 Bathroom | 1 | Wall D | Gray | Intact | Ceramic | > 9.9 | Positive |
| 558 | Room 114 Bathroom | 1 | Wall C Window Frame | Blue | Intact | Wood | 3.40 | Positive |
| 559 | Room 127 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 560 | Room 127 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 561 | Room 127 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 562 | Room 127 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.00 | Positive |
| 563 | Room 127 | 1 | Wall B | White | Intact | Plaster | 0.10 | Negative |
| 564 | Room 127 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 565 | Room 127 | 1 | Wall B Door Frame | White | Intact | Metal | 0.40 | Negative |
| 566 | Room 127 | 1 | Wall B Cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 567 | Room 127 | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 568 | Room 127 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 569 | Room 127 | 1 | Wall C Window Frame | White | Intact | Wood | 0.30 | Negative |
| 570 | Room 127 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 571 | Room 127 | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 572 | Room 129 | 1 | Wall A | Tan | Intact | Plaster | 0.10 | Negative |
| 573 | Room 129 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 574 | Room 129 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.50 | Negative |
| 575 | Room 129 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 576 | Room 129 | 1 | Wall B | Tan | Intact | Plaster | 0.20 | Negative |
| 577 | Room 129 | 1 | Wall C | Tan | Intact | Metal | 0.10 | Negative |
| 578 | Room 129 | 1 | Wall C Door | Tan | Intact | Metal | -0.10 | Negative |
| 579 | Room 129 | 1 | Wall C Door Frame | Tan | Intact | Plaster | -0.10 | Negative |
| 580 | Room 129 | 1 | Wall D | Tan | Intact | Plaster | 0.00 | Negative |
| 581 | Room 125 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 582 | Room 125 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 583 | Room 125 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 584 | Room 125 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 585 | Room 125 | 1 | Wall B | Yellow | Intact | Plaster | 0.50 | Negative |
| 586 | Room 125 | 1 | Wall B Cabinet | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 587 | Room 125 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 588 | Room 125 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 589 | Room 125 | 1 | Wall C Window Frame | Yellow | Intact | Wood | -0.10 | Negative |
| 590 | Room 125 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 591 | Room 125 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 592 | Room 125 | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 593 | Room 125 | 1 | Wall D Door Frame | White | Intact | Metal | 0.60 | Negative |
| 594 | Room 125 | 1 | Floor | Tan | Intact | VCT | 0.00 | Negative |
| 595 | Mens Room, #150 | 1 | Wall A | White | Intact | Plaster | 0.30 | Negative |
| 596 | Mens Room, #150 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 597 | Mens Room, #150 | 1 | Wall A Door Frame | White | Intact | Metal | 0.60 | Negative |
| 598 | Mens Room, #150 | 1 | Wall B | White | Intact | Plaster | 0.10 | Negative |
| 599 | Mens Room, #150 | 1 | Wall B | White | Intact | Cinderblock | 0.20 | Negative |
| 600 | Mens Room, #150 | 1 | Wall C | White | Intact | Plaster | 0.20 | Negative |
| 601 | Mens Room, #150 | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 602 | Mens Rm #150 | 1 | Wall C Window Frame | White | Intact | Wood | 2.20 | Positive |
| 603 | Mens Room, #150 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 604 | Mens Room, #150 | 1 | Wall D | White | Intact | Cinderblock | 0.00 | Negative |
| 605 | Mens Room, #150 | 1 | Wall D Stall Wall | Blue | Intact | Metal | 0.20 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 606 | Mens Room, #150 | 1 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 607 | Mens Room, #150 | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 608 | Foyer | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 609 | Foyer | 1 | Wall A Decorative Trim | White | Intact | Plaster | 0.30 | Negative |
| 610 | Foyer | 1 | Wall A Door | Yellow | Intact | Metal | 0.10 | Negative |
| 611 | Foyer | 1 | Wall A Door Frame | White | Intact | Wood | 0.30 | Negative |
| 612 | Foyer | 1 | Wall A Window | White | Intact | Wood | 0.20 | Negative |
| 613 | Foyer | 1 | Wall A Window Frame | White | Intact | Wood | 0.20 | Negative |
| 614 | Foyer | 1 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 615 | Foyer | 1 | Wall B Decorative Trim | White | Intact | Plaster | 0.20 | Negative |
| 616 | Foyer | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |
| 617 | Foyer | 1 | Wall C Door | Stained | Intact | Wood | 0.10 | Negative |
| 618 | Foyer | 1 | Wall C Door Frame | Brown | Intact | Metal | 0.00 | Negative |
| 619 | Foyer | 1 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 620 | Foyer | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 621 | Foyer | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 622 | Room 148 | 1 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 623 | Room 148 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 624 | Room 148 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.50 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 625 | Room 148 | 1 | Wall A Baseboard | Blue | Intact | Wood | 0.40 | Negative |
| 626 | Room 148 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 627 | Room 148 | 1 | Wall C | White | Intact | Plaster | 0.10 | Negative |
| 628 | Room 148 | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 629 | Room 148 | 1 | Wall C Window Frame | Blue | Intact | Wood | 3.10 | Positive |
| 630 | Room 148 | 1 | Wall D | White | Intact | Plaster | 0.00 | Negative |
| 631 | AL 3 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 632 | AL 3 | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 633 | AL 3 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 634 | AL 3 | 1 | Wall B | Yellow | Intact | Plaster | -0.10 | Negative |
| 635 | AL 3 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 636 | AL 3 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 637 | AL 3 | 1 | Ceiling | White | Fair | Plaster | 0.10 | Negative |
| 638 | AL 3 Bath | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 639 | AL 3 Bath | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 640 | AL 3 Bath | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 641 | AL 3 Bath | 1 | Wall A Stall Wall | Gray | Intact | Metal | 0.10 | Negative |
| 642 | AL 3 Bath | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 643 | AL 3 Bath | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 644 | AL 3 Bath | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 645 | AL 3 Bath | 1 | Wall C Window Frame | Brown | Intact | Wood | 4.10 | Positive |
| 646 | AL 3 Bath | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 647 | AL 3 Bath | 1 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 648 | AL 3 Bath | 1 | Ceiling | White | Fair | Plaster | 0.20 | Negative |
| 649 | Room 100 | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 650 | Room 100 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 651 | Room 100 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 652 | Room 100 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 653 | Room 100 | 1 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 654 | Room 100 | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 655 | Room 100 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.10 | Positive |
| 656 | Room 100 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 657 | Room 100 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 658 | Room 100 | 1 | Floor | Brown | Intact | Carpet | -0.20 | Negative |
| 659 | Room 101 | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 660 | Room 101 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 661 | Room 101 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 662 | Room 101 | 1 | Wall A Baseboard | Brown | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 663 | Room 101 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 664 | Room 101 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 665 | Room 101 | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 666 | Room 101 | 1 | Floor | Brown | Intact | VAT | -0.20 | Negative |
| 667 | Room 103 | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 668 | Room 103 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 669 | Room 103 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 670 | Room 103 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 671 | Room 103 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 672 | Room 103 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 673 | Room 103 | 1 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 674 | Room 103 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.60 | Positive |
| 675 | Room 103 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 676 | Room 103 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 677 | Room 103 | 1 | Floor | Gray | Intact | VCT | -0.20 | Negative |
| 678 | Rooms 105/107/109 | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 679 | Rooms 105/107/109 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 680 | Rooms 105/107/109 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.10 | Negative |
| 681 | Rooms 105/107/109 | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 682 | Rooms 105/107/109 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 683 | Rooms 105/107/109 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 684 | Rooms 105/107/109 | 1 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 685 | Rooms 105/107/109 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 686 | Rooms 105/107/109 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 687 | Rooms 105/107/109 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 688 | Rooms 105/107/109 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 689 | Room 111 | 1 | Wall A | White | Intact | Plaster | 0.00 | Negative |
| 690 | Room 111 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 691 | Room 111 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.00 | Negative |
| 692 | Room 111 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 2.90 | Positive |
| 693 | Room 111 | 1 | Wall B | White | Intact | Plaster | 0.20 | Negative |
| 694 | Room 111 | 1 | Wall C | White | Intact | Plaster | 0.30 | Negative |
| 695 | Room 111 | 1 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 696 | Room 111 | 1 | Wall C Window Frame | White | Intact | Wood | 1.90 | Positive |
| 697 | Room 111 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 698 | Room 111 | 1 | Wall D | White | Intact | Plaster | 0.10 | Negative |
| 699 | Room 111 | 1 | Floor | Brown | Intact | Carpet | 0.20 | Negative |
| 700 | Room 108 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 701 | Room 108 | 1 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 702 | Room 108 | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 703 | Room 108 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 704 | Room 108 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 705 | Room 108 | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 706 | Room 108 | 1 | Ceiling | Yellow | Intact | Plaster | 0.20 | Negative |
| 707 | Room 108 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 708 | Room 108A | 1 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 709 | Room 108A | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 710 | Room 108A | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 711 | Room 108A | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 712 | Room 108A | 1 | Wall B Window | White | Intact | Metal | -0.10 | Negative |
| 713 | Room 108A | 1 | Wall B Window Frame | Brown | Intact | Metal | 2.90 | Positive |
| 714 | Room 108A | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 715 | Room 108A | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 716 | Room 108A | 1 | Wall C Window Frame | Brown | Intact | Wood | 1.80 | Positive |
| 717 | Room 108A | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 718 | Room 108A | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 719 | Room 108A | 1 | Wall D Stall Wall | Gray | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|---------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 720 | Speech & Language Offices | 1 | Wall A | Blue | Intact | Plaster | 0.50 | Negative |
| 721 | Speech & Language Offices | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 722 | Speech & Language Offices | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 723 | Speech & Language Offices | 1 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 724 | Speech & Language Offices | 1 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 725 | Speech & Language Offices | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 726 | Speech & Language Offices | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.60 | Positive |
| 727 | Speech & Language Offices | 1 | Wall C Radiator | Tan | Intact | Metal | 0.50 | Negative |
| 728 | Speech & Language Offices | 1 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 729 | Speech & Language Offices | 1 | Floor | Gray | Intact | Concrete | 0.30 | Negative |
| 730 | Boys Room | 1 | Wall A | Yellow | Intact | Plaster | 0.50 | Negative |
| 731 | Boys Room | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 732 | Boys Room | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 733 | Boys Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 734 | Boys Room | 1 | Wall C | Yellow | Intact | Plaster | 0.50 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 735 | Boys Room | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 736 | Boys Room | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 737 | Boys Room | 1 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 738 | Boys Room | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 739 | Office by Gym | 1 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 740 | Office by Gym | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 741 | Office by Gym | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 742 | Office by Gym | 1 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 743 | Office by Gym | 1 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 744 | Office by Gym | 1 | Wall C | Blue | Intact | Cinderblock | 0.10 | Negative |
| 745 | Office by Gym | 1 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 746 | Office by Gym | 1 | Wall C Window Frame | Blue | Intact | Wood | 2.90 | Positive |
| 747 | Office by Gym | 1 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 748 | Office by Gym | 1 | Wall D Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 749 | Room 112 Conference Room | 1 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 750 | Room 112 Conference Room | 1 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 751 | Room 112 Conference Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 752 | Room 112 Conference Rm. | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.80 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 753 | Room 112 Conference Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 754 | Room 112 Conference Room | 1 | Wall C | Yellow | Intact | Plaster | 0.50 | Negative |
| 755 | Room 112 Conference Room | 1 | Wall C Window | White | Intact | Metal | -0.10 | Negative |
| 756 | Room 112 Conference rm. | 1 | Wall C Window Frame | White | Intact | Wood | 1.80 | Positive |
| 757 | Room 112 Conference Room | 1 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 758 | Room 112 Conference Room | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 759 | Room 112 Conference Room | 1 | Wall D Door Frame | Brown | Intact | Metal | 0.10 | Negative |
| 760 | Room 110 | 1 | Wall A | Blue | Intact | Plaster | 0.20 | Negative |
| 761 | Room 110 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 762 | Room 110 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.70 | Negative |
| 763 | Room 110 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 3.70 | Positive |
| 764 | Room 110 | 1 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 765 | Room 110 | 1 | Wall B Chair Rail | Stained | Intact | Wood | 0.00 | Negative |
| 766 | Room 110 | 1 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 767 | Room 110 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 768 | Room 110 | 1 | Wall C Window Frame | Brown | Intact | Wood | 3.10 | Positive |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 769 | Room 110 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 770 | Room 110 | 1 | Floor | Blue | Intact | Carpet | 0.10 | Negative |
| 771 | Room 106 | 1 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 772 | Room 106 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 773 | Room 106 | 1 | Wall A Door Frame | Blue | Intact | Metal | 0.30 | Negative |
| 774 | Room 106 | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 775 | Room 106 | 1 | Wall B | Blue | Intact | Plaster | 0.40 | Negative |
| 776 | Room 106 | 1 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 777 | Room 106 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 778 | Room 106 | 1 | Wall C Window Frame | Stained | Intact | Wood | -0.10 | Negative |
| 779 | Room 106 | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 780 | Room 106 | 1 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 781 | Room 106 | 1 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 782 | Room 106 | 1 | Wall D Door Frame | Blue | Intact | Metal | 0.10 | Negative |
| 783 | Room 106 Bathroom | 1 | Wall A | Pink | Intact | Plaster | 0.60 | Negative |
| 784 | Room 106 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 785 | Room 106 Bathroom | 1 | Wall A Door Frame | Pink | Intact | Metal | 0.40 | Negative |
| 786 | Room 106 Bathroom | 1 | Wall B | Pink | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 787 | Room 106 Bathroom | 1 | Wall C | Pink | Intact | Plaster | 0.50 | Negative |
| 788 | Room 106 Bathroom | 1 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |
| 789 | Room 106 Bathroom | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 790 | Room 106 Bathroom | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 791 | Room 108 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 792 | Room 108 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 793 | Room 108 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.30 | Negative |
| 794 | Room 108 | 1 | Wall A Baseboard | Tan | Intact | Vinyl | 4.10 | Positive |
| 795 | Room 108 | 1 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 796 | Room 108 | 1 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 797 | Room 108 | 1 | Wall C Window | White | Intact | Metal | 0.10 | Negative |
| 798 | Room 108 | 1 | Wall C Window Frame | Yellow | Intact | Metal | -0.30 | Negative |
| 799 | Room 108 | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 800 | Room 108 | 1 | Floor | Blue | Intact | Carpet | -0.10 | Negative |
| 801 | Room 104 Main Office | 1 | Wall A | Beige | Intact | Wood | 0.30 | Negative |
| 802 | Room 104 Main Office | 1 | Wall A Door | Stained | Intact | Plaster | -0.20 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|----------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 803 | Room 104 Main Office | 1 | Wall A Door Frame | Tan | Intact | Wood | 0.60 | Negative |
| 804 | Room 104 Main Office | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 805 | Room 104 Main Office | 1 | Wall B | Beige | Intact | Plaster | 0.40 | Negative |
| 806 | Room 104 Main Office | 1 | Wall C | Beige | Intact | Plaster | 0.50 | Negative |
| 807 | Room 104 Main Office | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 808 | Room 104 Main Office | 1 | Wall C Window Frame | Brown | Intact | Wood | 2.80 | Positive |
| 809 | Room 104 Main Office | 1 | Wall C Radiator | Tan | Intact | Metal | 0.30 | Negative |
| 810 | Room 104 Main Office | 1 | Wall D | Beige | Intact | Plaster | 0.50 | Negative |
| 811 | Room 104 Main Office | 1 | Wall D Door | Stained | Intact | Wood | -0.10 | Negative |
| 812 | Room 104 Main Office | 1 | Wall D Door Frame | Beige | Intact | Metal | 0.70 | Negative |
| 813 | Room 104 Main Office | 1 | Floor | Blue | Intact | Carpet | 0.00 | Negative |
| 814 | Room 104 Main Office | 1 | Counter | Green | Intact | Metal | 0.50 | Negative |
| 815 | Room 102 Principals Office | 1 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|----------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 816 | Room 102 Principals Office | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 817 | Room 102 Principals Office | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 818 | Room 102 Principals Office | 1 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 819 | Room 102 Principals Office | 1 | Wall B | Blue | Intact | Plaster | 0.40 | Negative |
| 820 | Room 102 Principals Office | 1 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 821 | Room 102 Principals Office | 1 | Wall B Door Frame | Blue | Intact | Metal | 0.60 | Negative |
| 822 | Room 102 Principals Office | 1 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 823 | Room 102 Principals Office | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 824 | Room 102 Principals Office | 1 | Wall C Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 825 | Room 102 Principals Office | 1 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 826 | Room 102 Principals Office | 1 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 827 | Room 102 Bathroom | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 828 | Room 102 Bathroom | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 829 | Room 102 Bathroom | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.60 | Negative |
| 830 | Room 102 Bathroom | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 831 | Room 102 Bathroom | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 832 | Room 102 Bathroom | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 833 | Room 102 Bathroom | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 834 | Room 102 Bathroom | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 835 | Guidance Conference Room | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 836 | Guidance Conference Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 837 | Guidance Conference Room | 1 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 838 | Guidance Conference Rm. | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 4.10 | Positive |
| 839 | Guidance Conference Room | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 840 | Guidance Conference Room | 1 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|--------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 841 | Guidance Conference Room | 1 | Wall B Door Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 842 | Guidance Conference Room | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 843 | Guidance Conference Room | 1 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 844 | Guidance Conference Room | 1 | Wall D Window | White | Intact | Metal | -0.30 | Negative |
| 845 | Guidance Conference Rm. | 1 | Wall D Window Frame | White | Intact | Wood | 3.40 | Positive |
| 846 | Guidance Conference Room | 1 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 847 | Guidance Conference Room | 1 | Floor | Brown | Intact | Carpet | -0.20 | Negative |
| 848 | Guidance Room | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 849 | Guidance Room | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 850 | Guidance Room | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 851 | Guidance Room | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.10 | Positive |
| 852 | Guidance Room | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 853 | Guidance Room | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 854 | Guidance Room | 1 | Wall C Window | White | Intact | Metal | -0.20 | Negative |
| 855 | Guidance Room | 1 | Wall C Window Frame | White | Intact | Wood | 3.80 | Positive |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 856 | Guidance Room | 1 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 857 | Guidance Room | 1 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 858 | Guidance #1 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 859 | Guidance #1 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 860 | Guidance #1 | 1 | Wall A Door Frame | White | Intact | Metal | 0.40 | Negative |
| 861 | Guidance #1 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.10 | Positive |
| 862 | Guidance #1 | 1 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 863 | Guidance #1 | 1 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 864 | Guidance #1 | 1 | Wall C Window | White | Intact | Metal | -0.30 | Negative |
| 865 | Guidance #1 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.40 | Positive |
| 866 | Guidance #1 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 867 | Guidance #1 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 868 | Guidance #2 | 1 | Wall A | Yellow | Intact | Plaster | 0.40 | Negative |
| 869 | Guidance #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 870 | Guidance #2 | 1 | Wall A Door Frame | White | Intact | Metal | 0.30 | Negative |
| 871 | Guidance #2 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 872 | Guidance #2 | 1 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 873 | Guidance #2 | 1 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 874 | Guidance #2 | 1 | Wall C Window | White | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
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 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 875 | Guidance #2 | 1 | Wall C Window Frame | Yellow | Intact | Wood | 2.40 | Positive |
| 876 | Guidance #2 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 877 | Guidance #2 | 1 | Floor | Brown | Intact | Carpet | 0.00 | Negative |
| 878 | Guidance #3 | 1 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 879 | Guidance #3 | 1 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 880 | Guidance #3 | 1 | Wall A Door Frame | White | Intact | Metal | 0.40 | Negative |
| 881 | Guidance #3 | 1 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 882 | Guidance #3 | 1 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 883 | Guidance #3 | 1 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 884 | Guidance #3 | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 885 | Guidance #3 | 1 | Floor | Brown | Intact | Carpet | -0.10 | Negative |
| 886 | Large Gym | 1 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 887 | Large Gym | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 888 | Large Gym | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 889 | Large Gym | 1 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 890 | Large Gym | 1 | Wall A Baseboard | Gray | Intact | Metal | 0.30 | Negative |
| 891 | Large Gym | 1 | Wall B | Yellow | Intact | Plaster | 0.40 | Negative |
| 892 | Large Gym | 1 | Wall B Bleachers | Stained | Intact | Wood | -0.10 | Negative |
| 893 | Large Gym | 1 | Wall B Partition Door | White | Intact | Wood | 0.00 | Negative |



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LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
Project Location: Middletown Enlarged School District
TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
SAMPLE COLLECTOR(S): William T. Johnson
XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 894 | Large Gym | 1 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 895 | Large Gym | 1 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 896 | Large Gym | 1 | Wall D Window Grate | White | Intact | Metal | 0.60 | Negative |
| 897 | Large Gym | 1 | Wall D Window | White | Intact | Metal | -0.20 | Negative |
| 898 | Large Gym | 1 | Wall D Window Frame | Stained | Intact | Wood | 0.10 | Negative |
| 899 | Girls Locker Room | 1 | Wall A | Green | Intact | Plaster | 0.30 | Negative |
| 900 | Girls Locker Room | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 901 | Girls Locker Room | 1 | Wall A Door Frame | Green | Intact | Metal | 0.40 | Negative |
| 902 | Girls Locker Room | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 903 | Girls Locker Room | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 904 | Girls Locker Room | 1 | Wall C Locker | Blue | Intact | Metal | 0.20 | Negative |
| 905 | Girls Locker Room | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 906 | Girls Locker Room | 1 | Wall A Stall Wall | Blue | Intact | Metal | 0.20 | Negative |
| 907 | Girls Locker Room | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 908 | Girls Locker Room | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 909 | Hall #2 | 1 | Wall A | Green | Intact | Plaster | 0.40 | Negative |
| 910 | Hall #2 | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 911 | Hall #2 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 912 | Hall #2 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

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 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|-------------------------------------|----------------------------|
| 913 | Hall #2 | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 914 | Hall #2 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 915 | Hall #2 | 1 | Wall B Bath Entrance | Green | Intact | Ceramic | > 9.9 | Positive |
| 916 | Hall #2 | 1 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 917 | Hall #2 | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 918 | Hall #2 | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 919 | Hall #2 | 1 | Wall D | Green | Intact | Ceramic | 8.80 | Positive |
| 920 | Hall #2 | 1 | Wall D Radiator | Gray | Intact | Metal | 0.40 | Negative |
| 921 | Hall #2 | 1 | Ceiling | White | Intact | Plaster | 0.30 | Negative |
| 922 | Hall #2 | 1 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 923 | Hall #3 | 1 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 924 | Hall #3 | 1 | Wall A | Green | Intact | Ceramic | 6.80 | Positive |
| 925 | Hall #3 | 1 | Wall A Door | Tan | Intact | Wood | 0.10 | Negative |
| 926 | Hall #3 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 927 | Hall #3 | 1 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 928 | Hall #3 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 929 | Hall #3 | 1 | Wall B Locker | Tan | Intact | Metal | 0.40 | Negative |
| 930 | Hall #3 | 1 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 931 | Hall #3 | 1 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

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 TWIN TOWERS MIDDLE SCHOOL

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|--------|-----------|----------------|-------------------------------------|----------------------------|
| 932 | Hall #3 | 1 | Wall D | Green | Intact | Plaster | 0.10 | Negative |
| 933 | Hall #3 | 1 | Wall D | Green | Intact | Concrete | > 9.9 | Positive |
| 934 | Hall #3 | 1 | Wall D Locker | Tan | Intact | Metal | 0.20 | Negative |
| 935 | Hall #3 | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 936 | Hall #3 | 1 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 937 | Hall #3 | 1 | Wall D Fire Exit Box | Tan | Intact | Metal | 0.30 | Negative |
| 938 | Hall #3 | 1 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | -0.20 | Negative |
| 939 | Hall #3 | 1 | Wall D 1" x 1" Tile | Tan | Intact | Ceramic | -0.40 | Negative |
| 940 | Hall #4 | 1 | Wall A Door | Tan | Intact | Metal | 0.20 | Negative |
| 941 | Hall #4 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 942 | Hall #4 | 1 | Wall B | White | Intact | Plaster | 0.00 | Negative |
| 943 | Hall #4 | 1 | Wall B 4x4 | Gold | Intact | Ceramic | 0.20 | Negative |
| 944 | Hall #4 | 1 | Wall D | Gold | Intact | Ceramic | 0.20 | Negative |
| 945 | Hall #4 | 1 | Wall D | White | Intact | Plaster | 0.10 | Negative |
| 946 | Hall #4 | 1 | Ceiling | White | Intact | Plaster | 0.00 | Negative |
| 947 | Hall #4 | 1 | Floor | Tan | Intact | Terrazzo | 0.20 | Negative |
| 948 | Hall #4 | 1 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |
| 949 | Hall #4 | 1 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 950 | Hall #4 | 1 | Wall D Door | Tan | Intact | Metal | 0.10 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 951 | Hall #4 | 1 | Wall D Door Frame | Tan | Intact | Metal | 0.20 | Negative |
| 952 | Hall #5 | 1 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 953 | Hall #5 | 1 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 954 | Hall #5 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 955 | Hall #5 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.60 | Negative |
| 956 | Hall #5 | 1 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 957 | Hall #5 | 1 | Wall B | Green | Intact | Ceramic | 8.40 | Positive |
| 958 | Hall #5 | 1 | Wall B 4"x4" | Green | Intact | Ceramic | 0.20 | Negative |
| 959 | Hall #5 | 1 | Wall B Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 960 | Hall #5 | 1 | Wall B Lockers | Tan | Intact | Metal | 0.40 | Negative |
| 961 | Hall #5 | 1 | Wall B Panel Box | Tan | Intact | Metal | 0.10 | Negative |
| 962 | Hall #5 | 1 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 963 | Hall #5 | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 964 | Hall #5 | 1 | Wall D Locker | Tan | Intact | Metal | 0.10 | Negative |
| 965 | Hall #5 | 1 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 966 | Hall #5 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 967 | Hall #6 | 1 | Wall A Door | Tan | Intact | Metal | 0.20 | Negative |
| 968 | Hall #6 | 1 | Wall A Door Frame | Tan | Intact | Metal | 0.40 | Negative |
| 969 | Hall #6 | 1 | Wall B | Green | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 970 | Hall #6 | 1 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 971 | Hall #6 | 1 | Wall B 4"x4" | Green | Intact | Ceramic | 0.20 | Negative |
| 972 | Hall #6 | 1 | Wall B Locker | Tan | Intact | Metal | 0.20 | Negative |
| 973 | Hall #6 | 1 | Wall B Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 974 | Hall #6 | 1 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 975 | Hall #6 | 1 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 976 | Hall #6 | 1 | Wall D Fire Box | Tan | Intact | Metal | 0.40 | Negative |
| 977 | Hall #6 | 1 | Wall D Panel Box | Tan | Intact | Metal | 0.30 | Negative |
| 978 | Hall #6 | 1 | Ceiling | White | Intact | Plaster | 0.50 | Negative |
| 979 | Hall #6 | 1 | Floor | Tan | Intact | Terrazzo | -0.10 | Negative |
| 980 | Hall #7 | 1 | Wall A Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 981 | Hall #7 | 1 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 982 | Hall #7 | 1 | Wall A Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 983 | Hall #7 | 1 | Wall B Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 984 | Hall #7 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 985 | Hall #7 | 1 | Wall B Door Frame | Brown | Intact | Metal | 0.60 | Negative |
| 986 | Hall #7 | 1 | Wall C Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 987 | Hall #7 | 1 | Wall D Decorative Plaster | White | Intact | Plaster | 0.20 | Negative |
| 988 | Hall #7 | 1 | Ceiling | White | Intact | x | 0.00 | Negative |

LEAD PAINT REPORT FORM

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 989 | Hall #7 | 1 | Floor | Brown | Intact | Terrazzo | -0.30 | Negative |
| 990 | Hall #8 | 1 | Wall A Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 991 | Hall #8 | 1 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 992 | Hall #8 | 1 | Wall A Door Frame | Brown | Intact | Metal | -0.20 | Negative |
| 993 | Hall #8 | 1 | Wall B Decorative Plaster | White | Intact | Plaster | 0.00 | Negative |
| 994 | Hall #8 | 1 | Wall B Door | Stained | Intact | Wood | 0.00 | Negative |
| 995 | Hall #8 | 1 | Wall B Door Frame | Brown | Intact | Metal | -0.40 | Negative |
| 996 | Hall #8 | 1 | Wall C Decorative Plaster | White | Intact | Plaster | 0.50 | Negative |
| 997 | Hall #8 | 1 | Wall D Decorative Plaster | White | Intact | Plaster | 0.10 | Negative |
| 998 | Hall #8 | 1 | Ceiling | White | Intact | Plastic | 0.00 | Negative |
| 999 | Hall #8 | 1 | Floor | Brown | Intact | Terrazzo | -0.30 | Negative |
| 1000 | Room 219 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1001 | Room 219 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1002 | Room 219 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1003 | Room 219 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.00 | Positive |
| 1004 | Room 219 | 2 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1005 | Room 219 | 2 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1006 | Room 219 | 2 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1007 | Room 219 | 2 | Floor | Tan | Intact | VCT | 0.00 | Negative |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1008 | Room 223 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1009 | Room 223 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1010 | Room 223 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1011 | Room 223 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1012 | Room 223 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1013 | Room 223 | 2 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1014 | Room 223 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1015 | Room 223 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1016 | Room 223 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1017 | Room 223 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1018 | Room 223 | 2 | Floor | Brown | Intact | Carpet | -0.10 | Negative |
| 1019 | Room 225 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1020 | Room 225 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1021 | Room 225 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1022 | Room 225 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1023 | Room 225 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1024 | Room 225 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 1025 | Room 225 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1026 | Room 225 | 2 | Wall C Window Frame | Blue | Intact | Wood | 3.60 | Positive |

LEAD PAINT REPORT FORM

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Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1027 | Room 225 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1028 | Room 225 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1029 | Room 227 | 2 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1030 | Room 227 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1031 | Room 227 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1032 | Room 227 | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1033 | Room 227 | 2 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 1034 | Room 227 | 2 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 1035 | Room 227 | 2 | Wall D | Yellow | Intact | Plaster | -0.10 | Negative |
| 1036 | Room 227 | 2 | Ceiling | Yellow | Intact | Plaster | 0.40 | Negative |
| 1037 | Room 227 | 2 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1038 | Room 227 Bathroom | 2 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1039 | Room 227 Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1040 | Room 227 Bathroom | 2 | Wall A Door Frame | Yellow | Intact | Wood | -0.20 | Negative |
| 1041 | Room 227 Bathroom | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1042 | Room 227 Bathroom | 2 | Wall B | Yellow | Intact | Plaster | 0.40 | Negative |
| 1043 | Room 227 Bathroom | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |



LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|--------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1044 | Room 227 Bathroom | 2 | Wall D | Yellow | Intact | Plaster | -0.10 | Negative |
| 1045 | Room 227 Bathroom | 2 | Ceiling | Yellow | Intact | Plaster | -0.10 | Negative |
| 1046 | Room 227 Bathroom | 2 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1047 | Room 204 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1048 | Room 204 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1049 | Room 204 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.70 | Negative |
| 1050 | Room 204 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.20 | Negative |
| 1051 | Room 204 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1052 | Room 204 | 2 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1053 | Room 204 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1054 | Room 204 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.50 | Positive |
| 1055 | Room 204 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1056 | Room 204 | 2 | Wall D | Blue | Intact | Plaster | 0.40 | Negative |
| 1057 | Room 201 Custodian | 2 | Wall A | Gray | Intact | Plaster | 0.10 | Negative |
| 1058 | Room 201 Custodian | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1059 | Room 201 Custodian | 2 | Wall A Door Frame | Gray | Intact | Metal | -0.30 | Negative |

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|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1060 | Room 201 Custodian | 2 | Wall B | Gray | Intact | Plaster | 0.40 | Negative |
| 1061 | Room 201 Custodian | 2 | Wall C | Gray | Intact | Plaster | 0.10 | Negative |
| 1062 | Room 201 Custodian | 2 | Wall D | Gray | Intact | Plaster | 0.20 | Negative |
| 1063 | Room 201 Custodian | 2 | Floor | Gray | Intact | Concrete | -0.10 | Negative |
| 1064 | Room 203 Girls' Bathroom | 2 | Wall A | White | Intact | Ceramic | 0.00 | Negative |
| 1065 | Room 203 Girls' Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 1066 | Room 203 Girls' Bathroom | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1067 | Room 203 Girls' Bathroom | 2 | Wall B | White | Intact | Ceramic | 0.00 | Negative |
| 1068 | Room 203 Girls' Bathroom | 2 | Wall C | White | Intact | Ceramic | 0.00 | Negative |
| 1069 | Room 203 Girls' Bathroom | 2 | Wall C Stall Wall | Pink | Intact | Wood | -0.10 | Negative |
| 1070 | Room 203 Girls' Bathroom | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1071 | Room 203 Girls' Bathroom | 2 | Wall C Window Frame | White | Intact | Wood | 2.60 | Positive |

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|--------------|--------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1072 | Room 203 Girls' Bathroom | 2 | Wall D | White | Intact | Ceramic | 0.10 | Negative |
| 1073 | Room 203 Girls' Bathroom | 2 | Floor | Gray | Intact | Ceramic | -0.20 | Negative |
| 1074 | Room 208 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1075 | Room 208 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1076 | Room 208 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1077 | Room 208 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1078 | Room 208 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1079 | Room 208 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1080 | Room 208 | 2 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1081 | Room 208 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1082 | Room 208 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1083 | Room 208 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1084 | Room 208 | 2 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1085 | Room 208 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1086 | Room 208 | 2 | Floor | Tan | Intact | VCT | -0.10 | Negative |
| 1087 | Room 210 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1088 | Room 210 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1089 | Room 210 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1090 | Room 210 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1091 | Room 210 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1092 | Room 210 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1093 | Room 210 | 2 | Wall C | Green | Intact | Plaster | 0.40 | Negative |
| 1094 | Room 210 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1095 | Room 210 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1096 | Room 210 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.30 | Negative |
| 1097 | Room 210 | 2 | Wall D | Green | Intact | Plaster | -0.20 | Negative |
| 1098 | Room 210 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1099 | Room 210 | 2 | Floor | Tan | Intact | VCT | 0.40 | Negative |
| 1100 | Room 205 | 2 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1101 | Room 205 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1102 | Room 205 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1103 | Room 205 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1104 | Room 205 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1105 | Room 205 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |
| 1106 | Room 205 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1107 | Room 205 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1108 | Room 205 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |

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|--------------|-------------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1109 | Room 205 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1110 | Room 204 | 2 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1111 | Room 204 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1112 | Room 204 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1113 | Room 204 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.40 | Negative |
| 1114 | Room 204 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1115 | Room 204 | 2 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 1116 | Room 204 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1117 | Room 204 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1118 | Room 204 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.00 | Negative |
| 1119 | Room 204 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1120 | Room 209 Boys' Bathroom | 2 | Wall A | White | Intact | Ceramic | 0.00 | Negative |
| 1121 | Room 209 Boys' Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.30 | Negative |
| 1122 | Room 209 Boys' Bathroom | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1123 | Room 209 Boys' Bathroom | 2 | Wall B | White | Intact | Ceramic | 0.00 | Negative |
| 1124 | Room 209 Boys' Bathroom | 2 | Wall C | White | Intact | Ceramic | 0.20 | Negative |

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|--------------|-------------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1125 | Room 209 Boys' Bathroom | 2 | Wall C Stall Wall | Blue | Intact | Wood | -0.10 | Negative |
| 1126 | Room 209 Boys' Bathroom | 2 | Wall C Window | Yellow | Intact | Metal | 0.00 | Negative |
| 1127 | Room 209 Boys' Bathroom | 2 | Wall C Window Frame | White | Intact | Wood | 2.60 | Positive |
| 1128 | Room 209 Boys' Bathroom | 2 | Wall D | White | Intact | Ceramic | 0.10 | Negative |
| 1129 | Room 209 Boys' Bathroom | 2 | Floor | Gray | Intact | Ceramic | -0.20 | Negative |
| 1130 | Room 212 | 2 | Wall A | Purple | Intact | Plaster | 0.10 | Negative |
| 1131 | Room 212 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1132 | Room 212 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1133 | Room 212 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1134 | Room 212 | 2 | Wall B | Purple | Intact | Plaster | 0.00 | Negative |
| 1135 | Room 212 | 2 | Wall C | Purple | Intact | Plaster | 0.30 | Negative |
| 1136 | Room 212 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1137 | Room 212 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1138 | Room 212 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1139 | Room 212 | 2 | Wall D | Purple | Intact | Plaster | -0.10 | Negative |
| 1140 | Room 212 | 2 | Floor | Brown | Intact | Carpet | 0.20 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1141 | Room 214 | 2 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1142 | Room 214 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1143 | Room 214 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1144 | Room 214 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1145 | Room 214 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1146 | Room 214 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.20 | Negative |
| 1147 | Room 214 | 2 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1148 | Room 214 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1149 | Room 214 | 2 | Wall C Window Frame | Green | Intact | Wood | 3.40 | Positive |
| 1150 | Room 214 | 2 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1151 | Room 214 | 2 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1152 | Room 214 | 2 | Wall D cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1153 | Room 214 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1154 | Room 216 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1155 | Room 216 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1156 | Room 216 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1157 | Room 216 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1158 | Room 216 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1159 | Room 216 | 2 | Wall C | Blue | Intact | Plaster | -0.10 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1160 | Room 216 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1161 | Room 216 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.60 | Positive |
| 1162 | Room 216 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1163 | Room 216 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1164 | Room 218 | 2 | Wall A | Yellow | Intact | Plaster | -0.30 | Negative |
| 1165 | Room 218 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1166 | Room 218 | 2 | Wall A Door Frame | Gray | Intact | Metal | -0.20 | Negative |
| 1167 | Room 218 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1168 | Room 218 | 2 | Wall B | Yellow | Intact | Plaster | 0.60 | Negative |
| 1169 | Room 218 | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1170 | Room 218 | 2 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1171 | Room 218 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 2.80 | Positive |
| 1172 | Room 218 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1173 | Room 218 | 2 | Wall D | Yellow | Intact | Plaster | 0.40 | Negative |
| 1174 | Room 218 | 2 | Wall D Door | Stained | Intact | Wood | -0.10 | Negative |
| 1175 | Room 218 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 1176 | Room 218 | 2 | Floor | Brown | Intact | Carpet | 0.10 | Negative |
| 1177 | Room 213 | 2 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1178 | Room 213 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1179 | Room 213 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1180 | Room 213 | 2 | Wall A Baseboard | Gray | Intact | Concrete | 0.10 | Negative |
| 1181 | Room 213 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1182 | Room 213 | 2 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 1183 | Room 213 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1184 | Room 213 | 2 | Wall D Door | Stained | Intact | Wood | 0.10 | Negative |
| 1185 | Room 213 | 2 | Wall D Door Frame | Blue | Intact | Metal | 0.60 | Negative |
| 1186 | Room 213 | 2 | Wall D shelf | Blue | Intact | Wood | 0.10 | Negative |
| 1187 | Room 213 | 2 | Ceiling | White | Intact | Plaster | 0.40 | Negative |
| 1188 | Room 213 | 2 | Floor | Gray | Intact | Concrete | 0.10 | Negative |
| 1189 | Room 220 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1190 | Room 220 | 2 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1191 | Room 220 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 1192 | Room 220 | 2 | Wall A Baseboard | Brown | Intact | Metal | -0.10 | Negative |
| 1193 | Room 220 | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1194 | Room 220 | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1195 | Room 220 | 2 | Wall C Locker | Green | Intact | Metal | 0.30 | Negative |
| 1196 | Room 220 | 2 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1197 | Room 220 | 2 | Floor | Brown | Intact | VAT | 0.30 | Negative |

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|--------------|-------------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1198 | Room 220 Bathroom | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1199 | Room 220 Bathroom | 2 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1200 | Room 220 Bathroom | 2 | Wall A Door Frame | Brown | Intact | Metal | 0.70 | Negative |
| 1201 | Room 220 Bathroom | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1202 | Room 220 Bathroom | 2 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1203 | Room 220 Bathroom | 2 | Wall D | Yellow | Intact | Plaster | 0.1 | Negative |
| 1204 | Room 220 Bathroom | 2 | Floor | Tan | Intact | Terrazzo | 0.1 | Negative |
| 1205 | Fan Room #222 | 2 | Wall A Door | Gray | Intact | Metal | -0.20 | Negative |
| 1206 | Fan Room #222 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1207 | Fan Room #222 | 2 | Fan Unit | Green | Intact | Metal | 2.80 | Positive |
| 1208 | Room 224 | 2 | Wall A | White | Intact | Plaster | 0.10 | Negative |
| 1209 | Room 224 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1210 | Room 224 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.50 | Negative |
| 1211 | Room 224 | 2 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1212 | Room 224 | 2 | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1213 | Room 224 | 2 | Wall C | White | Intact | Plaster | 0.10 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1214 | Room 224 | 2 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1215 | Room 224 | 2 | Floor | Brown | Intact | VAT | 0.10 | Negative |
| 1216 | Room 215 | 2 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 1217 | Room 215 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1218 | Room 215 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1219 | Room 215 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 1220 | Room 215 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1221 | Room 215 | 2 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1222 | Room 215 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1223 | Room 215 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1224 | Room 215 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 6.20 | Positive |
| 1225 | Room 215 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1226 | Room 215 | 2 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1227 | Room 215 | 2 | Floor | Tan | Intact | VCT | 0.10 | Negative |
| 1228 | Room 217 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1229 | Room 217 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1230 | Room 217 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1231 | Room 217 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.90 | Positive |
| 1232 | Room 217 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |

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| 1233 | Room 217 | 2 | Wall B | Yellow | Intact | Plaster | -0.10 | Negative |
| 1234 | Room 217 | 2 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1235 | Room 217 | 2 | Wall C Window | Yellow | Intact | Metal | 0.30 | Negative |
| 1236 | Room 217 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 6.10 | Positive |
| 1237 | Room 217 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1238 | Room 217 | 2 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 1239 | Room 217 | 2 | Floor | Tan | Intact | VCT | 0.10 | Negative |
| 1240 | Room 226 | 2 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 1241 | Room 226 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1242 | Room 226 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1243 | Room 226 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 2.60 | Positive |
| 1244 | Room 226 | 2 | Wall A Cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1245 | Room 226 | 2 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1246 | Room 226 | 2 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1247 | Room 226 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1248 | Room 226 | 2 | Wall C Window Frame | Blue | Intact | Wood | 3.80 | Positive |
| 1249 | Room 226 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1250 | Room 226 | 2 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1251 | Room 226 | 2 | Floor : | Brown | Intact | Carpet | 0.00 | Negative |

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 TWIN TOWERS MIDDLE SCHOOL

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 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1252 | Room 228 | 2 | Wall A | Purple | Intact | Plaster | 0.00 | Negative |
| 1253 | Room 228 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1254 | Room 228 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1255 | Room 228 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.60 | Positive |
| 1256 | Room 228 | 2 | Wall B | Purple | Intact | Plaster | 0.20 | Negative |
| 1257 | Room 228 | 2 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 1258 | Room 228 | 2 | Wall C Window | Yellow | Intact | Metal | -0.02 | Negative |
| 1259 | Room 228 | 2 | Wall C Window Frame | Purple | Intact | Wood | 3.90 | Positive |
| 1260 | Room 228 | 2 | Wall C Radiator | Tan | Intact | Metal | -0.10 | Negative |
| 1261 | Room 228 | 2 | Wall D | Purple | Intact | Plaster | 0.40 | Negative |
| 1262 | Room 228 | 2 | Floor | Brown | Intact | Concrete | 0.20 | Negative |
| 1263 | Room 230 | 2 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |
| 1264 | Room 230 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1265 | Room 230 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1266 | Room 230 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1267 | Room 230 | 2 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1268 | Room 230 | 2 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1269 | Room 230 | 2 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1270 | Room 230 | 2 | Wall C Window Frame | Yellow | Intact | Wood | 3.10 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1271 | Room 230 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1272 | Room 230 | 2 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1273 | Room 232 | 2 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1274 | Room 232 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1275 | Room 232 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1276 | Room 232 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 4.60 | Positive |
| 1277 | Room 232 | 2 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |
| 1278 | Room 232 | 2 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1279 | Room 232 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1280 | Room 232 | 2 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1281 | Room 232 | 2 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1282 | Room 232 | 2 | Wall D Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1283 | Room 234 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1284 | Room 234 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1285 | Room 234 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1286 | Room 234 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 1287 | Room 234 | 2 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1288 | Room 234 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1289 | Room 234 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1290 | Room 234 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1291 | Room 234 | 2 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 1292 | Room 234 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1293 | Room 234 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1294 | Room 234 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1295 | Room 234 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1296 | Room 236 | 2 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1297 | Room 236 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1298 | Room 236 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.00 | Negative |
| 1299 | Room 236 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.20 | Positive |
| 1300 | Room 236 | 2 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1301 | Room 236 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1302 | Room 236 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1303 | Room 236 | 2 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1304 | Room 236 | 2 | Wall C Window Frame | Yellow | Intact | Metal | -0.20 | Negative |
| 1305 | Room 236 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1306 | Room 236 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1307 | Room 236 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1308 | Room 238 | 2 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1309 | Room 238 | 2 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1310 | Room 238 | 2 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1311 | Room 238 | 2 | Wall A Baseboard | Brown | Intact | Vinyl | 3.30 | Positive |
| 1312 | Room 238 | 2 | Wall B | Yellow | Intact | Plaster | 0.00 | Negative |
| 1313 | Room 238 | 2 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1314 | Room 238 | 2 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1315 | Room 238 | 2 | Wall C Window | Yellow | Intact | Metal | 0.00 | Negative |
| 1316 | Room 238 | 2 | Wall C Window Frame | Yellow | Intact | Metal | 0.30 | Negative |
| 1317 | Room 238 | 2 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1318 | Room 238 | 2 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1319 | Room 238 | 2 | Wall D cabinet | Stained | Intact | Wood | -0.10 | Negative |
| 1320 | Room 238 | 2 | Floor | Tan | Intact | VCT | 0.20 | Negative |
| 1321 | Room 202 | 2 | Wall A | Blue | Intact | Plaster | 0.40 | Negative |
| 1322 | Room 202 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1323 | Room 202 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1324 | Room 202 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1325 | Room 202 | 2 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1326 | Room 202 | 2 | Wall C | Blue | Intact | Plaster | 0.30 | Negative |
| 1327 | Room 202 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |

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 XRF Serial Number: 1206

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1328 | Room 202 | 2 | Wall C Window Frame | Blue | Intact | Wood | 2.10 | Positive |
| 1329 | Room 202 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1330 | Room 202 | 2 | Wall D | Blue | Intact | Plaster | 0.10 | Negative |
| 1331 | Room 202 | 2 | Wall D Door | Stained | Intact | Wood | -0.20 | Negative |
| 1332 | Room 202 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.40 | Negative |
| 1333 | Room 200 | 2 | Wall A | Green | Intact | Plaster | 0.40 | Negative |
| 1334 | Room 200 | 2 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1335 | Room 200 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1336 | Room 200 | 2 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1337 | Room 200 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1338 | Room 200 | 2 | Wall C | Green | Intact | Plaster | -0.30 | Negative |
| 1339 | Room 200 | 2 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1340 | Room 200 | 2 | Wall C Window Frame | Green | Intact | Wood | 2.10 | Positive |
| 1341 | Room 200 | 2 | Wall C Radialor | Tan | Intact | Metal | 0.20 | Negative |
| 1342 | Room 200 | 2 | Wall D | Green | Intact | Plaster | 0.10 | Negative |
| 1343 | Room 200 | 2 | Wall D Door | Stained | Intact | Wood | 0.00 | Negative |
| 1344 | Room 200 | 2 | Wall D Door Frame | Brown | Intact | Metal | 0.30 | Negative |
| 1345 | Hall #9 | 2 | Wall A | Green | Intact | Plaster | 0.10 | Negative |
| 1346 | Hall #9 | 2 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1347 | Hall #9 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1348 | Hall #9 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1349 | Hall #9 | 2 | Wall B | Green | Intact | Plaster | 0.30 | Negative |
| 1350 | Hall #9 | 2 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1351 | Hall #9 | 2 | Wall B Locker | Gray | Intact | Metal | 0.50 | Negative |
| 1352 | Hall #9 | 2 | Wall C | Green | Intact | Plaster | 0.30 | Negative |
| 1353 | Hall #9 | 2 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1354 | Hall #9 | 2 | Wall C Door | Stained | Intact | Wood | 0.00 | Negative |
| 1355 | Hall #9 | 2 | Wall C Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1356 | Hall #9 | 2 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1357 | Hall #9 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1358 | Hall #9 | 2 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | -0.10 | Negative |
| 1359 | Hall #9 | 2 | Ceiling | White | Intact | Plaster | 0.20 | Negative |
| 1360 | Hall #9 | 2 | Floor | Tan | Intact | Terrazzo | 0.10 | Negative |
| 1361 | Hall #10 | 2 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 1362 | Hall #10 | 2 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1363 | Hall #10 | 2 | Wall A Window | White | Intact | Metal | -0.30 | Negative |
| 1364 | Hall #10 | 2 | Wall A Window Frame | White | Intact | Wood | 2.40 | Positive |
| 1365 | Hall #10 | 2 | Wall A Radiator | Gray | Intact | Metal | 0.20 | Negative |

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1366 | Hall #10 | 2 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 1367 | Hall #10 | 2 | Wall B | Green | Intact | Ceramic | 8.20 | Positive |
| 1368 | Hall #10 | 2 | Wall B Door | Stained | Intact | Wood | -0.20 | Negative |
| 1369 | Hall #10 | 2 | Wall B Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1370 | Hall #10 | 2 | Wall B 1" x 1" Tile | Green | Intact | Ceramic | -0.40 | Negative |
| 1371 | Hall #10 | 2 | Wall B 4" x 4" Tile | Green | Intact | Ceramic | -0.10 | Negative |
| 1372 | Hall #10 | 2 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1373 | Hall #10 | 2 | Wall C | Green | Intact | Plaster | 0.10 | Negative |
| 1374 | Hall #10 | 2 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1375 | Hall #10 | 2 | Wall C Door | Stained | Intact | Wood | -0.10 | Negative |
| 1376 | Hall #10 | 2 | Wall C Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1377 | Hall #10 | 2 | Wall D | Green | Intact | Plaster | -0.10 | Negative |
| 1378 | Hall #10 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1379 | Hall #10 | 2 | Wall D Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1380 | Hall #11 | 2 | Wall B | White | Intact | Plaster | 0.40 | Negative |
| 1381 | Hall #11 | 2 | Wall B | Gold | Intact | Ceramic | -0.20 | Negative |
| 1382 | Hall #11 | 2 | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1383 | Hall #11 | 2 | Wall D | Gold | Intact | Ceramic | -0.40 | Negative |
| 1384 | Hall #11 | 2 | Wall D Window | Yellow | Intact | Metal | -0.10 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1385 | Hall #11 | 2 | Wall D Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1386 | Hall #12 | 2 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1387 | Hall #12 | 2 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1388 | Hall #12 | 2 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1389 | Hall #12 | 2 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1390 | Hall #12 | 2 | Wall B 4" x 4" Tile | Green | Intact | Ceramic | 0.10 | Negative |
| 1391 | Hall #12 | 2 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1392 | Hall #12 | 2 | Wall B Panel Box | Gray | Intact | Metal | 0.30 | Negative |
| 1393 | Hall #12 | 2 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1394 | Hall #12 | 2 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1395 | Hall #12 | 2 | Wall D Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1396 | Hall #12 | 2 | Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 1397 | Hall #12 | 2 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 1398 | Room 300 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1399 | Room 300 | 3 | Wall A Door | Stained | Intact | Wood | -0.30 | Negative |
| 1400 | Room 300 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1401 | Room 300 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.10 | Negative |
| 1402 | Room 300 | 3 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1403 | Room 300 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |

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|--------------|----------------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1404 | Room 300 | 3 | Wall C | Yellow | Intact | Metal | -0.20 | Negative |
| 1405 | Room 300 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.10 | Positive |
| 1406 | Room 300 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1407 | Room 300 | 3 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1408 | Room 300 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1409 | Room 303 Girls' Room | 3 | Wall A | White | Intact | Ceramic | 0.10 | Negative |
| 1410 | Room 303 Girls' Room | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1411 | Room 303 Girls' Room | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1412 | Room 303 Girls' Room | 3 | Wall B | White | Intact | Ceramic | -0.10 | Negative |
| 1413 | Room 303 Girls' Room | 3 | Wall C | White | Intact | Ceramic | 0.20 | Negative |
| 1414 | Room 303 Girls' Room | 3 | Wall D | White | Intact | Ceramic | -0.10 | Negative |
| 1415 | Room 303 Girls' Room | 3 | Floor | Gray | Intact | Ceramic | 0.10 | Negative |
| 1416 | Room 302 | 3 | Wall A | Green | Intact | Plaster | 0.00 | Negative |
| 1417 | Room 302 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1418 | Room 302 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1419 | Room 302 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |

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|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1420 | Room 302 | 3 | Wall B | Green | Intact | Plaster | 0.10 | Negative |
| 1421 | Room 302 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1422 | Room 302 | 3 | Wall C Window | Yellow | Intact | Metal | 2.60 | Positive |
| 1423 | Room 302 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 0.10 | Negative |
| 1424 | Room 302 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1425 | Room 302 | 3 | Wall D | Green | Intact | Plaster | -0.20 | Negative |
| 1426 | Room 302 | 3 | Floor | Gray | Intact | VCT | 0.10 | Negative |
| 1427 | Room 305 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1428 | Room 305 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1429 | Room 305 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1430 | Room 305 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1431 | Room 305 | 3 | Wall B | Yellow | Intact | Plaster | 0.30 | Negative |
| 1432 | Room 305 | 3 | Wall C | Purple | Intact | Plaster | 0.10 | Negative |
| 1433 | Room 305 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1434 | Room 305 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.80 | Positive |
| 1435 | Room 305 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1436 | Room 305 | 3 | Wall D | Purple | Intact | Plaster | 0.30 | Negative |
| 1437 | Room 304 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1438 | Room 304 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |

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|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1439 | Room 304 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1440 | Room 304 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.60 | Positive |
| 1441 | Room 304 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1442 | Room 304 | 3 | Wall C | Blue | Intact | Plaster | 0.00 | Negative |
| 1443 | Room 304 | 3 | Wall C Window | Yellow | Intact | Metal | -0.21 | Negative |
| 1444 | Room 304 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.10 | Positive |
| 1445 | Room 304 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.10 | Negative |
| 1446 | Room 304 | 3 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 1447 | Room 304 | 3 | Floor | Gray | Intact | VCT | -0.20 | Negative |
| 1448 | Room 307 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1449 | Room 307 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1450 | Room 307 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1451 | Room 307 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1452 | Room 307 | 3 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1453 | Room 307 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1454 | Room 307 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1455 | Room 307 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 2.80 | Positive |
| 1456 | Room 307 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1457 | Room 307 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |

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| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1458 | Room 306 | 3 | Wall A | Blue | Intact | Plaster | 0.30 | Negative |
| 1459 | Room 306 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1460 | Room 306 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |
| 1461 | Room 306 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.20 | Negative |
| 1462 | Room 306 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1463 | Room 306 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1464 | Room 306 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1465 | Room 306 | 3 | Wall C Window Frame | Blue | Intact | Wood | 3.90 | Positive |
| 1466 | Room 306 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1467 | Room 306 | 3 | Wall D | Yellow | Intact | Plaster | 0.00 | Negative |
| 1468 | Room 306 | 3 | Floor | Gray | Intact | Carpet | 0.20 | Negative |
| 1469 | #309 Boys' Room | 3 | Wall A | White | Intact | Ceramic | 0.10 | Negative |
| 1470 | #309 Boys' Room | 3 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1471 | #309 Boys' Room | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1472 | #309 Boys' Room | 3 | Wall B | White | Intact | Ceramic | -0.10 | Negative |
| 1473 | #309 Boys' Room | 3 | Wall C | White | Intact | Ceramic | -0.10 | Negative |
| 1474 | #309 Boys' Room | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1475 | #309 Boys' Room | 3 | Wall C Window Frame | White | Intact | Wood | 1.80 | Positive |
| 1476 | #309 Boys' Room | 3 | Wall D | White | Intact | Ceramic | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-----------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1477 | #309 Boys' Room | 3 | Wall D Stall Wall | Blue | Intact | Wood | -0.10 | Negative |
| 1478 | #309 Boys' Room | 3 | Floor | Gray | Intact | Ceramic | 0.20 | Negative |
| 1479 | Room 308 | 3 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1480 | Room 308 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1481 | Room 308 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1482 | Room 308 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1483 | Room 308 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1484 | Room 308 | 3 | Wall B Door | Blue | Intact | Wood | -0.30 | Negative |
| 1485 | Room 308 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.20 | Negative |
| 1486 | Room 308 | 3 | Wall C | Blue | Intact | Plaster | 0.10 | Negative |
| 1487 | Room 308 | 3 | Wall C Window | Tan | Intact | Metal | -0.20 | Negative |
| 1488 | Room 308 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.70 | Positive |
| 1489 | Room 308 | 3 | Wall C Radiator | Yellow | Intact | Plaster | 0.00 | Negative |
| 1490 | Room 308 | 3 | Wall D | Stained | Intact | Wood | 0.30 | Negative |
| 1491 | Room 315 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |
| 1492 | Room 315 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1493 | Room 315 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.70 | Negative |
| 1494 | Room 315 | 3 | Wall A Baseboard | Stained | Intact | Wood | -0.10 | Negative |
| 1495 | Room 315 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|---------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1496 | Room 315 | 3 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1497 | Room 315 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1498 | Room 315 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 3.60 | Positive |
| 1499 | Room 315 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1500 | Room 315 | 3 | Wall D | Yellow | Intact | Plaster | 0.10 | Negative |
| 1501 | Room 315 | 3 | Floor | Gray | Intact | Carpet | 0.20 | Negative |
| 1502 | Room 315 Bath | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1503 | Room 315 Bath | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1504 | Room 315 Bath | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1505 | Room 315 Bath | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1506 | Room 315 Bath | 3 | Wall C | Yellow | Intact | Plaster | 0.10 | Negative |
| 1507 | Room 315 Bath | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1508 | Room 315 Bath | 3 | Ceiling | Yellow | Intact | Plaster | 0.20 | Negative |
| 1509 | Room 315 Bath | 3 | Floor | Tan | Intact | Terrazzo | 0.00 | Negative |
| 1510 | Room 317 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1511 | Room 317 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1512 | Room 317 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1513 | Room 317 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.90 | Positive |
| 1514 | Room 317 | 3 | Wall B | Blue | Intact | Plaster | 0.30 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1515 | Room 317 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1516 | Room 317 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1517 | Room 317 | 3 | Wall C Window Frame | Blue | Intact | Wood | 2.80 | Positive |
| 1518 | Room 317 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1519 | Room 317 | 3 | Wall D | Blue | Intact | Plaster | 0.00 | Negative |
| 1520 | Room 310 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1521 | Room 310 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1522 | Room 310 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1523 | Room 310 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1524 | Room 310 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1525 | Room 310 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1526 | Room 310 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1527 | Room 310 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 1.90 | Positive |
| 1528 | Room 310 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1529 | Room 310 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1530 | Room 310 | 3 | Floor | Gray | Intact | Carpet | -0.10 | Negative |
| 1531 | Room 319 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1532 | Room 319 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1533 | Room 319 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1534 | Room 319 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 2.80 | Positive |
| 1535 | Room 319 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1536 | Room 319 | 3 | Wall C | Yellow | Intact | Plaster | 0.30 | Negative |
| 1537 | Room 319 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1538 | Room 319 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.80 | Positive |
| 1539 | Room 319 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1540 | Room 319 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1541 | Room 312 | 3 | Wall A | Blue | Intact | Plaster | 0.00 | Negative |
| 1542 | Room 312 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1543 | Room 312 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.50 | Negative |
| 1544 | Room 312 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1545 | Room 312 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1546 | Room 312 | 3 | Wall C | Blue | Intact | Plaster | -0.20 | Negative |
| 1547 | Room 312 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1548 | Room 312 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1549 | Room 312 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1550 | Room 312 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1551 | Room 314 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1552 | Room 314 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1553 | Room 314 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1554 | Room 314 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1555 | Room 314 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1556 | Room 314 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1557 | Room 314 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1558 | Room 314 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1559 | Room 314 | 3 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1560 | Room 314 | 3 | Floor | Gray | Intact | Carpet | 0.00 | Negative |
| 1561 | Room 321 | 3 | Wall A | Blue | Intact | Plaster | 0.10 | Negative |
| 1562 | Room 321 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1563 | Room 321 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1564 | Room 321 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.10 | Positive |
| 1565 | Room 321 | 3 | Wall B | Blue | Intact | Plaster | 0.10 | Negative |
| 1566 | Room 321 | 3 | Wall C | Blue | Intact | Plaster | 0.20 | Negative |
| 1567 | Room 321 | 3 | Wall C Window | Yellow | Intact | Metal | -0.30 | Negative |
| 1568 | Room 321 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1569 | Room 321 | 3 | Wall D | Blue | Intact | Plaster | 0.30 | Negative |
| 1570 | Room 321 | 3 | Floor | Gray | Intact | Carpet | -0.10 | Negative |
| 1571 | Room 316 | 3 | Wall A | Yellow | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1572 | Room 316 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1573 | Room 316 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1574 | Room 316 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.80 | Positive |
| 1575 | Room 316 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1576 | Room 316 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1577 | Room 316 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1578 | Room 316 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 1.80 | Positive |
| 1579 | Room 316 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1580 | Room 316 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1581 | Room 318 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1582 | Room 318 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1583 | Room 318 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1584 | Room 318 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 3.90 | Positive |
| 1585 | Room 318 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1586 | Room 318 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1587 | Room 318 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1588 | Room 318 | 3 | Wall D Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1589 | Room 318 | 3 | Wall D Window Frame | Yellow | Intact | Metal | 0.10 | Negative |
| 1590 | Room 320 | 3 | Wall A | Yellow | Intact | Plaster | 0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1591 | Room 320 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1592 | Room 320 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.60 | Negative |
| 1593 | Room 320 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.40 | Positive |
| 1594 | Room 320 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1595 | Room 320 | 3 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 1596 | Room 320 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1597 | Room 320 | 3 | Wall C | Yellow | Intact | Plaster | -0.10 | Negative |
| 1598 | Room 320 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1599 | Room 320 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1600 | Room 320 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1601 | Room 320 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1602 | Room 322 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1603 | Room 322 | 3 | Wall A Door | Stained | Intact | Wood | 0.20 | Negative |
| 1604 | Room 322 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1605 | Room 322 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.30 | Positive |
| 1606 | Room 322 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1607 | Room 322 | 3 | Wall B Door | Stained | Intact | Wood | -0.10 | Negative |
| 1608 | Room 322 | 3 | Wall B Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1609 | Room 322 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1610 | Room 322 | 3 | Wall C Window | Yellow | Intact | Metal | 0.20 | Negative |
| 1611 | Room 322 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1612 | Room 322 | 3 | Wall C cabinet | Stained | Intact | Wood | 0.00 | Negative |
| 1613 | Room 322 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1614 | Room 324 | 3 | Wall A | Yellow | Intact | Plaster | 0.30 | Negative |
| 1615 | Room 324 | 3 | Wall A Door | Stained | Intact | Wood | -0.10 | Negative |
| 1616 | Room 324 | 3 | Wall A Door Frame | Yellow | Intact | Metal | 0.40 | Negative |
| 1617 | Room 324 | 3 | Wall A Baseboard | Tan | Intact | Vinyl | 4.00 | Positive |
| 1618 | Room 324 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1619 | Room 324 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1620 | Room 324 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1621 | Room 324 | 3 | Wall C Window Frame | Yellow | Intact | Metal | 0.00 | Negative |
| 1622 | Room 324 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1623 | Room 324 | 3 | Floor | Gray | Intact | Carpet | 0.10 | Negative |
| 1624 | Room 323 | 3 | Wall A | Yellow | Intact | Plaster | 0.00 | Negative |
| 1625 | Room 323 | 3 | Wall A Door | Gray | Intact | Metal | 0.20 | Negative |
| 1626 | Room 323 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.10 | Negative |
| 1627 | Room 323 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1628 | Room 323 | 3 | Wall B cabinet | Stained | Intact | Wood | -0.10 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|------------------------|----------------------------|
| 1629 | Room 323 | 3 | Wall C | Yellow | Intact | Plaster | 0.00 | Negative |
| 1630 | Room 323 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.20 | Negative |
| 1631 | Room 323 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1632 | Room 323 | 3 | Floor | Gray | Intact | VCT | -0.10 | Negative |
| 1633 | Room 325 | 3 | Wall A | Blue | Intact | Plaster | -0.10 | Negative |
| 1634 | Room 325 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1635 | Room 325 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1636 | Room 325 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |
| 1637 | Room 325 | 3 | Wall B | Blue | Intact | Plaster | 0.20 | Negative |
| 1638 | Room 325 | 3 | Wall B cabinet | White | Intact | Wood | 0.10 | Negative |
| 1639 | Room 325 | 3 | Wall C | Blue | Intact | Plaster | 0.40 | Negative |
| 1640 | Room 325 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1641 | Room 325 | 3 | Wall C Window Frame | Blue | Intact | Wood | 4.10 | Positive |
| 1642 | Room 325 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1643 | Room 325 | 3 | Wall D | Blue | Intact | Plaster | 0.20 | Negative |
| 1644 | Room 327 | 3 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 1645 | Room 327 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1646 | Room 327 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1647 | Room 327 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.00 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1786
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1648 | Room 327 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1649 | Room 327 | 3 | Wall B cabinet | White | Intact | Wood | 0.00 | Negative |
| 1650 | Room 327 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1651 | Room 327 | 3 | Wall C Window | Yellow | Intact | Metal | -0.10 | Negative |
| 1652 | Room 327 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.10 | Positive |
| 1653 | Room 327 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.10 | Negative |
| 1654 | Room 327 | 3 | Wall D | Yellow | Intact | Plaster | 0.20 | Negative |
| 1655 | Room 329 | 3 | Wall A | Yellow | Intact | Plaster | -0.10 | Negative |
| 1656 | Room 329 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1657 | Room 329 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1658 | Room 329 | 3 | Wall A Baseboard | Stained | Intact | Wood | 0.20 | Negative |
| 1659 | Room 329 | 3 | Wall B | Yellow | Intact | Plaster | 0.20 | Negative |
| 1660 | Room 329 | 3 | Wall B cabinet | White | Intact | Wood | 0.00 | Negative |
| 1661 | Room 329 | 3 | Wall C | Yellow | Intact | Plaster | 0.40 | Negative |
| 1662 | Room 329 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1663 | Room 329 | 3 | Wall C Window Frame | Yellow | Intact | Wood | 4.10 | Positive |
| 1664 | Room 329 | 3 | Wall C Radiator | Tan | Intact | Metal | 0.00 | Negative |
| 1665 | Room 329 | 3 | Wall D | Yellow | Intact | Plaster | 0.30 | Negative |
| 1666 | Room 331 | 3 | Wall A | Pink | Intact | Plaster | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1667 | Room 331 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1668 | Room 331 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1669 | Room 331 | 3 | Wall B | Pink | Intact | Plaster | 0.30 | Negative |
| 1670 | Room 331 | 3 | Wall C | Pink | Intact | Plaster | 0.40 | Negative |
| 1671 | Room 331 | 3 | Wall D | Pink | Intact | Plaster | 0.10 | Negative |
| 1672 | Room 331 | 3 | Ceiling | Pink | Intact | Plaster | 0.40 | Negative |
| 1673 | Room 331 | 3 | Floor | Gray | Intact | Concrete | 0.20 | Negative |
| 1674 | Room 331 | 3 | Locker Wall A | Pink | Intact | Metal | 0.10 | Negative |
| 1675 | Hall #13 | 3 | Wall A Door | Stained | Intact | Wood | 0.00 | Negative |
| 1676 | Hall #13 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1677 | Hall #13 | 3 | Wall B | Green | Intact | Plaster | 0.40 | Negative |
| 1678 | Hall #13 | 3 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1679 | Hall #13 | 3 | Wall B Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1680 | Hall #13 | 3 | Wall B Window Frame | White | Intact | Wood | 2.50 | Positive |
| 1681 | Hall #13 | 3 | Wall B Radialor cover | Gray | Intact | Metal | 0.20 | Negative |
| 1682 | Hall #13 | 3 | Wall B Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1683 | Hall #13 | 3 | Wall B Locker Door | Gray | Intact | Metal | 0.20 | Negative |
| 1684 | Hall #13 | 3 | Wall B Locker Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1685 | Hall #13 | 3 | Wall C | Green | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1686 | Hall #13 | 3 | Wall C | Green | Intact | Ceramic | 8.60 | Positive |
| 1687 | Hall #13 | 3 | Wall C Window | Yellow | Intact | Metal | -0.20 | Negative |
| 1688 | Hall #13 | 3 | Wall C Window Frame | White | Intact | Wood | 3.80 | Positive |
| 1689 | Hall #13 | 3 | Wall D | Green | Intact | Plaster | 0.30 | Negative |
| 1690 | Hall #13 | 3 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1691 | Hall #13 | 3 | Wall D 4" x 4" Tile | Green | Intact | Ceramic | 0.10 | Negative |
| 1692 | Hall #13 | 3 | Wall D Door | Stained | Intact | Wood | 0.10 | Negative |
| 1693 | Hall #13 | 3 | Wall D Door Frame | Gray | Intact | Metal | 0.40 | Negative |
| 1694 | Hall #13 | 3 | Wall D Locker | Gray | Intact | Metal | 0.20 | Negative |
| 1695 | Hall #13 | 3 | Ceiling | White | Intact | Plaster | 0.60 | Negative |
| 1696 | Hall #13 | 3 | Floor | Tan | Intact | Terrazzo | -0.20 | Negative |
| 1697 | Hall #14 | 3 | Wall B | Yellow | Intact | Plaster | 0.10 | Negative |
| 1698 | Hall #14 | 3 | Wall B | Yellow | Intact | Ceramic | 0.20 | Negative |
| 1699 | Hall #14 | 3 | Wall C | Yellow | Intact | Plaster | 0.20 | Negative |
| 1700 | Hall #14 | 3 | Wall C | Yellow | Intact | Ceramic | 0.20 | Negative |
| 1701 | Hall #14 | 3 | Wall C Window | Yellow | Intact | Metal | 0.10 | Negative |
| 1702 | Hall #14 | 3 | Wall C Window Frame | Yellow | Intact | Metal | -0.10 | Negative |
| 1703 | Hall #14 | 3 | Ceiling | White | Intact | Plaster | -0.20 | Negative |
| 1704 | Hall #14 | 3 | Floor | Tan | Intact | Terrazzo | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|---------|-----------|----------------|-------------------------------------|----------------------------|
| 1705 | Hall #15 | 3 | Wall A Door | Stained | Intact | Wood | 0.10 | Negative |
| 1706 | Hall #15 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.30 | Negative |
| 1707 | Hall #15 | 3 | Wall B | Green | Intact | Plaster | 0.20 | Negative |
| 1708 | Hall #15 | 3 | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1709 | Hall #15 | 3 | Wall B Locker | Gray | Intact | Metal | 0.40 | Negative |
| 1710 | Hall #15 | 3 | Wall B Panel Box | Gray | Intact | Metal | 0.20 | Negative |
| 1711 | Hall #15 | 3 | Wall D | Green | Intact | Plaster | 0.20 | Negative |
| 1712 | Hall #15 | 3 | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1713 | Hall #15 | 3 | Ceiling | White | Intact | Plaster | 0.10 | Negative |
| 1714 | Hall #15 | 3 | Floor | Tan | Intact | Terrazzo | 0.00 | Negative |
| 1715 | Hall #16 | 3 | Wall A | Green | Intact | Plaster | 0.20 | Negative |
| 1716 | Hall #16 | 3 | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1717 | Hall #16 | 3 | Wall A Door | Stained | Intact | Wood | -0.20 | Negative |
| 1718 | Hall #16 | 3 | Wall A Door Frame | Gray | Intact | Metal | 0.60 | Negative |
| 1719 | Hall #16 | 3 | Wall A 4" x 4" Tile | Green | Intact | Ceramic | 0.20 | Negative |
| 1720 | Hall #16 | 3 | Wall C | Green | Intact | Plaster | 0.20 | Negative |
| 1721 | Hall #16 | 3 | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1722 | Hall #16 | 3 | Wall C 4" x 4" Tile | Green | Intact | Ceramic | 0.20 | Negative |
| 1723 | Hall #16 | 3 | Wall C Locker | Gray | Intact | Metal | 0.40 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 1724 | Hall #16 | 3 | Wall C Fire Box | Gray | Intact | Metal | 0.10 | Negative |
| 1725 | Stair #1 | NA | Wall A | White | Intact | Plaster | 0.40 | Negative |
| 1726 | Stair #1 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1727 | Stair #1 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1728 | Stair #1 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1729 | Stair #1 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1730 | Stair #1 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1731 | Stair #1 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1732 | Stair #1 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1733 | Stair #1 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1734 | Stair #1 | NA | Stair Riser | Grey | Intact | Metal | 6.10 | Positive |
| 1735 | Stair #1 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1736 | Stair #1 | NA | Stair Railing | Grey | Intact | Metal | 8.90 | Positive |
| 1737 | Stair #2 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1738 | Stair #2 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1739 | Stair #2 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1740 | Stair #2 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1741 | Stair #2 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1742 | Stair #2 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm ²) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|-------------------------------------|----------------------------|
| 1743 | Stair #2 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1744 | Stair #2 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1745 | Stair #2 | NA | Stair Riser | Grey | Intact | Metal | 4.60 | Positive |
| 1746 | Stair #2 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1747 | Stair #2 | NA | Stair Railing | Grey | Intact | Metal | 8.20 | Positive |
| 1748 | Stair #3 | NA | Wall A | Green | Intact | Ceramic | > 9.9 | Positive |
| 1749 | Stair #3 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1750 | Stair #3 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |
| 1751 | Stair #3 | NA | Wall C | White | Intact | Plaster | 0.40 | Negative |
| 1752 | Stair #3 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1753 | Stair #3 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1754 | Stair #3 | NA | Wall D | Green | Intact | Ceramic | 7.60 | Positive |
| 1755 | Stair #3 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1756 | Stair #3 | NA | Stair Riser | Grey | Intact | Metal | 8.60 | Positive |
| 1757 | Stair #3 | NA | Stair Stringer | Grey | Intact | Metal | > 9.9 | Positive |
| 1758 | Stair #3 | NA | Stair Railing | Grey | Intact | Metal | > 9.9 | Positive |
| 1759 | Stair #4 | NA | Wall A | Green | Intact | Ceramic | 7.20 | Positive |
| 1760 | Stair #4 | NA | Wall B | White | Intact | Plaster | 0.30 | Negative |
| 1761 | Stair #4 | NA | Wall B | Green | Intact | Ceramic | > 9.9 | Positive |

LEAD PAINT REPORT FORM

Adelaide Project Number: MDDL-BA01684-LS
 Project Location: Middletown Enlarged School District
 TWIN TOWERS MIDDLE SCHOOL

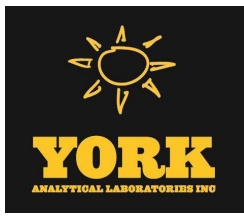
TOTAL ASSAY COUNT: 1766
 SAMPLE COLLECTOR(S): William T. Johnson
 XRF Serial Number: 1206

Services Provided: INVESTIGATIVE LEAD SURVEY

| Assay Number | Room Number | Unit Number | Sample Location, Coordinates Description and Other Comments | Color | Condition | Substrate Type | XRF Reading (mg / cm2) | Classification (pos / neg) |
|--------------|-------------|-------------|---|-------|-----------|----------------|------------------------|----------------------------|
| 1762 | Stair #4 | NA | Wall C | White | Intact. | Plaster | 0.40 | Negative |
| 1763 | Stair #4 | NA | Wall C | Green | Intact | Ceramic | > 9.9 | Positive |
| 1764 | Stair #4 | NA | Wall D | White | Intact | Plaster | 0.20 | Negative |
| 1765 | Stair #4 | NA | Wall D | Green | Intact | Ceramic | > 9.9 | Positive |
| 1766 | Stair #4 | NA | Stair Tread | Grey | Intact | Metal | 0.20 | Negative |
| 1767 | Stair #4 | NA | Stair Riser | Grey | Intact | Metal | 4.60 | Positive |
| 1768 | Stair #4 | NA | Stair Stringer | Grey | Intact | Metal | 8.60 | Positive |
| 1769 | Stair #4 | NA | Stair Railing | Grey | Intact | Metal | 3.90 | Positive |



**APPENDIX F:
PCB BULK SAMPLE FIELD DATA SHEETS
WITH CHAIN OF CUSTODY
AND LABORATORY RESULTS**



Technical Report

prepared for:

Louis Berger & Associates, P.C.
48 Wall Street, 16th Floor
New York NY, 10005
Attention: Craig Napolitano

Report Date: 04/13/2015
Client Project ID: 3001111.00
York Project (SDG) No.: 15D0196

CT Cert. No. PH-0723

New Jersey Cert. No. CT-005



New York Cert. No. 10854

PA Cert. No. 68-04440

Report Date: 04/13/2015
Client Project ID: 3001111.00
York Project (SDG) No.: 15D0196

Louis Berger & Associates, P.C.
48 Wall Street, 16th Floor
New York NY, 10005
Attention: Craig Napolitano

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 06, 2015 and listed below. The project was identified as your project: **3001111.00**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| <u>York Sample ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Date Collected</u> | <u>Date Received</u> |
|-----------------------|-------------------------|---------------|-----------------------|----------------------|
| 15D0196-01 | 03-03A/03B/03C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-02 | 05-05A/05B/05C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-03 | 13-13A/13B/13C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-04 | 25-25A/25B/25C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-05 | 26-26A/26B/26C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-06 | 27-27A/27B/27C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-07 | 29-29A/29B/29C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-08 | 30-30A/30B/30C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-09 | 31-31A/31B/31C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-10 | 32-32A/32B/32C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-11 | 37-37A/37B/37C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-12 | 39-39A/39B/39C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-13 | 40-40A/40B/40C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-14 | 41-41A/41B/41C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-15 | 42-42A/42B/42C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-16 | 61-61A/61B/61C | Caulk | 04/01/2015 | 04/06/2015 |
| 15D0196-17 | 62-62A/62B/62C | Caulk | 04/01/2015 | 04/06/2015 |

General Notes for York Project (SDG) No.: 15D0196

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Benjamin Gulizia
Laboratory Director

Date: 04/13/2015





Sample Information

Client Sample ID: 03-03A/03B/03C

York Sample ID: 15D0196-01

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:11 | JW |

Surrogate Recoveries

| | Surrogate | Result | Flag | Acceptance Range |
|-----------|---------------------------------|--------|--------|------------------|
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 98.5 % | | 30-140 |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 159 % | GC-Sur | 30-140 |

Sample Information

Client Sample ID: 05-05A/05B/05C

York Sample ID: 15D0196-02

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |



Sample Information

Client Sample ID: 05-05A/05B/05C

York Sample ID: 15D0196-02

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:30 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 86.7 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 159 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 13-13A/13B/13C

York Sample ID: 15D0196-03

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:49 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 102 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 160 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 25-25A/25B/25C

York Sample ID: 15D0196-04

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:08 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.6 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 156 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 26-26A/26B/26C

York Sample ID: 15D0196-05

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |



Sample Information

Client Sample ID: 26-26A/26B/26C

York Sample ID: 15D0196-05

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------|-------------------------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:27 | JW |
| Surrogate Recoveries | | Result | | | Acceptance Range | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 101 % | | | 30-140 | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 170 % | GC-Sur | | 30-140 | | | | | | |

Sample Information

Client Sample ID: 27-27A/27B/27C

York Sample ID: 15D0196-06

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------|-------------------------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:47 | JW |
| Surrogate Recoveries | | Result | | | Acceptance Range | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 99.0 % | | | 30-140 | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 163 % | GC-Sur | | 30-140 | | | | | | |



Sample Information

Client Sample ID: 29-29A/29B/29C

York Sample ID: 15D0196-07

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:06 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 100 % | | | 30-140 | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 170 % | GC-Sur | | 30-140 | | | | | | |

Sample Information

Client Sample ID: 30-30A/30B/30C

York Sample ID: 15D0196-08

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |



Sample Information

Client Sample ID: 30-30A/30B/30C

York Sample ID: 15D0196-08

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:25 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 100 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 163 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 31-31A/31B/31C

York Sample ID: 15D0196-09

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:44 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.6 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 154 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 32-32A/32B/32C

York Sample ID: 15D0196-10

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

15D0196

3001111.00

Caulk

April 1, 2015 3:00 pm

04/06/2015

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:04 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 73.4 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 109 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 37-37A/37B/37C

York Sample ID: 15D0196-11

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

15D0196

3001111.00

Caulk

April 1, 2015 3:00 pm

04/06/2015

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |



Sample Information

Client Sample ID: 37-37A/37B/37C

York Sample ID: 15D0196-11

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|------------------------------|--------------------|--------------------|---------|
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:23 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 81.3 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 169 % | GC-Sur | 30-140 | | | | | | | |

Sample Information

Client Sample ID: 39-39A/39B/39C

York Sample ID: 15D0196-12

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|--------|-------------------------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 22:42 | JW |
| Surrogate Recoveries | | Result | | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 93.1 % | | 30-140 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 165 % | GC-Sur | 30-140 | | | | | | | |



Sample Information

Client Sample ID: 40-40A/40B/40C

York Sample ID: 15D0196-13

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 19:53 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 88.7 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 87.1 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 41-41A/41B/41C

York Sample ID: 15D0196-14

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |



Sample Information

Client Sample ID: 41-41A/41B/41C

York Sample ID: 15D0196-14

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|--------------------|----------|------------------------------|-----------------------|-----------------------|---------|
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:22 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 87.2 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 85.6 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 42-42A/42B/42C

York Sample ID: 15D0196-15

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|--------------------|----------|--|-----------------------|-----------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 20:52 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 85.2 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 82.1 % | 30-140 | | | | | | | | |



Sample Information

Client Sample ID: 61-61A/61B/61C

York Sample ID: 15D0196-16

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| 1336-36-3 | * Total PCBs | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: | 04/08/2015 13:37 | 04/09/2015 21:21 | JW |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 80.8 % | 30-140 | | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 60.2 % | 30-140 | | | | | | | | |

Sample Information

Client Sample ID: 62-62A/62B/62C

York Sample ID: 15D0196-17

| | | | | |
|--|--|------------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 15D0196 | <u>Client Project ID</u> 3001111.00 | <u>Matrix</u> Caulk | <u>Collection Date/Time</u> April 1, 2015 3:00 pm | <u>Date Received</u> 04/06/2015 |
|--|--|------------------------|--|------------------------------------|

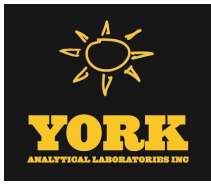
Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | LOD/MDL | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-------|---------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg | 0.500 | 0.500 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP | 04/08/2015 13:37 | 04/09/2015 21:50 | JW |



Sample Information

Client Sample ID: 62-62A/62B/62C

York Sample ID: 15D0196-17

York Project (SDG) No. 15D0196

Client Project ID 3001111.00

Matrix Caulk

Collection Date/Time April 1, 2015 3:00 pm

Date Received 04/06/2015

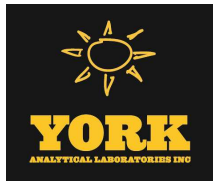
Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with 13 columns: CAS No., Parameter, Result, Flag, Units, LOD/MDL, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for Total PCBs and surrogate recoveries for Tetrachloro-m-xylene and Decachlorobiphenyl.



Analytical Batch Summary

Batch ID: BD50417

Preparation Method: EPA 3550C

Prepared By: SA

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 15D0196-01 | 03-03A/03B/03C | 04/08/15 |
| 15D0196-02 | 05-05A/05B/05C | 04/08/15 |
| 15D0196-03 | 13-13A/13B/13C | 04/08/15 |
| 15D0196-04 | 25-25A/25B/25C | 04/08/15 |
| 15D0196-05 | 26-26A/26B/26C | 04/08/15 |
| 15D0196-06 | 27-27A/27B/27C | 04/08/15 |
| 15D0196-07 | 29-29A/29B/29C | 04/08/15 |
| 15D0196-08 | 30-30A/30B/30C | 04/08/15 |
| 15D0196-09 | 31-31A/31B/31C | 04/08/15 |
| 15D0196-10 | 32-32A/32B/32C | 04/08/15 |
| 15D0196-11 | 37-37A/37B/37C | 04/08/15 |
| 15D0196-12 | 39-39A/39B/39C | 04/08/15 |
| 15D0196-13 | 40-40A/40B/40C | 04/08/15 |
| 15D0196-14 | 41-41A/41B/41C | 04/08/15 |
| 15D0196-15 | 42-42A/42B/42C | 04/08/15 |
| 15D0196-16 | 61-61A/61B/61C | 04/08/15 |
| 15D0196-17 | 62-62A/62B/62C | 04/08/15 |
| BD50417-BLK1 | Blank | 04/08/15 |
| BD50417-BS1 | LCS | 04/08/15 |
| BD50417-BSD1 | LCS Dup | 04/08/15 |



Polychlorinated Biphenyls by GC/ECD - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|--|--------|-----------------|-------|-------------|----------------|------|-------------|------|-------|---|------|
| Batch BD50417 - EPA 3550C | | | | | | | | | | | |
| Blank (BD50417-BLK1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | ND | 0.500 | mg/kg | | | | | | | | |
| Aroclor 1221 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1232 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1242 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1248 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1254 | ND | 0.500 | " | | | | | | | | |
| Aroclor 1260 | ND | 0.500 | " | | | | | | | | |
| Total PCBs | ND | 0.500 | " | | | | | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.39 | | " | 2.03 | | 68.5 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.53 | | " | 2.01 | | 76.1 | 30-140 | | | | |
| LCS (BD50417-BS1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | 10.6 | 0.500 | mg/kg | 10.0 | | 106 | 40-130 | | | | |
| Aroclor 1260 | 10.5 | 0.500 | " | 10.0 | | 105 | 40-130 | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.83 | | " | 2.03 | | 90.1 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.83 | | " | 2.01 | | 91.0 | 30-140 | | | | |
| LCS Dup (BD50417-BSD1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 04/08/2015 Analyzed: 04/09/2015 | |
| Aroclor 1016 | 10.7 | 0.500 | mg/kg | 10.0 | | 107 | 40-130 | | 0.917 | 25 | |
| Aroclor 1260 | 10.4 | 0.500 | " | 10.0 | | 104 | 40-130 | | 0.556 | 25 | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 1.90 | | " | 2.03 | | 93.6 | 30-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 1.74 | | " | 2.01 | | 86.6 | 30-140 | | | | |



Notes and Definitions

GC-Surr Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the alternate surrogate.

| | |
|-------------|--|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |
| Low Bias | Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| High Bias | High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias. |
| Non-Dir. | Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons. |

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 1 OF 5

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

LOUIS BERGER
 TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
 ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
 cnapolitano@louisberger.com
 jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

15DO196

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|--|-----------------|--------------------------|-------------|
| | 03 | 03A | | Coping Stone Caulk | Roof M | | |
| | 03 | 03B | | Coping Stone Caulk | Roof L | | |
| | 03 | 03C | | Coping Stone Caulk | Roof L | | |
| | 05 | 05A | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 05 | 05B | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 05 | 05C | | Caulk to Coping Stone/Cap Flashing Joint | Roof M | | |
| | 13 | 13A | | Cap Flashing Caulk | Roof L | | |
| | 13 | 13B | | Cap Flashing Caulk | Roof L | | |
| | 13 | 13B | | Cap Flashing Caulk | Roof L | | |
| | 25 | 25A | | Cap Flashing Caulk, Tan | Roof O | | |
| | 25 | 25B | | Cap Flashing Caulk, Tan | Roof O | | |
| | 25 | 25C | | Cap Flashing Caulk, Tan | Roof O | | |

CHAIN OF CUSTODY

| | | | | | |
|------------------|--------|--------|------------------|--------|--------|
| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |
| Relinquished by: | (Date) | (Time) | Relinquished by: | (Date) | (Time) |

INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlors 1016, Arochlors 1221, Arochlors 1232, Arochlors 1242, Arochlors 1248, Arochlors 1254, Arochlors 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PAGE 2 OF 5

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

1500196

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|---------------------------|-----------------|--------------------------|-------------|
| 26 | | 26A | | Cap Flashing Caulk, Red | Roof O | | |
| 26 | | 26B | | Cap Flashing Caulk, Red | Roof O | | |
| 26 | | 26C | | Cap Flashing Caulk, Red | Roof O | | |
| 27 | | 27A | | Cap Flashing Caulk, Grey | Roof O | | |
| 27 | | 27B | | Cap Flashing Caulk, Grey | Roof O | | |
| 27 | | 27C | | Cap Flashing Caulk, Grey | Roof O | | |
| 29 | | 29A | | Cap Flashing Caulk, White | Roof O | | |
| 29 | | 29B | | Cap Flashing Caulk, White | Roof O | | |
| 29 | | 29C | | Cap Flashing Caulk, White | Roof O | | |
| 30 | | 30A | | Expansion Joint Caulk | Roof Q | | |
| 30 | | 30B | | Expansion Joint Caulk | Roof Q | | |
| 30 | | 30C | | Expansion Joint Caulk | Roof Q | | |

| CHAIN OF CUSTODY | | | | | | | |
|------------------|------------|--------|---------|------------------|-----------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Relinquished by: | | | | Relinquished by: | | | |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| | Kyle Baker | 4/6/15 | 9:00 AM | Received by: | TECHNICAL | 4/6/15 | 11:30 |

LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions ($\pm 5\%$) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 – 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

15D0196

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5 Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|---|-----------------|--------------------------|-------------|
| | 31 | 31A | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 31 | 31B | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 31 | 31C | | Façade Corner Joint Caulk, Black | Roof Q | | |
| | 32 | 32A | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 32 | 32B | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 32 | 32C | | Façade Corner Joint Caulk, Brown | Roof Q | | |
| | 37 | 37A | | Cap Flashing Caulk, Light Grey | Roof I | | |
| | 37 | 37B | | Cap Flashing Caulk, Light Grey | Roof C | | |
| | 37 | 37C | | Cap Flashing Caulk, Light Grey | Roof C | | |
| | 39 | 39A | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| | 39 | 39B | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |
| | 39 | 39C | | Caulk Assoc. with Copper Deck/Coping Stone Seam | Roof H | | |

| CHAIN OF CUSTODY | | | | | | | |
|------------------|-----------|--------|--------|------------------|-------------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| | K. PARKER | 4/6/15 | | Received by: | C. Campbell | 4/6/15 | 18:30 |

LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

15D0196

LOUIS BERGER
TELEPHONE NO.: (212) 612-7900 FAX NO.: (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

| LAB SAMPLE No. | HA | SAMPLE NO. | SAMPLE DATE/TIME | MATERIAL DESCRIPTION | SAMPLE LOCATION | APPROX. QUANTITY (LF/SF) | FIELD NOTES |
|----------------|----|------------|------------------|-------------------------------|-------------------|--------------------------|-------------|
| 40 | | 40A | | Cap Flashing Caulk, Old | Roof D | | |
| 40 | | 40B | | Cap Flashing Caulk, Old | Roof C | | |
| 40 | | 40C | | Cap Flashing Caulk, Old | Roof C | | |
| 41 | | 41A | | Cap Flashing Caulk, Dark Grey | Roof I | | |
| 41 | | 41B | | Cap Flashing Caulk, Dark Grey | Roof C | | |
| 41 | | 41C | | Cap Flashing Caulk, Dark Grey | Roof C | | |
| 42 | | 42A | | Cap Flashing Caulk, White | Roof I | | |
| 42 | | 42B | | Cap Flashing Caulk, White | Roof C | | |
| 42 | | 42C | | Cap Flashing Caulk, White | Roof C | | |
| 61 | | 61A | | Caulking to Sinks/Toilets | Boys Locker Room | | |
| 61 | | 61B | | Caulking to Sinks/Toilets | Girls Locker Room | | |
| 61 | | 61C | | Caulking to Sinks/Toilets | Girls Locker Room | | |

CHAIN OF CUSTODY

| | | | | | | | |
|------------------|--------|--------|--------|------------------|--------|--------|--------|
| Relinquished by: | (Sign) | (Date) | (Time) | Relinquished by: | (Sign) | (Date) | (Time) |
| Received by: | (Sign) | (Date) | (Time) | Received by: | (Sign) | (Date) | (Time) |
| | | | | | | | |
| | | | | | | | |

LAB INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions ($\pm 5\%$) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



Louis Berger

PCB SURVEY DATA SHEET / CHAIN OF CUSTODY

PROJECT NO.: 3001111.00

CLIENT: Middletown Schools

PROJECT SITE: Twin Towers Middle School, Middletown, NY

Project Manager: Craig Napolitano

LOCATION(S) SURVEYED: Throughout

PROPOSED PROJECT: School Wide Renovations Renovation

DATE(S) OF INSPECTION: 3/24, 3/25, 3/31 - 4/01/2015

Inspector(s): Drew Cheskin & Josue Garcia

15D0196

LOUIS BERGER
TELEPHONE NO. : (212) 612-7900 FAX NO. : (212) 363-4341
ADDRESS: 48 Wall Street 16th Floor, New York, NY 10005

RESULTS TO: acheskin@louisberger.com
cnapolitano@louisberger.com
jgarcia@louisberger.com

TURNAROUND TIME: 5-Day

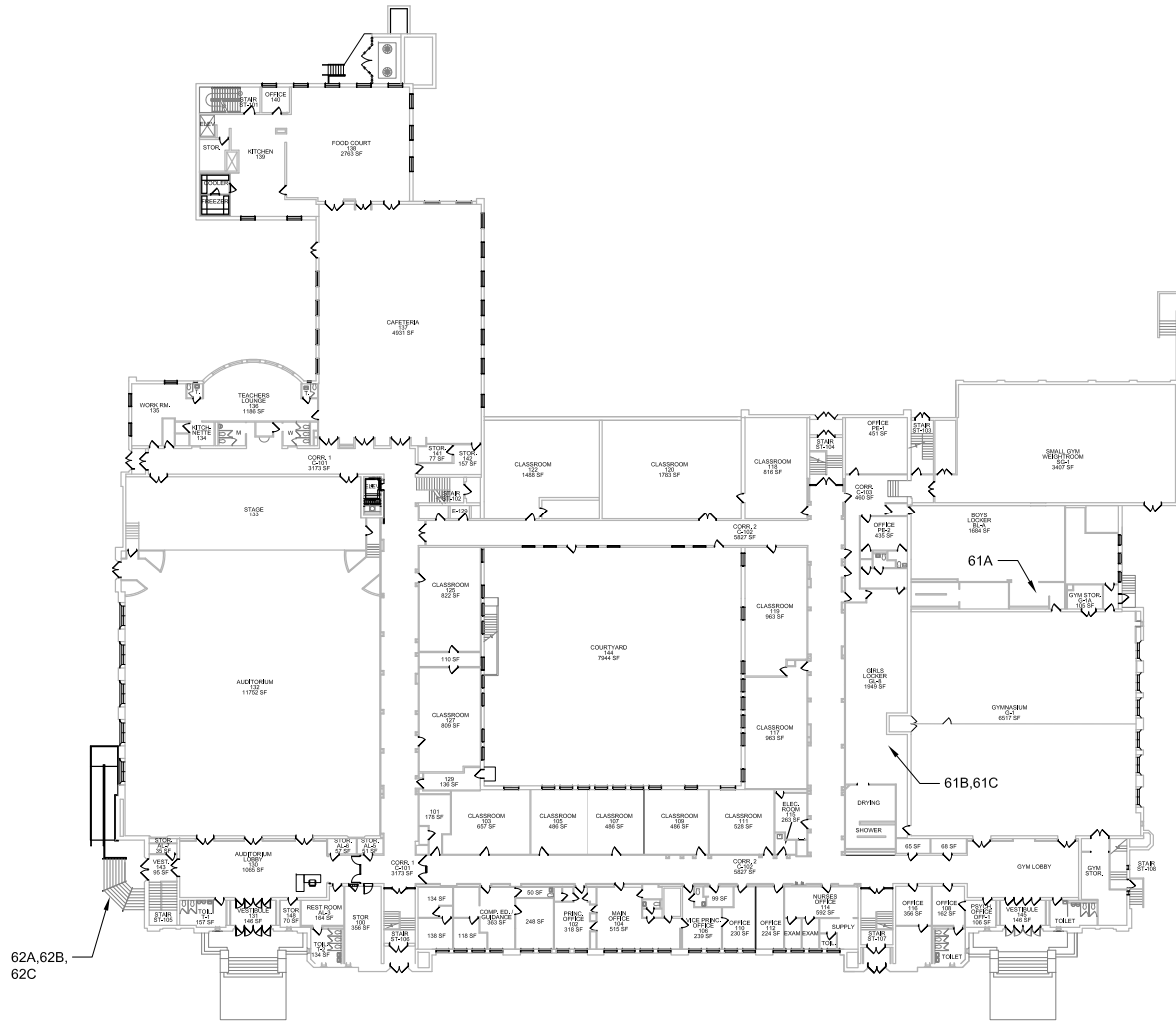
| <u>LAB SAMPLE NO.</u> | <u>HA</u> | <u>SAMPLE NO.</u> | <u>SAMPLE DATE/ TIME</u> | <u>MATERIAL DESCRIPTION</u> | <u>SAMPLE LOCATION</u> | <u>APPROX. QUANTITY (LF/SF)</u> | <u>FIELD NOTES</u> |
|-----------------------|-----------|-------------------|--------------------------|-----------------------------|----------------------------|---------------------------------|--------------------|
| | 62 | 62A | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | 62 | 62B | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | 62 | 62C | | Expansion Joint Caulk | Exterior Auditorium Stairs | | |
| | | | | | | | |
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| <u>CHAIN OF CUSTODY</u> | | | | | | | |
|-------------------------|---------------|---------------|---------------|-------------------------|---------------|---------------|---------------|
| <u>Relinquished by:</u> | <u>(Sign)</u> | <u>(Date)</u> | <u>(Time)</u> | <u>Relinquished by:</u> | <u>(Sign)</u> | <u>(Date)</u> | <u>(Time)</u> |
| | | | | | | | |
| | | | | | | | |

INSTRUCTIONS: create one (1) composite sample of each homogeneous material from equal mass portions (± 5%) of the three (3) sub-samples for extraction and analysis via EPA Method 8082 and report the Arochlors listed (Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, Arochlor 1260). The laboratory shall target a PCB detection limit of 1 ppm



**APPENDIX G:
PCB BULK SAMPLE LOCATION DRAWINGS**



62A, 62B,
62C

FIRST FLOOR PLAN
 0' 4" = 16' PROJECT NORTH

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
 MIDDLE SCHOOL**

DRAWING TITLE
**PCB SAMPLE LOCATIONS
 FIRST FLOOR PLAN**

| | |
|--------------------------|-----------------|
| DRAWN BY: J. HERRZ | SCALE: AS SHOWN |
| INSPECTED BY: D. CHESNIN | DATE: 04/10/15 |
| COORDINATE: MIDDLETOWN | DRAWING NUMBER |
| CHECKED BY: G. WENDEL | PCB001 |
| DRAWING NUMBER 1 OF 2 | |

REVISIONS

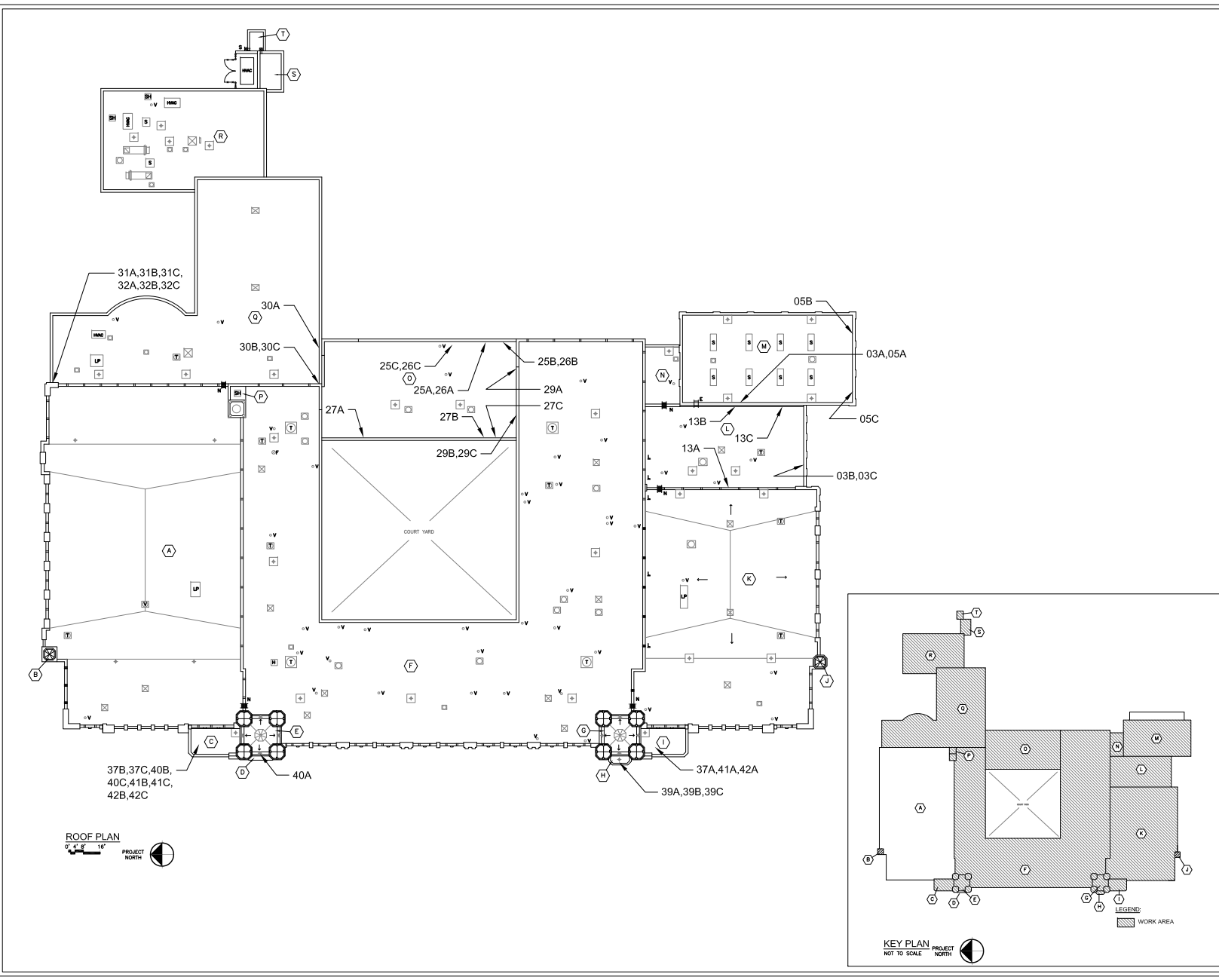
| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |

**TWIN TOWERS
MIDDLE SCHOOL**

DRAWING TITLE
**PCBSAMPLE LOCATIONS
ROOF PLAN**

DRAWN BY: J. HERRZ
CHECKED BY: D. CHERRY
DATE: 04/15/15
DRAWER: J. HERRZ

PCB002
DRAWING NUMBER
2 OF 2





**APPENDIX H:
COMPANY LICENSE, PERSONNEL CERTIFICATIONS
& LABORATORY ACCREDITATIONS**

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Louis Berger & Assoc., P.C.
16th Floor
48 Wall Street

New York, NY 10005

FILE NUMBER: 09-46778
LICENSE NUMBER: 46778
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 06/19/2014
EXPIRATION DATE: 07/31/2015

Duly Authorized Representative – Prakash Saha:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Acting Director
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



ANDREW B CHESKIN

CLASS(EXPIRES)

C ATEC(09/15) D INSP(09/15)

E MGPL(09/15) H PM (09/15)

I PD (09/15)

CERT# 09-04280
DMV# 3D4231776

MUST BE CARRIED ON ASBESTOS PROJECTS

**New York
INSPECTOR**



**Certified Lead-Based
Paint Professional**

| | |
|--|--------------------------------------|
| Certification No NY-I-11881-2 | |
| Date of Birth 06/30/1973 | Expiration Date 06/26/2016 |
| Address 142 Garth Rd., Apt. 6B Scarsdale, NY 10583 | |
| Badge Holder's Name Andrew Brian Cheskin | |
| Badge Holder's Signature <i>AB</i> | |



If found, drop in any mailbox
Postmaster: Please return to:
**US EPA
1200 Pennsylvania Ave, NW
(MC-74040T)
Washington, DC 20460
or call 1-800-424-LEAD**

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



JOSUE GARCIA
CLASS(EXPIRES)
C ATEC(08/15) D INSP(08/15)
H PM (08/15) I PD (08/15)

CERT# 01-04292
DMV# 816004194

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 000287824 70

EYES BLK
HAIR BLK
HGT 5' 06"

IF FOUND RETURN TO:
NYSOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

New York
RISK ASSESSOR



**Certified Lead-Based
Paint Professional**

| | |
|---|-----------------|
| Certification No. | NY-R-6928-4 |
| Date of Birth | Expiration Date |
| 03/07/1970 | 04/09/2017 |
| Address | |
| | |
| Badge Holder's Name | |
| Josue Garcia | |
| Badge Holder's Signature | |
|  | |



If found, drop in any mailbox
Postmaster: Please return to:

US EPA
1200 Pennsylvania Ave, NW
(MC-7404T)
Washington, DC 20460
or Call 1-800-424-LEAD

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2015
Issued April 01, 2014

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JAMES HALL
EMSL ANALYTICAL, INC
307 WEST 38TH STREET
NEW YORK, NY 10018

NY Lab Id No: 11506

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |
| Lead in Dust Wipes | EPA 7000B |
| Lead in Paint | EPA 7000B |

Sample Preparation Methods

EPA 3050B
APP. 14.2, HUD JUNE 1995

Serial No.: 50665

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2016
Issued April 01, 2015

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JAMES HALL
EMSL ANALYTICAL, INC
307 WEST 38TH STREET
NEW YORK, NY 10018

NY Lab Id No: 11506

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All approved subcategories and/or analytes are listed below:*

Miscellaneous

| | |
|--------------------------------------|---|
| Asbestos in Friable Material | Item 198.1 of Manual EPA 600/M4/82/020 |
| Asbestos in Non-Friable Material-PLM | Item 198.6 of Manual (NOB by PLM) |
| Asbestos in Non-Friable Material-TEM | Item 198.4 of Manual |
| Lead in Dust Wipes | EPA 7000B |
| Lead in Paint | EPA 7000B |

Sample Preparation Methods

EPA 3050B

Serial No.: 52401

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101048-9

EMSL Analytical, Inc.
New York, NY

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2014-07-01 through 2015-06-30

Effective dates



A handwritten signature in black ink, appearing to read 'William R. Mulford', is written over a horizontal line.

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.

307 W. 38th Street

New York, NY 10018

Jim Hall

Phone: 212-290-0051 Fax: 212-290-0058

E-Mail: ssiegel@emsl.com

URL: <http://www.emsl.com>

BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101048-9

NVLAP Code Designation / Description

18/A01 EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

18/A03 EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2014-07-01 through 2015-06-30

Effective dates

For the National Institute of Standards and Technology

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Metals II

| | |
|-----------------|-----------------------|
| Vanadium, Total | EPA 6020 |
| Zinc, Total | EPA 6010B EPA 6020 |

Nitrosoamines

| | |
|---------------------------|------------------------|
| N-Nitrosodimethylamine | EPA 8270D |
| N-Nitrosodi-n-propylamine | EPA 8270C EPA 8270D |
| N-Nitrosodiphenylamine | EPA 8270D |

Metals III

| | |
|-------------------|-----------------------|
| Cobalt, Total | EPA 6010B EPA 6020 |
| Molybdenum, Total | EPA 6010B EPA 6020 |
| Thallium, Total | EPA 6010B EPA 6020 |
| Tin, Total | EPA 6010B |

Petroleum Hydrocarbons

| | |
|-------------------------|-----------|
| Diesel Range Organics | EPA 8015B |
| Gasoline Range Organics | EPA 8260B |

Phthalate Esters

| | |
|-----------------------------|------------------------|
| Benzyl butyl phthalate | EPA 8270C EPA 8270D |
| Bis(2-ethylhexyl) phthalate | EPA 8270C EPA 8270D |
| Diethyl phthalate | EPA 8270C EPA 8270D |
| Dimethyl phthalate | EPA 8270C EPA 8270D |
| Di-n-butyl phthalate | EPA 8270C EPA 8270D |
| Di-n-octyl phthalate | EPA 8270C EPA 8270D |

Miscellaneous

| | |
|-----------------------------|----------|
| Extractable Organic Halides | EPA 9023 |
|-----------------------------|----------|

Nitroaromatics and Isophorone

| | |
|--------------------|------------------------|
| 2,4-Dinitrotoluene | EPA 8270C EPA 8270D |
| 2,6-Dinitrotoluene | EPA 8270C EPA 8270D |
| Isophorone | EPA 8270C EPA 8270D |
| Nitrobenzene | EPA 8270C EPA 8270D |
| Pyridine | EPA 8270D |

Polychlorinated Biphenyls

| | |
|----------|----------|
| PCB-1016 | EPA 8082 |
| PCB-1221 | EPA 8082 |
| PCB-1232 | EPA 8082 |

Serial No.: 48422

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Polychlorinated Biphenyls

| | |
|----------|----------|
| PCB-1242 | EPA 8082 |
| PCB-1248 | EPA 8082 |
| PCB-1254 | EPA 8082 |
| PCB-1260 | EPA 8082 |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Acenaphthene | EPA 8270C |
| | EPA 8270D |
| Acenaphthylene | EPA 8270C |
| | EPA 8270D |
| Anthracene | EPA 8270C |
| | EPA 8270D |
| Benzo(a)anthracene | EPA 8270C |
| | EPA 8270D |
| Benzo(a)pyrene | EPA 8270C |
| | EPA 8270D |
| Benzo(b)fluoranthene | EPA 8270C |
| | EPA 8270D |
| Benzo(ghi)perylene | EPA 8270C |
| | EPA 8270D |
| Chrysene | EPA 8270C |
| | EPA 8270D |
| Dibenzo(a,h)anthracene | EPA 8270C |
| | EPA 8270D |
| Fluoranthene | EPA 8270C |
| | EPA 8270D |

Polynuclear Aromatic Hydrocarbons

| | |
|------------------------|-----------|
| Fluorene | EPA 8270C |
| | EPA 8270D |
| Indeno(1,2,3-cd)pyrene | EPA 8270C |
| | EPA 8270D |
| Naphthalene | EPA 8270C |
| | EPA 8270D |
| Phenanthrene | EPA 8270C |
| | EPA 8270D |
| Pyrene | EPA 8270C |
| | EPA 8270D |

Priority Pollutant Phenols

| | |
|----------------------------|-----------|
| 2,4,5-Trichlorophenol | EPA 8270D |
| 2,4,6-Trichlorophenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dichlorophenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dimethylphenol | EPA 8270C |
| | EPA 8270D |
| 2,4-Dinitrophenol | EPA 8270C |
| | EPA 8270D |
| 2-Chlorophenol | EPA 8270C |
| | EPA 8270D |
| 2-Methyl-4,6-dinitrophenol | EPA 8270C |
| | EPA 8270D |
| 2-Methylphenol | EPA 8270C |
| | EPA 8270D |

Serial No.: 48422

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2016
Issued April 01, 2015

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT Q. BRADLEY
YORK ANALYTICAL LABORATORIES INC
120 RESEARCH DRIVE
STRATFORD, CT 06615

NY Lab Id No: 10854

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Metals II

Vanadium, Total EPA 6020A
Zinc, Total EPA 6010C
EPA 6020A

Metals III

Cobalt, Total EPA 6010C
EPA 6020A
Molybdenum, Total EPA 6020A
Thallium, Total EPA 6010C
EPA 6020A
Tin, Total EPA 6020A
Titanium, Total EPA 6020A

Miscellaneous

Boron, Total EPA 6020A
Cyanide, Total EPA 9014
Extractable Organic Halides EPA 9023

Nitroaromatics and Isophorone

2,4-Dinitrotoluene EPA 8270D
2,6-Dinitrotoluene EPA 8270D
Isophorone EPA 8270D
Nitrobenzene EPA 8270D
Pyridine EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine EPA 8270D
N-Nitrosodi-n-propylamine EPA 8270D

Nitrosoamines

N-Nitrosodiphenylamine EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics EPA 8015D
Gasoline Range Organics EPA 8015D

Phthalate Esters

Benzyl butyl phthalate EPA 8270D
Bis(2-ethylhexyl) phthalate EPA 8270D
Diethyl phthalate EPA 8270D
Dimethyl phthalate EPA 8270D
Di-n-butyl phthalate EPA 8270D
Di-n-octyl phthalate EPA 8270D

Polychlorinated Biphenyls

PCB-1016 EPA 8082A
PCB-1221 EPA 8082A
PCB-1232 EPA 8082A
PCB-1242 EPA 8082A
PCB-1248 EPA 8082A
PCB-1254 EPA 8082A
PCB-1260 EPA 8082A
PCB-1262 EPA 8082A
PCB-1268 EPA 8082A
PCBs in Oil EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene EPA 8270D

Serial No.: 52148

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.





**APPENDIX I:
PHOTOGRAPHIC DOCUMENTATION**

**FINAL REPORT OF ENVIRONENMTAL ASBESTOS SERVICES
FOR
TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE, MIDDLETOWN NY
PHOTODOCUMENTATION LOG**



Photograph 1: Caulk Assoc. with Copper Deck/Coping Stone Seam, Cap Flashing Caulk, Old, Cap Flashing Caulk, Dark Grey & Cap Flashing Caulk, White



Photograph 2: Cementitious Materials Assoc. with Boiler

**FINAL REPORT OF ENVIRONENMTAL ASBESTOS SERVICES
FOR
TWIN TOWERS MIDDLE SCHOOL
112 GRAND AVENUE, MIDDLETOWN NY
PHOTODOCUMENTATION LOG**



Photograph 3: Water Tank Brick Mortar



**APPENDIX J:
FILE SEARCH MATERIALS**

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 1/7/15

Building Twin Towers

Homogenous Area _____ Floor 3rd Room 308

Types of ACM Misc Floor tile 12x12

Location of ACM Classroom

Amount LF or SF 1

Condition Broken Changes Broken

Homogenous Area _____ Floor 3rd Room 319 & 317

Types of ACM 9x9 Floor tile (misc)

Location of ACM Under Carpet (Tom S. said it will be addressed in 2015-16)

Amount LF or SF 50+

Condition Loose (Broken) Changes Needs Attention! NOT EXPOSED TO STAFF & STUDENTS CONSTRUCTION PROJECT

Homogenous Area _____ Floor _____ Room _____
Floor _____ Room _____

Types of ACM _____

Location of ACM _____

Amount LF or SF _____

Condition _____ Changes _____

Person Conducting Surveillance George Pema License# 90-07253

Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 11/7/15
Building Twin Tower 112 Grand Ave
Homogenous Area _____ Floor Basement Room Storage (Boiler RM)
Types of ACM TSI
Location of ACM Ceiling Storage (WRAPPED)
Amount LF or SF _____
Condition OK Changes NONE

Homogenous Area _____ Floor Basement Room Fallout
Types of ACM TSI - All Entrances with Proper Surge
ACCESS TO RPTS + MAINTENANCE STOP, Boiler RM
Location of ACM Fallout Shelter Behind Library, By elevator Electric RM
Amount LF or SF _____
Condition Good to Poor Changes NONE

Homogenous Area _____ Floor _____ Room _____
Floor _____ Room _____
Types of ACM _____
Location of ACM _____
Amount LF or SF _____
Condition _____ Changes _____

Person Conducting Surveillance George Perna License# 90-07253
Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

Middletown Enlarged City School District
223 Wisner Ave. Middletown NY 10940

AHERA-Six Month Reassessment of ACM

Date 1/7/15

Building TWIN TOWERS 112 Grand Ave

Homogenous Area _____ Floor _____ Room _____

Types of ACM Misc Floor tile
Covered w/ carpet

Location of ACM Rms - 105, 107, 109, 111 (new) 226, 224 (ART storage) 220 Teacher Rm

Amount LF or SF _____ 325, 327 (new) 324 (new) 300 (new) (206 new)
AS-3 Teacher lounge Cafe

Condition OK Changes none

Homogenous Area _____ Floor 1st Room 1st Aud.

Types of ACM Misc. Floor tile

Location of ACM Auditorium 9x9 Brown

Amount LF or SF _____

Condition OK Changes none

Homogenous Area _____ Floor 1st Room AS-4, 101
Floor _____ Room _____

Types of ACM Misc. Floor tile

Location of ACM Room 101, AS-4 12x12 DARK Brown tile







Amount LF or SF _____

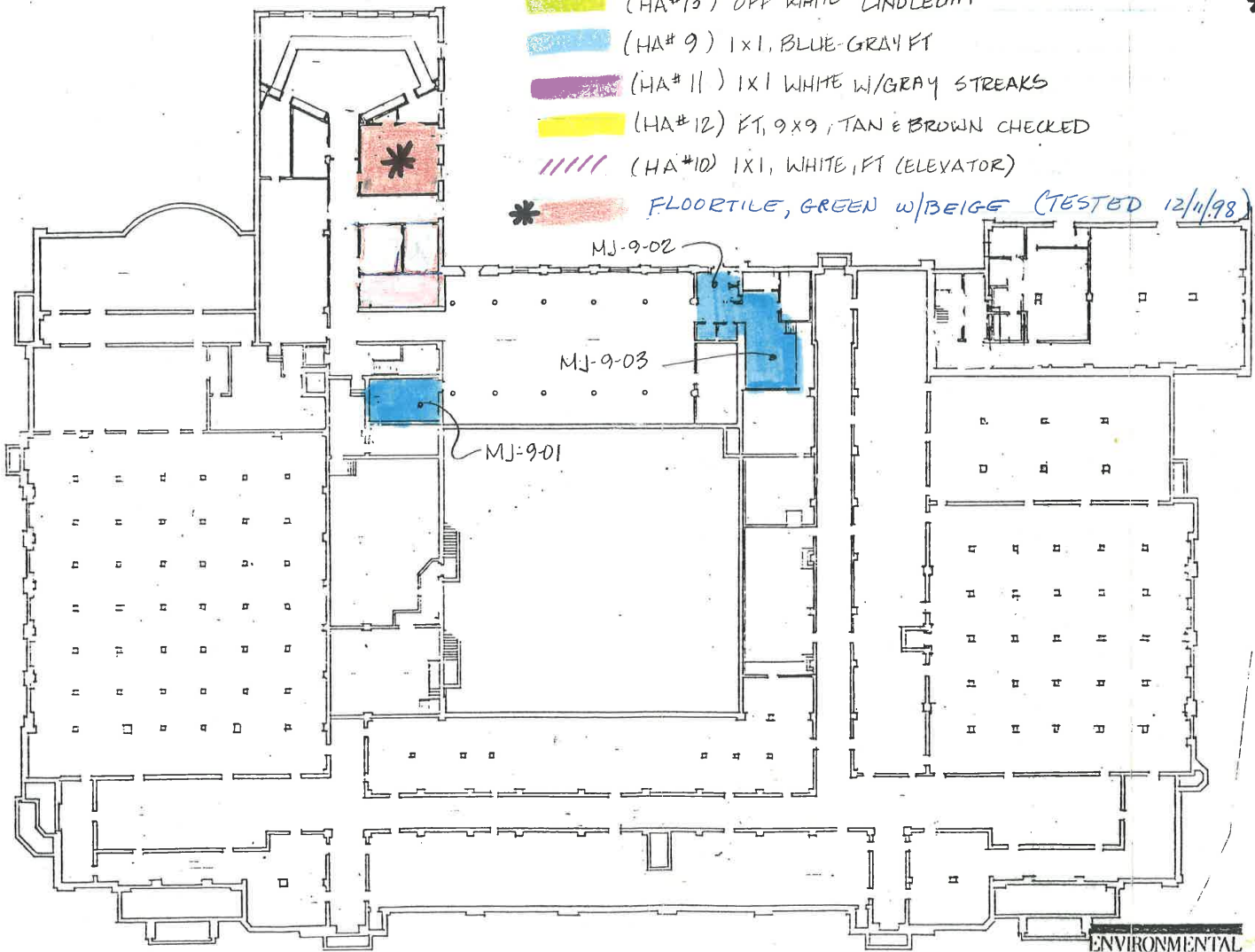
Condition OK Changes none

Person Conducting Surveillance George Perna License# 90-07253

Signature [Signature] Next Surveillance July 2015
Updated 1/07 gwpjr

* Asbestos

-  (HA#13) OFF WHITE LINDLEUM
-  (HA#9) 1x1, BLUE-GRAY FT
-  (HA#11) 1x1 WHITE W/GRAY STREAKS
-  (HA#12) FT, 9x9, TAN & BROWN CHECKED
-  (HA#10) 1x1, WHITE, FT (ELEVATOR)
-  * FLOORTILE, GREEN W/BEIGE (TESTED 12/1/98)



BASEMENT FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

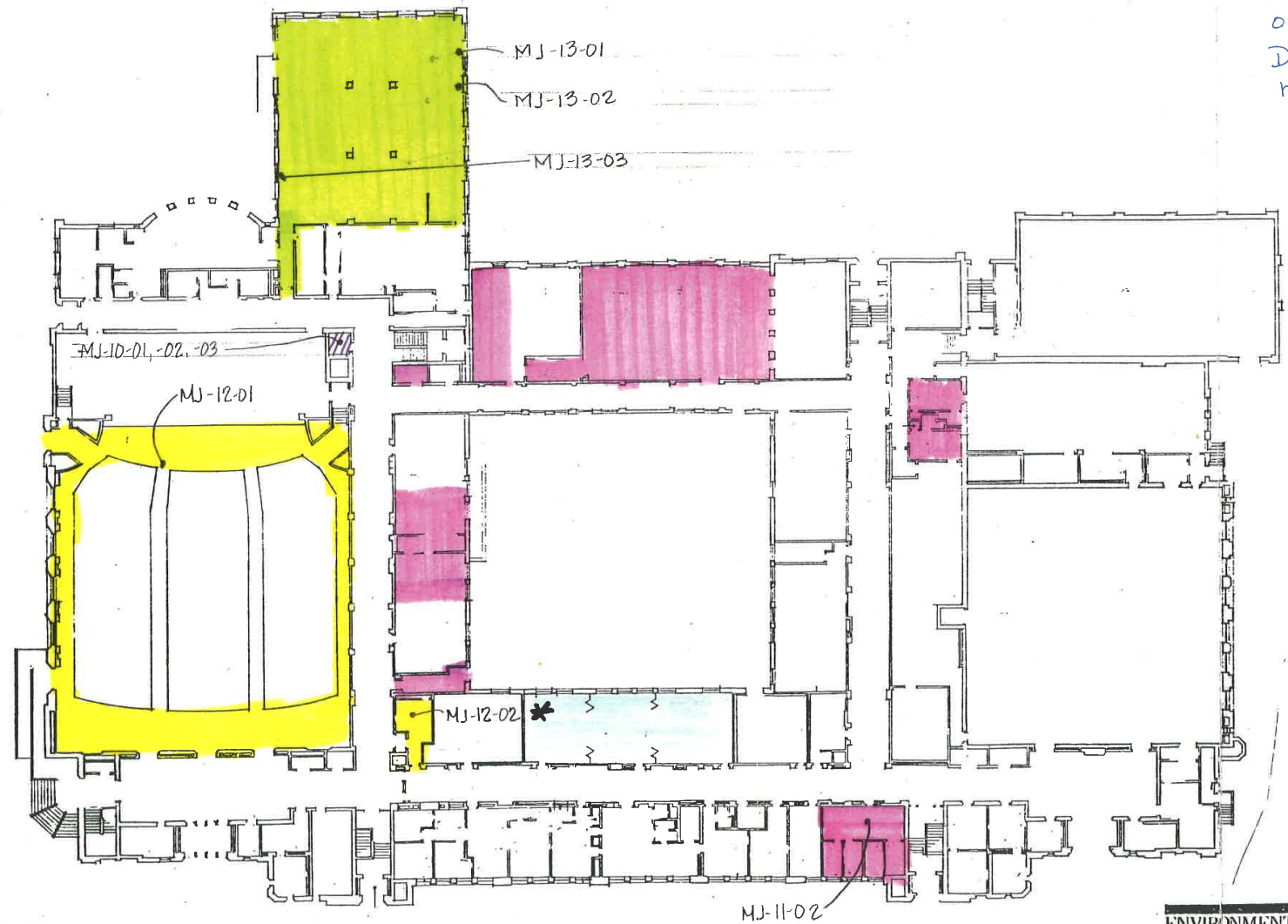
2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 3034

MATERIALS SHOWN: FLOORS

DRAWING NO. 1 DRAWN BY: CR

D.C. BY: MD DATE: 10-21-88

misc. - asbestos in wiring
on stage lighting.
Discovered 9/95 - See lab
results.



FIRST FLOOR PLAN

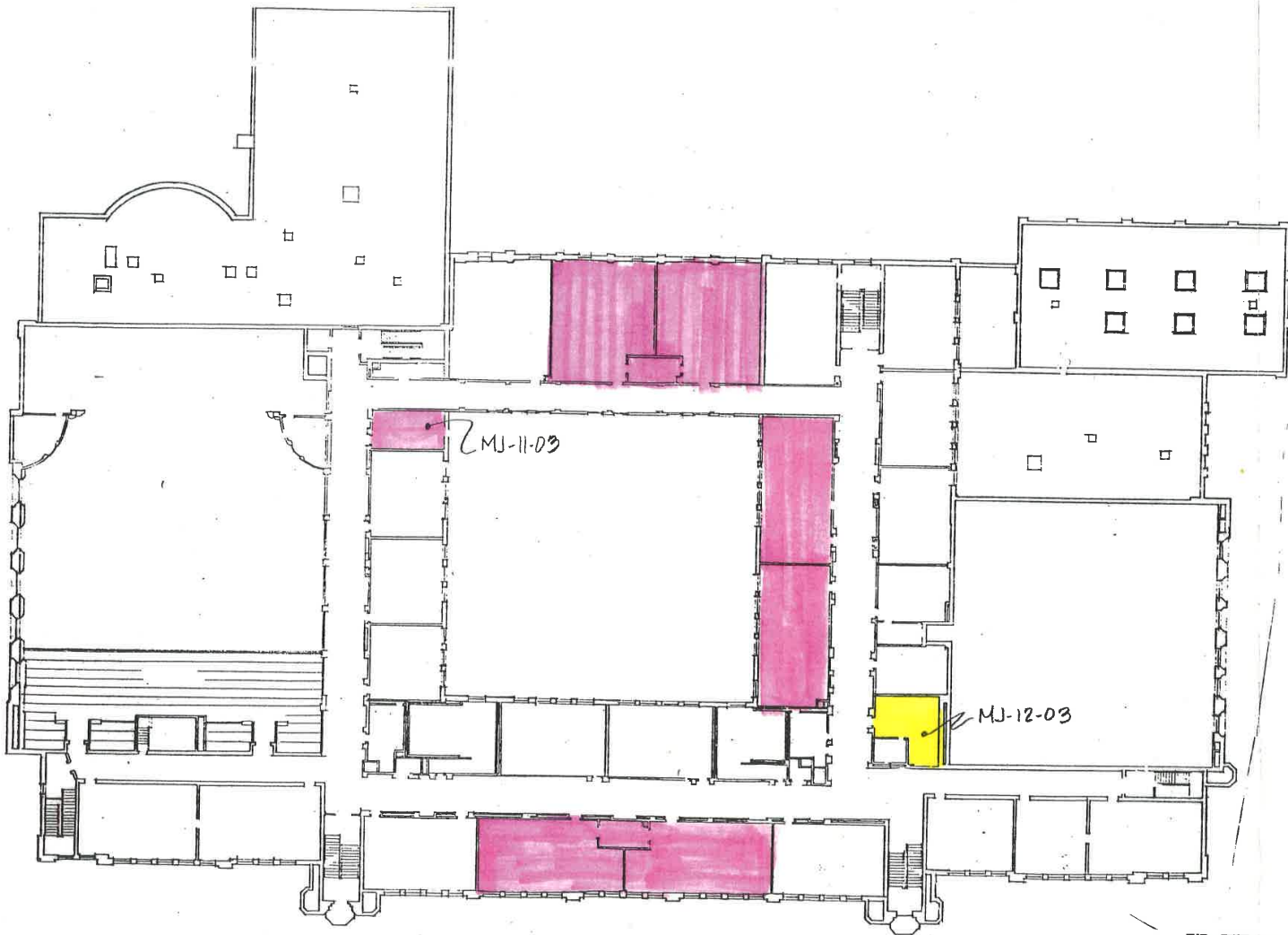
MIDDLETOWN JUNIOR HIGH SCHOOL

* 12x12" asbestos floortile
discovered 8/98 (under
carpet)

ENVIRONMENTAL
MANAGEMENT
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 2 DRAWN BY: CR
Q.C. BY: ME DATE: 10-31-88



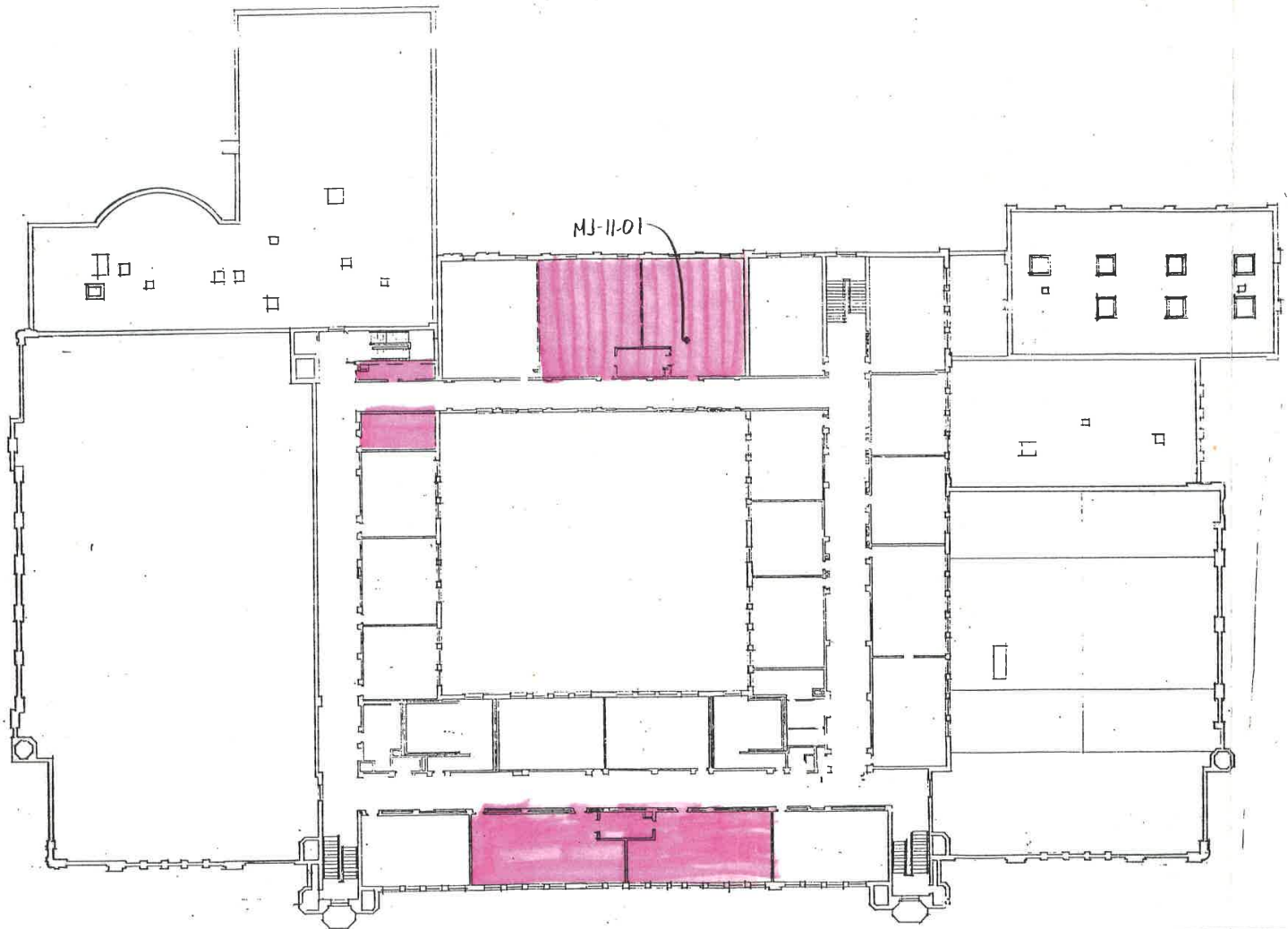
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 3 DRAWN BY: CR
O.C. BY: *mm* DATE: 10-31-88



MJ-11-01

THIRD FLOOR PLAN

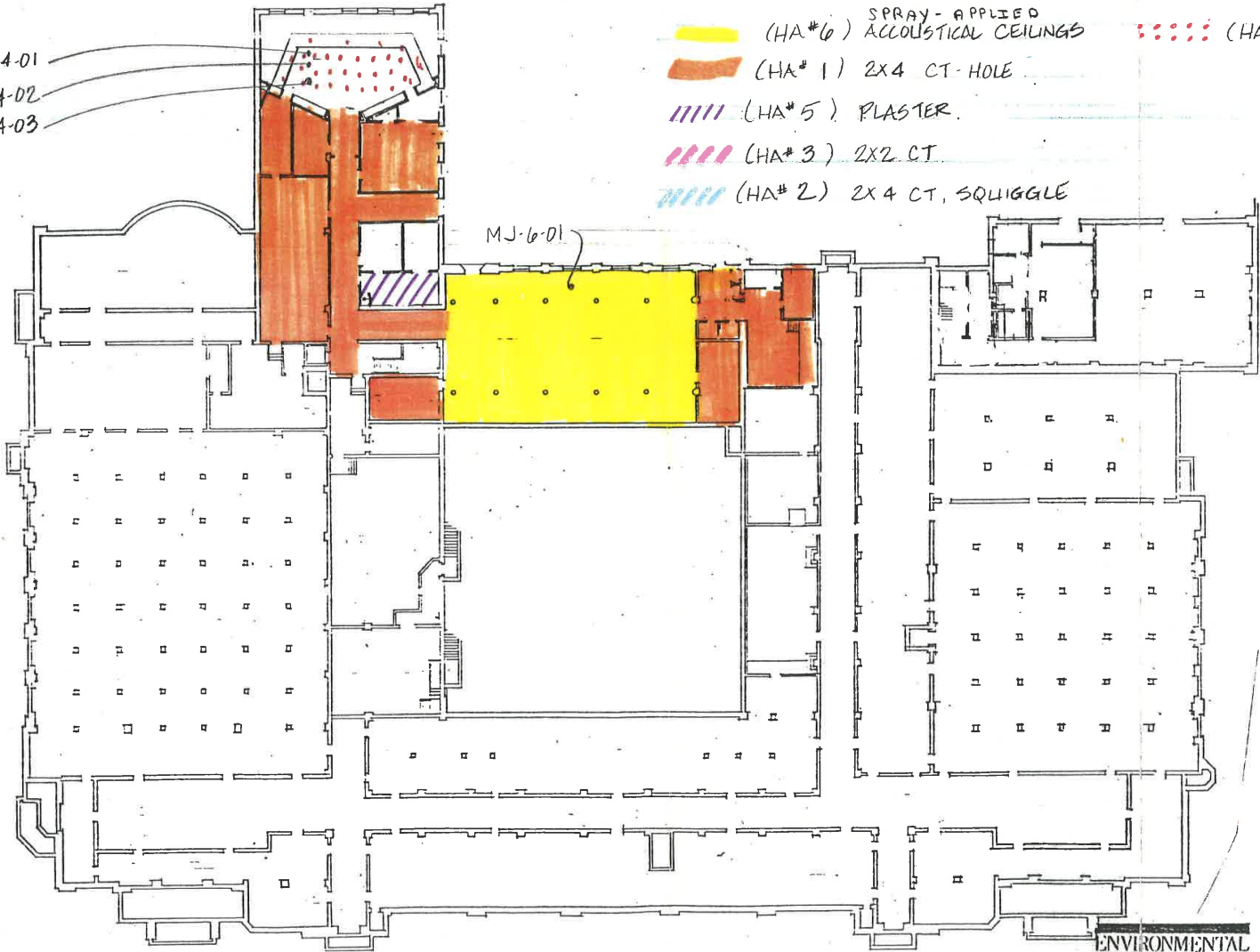
MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: FLOORS
DRAWING NO. 4 DRAWN BY: CR
Q.C. BY: MJ DATE: 10-31-88

MJ-4-01
MJ-4-02
MJ-4-03



- (HA#6) SPRAY-APPLIED ACOUSTICAL CEILINGS
- (HA#1) 2X4 CT-HOLE
- (HA#5) PLASTER
- (HA#3) 2X2 CT
- (HA#2) 2X4 CT, SQUIGGLE
- (HA#4) GYP CEILING

MJ-6-01

BASEMENT FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
INC

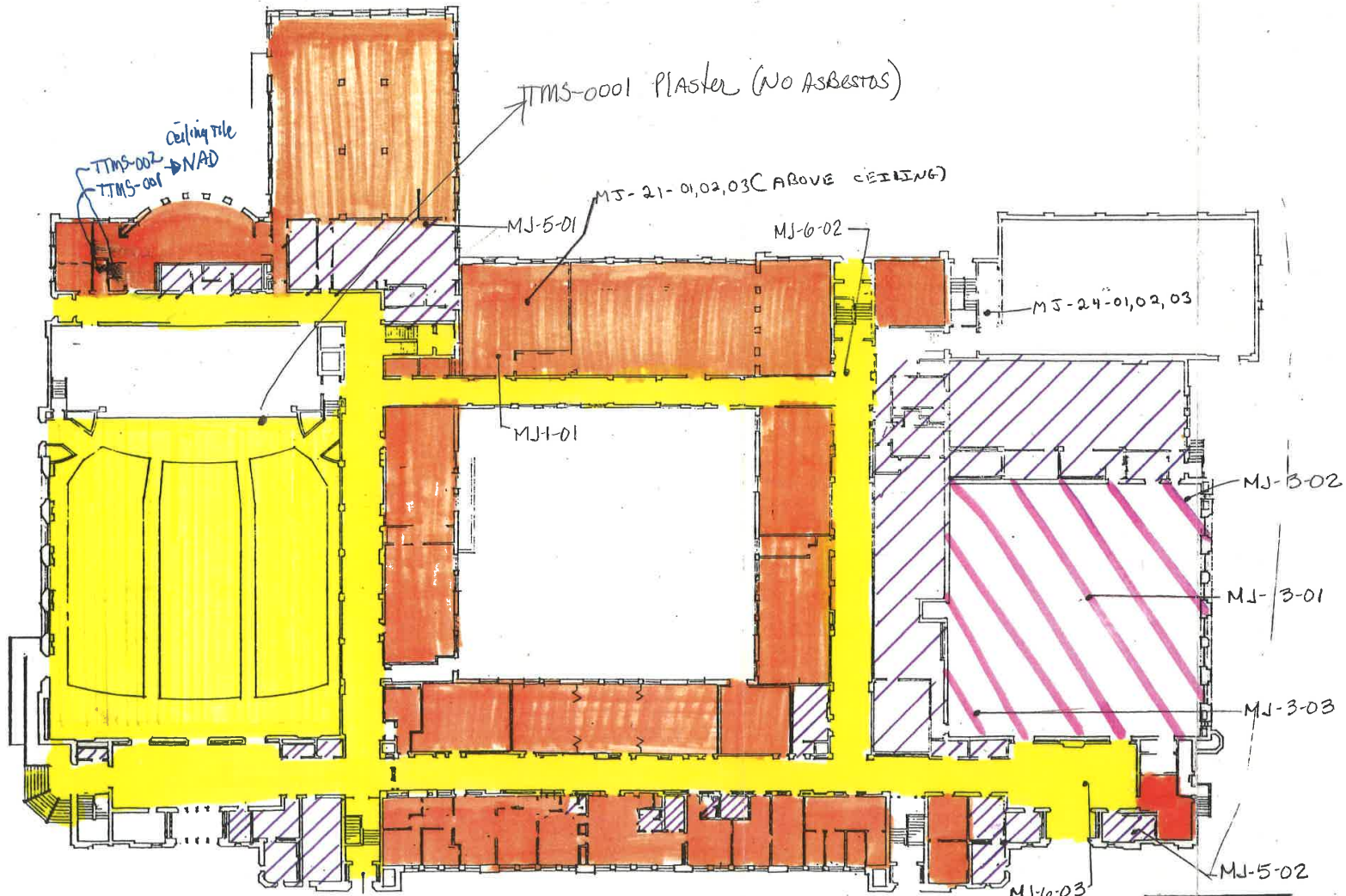
2699 Johnson Road, N.E
Suite Three Hundred
Atlanta, Georgia 3034

MATERIALS SHOWN: CEILING

DRAWING NO. 5 DRAWN BY: CR

O.C. BY: MJ

DATE: 10-31-88



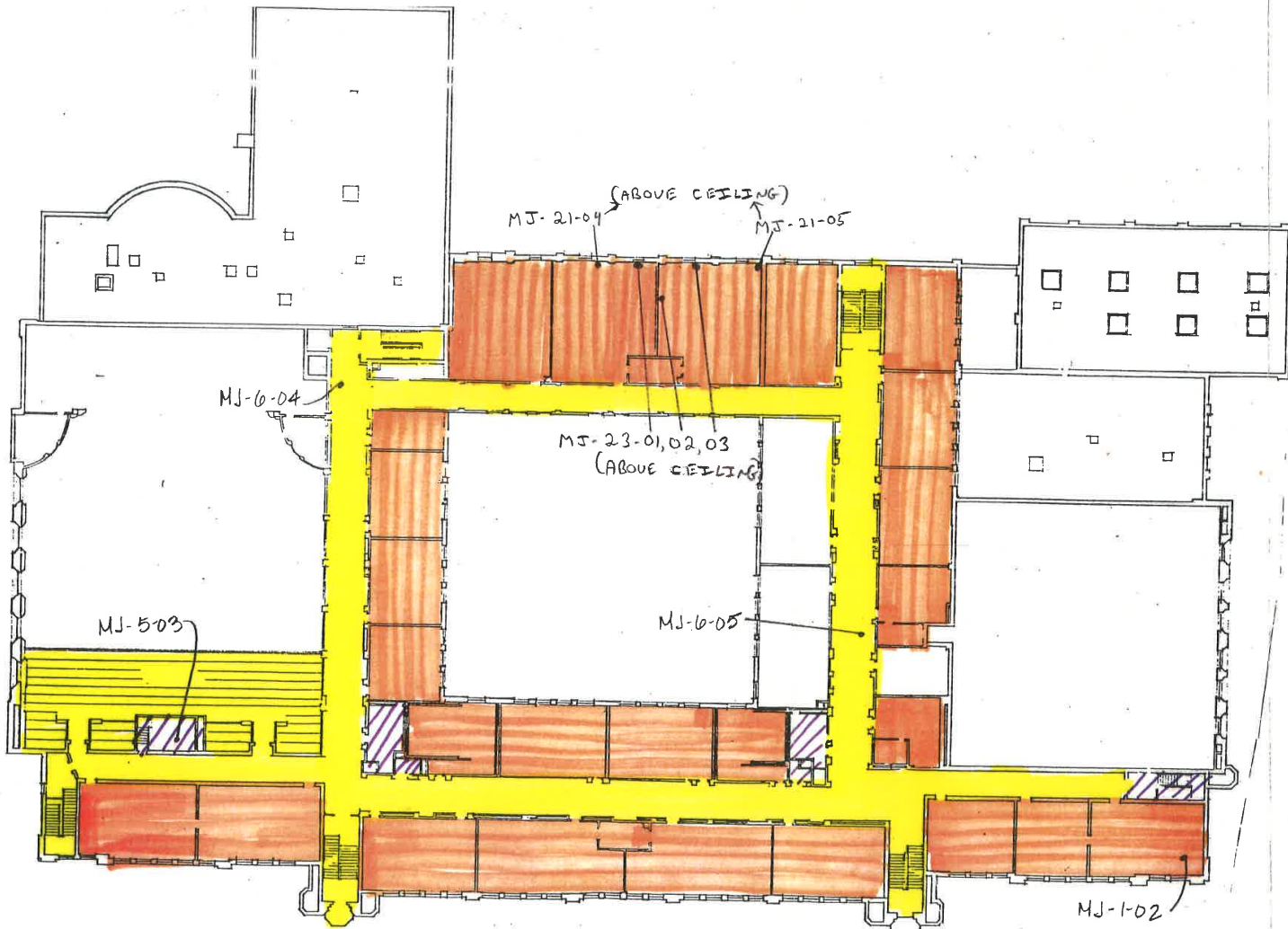
FIRST FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
DRAWING NO. 6 DRAWN BY: CR
Q.C. BY: MJ DATE: 10-31-88



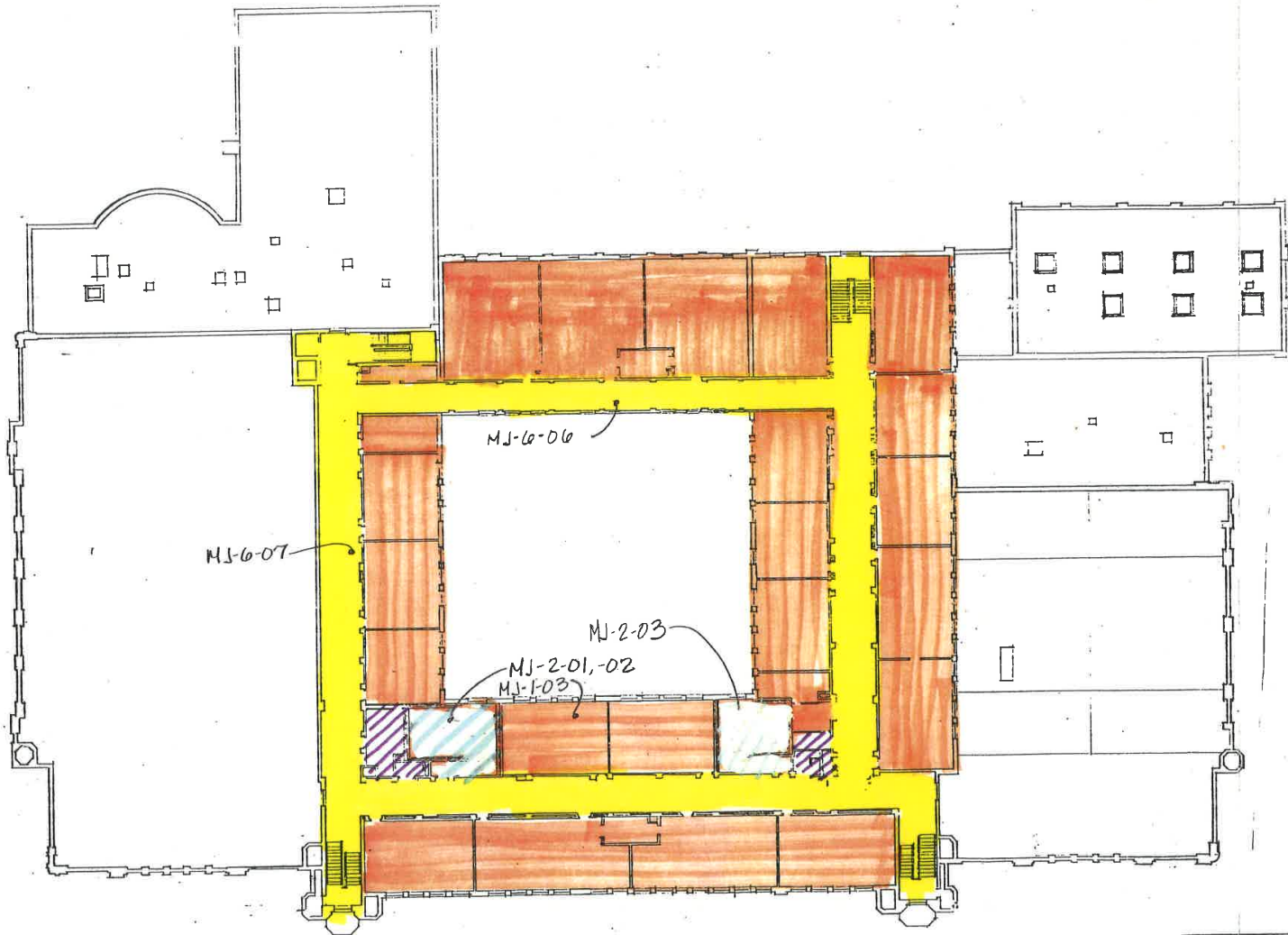
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
 DRAWING NO. 2 DRAWN BY: CR
 Q.C. BY: MJ DATE: 10-31-88



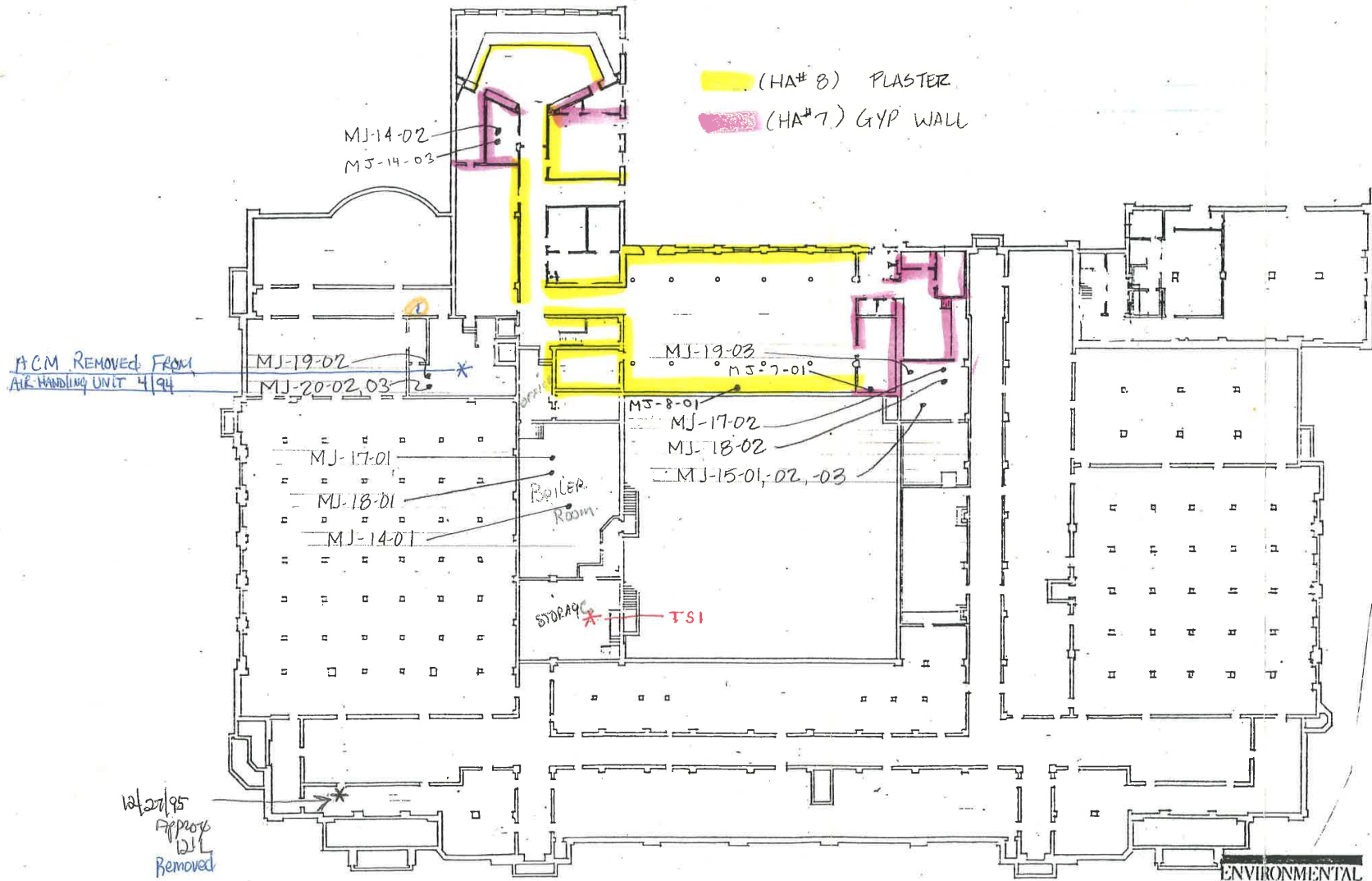
THIRD FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: CEILING
DRAWING NO. 8 DRAWN BY: CR
O.C. BY: MJ DATE: 10-31-88



(HA# 8) PLASTER
 (HA# 7) GYP WALL

ACM Removed From
 AIR HANDLING UNIT 4194

10/27/95
 Approx
 DIT
 Removed

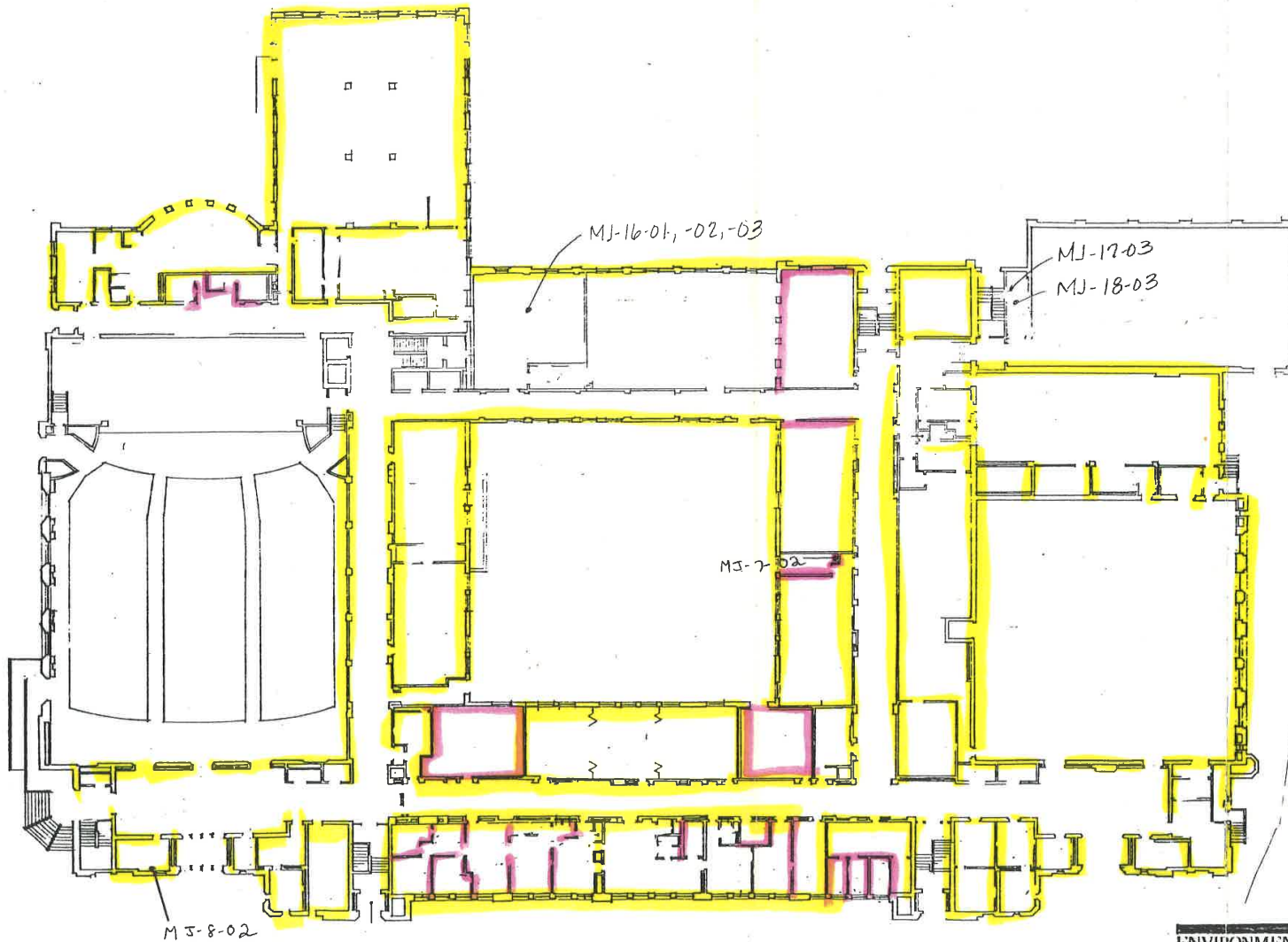
BASEMENT FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
 MANAGEMENT
 I N C

2699 Johnson Road, N.E.
 Suite Three Hundred
 Atlanta, Georgia 3034

MATERIALS SHOWN: WALLS & T&I
 DRAWING NO. 9 DRAWN BY: CR
 O.C. BY: *ML* DATE: 10-31-98



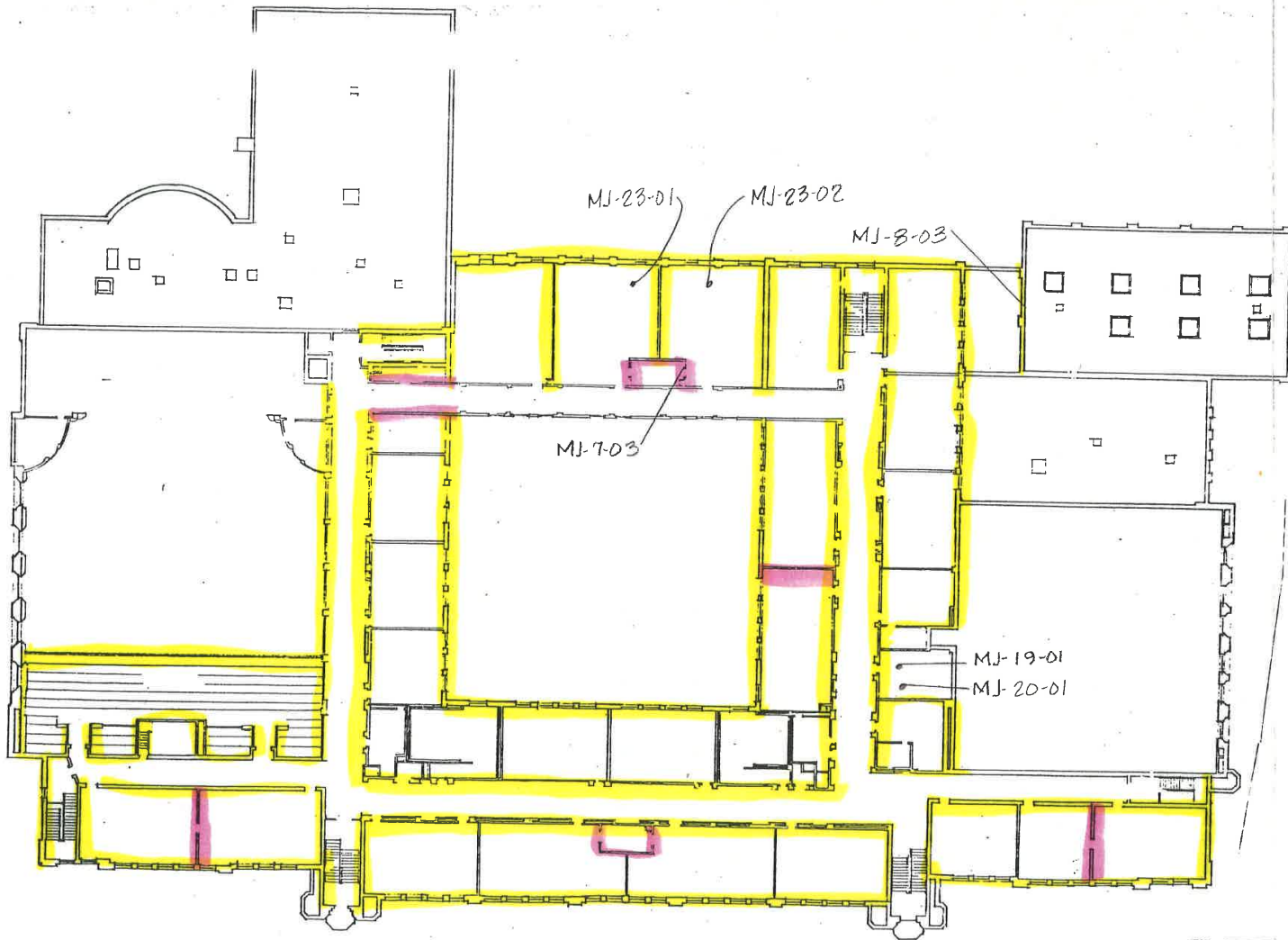
FIRST FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

**ENVIRONMENTAL
MANAGEMENT**
I N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & T&I
DRAWING NO. 10 DRAWN BY: CR
DATE: 10-31-88



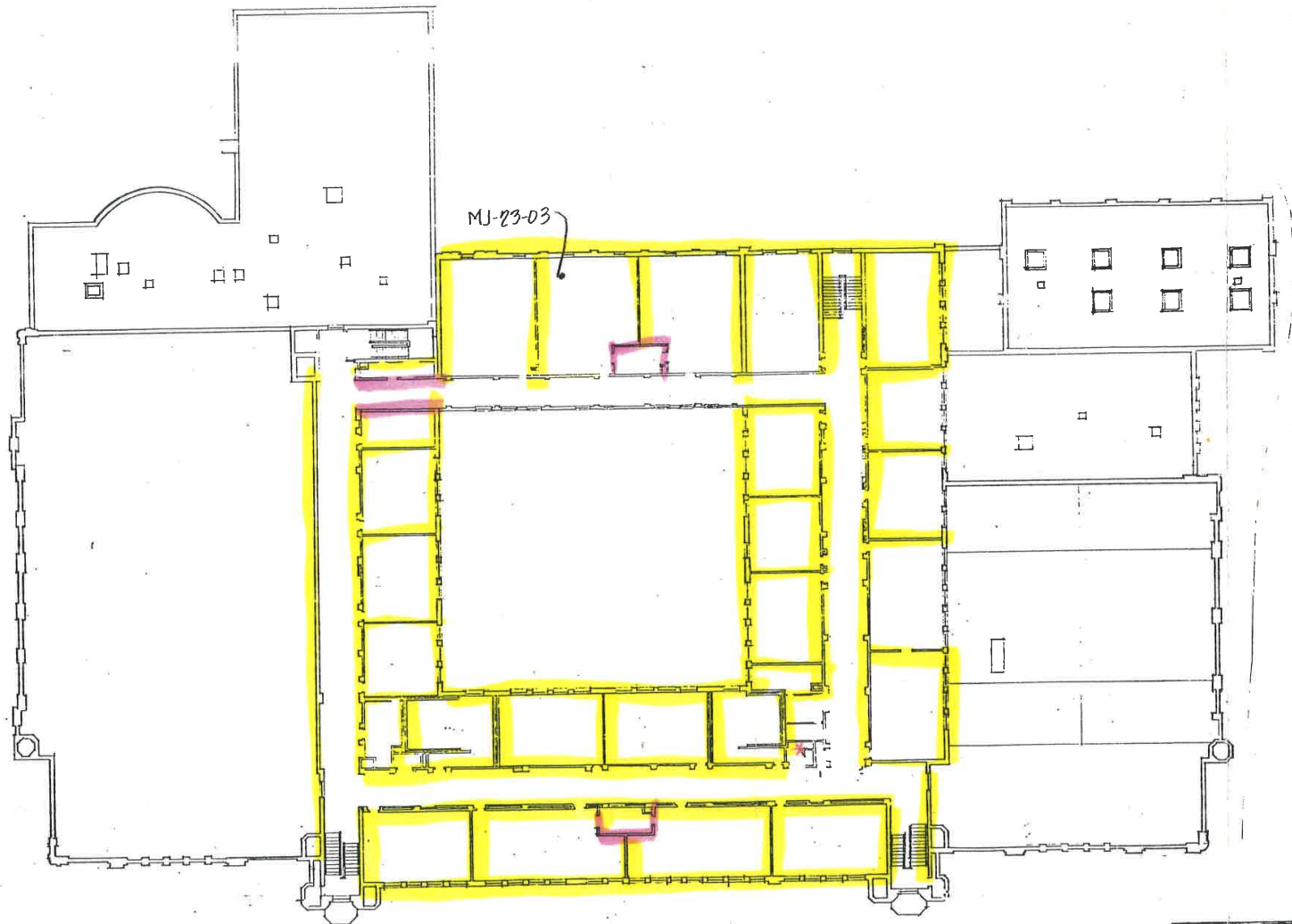
SECOND FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
MANAGEMENT
N C

2699 Johnson Road, N.E.
Suite Three Hundred
Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & T&I
DRAWING NO. 11 DRAWN BY: CR
O.C. BY: MJ DATE: 10-31-88



MJ-23-03

* - 3 - Vertical Pipe Runs
 Approx 9 LIN FT. (TSI)
 Found 7/28/97
 REMOVED 4/1/99

THIRD FLOOR PLAN

MIDDLETOWN JUNIOR HIGH SCHOOL

ENVIRONMENTAL
 MANAGEMENT
 I N C

2699 Johnson Road, N.E.
 Suite Three Hundred
 Atlanta, Georgia 30345

MATERIALS SHOWN: WALLS & TSI
 DRAWING NO. 12 DRAWN BY: CR
 G.C. BY: *MO* DATE: 10-31-88

APPENDIX B
PCB ANALYTICAL RESULTS



Wednesday, December 29, 2021

Attn: Mr. Chris Slagle
Adelaide Environmental Health Assoc, Inc
1511 Route 22, Suite C24
Brewster, NY 10509

Project ID: MIDD 18116.04-IN
SDG ID: GCK03563
Sample ID#s: CK03563

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Id Cross Reference

December 29, 2021

SDG I.D.: GCK03563

Project ID: MIDD 18116.04-IN

| Client Id | Lab Id | Matrix |
|-------------|---------|--------|
| PCB 1 PATCH | CK03563 | CAULK |



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report
 December 29, 2021

FOR: Attn: Mr. Chris Slagle
 Adelaide Environmental Health Assoc, Inc
 1511 Route 22, Suite C24
 Brewster, NY 10509

Sample Information

Matrix: CAULK
 Location Code: ADELAIDE
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 12/17/21 8:49
 12/21/21 15:40

Laboratory Data

SDG ID: GCK03563
 Phoenix ID: CK03563

Project ID: MIDD 18116.04-IN
 Client ID: PCB 1 PATCH

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-------------------------------------|-----------|------------|-------|----------|-----------|---------|------------|
| Caulk Extraction for PCB | Completed | | | | 12/23/21 | B/X/C/Q | SW3540C |
| <u>PCB (Soxhlet SW3540C)</u> | | | | | | | |
| PCB-1016 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1221 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1232 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1242 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1248 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1254 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1260 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1262 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| PCB-1268 | ND | 1100 | ug/Kg | 1 | 12/27/21 | SC | SW8082A |
| <u>QA/QC Surrogates</u> | | | | | | | |
| % DCBP | 59 | | % | 1 | 12/27/21 | SC | 30 - 150 % |
| % DCBP (Confirmation) | 49 | | % | 1 | 12/27/21 | SC | 30 - 150 % |
| % TCMX | 45 | | % | 1 | 12/27/21 | SC | 30 - 150 % |
| % TCMX (Confirmation) | 42 | | % | 1 | 12/27/21 | SC | 30 - 150 % |

| Parameter | Result | RL/ PQL | Units | Dilution | Date/Time | By | Reference |
|-----------|--------|------------|-------|----------|-----------|----|-----------|
|-----------|--------|------------|-------|----------|-----------|----|-----------|

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

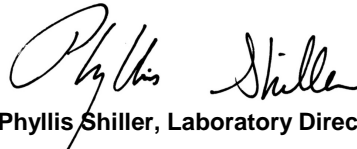
Results are reported on an ``as received`` basis, and are not corrected for dry weight.

PCB Comment:

Due to limited sample an elevated RL was reported.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 29, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

December 29, 2021

QA/QC Data

SDG I.D.: GCK03563

| Parameter | Blank | Blk RL | LCS % | LCSD % | LCS RPD | MS % | MSD % | MS RPD | % Rec Limits | % RPD Limits |
|---|-------|-----------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 605935 (ug/Kg), QC Sample No: CK02748 10X (CK03563) | | | | | | | | | | |
| <u>Polychlorinated Biphenyls</u> | | | | | | | | | | |
| PCB-1016 | ND | 170 | 68 | 66 | 3.0 | | | | 40 - 140 | 30 |
| PCB-1221 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1232 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1242 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1248 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1254 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1260 | ND | 170 | 85 | 85 | 0.0 | | | | 40 - 140 | 30 |
| PCB-1262 | ND | 170 | | | | | | | 40 - 140 | 30 |
| PCB-1268 | ND | 170 | | | | | | | 40 - 140 | 30 |
| % DCBP (Surrogate Rec) | 90 | % | 101 | 98 | 3.0 | | | | 30 - 150 | 30 |
| % DCBP (Surrogate Rec) (Confirm) | 79 | % | 81 | 80 | 1.2 | | | | 30 - 150 | 30 |
| % TCMX (Surrogate Rec) | 27 | % | 65 | 64 | 1.6 | | | | 30 - 150 | 30 s |
| % TCMX (Surrogate Rec) (Confirm) | 29 | % | 68 | 67 | 1.5 | | | | 30 - 150 | 30 s |


Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

s = This parameter is outside laboratory Blank Surrogate specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 December 29, 2021

Wednesday, December 29, 2021

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCK03563 - ADELAIDE

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL Criteria | Analysis Units |
|---------|------------|-----------------|-------------------------|--------|------|----------|----------------|-------------------|
| CK03563 | \$PCB_SOXR | PCB-1268 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1262 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1260 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1254 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1248 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1242 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1232 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1221 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |
| CK03563 | \$PCB_SOXR | PCB-1016 | NY / Requested PCB RL / | ND | 1100 | 1000 | 1000 | ug/Kg |

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



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Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

December 29, 2021

SDG I.D.: GCK03563

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



NY Temperature Narration

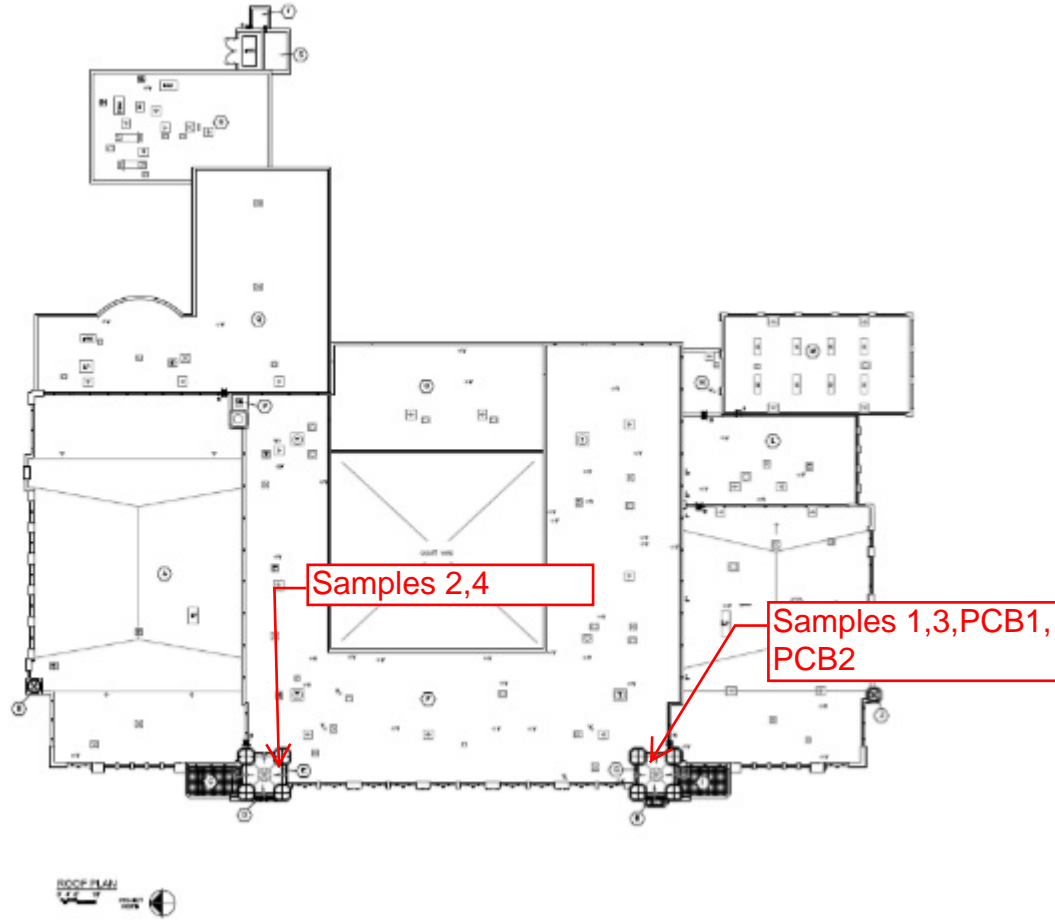
December 29, 2021

SDG I.D.: GCK03563

The samples in this delivery group were received at 1.0°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

APPENDIX C

SAMPLE LOCATION MAPS



Roof outline for exterior - Sample Location Map
 Drawing Not to Scale

| | |
|--|---------------------------|
| <p>Twin Towers Middle School 112 Grand Avenue Middletown, New York 10940</p> <p>Mr. Thomas Scott Superintendent of Buildings and Grounds Enlarged City School District of Middletown 223 Wisner Avenue Middletown, New York 10940-3240</p> | |
| <p>Client Project No.</p> | |
| <p>Adelaide 1511 Route 22 Bessie, NY 10509 Phone: (845)278-7710 Fax: (845)278-7750</p> | |
| <p>Date: 03/07/2019</p> | <p>Version # 1</p> |
| <p>Issued For: Limited Asbestos Survey</p> | |
| <p>Adelaide Project NO: MIDD:18116:04-IN</p> | |
| <p>Drawing Prepared By: Robert See</p> | |
| <p>SLM - 01</p> | |

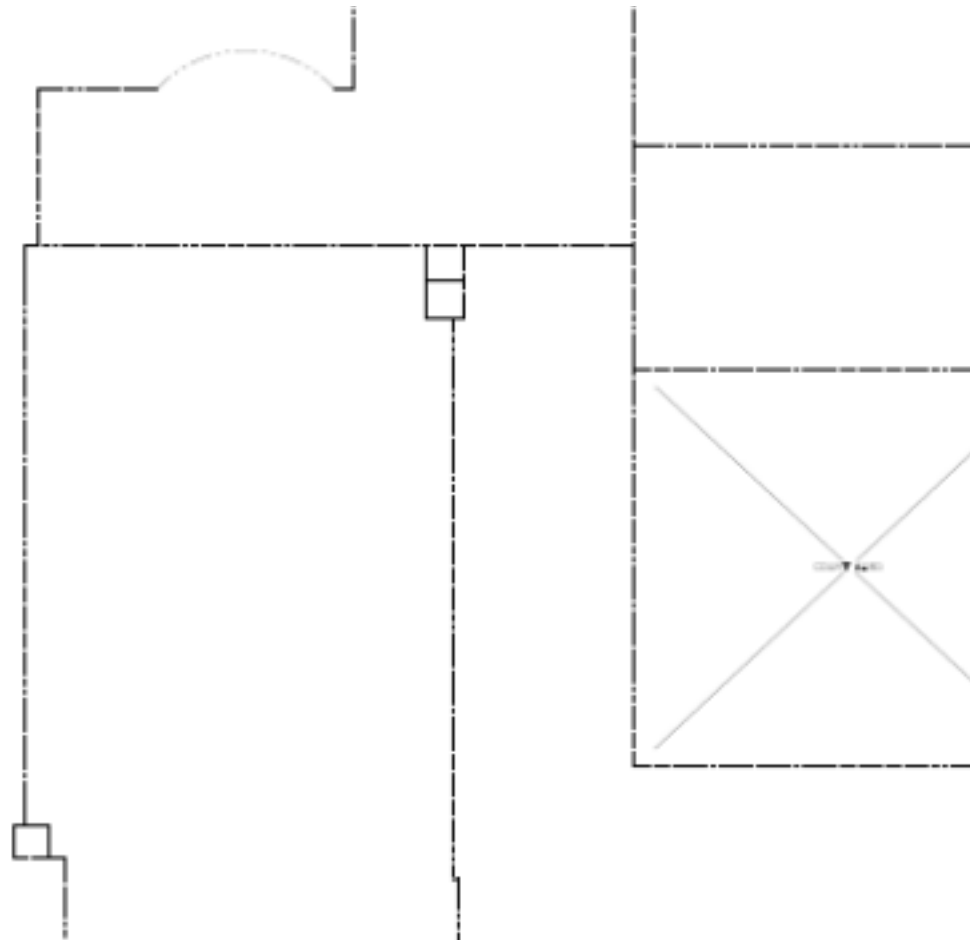


1511 Route 22
Brewster, NY 10509
Phone: (845) 278-7710
Fax: (845) 278-7750

CLIENT:
Superintendent of Buildings
and Grounds
Enlarged City School
District of Middletown
223 Wisner Avenue
Middletown, New York 10940-3240

KEY LOCATION:
Towers Middle School
Grand Avenue
Middletown, New York 10940

Sample# 2-1
PCB1(12-17-21)



Roof - Sample Locations
Drawing Not to Scale

DATE: 01/05/2022

DRAWING VERSION: No. 1

ISSUED FOR:
Limited HazMat Survey

ADELAIDE PROJECT NO.:
MIDD:18116.04-IN

DRAWING PREPARED BY:
Robert See

SLM - 02

APPENDIX D
PERSONNEL CERTIFICATIONS

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Adelaide Environmental Health Associates, Inc.
Suite C24
1511 Route 22
Brewster, NY 10509

FILE NUMBER: 99-0656
LICENSE NUMBER: 29305
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 06/02/2021
EXPIRATION DATE: 07/31/2022

Duly Authorized Representative – John Soter:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Amy Phillips, Director
For the Commissioner of Labor

United States Environmental Protection Agency

This is to certify that



Adelaide Environmental Health Associates, Inc

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint renovation, repair, and painting activities pursuant to 40 CFR Part 745.89

In the Jurisdiction of:

All EPA Administered States, Tribes, and Territories

This certification is valid from the date of issuance and expires December 05, 2022

NAT-15081-2

Certification #

June 21, 2017

Issued On



A handwritten signature in black ink that reads "Michelle Price".

Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



ROBERT A SEE
CLASS(EXPIRES)
C ATEC(04/22) D INSP(04/22)
E MGPL(04/22) H PM (04/22)

CERT# 06-09124
DMV# 805716986

MUST BE CARRIED ON ASBESTOS PROJECTS



United States Environmental Protection Agency

This is to certify that



Robert A See

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires July 22, 2023

A blue ink signature of Susan Schulz, consisting of stylized initials and a long horizontal stroke.

Susan Schulz, Acting Chief

Chemicals and Multimedia Programs Branch

LBP-R-101137-2

Certification #

May 14, 2020

Issued On



**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2022
Issued April 01, 2021

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MS. PHYLLIS SHILLER
PHOENIX ENVIRONMENTAL LABS
587 EAST MIDDLE TURNPIKE
MANCHESTER, CT 06040**

NY Lab Id No: 11301

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2016) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Polychlorinated Biphenyls

| | |
|-------------------------|-----------|
| Aroclor 1242 (PCB-1242) | EPA 8082A |
| | EPA 608.3 |
| Aroclor 1248 (PCB-1248) | EPA 8082A |
| | EPA 608.3 |
| Aroclor 1254 (PCB-1254) | EPA 8082A |
| | EPA 608.3 |
| Aroclor 1260 (PCB-1260) | EPA 8082A |
| | EPA 608.3 |
| Aroclor 1262 (PCB-1262) | EPA 8082A |
| Aroclor 1268 (PCB-1268) | EPA 8082A |
| PCB 101 | EPA 8082A |
| PCB 105 | EPA 8082A |
| PCB 118 | EPA 8082A |
| PCB 128 | EPA 8082A |
| PCB 138 | EPA 8082A |
| PCB 153 | EPA 8082A |
| PCB 170 | EPA 8082A |
| PCB 18 | EPA 8082A |
| PCB 180 | EPA 8082A |
| PCB 183 | EPA 8082A |
| PCB 184 | EPA 8082A |
| PCB 187 | EPA 8082A |
| PCB 195 | EPA 8082A |
| PCB 206 | EPA 8082A |
| PCB 209 | EPA 8082A |
| PCB 28 | EPA 8082A |

Polychlorinated Biphenyls

| | |
|----------------------|-----------|
| PCB 44 | EPA 8082A |
| PCB 49 | EPA 8082A |
| PCB 52 | EPA 8082A |
| PCB 66 | EPA 8082A |
| PCB 8 | EPA 8082A |
| PCB 87 | EPA 8082A |
| PCB Congeners, Total | EPA 8082A |

Polynuclear Aromatics

| | |
|----------------------|-----------|
| Acenaphthene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Acenaphthylene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Anthracene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(a)anthracene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(a)pyrene | EPA 625.1 |
| | EPA 8270D |
| | EPA 8270E |
| Benzo(b)fluoranthene | EPA 625.1 |
| | EPA 8270D |

Serial No.: 62925

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2022
Issued April 01, 2021

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MS. PHYLLIS SHILLER
PHOENIX ENVIRONMENTAL LABS
587 EAST MIDDLE TURNPIKE
MANCHESTER, CT 06040**

NY Lab Id No: 11301

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2016) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Phthalate Esters

Di-n-octyl phthalate EPA 8270E

Polychlorinated Biphenyls

Aroclor 1016 (PCB-1016) EPA 8082A
Aroclor 1016 (PCB-1016) in Oil EPA 8082A
Aroclor 1221 (PCB-1221) EPA 8082A
Aroclor 1221 (PCB-1221) in Oil EPA 8082A
Aroclor 1232 (PCB-1232) EPA 8082A
Aroclor 1232 (PCB-1232) in Oil EPA 8082A
Aroclor 1242 (PCB-1242) EPA 8082A
Aroclor 1242 (PCB-1242) in Oil EPA 8082A
Aroclor 1248 (PCB-1248) EPA 8082A
Aroclor 1248 (PCB-1248) in Oil EPA 8082A
Aroclor 1254 (PCB-1254) EPA 8082A
Aroclor 1254 (PCB-1254) in Oil EPA 8082A
Aroclor 1260 (PCB-1260) EPA 8082A
Aroclor 1260 (PCB-1260) in Oil EPA 8082A
Aroclor 1262 (PCB-1262) EPA 8082A
Aroclor 1262 (PCB-1262) in Oil EPA 8082A
Aroclor 1268 (PCB-1268) EPA 8082A
Aroclor 1268 (PCB-1268) in Oil EPA 8082A
PCB 101 EPA 8082A
PCB 105 EPA 8082A
PCB 118 EPA 8082A
PCB 128 EPA 8082A
PCB 138 EPA 8082A

Polychlorinated Biphenyls

PCB 153 EPA 8082A
PCB 170 EPA 8082A
PCB 18 EPA 8082A
PCB 180 EPA 8082A
PCB 183 EPA 8082A
PCB 184 EPA 8082A
PCB 187 EPA 8082A
PCB 195 EPA 8082A
PCB 206 EPA 8082A
PCB 209 EPA 8082A
PCB 28 EPA 8082A
PCB 44 EPA 8082A
PCB 49 EPA 8082A
PCB 52 EPA 8082A
PCB 66 EPA 8082A
PCB 8 EPA 8082A
PCB 87 EPA 8082A
PCB Congeners, Total EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene EPA 8270D
 EPA 8270E
Acenaphthylene EPA 8270D
 EPA 8270E
Anthracene EPA 8270D
 EPA 8270E

Serial No.: 62926

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2022
Issued April 01, 2021

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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**MS. PHYLLIS SHILLER
PHOENIX ENVIRONMENTAL LABS
587 EAST MIDDLE TURNPIKE
MANCHESTER, CT 06040**

NY Lab Id No: 11301

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2016) for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:*

| | | | |
|----------------------------------|---------------------------|---------------------------------------|-----------|
| Acrylates | | Purgeable Aromatics | |
| Acrylonitrile | EPA TO-15 | Isopropylbenzene | EPA TO-15 |
| Methyl methacrylate | EPA TO-15 | m/p-Xylenes | EPA TO-15 |
| Chlorinated Hydrocarbons | | o-Xylene | EPA TO-15 |
| 1,2,4-Trichlorobenzene | EPA TO-15 | Styrene | EPA TO-15 |
| Hexachlorobutadiene | EPA TO-15 | Toluene | EPA TO-15 |
| Hexachloroethane | EPA TO-15 | Total Xylenes | EPA TO-15 |
| Metals I | | Purgeable Halocarbons | |
| Lead, Total | EPA 29 (6010) EPA 7010 | 1,1,1-Trichloroethane | EPA TO-15 |
| Polychlorinated Biphenyls | | 1,1,2,2-Tetrachloroethane | EPA TO-15 |
| PCBs and Aroclors | EPA TO-10A | 1,1,2-Trichloro-1,2,2-Trifluoroethane | EPA TO-15 |
| Polynuclear Aromatics | | 1,1,2-Trichloroethane | EPA TO-15 |
| Naphthalene | EPA TO-15 | 1,1-Dichloroethane | EPA TO-15 |
| Purgeable Aromatics | | 1,1-Dichloroethene | EPA TO-15 |
| 1,2,4-Trimethylbenzene | EPA TO-15 | 1,2-Dibromo-3-chloropropane | EPA TO-15 |
| 1,2-Dichlorobenzene | EPA TO-15 | 1,2-Dibromoethane | EPA TO-15 |
| 1,3,5-Trimethylbenzene | EPA TO-15 | 1,2-Dichloroethane | EPA TO-15 |
| 1,3-Dichlorobenzene | EPA TO-15 | 1,2-Dichloropropane | EPA TO-15 |
| 1,4-Dichlorobenzene | EPA TO-15 | 3-Chloropropene (Allyl chloride) | EPA TO-15 |
| 2-Chlorotoluene | EPA TO-15 | Bromodichloromethane | EPA TO-15 |
| Benzene | EPA TO-15 | Bromoform | EPA TO-15 |
| Chlorobenzene | EPA TO-15 | Bromomethane | EPA TO-15 |
| Ethyl benzene | EPA TO-15 | Carbon tetrachloride | EPA TO-15 |
| | | Chloroethane | EPA TO-15 |
| | | Chloroform | EPA TO-15 |
| | | Chloromethane | EPA TO-15 |

Serial No.: 62928

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Kaeyer, Garment + Davidson Architects
285 Main Street
Mount Kisco, New York 10549

ATTN: Walter Hauser, AIA
whauser@kgdarchitects.com

September 3, 2021

**RE: W.O.: # 11078.01,
LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT (ESA) REPORT,
TWIN TOWERS MIDDLE SCHOOL,
100 GRAND AVENUE,
MIDDLETOWN, NEW YORK 10940**

Dear Mr. Hauser,

This letter report presents the findings of the Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C. (Tectonic) Limited Phase II Environmental Site Assessment (ESA) performed at the above-referenced property (the "Subject Property" or "Site") on August 19, 2021 (see **Figure 1**). This investigation was performed for Kaeyer, Garment + Davidson Architects, herein referred to as "the Client." Tectonic's sampling activities, as detailed in this letter report, were performed as an initial evaluation of on-site soils with the intention of providing preliminary waste characterization and information relative to whether or not subsurface soils at the Site would require special handling during the proposed improvements. Tectonic understands that proposed improvements at the Site include construction of an addition on the southeast side of the existing middle school building, and construction of new athletic fields in an existing grassy area located to the south of the existing building. Additionally, the subject sampling event is intended to obtain preliminary data relative to whether impacts to the soils at the Subject Property are present relative to recognized environmental conditions (RECs) identified as part of Tectonic's concurrent Phase I ESA investigation. The findings, conclusions, and recommendations of the Limited Phase II ESA are presented as follows.

1.0 SITE DESCRIPTION AND BACKGROUND

The Subject Property is located at 100 Grand Avenue in the City of Middletown, Orange County, New York, comprising of approximately 9.60 acres and is identified as tax map number 27-8-1.23. Tectonic conducted a Phase I ESA investigation concurrently with this Limited Phase II ESA. The Phase I ESA will be submitted under a separate cover. Tectonic's Phase I ESA identified three (3) RECs that have the potential to impact future development at the Site. The RECs include:

1. The first REC was identified as the historic use of coal on the Subject Property. The Subject Property was historically heated via coal fueled boilers and stored coal on site within the existing structure. Coal can contain metals such as arsenic, cadmium, mercury, and other metals that can negatively impact soils and groundwater. Due to the unknown length of time the coal was stored on the Subject Property, it has been

Corporate Office

70 Pleasant Hill Road, PO Box 37 | Mountainville, NY 10953
845.534.5959 Tel | 845.534.5999 Fax

tectonicengineering.com
Equal Opportunity Employer

determined that the former use of coal on the Subject Property has a moderate potential for contamination to have been released, impacting the soils and groundwater at the Subject Property.

2. The second REC was identified as the presence of a historic gasoline service station and two (2) leaking tank (LTANK) reports at a site located approximately three hundred twenty-nine (329) feet cross-gradient from the Subject Property. The two (2) historic LTANK reports for the site involved contaminated soil and gravel being discovered at the site. According to the database report, cleanup was not completed to New York State Department of Environmental Conservation (NYSDEC) standards. Due to the unknown quantity of petroleum released, the proximity of the property to the Subject Property, and the cleanup not meeting NYSDEC standards, it has been determined that this site has a moderate potential for petroleum contamination to have been released and migrated toward the Subject Property, impacting the soils, groundwater, and soil vapor at the Subject Property.
3. The third REC was associated with the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Custom Soil Resource Report that notes that the Subject Property is located at least partially on a historic dump. Due to the Subject Property's location within an urban area, it is likely that the property is underlain by historic fill that is considered a regulated material. Disposal of such material must be done in accordance with Title 6 NYCRR Part 375 and Part 360.

The Subject Property is situated on an approximately 9.60-acre lot improved with a slab-on-grade structure that ranges from one (1) to three (3) stories tall. The Subject Property also contains recreational athletic fields and an asphalt paved parking and drop off area. The Subject Property was historically used as a High School and it is currently utilized as the City of Middletown's Middle School. The surrounding area was historically occupied by residential and commercial properties.

2.0 FIELD INVESTIGATION AND SAMPLING

On August 19, 2021, a geologist from Tectonic, with current Occupational Safety and Health Administration (OSHA) 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training, mobilized to Site to collect environmental soil samples from eight (8) of nine (9) borings that were being advanced as part of a Limited Phase II ESA investigation. No environmental samples were obtained from the boring designated B-9, as this boring was advanced in order to determine the potential extent of an observed ash layer. The approximate locations of all nine (9) borings are shown in **Figure 2**, attached.

The boring subcontractor, Core Down Drilling, advanced the borings continuously via Geoprobe 7822DT in five (5) foot intervals to depths of fifteen (15) feet below ground surface (bgs). Based on observations of soil moisture, groundwater was potentially encountered at depths ranging between approximately seven (7) and thirteen (13) feet below ground surface (bgs) in the borings designated B-1, B-2, B-3, B-6, and B-9. It should be noted that the remnants of Tropical Storm Fred traveled through the area the night before, with approximately two (2) inches of rain saturating the area and making groundwater depth difficult to determine due to the infiltration of precipitation.

Each vertical interval from the ground surface down to fifteen (15) feet bgs was screened with a calibrated MiniRAE 3000 Photo-ionization Detector (PID) for the presence of Volatile Organic Compounds (VOCs) and inspected visually and olfactorily for other indications of potential contamination. No PID Readings exceeding the background concentrations were observed in any borings, while visual evidence of contamination in the form of fill material, ash, or coal were observed within the borings designated B-2, B-3, and B-9 (see **Table 1**, below). Additionally, the soils from each boring were classified via the United Soil Classification System (USCS). The soils generally consisted of historic fill material, containing varying amounts of brown to tan coarse to fine sand with gravel or silt. Observed fill material included brick, gravel, and asphalt.

One (1) discrete soil sample was collected from each boring, via Terra Core® samplers for VOC analysis and a discrete grab sample for the remaining analysis using dedicated sampling equipment. Discrete sample locations were obtained at the discretion of Tectonic personnel to be either at the interval of observed contamination (ash) or at the bottom of apparent historic fill material.

A total of eight (8) discrete samples were collected.

Table 1: Soil Sampling Summary Table

| Boring ID | Depth (feet bgs) | PID Reading (ppm) | Comments | Sample ID |
|-----------|------------------|-------------------|---|----------------|
| B-1 | 0-5 | 0.0 | No odors, no staining | B-1 @ ±4' bgs |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | |
| B-2 | 0-5 | 0.0 | No odors, no staining; ash layer at ~4ft. | B-2 @ ±4' bgs |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | |
| B-3 | 0-5 | 0.0 | No odors, no staining; ash layer at ~2ft. | |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | B-3 @ ±12' bgs |
| B-4 | 0-5 | 0.0 | No odors, no staining | |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | B-4 @ ±14' bgs |
| B-5 | 0-5 | 0.0 | No odors, no staining | |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | B-5 @ ±13' bgs |
| B-6 | 0-5 | 0.0 | No odors, no staining | |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | B-6 @ ±8' bgs |

| Boring ID | Depth (feet bgs) | PID Reading (ppm) | Comments | Sample ID |
|-----------|------------------|-------------------|--|-------------------------|
| B-7 | 0-5 | 0.0 | No odors, no staining | |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | B-7 @ ±12' bgs |
| B-8 | 0-5 | 0.0 | No odors, no staining | B-8 @ ±4' bgs |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | |
| B-9 | 0-5 | 0.0 | No odors, no staining; ash, coal, and brick layer at ~4.5ft | No environmental sample |
| | 5-10 | 0.0 | No odors, no staining | |
| | 10-15 | 0.0 | No odors, no staining | |

The soil samples were transferred to laboratory prepared containers. The containers were labeled, placed into a cooler on ice and shipped York Analytical Laboratories (York), a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) accredited laboratory located in Stratford, Connecticut following standard chain-of-custody protocol.

PID readings and soil USCS classifications were noted on the corresponding boring logs, included as **Appendix I**. Photographs depicting the conditions at the Site during sample collection activities are included as **Appendix II**.

3.0 ANALYTICAL TEST RESULTS

All samples were analyzed by York located in Stratford, Connecticut. Samples were received in proper condition by the laboratory at the proper temperature and within the method required holding times for all analyses. Soil samples were analyzed for the parameters listed in **Table 2** via the indicated analytical methods.

Table 2: Soil Analytical Parameter Summary

| Parameter | Method |
|--|-------------------------------|
| Total Compound List (TCL) Volatile Organic Compounds (VOCs) | EPA 8260 |
| TCL Semi-volatile Organic Compounds (SVOCs) | EPA 8270 |
| Pesticides | EPA 8081 |
| Total Polychlorinated Biphenyls (PCBs) | EPA 8082 |
| Target Analyte List (TAL) Metals (including cyanide, mercury and hexavalent chromium) | EPA 6010 / 9012 / 7471 / 7196 |

The analytical test results for the soil samples were compared to the Soil Clean-Up Objectives (SCOs) set forth in 6 NYCRR Part 375. -6.8(a) and (b) (Part 375) and the Supplemental Soil Clean-up Objectives (SSCOs) set forth by the New York State Department of Environmental Conservation (NYSDEC) Final Commissioner Policy, CP-51 (CP-51).

Summary comparison tables of detected analytes in the soil samples, and soil chemical properties are presented in **Table 3**. A copy of the analytical test results is attached in **Appendix III**.

4.0 FINDINGS

The following summarizes the findings of the Limited Phase II investigation and the soil sampling conducted on August 19, 2021. The results of analytical testing indicate the following:

1. Visual evidence of contamination in the form of ash, coal, and/or brick were observed within borings designated B-2, B-3, and B-9; no PID readings above background concentrations were observed in these borings. No field observations including elevated PID readings, odors, or staining indicating the potential presence of petroleum hydrocarbon compounds or other contaminants were observed within the remaining borings.
2. Analytical test results indicate that Pesticides and PCBs were not present above laboratory reporting limits in the discrete soil samples collected during this investigation.
3. The analytical test results indicated that VOCs and SVOCs detected above laboratory reporting limits in the discrete soil samples collected as part of this investigation were below their respective Part 375/CP-51 SCOs/SSCOs for all uses.
4. The analytical test results indicate that detected concentrations of the following metals were at concentrations above at least one of their respective Part 375/CP-51 SCOs/SSCOs in the discrete soil samples collected as part of this investigation:
 - Aluminum;
 - Calcium;
 - Iron;
 - Lead;
 - Mercury;
 - Nickel; and
 - Zinc.

The remaining metals detected above laboratory reporting limits were below their respective Part 375/CP-51 SCOs/SSCOs for all uses.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The soils sampled and analyzed as part of this investigation would be classified as non-hazardous regulated material by the State on New York. Material scheduled for excavation and off-site disposal and/or re-use should be disposed of / re-used at an appropriate, permitted facility that can accept the material.

This Phase II ESA was based on limited field work consisting of the advancement of nine (9) borings and included the sampling of soil only from the top fifteen (15) feet bgs. As such, only the soils in these areas could be investigated for the presence or absence of impacts. Potential impacts to groundwater and soil vapor were not investigated.

The purpose of this Limited Phase II ESA was to investigate the potential for impacts from the findings of the Phase I ESA Report prepared concurrently by Tectonic as described above, and to look for layers of ash in the subsurface within the area of proposed improvements. Based on the field observations and the analytical results, there was no visual or olfactory evidence of a petroleum release or off-site impacts to the soils in any of the borings sampled. There was evidence of elevated metals within the ash and historic fill material on-site. As an industry practice for handling of excavated soils, it is recommended that a site-specific Soil Management Plan (SMP) be prepared. The purpose of the SMP is to provide guidance for handling soils during excavation, storage, and offsite disposal (if required), as well as provide procedures if any undocumented contamination is encountered. Additionally, if changes are made to the project plans, Tectonic recommends additional soil investigation if other areas of the Subject Property are to be disturbed.

6.0 LIMITATIONS

The Limited Phase II services provided by Tectonic have been performed in general accordance with industry standards. Our professional services were performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental engineers and geologists practicing in this or similar situations. Our interpretation of the field data is based on good judgment and experience. However, no matter how qualified the environmental engineer or detailed the investigation, conditions cannot always be predicted beyond the points of actual sampling and testing. No other warranty, expressed or implied, is made as to the professional advice included in this report.

If you should have any questions or comments, please call the undersigned.

Sincerely,

TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYOURS, D.P.C.

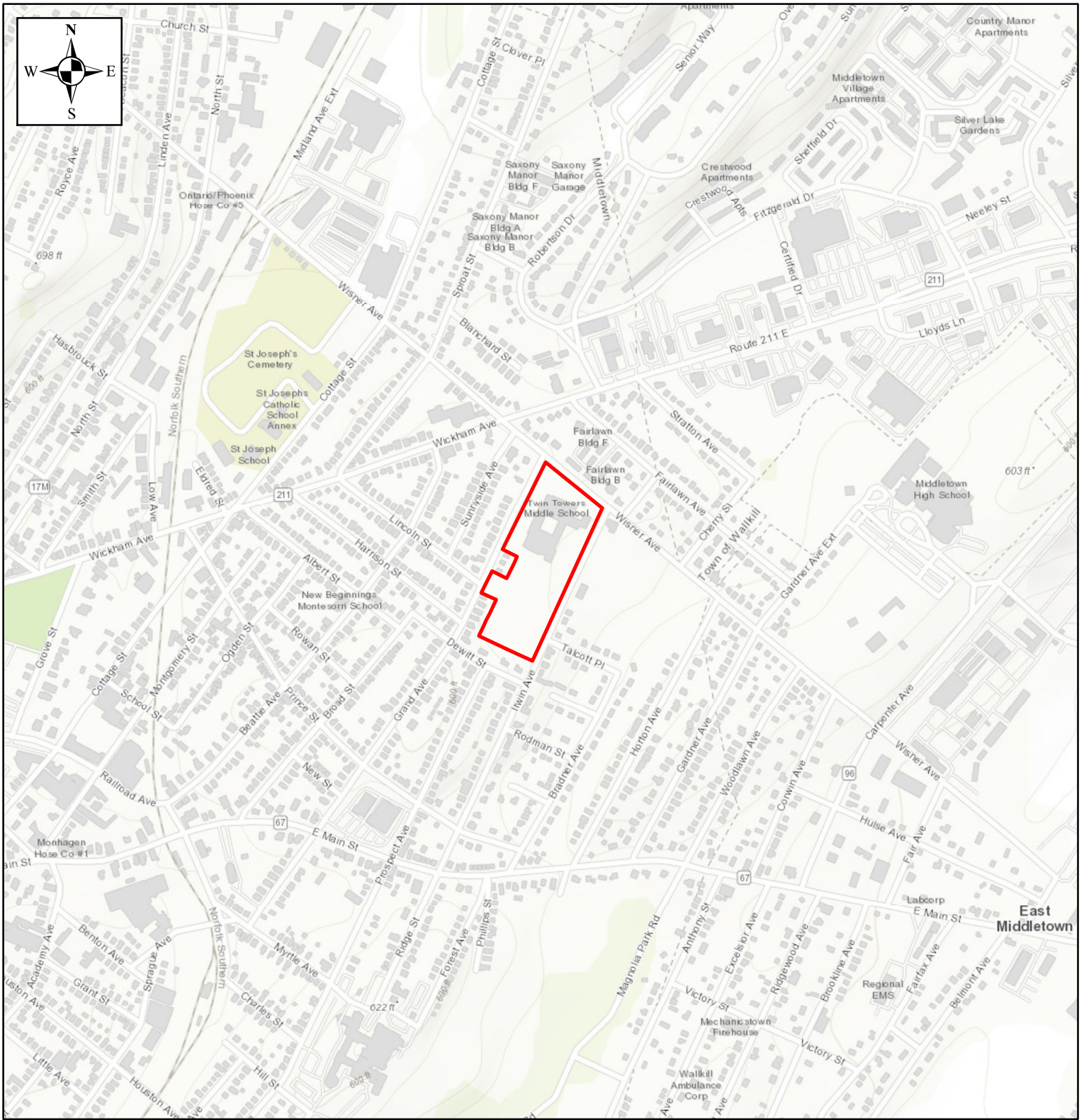


Lori Bart
Environmental Supervisor

G:\Mountainville\Environmental\11078 Twin Towers Middle School (KG&D)\Phase I\Phase II Report

| | | |
|--------------|--------------|--|
| Attachments: | Figure 1 | Approximate Site Location Map |
| | Figure 2 | Approximate Boring Location Map |
| | Table 3 | Summary of Laboratory Detected Compounds in Soil Samples |
| | Appendix I | Boring Logs |
| | Appendix II | Site Photographs |
| | Appendix III | Laboratory Analytical Test Results |

FIGURE 1



Legend 1:10,000

Subject Property

0 625 1,250 2,500 Feet

Twin Towers Middle School
100 Grand Avenue
Middletown, NY 10940

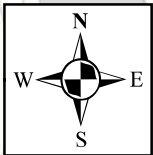
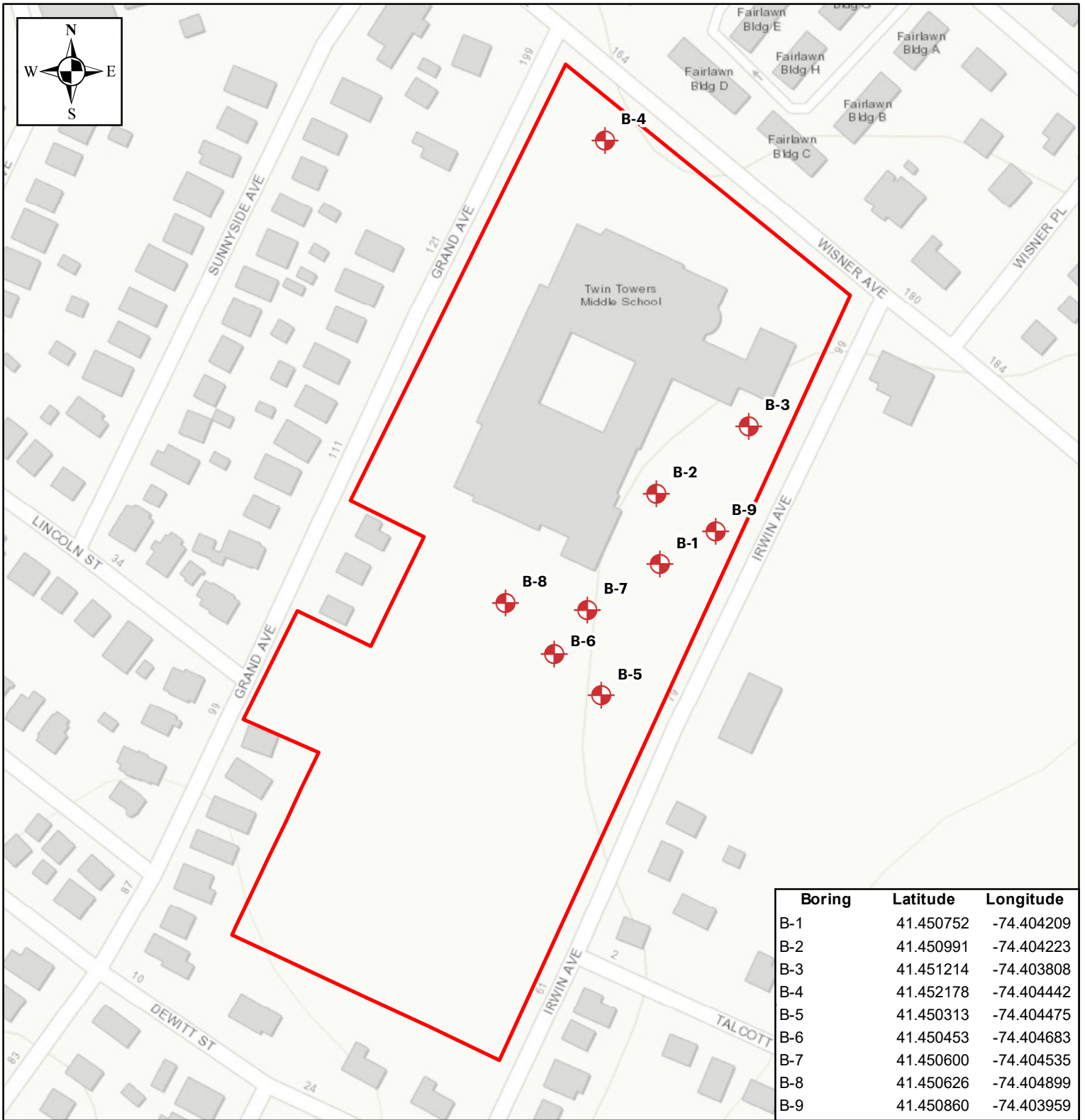
Approximate Site Location

| | |
|--------------------------------------|------------------|
| | Date: 8/31/2021 |
| | Project #: 11078 |
| Location: Middletown, New York 10940 | |

| | |
|---|------------------|
| PO Box 37, 70 Pleasant Hill Rd. Mountainville, New York 10953 Phone: (845) 534-5959 | Figure: 1 |
|---|------------------|


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FIGURE 2



| Boring | Latitude | Longitude |
|--------|-----------|------------|
| B-1 | 41.450752 | -74.404209 |
| B-2 | 41.450991 | -74.404223 |
| B-3 | 41.451214 | -74.403808 |
| B-4 | 41.452178 | -74.404442 |
| B-5 | 41.450313 | -74.404475 |
| B-6 | 41.450453 | -74.404683 |
| B-7 | 41.450600 | -74.404535 |
| B-8 | 41.450626 | -74.404899 |
| B-9 | 41.450860 | -74.403959 |

Legend 1:2,000


 Subject Property

 Approximate Boring Locations

0 125 250 500 Feet

Twin Towers Middle School
100 Grand Avenue
Middletown, NY 10940

Approximate Boring Locations

| | |
|--|------------------|
|  | Date: 8/31/2021 |
| | Project #: 11078 |
| Location: Middletown, New York 10940 | |

| | |
|--|------------------|
| PO Box 37, Pleasant Hill Rd. Mountainville, New York 10953 Phone: (845) 534-5959 | Figure: 2 |
|--|------------------|

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TABLE 3

Table 3. Summary of Laboratory Detected Compounds in Soil Samples
Twin Towers Middle School Limited Phase II ESA
100 Grand Avenue, Middletown, NY

| SAMPLE ID: | Part 375 / CP-51 | Part 375 / CP-51 | Part 375 / CP-51 | Part 375 / CP-51 | Part 375 / CP-51 | Part 375 / CP-51 | Part 375 / CP-51 | B-1 | B-2 | B-3 | B-4 | B-5 | B-6 | B-7 | B-8 |
|---|------------------|------------------|------------------|------------------|------------------|------------------------------------|---------------------------|------------|------------|------------|------------|--------------------|------------|------------|------------|
| LAB ID: | Unrestricted | Residential | Restricted | Commercial | Industrial | Protection of Ecological Resources | Protection of Groundwater | 21H1047-01 | 21H1047-02 | 21H1047-03 | 21H1047-04 | 21H1047-05 | 21H1047-06 | 21H1047-07 | 21H1047-08 |
| COLLECTION DATE: | Use | Use | Residential Use | Use | Use | Ecological Resources | Groundwater | 8/19/20201 | 8/19/2021 | 8/19/2021 | 8/19/2021 | 8/19/2021 | 8/19/2021 | 8/19/2021 | 8/19/2021 |
| SAMPLE MATRIX: | | | Use | Use | Use | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| SAMPLE UNITS: | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| Metals | | | | | | | | | | | | | | | |
| Aluminum | NS | NS | NS | NS | NS | 10,000 | NS | 15,200 | 14,900 | 3,550 | 18,000 | 14,700 | 16,300 | 13,600 | 22,200 |
| Arsenic | 13 | 16 | 16 | 16 | 16 | 13 | 16 | 4.70 | 3.63 | 3.36 | 7.04 | 3.29 | 4.34 | 3.24 | 3.78 |
| Barium | 350 | 400 | 400 | 400 | 10,000 | 433 | 820 | 54.5 | 57.9 | 38.1 | 63.9 | 77.9 | 86.0 | 71.7 | 62.0 |
| Beryllium | 7.2 | 14 | 72 | 590 | 2,700 | 10 | 47 | 0.602 | 0.568 | ND | 0.854 | 0.593 | 0.677 | 0.213 | 0.962 |
| Cadmium | 2.5 | 2.5 | 4.3 | 9.3 | 60 | 4 | 7.5 | ND | 1.09 | ND | ND | ND | ND | ND | ND |
| Calcium | NS | NS | NS | NS | NS | 10,000 | NS | 16,700 B | 14,900 B | 1,970 B | 1,320 B | 22,400 B | 2,470 B | 45,500 B | 1,020 B |
| Chromium, total | NS | NS | NS | NS | NS | NS | NS | 19.5 | 18.4 | 8.45 | 24.0 | 19.7 | 20.5 | 16.0 | 24.5 |
| Cobalt | NS | 30 | NS | NS | NS | 20 | NS | 11.8 | 10.6 | 5.38 | 13.4 | 13.2 | 11.5 | 7.41 | 12.5 |
| Copper | 50 | 270 | 270 | 270 | 10,000 | 50 | 1,720 | 30.5 | 32.9 | 23.0 | 40.1 | 30.0 | 28.5 | 19.0 | 38.9 |
| Iron | NS | 2,000 | NS | NS | NS | NS | NS | 27,800 | 25,200 | 11,400 | 36,200 | 28,700 | 28,000 | 17,300 | 34,600 |
| Lead | 63 | 400 | 400 | 1,000 | 3,900 | 63 | 450 | 18.3 | 89.7 | 17.0 | 12.5 | 10.4 | 12.7 | 18.7 | 11.2 |
| Magnesium | NS | NS | NS | NS | NS | NS | NS | 5,940 | 6,530 | 880 | 7,120 | 7,340 | 4,920 | 4,940 | 7,150 |
| Manganese | 1,600 | 2,000 | 2,000 | 10,000 | 10,000 | 1,600 | 2,000 | 650 | 586 | 141 | 726 | 878 | 762 | 627 | 555 |
| Mercury | 0.18 | 0.81 | 0.81 | 2.8 | 5.7 | 0.18 | 0.73 | 0.0442 | 0.414 | ND | ND | ND | 0.0331 | ND | 0.0341 |
| Nickel | 30 | 140 | 310 | 310 | 10,000 | 30 | 130 | 28.5 | 24.2 | 12.1 | 34.9 | 31.5 | 29.1 | 17.5 | 34.3 |
| Potassium | NS | NS | NS | NS | NS | NS | NS | 1,600 | 1,540 | 382 | 2,030 | 2,310 | 2,430 | 1,750 | 2,560 |
| Sodium | NS | NS | NS | NS | NS | NS | NS | 737 | 62.2 | 254 | 125 | 78.9 | 67.8 | 94.3 | ND |
| Vanadium | NS | 100 | NS | NS | NS | 39 | NS | 21.3 | 20.0 | 35.2 | 24.9 | 22.6 | 24.8 | 17.9 | 28.3 |
| Zinc | 109 | 2,200 | 10,000 | 10,000 | 10,000 | 109 | 2,480 | 77.2 B | 561 B | 25.8 B | 90.8 B | 74.1 B | 75.7 B | 49.1 B | 82.0 B |
| Semivolatile Organic Compounds (SVOCs) | | | | | | | | | | | | | | | |
| Acenaphthylene | 100 | 100 | 100 | 500 | 1,000 | NS | 107 | ND | ND | 0.161 | ND | ND | ND | ND | ND |
| Anthracene | 100 | 100 | 100 | 500 | 1,000 | NS | 1,000 | ND | ND | 0.0790 J | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 1 | 1 | 1 | 5.6 | 11 | NS | 1 | ND | 0.0684 J | 0.295 | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 1 | 1 | 1 | 1 | 1.1 | 2.6 | 22 | ND | 0.0623 J | 0.239 | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthene | 1 | 1 | 1 | 5.6 | 11 | NS | 2 | ND | 0.0502 J | 0.149 | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | 100 | 100 | 100 | 500 | 1,000 | NS | 1,000 | ND | ND | 0.164 | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthene | 0.8 | 1 | 3.9 | 56 | 110 | NS | 1.7 | ND | ND | 0.141 | ND | ND | ND | ND | ND |
| Chrysene | 1 | 1 | 3.9 | 56 | 110 | NS | 1 | ND | 0.0601 J | 0.323 | ND | ND | ND | ND | ND |
| Fluoranthene | 100 | 100 | 100 | 500 | 1,000 | NS | 1,000 | 0.0602 J | 0.121 | 0.281 | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.5 | 0.5 | 0.5 | 5.6 | 11 | NS | 8.2 | ND | 0.0487 J | 0.171 | ND | ND | ND | ND | ND |
| Phenanthrene | 100 | 100 | 100 | 500 | 1,000 | NS | 1,000 | ND | 0.0882 J | 0.105 | ND | ND | ND | ND | ND |
| Pyrene | 100 | 100 | 100 | 500 | 1,000 | NS | 1,000 | 0.0480 J | 0.0935 J | 0.551 | ND | ND | ND | ND | ND |
| Volatile Organic Compounds (VOCs) | | | | | | | | | | | | | | | |
| 2-Butanone | NS | 100 | NS | NS | NS | NS | 0.3 | ND | ND | ND | ND | 0.0068 | ND | ND | ND |
| Acetone | 0.05 | 100 | 100 | 500 | 1,000 | 2.2 | 0.05 | ND | ND | ND | ND | 0.041 CCV-E, IVC-E | ND | ND | ND |
| Methylene Chloride | 0.05 | 51 | 100 | 500 | 1,000 | 12 | 0.05 | 0.016 | 0.0099 | 0.0058 J | ND | 0.010 | 0.011 | 0.0080 J | 0.0074 J |

Qualifiers:

ND - Not Detected

NS - No Standard

J - Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD), or in the case of a TIC, the result is an estimated concentration.

B - Analyte is found in the associated analysis batch blank.

CCV-E The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

IVC-E The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value).

Notes:

Analyses that exceed any guidance concentrations set forth in 6 NYCRR Part 375 / CP-51 are bolded and highlighted in yellow.

APPENDIX I



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-1

SHEET No. 1 of 1

| | | | | | |
|---|--------------|----------|---|---|---|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | 8/19/21 | 0800 | ~7' | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | SURFACE ELEVATION: ~560' AMSL | |
| POWER AUGER: | | TO | MON. WELL | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS1984 |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | DATE START: 8/19/21 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | DATE FINISH: 8/19/21 | |
| GEOPROBE: | 2 | 0 TO 15' | DEPTH TO ROCK: NE' | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|----------------------|--|---|---|---|---|-------------|----|----|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 | |
| 1 | | | | 60 | | M | GW | | | | | | | | 1 | |
| 2 | | | | | | M | ML | | 0-2" Asphalt, Gry c-f GRAVEL, little c-f Sand, trace Silt (FILL: subbase gravel), (PID=0.0ppm) | | | | | | | 2 |
| 3 | | | | | | M | ML | | Bwn to Tn SILT, trace f Sand, (FILL: coal), (PID=0.0ppm) | | | | | | | 3 |
| 4 | | | B-1 | | | M | ML | | Bwn to Tn SILT, trace f Sand, (FILL: coal), (PID=0.0ppm) | | | | | | | 4 |
| 5 | | | | | | M | ML | | Bwn to Tn SILT, trace f Sand, (FILL: coal), (PID=0.0ppm) | | | | | | | 5 |
| 6 | | | | 60 | | M | ML | | Bwn to Tn SILT, trace f Sand, (FILL: coal), (PID=0.0ppm) | | | | | | | 6 |
| 7 | | | | | | W | ML | | Bwn SILT, some Clay, trace f Sand, (PID=0.0ppm) | | | | | | | 7 |
| 8 | | | | | | W | ML | | Bwn SILT, some Clay, trace f Sand, (PID=0.0ppm) | | | | | | | 8 |
| 9 | | | | | | W | ML | | Bwn SILT, some Clay, trace f Sand, (PID=0.0ppm) | | | | | | | 9 |
| 10 | | | | | | W | ML | | Gry SILT, some Clay, (PID=0.0ppm) | | | | | | | 10 |
| 11 | | | | 60 | | W | ML | | Gry SILT, some Clay, (PID=0.0ppm) | | | | | | | 11 |
| 12 | | | | | | W | ML | | Tn Silt, some Clay, (PID=0.0ppm) | | | | | | | 12 |
| 13 | | | | | | W | ML | | Gry SILT, some Clay, (PID=0.0ppm) | | | | | | | 13 |
| 14 | | | | | | W | ML | | Gry SILT, some Clay, (PID=0.0ppm) | | | | | | | 14 |
| 15 | | | | | | W | ML | | Gry SILT, some Clay, (PID=0.0ppm) | | | | | | | 15 |
| 16 | | | | | | | | End of Boring at 15' | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | | | 17 | |
| 18 | | | | | | | | | | | | | | | 18 | |
| 19 | | | | | | | | | | | | | | | 19 | |
| 20 | | | | | | | | | | | | | | | 20 | |
| 21 | | | | | | | | | | | | | | | 21 | |
| 22 | | | | | | | | | | | | | | | 22 | |
| 23 | | | | | | | | | | | | | | | 23 | |
| 24 | | | | | | | | | | | | | | | 24 | |
| 25 | | | | | | | | | | | | | | | 25 | |

REMARKS: Discrete sample collected from ~4' bgs.



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-2

SHEET No. 1 of 1

| | | | | | |
|---|--------------|------------------------|---|---|--------------------------------------|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | 8/19/21 | 0830 | ~13' | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | | | | | SURFACE ELEVATION: ~560' AMSL |
| POWER AUGER: | | TO | MON. WELL <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS 1984 | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | DATE START: 8/19/21 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | DATE FINISH: 8/19/21 | |
| GEOPROBE: | 2 | 0 TO 15' | DEPTH TO ROCK: NE' | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |

Geoprobe 7822 DT *CHANGES IN STRATA ARE INFERRED

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | STANDARD PENETRATION (BLOWS/FT.) | | | | | DEPTH (FT.) | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|---|------------|----------------------------------|---|---|---|---|-------------|----|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 |
| 1 | | | | | | | Bwn c-f SAND, some Silt, little c-f Gravel, (Organics: roots and plats at top ~12"), (FILL: Concrete, gravel), (PID=0.0ppm) | | | | | | | 1 | |
| 2 | | | | 48 | | M | | | SW | | | | | | 2 |
| 3 | | | | | | | | | | | | | | | 3 |
| 4 | | | | | | | Ash (PID=0.0ppm) Bwn c-f SAND, some Silt, trace Gravel (FILL: brick and coal +/- 6" under ash layer), (PID=0.0ppm) | | | | | | | 4 | |
| 5 | | | B-2 | | | M | | | SW | | | | | | 5 |
| 6 | | | | | | | Bwn c-f SAND, little Silt, trace Gravel, (FILL: Coal and brick), (PID=0.0ppm) | | | | | | | 6 | |
| 7 | | | | | | | | | | | | | | | 7 |
| 8 | | | | 45 | | M | | | SW | | | | | | 8 |
| 9 | | | | | | | Lt Bwn SILT, trace f Sand, trace f Gravel, (PID=0.0ppm) | | | | | | | 9 | |
| 10 | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | End of Boring at 15' | | | | | | | 12 | |
| 13 | | | | 50 | | W | | | ML | | | | | | 13 |
| 14 | | | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | | 15 | |
| 16 | | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | | 17 | |
| 18 | | | | | | | | | | | | | | 18 | |
| 19 | | | | | | | | | | | | | | 19 | |
| 20 | | | | | | | | | | | | | | 20 | |
| 21 | | | | | | | | | | | | | | 21 | |
| 22 | | | | | | | | | | | | | | 22 | |
| 23 | | | | | | | | | | | | | | 23 | |
| 24 | | | | | | | | | | | | | | 24 | |
| 25 | | | | | | | | | | | | | | 25 | |

REMARKS: Discrete sample collected from ~4-5ft bgs. ~6" of ash at ~4' bgs, over ~6" of coal mixed with soil.

BORING LOG 11078.01_B-2.GPJ TECTONIC ENG.GDT 9/2/21



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-3

SHEET No. 1 of 1

| | | | | | |
|---|--------------|------------------------|---|---|--------------------------------------|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | 8/19/21 | 0900 | ~13' | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | | | | | SURFACE ELEVATION: ~560' AMSL |
| POWER AUGER: | | TO | MON. WELL <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS 1984 | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | DATE START: 8/19/21 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | DATE FINISH: 8/19/21 | |
| GEOPROBE: | 2 | 0 TO 15' | DEPTH TO ROCK: NE' | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | |
|-------------|---------------|------------------------------------|---------------|--------------|---------|---------------------|-------------------------|---|---|---|---|---|---|-------------|----|
| | | | SAMPLE NUMBER | RECOV. | | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | |
| 1 | | | | 48 | | M | SW | Bwn c-f SAND, some c-f Gravel, (Organics: grass and roots), (PID=0.0ppm) | | | | | | | 1 |
| 2 | | | | | | M | SW | Ash (PID=0.0ppm) | | | | | | | 2 |
| 3 | | | | | | | | | | | | | | | 3 |
| 4 | | | | | | M | SW | Bwn c-f SAND, little Silt, trace c-f Gravel, (FILL: Brick and coal), (PID=0.0ppm) | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | 7 |
| 8 | | | | 43 | | M | SW | Bwn c-f SAND, some Silt, trace f Gravel, (PID=0.0ppm) | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | 11 |
| 12 | | | | 40 | | M | SW | Bwn c-f SAND, some Silt, trace f Gravel, (PID=0.0ppm) | | | | | | | 12 |
| 13 | | | B-3 | | | | | | | | | | | | 13 |
| 14 | | | | | | W | SW | Bwn c-f SAND, some Silt, trace f Gravel, (PID=0.0ppm) | | | | | | | 14 |
| 15 | | | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | End of Boring at 15' | | | | | | | 16 |
| 17 | | | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | | | 25 |

REMARKS: Discrete sample collected from ~12' bgs. ~2" ash layer at ~2' bgs, with coal ~3" below ash layer.



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-4

SHEET No. 1 of 1

| | | | | | | | |
|---|----------|--------------|--------------------------|---|-----------------------------|--------------------------------|--|
| CLIENT: KGD Architects | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples | |
| CONTRACTOR: Core Down Drilling LLC | | | NE | NE | NE | DRILLER: Bill Johnson | |
| METHOD OF ADVANCING BORING | DIA. | | DEPTH | SURFACE ELEVATION: ~560' AMSL | | | |
| POWER AUGER: | | TO | MON. WELL | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | DATUM: WGS 1984 | |
| ROT. DRILL: | | TO | SCREEN DEPTH: | --- | TO | --- | DATE START: 8/19/21 |
| CASING: | | TO | WEATHER: Overcast | TEMP: 80° F | DATE FINISH: 8/19/21 | | |
| GEOPROBE: | 2 | 0 | TO | 15' | DEPTH TO ROCK: NE' | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) ● |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | |
|-------------|---------------|-----------------------------------|---------------|--------------|---------|----------|---------------------|--|------------|---|---|---|---|---|-------------|-----------------|
| | | | SAMPLE NUMBER | RECOV. | | MOISTURE | | | | 1 | 2 | 3 | 4 | 5 | | |
| | | | | LENGTH (IN.) | RQD (%) | | | | | | | | | | | PLASTIC LIMIT % |
| | | | | | | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | |
| 1 | | | | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | | | | 2 |
| 3 | | | | 48 | | M | SP | Bwn c-f SAND, some c-f Gravel, little Silt (Organics: grass and roots), (PID=0.0ppm) | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | | 7 |
| 8 | | | | 48 | | M | SW | Bwn c-f SAND, trace Silt, trace c-f Gravel, (PID=0.0ppm) | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | 12 |
| 13 | | | | 48 | | M | SW | Bwn c-f SAND, trace Silt, trace c-f Gravel, (PID=0.0ppm) | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | End of Boring at 15' | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | | | | 25 |

REMARKS: Discrete sample collected from ~14' bgs.



PROJECT No. **10078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-5

SHEET No. 1 of 1

| | | | | | |
|---|--------------|-----------|--------------------------|---|--------------------------------------|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | NE | NE | NE | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | | | | | SURFACE ELEVATION: ~560' AMSL |
| POWER AUGER: | | TO | MON. WELL | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS 1984 |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- | TO --- | DATE START: 8/19/21 |
| CASING: | | TO | WEATHER: Overcast | TEMP: 80° F | DATE FINISH: 8/19/21 |
| GEOPROBE: | 2 | 0 | TO 15' | DEPTH TO ROCK: NE' | |

Geoprobe 7822 DT *CHANGES IN STRATA ARE INFERRED

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | | | | | | | | | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|--|------------|---|---|---|---|---|-----------------|---|--|--|--|----------------|--|--|--|--|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 | | | | | | | | |
| | | | | | | | | | PLASTIC LIMIT % | | | | | WATER CONTENT % | | | | | LIQUID LIMIT % | | | | |
| | | | | | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | | | | | | | |
| 1 | | | | | | | Bwn c-f SAND, some Silt, little c-f Gravel, (Organics: grass and roots), (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 2 | | | | 56 | | M | | | SW | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | Bwn SILT, some c-f Sand, little c-f Gravel, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 5 | | | | | | M | | | ML | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | Bwn SILT, some c-f Sand, little c-f Gravel, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 8 | | | | 48 | | M | | | ML | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | Bwn SILT, some c-f Sand, little c-f Gravel, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 11 | | | | | | M | | | ML | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | Bwn SILT, some c-f Sand, little c-f Gravel, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 14 | | | | 52 | | M | | | ML | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | End of Boring at 15' | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | | | |

REMARKS: Discrete sample collected from ~13' bgs.



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-6

SHEET No. 1 of 1

| | | | | | | | |
|---|----------|--------------|---|------|-----------------------------|--------------------------------------|--|
| CLIENT: KGD Architects | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples | |
| CONTRACTOR: Core Down Drilling LLC | | | 8/19/21 | 1130 | ~13' | DRILLER: Bill Johnson | |
| METHOD OF ADVANCING BORING | DIA. | | DEPTH | | | SURFACE ELEVATION: ~560' AMSL | |
| POWER AUGER: | | TO | MON. WELL <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | DATUM: WGS 1984 | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | DATE START: 8/19/21 | | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | | DATE FINISH: 8/19/21 | | |
| GEOPROBE: | 2 | 0 | TO 15' | | DEPTH TO ROCK: NE' | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) ● |

Geoprobe 7822 DT *CHANGES IN STRATA ARE INFERRED

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | | | | | | | | | | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|---|---|---|---|---|-------------|---|--|--|--|--|--|--|--|--|--|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 | | | | | | | | | |
| | | | | | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | | | | | | | | |
| | | | | | | | | | ● | | | | | | | | | | | | | | | |
| | | | | | | | | | X | | | | | | | | | | | | | | | |
| | | | | | | | | | ○ | | | | | | | | | | | | | | | |
| | | | | | | | | | △ | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | 50 | | M | SW | Bwn c-f SAND, some c-f Gravel, trace Silt, (Organics: stems), (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | 50 | | M | SW | Bwn c-f SAND, some c-f Gravel, trace Silt, (Organics: stems), (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | M | SW | Bwn c-f SAND, little Silt, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | 55 | | M | SW | Bwn c-f SAND, little Silt, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | W | SW | Bwn c-f SAND, little Silt, (PID=0.0ppm) | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | End of Boring at 15' | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | |

REMARKS: Discrete sample collected from ~8' bgs.



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-7

SHEET No. 1 of 1

| | | | | | | | | |
|---|------|--------------|---------------------------------|---|-----------------------------|--------------------------------------|---|--|
| CLIENT: KGD Architects | | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples | | |
| CONTRACTOR: Core Down Drilling LLC | | | NE | NE | NE | DRILLER: Bill Johnson | | |
| METHOD OF ADVANCING BORING | DIA. | | DEPTH | | | SURFACE ELEVATION: ~560' AMSL | | |
| POWER AUGER: | | TO | MON. WELL | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | DATUM: WGS 1984 | | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | | DATE START: 8/19/21 | | | |
| CASING: | | TO | WEATHER: Overcast | TEMP: 80° F | DATE FINISH: 8/19/21 | | | |
| GEOPROBE: | | 2 | 0 | TO | 15' | DEPTH TO ROCK: NE' | | |
| Geoprobe 7822 DT | | | *CHANGES IN STRATA ARE INFERRED | | | | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BLU/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | | | | | | | | |
|-------------|---------------|------------------------------------|---------------|---------------------|---------|---------------------|--|--|---|-----------------|----|----------------|----|-------------|---|--|--|--|--|----|--|--|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 | | | | | | | |
| | | | | | | | | | PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | | | | | | | | | |
| | | | | | | | | | X | ○ | | △ | | | | | | | | | | |
| | | | | | | | | | 10 | 20 | 30 | 40 | 50 | | | | | | | | | |
| | | | | | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | | | | | | |
| | | | | | | | | | 10 | 20 | 30 | 40 | 50 | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | 1 | | |
| 2 | | | | | | | Bwn c-f SAND, some c-f Gravel, little Silt, (Organics: grass and roots), (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | | 2 | | |
| 3 | | | | 40 | | M | SW | | | | | | | | | | | | | 3 | | |
| 4 | | | | | | | | | | | | | | | | | | | | 4 | | |
| 5 | | | | | | | | | | | | | | | | | | | | 5 | | |
| 6 | | | | | | | | | | | | | | | | | | | | 6 | | |
| 7 | | | | | | | | | | | | | | | | | | | | 7 | | |
| 8 | | | | 30 | | M | SW | Bwn c-f SAND, some c-f Gravel, little Silt, (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | 8 | | |
| 9 | | | | | | | | | | | | | | | | | | | | 9 | | |
| 10 | | | | | | | | | | | | | | | | | | | | 10 | | |
| 11 | | | | 55 | | M | SW | Bwn c-f SAND, some c-f Gravel, little Silt, (Organics: grass and roots), (FILL: gravel and concrete), (PID=0.0ppm) | | | | | | | | | | | | 11 | | |
| 12 | | | | | | M | SW | Wht c-f SAND, some c-f Gravel, trace Silt, (Organics: grass and roots), (FILL: concrete), (PID=0.0ppm) | | | | | | | | | | | | 12 | | |
| 13 | | | B-7 | | | | | | | | | | | | | | | | | 13 | | |
| 14 | | | | | | M | SW | Bwn c-f SAND, little c-f Gravel, little Silt, (PID=0.0ppm) | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | End of Boring at 15' | | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | | | | | | | | | 17 | | |
| 18 | | | | | | | | | | | | | | | | | | | | 18 | | |
| 19 | | | | | | | | | | | | | | | | | | | | 19 | | |
| 20 | | | | | | | | | | | | | | | | | | | | 20 | | |
| 21 | | | | | | | | | | | | | | | | | | | | 21 | | |
| 22 | | | | | | | | | | | | | | | | | | | | 22 | | |
| 23 | | | | | | | | | | | | | | | | | | | | 23 | | |
| 24 | | | | | | | | | | | | | | | | | | | | 24 | | |
| 25 | | | | | | | | | | | | | | | | | | | | 25 | | |

REMARKS: Discrete sample collected from ~12' bgs.



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-8

SHEET No. 1 of 1

| | | | | | |
|---|--------------|------------------------|---|---|--------------------------------------|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | NE | NE | NE | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | | | | | SURFACE ELEVATION: ~560' AMSL |
| POWER AUGER: | | TO | MON. WELL <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS 1984 | |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- TO --- | DATE START: 8/19/21 | |
| CASING: | | TO | WEATHER: Overcast TEMP: 80° F | DATE FINISH: 8/19/21 | |
| GEOPROBE: | 2 | 0 TO 15' | DEPTH TO ROCK: NE' | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | |

Geoprobe 7822 DT *CHANGES IN STRATA ARE INFERRED

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | UNCONFINED COMPRESS. STRENGTH (TONS/FT) | | | | | DEPTH (FT.) | | | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|------------|---|-----------------|----|----------------|----|-------------|---|--|----|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 | | |
| | | | | | | | | | PLASTIC LIMIT % | WATER CONTENT % | | LIQUID LIMIT % | | | | | |
| | | | | | | | | | X | ○ | | △ | | | | | |
| | | | | | | | | | 10 | 20 | 30 | 40 | 50 | | | | |
| | | | | | | | | | STANDARD PENETRATION (BLOWS/FT.) | | | | | | | | |
| | | | | | | | | | 10 | 20 | 30 | 40 | 50 | | | | |
| 1 | | | | | | | | | | | | | | | | | 1 |
| 2 | | | | 50 | | M | SM | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | | | | | 4 |
| 5 | | | B-8 | | | M | SM | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | | | 7 |
| 8 | | | | 52 | | M | SM | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | 12 |
| 13 | | | | | | M | SM | | | | | | | | | | 13 |
| 14 | | | | | | | | | | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | | | | | 25 |

REMARKS: Discrete sample collected from ~4' bgs.

BORING LOG 11078.01_B-8.GPJ TECTONIC ENG.GDT 9/2/21



PROJECT No. **11078.01**
 PROJECT: **Twin Towers Middle School**
 LOCATION: **100 Grand Ave, Middletown, NY**

BORING No. B-9

SHEET No. 1 of 1

| | | | | | |
|---|--------------|----------|---------------------------------|---|---|
| CLIENT: KGD Architects | GROUND WATER | DATE | TIME | DEPTH | INSPECTOR: Dina Peoples |
| CONTRACTOR: Core Down Drilling LLC | | 8/19/21 | 1400 | ~10' | DRILLER: Bill Johnson |
| METHOD OF ADVANCING BORING | DIA. | DEPTH | | SURFACE ELEVATION: ~560' AMSL | |
| POWER AUGER: | | TO | MON. WELL | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | DATUM: WGS 1984 |
| ROT. DRILL: | | TO | SCREEN DEPTH: --- | TO --- | DATE START: 8/19/21 |
| CASING: | | TO | WEATHER: Overcast | TEMP: 80° F | DATE FINISH: 8/19/21 |
| GEOPROBE: | 2 | 0 | TO 15' | DEPTH TO ROCK: NE' | UNCONFINED COMPRESS. STRENGTH (TONS/FT) |
| Geoprobe 7822 DT | | | *CHANGES IN STRATA ARE INFERRED | | |

| DEPTH (FT.) | N OR MIN./FT. | PENETRATION RESISTANCE (BL/6 IN.) | SAMPLES | | | UNIFIED SOIL CLASS. | DESCRIPTION OF MATERIAL | LITHOLOGY* | STANDARD PENETRATION (BLOWS/FT.) | | | | | DEPTH (FT.) | |
|-------------|---------------|-----------------------------------|---------------|---------------------|---------|---------------------|-------------------------|---|----------------------------------|---|---|---|---|-------------|----|
| | | | SAMPLE NUMBER | RECOV. LENGTH (IN.) | RQD (%) | | | | MOISTURE | 1 | 2 | 3 | 4 | | 5 |
| 1 | | | | 45 | | M | GW | ASPHALT & Gry c-f GRAVEL, little c-f Sand, (FILL: asphalt and gravel), (PID=0.0ppm) | | | | | | | 1 |
| 2 | | | | | | M | SW | Dk Bwn c-f SAND, little Silt, trace c-f Gravel, (FILL: Brick, gravel, and coal), (PID=0.0ppm) | | | | | | | 2 |
| 3 | | | | | | M | SW | Ash, brick, coal, (PID=0.0ppm) | | | | | | | 3 |
| 4 | | | | | | M | SW | Tn c-f SAND, some Silt, trace c-f Gravel, (FILL: coal), (PID=0.0ppm) | | | | | | | 4 |
| 5 | | | | | | M | SW | Bwn f SAND, some Silt, trace c-f Gravel, (PID=0.0ppm) | | | | | | | 5 |
| 6 | | | | 50 | | M | SW | Bwn SILT, little f Sand, (PID=0.0ppm) | | | | | | | 6 |
| 7 | | | | | | M | SW | Gry SILT, little f Sand, (PID=0.0ppm) | | | | | | | 7 |
| 8 | | | | | | M | SW | | | | | | | | 8 |
| 9 | | | | | | M | SW | | | | | | | | 9 |
| 10 | | | | | | M | SW | | | | | | | | 10 |
| 11 | | | | 60 | | W | ML | | | | | | | | 11 |
| 12 | | | | | | W | ML | | | | | | | | 12 |
| 13 | | | | | | W | ML | | | | | | | | 13 |
| 14 | | | | | | W | ML | | | | | | | | 14 |
| 15 | | | | | | | | | | | | | | | 15 |
| 16 | | | | | | | | End of Boring at 15' | | | | | | | 16 |
| 17 | | | | | | | | | | | | | | | 17 |
| 18 | | | | | | | | | | | | | | | 18 |
| 19 | | | | | | | | | | | | | | | 19 |
| 20 | | | | | | | | | | | | | | | 20 |
| 21 | | | | | | | | | | | | | | | 21 |
| 22 | | | | | | | | | | | | | | | 22 |
| 23 | | | | | | | | | | | | | | | 23 |
| 24 | | | | | | | | | | | | | | | 24 |
| 25 | | | | | | | | | | | | | | | 25 |

REMARKS: No sample; exploratory boring. ~6" ash, coal, and brick layer at ~4' bgs.

BORING LOG 11078.01_B-9.GPJ, TECTONIC ENG.GDT 9/2/21

APPENDIX II

W.O.# 11078.01 Twin Tower Middle School

Appendix II – Site Photographs



FACING NORTHWEST, TOWARDS B-1 BORING LOCATION.



FACING NORTHEAST, TOWARDS B-6 BORING LOCATION.

W.O.# 11078.01 Twin Tower Middle School

Appendix II – Site Photographs



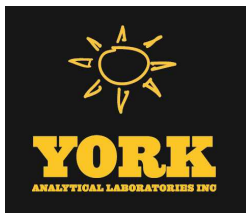
REPRESENTATIVE PHOTOGRAPH OF BORING B-3 SOILS, INCLUDING ASH LAYER.



REPRESENTATIVE PHOTOGRAPH OF BORING B-9 SOILS, INCLUDING ASH, COAL, AND BRICK LAYER.

W.O.# 11078.01 Twin Tower Middle School
Appendix II – Site Photographs

APPENDIX III



Technical Report

prepared for:

Tectonic
70 Pleasant Hill Road
Mountainville NY, 10953
Attention: Christopher Callinan

Report Date: 08/30/2021
Client Project ID: 11078.01 Twin Towers Middle School
York Project (SDG) No.: 21H1047

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

120 RESEARCH DRIVE
www.YORKLAB.com

STRATFORD, CT 06615
(203) 325-1371



132-02 89th AVENUE
FAX (203) 357-0166

RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Tectonic
70 Pleasant Hill Road
Mountainville NY, 10953
Attention: Christopher Callinan

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on August 20, 2021 and listed below. The project was identified as your project: **11078.01 Twin Towers Middle School**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

| <u>York Sample ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Date Collected</u> | <u>Date Received</u> |
|-----------------------|-------------------------|---------------|-----------------------|----------------------|
| 21H1047-01 | B-1 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-02 | B-2 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-03 | B-3 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-04 | B-4 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-05 | B-5 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-06 | B-6 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-07 | B-7 | Soil | 08/19/2021 | 08/20/2021 |
| 21H1047-08 | B-8 | Soil | 08/19/2021 | 08/20/2021 |

General Notes for York Project (SDG) No.: 21H1047

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 08/30/2021

Cassie L. Mosher
Laboratory Manager





Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

| York Project (SDG) No. | Client Project ID | Matrix | Collection Date/Time | Date Received |
|------------------------|------------------------------------|--------|-------------------------|---------------|
| 21H1047 | 11078.01 Twin Towers Middle School | Soil | August 19, 2021 8:30 am | 08/20/2021 |

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 39 | 79 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 67-64-1 | Acetone | ND | | ug/kg dry | 3.9 | 7.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 3.9 | 7.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-------------|--|---------------|------|-------------------------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-09-2 | Methylene chloride | 16 | | ug/kg dry | 3.9 | 7.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 3.9 | 7.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.0 | 3.9 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 5.9 | 12 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:21 | LLJ |
| | Surrogate Recoveries | Result | | Acceptance Range | | | | | | | |
| 17060-07-0 | Surrogate: SURRE: 1,2-Dichloroethane-d4 | 117 % | | 77-125 | | | | | | | |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|---------------------------------------|--------|------|-------|---------------------|-----|----------|------------------|--------------------|--------------------|---------|
| 2037-26-5 | Surrogate: SURR: Toluene-d8 | 100 % | | | 85-120 | | | | | | |
| 460-00-4 | Surrogate: SURR: p-Bromofluorobenzene | 103 % | | | 76-130 | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 191 | 382 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 191 | 382 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------------------------|-------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 95.3 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 206-44-0 | Fluoranthene | 60.2 | J | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------------|---------------|------|-----------|-------------------------|------|----------|--|--------------------|--------------------|---------|
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| 129-00-0 | Pyrene | 48.0 | J | ug/kg dry | 47.8 | 95.3 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 11:35 | KH |
| Surrogate Recoveries | | Result | | | Acceptance Range | | | | | | |
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 70.1 % | | | 20-108 | | | | | | |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 60.6 % | | | 23-114 | | | | | | |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 77.0 % | | | 22-108 | | | | | | |
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 75.0 % | | | 21-113 | | | | | | |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 100 % | | | 19-110 | | | | | | |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 84.0 % | | | 24-116 | | | | | | |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 1.87 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:42 | CM |

Surrogate Recoveries

Result

Acceptance Range

| | | | | |
|-----------|---------------------------------|--------|--|--------|
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 71.0 % | | 30-150 |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 82.5 % | | 30-150 |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0189 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 12:31 | BJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 76.5 % | 30-120 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 53.0 % | 30-120 | | | | | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|------------------|--------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 15200 | | mg/kg dry | 5.77 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-38-2 | Arsenic | 4.70 | | mg/kg dry | 1.73 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-39-3 | Barium | 54.5 | | mg/kg dry | 2.89 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-41-7 | Beryllium | 0.602 | | mg/kg dry | 0.058 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.346 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-70-2 | Calcium | 16700 | B | mg/kg dry | 5.77 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-47-3 | Chromium | 19.5 | | mg/kg dry | 0.577 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-48-4 | Cobalt | 11.8 | | mg/kg dry | 0.462 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-50-8 | Copper | 30.5 | | mg/kg dry | 2.31 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7439-89-6 | Iron | 27800 | | mg/kg dry | 28.9 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 8:30 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7439-92-1 | Lead | 18.3 | | mg/kg dry | 0.577 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7439-95-4 | Magnesium | 5940 | | mg/kg dry | 5.77 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7439-96-5 | Manganese | 650 | | mg/kg dry | 0.577 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-02-0 | Nickel | 28.5 | | mg/kg dry | 1.15 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-09-7 | Potassium | 1600 | | mg/kg dry | 5.77 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.577 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-23-5 | Sodium | 737 | | mg/kg dry | 57.7 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.89 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-62-2 | Vanadium | 21.3 | | mg/kg dry | 1.15 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |
| 7440-66-6 | Zinc | 77.2 | B | mg/kg dry | 2.89 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:54 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | 0.0442 | | mg/kg dry | 0.0346 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 20:19 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.577 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.577 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |



Sample Information

Client Sample ID: B-1

York Sample ID: 21H1047-01

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 8:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 86.6 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |

Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 9:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 46 | 91 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-------------|--------------------------------|------------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-09-2 | Methylene chloride | 9.9 | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---|---------------|-------------------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.8 | 14 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 09:00 | 08/25/2021 14:48 | LLJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 17060-07-0 | Surrogate: <i>SURR: 1,2-Dichloroethane-d4</i> | 116 % | 77-125 | | | | | | | | |
| 2037-26-5 | Surrogate: <i>SURR: Toluene-d8</i> | 97.1 % | 85-120 | | | | | | | | |
| 460-00-4 | Surrogate: <i>SURR: p-Bromofluorobenzene</i> | 104 % | 76-130 | | | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|------------------------|------|----------|--|-----------------------|-----------------------|---------|
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------------------|-------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 190 | 381 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 190 | 381 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 56-55-3 | Benzo(a)anthracene | 68.4 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 50-32-8 | Benzo(a)pyrene | 62.3 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 205-99-2 | Benzo(b)fluoranthene | 50.2 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 95.1 | 190 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 218-01-9 | Chrysene | 60.1 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-------------------------------|-------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 206-44-0 | Fluoranthene | 121 | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 48.7 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 85-01-8 | Phenanthrene | 88.2 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |
| 129-00-0 | Pyrene | 93.5 | J | ug/kg dry | 47.7 | 95.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:07 | KH |

| | Surrogate Recoveries | Result | Acceptance Range |
|-----------|----------------------------------|--------|------------------|
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 71.9 % | 20-108 |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 63.7 % | 23-114 |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 79.5 % | 22-108 |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 9:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|--|--------|------|-------|---------------------|-----|----------|------------------|--------------------|--------------------|---------|
| 321-60-8 | Surrogate: SURRE: 2-Fluorobiphenyl | 76.1 % | | | 21-113 | | | | | | |
| 118-79-6 | Surrogate: SURRE: 2,4,6-Tribromophenol | 104 % | | | 19-110 | | | | | | |
| 1718-51-0 | Surrogate: SURRE: Terphenyl-d14 | 79.5 % | | | 24-116 | | | | | | |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.90 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 190 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 19:59 | CM |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 57.9 % | 30-150 | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 77.4 % | 30-150 | | | | | | | |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0192 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 12:44 | BJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 79.5 % | 30-120 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 48.0 % | 30-120 | | | | | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 14900 | | mg/kg dry | 5.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.90 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:00 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7440-38-2 | Arsenic | 3.63 | | mg/kg dry | 1.74 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-39-3 | Barium | 57.9 | | mg/kg dry | 2.90 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-41-7 | Beryllium | 0.568 | | mg/kg dry | 0.058 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-43-9 | Cadmium | 1.09 | | mg/kg dry | 0.348 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-70-2 | Calcium | 14900 | B | mg/kg dry | 5.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-47-3 | Chromium | 18.4 | | mg/kg dry | 0.580 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-48-4 | Cobalt | 10.6 | | mg/kg dry | 0.464 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-50-8 | Copper | 32.9 | | mg/kg dry | 2.32 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7439-89-6 | Iron | 25200 | | mg/kg dry | 29.0 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7439-92-1 | Lead | 89.7 | | mg/kg dry | 0.580 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7439-95-4 | Magnesium | 6530 | | mg/kg dry | 5.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7439-96-5 | Manganese | 586 | | mg/kg dry | 0.580 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-02-0 | Nickel | 24.2 | | mg/kg dry | 1.16 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-09-7 | Potassium | 1540 | | mg/kg dry | 5.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.90 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.580 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-23-5 | Sodium | 62.2 | | mg/kg dry | 58.0 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.90 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-62-2 | Vanadium | 20.0 | | mg/kg dry | 1.16 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |
| 7440-66-6 | Zinc | 561 | B | mg/kg dry | 2.90 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:57 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:



Sample Information

Client Sample ID: B-2

York Sample ID: 21H1047-02

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 9:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | 0.414 | | mg/kg dry | 0.0348 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 20:27 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.580 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.580 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 86.2 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |

Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 9:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 41 | 82 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.1 | 8.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.1 | 8.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|--|---------------|-------------------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 75-09-2 | Methylene chloride | 5.8 | J | ug/kg dry | 4.1 | 8.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.1 | 8.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.0 | 4.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.1 | 12 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/27/2021 07:00 | 08/27/2021 17:18 | AS |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 17060-07-0 | Surrogate: SURRE: 1,2-Dichloroethane-d4 | 97.7 % | 77-125 | | | | | | | | |
| 2037-26-5 | Surrogate: SURRE: Toluene-d8 | 100 % | 85-120 | | | | | | | | |
| 460-00-4 | Surrogate: SURRE: p-Bromofluorobenzene | 101 % | 76-130 | | | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

| | | | | |
|--|--|-----------------------|--|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 9:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|--|------------------------------------|

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------------------|--------|------|-----------|------------------------|------|----------|--|-----------------------|-----------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------------------|-------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 208-96-8 | Acenaphthylene | 161 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 200 | 400 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 120-12-7 | Anthracene | 79.0 | J | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 200 | 400 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 56-55-3 | Benzo(a)anthracene | 295 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 50-32-8 | Benzo(a)pyrene | 239 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 205-99-2 | Benzo(b)fluoranthene | 149 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 191-24-2 | Benzo(g,h,i)perylene | 164 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 207-08-9 | Benzo(k)fluoranthene | 141 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-------------------------------|------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 99.9 | 200 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 218-01-9 | Chrysene | 323 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 206-44-0 | Fluoranthene | 281 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 171 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|----------------------------|------------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 85-01-8 | Phenanthrene | 105 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |
| 129-00-0 | Pyrene | 551 | | ug/kg dry | 50.1 | 99.9 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 12:38 | KH |

Surrogate Recoveries

Result

Acceptance Range

| | | | |
|-----------|---------------------------------------|--------|--------|
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 63.7 % | 20-108 |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 55.9 % | 23-114 |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 77.8 % | 22-108 |
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 70.6 % | 21-113 |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 99.6 % | 19-110 |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 77.0 % | 24-116 |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------------|---------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 1.96 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:16 | CM |
| | Surrogate Recoveries | Result | | | | | Acceptance Range | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 54.0 % | | | | | 30-150 | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 77.6 % | | | | | 30-150 | | | |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0198 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 12:58 | BJ |
| Surrogate Recoveries | | Result | | | | | Acceptance Range | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 78.0 % | | | | | 30-120 | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 42.5 % | | | | | 30-120 | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 3550 | | mg/kg dry | 6.03 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 3.01 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-38-2 | Arsenic | 3.36 | | mg/kg dry | 1.81 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-39-3 | Barium | 38.1 | | mg/kg dry | 3.01 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-41-7 | Beryllium | ND | | mg/kg dry | 0.060 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.362 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-70-2 | Calcium | 1970 | B | mg/kg dry | 6.03 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-47-3 | Chromium | 8.45 | | mg/kg dry | 0.603 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-48-4 | Cobalt | 5.38 | | mg/kg dry | 0.482 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-50-8 | Copper | 23.0 | | mg/kg dry | 2.41 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7439-89-6 | Iron | 11400 | | mg/kg dry | 30.1 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7439-92-1 | Lead | 17.0 | | mg/kg dry | 0.603 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7439-95-4 | Magnesium | 880 | | mg/kg dry | 6.03 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7439-96-5 | Manganese | 141 | | mg/kg dry | 0.603 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-02-0 | Nickel | 12.1 | | mg/kg dry | 1.21 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |



Sample Information

Client Sample ID: B-3

York Sample ID: 21H1047-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 9:30 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7440-09-7 | Potassium | 382 | | mg/kg dry | 6.03 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 3.01 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.603 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-23-5 | Sodium | 254 | | mg/kg dry | 60.3 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 3.01 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-62-2 | Vanadium | 35.2 | | mg/kg dry | 1.21 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |
| 7440-66-6 | Zinc | 25.8 | B | mg/kg dry | 3.01 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 11:59 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0362 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 20:36 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.603 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.603 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 82.9 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 10:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|--|--------|------|-----------|------------------------|-----|----------|--|-----------------------|-----------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 45 | 90 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.5 | 9.0 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.5 | 9.0 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|--|---------------|-------------------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-09-2 | Methylene chloride | ND | | ug/kg dry | 4.5 | 9.0 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.5 | 9.0 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.3 | 4.5 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.8 | 14 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/26/2021 06:27 | 08/27/2021 03:04 | AS |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 17060-07-0 | Surrogate: SURRE: 1,2-Dichloroethane-d4 | 103 % | 77-125 | | | | | | | | |
| 2037-26-5 | Surrogate: SURRE: Toluene-d8 | 98.2 % | 85-120 | | | | | | | | |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|--|--------|------|-------|------------------------|-----|----------|------------------|-----------------------|-----------------------|---------|
| 460-00-4 | Surrogate: SURR: p-Bromofluorobenzene | 99.8 % | | | 76-130 | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|------------------------|------|----------|--|-----------------------|-----------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 178 | 356 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 178 | 356 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------------------------|--------|------|-----------|------------------------|------|----------|--|-----------------------|-----------------------|---------|
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 88.8 | 177 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 44.5 | 88.8 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:10 | KH |

Surrogate Recoveries

Result

Acceptance Range

| | | | |
|-----------|--|--------|--------|
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 69.1 % | 20-108 |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 60.6 % | 23-114 |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 79.5 % | 22-108 |
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 76.6 % | 21-113 |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 102 % | 19-110 |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 82.1 % | 24-116 |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 1.75 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:33 | CM |

Surrogate Recoveries

Result

Acceptance Range

| | | | | | | | | | | |
|-----------|---------------------------------|--------|--|--|--|--|--|--|--|--|
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 65.2 % | | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 78.9 % | | | | | | | | |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0177 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 13:11 | BJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 81.0 % | 30-120 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 52.5 % | 30-120 | | | | | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|------------------|--------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 18000 | | mg/kg dry | 5.41 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.71 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-38-2 | Arsenic | 7.04 | | mg/kg dry | 1.62 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-39-3 | Barium | 63.9 | | mg/kg dry | 2.71 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-41-7 | Beryllium | 0.854 | | mg/kg dry | 0.054 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.325 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-70-2 | Calcium | 1320 | B | mg/kg dry | 5.41 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-47-3 | Chromium | 24.0 | | mg/kg dry | 0.541 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-48-4 | Cobalt | 13.4 | | mg/kg dry | 0.433 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-50-8 | Copper | 40.1 | | mg/kg dry | 2.17 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7439-89-6 | Iron | 36200 | | mg/kg dry | 27.1 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7439-92-1 | Lead | 12.5 | | mg/kg dry | 0.541 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7439-95-4 | Magnesium | 7120 | | mg/kg dry | 5.41 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7439-96-5 | Manganese | 726 | | mg/kg dry | 0.541 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-02-0 | Nickel | 34.9 | | mg/kg dry | 1.08 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-09-7 | Potassium | 2030 | | mg/kg dry | 5.41 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.71 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.541 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-23-5 | Sodium | 125 | | mg/kg dry | 54.1 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.71 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-62-2 | Vanadium | 24.9 | | mg/kg dry | 1.08 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |
| 7440-66-6 | Zinc | 90.8 | B | mg/kg dry | 2.71 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:03 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0325 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 20:45 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.541 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.541 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |



Sample Information

Client Sample ID: B-4

York Sample ID: 21H1047-04

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:00 am

08/20/2021

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|------------------|--------------------|--------------------|---------|
| solids | * % Solids | 92.3 | | % | 0.100 | 1 | SM 2540G | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |
| | | | | | | | Certifications: | CTDOH | | |

Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|-----------------|---|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | | | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| | | | | | | | Certifications: | CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | | | |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|------------------------|------------|-----------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 44 | 88 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 78-93-3 | 2-Butanone | 6.8 | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 67-64-1 | Acetone | 41 | CCV-E, ICV-E | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-------------|--------------------------------|-----------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-09-2 | Methylene chloride | 10 | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.4 | 8.8 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

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21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---|---------------|-------------------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.2 | 4.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 6.6 | 13 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 22:18 | LLJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 17060-07-0 | Surrogate: <i>SURR: 1,2-Dichloroethane-d4</i> | 109 % | 77-125 | | | | | | | | |
| 2037-26-5 | Surrogate: <i>SURR: Toluene-d8</i> | 97.2 % | 85-120 | | | | | | | | |
| 460-00-4 | Surrogate: <i>SURR: p-Bromofluorobenzene</i> | 99.9 % | 76-130 | | | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

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21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 186 | 373 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 186 | 373 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 93.1 | 186 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 46.7 | 93.1 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 13:42 | KH |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

Table with 13 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include various chemical compounds like Diethyl phthalate, Dimethyl phthalate, etc.

Table with 3 columns: Surrogate Recoveries, Result, Acceptance Range. Rows include Surrogate: SURR: 2-Fluorophenol, Surrogate: SURR: Phenol-d5, Surrogate: SURR: Nitrobenzene-d5.



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

| <u>York Project (SDG) No.</u> | <u>Client Project ID</u> | <u>Matrix</u> | <u>Collection Date/Time</u> | <u>Date Received</u> |
|-------------------------------|------------------------------------|---------------|-----------------------------|----------------------|
| 21H1047 | 11078.01 Twin Towers Middle School | Soil | August 19, 2021 10:30 am | 08/20/2021 |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|---------------------------------------|--------|------|-------|---------------------|-----|----------|------------------|--------------------|--------------------|---------|
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 80.6 % | | | 21-113 | | | | | | |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 106 % | | | 19-110 | | | | | | |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 85.5 % | | | 24-116 | | | | | | |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.85 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 20:50 | CM |



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with 11 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Heptachlor epoxide, Methoxychlor, Toxaphene, and Surrogate Recoveries for Decachlorobiphenyl and Tetrachloro-m-xylene.

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

Table with 11 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, * Total PCBs, and Surrogate Recoveries for Tetrachloro-m-xylene and Decachlorobiphenyl.

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

Table with 11 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Aluminum and Antimony.



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 10:30 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

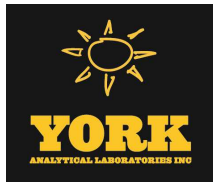
Sample Prepared by Method: EPA 3050B

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows include Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc.

Mercury by 7473

Log-in Notes:

Sample Notes:



Sample Information

Client Sample ID: B-5

York Sample ID: 21H1047-05

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 10:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0341 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 20:53 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.568 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.568 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 88.1 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |

Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 11:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|--|--------|------|-----------|------------------------|-----|----------|--|-----------------------|-----------------------|---------|
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 46 | 91 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.6 | 9.1 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

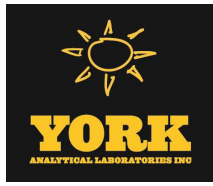
VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------------------------|--------|------|-----------|------------------------|-----|----------|--|-----------------------|-----------------------|---------|
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.3 | 4.6 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 22:45 | LLJ |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

Table with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for various chemicals like Methylene chloride, n-Butylbenzene, etc., and a Surrogate Recoveries section.

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 11:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 89.7 | 179 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 180 | 359 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 180 | 359 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

Table with 13 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Rows list various chemical compounds like Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, etc., with their respective results and analysis details.



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 11:00 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|--|---------------|------|-----------|-------------------------|------|----------|--|--------------------|--------------------|---------|
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 45.0 | 89.7 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:14 | KH |
| Surrogate Recoveries | | Result | | | Acceptance Range | | | | | | |
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 72.8 % | | | 20-108 | | | | | | |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 66.5 % | | | 23-114 | | | | | | |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 84.0 % | | | 22-108 | | | | | | |
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 85.1 % | | | 21-113 | | | | | | |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 110 % | | | 19-110 | | | | | | |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 93.8 % | | | 24-116 | | | | | | |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|------|-----------|-------------------------|----------|--|--------------------|--------------------|---------|
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 1.80 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:40 | CM |
| Surrogate Recoveries | | Result | | | Acceptance Range | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 60.8 % | | | 30-150 | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 80.4 % | | | 30-150 | | | | | |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0182 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 13:38 | BJ |
| Surrogate Recoveries | | Result | | | | | Acceptance Range | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 83.5 % | | | | | 30-120 | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 47.0 % | | | | | 30-120 | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|------------------|--------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 16300 | | mg/kg dry | 5.52 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.76 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-38-2 | Arsenic | 4.34 | | mg/kg dry | 1.66 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-39-3 | Barium | 86.0 | | mg/kg dry | 2.76 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-41-7 | Beryllium | 0.677 | | mg/kg dry | 0.055 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.331 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-70-2 | Calcium | 2470 | B | mg/kg dry | 5.52 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-47-3 | Chromium | 20.5 | | mg/kg dry | 0.552 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-48-4 | Cobalt | 11.5 | | mg/kg dry | 0.442 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-50-8 | Copper | 28.5 | | mg/kg dry | 2.21 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7439-89-6 | Iron | 28000 | | mg/kg dry | 27.6 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7439-92-1 | Lead | 12.7 | | mg/kg dry | 0.552 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7439-95-4 | Magnesium | 4920 | | mg/kg dry | 5.52 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7439-96-5 | Manganese | 762 | | mg/kg dry | 0.552 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-02-0 | Nickel | 29.1 | | mg/kg dry | 1.10 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |



Sample Information

Client Sample ID: B-6

York Sample ID: 21H1047-06

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:00 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7440-09-7 | Potassium | 2430 | | mg/kg dry | 5.52 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.76 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.552 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-23-5 | Sodium | 67.8 | | mg/kg dry | 55.2 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.76 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-62-2 | Vanadium | 24.8 | | mg/kg dry | 1.10 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |
| 7440-66-6 | Zinc | 75.7 | B | mg/kg dry | 2.76 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:14 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | 0.0331 | | mg/kg dry | 0.0331 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 21:22 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.552 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/24/2021 07:44 | 08/25/2021 07:55 | JAG |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.552 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 90.5 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 52 | 100 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 11:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------------|--------|------|-----------|------------------------|-----|----------|--|-----------------------|-----------------------|---------|
| 67-64-1 | Acetone | ND | | ug/kg dry | 5.2 | 10 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 5.2 | 10 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-------------|--|---------------|------|-----------|-------------------------|-----|----------|--|--------------------|--------------------|---------|
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-09-2 | Methylene chloride | 8.0 | J | ug/kg dry | 5.2 | 10 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 5.2 | 10 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.6 | 5.2 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 7.8 | 16 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:12 | LLJ |
| | Surrogate Recoveries | Result | | | Acceptance Range | | | | | | |
| 17060-07-0 | Surrogate: SURR: 1,2-Dichloroethane-d4 | 109 % | | | 77-125 | | | | | | |
| 2037-26-5 | Surrogate: SURR: Toluene-d8 | 96.6 % | | | 85-120 | | | | | | |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-------|---------------------|-----|----------|------------------|--------------------|--------------------|---------|
| 460-00-4 | Surrogate: SURRE: p-Bromofluorobenzene | 99.7 % | | | 76-130 | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 185 | 369 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 185 | 369 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 92.2 | 184 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 46.2 | 92.2 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 14:46 | KH |

Surrogate Recoveries

Result

Acceptance Range

| | | | |
|-----------|---------------------------------------|--------|--------|
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 57.5 % | 20-108 |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 50.3 % | 23-114 |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 68.0 % | 22-108 |
| 321-60-8 | Surrogate: SURR: 2-Fluorobiphenyl | 67.0 % | 21-113 |
| 118-79-6 | Surrogate: SURR: 2,4,6-Tribromophenol | 86.2 % | 19-110 |
| 1718-51-0 | Surrogate: SURR: Terphenyl-d14 | 72.3 % | 24-116 |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 1.82 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 21:57 | CM |

Surrogate Recoveries

Result

Acceptance Range

| | | | | |
|-----------|---------------------------------|--------|--|--------|
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 60.6 % | | 30-150 |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 70.2 % | | 30-150 |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|--------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0184 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 13:52 | BJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 72.5 % | 30-120 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 48.0 % | 30-120 | | | | | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|------------------|--------------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 13600 | | mg/kg dry | 5.60 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-38-2 | Arsenic | 3.24 | | mg/kg dry | 1.68 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-39-3 | Barium | 71.7 | | mg/kg dry | 2.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-41-7 | Beryllium | 0.213 | | mg/kg dry | 0.056 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.336 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-70-2 | Calcium | 45500 | B | mg/kg dry | 5.60 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-47-3 | Chromium | 16.0 | | mg/kg dry | 0.560 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-48-4 | Cobalt | 7.41 | | mg/kg dry | 0.448 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-50-8 | Copper | 19.0 | | mg/kg dry | 2.24 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7439-89-6 | Iron | 17300 | | mg/kg dry | 28.0 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 11:30 am

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7439-92-1 | Lead | 18.7 | | mg/kg dry | 0.560 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7439-95-4 | Magnesium | 4940 | | mg/kg dry | 5.60 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7439-96-5 | Manganese | 627 | | mg/kg dry | 0.560 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-02-0 | Nickel | 17.5 | | mg/kg dry | 1.12 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-09-7 | Potassium | 1750 | | mg/kg dry | 5.60 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.560 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-23-5 | Sodium | 94.3 | | mg/kg dry | 56.0 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-62-2 | Vanadium | 17.9 | | mg/kg dry | 1.12 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |
| 7440-66-6 | Zinc | 49.1 | B | mg/kg dry | 2.80 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:17 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 7439-97-6 | Mercury | ND | | mg/kg dry | 0.0336 | 1 | EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP | 08/26/2021 11:58 | 08/26/2021 21:31 | BR |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.560 | 1 | EPA 7196A Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP | 08/25/2021 07:45 | 08/25/2021 18:39 | ALH |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|---|--------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.560 | 1 | EPA 9014/9010C Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |



Sample Information

Client Sample ID: B-7

York Sample ID: 21H1047-07

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 11:30 am | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|-----------------------------------|--------------------|--------------------|---------|
| solids | * % Solids | 89.3 | | % | 0.100 | 1 | SM 2540G Certifications: CTDOH | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |

Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

| | | | | |
|--|--|-----------------------|---|------------------------------------|
| <u>York Project (SDG) No.</u> 21H1047 | <u>Client Project ID</u> 11078.01 Twin Towers Middle School | <u>Matrix</u> Soil | <u>Collection Date/Time</u> August 19, 2021 12:00 pm | <u>Date Received</u> 08/20/2021 |
|--|--|-----------------------|---|------------------------------------|

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-34-3 | 1,1-Dichloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-35-4 | 1,1-Dichloroethylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 96-18-4 | 1,2,3-Trichloropropane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 106-93-4 | 1,2-Dibromoethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|------------------------|--------|------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 107-06-2 | 1,2-Dichloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 78-87-5 | 1,2-Dichloropropane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 123-91-1 | 1,4-Dioxane | ND | | ug/kg dry | 47 | 94 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 78-93-3 | 2-Butanone | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 591-78-6 | 2-Hexanone | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 108-10-1 | 4-Methyl-2-pentanone | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 67-64-1 | Acetone | ND | | ug/kg dry | 4.7 | 9.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 107-02-8 | Acrolein | ND | | ug/kg dry | 4.7 | 9.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 107-13-1 | Acrylonitrile | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 71-43-2 | Benzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 74-97-5 | Bromochloromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-27-4 | Bromodichloromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-25-2 | Bromoform | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 74-83-9 | Bromomethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-15-0 | Carbon disulfide | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 56-23-5 | Carbon tetrachloride | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 108-90-7 | Chlorobenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-00-3 | Chloroethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 67-66-3 | Chloroform | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 74-87-3 | Chloromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-------------|--------------------------------|------------|----------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 156-59-2 | cis-1,2-Dichloroethylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 10061-01-5 | cis-1,3-Dichloropropylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 110-82-7 | Cyclohexane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 124-48-1 | Dibromochloromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 74-95-3 | Dibromomethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-71-8 | Dichlorodifluoromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 100-41-4 | Ethyl Benzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 98-82-8 | Isopropylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 79-20-9 | Methyl acetate | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 108-87-2 | Methylcyclohexane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-09-2 | Methylene chloride | 7.4 | J | ug/kg dry | 4.7 | 9.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 104-51-8 | n-Butylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 103-65-1 | n-Propylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 95-47-6 | o-Xylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 179601-23-1 | p- & m- Xylenes | ND | | ug/kg dry | 4.7 | 9.4 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 99-87-6 | p-Isopropyltoluene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 135-98-8 | sec-Butylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 100-42-5 | Styrene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-65-0 | tert-Butyl alcohol (TBA) | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 98-06-6 | tert-Butylbenzene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 127-18-4 | Tetrachloroethylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

VOA, 8260 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|--|---------------|-------------------------|-----------|---------------------|-----|----------|--|--------------------|--------------------|---------|
| 108-88-3 | Toluene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 156-60-5 | trans-1,2-Dichloroethylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 10061-02-6 | trans-1,3-Dichloropropylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 79-01-6 | Trichloroethylene | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-69-4 | Trichlorofluoromethane | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 75-01-4 | Vinyl Chloride | ND | | ug/kg dry | 2.4 | 4.7 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| 1330-20-7 | Xylenes, Total | ND | | ug/kg dry | 7.1 | 14 | 1 | EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP | 08/25/2021 06:00 | 08/25/2021 23:38 | LLJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | | |
| 17060-07-0 | Surrogate: SURR: 1,2-Dichloroethane-d4 | 111 % | 77-125 | | | | | | | | |
| 2037-26-5 | Surrogate: SURR: Toluene-d8 | 96.8 % | 85-120 | | | | | | | | |
| 460-00-4 | Surrogate: SURR: p-Bromofluorobenzene | 99.5 % | 76-130 | | | | | | | | |

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|---------------------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 92-52-4 | 1,1-Biphenyl | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 122-66-7 | 1,2-Diphenylhydrazine (as Azobenzene) | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 95-95-4 | 2,4,5-Trichlorophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 88-06-2 | 2,4,6-Trichlorophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 120-83-2 | 2,4-Dichlorophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 105-67-9 | 2,4-Dimethylphenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 51-28-5 | 2,4-Dinitrophenol | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 121-14-2 | 2,4-Dinitrotoluene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 606-20-2 | 2,6-Dinitrotoluene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 91-58-7 | 2-Chloronaphthalene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 95-57-8 | 2-Chlorophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 91-57-6 | 2-Methylnaphthalene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 95-48-7 | 2-Methylphenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 88-74-4 | 2-Nitroaniline | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 88-75-5 | 2-Nitrophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 65794-96-9 | 3- & 4-Methylphenols | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 91-94-1 | 3,3-Dichlorobenzidine | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 99-09-2 | 3-Nitroaniline | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 101-55-3 | 4-Bromophenyl phenyl ether | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 59-50-7 | 4-Chloro-3-methylphenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 106-47-8 | 4-Chloroaniline | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 100-01-6 | 4-Nitroaniline | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 100-02-7 | 4-Nitrophenol | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 83-32-9 | Acenaphthene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 208-96-8 | Acenaphthylene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 98-86-2 | Acetophenone | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 62-53-3 | Aniline | ND | | ug/kg dry | 182 | 365 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 120-12-7 | Anthracene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 1912-24-9 | Atrazine | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 100-52-7 | Benzaldehyde | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 92-87-5 | Benzidine | ND | | ug/kg dry | 182 | 365 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 56-55-3 | Benzo(a)anthracene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 50-32-8 | Benzo(a)pyrene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 205-99-2 | Benzo(b)fluoranthene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 191-24-2 | Benzo(g,h,i)perylene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 207-08-9 | Benzo(k)fluoranthene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 65-85-0 | Benzoic acid | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 100-51-6 | Benzyl alcohol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 85-68-7 | Benzyl butyl phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 111-91-1 | Bis(2-chloroethoxy)methane | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 111-44-4 | Bis(2-chloroethyl)ether | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 108-60-1 | Bis(2-chloroisopropyl)ether | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 105-60-2 | Caprolactam | ND | | ug/kg dry | 91.0 | 182 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 86-74-8 | Carbazole | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 218-01-9 | Chrysene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 53-70-3 | Dibenzo(a,h)anthracene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 132-64-9 | Dibenzofuran | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|----------|----------------------------|--------|------|-----------|---------------------|------|----------|--|--------------------|--------------------|---------|
| 84-66-2 | Diethyl phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 131-11-3 | Dimethyl phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 84-74-2 | Di-n-butyl phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 117-84-0 | Di-n-octyl phthalate | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 206-44-0 | Fluoranthene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 86-73-7 | Fluorene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 118-74-1 | Hexachlorobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 87-68-3 | Hexachlorobutadiene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 77-47-4 | Hexachlorocyclopentadiene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 67-72-1 | Hexachloroethane | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 78-59-1 | Isophorone | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 91-20-3 | Naphthalene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 98-95-3 | Nitrobenzene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 62-75-9 | N-Nitrosodimethylamine | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 621-64-7 | N-nitroso-di-n-propylamine | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 86-30-6 | N-Nitrosodiphenylamine | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 87-86-5 | Pentachlorophenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 85-01-8 | Phenanthrene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 108-95-2 | Phenol | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |
| 129-00-0 | Pyrene | ND | | ug/kg dry | 45.6 | 91.0 | 2 | EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 12:45 | 08/27/2021 15:17 | KH |

| | Surrogate Recoveries | Result | Acceptance Range |
|-----------|----------------------------------|--------|------------------|
| 367-12-4 | Surrogate: SURR: 2-Fluorophenol | 65.5 % | 20-108 |
| 4165-62-2 | Surrogate: SURR: Phenol-d5 | 56.6 % | 23-114 |
| 4165-60-0 | Surrogate: SURR: Nitrobenzene-d5 | 72.9 % | 22-108 |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

SVOA, 8270 Comprehensive

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3546 SVOA

| CAS No. | Parameter | Result | Flag | Units | Reported to LOD/MDL | LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|---|--------|------|-------|------------------------|-----|----------|------------------|-----------------------|-----------------------|---------|
| 321-60-8 | Surrogate: SURRE: 2-Fluorobiphenyl | 72.1 % | | | 21-113 | | | | | | |
| 118-79-6 | Surrogate: SURRE: 2,4,6-Tribromophenol | 90.1 % | | | 19-110 | | | | | | |
| 1718-51-0 | Surrogate: SURRE: Terphenyl-d14 | 78.0 % | | | 24-116 | | | | | | |

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|---------------------|--------|------|-----------|--------------------|----------|--|-----------------------|-----------------------|---------|
| 72-54-8 | 4,4'-DDD | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 72-55-9 | 4,4'-DDE | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 50-29-3 | 4,4'-DDT | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 309-00-2 | Aldrin | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 319-84-6 | alpha-BHC | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 5103-71-9 | alpha-Chlordane | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 319-85-7 | beta-BHC | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 319-86-8 | delta-BHC | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 60-57-1 | Dieldrin | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 959-98-8 | Endosulfan I | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 33213-65-9 | Endosulfan II | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854 | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 1031-07-8 | Endosulfan sulfate | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 72-20-8 | Endrin | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 7421-93-4 | Endrin aldehyde | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 53494-70-5 | Endrin ketone | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 58-89-9 | gamma-BHC (Lindane) | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 5566-34-7 | gamma-Chlordane | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: NELAC-NY10854,NJDEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 76-44-8 | Heptachlor | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

PEST, 8081 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 1024-57-3 | Heptachlor epoxide | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 72-43-5 | Methoxychlor | ND | | ug/kg dry | 1.79 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| 8001-35-2 | Toxaphene | ND | | ug/kg dry | 179 | 5 | EPA 8081B Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/27/2021 13:16 | 08/28/2021 22:13 | CM |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 67.8 % | 30-150 | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 84.0 % | 30-150 | | | | | | | |

PCB, 8082 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------------------------|---------------------------------|---------------|-------------------------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 12674-11-2 | Aroclor 1016 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 11104-28-2 | Aroclor 1221 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 11141-16-5 | Aroclor 1232 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 53469-21-9 | Aroclor 1242 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 12672-29-6 | Aroclor 1248 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 11097-69-1 | Aroclor 1254 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 11096-82-5 | Aroclor 1260 | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| 1336-36-3 | * Total PCBs | ND | | mg/kg dry | 0.0181 | 1 | EPA 8082A Certifications: | 08/27/2021 13:16 | 08/30/2021 14:05 | BJ |
| Surrogate Recoveries | | Result | Acceptance Range | | | | | | | |
| 877-09-8 | Surrogate: Tetrachloro-m-xylene | 90.5 % | 30-120 | | | | | | | |
| 2051-24-3 | Surrogate: Decachlorobiphenyl | 58.0 % | 30-120 | | | | | | | |

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7429-90-5 | Aluminum | 22200 | | mg/kg dry | 5.49 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-36-0 | Antimony | ND | | mg/kg dry | 2.75 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

Metals, Target Analyte

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|--|--------------------|--------------------|---------|
| 7440-38-2 | Arsenic | 3.78 | | mg/kg dry | 1.65 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-39-3 | Barium | 62.0 | | mg/kg dry | 2.75 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-41-7 | Beryllium | 0.962 | | mg/kg dry | 0.055 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-43-9 | Cadmium | ND | | mg/kg dry | 0.330 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-70-2 | Calcium | 1020 | B | mg/kg dry | 5.49 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-47-3 | Chromium | 24.5 | | mg/kg dry | 0.549 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-48-4 | Cobalt | 12.5 | | mg/kg dry | 0.440 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-50-8 | Copper | 38.9 | | mg/kg dry | 2.20 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7439-89-6 | Iron | 34600 | | mg/kg dry | 27.5 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7439-92-1 | Lead | 11.2 | | mg/kg dry | 0.549 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7439-95-4 | Magnesium | 7150 | | mg/kg dry | 5.49 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7439-96-5 | Manganese | 555 | | mg/kg dry | 0.549 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-02-0 | Nickel | 34.3 | | mg/kg dry | 1.10 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-09-7 | Potassium | 2560 | | mg/kg dry | 5.49 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7782-49-2 | Selenium | ND | | mg/kg dry | 2.75 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-22-4 | Silver | ND | | mg/kg dry | 0.549 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-23-5 | Sodium | ND | | mg/kg dry | 54.9 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-28-0 | Thallium | ND | | mg/kg dry | 2.75 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-62-2 | Vanadium | 28.3 | | mg/kg dry | 1.10 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |
| 7440-66-6 | Zinc | 82.0 | B | mg/kg dry | 2.75 | 1 | EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP | 08/26/2021 15:26 | 08/29/2021 12:19 | EM |

Mercury by 7473

Log-in Notes:

Sample Notes:



Sample Information

Client Sample ID: B-8

York Sample ID: 21H1047-08

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21H1047

11078.01 Twin Towers Middle School

Soil

August 19, 2021 12:00 pm

08/20/2021

Sample Prepared by Method: EPA 7473 soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|-----------|-----------|--------|------|-----------|-----------------|----------|------------------|---------------------------------|--------------------|---------|
| 7439-97-6 | Mercury | 0.0341 | | mg/kg dry | 0.0330 | 1 | EPA 7473 | 08/26/2021 11:58 | 08/26/2021 21:40 | BR |
| | | | | | | | Certifications: | CTDOH,NJDEP,NELAC-NY10854,PADEP | | |

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|------------|----------------------|--------|------|-----------|-----------------|----------|------------------|---------------------------------|--------------------|---------|
| 18540-29-9 | Chromium, Hexavalent | ND | | mg/kg dry | 0.549 | 1 | EPA 7196A | 08/25/2021 07:45 | 08/25/2021 18:39 | ALH |
| | | | | | | | Certifications: | NJDEP,CTDOH,NELAC-NY10854,PADEP | | |

Cyanide, Total

Log-in Notes:

Sample Notes:

Sample Prepared by Method: Analysis Preparation Soil

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|----------------|--------|------|-----------|-----------------|----------|------------------|---------------------------------|--------------------|---------|
| 57-12-5 | Cyanide, total | ND | | mg/kg dry | 0.549 | 1 | EPA 9014/9010C | 08/25/2021 14:07 | 08/25/2021 22:36 | MAO |
| | | | | | | | Certifications: | NELAC-NY10854,CTDOH,NJDEP,PADEP | | |

Total Solids

Log-in Notes:

Sample Notes:

Sample Prepared by Method: % Solids Prep

| CAS No. | Parameter | Result | Flag | Units | Reported to LOQ | Dilution | Reference Method | Date/Time Prepared | Date/Time Analyzed | Analyst |
|---------|------------|--------|------|-------|-----------------|----------|------------------|--------------------|--------------------|---------|
| solids | * % Solids | 91.0 | | % | 0.100 | 1 | SM 2540G | 08/26/2021 13:50 | 08/26/2021 16:38 | VR |
| | | | | | | | Certifications: | CTDOH | | |



Analytical Batch Summary

Batch ID: BH11290 **Preparation Method:** EPA SW846-3060 **Prepared By:** JAG

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/24/21 |
| 21H1047-02 | B-2 | 08/24/21 |
| 21H1047-03 | B-3 | 08/24/21 |
| 21H1047-04 | B-4 | 08/24/21 |
| 21H1047-05 | B-5 | 08/24/21 |
| 21H1047-06 | B-6 | 08/24/21 |
| BH11290-BLK1 | Blank | 08/24/21 |
| BH11290-DUP1 | Duplicate | 08/24/21 |
| BH11290-MS1 | Matrix Spike | 08/24/21 |
| BH11290-MS2 | Matrix Spike | 08/24/21 |
| BH11290-SRM1 | Reference | 08/24/21 |

Batch ID: BH11372 **Preparation Method:** EPA SW846-3060 **Prepared By:** ALH

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-07 | B-7 | 08/25/21 |
| 21H1047-08 | B-8 | 08/25/21 |
| BH11372-BLK1 | Blank | 08/25/21 |
| BH11372-DUP1 | Duplicate | 08/25/21 |
| BH11372-MS1 | Matrix Spike | 08/25/21 |
| BH11372-MS2 | Matrix Spike | 08/25/21 |
| BH11372-SRM1 | Reference | 08/25/21 |

Batch ID: BH11421 **Preparation Method:** Analysis Preparation Soil **Prepared By:** MAO

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/25/21 |
| 21H1047-02 | B-2 | 08/25/21 |
| 21H1047-03 | B-3 | 08/25/21 |
| 21H1047-04 | B-4 | 08/25/21 |
| 21H1047-05 | B-5 | 08/25/21 |
| 21H1047-06 | B-6 | 08/25/21 |
| 21H1047-07 | B-7 | 08/25/21 |
| 21H1047-08 | B-8 | 08/25/21 |
| BH11421-BLK1 | Blank | 08/25/21 |
| BH11421-DUP1 | Duplicate | 08/25/21 |
| BH11421-MS1 | Matrix Spike | 08/25/21 |
| BH11421-SRM1 | Reference | 08/25/21 |

Batch ID: BH11497 **Preparation Method:** EPA 7473 soil **Prepared By:** BML

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/26/21 |
| 21H1047-02 | B-2 | 08/26/21 |



| | | |
|--------------|--------------|----------|
| 21H1047-03 | B-3 | 08/26/21 |
| 21H1047-04 | B-4 | 08/26/21 |
| 21H1047-05 | B-5 | 08/26/21 |
| 21H1047-06 | B-6 | 08/26/21 |
| 21H1047-07 | B-7 | 08/26/21 |
| 21H1047-08 | B-8 | 08/26/21 |
| BH11497-BLK1 | Blank | 08/26/21 |
| BH11497-DUP1 | Duplicate | 08/26/21 |
| BH11497-MS1 | Matrix Spike | 08/26/21 |
| BH11497-SRM1 | Reference | 08/26/21 |

Batch ID: BH11507 **Preparation Method:** EPA 3546 SVOA **Prepared By:** EMS

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/26/21 |
| 21H1047-02 | B-2 | 08/26/21 |
| 21H1047-03 | B-3 | 08/26/21 |
| 21H1047-04 | B-4 | 08/26/21 |
| 21H1047-05 | B-5 | 08/26/21 |
| 21H1047-06 | B-6 | 08/26/21 |
| 21H1047-07 | B-7 | 08/26/21 |
| 21H1047-08 | B-8 | 08/26/21 |
| BH11507-BLK1 | Blank | 08/26/21 |
| BH11507-BS1 | LCS | 08/26/21 |
| BH11507-MS1 | Matrix Spike | 08/26/21 |
| BH11507-MSD1 | Matrix Spike Dup | 08/26/21 |

Batch ID: BH11515 **Preparation Method:** % Solids Prep **Prepared By:** VR

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/26/21 |
| 21H1047-02 | B-2 | 08/26/21 |
| 21H1047-03 | B-3 | 08/26/21 |
| 21H1047-04 | B-4 | 08/26/21 |
| 21H1047-05 | B-5 | 08/26/21 |
| 21H1047-06 | B-6 | 08/26/21 |
| 21H1047-07 | B-7 | 08/26/21 |
| 21H1047-08 | B-8 | 08/26/21 |
| BH11515-DUP1 | Duplicate | 08/26/21 |

Batch ID: BH11525 **Preparation Method:** EPA 5035A **Prepared By:** TL

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-05 | B-5 | 08/25/21 |
| 21H1047-06 | B-6 | 08/25/21 |
| 21H1047-07 | B-7 | 08/25/21 |
| 21H1047-08 | B-8 | 08/25/21 |
| BH11525-BLK1 | Blank | 08/25/21 |
| BH11525-BS1 | LCS | 08/25/21 |
| BH11525-BSD1 | LCS Dup | 08/25/21 |



Batch ID: BH11530

Preparation Method: EPA 3050B

Prepared By: BR

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/26/21 |
| 21H1047-02 | B-2 | 08/26/21 |
| 21H1047-03 | B-3 | 08/26/21 |
| 21H1047-04 | B-4 | 08/26/21 |
| 21H1047-05 | B-5 | 08/26/21 |
| 21H1047-06 | B-6 | 08/26/21 |
| 21H1047-07 | B-7 | 08/26/21 |
| 21H1047-08 | B-8 | 08/26/21 |
| BH11530-BLK1 | Blank | 08/26/21 |
| BH11530-DUP1 | Duplicate | 08/26/21 |
| BH11530-MS1 | Matrix Spike | 08/26/21 |
| BH11530-PS1 | Post Spike | 08/26/21 |
| BH11530-SRM1 | Reference | 08/26/21 |

Batch ID: BH11553

Preparation Method: EPA 5035A

Prepared By: LLJ

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-04 | B-4 | 08/26/21 |
| BH11553-BLK1 | Blank | 08/26/21 |
| BH11553-BLK2 | Blank | 08/26/21 |
| BH11553-BS1 | LCS | 08/26/21 |
| BH11553-BSD1 | LCS Dup | 08/26/21 |

Batch ID: BH11594

Preparation Method: EPA 3550C

Prepared By: EMS

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/27/21 |
| 21H1047-01 | B-1 | 08/27/21 |
| 21H1047-02 | B-2 | 08/27/21 |
| 21H1047-02 | B-2 | 08/27/21 |
| 21H1047-03 | B-3 | 08/27/21 |
| 21H1047-03 | B-3 | 08/27/21 |
| 21H1047-04 | B-4 | 08/27/21 |
| 21H1047-04 | B-4 | 08/27/21 |
| 21H1047-05 | B-5 | 08/27/21 |
| 21H1047-05 | B-5 | 08/27/21 |
| 21H1047-06 | B-6 | 08/27/21 |
| 21H1047-06 | B-6 | 08/27/21 |
| 21H1047-07 | B-7 | 08/27/21 |
| 21H1047-07 | B-7 | 08/27/21 |
| 21H1047-08 | B-8 | 08/27/21 |
| 21H1047-08 | B-8 | 08/27/21 |
| BH11594-BLK1 | Blank | 08/27/21 |
| BH11594-BLK2 | Blank | 08/27/21 |
| BH11594-BS1 | LCS | 08/27/21 |
| BH11594-BS2 | LCS | 08/27/21 |



Batch ID: BH11612

Preparation Method: EPA 5035A

Prepared By: AS

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-03 | B-3 | 08/27/21 |
| BH11612-BLK1 | Blank | 08/27/21 |
| BH11612-BLK2 | Blank | 08/27/21 |
| BH11612-BS1 | LCS | 08/27/21 |
| BH11612-BSD1 | LCS Dup | 08/27/21 |

Batch ID: BH11616

Preparation Method: EPA 5035A

Prepared By: AS

| YORK Sample ID | Client Sample ID | Preparation Date |
|----------------|------------------|------------------|
| 21H1047-01 | B-1 | 08/25/21 |
| 21H1047-02 | B-2 | 08/25/21 |
| BH11616-BLK1 | Blank | 08/25/21 |
| BH11616-BS1 | LCS | 08/25/21 |
| BH11616-BSD1 | LCS Dup | 08/25/21 |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11525 - EPA 5035A

Blank (BH11525-BLK1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |
| Bromodichloromethane | ND | 5.0 | " | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11525 - EPA 5035A

Blank (BH11525-BLK1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|-----------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|
| Methylene chloride | ND | 10 | ug/kg wet | | | | | | | | |
| n-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | |

| | | | | | | | | | | | |
|---|------|--|------|------|--|------|--------|--|--|--|--|
| Surrogate: SURRE: 1,2-Dichloroethane-d4 | 57.9 | | ug/L | 50.0 | | 116 | 77-125 | | | | |
| Surrogate: SURRE: Toluene-d8 | 48.7 | | " | 50.0 | | 97.4 | 85-120 | | | | |
| Surrogate: SURRE: p-Bromofluorobenzene | 50.0 | | " | 50.0 | | 100 | 76-130 | | | | |

LCS (BH11525-BS1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|---|------|--|------|------|--|------|--------|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | 56.8 | | ug/L | 50.0 | | 114 | 75-129 | | | | |
| 1,1,1-Trichloroethane | 65.5 | | " | 50.0 | | 131 | 71-137 | | | | |
| 1,1,2,2-Tetrachloroethane | 56.5 | | " | 50.0 | | 113 | 79-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 62.5 | | " | 50.0 | | 125 | 58-146 | | | | |
| 1,1,2-Trichloroethane | 53.8 | | " | 50.0 | | 108 | 83-123 | | | | |
| 1,1-Dichloroethane | 57.7 | | " | 50.0 | | 115 | 75-130 | | | | |
| 1,1-Dichloroethylene | 62.5 | | " | 50.0 | | 125 | 64-137 | | | | |
| 1,2,3-Trichlorobenzene | 57.3 | | " | 50.0 | | 115 | 81-140 | | | | |
| 1,2,3-Trichloropropane | 57.8 | | " | 50.0 | | 116 | 81-126 | | | | |
| 1,2,4-Trichlorobenzene | 62.8 | | " | 50.0 | | 126 | 80-141 | | | | |
| 1,2,4-Trimethylbenzene | 57.7 | | " | 50.0 | | 115 | 84-125 | | | | |
| 1,2-Dibromo-3-chloropropane | 60.2 | | " | 50.0 | | 120 | 74-142 | | | | |
| 1,2-Dibromoethane | 55.4 | | " | 50.0 | | 111 | 86-123 | | | | |
| 1,2-Dichlorobenzene | 55.2 | | " | 50.0 | | 110 | 85-122 | | | | |
| 1,2-Dichloroethane | 63.7 | | " | 50.0 | | 127 | 71-133 | | | | |
| 1,2-Dichloropropane | 55.6 | | " | 50.0 | | 111 | 81-122 | | | | |
| 1,3,5-Trimethylbenzene | 58.1 | | " | 50.0 | | 116 | 82-126 | | | | |
| 1,3-Dichlorobenzene | 55.4 | | " | 50.0 | | 111 | 84-124 | | | | |
| 1,4-Dichlorobenzene | 55.3 | | " | 50.0 | | 111 | 84-124 | | | | |
| 1,4-Dioxane | 1040 | | " | 1050 | | 98.9 | 10-228 | | | | |
| 2-Butanone | 52.1 | | " | 50.0 | | 104 | 58-147 | | | | |
| 2-Hexanone | 56.7 | | " | 50.0 | | 113 | 70-139 | | | | |
| 4-Methyl-2-pentanone | 55.2 | | " | 50.0 | | 110 | 72-132 | | | | |
| Acetone | 43.2 | | " | 50.0 | | 86.3 | 36-155 | | | | |
| Acrolein | 62.6 | | " | 50.0 | | 125 | 10-238 | | | | |
| Acrylonitrile | 56.8 | | " | 50.0 | | 114 | 66-141 | | | | |
| Benzene | 57.0 | | " | 50.0 | | 114 | 77-127 | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11525 - EPA 5035A

LCS (BH11525-BS1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|---|-------------|--|----------|-------------|--|-------------|---------------|----------|--|--|--|
| Bromochloromethane | 56.4 | | ug/L | 50.0 | | 113 | 74-129 | | | | |
| Bromodichloromethane | 58.4 | | " | 50.0 | | 117 | 81-124 | | | | |
| Bromoform | 56.7 | | " | 50.0 | | 113 | 80-136 | | | | |
| Bromomethane | 69.5 | | " | 50.0 | | 139 | 32-177 | | | | |
| Carbon disulfide | 58.4 | | " | 50.0 | | 117 | 10-136 | | | | |
| Carbon tetrachloride | 65.6 | | " | 50.0 | | 131 | 66-143 | | | | |
| Chlorobenzene | 54.8 | | " | 50.0 | | 110 | 86-120 | | | | |
| Chloroethane | 69.9 | | " | 50.0 | | 140 | 51-142 | | | | |
| Chloroform | 60.8 | | " | 50.0 | | 122 | 76-131 | | | | |
| Chloromethane | 56.6 | | " | 50.0 | | 113 | 49-132 | | | | |
| cis-1,2-Dichloroethylene | 61.7 | | " | 50.0 | | 123 | 74-132 | | | | |
| cis-1,3-Dichloropropylene | 56.9 | | " | 50.0 | | 114 | 81-129 | | | | |
| Cyclohexane | 50.8 | | " | 50.0 | | 102 | 70-130 | | | | |
| Dibromochloromethane | 57.7 | | " | 50.0 | | 115 | 10-200 | | | | |
| Dibromomethane | 55.6 | | " | 50.0 | | 111 | 83-124 | | | | |
| Dichlorodifluoromethane | 72.2 | | " | 50.0 | | 144 | 28-158 | | | | |
| Ethyl Benzene | 57.7 | | " | 50.0 | | 115 | 84-125 | | | | |
| Hexachlorobutadiene | 55.9 | | " | 50.0 | | 112 | 83-133 | | | | |
| Isopropylbenzene | 55.8 | | " | 50.0 | | 112 | 81-127 | | | | |
| Methyl acetate | 51.7 | | " | 50.0 | | 103 | 41-143 | | | | |
| Methyl tert-butyl ether (MTBE) | 59.8 | | " | 50.0 | | 120 | 74-131 | | | | |
| Methylcyclohexane | 57.9 | | " | 50.0 | | 116 | 70-130 | | | | |
| Methylene chloride | 56.7 | | " | 50.0 | | 113 | 57-141 | | | | |
| n-Butylbenzene | 61.2 | | " | 50.0 | | 122 | 80-130 | | | | |
| n-Propylbenzene | 56.6 | | " | 50.0 | | 113 | 74-136 | | | | |
| o-Xylene | 57.4 | | " | 50.0 | | 115 | 83-123 | | | | |
| p- & m- Xylenes | 115 | | " | 100 | | 115 | 82-128 | | | | |
| p-Isopropyltoluene | 57.9 | | " | 50.0 | | 116 | 85-125 | | | | |
| sec-Butylbenzene | 57.9 | | " | 50.0 | | 116 | 83-125 | | | | |
| Styrene | 59.1 | | " | 50.0 | | 118 | 86-126 | | | | |
| tert-Butyl alcohol (TBA) | 96.8 | | " | 250 | | 38.7 | 70-130 | Low Bias | | | |
| tert-Butylbenzene | 49.2 | | " | 50.0 | | 98.4 | 80-127 | | | | |
| Tetrachloroethylene | 46.2 | | " | 50.0 | | 92.4 | 80-129 | | | | |
| Toluene | 55.3 | | " | 50.0 | | 111 | 85-121 | | | | |
| trans-1,2-Dichloroethylene | 63.5 | | " | 50.0 | | 127 | 72-132 | | | | |
| trans-1,3-Dichloropropylene | 59.5 | | " | 50.0 | | 119 | 78-132 | | | | |
| Trichloroethylene | 57.3 | | " | 50.0 | | 115 | 84-123 | | | | |
| Trichlorofluoromethane | 68.2 | | " | 50.0 | | 136 | 62-140 | | | | |
| Vinyl Chloride | 64.1 | | " | 50.0 | | 128 | 52-130 | | | | |
| <i>Surrogate: Surr: 1,2-Dichloroethane-d4</i> | <i>56.1</i> | | <i>"</i> | <i>50.0</i> | | <i>112</i> | <i>77-125</i> | | | | |
| <i>Surrogate: Surr: Toluene-d8</i> | <i>49.1</i> | | <i>"</i> | <i>50.0</i> | | <i>98.2</i> | <i>85-120</i> | | | | |
| <i>Surrogate: Surr: p-Bromofluorobenzene</i> | <i>51.3</i> | | <i>"</i> | <i>50.0</i> | | <i>103</i> | <i>76-130</i> | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-------|-------------|----------------|------|-------------|------|-------|-----------|------|
| Batch BH11525 - EPA 5035A | | | | | | | | | | | |
| LCS Dup (BH11525-BSD1) | | | | | | | | | | | |
| Prepared & Analyzed: 08/25/2021 | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 54.4 | | ug/L | 50.0 | | 109 | 75-129 | | 4.17 | 30 | |
| 1,1,1-Trichloroethane | 52.1 | | " | 50.0 | | 104 | 71-137 | | 22.7 | 30 | |
| 1,1,2,2-Tetrachloroethane | 52.0 | | " | 50.0 | | 104 | 79-129 | | 8.34 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 57.7 | | " | 50.0 | | 115 | 58-146 | | 8.05 | 30 | |
| 1,1,2-Trichloroethane | 53.2 | | " | 50.0 | | 106 | 83-123 | | 1.12 | 30 | |
| 1,1-Dichloroethane | 53.2 | | " | 50.0 | | 106 | 75-130 | | 8.15 | 30 | |
| 1,1-Dichloroethylene | 64.0 | | " | 50.0 | | 128 | 64-137 | | 2.35 | 30 | |
| 1,2,3-Trichlorobenzene | 57.5 | | " | 50.0 | | 115 | 81-140 | | 0.436 | 30 | |
| 1,2,3-Trichloropropane | 53.8 | | " | 50.0 | | 108 | 81-126 | | 7.15 | 30 | |
| 1,2,4-Trichlorobenzene | 62.1 | | " | 50.0 | | 124 | 80-141 | | 1.17 | 30 | |
| 1,2,4-Trimethylbenzene | 54.6 | | " | 50.0 | | 109 | 84-125 | | 5.59 | 30 | |
| 1,2-Dibromo-3-chloropropane | 58.1 | | " | 50.0 | | 116 | 74-142 | | 3.40 | 30 | |
| 1,2-Dibromoethane | 54.4 | | " | 50.0 | | 109 | 86-123 | | 1.75 | 30 | |
| 1,2-Dichlorobenzene | 52.6 | | " | 50.0 | | 105 | 85-122 | | 4.86 | 30 | |
| 1,2-Dichloroethane | 60.4 | | " | 50.0 | | 121 | 71-133 | | 5.24 | 30 | |
| 1,2-Dichloropropane | 54.4 | | " | 50.0 | | 109 | 81-122 | | 2.27 | 30 | |
| 1,3,5-Trimethylbenzene | 53.8 | | " | 50.0 | | 108 | 82-126 | | 7.63 | 30 | |
| 1,3-Dichlorobenzene | 52.4 | | " | 50.0 | | 105 | 84-124 | | 5.56 | 30 | |
| 1,4-Dichlorobenzene | 52.2 | | " | 50.0 | | 104 | 84-124 | | 5.73 | 30 | |
| 1,4-Dioxane | 999 | | " | 1050 | | 95.1 | 10-228 | | 3.90 | 30 | |
| 2-Butanone | 46.5 | | " | 50.0 | | 93.0 | 58-147 | | 11.4 | 30 | |
| 2-Hexanone | 55.7 | | " | 50.0 | | 111 | 70-139 | | 1.85 | 30 | |
| 4-Methyl-2-pentanone | 53.8 | | " | 50.0 | | 108 | 72-132 | | 2.61 | 30 | |
| Acetone | 41.3 | | " | 50.0 | | 82.6 | 36-155 | | 4.38 | 30 | |
| Acrolein | 57.4 | | " | 50.0 | | 115 | 10-238 | | 8.65 | 30 | |
| Acrylonitrile | 51.9 | | " | 50.0 | | 104 | 66-141 | | 9.02 | 30 | |
| Benzene | 53.5 | | " | 50.0 | | 107 | 77-127 | | 6.42 | 30 | |
| Bromochloromethane | 53.3 | | " | 50.0 | | 107 | 74-129 | | 5.56 | 30 | |
| Bromodichloromethane | 57.2 | | " | 50.0 | | 114 | 81-124 | | 2.08 | 30 | |
| Bromoform | 54.4 | | " | 50.0 | | 109 | 80-136 | | 4.19 | 30 | |
| Bromomethane | 62.4 | | " | 50.0 | | 125 | 32-177 | | 10.8 | 30 | |
| Carbon disulfide | 53.0 | | " | 50.0 | | 106 | 10-136 | | 9.79 | 30 | |
| Carbon tetrachloride | 59.6 | | " | 50.0 | | 119 | 66-143 | | 9.55 | 30 | |
| Chlorobenzene | 52.6 | | " | 50.0 | | 105 | 86-120 | | 4.04 | 30 | |
| Chloroethane | 64.5 | | " | 50.0 | | 129 | 51-142 | | 8.12 | 30 | |
| Chloroform | 56.7 | | " | 50.0 | | 113 | 76-131 | | 6.89 | 30 | |
| Chloromethane | 52.5 | | " | 50.0 | | 105 | 49-132 | | 7.48 | 30 | |
| cis-1,2-Dichloroethylene | 56.4 | | " | 50.0 | | 113 | 74-132 | | 9.03 | 30 | |
| cis-1,3-Dichloropropylene | 55.9 | | " | 50.0 | | 112 | 81-129 | | 1.68 | 30 | |
| Cyclohexane | 46.2 | | " | 50.0 | | 92.5 | 70-130 | | 9.44 | 30 | |
| Dibromochloromethane | 55.3 | | " | 50.0 | | 111 | 10-200 | | 4.23 | 30 | |
| Dibromomethane | 55.4 | | " | 50.0 | | 111 | 83-124 | | 0.343 | 30 | |
| Dichlorodifluoromethane | 67.0 | | " | 50.0 | | 134 | 28-158 | | 7.48 | 30 | |
| Ethyl Benzene | 54.5 | | " | 50.0 | | 109 | 84-125 | | 5.60 | 30 | |
| Hexachlorobutadiene | 56.1 | | " | 50.0 | | 112 | 83-133 | | 0.321 | 30 | |
| Isopropylbenzene | 50.9 | | " | 50.0 | | 102 | 81-127 | | 9.17 | 30 | |
| Methyl acetate | 48.1 | | " | 50.0 | | 96.2 | 41-143 | | 7.27 | 30 | |
| Methyl tert-butyl ether (MTBE) | 56.2 | | " | 50.0 | | 112 | 74-131 | | 6.22 | 30 | |
| Methylcyclohexane | 54.9 | | " | 50.0 | | 110 | 70-130 | | 5.39 | 30 | |
| Methylene chloride | 54.3 | | " | 50.0 | | 109 | 57-141 | | 4.27 | 30 | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11525 - EPA 5035A

LCS Dup (BH11525-BSD1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|---|-------------|--|----------|-------------|--|-------------|---------------|----------|-------|----|--|
| n-Butylbenzene | 55.6 | | ug/L | 50.0 | | 111 | 80-130 | | 9.58 | 30 | |
| n-Propylbenzene | 52.5 | | " | 50.0 | | 105 | 74-136 | | 7.48 | 30 | |
| o-Xylene | 54.7 | | " | 50.0 | | 109 | 83-123 | | 4.91 | 30 | |
| p- & m- Xylenes | 109 | | " | 100 | | 109 | 82-128 | | 5.54 | 30 | |
| p-Isopropyltoluene | 55.4 | | " | 50.0 | | 111 | 85-125 | | 4.36 | 30 | |
| sec-Butylbenzene | 54.9 | | " | 50.0 | | 110 | 83-125 | | 5.19 | 30 | |
| Styrene | 56.1 | | " | 50.0 | | 112 | 86-126 | | 5.19 | 30 | |
| tert-Butyl alcohol (TBA) | 95.2 | | " | 250 | | 38.1 | 70-130 | Low Bias | 1.77 | 30 | |
| tert-Butylbenzene | 46.3 | | " | 50.0 | | 92.7 | 80-127 | | 5.99 | 30 | |
| Tetrachloroethylene | 44.7 | | " | 50.0 | | 89.4 | 80-129 | | 3.23 | 30 | |
| Toluene | 53.7 | | " | 50.0 | | 107 | 85-121 | | 2.97 | 30 | |
| trans-1,2-Dichloroethylene | 59.3 | | " | 50.0 | | 119 | 72-132 | | 6.92 | 30 | |
| trans-1,3-Dichloropropylene | 59.0 | | " | 50.0 | | 118 | 78-132 | | 0.945 | 30 | |
| Trichloroethylene | 55.2 | | " | 50.0 | | 110 | 84-123 | | 3.81 | 30 | |
| Trichlorofluoromethane | 62.3 | | " | 50.0 | | 125 | 62-140 | | 9.06 | 30 | |
| Vinyl Chloride | 59.0 | | " | 50.0 | | 118 | 52-130 | | 8.15 | 30 | |
| <i>Surrogate: SURR: 1,2-Dichloroethane-d4</i> | <i>56.4</i> | | <i>"</i> | <i>50.0</i> | | <i>113</i> | <i>77-125</i> | | | | |
| <i>Surrogate: SURR: Toluene-d8</i> | <i>49.7</i> | | <i>"</i> | <i>50.0</i> | | <i>99.4</i> | <i>85-120</i> | | | | |
| <i>Surrogate: SURR: p-Bromofluorobenzene</i> | <i>50.3</i> | | <i>"</i> | <i>50.0</i> | | <i>101</i> | <i>76-130</i> | | | | |

Batch BH11553 - EPA 5035A

Blank (BH11553-BLK1)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting | Units | Spike | Source* | %REC | %REC | Limits | Flag | RPD | RPD | Limit | Flag |
|---------|--------|-----------|-------|-------|---------|------|------|--------|------|-------|-----|-------|------|
| | | Limit | | | Result | | | | | Limit | | | |

Batch BH11553 - EPA 5035A

Blank (BH11553-BLK1)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | | | |
|--------------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|--|--|
| Bromodichloromethane | ND | 5.0 | ug/kg wet | | | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | | | |
| Methylene chloride | ND | 10 | " | | | | | | | | | | |
| n-Butylbenzene | ND | 5.0 | " | | | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | | | |

| | | | | | | | |
|---|------|--|------|------|--|-----|--------|
| Surrogate: SURRE: 1,2-Dichloroethane-d4 | 50.0 | | ug/L | 50.0 | | 100 | 77-125 |
| Surrogate: SURRE: Toluene-d8 | 50.2 | | " | 50.0 | | 100 | 85-120 |
| Surrogate: SURRE: p-Bromofluorobenzene | 50.3 | | " | 50.0 | | 101 | 76-130 |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11553 - EPA 5035A

Blank (BH11553-BLK2)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |
| Bromodichloromethane | ND | 5.0 | " | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | |
| Methylene chloride | ND | 10 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11553 - EPA 5035A

Blank (BH11553-BLK2)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | |
|-----------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|
| n-Butylbenzene | ND | 5.0 | ug/kg wet | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | |

| | | | | | | | | | | | |
|---|------|--|------|------|--|-----|--------|--|--|--|--|
| Surrogate: SURRE: 1,2-Dichloroethane-d4 | 50.3 | | ug/L | 50.0 | | 101 | 77-125 | | | | |
| Surrogate: SURRE: Toluene-d8 | 50.6 | | " | 50.0 | | 101 | 85-120 | | | | |
| Surrogate: SURRE: p-Bromofluorobenzene | 51.8 | | " | 50.0 | | 104 | 76-130 | | | | |

LCS (BH11553-BS1)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | |
|---|------|--|------|------|--|------|--------|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | 51.2 | | ug/L | 50.0 | | 102 | 75-129 | | | | |
| 1,1,1-Trichloroethane | 51.2 | | " | 50.0 | | 102 | 71-137 | | | | |
| 1,1,2,2-Tetrachloroethane | 52.2 | | " | 50.0 | | 104 | 79-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 54.4 | | " | 50.0 | | 109 | 58-146 | | | | |
| 1,1,2-Trichloroethane | 50.3 | | " | 50.0 | | 101 | 83-123 | | | | |
| 1,1-Dichloroethane | 49.6 | | " | 50.0 | | 99.3 | 75-130 | | | | |
| 1,1-Dichloroethylene | 53.0 | | " | 50.0 | | 106 | 64-137 | | | | |
| 1,2,3-Trichlorobenzene | 49.3 | | " | 50.0 | | 98.7 | 81-140 | | | | |
| 1,2,3-Trichloropropane | 52.4 | | " | 50.0 | | 105 | 81-126 | | | | |
| 1,2,4-Trichlorobenzene | 50.5 | | " | 50.0 | | 101 | 80-141 | | | | |
| 1,2,4-Trimethylbenzene | 53.7 | | " | 50.0 | | 107 | 84-125 | | | | |
| 1,2-Dibromo-3-chloropropane | 51.3 | | " | 50.0 | | 103 | 74-142 | | | | |
| 1,2-Dibromoethane | 49.7 | | " | 50.0 | | 99.5 | 86-123 | | | | |
| 1,2-Dichlorobenzene | 50.0 | | " | 50.0 | | 99.9 | 85-122 | | | | |
| 1,2-Dichloroethane | 49.1 | | " | 50.0 | | 98.2 | 71-133 | | | | |
| 1,2-Dichloropropane | 52.4 | | " | 50.0 | | 105 | 81-122 | | | | |
| 1,3,5-Trimethylbenzene | 53.0 | | " | 50.0 | | 106 | 82-126 | | | | |
| 1,3-Dichlorobenzene | 50.4 | | " | 50.0 | | 101 | 84-124 | | | | |
| 1,4-Dichlorobenzene | 49.7 | | " | 50.0 | | 99.4 | 84-124 | | | | |
| 1,4-Dioxane | 1130 | | " | 1050 | | 107 | 10-228 | | | | |
| 2-Butanone | 52.8 | | " | 50.0 | | 106 | 58-147 | | | | |
| 2-Hexanone | 54.7 | | " | 50.0 | | 109 | 70-139 | | | | |
| 4-Methyl-2-pentanone | 53.3 | | " | 50.0 | | 107 | 72-132 | | | | |
| Acetone | 44.5 | | " | 50.0 | | 88.9 | 36-155 | | | | |
| Acrolein | 118 | | " | 50.0 | | 236 | 10-238 | | | | |
| Acrylonitrile | 54.4 | | " | 50.0 | | 109 | 66-141 | | | | |
| Benzene | 51.5 | | " | 50.0 | | 103 | 77-127 | | | | |
| Bromochloromethane | 49.9 | | " | 50.0 | | 99.8 | 74-129 | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting | Units | Spike Level | Source* | %REC | %REC Limits | Flag | RPD | RPD | Flag |
|---------|--------|-----------|-------|----------------|---------|------|----------------|------|-----|-------|------|
| | | Limit | | | Result | | | | | Limit | |

Batch BH11553 - EPA 5035A

LCS (BH11553-BS1)

Prepared & Analyzed: 08/26/2021

| | | | | | | | | | | | |
|---|-------------|--|----------|-------------|--|-------------|---------------|--|--|--|--|
| Bromodichloromethane | 50.9 | | ug/L | 50.0 | | 102 | 81-124 | | | | |
| Bromoform | 46.5 | | " | 50.0 | | 93.0 | 80-136 | | | | |
| Bromomethane | 55.2 | | " | 50.0 | | 110 | 32-177 | | | | |
| Carbon disulfide | 53.8 | | " | 50.0 | | 108 | 10-136 | | | | |
| Carbon tetrachloride | 53.5 | | " | 50.0 | | 107 | 66-143 | | | | |
| Chlorobenzene | 50.5 | | " | 50.0 | | 101 | 86-120 | | | | |
| Chloroethane | 42.2 | | " | 50.0 | | 84.5 | 51-142 | | | | |
| Chloroform | 50.7 | | " | 50.0 | | 101 | 76-131 | | | | |
| Chloromethane | 46.4 | | " | 50.0 | | 92.7 | 49-132 | | | | |
| cis-1,2-Dichloroethylene | 51.7 | | " | 50.0 | | 103 | 74-132 | | | | |
| cis-1,3-Dichloropropylene | 50.9 | | " | 50.0 | | 102 | 81-129 | | | | |
| Cyclohexane | 50.8 | | " | 50.0 | | 102 | 70-130 | | | | |
| Dibromochloromethane | 51.9 | | " | 50.0 | | 104 | 10-200 | | | | |
| Dibromomethane | 50.2 | | " | 50.0 | | 100 | 83-124 | | | | |
| Dichlorodifluoromethane | 54.2 | | " | 50.0 | | 108 | 28-158 | | | | |
| Ethyl Benzene | 52.7 | | " | 50.0 | | 105 | 84-125 | | | | |
| Hexachlorobutadiene | 52.8 | | " | 50.0 | | 106 | 83-133 | | | | |
| Isopropylbenzene | 52.0 | | " | 50.0 | | 104 | 81-127 | | | | |
| Methyl acetate | 46.0 | | " | 50.0 | | 92.1 | 41-143 | | | | |
| Methyl tert-butyl ether (MTBE) | 48.7 | | " | 50.0 | | 97.4 | 74-131 | | | | |
| Methylcyclohexane | 52.0 | | " | 50.0 | | 104 | 70-130 | | | | |
| Methylene chloride | 52.1 | | " | 50.0 | | 104 | 57-141 | | | | |
| n-Butylbenzene | 61.4 | | " | 50.0 | | 123 | 80-130 | | | | |
| n-Propylbenzene | 52.5 | | " | 50.0 | | 105 | 74-136 | | | | |
| o-Xylene | 51.7 | | " | 50.0 | | 103 | 83-123 | | | | |
| p- & m- Xylenes | 106 | | " | 100 | | 106 | 82-128 | | | | |
| p-Isopropyltoluene | 53.7 | | " | 50.0 | | 107 | 85-125 | | | | |
| sec-Butylbenzene | 55.2 | | " | 50.0 | | 110 | 83-125 | | | | |
| Styrene | 52.2 | | " | 50.0 | | 104 | 86-126 | | | | |
| tert-Butyl alcohol (TBA) | 304 | | " | 250 | | 121 | 70-130 | | | | |
| tert-Butylbenzene | 52.1 | | " | 50.0 | | 104 | 80-127 | | | | |
| Tetrachloroethylene | 46.1 | | " | 50.0 | | 92.2 | 80-129 | | | | |
| Toluene | 51.9 | | " | 50.0 | | 104 | 85-121 | | | | |
| trans-1,2-Dichloroethylene | 54.0 | | " | 50.0 | | 108 | 72-132 | | | | |
| trans-1,3-Dichloropropylene | 50.4 | | " | 50.0 | | 101 | 78-132 | | | | |
| Trichloroethylene | 53.4 | | " | 50.0 | | 107 | 84-123 | | | | |
| Trichlorofluoromethane | 52.9 | | " | 50.0 | | 106 | 62-140 | | | | |
| Vinyl Chloride | 54.9 | | " | 50.0 | | 110 | 52-130 | | | | |
| <i>Surrogate: Surr: 1,2-Dichloroethane-d4</i> | <i>48.6</i> | | <i>"</i> | <i>50.0</i> | | <i>97.2</i> | <i>77-125</i> | | | | |
| <i>Surrogate: Surr: Toluene-d8</i> | <i>50.6</i> | | <i>"</i> | <i>50.0</i> | | <i>101</i> | <i>85-120</i> | | | | |
| <i>Surrogate: Surr: p-Bromofluorobenzene</i> | <i>50.6</i> | | <i>"</i> | <i>50.0</i> | | <i>101</i> | <i>76-130</i> | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-------|-------------|----------------|------|-------------|----------|------|---|------|
| Batch BH11553 - EPA 5035A | | | | | | | | | | | |
| LCS Dup (BH11553-BSD1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | |
| 1,1,1,2-Tetrachloroethane | 44.3 | | ug/L | 50.0 | | 88.5 | 75-129 | | 14.6 | 30 | |
| 1,1,1-Trichloroethane | 45.9 | | " | 50.0 | | 91.8 | 71-137 | | 11.0 | 30 | |
| 1,1,2,2-Tetrachloroethane | 45.5 | | " | 50.0 | | 91.1 | 79-129 | | 13.6 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 48.9 | | " | 50.0 | | 97.8 | 58-146 | | 10.6 | 30 | |
| 1,1,2-Trichloroethane | 43.9 | | " | 50.0 | | 87.8 | 83-123 | | 13.6 | 30 | |
| 1,1-Dichloroethane | 44.3 | | " | 50.0 | | 88.6 | 75-130 | | 11.3 | 30 | |
| 1,1-Dichloroethylene | 48.0 | | " | 50.0 | | 96.1 | 64-137 | | 9.80 | 30 | |
| 1,2,3-Trichlorobenzene | 44.7 | | " | 50.0 | | 89.4 | 81-140 | | 9.91 | 30 | |
| 1,2,3-Trichloropropane | 45.8 | | " | 50.0 | | 91.6 | 81-126 | | 13.4 | 30 | |
| 1,2,4-Trichlorobenzene | 46.0 | | " | 50.0 | | 92.0 | 80-141 | | 9.23 | 30 | |
| 1,2,4-Trimethylbenzene | 48.2 | | " | 50.0 | | 96.3 | 84-125 | | 10.9 | 30 | |
| 1,2-Dibromo-3-chloropropane | 43.0 | | " | 50.0 | | 86.0 | 74-142 | | 17.5 | 30 | |
| 1,2-Dibromoethane | 43.4 | | " | 50.0 | | 86.9 | 86-123 | | 13.5 | 30 | |
| 1,2-Dichlorobenzene | 44.4 | | " | 50.0 | | 88.8 | 85-122 | | 11.8 | 30 | |
| 1,2-Dichloroethane | 44.3 | | " | 50.0 | | 88.6 | 71-133 | | 10.2 | 30 | |
| 1,2-Dichloropropane | 45.4 | | " | 50.0 | | 90.8 | 81-122 | | 14.3 | 30 | |
| 1,3,5-Trimethylbenzene | 47.8 | | " | 50.0 | | 95.5 | 82-126 | | 10.4 | 30 | |
| 1,3-Dichlorobenzene | 45.5 | | " | 50.0 | | 91.1 | 84-124 | | 10.1 | 30 | |
| 1,4-Dichlorobenzene | 44.5 | | " | 50.0 | | 88.9 | 84-124 | | 11.2 | 30 | |
| 1,4-Dioxane | 972 | | " | 1050 | | 92.5 | 10-228 | | 14.7 | 30 | |
| 2-Butanone | 45.5 | | " | 50.0 | | 91.1 | 58-147 | | 14.8 | 30 | |
| 2-Hexanone | 46.5 | | " | 50.0 | | 92.9 | 70-139 | | 16.3 | 30 | |
| 4-Methyl-2-pentanone | 45.3 | | " | 50.0 | | 90.6 | 72-132 | | 16.3 | 30 | |
| Acetone | 37.6 | | " | 50.0 | | 75.2 | 36-155 | | 16.7 | 30 | |
| Acrolein | 112 | | " | 50.0 | | 224 | 10-238 | | 5.20 | 30 | |
| Acrylonitrile | 47.1 | | " | 50.0 | | 94.1 | 66-141 | | 14.5 | 30 | |
| Benzene | 46.4 | | " | 50.0 | | 92.8 | 77-127 | | 10.5 | 30 | |
| Bromochloromethane | 44.6 | | " | 50.0 | | 89.1 | 74-129 | | 11.3 | 30 | |
| Bromodichloromethane | 44.1 | | " | 50.0 | | 88.2 | 81-124 | | 14.3 | 30 | |
| Bromoform | 38.9 | | " | 50.0 | | 77.8 | 80-136 | Low Bias | 17.8 | 30 | |
| Bromomethane | 51.2 | | " | 50.0 | | 102 | 32-177 | | 7.56 | 30 | |
| Carbon disulfide | 47.5 | | " | 50.0 | | 95.0 | 10-136 | | 12.6 | 30 | |
| Carbon tetrachloride | 46.9 | | " | 50.0 | | 93.8 | 66-143 | | 13.2 | 30 | |
| Chlorobenzene | 44.7 | | " | 50.0 | | 89.4 | 86-120 | | 12.2 | 30 | |
| Chloroethane | 48.2 | | " | 50.0 | | 96.4 | 51-142 | | 13.1 | 30 | |
| Chloroform | 45.4 | | " | 50.0 | | 90.7 | 76-131 | | 11.2 | 30 | |
| Chloromethane | 42.1 | | " | 50.0 | | 84.3 | 49-132 | | 9.54 | 30 | |
| cis-1,2-Dichloroethylene | 46.5 | | " | 50.0 | | 93.0 | 74-132 | | 10.5 | 30 | |
| cis-1,3-Dichloropropylene | 44.7 | | " | 50.0 | | 89.5 | 81-129 | | 12.8 | 30 | |
| Cyclohexane | 46.0 | | " | 50.0 | | 92.0 | 70-130 | | 9.90 | 30 | |
| Dibromochloromethane | 43.8 | | " | 50.0 | | 87.7 | 10-200 | | 16.9 | 30 | |
| Dibromomethane | 42.8 | | " | 50.0 | | 85.5 | 83-124 | | 16.1 | 30 | |
| Dichlorodifluoromethane | 48.6 | | " | 50.0 | | 97.1 | 28-158 | | 10.9 | 30 | |
| Ethyl Benzene | 47.0 | | " | 50.0 | | 94.1 | 84-125 | | 11.4 | 30 | |
| Hexachlorobutadiene | 47.0 | | " | 50.0 | | 93.9 | 83-133 | | 11.7 | 30 | |
| Isopropylbenzene | 46.4 | | " | 50.0 | | 92.8 | 81-127 | | 11.3 | 30 | |
| Methyl acetate | 40.0 | | " | 50.0 | | 80.0 | 41-143 | | 14.1 | 30 | |
| Methyl tert-butyl ether (MTBE) | 43.7 | | " | 50.0 | | 87.3 | 74-131 | | 10.9 | 30 | |
| Methylcyclohexane | 45.8 | | " | 50.0 | | 91.7 | 70-130 | | 12.6 | 30 | |
| Methylene chloride | 46.7 | | " | 50.0 | | 93.3 | 57-141 | | 11.0 | 30 | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11553 - EPA 5035A

LCS Dup (BH11553-BSD1)

Prepared: 08/26/2021 Analyzed: 08/27/2021

| | | | | | | | | | | | |
|-----------------------------|------|--|------|------|--|------|--------|--|------|----|--|
| n-Butylbenzene | 55.8 | | ug/L | 50.0 | | 112 | 80-130 | | 9.53 | 30 | |
| n-Propylbenzene | 47.3 | | " | 50.0 | | 94.6 | 74-136 | | 10.5 | 30 | |
| o-Xylene | 45.4 | | " | 50.0 | | 90.9 | 83-123 | | 12.9 | 30 | |
| p- & m- Xylenes | 94.3 | | " | 100 | | 94.3 | 82-128 | | 11.3 | 30 | |
| p-Isopropyltoluene | 48.4 | | " | 50.0 | | 96.8 | 85-125 | | 10.4 | 30 | |
| sec-Butylbenzene | 49.3 | | " | 50.0 | | 98.6 | 83-125 | | 11.4 | 30 | |
| Styrene | 46.1 | | " | 50.0 | | 92.1 | 86-126 | | 12.4 | 30 | |
| tert-Butyl alcohol (TBA) | 264 | | " | 250 | | 106 | 70-130 | | 14.1 | 30 | |
| tert-Butylbenzene | 46.3 | | " | 50.0 | | 92.6 | 80-127 | | 11.8 | 30 | |
| Tetrachloroethylene | 41.6 | | " | 50.0 | | 83.2 | 80-129 | | 10.3 | 30 | |
| Toluene | 46.0 | | " | 50.0 | | 91.9 | 85-121 | | 12.1 | 30 | |
| trans-1,2-Dichloroethylene | 49.1 | | " | 50.0 | | 98.1 | 72-132 | | 9.64 | 30 | |
| trans-1,3-Dichloropropylene | 44.1 | | " | 50.0 | | 88.2 | 78-132 | | 13.4 | 30 | |
| Trichloroethylene | 47.4 | | " | 50.0 | | 94.9 | 84-123 | | 11.8 | 30 | |
| Trichlorofluoromethane | 50.0 | | " | 50.0 | | 100 | 62-140 | | 5.58 | 30 | |
| Vinyl Chloride | 50.6 | | " | 50.0 | | 101 | 52-130 | | 8.07 | 30 | |

Surrogate: SURR: 1,2-Dichloroethane-d4

48.8

"

50.0

97.5

77-125

Surrogate: SURR: Toluene-d8

49.9

"

50.0

99.8

85-120

Surrogate: SURR: p-Bromofluorobenzene

50.8

"

50.0

102

76-130

Batch BH11612 - EPA 5035A

Blank (BH11612-BLK1)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11612 - EPA 5035A

Blank (BH11612-BLK1)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|--------------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|
| Bromodichloromethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | |
| Methylene chloride | ND | 10 | " | | | | | | | | |
| n-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | |

| | | | | | | | | | | | |
|---|------|--|------|------|--|------|--------|--|--|--|--|
| Surrogate: SURRE: 1,2-Dichloroethane-d4 | 50.3 | | ug/L | 50.0 | | 101 | 77-125 | | | | |
| Surrogate: SURRE: Toluene-d8 | 50.4 | | " | 50.0 | | 101 | 85-120 | | | | |
| Surrogate: SURRE: p-Bromofluorobenzene | 49.8 | | " | 50.0 | | 99.6 | 76-130 | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11612 - EPA 5035A

Blank (BH11612-BLK2)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |
| Bromodichloromethane | ND | 5.0 | " | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | |
| Methylene chloride | ND | 10 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11612 - EPA 5035A

Blank (BH11612-BLK2)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|-----------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|
| n-Butylbenzene | ND | 5.0 | ug/kg wet | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | |

| | | | | | | | | | | | |
|---|------|--|------|------|--|------|--------|--|--|--|--|
| <i>Surrogate: SURR: 1,2-Dichloroethane-d4</i> | 49.9 | | ug/L | 50.0 | | 99.8 | 77-125 | | | | |
| <i>Surrogate: SURR: Toluene-d8</i> | 50.6 | | " | 50.0 | | 101 | 85-120 | | | | |
| <i>Surrogate: SURR: p-Bromofluorobenzene</i> | 50.2 | | " | 50.0 | | 100 | 76-130 | | | | |

LCS (BH11612-BS1)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---|------|--|------|------|--|-----|--------|-----------|--|--|--|
| 1,1,1,2-Tetrachloroethane | 53.5 | | ug/L | 50.0 | | 107 | 75-129 | | | | |
| 1,1,1-Trichloroethane | 54.7 | | " | 50.0 | | 109 | 71-137 | | | | |
| 1,1,2,2-Tetrachloroethane | 53.1 | | " | 50.0 | | 106 | 79-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 62.4 | | " | 50.0 | | 125 | 58-146 | | | | |
| 1,1,2-Trichloroethane | 52.1 | | " | 50.0 | | 104 | 83-123 | | | | |
| 1,1-Dichloroethane | 52.6 | | " | 50.0 | | 105 | 75-130 | | | | |
| 1,1-Dichloroethylene | 59.3 | | " | 50.0 | | 119 | 64-137 | | | | |
| 1,2,3-Trichlorobenzene | 52.3 | | " | 50.0 | | 105 | 81-140 | | | | |
| 1,2,3-Trichloropropane | 53.4 | | " | 50.0 | | 107 | 81-126 | | | | |
| 1,2,4-Trichlorobenzene | 53.3 | | " | 50.0 | | 107 | 80-141 | | | | |
| 1,2,4-Trimethylbenzene | 55.7 | | " | 50.0 | | 111 | 84-125 | | | | |
| 1,2-Dibromo-3-chloropropane | 51.4 | | " | 50.0 | | 103 | 74-142 | | | | |
| 1,2-Dibromoethane | 52.1 | | " | 50.0 | | 104 | 86-123 | | | | |
| 1,2-Dichlorobenzene | 52.5 | | " | 50.0 | | 105 | 85-122 | | | | |
| 1,2-Dichloroethane | 53.0 | | " | 50.0 | | 106 | 71-133 | | | | |
| 1,2-Dichloropropane | 53.9 | | " | 50.0 | | 108 | 81-122 | | | | |
| 1,3,5-Trimethylbenzene | 54.8 | | " | 50.0 | | 110 | 82-126 | | | | |
| 1,3-Dichlorobenzene | 53.7 | | " | 50.0 | | 107 | 84-124 | | | | |
| 1,4-Dichlorobenzene | 52.2 | | " | 50.0 | | 104 | 84-124 | | | | |
| 1,4-Dioxane | 1130 | | " | 1050 | | 108 | 10-228 | | | | |
| 2-Butanone | 57.3 | | " | 50.0 | | 115 | 58-147 | | | | |
| 2-Hexanone | 54.6 | | " | 50.0 | | 109 | 70-139 | | | | |
| 4-Methyl-2-pentanone | 54.1 | | " | 50.0 | | 108 | 72-132 | | | | |
| Acetone | 51.4 | | " | 50.0 | | 103 | 36-155 | | | | |
| Acrolein | 127 | | " | 50.0 | | 253 | 10-238 | High Bias | | | |
| Acrylonitrile | 56.2 | | " | 50.0 | | 112 | 66-141 | | | | |
| Benzene | 55.1 | | " | 50.0 | | 110 | 77-127 | | | | |
| Bromochloromethane | 53.4 | | " | 50.0 | | 107 | 74-129 | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting | Units | Spike | Source* | %REC | %REC | Limits | Flag | RPD | Flag |
|---------|--------|-----------|-------|-------|---------|------|------|--------|------|-----|------|
| | | Limit | | | Result | | | | | RPD | |

Batch BH11612 - EPA 5035A

LCS (BH11612-BS1)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|--|-------------|--|----------|-------------|--|-------------|--|---------------|--|--|--|
| Bromodichloromethane | 53.1 | | ug/L | 50.0 | | 106 | | 81-124 | | | |
| Bromoform | 48.2 | | " | 50.0 | | 96.5 | | 80-136 | | | |
| Bromomethane | 76.2 | | " | 50.0 | | 152 | | 32-177 | | | |
| Carbon disulfide | 55.3 | | " | 50.0 | | 111 | | 10-136 | | | |
| Carbon tetrachloride | 56.7 | | " | 50.0 | | 113 | | 66-143 | | | |
| Chlorobenzene | 53.2 | | " | 50.0 | | 106 | | 86-120 | | | |
| Chloroethane | 68.4 | | " | 50.0 | | 137 | | 51-142 | | | |
| Chloroform | 53.9 | | " | 50.0 | | 108 | | 76-131 | | | |
| Chloromethane | 49.1 | | " | 50.0 | | 98.2 | | 49-132 | | | |
| cis-1,2-Dichloroethylene | 54.7 | | " | 50.0 | | 109 | | 74-132 | | | |
| cis-1,3-Dichloropropylene | 52.8 | | " | 50.0 | | 106 | | 81-129 | | | |
| Cyclohexane | 53.0 | | " | 50.0 | | 106 | | 70-130 | | | |
| Dibromochloromethane | 53.8 | | " | 50.0 | | 108 | | 10-200 | | | |
| Dibromomethane | 51.6 | | " | 50.0 | | 103 | | 83-124 | | | |
| Dichlorodifluoromethane | 51.8 | | " | 50.0 | | 104 | | 28-158 | | | |
| Ethyl Benzene | 55.9 | | " | 50.0 | | 112 | | 84-125 | | | |
| Hexachlorobutadiene | 55.7 | | " | 50.0 | | 111 | | 83-133 | | | |
| Isopropylbenzene | 53.8 | | " | 50.0 | | 108 | | 81-127 | | | |
| Methyl acetate | 47.3 | | " | 50.0 | | 94.6 | | 41-143 | | | |
| Methyl tert-butyl ether (MTBE) | 52.7 | | " | 50.0 | | 105 | | 74-131 | | | |
| Methylcyclohexane | 53.8 | | " | 50.0 | | 108 | | 70-130 | | | |
| Methylene chloride | 54.9 | | " | 50.0 | | 110 | | 57-141 | | | |
| n-Butylbenzene | 63.6 | | " | 50.0 | | 127 | | 80-130 | | | |
| n-Propylbenzene | 54.4 | | " | 50.0 | | 109 | | 74-136 | | | |
| o-Xylene | 53.7 | | " | 50.0 | | 107 | | 83-123 | | | |
| p- & m- Xylenes | 112 | | " | 100 | | 112 | | 82-128 | | | |
| p-Isopropyltoluene | 56.2 | | " | 50.0 | | 112 | | 85-125 | | | |
| sec-Butylbenzene | 57.0 | | " | 50.0 | | 114 | | 83-125 | | | |
| Styrene | 54.9 | | " | 50.0 | | 110 | | 86-126 | | | |
| tert-Butyl alcohol (TBA) | 306 | | " | 250 | | 122 | | 70-130 | | | |
| tert-Butylbenzene | 54.0 | | " | 50.0 | | 108 | | 80-127 | | | |
| Tetrachloroethylene | 49.5 | | " | 50.0 | | 99.1 | | 80-129 | | | |
| Toluene | 54.0 | | " | 50.0 | | 108 | | 85-121 | | | |
| trans-1,2-Dichloroethylene | 57.4 | | " | 50.0 | | 115 | | 72-132 | | | |
| trans-1,3-Dichloropropylene | 52.0 | | " | 50.0 | | 104 | | 78-132 | | | |
| Trichloroethylene | 55.2 | | " | 50.0 | | 110 | | 84-123 | | | |
| Trichlorofluoromethane | 59.4 | | " | 50.0 | | 119 | | 62-140 | | | |
| Vinyl Chloride | 60.2 | | " | 50.0 | | 120 | | 52-130 | | | |
| <i>Surrogate: SURRE: 1,2-Dichloroethane-d4</i> | <i>48.3</i> | | <i>"</i> | <i>50.0</i> | | <i>96.6</i> | | <i>77-125</i> | | | |
| <i>Surrogate: SURRE: Toluene-d8</i> | <i>50.1</i> | | <i>"</i> | <i>50.0</i> | | <i>100</i> | | <i>85-120</i> | | | |
| <i>Surrogate: SURRE: p-Bromofluorobenzene</i> | <i>49.0</i> | | <i>"</i> | <i>50.0</i> | | <i>98.0</i> | | <i>76-130</i> | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-------|-------------|----------------|------|-------------|-----------|-------|-----------|----------|
| Batch BH11612 - EPA 5035A | | | | | | | | | | | |
| LCS Dup (BH11612-BSD1) | | | | | | | | | | | |
| Prepared & Analyzed: 08/27/2021 | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 53.4 | | ug/L | 50.0 | | 107 | 75-129 | | 0.206 | 30 | |
| 1,1,1-Trichloroethane | 53.7 | | " | 50.0 | | 107 | 71-137 | | 1.88 | 30 | |
| 1,1,2,2-Tetrachloroethane | 58.0 | | " | 50.0 | | 116 | 79-129 | | 8.84 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 61.4 | | " | 50.0 | | 123 | 58-146 | | 1.57 | 30 | |
| 1,1,2-Trichloroethane | 54.1 | | " | 50.0 | | 108 | 83-123 | | 3.73 | 30 | |
| 1,1-Dichloroethane | 53.8 | | " | 50.0 | | 108 | 75-130 | | 2.14 | 30 | |
| 1,1-Dichloroethylene | 60.7 | | " | 50.0 | | 121 | 64-137 | | 2.42 | 30 | |
| 1,2,3-Trichlorobenzene | 52.9 | | " | 50.0 | | 106 | 81-140 | | 1.12 | 30 | |
| 1,2,3-Trichloropropane | 56.2 | | " | 50.0 | | 112 | 81-126 | | 5.06 | 30 | |
| 1,2,4-Trichlorobenzene | 53.4 | | " | 50.0 | | 107 | 80-141 | | 0.150 | 30 | |
| 1,2,4-Trimethylbenzene | 58.4 | | " | 50.0 | | 117 | 84-125 | | 4.70 | 30 | |
| 1,2-Dibromo-3-chloropropane | 55.5 | | " | 50.0 | | 111 | 74-142 | | 7.75 | 30 | |
| 1,2-Dibromoethane | 53.3 | | " | 50.0 | | 107 | 86-123 | | 2.31 | 30 | |
| 1,2-Dichlorobenzene | 53.5 | | " | 50.0 | | 107 | 85-122 | | 1.89 | 30 | |
| 1,2-Dichloroethane | 55.5 | | " | 50.0 | | 111 | 71-133 | | 4.66 | 30 | |
| 1,2-Dichloropropane | 57.5 | | " | 50.0 | | 115 | 81-122 | | 6.52 | 30 | |
| 1,3,5-Trimethylbenzene | 57.6 | | " | 50.0 | | 115 | 82-126 | | 4.95 | 30 | |
| 1,3-Dichlorobenzene | 54.2 | | " | 50.0 | | 108 | 84-124 | | 0.816 | 30 | |
| 1,4-Dichlorobenzene | 53.1 | | " | 50.0 | | 106 | 84-124 | | 1.54 | 30 | |
| 1,4-Dioxane | 1180 | | " | 1050 | | 112 | 10-228 | | 3.92 | 30 | |
| 2-Butanone | 57.6 | | " | 50.0 | | 115 | 58-147 | | 0.574 | 30 | |
| 2-Hexanone | 60.5 | | " | 50.0 | | 121 | 70-139 | | 10.3 | 30 | |
| 4-Methyl-2-pentanone | 59.7 | | " | 50.0 | | 119 | 72-132 | | 9.92 | 30 | |
| Acetone | 51.2 | | " | 50.0 | | 102 | 36-155 | | 0.292 | 30 | |
| Acrolein | 130 | | " | 50.0 | | 261 | 10-238 | High Bias | 2.80 | 30 | |
| Acrylonitrile | 59.2 | | " | 50.0 | | 118 | 66-141 | | 5.18 | 30 | |
| Benzene | 55.8 | | " | 50.0 | | 112 | 77-127 | | 1.28 | 30 | |
| Bromochloromethane | 55.8 | | " | 50.0 | | 112 | 74-129 | | 4.47 | 30 | |
| Bromodichloromethane | 55.7 | | " | 50.0 | | 111 | 81-124 | | 4.82 | 30 | |
| Bromoform | 47.2 | | " | 50.0 | | 94.4 | 80-136 | | 2.16 | 30 | |
| Bromomethane | 68.4 | | " | 50.0 | | 137 | 32-177 | | 10.7 | 30 | |
| Carbon disulfide | 56.5 | | " | 50.0 | | 113 | 10-136 | | 2.11 | 30 | |
| Carbon tetrachloride | 55.4 | | " | 50.0 | | 111 | 66-143 | | 2.32 | 30 | |
| Chlorobenzene | 54.4 | | " | 50.0 | | 109 | 86-120 | | 2.27 | 30 | |
| Chloroethane | 48.2 | | " | 50.0 | | 96.3 | 51-142 | | 34.7 | 30 | Non-dir. |
| Chloroform | 54.6 | | " | 50.0 | | 109 | 76-131 | | 1.38 | 30 | |
| Chloromethane | 51.6 | | " | 50.0 | | 103 | 49-132 | | 4.93 | 30 | |
| cis-1,2-Dichloroethylene | 56.7 | | " | 50.0 | | 113 | 74-132 | | 3.68 | 30 | |
| cis-1,3-Dichloropropylene | 55.6 | | " | 50.0 | | 111 | 81-129 | | 5.28 | 30 | |
| Cyclohexane | 55.0 | | " | 50.0 | | 110 | 70-130 | | 3.79 | 30 | |
| Dibromochloromethane | 54.7 | | " | 50.0 | | 109 | 10-200 | | 1.55 | 30 | |
| Dibromomethane | 53.4 | | " | 50.0 | | 107 | 83-124 | | 3.41 | 30 | |
| Dichlorodifluoromethane | 51.4 | | " | 50.0 | | 103 | 28-158 | | 0.891 | 30 | |
| Ethyl Benzene | 57.5 | | " | 50.0 | | 115 | 84-125 | | 2.77 | 30 | |
| Hexachlorobutadiene | 54.5 | | " | 50.0 | | 109 | 83-133 | | 2.07 | 30 | |
| Isopropylbenzene | 56.4 | | " | 50.0 | | 113 | 81-127 | | 4.68 | 30 | |
| Methyl acetate | 50.4 | | " | 50.0 | | 101 | 41-143 | | 6.28 | 30 | |
| Methyl tert-butyl ether (MTBE) | 52.2 | | " | 50.0 | | 104 | 74-131 | | 0.953 | 30 | |
| Methylcyclohexane | 56.4 | | " | 50.0 | | 113 | 70-130 | | 4.59 | 30 | |
| Methylene chloride | 58.0 | | " | 50.0 | | 116 | 57-141 | | 5.42 | 30 | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11612 - EPA 5035A

LCS Dup (BH11612-BSD1)

Prepared & Analyzed: 08/27/2021

| | | | | | | | | | | | |
|-----------------------------|------|--|------|------|--|------|--------|-----------|-------|----|--|
| n-Butylbenzene | 68.3 | | ug/L | 50.0 | | 137 | 80-130 | High Bias | 7.02 | 30 | |
| n-Propylbenzene | 57.8 | | " | 50.0 | | 116 | 74-136 | | 6.13 | 30 | |
| o-Xylene | 56.0 | | " | 50.0 | | 112 | 83-123 | | 4.26 | 30 | |
| p- & m- Xylenes | 115 | | " | 100 | | 115 | 82-128 | | 3.40 | 30 | |
| p-Isopropyltoluene | 57.9 | | " | 50.0 | | 116 | 85-125 | | 2.87 | 30 | |
| sec-Butylbenzene | 59.9 | | " | 50.0 | | 120 | 83-125 | | 4.86 | 30 | |
| Styrene | 55.9 | | " | 50.0 | | 112 | 86-126 | | 1.75 | 30 | |
| tert-Butyl alcohol (TBA) | 310 | | " | 250 | | 124 | 70-130 | | 1.52 | 30 | |
| tert-Butylbenzene | 55.5 | | " | 50.0 | | 111 | 80-127 | | 2.68 | 30 | |
| Tetrachloroethylene | 48.4 | | " | 50.0 | | 96.9 | 80-129 | | 2.25 | 30 | |
| Toluene | 55.9 | | " | 50.0 | | 112 | 85-121 | | 3.38 | 30 | |
| trans-1,2-Dichloroethylene | 58.9 | | " | 50.0 | | 118 | 72-132 | | 2.51 | 30 | |
| trans-1,3-Dichloropropylene | 54.8 | | " | 50.0 | | 110 | 78-132 | | 5.13 | 30 | |
| Trichloroethylene | 57.0 | | " | 50.0 | | 114 | 84-123 | | 3.30 | 30 | |
| Trichlorofluoromethane | 58.8 | | " | 50.0 | | 118 | 62-140 | | 0.998 | 30 | |
| Vinyl Chloride | 45.4 | | " | 50.0 | | 90.8 | 52-130 | | 28.1 | 30 | |

Surrogate: SURR: 1,2-Dichloroethane-d4

49.2

"

50.0

98.4

77-125

Surrogate: SURR: Toluene-d8

50.6

"

50.0

101

85-120

Surrogate: SURR: p-Bromofluorobenzene

51.4

"

50.0

103

76-130

Batch BH11616 - EPA 5035A

Blank (BH11616-BLK1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|---|----|-----|-----------|--|--|--|--|--|--|--|--|
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 5.0 | " | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,1-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | " | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | " | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | " | | | | | | | | |
| 1,4-Dioxane | ND | 100 | " | | | | | | | | |
| 2-Butanone | ND | 5.0 | " | | | | | | | | |
| 2-Hexanone | ND | 5.0 | " | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 5.0 | " | | | | | | | | |
| Acetone | ND | 10 | " | | | | | | | | |
| Acrolein | ND | 10 | " | | | | | | | | |
| Acrylonitrile | ND | 5.0 | " | | | | | | | | |
| Benzene | ND | 5.0 | " | | | | | | | | |
| Bromochloromethane | ND | 5.0 | " | | | | | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting | Units | Spike Level | Source* | %REC | %REC Limits | Flag | RPD | RPD | Flag |
|---------|--------|-----------|-------|----------------|---------|------|----------------|------|-----|-------|------|
| | | Limit | | | Result | | | | | Limit | |

Batch BH11616 - EPA 5035A

Blank (BH11616-BLK1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|--------------------------------|----|-----|-----------|--|--|--|--|--|--|--|--|
| Bromodichloromethane | ND | 5.0 | ug/kg wet | | | | | | | | |
| Bromoform | ND | 5.0 | " | | | | | | | | |
| Bromomethane | ND | 5.0 | " | | | | | | | | |
| Carbon disulfide | ND | 5.0 | " | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | " | | | | | | | | |
| Chlorobenzene | ND | 5.0 | " | | | | | | | | |
| Chloroethane | ND | 5.0 | " | | | | | | | | |
| Chloroform | ND | 5.0 | " | | | | | | | | |
| Chloromethane | ND | 5.0 | " | | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| cis-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Cyclohexane | ND | 5.0 | " | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | " | | | | | | | | |
| Dibromomethane | ND | 5.0 | " | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | " | | | | | | | | |
| Ethyl Benzene | ND | 5.0 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | " | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | " | | | | | | | | |
| Methyl acetate | ND | 5.0 | " | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 5.0 | " | | | | | | | | |
| Methylcyclohexane | ND | 5.0 | " | | | | | | | | |
| Methylene chloride | ND | 10 | " | | | | | | | | |
| n-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | " | | | | | | | | |
| o-Xylene | ND | 5.0 | " | | | | | | | | |
| p- & m- Xylenes | ND | 10 | " | | | | | | | | |
| p-Isopropyltoluene | ND | 5.0 | " | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Styrene | ND | 5.0 | " | | | | | | | | |
| tert-Butyl alcohol (TBA) | ND | 5.0 | " | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | " | | | | | | | | |
| Tetrachloroethylene | ND | 5.0 | " | | | | | | | | |
| Toluene | ND | 5.0 | " | | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 5.0 | " | | | | | | | | |
| trans-1,3-Dichloropropylene | ND | 5.0 | " | | | | | | | | |
| Trichloroethylene | ND | 5.0 | " | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | " | | | | | | | | |
| Vinyl Chloride | ND | 5.0 | " | | | | | | | | |
| Xylenes, Total | ND | 15 | " | | | | | | | | |

| | | | | | | | |
|---|------|--|------|------|--|------|--------|
| Surrogate: SURRE: 1,2-Dichloroethane-d4 | 62.2 | | ug/L | 50.0 | | 124 | 77-125 |
| Surrogate: SURRE: Toluene-d8 | 49.5 | | " | 50.0 | | 98.9 | 85-120 |
| Surrogate: SURRE: p-Bromofluorobenzene | 48.6 | | " | 50.0 | | 97.2 | 76-130 |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
| Batch BH11616 - EPA 5035A | | | | | | | | | | | |
| LCS (BH11616-BS1) | | | | | | | | | | | |
| Prepared & Analyzed: 08/25/2021 | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 57.1 | | ug/L | 50.0 | | 114 | 75-129 | | | | |
| 1,1,1-Trichloroethane | 56.5 | | " | 50.0 | | 113 | 71-137 | | | | |
| 1,1,2,2-Tetrachloroethane | 57.7 | | " | 50.0 | | 115 | 79-129 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 60.7 | | " | 50.0 | | 121 | 58-146 | | | | |
| 1,1,2-Trichloroethane | 57.8 | | " | 50.0 | | 116 | 83-123 | | | | |
| 1,1-Dichloroethane | 56.1 | | " | 50.0 | | 112 | 75-130 | | | | |
| 1,1-Dichloroethylene | 63.1 | | " | 50.0 | | 126 | 64-137 | | | | |
| 1,2,3-Trichlorobenzene | 59.2 | | " | 50.0 | | 118 | 81-140 | | | | |
| 1,2,3-Trichloropropane | 57.2 | | " | 50.0 | | 114 | 81-126 | | | | |
| 1,2,4-Trichlorobenzene | 61.7 | | " | 50.0 | | 123 | 80-141 | | | | |
| 1,2,4-Trimethylbenzene | 55.5 | | " | 50.0 | | 111 | 84-125 | | | | |
| 1,2-Dibromo-3-chloropropane | 59.4 | | " | 50.0 | | 119 | 74-142 | | | | |
| 1,2-Dibromoethane | 58.1 | | " | 50.0 | | 116 | 86-123 | | | | |
| 1,2-Dichlorobenzene | 56.7 | | " | 50.0 | | 113 | 85-122 | | | | |
| 1,2-Dichloroethane | 61.4 | | " | 50.0 | | 123 | 71-133 | | | | |
| 1,2-Dichloropropane | 57.3 | | " | 50.0 | | 115 | 81-122 | | | | |
| 1,3,5-Trimethylbenzene | 56.2 | | " | 50.0 | | 112 | 82-126 | | | | |
| 1,3-Dichlorobenzene | 54.3 | | " | 50.0 | | 109 | 84-124 | | | | |
| 1,4-Dichlorobenzene | 54.3 | | " | 50.0 | | 109 | 84-124 | | | | |
| 1,4-Dioxane | 1080 | | " | 1050 | | 103 | 10-228 | | | | |
| 2-Butanone | 52.2 | | " | 50.0 | | 104 | 58-147 | | | | |
| 2-Hexanone | 61.7 | | " | 50.0 | | 123 | 70-139 | | | | |
| 4-Methyl-2-pentanone | 60.6 | | " | 50.0 | | 121 | 72-132 | | | | |
| Acetone | 44.6 | | " | 50.0 | | 89.1 | 36-155 | | | | |
| Acrolein | 65.3 | | " | 50.0 | | 131 | 10-238 | | | | |
| Acrylonitrile | 59.3 | | " | 50.0 | | 119 | 66-141 | | | | |
| Benzene | 58.0 | | " | 50.0 | | 116 | 77-127 | | | | |
| Bromochloromethane | 60.6 | | " | 50.0 | | 121 | 74-129 | | | | |
| Bromodichloromethane | 58.7 | | " | 50.0 | | 117 | 81-124 | | | | |
| Bromoform | 59.9 | | " | 50.0 | | 120 | 80-136 | | | | |
| Bromomethane | 69.5 | | " | 50.0 | | 139 | 32-177 | | | | |
| Carbon disulfide | 59.8 | | " | 50.0 | | 120 | 10-136 | | | | |
| Carbon tetrachloride | 61.8 | | " | 50.0 | | 124 | 66-143 | | | | |
| Chlorobenzene | 56.6 | | " | 50.0 | | 113 | 86-120 | | | | |
| Chloroethane | 67.7 | | " | 50.0 | | 135 | 51-142 | | | | |
| Chloroform | 58.7 | | " | 50.0 | | 117 | 76-131 | | | | |
| Chloromethane | 60.1 | | " | 50.0 | | 120 | 49-132 | | | | |
| cis-1,2-Dichloroethylene | 59.4 | | " | 50.0 | | 119 | 74-132 | | | | |
| cis-1,3-Dichloropropylene | 58.5 | | " | 50.0 | | 117 | 81-129 | | | | |
| Cyclohexane | 50.8 | | " | 50.0 | | 102 | 70-130 | | | | |
| Dibromochloromethane | 59.1 | | " | 50.0 | | 118 | 10-200 | | | | |
| Dibromomethane | 59.0 | | " | 50.0 | | 118 | 83-124 | | | | |
| Dichlorodifluoromethane | 74.4 | | " | 50.0 | | 149 | 28-158 | | | | |
| Ethyl Benzene | 58.0 | | " | 50.0 | | 116 | 84-125 | | | | |
| Hexachlorobutadiene | 53.2 | | " | 50.0 | | 106 | 83-133 | | | | |
| Isopropylbenzene | 53.8 | | " | 50.0 | | 108 | 81-127 | | | | |
| Methyl acetate | 55.3 | | " | 50.0 | | 111 | 41-143 | | | | |
| Methyl tert-butyl ether (MTBE) | 60.7 | | " | 50.0 | | 121 | 74-131 | | | | |
| Methylcyclohexane | 57.9 | | " | 50.0 | | 116 | 70-130 | | | | |
| Methylene chloride | 60.5 | | " | 50.0 | | 121 | 57-141 | | | | |



Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-------|-------------|----------------|------|-------------|-----------|------|-----------|------|
| Batch BH11616 - EPA 5035A | | | | | | | | | | | |
| LCS (BH11616-BS1) | | | | | | | | | | | |
| Prepared & Analyzed: 08/25/2021 | | | | | | | | | | | |
| n-Butylbenzene | 67.8 | | ug/L | 50.0 | | 136 | 80-130 | High Bias | | | |
| n-Propylbenzene | 54.4 | | " | 50.0 | | 109 | 74-136 | | | | |
| o-Xylene | 58.3 | | " | 50.0 | | 117 | 83-123 | | | | |
| p- & m- Xylenes | 117 | | " | 100 | | 117 | 82-128 | | | | |
| p-Isopropyltoluene | 55.8 | | " | 50.0 | | 112 | 85-125 | | | | |
| sec-Butylbenzene | 55.5 | | " | 50.0 | | 111 | 83-125 | | | | |
| Styrene | 61.4 | | " | 50.0 | | 123 | 86-126 | | | | |
| tert-Butyl alcohol (TBA) | 100 | | " | 250 | | 40.1 | 70-130 | Low Bias | | | |
| tert-Butylbenzene | 46.3 | | " | 50.0 | | 92.6 | 80-127 | | | | |
| Tetrachloroethylene | 45.3 | | " | 50.0 | | 90.5 | 80-129 | | | | |
| Toluene | 56.6 | | " | 50.0 | | 113 | 85-121 | | | | |
| trans-1,2-Dichloroethylene | 62.4 | | " | 50.0 | | 125 | 72-132 | | | | |
| trans-1,3-Dichloropropylene | 61.2 | | " | 50.0 | | 122 | 78-132 | | | | |
| Trichloroethylene | 57.4 | | " | 50.0 | | 115 | 84-123 | | | | |
| Trichlorofluoromethane | 65.0 | | " | 50.0 | | 130 | 62-140 | | | | |
| Vinyl Chloride | 64.9 | | " | 50.0 | | 130 | 52-130 | | | | |
| Surrogate: SURR: 1,2-Dichloroethane-d4 | 53.2 | | " | 50.0 | | 106 | 77-125 | | | | |
| Surrogate: SURR: Toluene-d8 | 49.1 | | " | 50.0 | | 98.2 | 85-120 | | | | |
| Surrogate: SURR: p-Bromofluorobenzene | 49.4 | | " | 50.0 | | 98.7 | 76-130 | | | | |
| LCS Dup (BH11616-BS1) | | | | | | | | | | | |
| Prepared & Analyzed: 08/25/2021 | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 47.0 | | ug/L | 50.0 | | 93.9 | 75-129 | | 19.6 | 30 | |
| 1,1,1-Trichloroethane | 44.0 | | " | 50.0 | | 88.0 | 71-137 | | 24.8 | 30 | |
| 1,1,2,2-Tetrachloroethane | 53.2 | | " | 50.0 | | 106 | 79-129 | | 8.10 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 47.0 | | " | 50.0 | | 94.0 | 58-146 | | 25.4 | 30 | |
| 1,1,2-Trichloroethane | 47.3 | | " | 50.0 | | 94.6 | 83-123 | | 20.0 | 30 | |
| 1,1-Dichloroethane | 47.0 | | " | 50.0 | | 94.1 | 75-130 | | 17.5 | 30 | |
| 1,1-Dichloroethylene | 52.8 | | " | 50.0 | | 106 | 64-137 | | 17.8 | 30 | |
| 1,2,3-Trichlorobenzene | 52.2 | | " | 50.0 | | 104 | 81-140 | | 12.6 | 30 | |
| 1,2,3-Trichloropropane | 53.0 | | " | 50.0 | | 106 | 81-126 | | 7.75 | 30 | |
| 1,2,4-Trichlorobenzene | 55.3 | | " | 50.0 | | 111 | 80-141 | | 10.9 | 30 | |
| 1,2,4-Trimethylbenzene | 49.0 | | " | 50.0 | | 97.9 | 84-125 | | 12.6 | 30 | |
| 1,2-Dibromo-3-chloropropane | 56.9 | | " | 50.0 | | 114 | 74-142 | | 4.27 | 30 | |
| 1,2-Dibromoethane | 48.8 | | " | 50.0 | | 97.6 | 86-123 | | 17.3 | 30 | |
| 1,2-Dichlorobenzene | 47.4 | | " | 50.0 | | 94.8 | 85-122 | | 18.0 | 30 | |
| 1,2-Dichloroethane | 51.0 | | " | 50.0 | | 102 | 71-133 | | 18.6 | 30 | |
| 1,2-Dichloropropane | 48.2 | | " | 50.0 | | 96.3 | 81-122 | | 17.3 | 30 | |
| 1,3,5-Trimethylbenzene | 50.9 | | " | 50.0 | | 102 | 82-126 | | 9.77 | 30 | |
| 1,3-Dichlorobenzene | 46.7 | | " | 50.0 | | 93.4 | 84-124 | | 14.9 | 30 | |
| 1,4-Dichlorobenzene | 47.2 | | " | 50.0 | | 94.5 | 84-124 | | 13.9 | 30 | |
| 1,4-Dioxane | 1130 | | " | 1050 | | 107 | 10-228 | | 3.79 | 30 | |
| 2-Butanone | 52.8 | | " | 50.0 | | 106 | 58-147 | | 1.03 | 30 | |
| 2-Hexanone | 58.9 | | " | 50.0 | | 118 | 70-139 | | 4.73 | 30 | |
| 4-Methyl-2-pentanone | 55.4 | | " | 50.0 | | 111 | 72-132 | | 9.00 | 30 | |
| Acetone | 40.9 | | " | 50.0 | | 81.8 | 36-155 | | 8.59 | 30 | |
| Acrolein | 53.3 | | " | 50.0 | | 107 | 10-238 | | 20.3 | 30 | |
| Acrylonitrile | 52.7 | | " | 50.0 | | 105 | 66-141 | | 11.9 | 30 | |
| Benzene | 49.5 | | " | 50.0 | | 99.0 | 77-127 | | 15.7 | 30 | |
| Bromochloromethane | 49.6 | | " | 50.0 | | 99.2 | 74-129 | | 20.0 | 30 | |
| Bromodichloromethane | 48.6 | | " | 50.0 | | 97.3 | 81-124 | | 18.7 | 30 | |



Volatile Organic Compounds by GC/MS - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11616 - EPA 5035A

LCS Dup (BH11616-BSD1)

Prepared & Analyzed: 08/25/2021

| | | | | | | | | | | | |
|--|------|--|------|------|--|------|--------|----------|------|----|--|
| Bromoform | 50.0 | | ug/L | 50.0 | | 100 | 80-136 | | 18.0 | 30 | |
| Bromomethane | 56.0 | | " | 50.0 | | 112 | 32-177 | | 21.5 | 30 | |
| Carbon disulfide | 45.2 | | " | 50.0 | | 90.4 | 10-136 | | 27.8 | 30 | |
| Carbon tetrachloride | 51.8 | | " | 50.0 | | 104 | 66-143 | | 17.6 | 30 | |
| Chlorobenzene | 48.2 | | " | 50.0 | | 96.5 | 86-120 | | 16.0 | 30 | |
| Chloroethane | 52.6 | | " | 50.0 | | 105 | 51-142 | | 25.0 | 30 | |
| Chloroform | 49.6 | | " | 50.0 | | 99.3 | 76-131 | | 16.8 | 30 | |
| Chloromethane | 47.6 | | " | 50.0 | | 95.2 | 49-132 | | 23.2 | 30 | |
| cis-1,2-Dichloroethylene | 49.6 | | " | 50.0 | | 99.2 | 74-132 | | 18.0 | 30 | |
| cis-1,3-Dichloropropylene | 48.4 | | " | 50.0 | | 96.7 | 81-129 | | 19.0 | 30 | |
| Cyclohexane | 44.1 | | " | 50.0 | | 88.2 | 70-130 | | 14.0 | 30 | |
| Dibromochloromethane | 48.7 | | " | 50.0 | | 97.4 | 10-200 | | 19.3 | 30 | |
| Dibromomethane | 48.9 | | " | 50.0 | | 97.7 | 83-124 | | 18.7 | 30 | |
| Dichlorodifluoromethane | 59.9 | | " | 50.0 | | 120 | 28-158 | | 21.7 | 30 | |
| Ethyl Benzene | 49.2 | | " | 50.0 | | 98.4 | 84-125 | | 16.3 | 30 | |
| Hexachlorobutadiene | 51.4 | | " | 50.0 | | 103 | 83-133 | | 3.59 | 30 | |
| Isopropylbenzene | 49.2 | | " | 50.0 | | 98.4 | 81-127 | | 8.91 | 30 | |
| Methyl acetate | 47.8 | | " | 50.0 | | 95.6 | 41-143 | | 14.5 | 30 | |
| Methyl tert-butyl ether (MTBE) | 46.7 | | " | 50.0 | | 93.4 | 74-131 | | 26.1 | 30 | |
| Methylcyclohexane | 50.8 | | " | 50.0 | | 102 | 70-130 | | 13.1 | 30 | |
| Methylene chloride | 46.6 | | " | 50.0 | | 93.1 | 57-141 | | 26.1 | 30 | |
| n-Butylbenzene | 60.5 | | " | 50.0 | | 121 | 80-130 | | 11.3 | 30 | |
| n-Propylbenzene | 50.6 | | " | 50.0 | | 101 | 74-136 | | 7.23 | 30 | |
| o-Xylene | 49.0 | | " | 50.0 | | 98.1 | 83-123 | | 17.2 | 30 | |
| p- & m- Xylenes | 99.6 | | " | 100 | | 99.6 | 82-128 | | 15.6 | 30 | |
| p-Isopropyltoluene | 50.2 | | " | 50.0 | | 100 | 85-125 | | 10.7 | 30 | |
| sec-Butylbenzene | 50.6 | | " | 50.0 | | 101 | 83-125 | | 9.24 | 30 | |
| Styrene | 50.9 | | " | 50.0 | | 102 | 86-126 | | 18.7 | 30 | |
| tert-Butyl alcohol (TBA) | 86.9 | | " | 250 | | 34.8 | 70-130 | Low Bias | 14.3 | 30 | |
| tert-Butylbenzene | 41.7 | | " | 50.0 | | 83.3 | 80-127 | | 10.6 | 30 | |
| Tetrachloroethylene | 40.0 | | " | 50.0 | | 80.0 | 80-129 | | 12.4 | 30 | |
| Toluene | 48.7 | | " | 50.0 | | 97.3 | 85-121 | | 15.0 | 30 | |
| trans-1,2-Dichloroethylene | 49.8 | | " | 50.0 | | 99.6 | 72-132 | | 22.5 | 30 | |
| trans-1,3-Dichloropropylene | 50.2 | | " | 50.0 | | 100 | 78-132 | | 19.9 | 30 | |
| Trichloroethylene | 49.8 | | " | 50.0 | | 99.7 | 84-123 | | 14.2 | 30 | |
| Trichlorofluoromethane | 52.9 | | " | 50.0 | | 106 | 62-140 | | 20.5 | 30 | |
| Vinyl Chloride | 50.3 | | " | 50.0 | | 101 | 52-130 | | 25.3 | 30 | |
| Surrogate: SURR: 1,2-Dichloroethane-d4 | 51.9 | | " | 50.0 | | 104 | 77-125 | | | | |
| Surrogate: SURR: Toluene-d8 | 49.9 | | " | 50.0 | | 99.8 | 85-120 | | | | |
| Surrogate: SURR: p-Bromofluorobenzene | 52.1 | | " | 50.0 | | 104 | 76-130 | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11507 - EPA 3546 SVOA

Blank (BH11507-BLK1)

Prepared: 08/26/2021 Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---------------------------------------|----|------|-----------|--|--|--|--|--|--|--|--|
| 1,1-Biphenyl | ND | 41.6 | ug/kg wet | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | ND | 83.0 | " | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 41.6 | " | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 41.6 | " | | | | | | | | |
| 1,2-Diphenylhydrazine (as Azobenzene) | ND | 41.6 | " | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 41.6 | " | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 41.6 | " | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | ND | 83.0 | " | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 41.6 | " | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 41.6 | " | | | | | | | | |
| 2,4-Dichlorophenol | ND | 41.6 | " | | | | | | | | |
| 2,4-Dimethylphenol | ND | 41.6 | " | | | | | | | | |
| 2,4-Dinitrophenol | ND | 83.0 | " | | | | | | | | |
| 2,4-Dinitrotoluene | ND | 41.6 | " | | | | | | | | |
| 2,6-Dinitrotoluene | ND | 41.6 | " | | | | | | | | |
| 2-Chloronaphthalene | ND | 41.6 | " | | | | | | | | |
| 2-Chlorophenol | ND | 41.6 | " | | | | | | | | |
| 2-Methylnaphthalene | ND | 41.6 | " | | | | | | | | |
| 2-Methylphenol | ND | 41.6 | " | | | | | | | | |
| 2-Nitroaniline | ND | 83.0 | " | | | | | | | | |
| 2-Nitrophenol | ND | 41.6 | " | | | | | | | | |
| 3- & 4-Methylphenols | ND | 41.6 | " | | | | | | | | |
| 3,3-Dichlorobenzidine | ND | 41.6 | " | | | | | | | | |
| 3-Nitroaniline | ND | 83.0 | " | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 83.0 | " | | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 41.6 | " | | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 41.6 | " | | | | | | | | |
| 4-Chloroaniline | ND | 41.6 | " | | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 41.6 | " | | | | | | | | |
| 4-Nitroaniline | ND | 83.0 | " | | | | | | | | |
| 4-Nitrophenol | ND | 83.0 | " | | | | | | | | |
| Acenaphthene | ND | 41.6 | " | | | | | | | | |
| Acenaphthylene | ND | 41.6 | " | | | | | | | | |
| Acetophenone | ND | 41.6 | " | | | | | | | | |
| Aniline | ND | 166 | " | | | | | | | | |
| Anthracene | ND | 41.6 | " | | | | | | | | |
| Atrazine | ND | 41.6 | " | | | | | | | | |
| Benzaldehyde | ND | 41.6 | " | | | | | | | | |
| Benzidine | ND | 166 | " | | | | | | | | |
| Benzo(a)anthracene | ND | 41.6 | " | | | | | | | | |
| Benzo(a)pyrene | ND | 41.6 | " | | | | | | | | |
| Benzo(b)fluoranthene | ND | 41.6 | " | | | | | | | | |
| Benzo(g,h,i)perylene | ND | 41.6 | " | | | | | | | | |
| Benzo(k)fluoranthene | ND | 41.6 | " | | | | | | | | |
| Benzoic acid | ND | 41.6 | " | | | | | | | | |
| Benzyl alcohol | ND | 41.6 | " | | | | | | | | |
| Benzyl butyl phthalate | ND | 41.6 | " | | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 41.6 | " | | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 41.6 | " | | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 41.6 | " | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 41.6 | " | | | | | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11507 - EPA 3546 SVOA

Blank (BH11507-BLK1)

Prepared: 08/26/2021 Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---------------------------------------|------|------|-----------|------|--|------|--------|--|--|--|--|
| Caprolactam | ND | 83.0 | ug/kg wet | | | | | | | | |
| Carbazole | ND | 41.6 | " | | | | | | | | |
| Chrysene | ND | 41.6 | " | | | | | | | | |
| Dibenzo(a,h)anthracene | ND | 41.6 | " | | | | | | | | |
| Dibenzofuran | ND | 41.6 | " | | | | | | | | |
| Diethyl phthalate | ND | 41.6 | " | | | | | | | | |
| Dimethyl phthalate | ND | 41.6 | " | | | | | | | | |
| Di-n-butyl phthalate | ND | 41.6 | " | | | | | | | | |
| Di-n-octyl phthalate | ND | 41.6 | " | | | | | | | | |
| Fluoranthene | ND | 41.6 | " | | | | | | | | |
| Fluorene | ND | 41.6 | " | | | | | | | | |
| Hexachlorobenzene | ND | 41.6 | " | | | | | | | | |
| Hexachlorobutadiene | ND | 41.6 | " | | | | | | | | |
| Hexachlorocyclopentadiene | ND | 41.6 | " | | | | | | | | |
| Hexachloroethane | ND | 41.6 | " | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 41.6 | " | | | | | | | | |
| Isophorone | ND | 41.6 | " | | | | | | | | |
| Naphthalene | ND | 41.6 | " | | | | | | | | |
| Nitrobenzene | ND | 41.6 | " | | | | | | | | |
| N-Nitrosodimethylamine | ND | 41.6 | " | | | | | | | | |
| N-nitroso-di-n-propylamine | ND | 41.6 | " | | | | | | | | |
| N-Nitrosodiphenylamine | ND | 41.6 | " | | | | | | | | |
| Pentachlorophenol | ND | 41.6 | " | | | | | | | | |
| Phenanthrene | ND | 41.6 | " | | | | | | | | |
| Phenol | ND | 41.6 | " | | | | | | | | |
| Pyrene | ND | 41.6 | " | | | | | | | | |
| Surrogate: SURR: 2-Fluorophenol | 1270 | | " | 1660 | | 76.6 | 20-108 | | | | |
| Surrogate: SURR: Phenol-d5 | 1190 | | " | 1660 | | 71.6 | 23-114 | | | | |
| Surrogate: SURR: Nitrobenzene-d5 | 671 | | " | 831 | | 80.8 | 22-108 | | | | |
| Surrogate: SURR: 2-Fluorobiphenyl | 674 | | " | 831 | | 81.2 | 21-113 | | | | |
| Surrogate: SURR: 2,4,6-Tribromophenol | 1900 | | " | 1660 | | 114 | 19-110 | | | | |
| Surrogate: SURR: Terphenyl-d14 | 774 | | " | 831 | | 93.2 | 24-116 | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------------------------------------|--------|-----------------|-----------|-------------|----------------|---|-------------|-----------|-----|-----------|------|
| Batch BH11507 - EPA 3546 SVOA | | | | | | | | | | | |
| LCS (BH11507-BS1) | | | | | | | | | | | |
| | | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | | | | | |
| 1,1-Biphenyl | 632 | 41.6 | ug/kg wet | 831 | | 76.0 | 18-111 | | | | |
| 1,2,4,5-Tetrachlorobenzene | 932 | 83.0 | " | 831 | | 112 | 21-131 | | | | |
| 1,2,4-Trichlorobenzene | 781 | 41.6 | " | 831 | | 94.0 | 10-140 | | | | |
| 1,2-Dichlorobenzene | 676 | 41.6 | " | 831 | | 81.4 | 34-108 | | | | |
| 1,2-Diphenylhydrazine (as Azobenzene) | 696 | 41.6 | " | 831 | | 83.8 | 17-137 | | | | |
| 1,3-Dichlorobenzene | 657 | 41.6 | " | 831 | | 79.1 | 33-110 | | | | |
| 1,4-Dichlorobenzene | 688 | 41.6 | " | 831 | | 82.8 | 32-104 | | | | |
| 2,3,4,6-Tetrachlorophenol | 811 | 83.0 | " | 831 | | 97.7 | 30-130 | | | | |
| 2,4,5-Trichlorophenol | 796 | 41.6 | " | 831 | | 95.8 | 27-118 | | | | |
| 2,4,6-Trichlorophenol | 778 | 41.6 | " | 831 | | 93.6 | 31-120 | | | | |
| 2,4-Dichlorophenol | 751 | 41.6 | " | 831 | | 90.4 | 20-127 | | | | |
| 2,4-Dimethylphenol | 748 | 41.6 | " | 831 | | 90.0 | 14-132 | | | | |
| 2,4-Dinitrophenol | 602 | 83.0 | " | 831 | | 72.4 | 10-171 | | | | |
| 2,4-Dinitrotoluene | 765 | 41.6 | " | 831 | | 92.1 | 34-131 | | | | |
| 2,6-Dinitrotoluene | 810 | 41.6 | " | 831 | | 97.6 | 31-128 | | | | |
| 2-Chloronaphthalene | 686 | 41.6 | " | 831 | | 82.6 | 31-117 | | | | |
| 2-Chlorophenol | 682 | 41.6 | " | 831 | | 82.1 | 33-113 | | | | |
| 2-Methylnaphthalene | 769 | 41.6 | " | 831 | | 92.6 | 12-138 | | | | |
| 2-Methylphenol | 685 | 41.6 | " | 831 | | 82.5 | 10-136 | | | | |
| 2-Nitroaniline | 726 | 83.0 | " | 831 | | 87.4 | 27-132 | | | | |
| 2-Nitrophenol | 917 | 41.6 | " | 831 | | 110 | 17-129 | | | | |
| 3- & 4-Methylphenols | 587 | 41.6 | " | 831 | | 70.6 | 29-103 | | | | |
| 3,3-Dichlorobenzidine | 1640 | 41.6 | " | 831 | | 197 | 22-149 | High Bias | | | |
| 3-Nitroaniline | 667 | 83.0 | " | 831 | | 80.3 | 20-133 | | | | |
| 4,6-Dinitro-2-methylphenol | 846 | 83.0 | " | 831 | | 102 | 10-143 | | | | |
| 4-Bromophenyl phenyl ether | 806 | 41.6 | " | 831 | | 97.1 | 29-120 | | | | |
| 4-Chloro-3-methylphenol | 743 | 41.6 | " | 831 | | 89.4 | 24-129 | | | | |
| 4-Chloroaniline | 528 | 41.6 | " | 831 | | 63.6 | 10-132 | | | | |
| 4-Chlorophenyl phenyl ether | 721 | 41.6 | " | 831 | | 86.8 | 27-124 | | | | |
| 4-Nitroaniline | 660 | 83.0 | " | 831 | | 79.5 | 16-128 | | | | |
| 4-Nitrophenol | 623 | 83.0 | " | 831 | | 75.0 | 10-141 | | | | |
| Acenaphthene | 685 | 41.6 | " | 831 | | 82.4 | 30-121 | | | | |
| Acenaphthylene | 679 | 41.6 | " | 831 | | 81.7 | 30-115 | | | | |
| Acetophenone | 667 | 41.6 | " | 831 | | 80.3 | 20-112 | | | | |
| Aniline | 599 | 166 | " | 831 | | 72.1 | 10-119 | | | | |
| Anthracene | 756 | 41.6 | " | 831 | | 91.1 | 34-118 | | | | |
| Atrazine | 805 | 41.6 | " | 831 | | 97.0 | 26-112 | | | | |
| Benzaldehyde | 627 | 41.6 | " | 831 | | 75.5 | 21-100 | | | | |
| Benzo(a)anthracene | 763 | 41.6 | " | 831 | | 91.9 | 32-122 | | | | |
| Benzo(a)pyrene | 802 | 41.6 | " | 831 | | 96.6 | 29-133 | | | | |
| Benzo(b)fluoranthene | 741 | 41.6 | " | 831 | | 89.2 | 25-133 | | | | |
| Benzo(g,h,i)perylene | 747 | 41.6 | " | 831 | | 89.9 | 10-143 | | | | |
| Benzo(k)fluoranthene | 714 | 41.6 | " | 831 | | 85.9 | 25-128 | | | | |
| Benzoic acid | 297 | 41.6 | " | 831 | | 35.8 | 10-140 | | | | |
| Benzyl alcohol | 662 | 41.6 | " | 831 | | 79.7 | 30-115 | | | | |
| Benzyl butyl phthalate | 831 | 41.6 | " | 831 | | 100 | 26-126 | | | | |
| Bis(2-chloroethoxy)methane | 634 | 41.6 | " | 831 | | 76.4 | 19-132 | | | | |
| Bis(2-chloroethyl)ether | 589 | 41.6 | " | 831 | | 70.9 | 19-125 | | | | |
| Bis(2-chloroisopropyl)ether | 519 | 41.6 | " | 831 | | 62.4 | 20-135 | | | | |
| Bis(2-ethylhexyl)phthalate | 860 | 41.6 | " | 831 | | 104 | 10-155 | | | | |
| Caprolactam | 713 | 83.0 | " | 831 | | 85.8 | 10-127 | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11507 - EPA 3546 SVOA

LCS (BH11507-BS1)

Prepared: 08/26/2021 Analyzed: 08/27/2021

| | | | | | | | | | | | |
|---------------------------------------|------|------|-----------|------|--|------|--------|-----------|--|--|--|
| Carbazole | 695 | 41.6 | ug/kg wet | 831 | | 83.7 | 35-123 | | | | |
| Chrysene | 737 | 41.6 | " | 831 | | 88.7 | 32-123 | | | | |
| Dibenzo(a,h)anthracene | 835 | 41.6 | " | 831 | | 100 | 10-136 | | | | |
| Dibenzofuran | 691 | 41.6 | " | 831 | | 83.2 | 29-121 | | | | |
| Diethyl phthalate | 694 | 41.6 | " | 831 | | 83.5 | 34-116 | | | | |
| Dimethyl phthalate | 732 | 41.6 | " | 831 | | 88.1 | 35-124 | | | | |
| Di-n-butyl phthalate | 763 | 41.6 | " | 831 | | 91.8 | 31-116 | | | | |
| Di-n-octyl phthalate | 1010 | 41.6 | " | 831 | | 121 | 26-136 | | | | |
| Fluoranthene | 743 | 41.6 | " | 831 | | 89.5 | 33-122 | | | | |
| Fluorene | 700 | 41.6 | " | 831 | | 84.3 | 29-123 | | | | |
| Hexachlorobenzene | 696 | 41.6 | " | 831 | | 83.8 | 21-124 | | | | |
| Hexachlorobutadiene | 845 | 41.6 | " | 831 | | 102 | 10-149 | | | | |
| Hexachlorocyclopentadiene | 462 | 41.6 | " | 831 | | 55.6 | 10-129 | | | | |
| Hexachloroethane | 680 | 41.6 | " | 831 | | 81.9 | 28-108 | | | | |
| Indeno(1,2,3-cd)pyrene | 985 | 41.6 | " | 831 | | 119 | 10-135 | | | | |
| Isophorone | 675 | 41.6 | " | 831 | | 81.3 | 20-132 | | | | |
| Naphthalene | 720 | 41.6 | " | 831 | | 86.6 | 23-124 | | | | |
| Nitrobenzene | 660 | 41.6 | " | 831 | | 79.5 | 13-132 | | | | |
| N-Nitrosodimethylamine | 1230 | 41.6 | " | 831 | | 148 | 11-129 | High Bias | | | |
| N-nitroso-di-n-propylamine | 626 | 41.6 | " | 831 | | 75.4 | 24-119 | | | | |
| N-Nitrosodiphenylamine | 839 | 41.6 | " | 831 | | 101 | 22-152 | | | | |
| Pentachlorophenol | 784 | 41.6 | " | 831 | | 94.4 | 10-139 | | | | |
| Phenanthrene | 695 | 41.6 | " | 831 | | 83.6 | 33-123 | | | | |
| Phenol | 619 | 41.6 | " | 831 | | 74.5 | 23-115 | | | | |
| Pyrene | 741 | 41.6 | " | 831 | | 89.2 | 24-130 | | | | |
| Surrogate: SURR: 2-Fluorophenol | 1290 | | " | 1660 | | 77.7 | 20-108 | | | | |
| Surrogate: SURR: Phenol-d5 | 1270 | | " | 1660 | | 76.3 | 23-114 | | | | |
| Surrogate: SURR: Nitrobenzene-d5 | 685 | | " | 831 | | 82.5 | 22-108 | | | | |
| Surrogate: SURR: 2-Fluorobiphenyl | 706 | | " | 831 | | 85.0 | 21-113 | | | | |
| Surrogate: SURR: 2,4,6-Tribromophenol | 2030 | | " | 1660 | | 122 | 19-110 | | | | |
| Surrogate: SURR: Terphenyl-d14 | 803 | | " | 831 | | 96.6 | 24-116 | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag | |
|---------------------------------------|---|-----------------|-----------|-------------|----------------|------|---|-----------|-----|-----------|------|--|
| Batch BH11507 - EPA 3546 SVOA | | | | | | | | | | | | |
| Matrix Spike (BH11507-MS1) | *Source sample: 21H1089-01 (Matrix Spike) | | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | | | | | |
| 1,1-Biphenyl | 510 | 88.1 | ug/kg dry | 881 | ND | 57.9 | 10-130 | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 707 | 176 | " | 881 | ND | 80.2 | 10-133 | | | | | |
| 1,2,4-Trichlorobenzene | 559 | 88.1 | " | 881 | ND | 63.5 | 10-127 | | | | | |
| 1,2-Dichlorobenzene | 459 | 88.1 | " | 881 | ND | 52.1 | 14-111 | | | | | |
| 1,2-Diphenylhydrazine (as Azobenzene) | 544 | 88.1 | " | 881 | ND | 61.8 | 10-144 | | | | | |
| 1,3-Dichlorobenzene | 435 | 88.1 | " | 881 | ND | 49.4 | 11-111 | | | | | |
| 1,4-Dichlorobenzene | 461 | 88.1 | " | 881 | ND | 52.3 | 10-106 | | | | | |
| 2,3,4,6-Tetrachlorophenol | 643 | 176 | " | 881 | ND | 73.0 | 30-130 | | | | | |
| 2,4,5-Trichlorophenol | 606 | 88.1 | " | 881 | ND | 68.8 | 10-127 | | | | | |
| 2,4,6-Trichlorophenol | 588 | 88.1 | " | 881 | ND | 66.7 | 10-132 | | | | | |
| 2,4-Dichlorophenol | 575 | 88.1 | " | 881 | ND | 65.3 | 10-128 | | | | | |
| 2,4-Dimethylphenol | 561 | 88.1 | " | 881 | ND | 63.7 | 10-137 | | | | | |
| 2,4-Dinitrophenol | 184 | 176 | " | 881 | ND | 20.9 | 10-171 | | | | | |
| 2,4-Dinitrotoluene | 600 | 88.1 | " | 881 | ND | 68.1 | 16-135 | | | | | |
| 2,6-Dinitrotoluene | 607 | 88.1 | " | 881 | ND | 69.0 | 18-131 | | | | | |
| 2-Chloronaphthalene | 557 | 88.1 | " | 881 | ND | 63.3 | 10-129 | | | | | |
| 2-Chlorophenol | 497 | 88.1 | " | 881 | ND | 56.4 | 15-116 | | | | | |
| 2-Methylnaphthalene | 612 | 88.1 | " | 881 | ND | 69.5 | 10-147 | | | | | |
| 2-Methylphenol | 494 | 88.1 | " | 881 | ND | 56.1 | 10-136 | | | | | |
| 2-Nitroaniline | 573 | 176 | " | 881 | ND | 65.0 | 10-137 | | | | | |
| 2-Nitrophenol | 662 | 88.1 | " | 881 | ND | 75.1 | 10-129 | | | | | |
| 3- & 4-Methylphenols | 423 | 88.1 | " | 881 | ND | 48.1 | 10-123 | | | | | |
| 3,3-Dichlorobenzidine | 1020 | 88.1 | " | 881 | ND | 116 | 10-155 | | | | | |
| 3-Nitroaniline | 535 | 176 | " | 881 | ND | 60.7 | 12-133 | | | | | |
| 4,6-Dinitro-2-methylphenol | 312 | 176 | " | 881 | ND | 35.4 | 10-155 | | | | | |
| 4-Bromophenyl phenyl ether | 653 | 88.1 | " | 881 | ND | 74.2 | 14-128 | | | | | |
| 4-Chloro-3-methylphenol | 586 | 88.1 | " | 881 | ND | 66.5 | 10-134 | | | | | |
| 4-Chloroaniline | 430 | 88.1 | " | 881 | ND | 48.8 | 10-145 | | | | | |
| 4-Chlorophenyl phenyl ether | 564 | 88.1 | " | 881 | ND | 64.1 | 14-130 | | | | | |
| 4-Nitroaniline | 498 | 176 | " | 881 | ND | 56.6 | 10-147 | | | | | |
| 4-Nitrophenol | 400 | 176 | " | 881 | ND | 45.4 | 10-137 | | | | | |
| Acenaphthene | 564 | 88.1 | " | 881 | ND | 64.0 | 10-146 | | | | | |
| Acenaphthylene | 539 | 88.1 | " | 881 | ND | 61.2 | 10-134 | | | | | |
| Acetophenone | 503 | 88.1 | " | 881 | ND | 57.1 | 10-116 | | | | | |
| Aniline | 412 | 353 | " | 881 | ND | 46.8 | 10-123 | | | | | |
| Anthracene | 595 | 88.1 | " | 881 | ND | 67.6 | 10-142 | | | | | |
| Atrazine | 551 | 88.1 | " | 881 | ND | 62.6 | 19-115 | | | | | |
| Benzaldehyde | 486 | 88.1 | " | 881 | ND | 55.2 | 10-125 | | | | | |
| Benzo(a)anthracene | 614 | 88.1 | " | 881 | ND | 69.8 | 10-158 | | | | | |
| Benzo(a)pyrene | 714 | 88.1 | " | 881 | ND | 81.1 | 10-180 | | | | | |
| Benzo(b)fluoranthene | 672 | 88.1 | " | 881 | ND | 76.3 | 10-200 | | | | | |
| Benzo(g,h,i)perylene | 662 | 88.1 | " | 881 | ND | 75.1 | 10-138 | | | | | |
| Benzo(k)fluoranthene | 626 | 88.1 | " | 881 | ND | 71.1 | 10-197 | | | | | |
| Benzoic acid | 157 | 88.1 | " | 881 | ND | 17.8 | 10-166 | | | | | |
| Benzyl alcohol | 476 | 88.1 | " | 881 | ND | 54.1 | 12-124 | | | | | |
| Benzyl butyl phthalate | 654 | 88.1 | " | 881 | ND | 74.2 | 10-154 | | | | | |
| Bis(2-chloroethoxy)methane | 500 | 88.1 | " | 881 | ND | 56.8 | 10-132 | | | | | |
| Bis(2-chloroethyl)ether | 423 | 88.1 | " | 881 | ND | 48.1 | 10-119 | | | | | |
| Bis(2-chloroisopropyl)ether | 376 | 88.1 | " | 881 | ND | 42.7 | 10-139 | | | | | |
| Bis(2-ethylhexyl)phthalate | 6600 | 88.1 | " | 881 | 5110 | 168 | 10-167 | High Bias | | | | |
| Caprolactam | 470 | 176 | " | 881 | ND | 53.4 | 10-132 | | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11507 - EPA 3546 SVOA

| Matrix Spike (BH11507-MS1) | *Source sample: 21H1089-01 (Matrix Spike) | | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | | | | |
|---------------------------------------|---|------|-----------|------|----|------|---|--|--|--|--|
| Carbazole | 545 | 88.1 | ug/kg dry | 881 | ND | 61.8 | 10-167 | | | | |
| Chrysene | 575 | 88.1 | " | 881 | ND | 65.3 | 10-156 | | | | |
| Dibenzo(a,h)anthracene | 722 | 88.1 | " | 881 | ND | 81.9 | 10-137 | | | | |
| Dibenzofuran | 544 | 88.1 | " | 881 | ND | 61.8 | 10-147 | | | | |
| Diethyl phthalate | 562 | 88.1 | " | 881 | ND | 63.8 | 20-120 | | | | |
| Dimethyl phthalate | 587 | 88.1 | " | 881 | ND | 66.6 | 18-131 | | | | |
| Di-n-butyl phthalate | 612 | 88.1 | " | 881 | ND | 69.4 | 10-137 | | | | |
| Di-n-octyl phthalate | 1570 | 88.1 | " | 881 | ND | 178 | 10-180 | | | | |
| Fluoranthene | 565 | 88.1 | " | 881 | ND | 64.2 | 10-160 | | | | |
| Fluorene | 554 | 88.1 | " | 881 | ND | 62.9 | 10-157 | | | | |
| Hexachlorobenzene | 570 | 88.1 | " | 881 | ND | 64.7 | 10-137 | | | | |
| Hexachlorobutadiene | 647 | 88.1 | " | 881 | ND | 73.4 | 10-132 | | | | |
| Hexachlorocyclopentadiene | 145 | 88.1 | " | 881 | ND | 16.5 | 10-106 | | | | |
| Hexachloroethane | 466 | 88.1 | " | 881 | ND | 53.0 | 10-110 | | | | |
| Indeno(1,2,3-cd)pyrene | 726 | 88.1 | " | 881 | ND | 82.5 | 10-144 | | | | |
| Isophorone | 522 | 88.1 | " | 881 | ND | 59.3 | 10-132 | | | | |
| Naphthalene | 543 | 88.1 | " | 881 | ND | 61.7 | 10-141 | | | | |
| Nitrobenzene | 507 | 88.1 | " | 881 | ND | 57.6 | 10-131 | | | | |
| N-Nitrosodimethylamine | 867 | 88.1 | " | 881 | ND | 98.4 | 10-126 | | | | |
| N-nitroso-di-n-propylamine | 464 | 88.1 | " | 881 | ND | 52.7 | 10-125 | | | | |
| N-Nitrosodiphenylamine | 665 | 88.1 | " | 881 | ND | 75.5 | 10-177 | | | | |
| Pentachlorophenol | 485 | 88.1 | " | 881 | ND | 55.0 | 10-153 | | | | |
| Phenanthrene | 556 | 88.1 | " | 881 | ND | 63.1 | 10-148 | | | | |
| Phenol | 424 | 88.1 | " | 881 | ND | 48.2 | 10-126 | | | | |
| Pyrene | 588 | 88.1 | " | 881 | ND | 66.7 | 10-165 | | | | |
| Surrogate: SURR: 2-Fluorophenol | 872 | | " | 1760 | | 49.5 | 20-108 | | | | |
| Surrogate: SURR: Phenol-d5 | 872 | | " | 1760 | | 49.5 | 23-114 | | | | |
| Surrogate: SURR: Nitrobenzene-d5 | 506 | | " | 881 | | 57.4 | 22-108 | | | | |
| Surrogate: SURR: 2-Fluorobiphenyl | 542 | | " | 881 | | 61.5 | 21-113 | | | | |
| Surrogate: SURR: 2,4,6-Tribromophenol | 1470 | | " | 1760 | | 83.5 | 19-110 | | | | |
| Surrogate: SURR: Terphenyl-d14 | 617 | | " | 881 | | 70.0 | 24-116 | | | | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|--|---|-----------------|-----------|-------------|----------------|------|---|------|------|-----------|----------|
| Batch BH11507 - EPA 3546 SVOA | | | | | | | | | | | |
| Matrix Spike Dup (BH11507-MSD1) | *Source sample: 21H1089-01 (Matrix Spike Dup) | | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | | | | |
| 1,1-Biphenyl | 466 | 88.1 | ug/kg dry | 881 | ND | 52.9 | 10-130 | | 9.10 | 30 | |
| 1,2,4,5-Tetrachlorobenzene | 671 | 176 | " | 881 | ND | 76.2 | 10-133 | | 5.22 | 30 | |
| 1,2,4-Trichlorobenzene | 524 | 88.1 | " | 881 | ND | 59.4 | 10-127 | | 6.64 | 30 | |
| 1,2-Dichlorobenzene | 414 | 88.1 | " | 881 | ND | 47.0 | 14-111 | | 10.2 | 30 | |
| 1,2-Diphenylhydrazine (as Azobenzene) | 462 | 88.1 | " | 881 | ND | 52.4 | 10-144 | | 16.4 | 30 | |
| 1,3-Dichlorobenzene | 396 | 88.1 | " | 881 | ND | 45.0 | 11-111 | | 9.33 | 30 | |
| 1,4-Dichlorobenzene | 428 | 88.1 | " | 881 | ND | 48.6 | 10-106 | | 7.29 | 30 | |
| 2,3,4,6-Tetrachlorophenol | 609 | 176 | " | 881 | ND | 69.2 | 30-130 | | 5.40 | 30 | |
| 2,4,5-Trichlorophenol | 581 | 88.1 | " | 881 | ND | 66.0 | 10-127 | | 4.15 | 30 | |
| 2,4,6-Trichlorophenol | 550 | 88.1 | " | 881 | ND | 62.5 | 10-132 | | 6.56 | 30 | |
| 2,4-Dichlorophenol | 518 | 88.1 | " | 881 | ND | 58.8 | 10-128 | | 10.4 | 30 | |
| 2,4-Dimethylphenol | 504 | 88.1 | " | 881 | ND | 57.3 | 10-137 | | 10.6 | 30 | |
| 2,4-Dinitrophenol | 260 | 176 | " | 881 | ND | 29.5 | 10-171 | | 34.3 | 30 | Non-dir. |
| 2,4-Dinitrotoluene | 571 | 88.1 | " | 881 | ND | 64.9 | 16-135 | | 4.81 | 30 | |
| 2,6-Dinitrotoluene | 588 | 88.1 | " | 881 | ND | 66.7 | 18-131 | | 3.30 | 30 | |
| 2-Chloronaphthalene | 517 | 88.1 | " | 881 | ND | 58.7 | 10-129 | | 7.48 | 30 | |
| 2-Chlorophenol | 453 | 88.1 | " | 881 | ND | 51.4 | 15-116 | | 9.20 | 30 | |
| 2-Methylnaphthalene | 566 | 88.1 | " | 881 | ND | 64.2 | 10-147 | | 7.89 | 30 | |
| 2-Methylphenol | 453 | 88.1 | " | 881 | ND | 51.4 | 10-136 | | 8.63 | 30 | |
| 2-Nitroaniline | 543 | 176 | " | 881 | ND | 61.6 | 10-137 | | 5.43 | 30 | |
| 2-Nitrophenol | 630 | 88.1 | " | 881 | ND | 71.5 | 10-129 | | 4.91 | 30 | |
| 3- & 4-Methylphenols | 402 | 88.1 | " | 881 | ND | 45.6 | 10-123 | | 5.29 | 30 | |
| 3,3-Dichlorobenzidine | 896 | 88.1 | " | 881 | ND | 102 | 10-155 | | 13.0 | 30 | |
| 3-Nitroaniline | 485 | 176 | " | 881 | ND | 55.0 | 12-133 | | 9.81 | 30 | |
| 4,6-Dinitro-2-methylphenol | 427 | 176 | " | 881 | ND | 48.5 | 10-155 | | 31.1 | 30 | Non-dir. |
| 4-Bromophenyl phenyl ether | 600 | 88.1 | " | 881 | ND | 68.1 | 14-128 | | 8.55 | 30 | |
| 4-Chloro-3-methylphenol | 553 | 88.1 | " | 881 | ND | 62.8 | 10-134 | | 5.69 | 30 | |
| 4-Chloroaniline | 395 | 88.1 | " | 881 | ND | 44.8 | 10-145 | | 8.55 | 30 | |
| 4-Chlorophenyl phenyl ether | 543 | 88.1 | " | 881 | ND | 61.6 | 14-130 | | 3.95 | 30 | |
| 4-Nitroaniline | 481 | 176 | " | 881 | ND | 54.6 | 10-147 | | 3.60 | 30 | |
| 4-Nitrophenol | 502 | 176 | " | 881 | ND | 57.0 | 10-137 | | 22.5 | 30 | |
| Acenaphthene | 533 | 88.1 | " | 881 | ND | 60.6 | 10-146 | | 5.52 | 30 | |
| Acenaphthylene | 500 | 88.1 | " | 881 | ND | 56.7 | 10-134 | | 7.60 | 30 | |
| Acetophenone | 464 | 88.1 | " | 881 | ND | 52.6 | 10-116 | | 8.16 | 30 | |
| Aniline | 377 | 353 | " | 881 | ND | 42.8 | 10-123 | | 8.93 | 30 | |
| Anthracene | 560 | 88.1 | " | 881 | ND | 63.6 | 10-142 | | 6.10 | 30 | |
| Atrazine | 504 | 88.1 | " | 881 | ND | 57.2 | 19-115 | | 8.95 | 30 | |
| Benzaldehyde | 441 | 88.1 | " | 881 | ND | 50.1 | 10-125 | | 9.73 | 30 | |
| Benzo(a)anthracene | 581 | 88.1 | " | 881 | ND | 66.0 | 10-158 | | 5.54 | 30 | |
| Benzo(a)pyrene | 655 | 88.1 | " | 881 | ND | 74.3 | 10-180 | | 8.75 | 30 | |
| Benzo(b)fluoranthene | 629 | 88.1 | " | 881 | ND | 71.4 | 10-200 | | 6.61 | 30 | |
| Benzo(g,h,i)perylene | 606 | 88.1 | " | 881 | ND | 68.8 | 10-138 | | 8.78 | 30 | |
| Benzo(k)fluoranthene | 575 | 88.1 | " | 881 | ND | 65.3 | 10-197 | | 8.56 | 30 | |
| Benzoic acid | 206 | 88.1 | " | 881 | ND | 23.4 | 10-166 | | 27.1 | 30 | |
| Benzyl alcohol | 425 | 88.1 | " | 881 | ND | 48.2 | 12-124 | | 11.4 | 30 | |
| Benzyl butyl phthalate | 593 | 88.1 | " | 881 | ND | 67.4 | 10-154 | | 9.72 | 30 | |
| Bis(2-chloroethoxy)methane | 476 | 88.1 | " | 881 | ND | 54.0 | 10-132 | | 5.05 | 30 | |
| Bis(2-chloroethyl)ether | 407 | 88.1 | " | 881 | ND | 46.2 | 10-119 | | 3.90 | 30 | |
| Bis(2-chloroisopropyl)ether | 345 | 88.1 | " | 881 | ND | 39.1 | 10-139 | | 8.80 | 30 | |
| Bis(2-ethylhexyl)phthalate | 5490 | 88.1 | " | 881 | 5110 | 43.2 | 10-167 | | 18.3 | 30 | |
| Caprolactam | 454 | 176 | " | 881 | ND | 51.5 | 10-132 | | 3.51 | 30 | |



Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11507 - EPA 3546 SVOA

| Matrix Spike Dup (BH11507-MSD1) | *Source sample: 21H1089-01 (Matrix Spike Dup) | | | | | Prepared: 08/26/2021 Analyzed: 08/27/2021 | | | | | |
|---------------------------------------|---|------|-----------|------|----|---|--------|--|-------|----|--|
| Carbazole | 523 | 88.1 | ug/kg dry | 881 | ND | 59.4 | 10-167 | | 4.09 | 30 | |
| Chrysene | 545 | 88.1 | " | 881 | ND | 61.8 | 10-156 | | 5.41 | 30 | |
| Dibenzo(a,h)anthracene | 663 | 88.1 | " | 881 | ND | 75.3 | 10-137 | | 8.45 | 30 | |
| Dibenzofuran | 526 | 88.1 | " | 881 | ND | 59.7 | 10-147 | | 3.43 | 30 | |
| Diethyl phthalate | 543 | 88.1 | " | 881 | ND | 61.6 | 20-120 | | 3.57 | 30 | |
| Dimethyl phthalate | 549 | 88.1 | " | 881 | ND | 62.3 | 18-131 | | 6.70 | 30 | |
| Di-n-butyl phthalate | 581 | 88.1 | " | 881 | ND | 65.9 | 10-137 | | 5.20 | 30 | |
| Di-n-octyl phthalate | 1360 | 88.1 | " | 881 | ND | 155 | 10-180 | | 14.2 | 30 | |
| Fluoranthene | 560 | 88.1 | " | 881 | ND | 63.6 | 10-160 | | 0.877 | 30 | |
| Fluorene | 522 | 88.1 | " | 881 | ND | 59.3 | 10-157 | | 5.89 | 30 | |
| Hexachlorobenzene | 541 | 88.1 | " | 881 | ND | 61.4 | 10-137 | | 5.20 | 30 | |
| Hexachlorobutadiene | 594 | 88.1 | " | 881 | ND | 67.4 | 10-132 | | 8.52 | 30 | |
| Hexachlorocyclopentadiene | 165 | 88.1 | " | 881 | ND | 18.7 | 10-106 | | 12.7 | 30 | |
| Hexachloroethane | 419 | 88.1 | " | 881 | ND | 47.6 | 10-110 | | 10.7 | 30 | |
| Indeno(1,2,3-cd)pyrene | 723 | 88.1 | " | 881 | ND | 82.1 | 10-144 | | 0.486 | 30 | |
| Isophorone | 500 | 88.1 | " | 881 | ND | 56.7 | 10-132 | | 4.41 | 30 | |
| Naphthalene | 520 | 88.1 | " | 881 | ND | 59.0 | 10-141 | | 4.37 | 30 | |
| Nitrobenzene | 490 | 88.1 | " | 881 | ND | 55.7 | 10-131 | | 3.39 | 30 | |
| N-Nitrosodimethylamine | 820 | 88.1 | " | 881 | ND | 93.1 | 10-126 | | 5.51 | 30 | |
| N-nitroso-di-n-propylamine | 442 | 88.1 | " | 881 | ND | 50.2 | 10-125 | | 4.82 | 30 | |
| N-Nitrosodiphenylamine | 609 | 88.1 | " | 881 | ND | 69.2 | 10-177 | | 8.73 | 30 | |
| Pentachlorophenol | 475 | 88.1 | " | 881 | ND | 53.9 | 10-153 | | 2.06 | 30 | |
| Phenanthrene | 536 | 88.1 | " | 881 | ND | 60.9 | 10-148 | | 3.61 | 30 | |
| Phenol | 383 | 88.1 | " | 881 | ND | 43.5 | 10-126 | | 10.1 | 30 | |
| Pyrene | 538 | 88.1 | " | 881 | ND | 61.0 | 10-165 | | 8.89 | 30 | |
| Surrogate: SURR: 2-Fluorophenol | 807 | | " | 1760 | | 45.8 | 20-108 | | | | |
| Surrogate: SURR: Phenol-d5 | 791 | | " | 1760 | | 44.9 | 23-114 | | | | |
| Surrogate: SURR: Nitrobenzene-d5 | 483 | | " | 881 | | 54.9 | 22-108 | | | | |
| Surrogate: SURR: 2-Fluorobiphenyl | 512 | | " | 881 | | 58.1 | 21-113 | | | | |
| Surrogate: SURR: 2,4,6-Tribromophenol | 1380 | | " | 1760 | | 78.2 | 19-110 | | | | |
| Surrogate: SURR: Terphenyl-d14 | 564 | | " | 881 | | 64.0 | 24-116 | | | | |



Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11594 - EPA 3550C

Blank (BH11594-BLK1)

Prepared: 08/27/2021 Analyzed: 08/28/2021

| | | | | | | | | | | | |
|--|------|------|-----------|------|--|------|--------|--|--|--|--|
| 4,4'-DDD | ND | 1.64 | ug/kg wet | | | | | | | | |
| 4,4'-DDE | ND | 1.64 | " | | | | | | | | |
| 4,4'-DDT | ND | 1.64 | " | | | | | | | | |
| Aldrin | ND | 1.64 | " | | | | | | | | |
| alpha-BHC | ND | 1.64 | " | | | | | | | | |
| alpha-Chlordane | ND | 1.64 | " | | | | | | | | |
| beta-BHC | ND | 1.64 | " | | | | | | | | |
| delta-BHC | ND | 1.64 | " | | | | | | | | |
| Dieldrin | ND | 1.64 | " | | | | | | | | |
| Endosulfan I | ND | 1.64 | " | | | | | | | | |
| Endosulfan II | ND | 1.64 | " | | | | | | | | |
| Endosulfan sulfate | ND | 1.64 | " | | | | | | | | |
| Endrin | ND | 1.64 | " | | | | | | | | |
| Endrin aldehyde | ND | 1.64 | " | | | | | | | | |
| Endrin ketone | ND | 1.64 | " | | | | | | | | |
| gamma-BHC (Lindane) | ND | 1.64 | " | | | | | | | | |
| gamma-Chlordane | ND | 1.64 | " | | | | | | | | |
| Heptachlor | ND | 1.64 | " | | | | | | | | |
| Heptachlor epoxide | ND | 1.64 | " | | | | | | | | |
| Methoxychlor | ND | 1.64 | " | | | | | | | | |
| Toxaphene | ND | 1.64 | " | | | | | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 51.3 | | " | 66.4 | | 77.3 | 30-150 | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 58.1 | | " | 66.4 | | 87.5 | 30-150 | | | | |

LCS (BH11594-BS1)

Prepared: 08/27/2021 Analyzed: 08/28/2021

| | | | | | | | | | | | |
|--|------|------|-----------|------|--|------|--------|--|--|--|--|
| 4,4'-DDD | 32.9 | 1.64 | ug/kg wet | 33.2 | | 99.1 | 40-140 | | | | |
| 4,4'-DDE | 21.0 | 1.64 | " | 33.2 | | 63.2 | 40-140 | | | | |
| 4,4'-DDT | 21.1 | 1.64 | " | 33.2 | | 63.5 | 40-140 | | | | |
| Aldrin | 34.5 | 1.64 | " | 33.2 | | 104 | 40-140 | | | | |
| alpha-BHC | 30.2 | 1.64 | " | 33.2 | | 90.9 | 40-140 | | | | |
| alpha-Chlordane | 33.7 | 1.64 | " | 33.2 | | 101 | 40-140 | | | | |
| beta-BHC | 34.1 | 1.64 | " | 33.2 | | 103 | 40-140 | | | | |
| delta-BHC | 32.9 | 1.64 | " | 33.2 | | 98.9 | 40-140 | | | | |
| Dieldrin | 35.5 | 1.64 | " | 33.2 | | 107 | 40-140 | | | | |
| Endosulfan I | 41.0 | 1.64 | " | 33.2 | | 123 | 40-140 | | | | |
| Endosulfan II | 35.9 | 1.64 | " | 33.2 | | 108 | 40-140 | | | | |
| Endosulfan sulfate | 32.0 | 1.64 | " | 33.2 | | 96.2 | 40-140 | | | | |
| Endrin | 26.8 | 1.64 | " | 33.2 | | 80.7 | 40-140 | | | | |
| Endrin aldehyde | 34.4 | 1.64 | " | 33.2 | | 104 | 40-140 | | | | |
| Endrin ketone | 35.9 | 1.64 | " | 33.2 | | 108 | 40-140 | | | | |
| gamma-BHC (Lindane) | 32.5 | 1.64 | " | 33.2 | | 97.7 | 40-140 | | | | |
| gamma-Chlordane | 34.0 | 1.64 | " | 33.2 | | 102 | 40-140 | | | | |
| Heptachlor | 35.7 | 1.64 | " | 33.2 | | 108 | 40-140 | | | | |
| Heptachlor epoxide | 35.5 | 1.64 | " | 33.2 | | 107 | 40-140 | | | | |
| Methoxychlor | 21.3 | 1.64 | " | 33.2 | | 64.2 | 40-140 | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 55.4 | | " | 66.4 | | 83.4 | 30-150 | | | | |
| <i>Surrogate: Tetrachloro-m-xylene</i> | 60.6 | | " | 66.4 | | 91.3 | 30-150 | | | | |



Polychlorinated Biphenyls by GC/ECD - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11594 - EPA 3550C

Blank (BH11594-BLK2)

Prepared: 08/27/2021 Analyzed: 08/30/2021

| | | | | | | | | | | | |
|--------------|----|--------|-----------|--|--|--|--|--|--|--|--|
| Aroclor 1016 | ND | 0.0166 | mg/kg wet | | | | | | | | |
| Aroclor 1221 | ND | 0.0166 | " | | | | | | | | |
| Aroclor 1232 | ND | 0.0166 | " | | | | | | | | |
| Aroclor 1242 | ND | 0.0166 | " | | | | | | | | |
| Aroclor 1248 | ND | 0.0166 | " | | | | | | | | |
| Aroclor 1254 | ND | 0.0166 | " | | | | | | | | |
| Aroclor 1260 | ND | 0.0166 | " | | | | | | | | |
| Total PCBs | ND | 0.0166 | " | | | | | | | | |

| | | | | | | | | | | | |
|---------------------------------|--------|--|---|--------|--|------|--------|--|--|--|--|
| Surrogate: Tetrachloro-m-xylene | 0.0568 | | " | 0.0664 | | 85.5 | 30-120 | | | | |
| Surrogate: Decachlorobiphenyl | 0.0415 | | " | 0.0664 | | 62.5 | 30-120 | | | | |

LCS (BH11594-BS2)

Prepared: 08/27/2021 Analyzed: 08/30/2021

| | | | | | | | | | | | |
|---------------------------------|--------|--------|-----------|--------|--|------|--------|--|--|--|--|
| Aroclor 1016 | 0.314 | 0.0166 | mg/kg wet | 0.332 | | 94.5 | 40-130 | | | | |
| Aroclor 1260 | 0.308 | 0.0166 | " | 0.332 | | 92.7 | 40-130 | | | | |
| Surrogate: Tetrachloro-m-xylene | 0.0578 | | " | 0.0664 | | 87.0 | 30-120 | | | | |
| Surrogate: Decachlorobiphenyl | 0.0429 | | " | 0.0664 | | 64.5 | 30-120 | | | | |

Batch Y1H3036 - BH11551

Aroclor Reference (Y1H3036-ARC1)

Prepared & Analyzed: 08/30/2021

| | | | | | | | | | | | |
|---------------------------------|-------|--|-------|-------|--|------|--|--|--|--|--|
| Surrogate: Tetrachloro-m-xylene | 0.178 | | ug/mL | 0.200 | | 89.0 | | | | | |
| Surrogate: Decachlorobiphenyl | 0.174 | | " | 0.200 | | 87.0 | | | | | |



Metals by ICP - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11530 - EPA 3050B

Blank (BH11530-BLK1)

Prepared: 08/26/2021 Analyzed: 08/29/2021

| | | | | | | | | | | | |
|-----------|------|-------|-----------|--|--|--|--|--|--|--|--|
| Aluminum | ND | 5.00 | mg/kg wet | | | | | | | | |
| Antimony | ND | 2.50 | " | | | | | | | | |
| Arsenic | ND | 1.50 | " | | | | | | | | |
| Barium | ND | 2.50 | " | | | | | | | | |
| Beryllium | ND | 0.050 | " | | | | | | | | |
| Cadmium | ND | 0.300 | " | | | | | | | | |
| Calcium | 13.9 | 5.00 | " | | | | | | | | |
| Chromium | ND | 0.500 | " | | | | | | | | |
| Cobalt | ND | 0.400 | " | | | | | | | | |
| Copper | ND | 2.00 | " | | | | | | | | |
| Iron | ND | 25.0 | " | | | | | | | | |
| Lead | ND | 0.500 | " | | | | | | | | |
| Magnesium | ND | 5.00 | " | | | | | | | | |
| Manganese | ND | 0.500 | " | | | | | | | | |
| Nickel | ND | 1.00 | " | | | | | | | | |
| Potassium | ND | 5.00 | " | | | | | | | | |
| Selenium | ND | 2.50 | " | | | | | | | | |
| Silver | ND | 0.500 | " | | | | | | | | |
| Sodium | ND | 50.0 | " | | | | | | | | |
| Thallium | ND | 2.50 | " | | | | | | | | |
| Vanadium | ND | 1.00 | " | | | | | | | | |
| Zinc | 3.62 | 2.50 | " | | | | | | | | |

Duplicate (BH11530-DUP1)

*Source sample: 21H1138-02 (Duplicate)

Prepared: 08/26/2021 Analyzed: 08/29/2021

| | | | | | | | | | | | |
|-----------|-------|-------|-----------|--|-------|--|-------|--|----|--|--|
| Aluminum | 11800 | 5.39 | mg/kg dry | | 11900 | | 0.646 | | 35 | | |
| Antimony | ND | 2.69 | " | | ND | | | | 35 | | |
| Arsenic | 2.70 | 1.62 | " | | 2.44 | | 10.3 | | 35 | | |
| Barium | 67.1 | 2.69 | " | | 68.3 | | 1.78 | | 35 | | |
| Beryllium | ND | 0.054 | " | | ND | | | | 35 | | |
| Cadmium | ND | 0.323 | " | | ND | | | | 35 | | |
| Calcium | 13200 | 5.39 | " | | 9670 | | 31.0 | | 35 | | |
| Chromium | 20.7 | 0.539 | " | | 20.6 | | 0.278 | | 35 | | |
| Cobalt | 6.58 | 0.431 | " | | 7.29 | | 10.3 | | 35 | | |
| Copper | 20.7 | 2.15 | " | | 22.0 | | 6.21 | | 35 | | |
| Iron | 15000 | 26.9 | " | | 15100 | | 0.495 | | 35 | | |
| Lead | 38.7 | 0.539 | " | | 43.7 | | 12.2 | | 35 | | |
| Magnesium | 4110 | 5.39 | " | | 3450 | | 17.5 | | 35 | | |
| Manganese | 343 | 0.539 | " | | 376 | | 9.37 | | 35 | | |
| Nickel | 14.3 | 1.08 | " | | 15.0 | | 4.56 | | 35 | | |
| Potassium | 1220 | 5.39 | " | | 1320 | | 7.59 | | 35 | | |
| Selenium | ND | 2.69 | " | | ND | | | | 35 | | |
| Silver | ND | 0.539 | " | | ND | | | | 35 | | |
| Sodium | 674 | 53.9 | " | | 640 | | 5.17 | | 35 | | |
| Thallium | ND | 2.69 | " | | ND | | | | 35 | | |
| Vanadium | 26.5 | 1.08 | " | | 27.3 | | 2.92 | | 35 | | |
| Zinc | 51.6 | 2.69 | " | | 52.5 | | 1.58 | | 35 | | |



Metals by ICP - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting | Units | Spike | Source* | %REC | %REC | Limits | Flag | RPD | |
|-----------------------------------|--------|---|-----------|--------|---------|------|---|--------|-----------|-------|--------|
| | | Limit | | | | | | | | Level | Result |
| Batch BH11530 - EPA 3050B | | | | | | | | | | | |
| Matrix Spike (BH11530-MS1) | | *Source sample: 21H1138-02 (Matrix Spike) | | | | | Prepared: 08/26/2021 Analyzed: 08/29/2021 | | | | |
| Aluminum | 11300 | 5.39 | mg/kg dry | 215 | 11900 | NR | 75-125 | | Low Bias | | |
| Antimony | 10.9 | 2.69 | " | 26.9 | ND | 40.4 | 75-125 | | Low Bias | | |
| Arsenic | 221 | 1.62 | " | 215 | 2.44 | 101 | 75-125 | | | | |
| Barium | 308 | 2.69 | " | 215 | 68.3 | 111 | 75-125 | | | | |
| Beryllium | 5.25 | 0.054 | " | 5.39 | ND | 97.5 | 75-125 | | | | |
| Cadmium | 5.79 | 0.323 | " | 5.39 | ND | 107 | 75-125 | | | | |
| Calcium | 9870 | 5.39 | " | 108 | 9670 | 184 | 75-125 | | High Bias | | |
| Chromium | 41.3 | 0.539 | " | 21.5 | 20.6 | 95.9 | 75-125 | | | | |
| Cobalt | 67.5 | 0.431 | " | 53.9 | 7.29 | 112 | 75-125 | | | | |
| Copper | 52.6 | 2.15 | " | 26.9 | 22.0 | 114 | 75-125 | | | | |
| Iron | 14400 | 26.9 | " | 108 | 15100 | NR | 75-125 | | Low Bias | | |
| Lead | 101 | 0.539 | " | 53.9 | 43.7 | 106 | 75-125 | | | | |
| Magnesium | 3400 | 5.39 | " | 108 | 3450 | NR | 75-125 | | Low Bias | | |
| Manganese | 415 | 0.539 | " | 53.9 | 376 | 72.1 | 75-125 | | Low Bias | | |
| Nickel | 76.5 | 1.08 | " | 53.9 | 15.0 | 114 | 75-125 | | | | |
| Potassium | 1330 | 5.39 | " | 108 | 1320 | 9.38 | 75-125 | | Low Bias | | |
| Selenium | 182 | 2.69 | " | 215 | ND | 84.3 | 75-125 | | | | |
| Silver | 5.33 | 0.539 | " | 5.39 | ND | 99.0 | 75-125 | | | | |
| Sodium | 752 | 53.9 | " | 108 | 640 | 104 | 75-125 | | | | |
| Thallium | 210 | 2.69 | " | 215 | ND | 97.2 | 75-125 | | | | |
| Vanadium | 82.8 | 1.08 | " | 53.9 | 27.3 | 103 | 75-125 | | | | |
| Zinc | 109 | 2.69 | " | 53.9 | 52.5 | 105 | 75-125 | | | | |
| Post Spike (BH11530-PS1) | | *Source sample: 21H1138-02 (Post Spike) | | | | | Prepared: 08/26/2021 Analyzed: 08/29/2021 | | | | |
| Aluminum | 113 | | ug/mL | 2.00 | 111 | 133 | 75-125 | | High Bias | | |
| Antimony | 0.302 | | " | 0.250 | 0.004 | 119 | 75-125 | | | | |
| Arsenic | 2.10 | | " | 2.00 | 0.023 | 104 | 75-125 | | | | |
| Barium | 2.91 | | " | 2.00 | 0.634 | 114 | 75-125 | | | | |
| Beryllium | 0.049 | | " | 0.0500 | -0.007 | 97.5 | 75-125 | | | | |
| Cadmium | 0.054 | | " | 0.0500 | 0.0006 | 107 | 75-125 | | | | |
| Calcium | 91.2 | | " | 1.00 | 89.7 | 152 | 75-125 | | High Bias | | |
| Chromium | 0.403 | | " | 0.200 | 0.191 | 106 | 75-125 | | | | |
| Cobalt | 0.637 | | " | 0.500 | 0.068 | 114 | 75-125 | | | | |
| Copper | 0.497 | | " | 0.250 | 0.204 | 117 | 75-125 | | | | |
| Iron | 140 | | " | 1.00 | 140 | NR | 75-125 | | Low Bias | | |
| Lead | 0.964 | | " | 0.500 | 0.406 | 112 | 75-125 | | | | |
| Magnesium | 32.9 | | " | 1.00 | 32.0 | 88.3 | 75-125 | | | | |
| Manganese | 4.04 | | " | 0.500 | 3.49 | 109 | 75-125 | | | | |
| Nickel | 0.724 | | " | 0.500 | 0.139 | 117 | 75-125 | | | | |
| Potassium | 13.3 | | " | 1.00 | 12.2 | 111 | 75-125 | | | | |
| Selenium | 1.70 | | " | 2.00 | -0.136 | 84.9 | 75-125 | | | | |
| Silver | 0.055 | | " | 0.0500 | 0.0002 | 110 | 75-125 | | | | |
| Sodium | 7.08 | | " | 1.00 | 5.94 | 114 | 75-125 | | | | |
| Thallium | 1.97 | | " | 2.00 | -0.043 | 98.6 | 75-125 | | | | |
| Vanadium | 0.800 | | " | 0.500 | 0.253 | 109 | 75-125 | | | | |
| Zinc | 1.03 | | " | 0.500 | 0.487 | 109 | 75-125 | | | | |



Metals by ICP - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11530 - EPA 3050B

Reference (BH11530-SRM1)

Prepared: 08/26/2021 Analyzed: 08/29/2021

| | | | | | | | | | | | |
|-----------|-------|-------|-----------|-------|--|------|------------|-----------|--|--|--|
| Aluminum | 9700 | 5.00 | mg/kg wet | 8130 | | 119 | 50.1-150.2 | | | | |
| Antimony | 77.9 | 2.50 | " | 134 | | 58.2 | 22.2-254.5 | | | | |
| Arsenic | 169 | 1.50 | " | 156 | | 108 | 88.9-130.2 | | | | |
| Barium | 276 | 2.50 | " | 239 | | 115 | 74.6-124.6 | | | | |
| Beryllium | 196 | 0.050 | " | 169 | | 116 | 75.2-125.5 | | | | |
| Cadmium | 158 | 0.300 | " | 137 | | 115 | 74.8-124.4 | | | | |
| Calcium | 5270 | 5.00 | " | 4760 | | 111 | 72.7-127.3 | | | | |
| Chromium | 169 | 0.500 | " | 154 | | 110 | 70.1-129.9 | | | | |
| Cobalt | 144 | 0.400 | " | 121 | | 119 | 75.1-125.3 | | | | |
| Copper | 65.4 | 2.00 | " | 54.9 | | 119 | 74.8-124.5 | | | | |
| Iron | 15100 | 25.0 | " | 14100 | | 107 | 37.2-162.9 | | | | |
| Lead | 144 | 0.500 | " | 130 | | 111 | 68.8-131.4 | | | | |
| Magnesium | 2570 | 5.00 | " | 2320 | | 111 | 62.1-137.9 | | | | |
| Manganese | 331 | 0.500 | " | 269 | | 123 | 74.9-125.1 | | | | |
| Nickel | 76.4 | 1.00 | " | 53.9 | | 142 | 70-130.2 | High Bias | | | |
| Potassium | 2290 | 5.00 | " | 2020 | | 113 | 59.5-141 | | | | |
| Selenium | 142 | 2.50 | " | 167 | | 85.0 | 68-132.6 | | | | |
| Silver | 34.5 | 0.500 | " | 33.6 | | 103 | 67.2-133.2 | | | | |
| Sodium | 153 | 50.0 | " | 133 | | 115 | 35.8-164.2 | | | | |
| Thallium | 116 | 2.50 | " | 112 | | 104 | 66-134.1 | | | | |
| Vanadium | 65.7 | 1.00 | " | 62.6 | | 105 | 67.4-132.1 | | | | |
| Zinc | 172 | 2.50 | " | 158 | | 109 | 69.9-129.8 | | | | |



Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-----------|-------------|----------------|------|-------------|------|-----|---------------------------------|------|
| Batch BH11497 - EPA 7473 soil | | | | | | | | | | | |
| Blank (BH11497-BLK1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared & Analyzed: 08/26/2021 | |
| Mercury | ND | 0.0300 | mg/kg wet | | | | | | | | |
| Duplicate (BH11497-DUP1) | | | | | | | | | | | |
| *Source sample: 21H1045-09 (Duplicate) | | | | | | | | | | Prepared & Analyzed: 08/26/2021 | |
| Mercury | ND | 0.0306 | mg/kg dry | | 0.0337 | | | | | | 35 |
| Matrix Spike (BH11497-MS1) | | | | | | | | | | | |
| *Source sample: 21H1045-09 (Matrix Spike) | | | | | | | | | | Prepared & Analyzed: 08/26/2021 | |
| Mercury | 0.468 | | mg/kg | 0.500 | 0.0330 | 87.0 | 75-125 | | | | |
| Reference (BH11497-SRM1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared & Analyzed: 08/26/2021 | |
| Mercury | 25.312 | | mg/kg | 27.2 | | 93.1 | 59.9-140.1 | | | | |



Wet Chemistry Parameters - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---|--------|-----------------|-----------|-------------|----------------|------|-------------|----------|-----|---|------|
| Batch BH11290 - EPA SW846-3060 | | | | | | | | | | | |
| Blank (BH11290-BLK1) | | | | | | | | | | Prepared: 08/24/2021 Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | ND | 0.500 | mg/kg wet | | | | | | | | |
| Duplicate (BH11290-DUP1) *Source sample: 21H1047-03 (B-3) | | | | | | | | | | Prepared: 08/24/2021 Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | ND | 0.603 | mg/kg dry | | ND | | | | | | 35 |
| Matrix Spike (BH11290-MS1) *Source sample: 21H1047-03 (B-3) | | | | | | | | | | Prepared: 08/24/2021 Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 7.72 | 0.603 | mg/kg dry | 24.1 | ND | 32.0 | 75-125 | Low Bias | | | |
| Matrix Spike (BH11290-MS2) *Source sample: 21H1047-03 (B-3) | | | | | | | | | | Prepared: 08/24/2021 Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 4.87 | 0.603 | mg/kg dry | 24.1 | ND | 20.2 | 75-125 | Low Bias | | | |
| Reference (BH11290-SRM1) | | | | | | | | | | Prepared: 08/24/2021 Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 99.3 | | mg/L | 109 | | 91.1 | 30-169.7 | | | | |
| Batch BH11372 - EPA SW846-3060 | | | | | | | | | | | |
| Blank (BH11372-BLK1) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | ND | 0.500 | mg/kg wet | | | | | | | | |
| Duplicate (BH11372-DUP1) *Source sample: 21H1075-01 (Duplicate) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | ND | 0.535 | mg/kg dry | | ND | | | | | | 35 |
| Matrix Spike (BH11372-MS1) *Source sample: 21H1075-01 (Matrix Spike) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 16.8 | 0.535 | mg/kg dry | 21.4 | ND | 78.4 | 75-125 | | | | |
| Matrix Spike (BH11372-MS2) *Source sample: 21H1075-01 (Matrix Spike) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 16.8 | 0.535 | mg/kg dry | 21.4 | ND | 78.4 | 75-125 | | | | |



Wet Chemistry Parameters - Quality Control Data
York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|--|--------|-----------------|-----------|-------------|----------------|------|--------------|------|-----|---------------------------------|------|
| Batch BH11372 - EPA SW846-3060 | | | | | | | | | | | |
| Reference (BH11372-SRM1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Chromium, Hexavalent | 89.5 | | mg/L | 109 | | 82.1 | 30-169.7 | | | | |
| Batch BH11421 - Analysis Preparation Soil | | | | | | | | | | | |
| Blank (BH11421-BLK1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Cyanide, total | ND | 0.500 | mg/kg wet | | | | | | | | |
| Duplicate (BH11421-DUP1) | | | | | | | | | | | |
| *Source sample: 21H1045-09 (Duplicate) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Cyanide, total | ND | 0.511 | mg/kg dry | | ND | | | | | | 15 |
| Matrix Spike (BH11421-MS1) | | | | | | | | | | | |
| *Source sample: 21H1045-09 (Matrix Spike) | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Cyanide, total | 9.61 | 0.511 | mg/kg dry | 10.2 | ND | 94.1 | 79.6-107 | | | | |
| Reference (BH11421-SRM1) | | | | | | | | | | | |
| | | | | | | | | | | Prepared & Analyzed: 08/25/2021 | |
| Cyanide, total | 110 | | ug/mL | 91.9 | | 119 | 42.22-159.96 | | | | |



Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source* Result | %REC | %REC Limits | Flag | RPD | RPD Limit | Flag |
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|
|---------|--------|-----------------|-------|-------------|----------------|------|-------------|------|-----|-----------|------|

Batch BH11515 - % Solids Prep

| | | | | | | | | | | | | |
|---------------------------------|--|-------|---|--|------|--|---------------------------------|--|-------|----|--|--|
| Duplicate (BH11515-DUP1) | *Source sample: 21H1213-05 (Duplicate) | | | | | | Prepared & Analyzed: 08/26/2021 | | | | | |
| % Solids | 95.0 | 0.100 | % | | 94.4 | | | | 0.656 | 20 | | |



Volatile Analysis Sample Containers

| Lab ID | Client Sample ID | Volatile Sample Container |
|------------|------------------|-----------------------------------|
| 21H1047-01 | B-1 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-02 | B-2 | 40mL 01_Clear Vial Cool to 4° C |
| 21H1047-03 | B-3 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-04 | B-4 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-05 | B-5 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-06 | B-6 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-07 | B-7 | 40mL Vial with Stir Bar-Cool 4° C |
| 21H1047-08 | B-8 | 40mL Vial with Stir Bar-Cool 4° C |

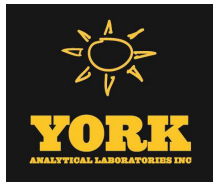


Sample and Data Qualifiers Relating to This Work Order

| | |
|--------|---|
| S-08 | The recovery of this surrogate was outside of QC limits. |
| QR-03 | The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values. |
| QR-02 | The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. |
| QM-07 | The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. |
| QM-05 | The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data are acceptable. |
| QL-02 | This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature. |
| M-SPKM | The spike recovery is not within acceptance windows due to sample non-homogeneity, or matrix interference. |
| M-ICV1 | The recovery for this element in the Initial Calibration Verification (ICV) exceeded 110% of the expected value. Positive detections may be biased high. |
| J | Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration. |
| ICV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during initial calibration verification (recovery exceeded 30% of expected value). |
| E | The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate. |
| CCV-E | The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit). |
| B | Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. |

Definitions and Other Explanations

| | |
|-------------|--|
| * | Analyte is not certified or the state of the samples origination does not offer certification for the Analyte. |
| ND | NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL) |
| RL | REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve. |
| LOQ | LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses. |
| LOD | LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW -846. |
| MDL | METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods. |
| Reported to | This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only. |
| NR | Not reported |
| RPD | Relative Percent Difference |
| Wet | The data has been reported on an as-received (wet weight) basis |



- Low Bias** Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias** High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir.** Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

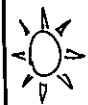
If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.



York Analytical Laboratories, Inc.
 120 Research Drive 132-02 89th Ave
 Stratford, CT 06615 Queens, NY 11418
 clientservices@yorklab.com
 www.yorklab.com

Field Chain-of-Custody Record

NOTE: YORK's Standard Terms & Conditions are listed on the back side of this document.
 This document serves as your written authorization for YORK to proceed with the analyses requested below.
 Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.
 21H1047

Page 1 of 1

| | | | | | | | | | |
|---|---|---|------------------------------------|-------------------------|--|----------------------------|--|-------------------------|--|
| YOUR INFORMATION | | Report To: | | Invoice To: | | YOUR Project Number | | Turn-Around Time | |
| Company: Tectonic Engineering | Company: Tectonic Engineering | Company: Tectonic Engineering | Company: Tectonic Engineering | 11078.01 | | RUSH - Next Day | | RUSH - Next Day | |
| Address: 70 Pleasant Hill Road | Address: 70 Pleasant Hill Road | Address: 70 Pleasant Hill Road | Address: 70 Pleasant Hill Road | Mountainville, NY 10953 | | RUSH - Two Day | | RUSH - Two Day | |
| Phone: 845-534-5959 | Phone: 845-534-5959 | Phone: 845-534-5959 | Phone: 845-534-5959 | Mountainville, NY 10953 | | RUSH - Three Day | | RUSH - Three Day | |
| Contact: Chris Callinan | Contact: Chris Callinan | Contact: Chris Callinan | Contact: Accounts Payable | Mountainville, NY 10953 | | RUSH - Four Day | | RUSH - Four Day | |
| E-mail: CCallinan@tectonicengineering.com | E-mail: CCallinan@tectonicengineering.com | E-mail: CCallinan@tectonicengineering.com | E-mail: AP@tectonicengineering.com | Mountainville, NY 10953 | | Standard (5-7 Day) | | Standard (5-7 Day) | |

| | | | | | |
|---------------------------|--|------------------|--|--|--|
| YOUR Project Name | | YOUR PO#: | | YORK Reg. Comp. | |
| Twin Towers Middle School | | 178258 | | Compared to the following Regulation(s): | |
| | | | | NI Part 375 | |

| Matrix Codes | Samples From | Report / EDD Type (circle selections) | Analysis Requested | Container Description |
|---------------------|--------------|---------------------------------------|--|-----------------------|
| S - soil / solid | New York | CT RCP | VOC, SVOC, PCBs/Pesticides, TAL metals (plays cyanide, mercury, and hex. chromium) | VOC = VOA vials |
| GW - groundwater | New Jersey | Standard Exce EDD | | |
| DW - drinking water | Connecticut | CT RCP DQADUE EQUIS (Standard) | | |
| WW - wastewater | Pennsylvania | NJDEP Reduced | | |
| O - Oil | Other | Deliverables | | |
| | | NJDEP SRP HazSite | | |
| | | Other: | | |
| | | NJDKQP | | |

| Sample Identification | Sample Matrix | Date/Time Sampled | Date/Time Relinquished by / Company | Date/Time Received by / Company | Temp. Received at Lab |
|-----------------------|---------------|-------------------|-------------------------------------|---------------------------------|-----------------------|
| B-1 | S | 8/20/11 0830 | Chris York 8/20/11 10:30 | 8/20/11 15:15 | 2.4 |
| B-2 | S | 0900 | | | |
| B-3 | S | 0930 | | | |
| B-4 | S | 1000 | | | |
| B-5 | S | 1030 | | | |
| B-6 | S | 1100 | | | |
| B-7 | S | 1130 | | | |
| B-8 | S | 1200 | | | |

Comments:

1. Samples Relinquished by / Company: Chris York 8/20/11 10:30

2. Samples Relinquished by / Company: Chris York 8/20/11 15:15

3. Samples Received by / Company: Chris York 8/20/11 15:15

4. Samples Received by / Company: Minkh Regrade 8/20/11 15:15

Preservation: (check all that apply)
 HCl ___ MeOH ___ X ___ HNO3 ___ H2SO4 ___ NaOH ___
 ZnAc ___ Ascorbic Acid ___ Other: Ice ___

**BID FORM CONTRACT NO. G1 - GENERAL CONSTRUCTION WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL**

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for General Construction Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

ALTERNATE NO. S1: PLAY AREAS (FIELD AND COURTS)

ADD _____ Dollars (\$ _____)

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R4: CORRIDOR WALL TILE AND WOOD TRIM (SHPO)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES**

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given:

Unit Price No. 5 - Asphalt Pavement: All work required for provision of full depth asphalt pavement, for the unit price per square foot:

Dollars (\$ _____)

(Name of Bidder)

Unit Price No. 6 - Concrete Sidewalk: All work required for provision of full depth concrete sidewalk, for the unit price per square foot:

_____ Dollars (\$ _____)

Unit Price No. 7 - Concrete Curb: All work required for provision of concrete curb, for the unit price per linear foot:

_____ Dollars (\$ _____)

Unit Price No. 8 - Removal and Replacement of Unsuitable Soil: All work required for removal and disposal of unsuitable soil and replacement with structural fill, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

Unit Price No. 9 - Soil Remediation: All work required for providing soil remediation (removal and disposal) - ash, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

Unit Price No. 10 - Clean Crushed Stone: All work required for providing 2" clean crushed stone, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

Unit Price No. 11 - Item 4 Subbase: All work required for providing Item 4 subbase, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

Unit Price No. 12 - Construction Fencing: All work required for providing construction fencing beyond what is shown, for the unit price per linear foot yard of:

_____ Dollars (\$ _____)

Unit Price No. 19 - Slate Window Stools Replacement: All work required for replacing slate window stools, for the unit price per each stool of:

_____ Dollars (\$ _____)

Unit Price No. 20 - Window Shades Replacement: All work required for replacing single roller window shades, for the unit price per square foot of:

_____ Dollars (\$ _____)

Unit Price No. 21 - Plaster and Lath Repair at Wall: All work required for repairing plaster and lath wall finish, for the unit price per square foot of:

(Name of Bidder)

Dollars (\$ _____)

Unit Price No. 22 - Plaster and Lath Repair at Ceiling: All work required for repairing plaster and lath ceiling finish, for the unit price per square foot of:

Dollars (\$ _____)

Unit Price No. 23 - CMU Wall Infill: All work required for 8" reinforced, fully grouted CMU wall infill, for the unit price per each square foot of:

Dollars (\$ _____)

Unit Price No. 24 - Concrete Slab Repair for Openings 0" to 4" in Diameter: All work required for repairing concrete slab openings 0" to 4" in diameter, for the unit price per opening of:

Dollars (\$ _____)

Unit Price No. 25 - Concrete Slab Repair for Openings 4" to 12" in Diameter: All work required for repairing concrete slab openings 4" to 12" in diameter, for the unit price per opening of:

Dollars (\$ _____)

Unit Price No. 26 - Concrete Slab Repair for Openings 12" to 16" in Diameter: All work required for repairing concrete slab openings 12" to 16" in diameter, for the unit price per opening of:

Dollars (\$ _____)

Unit Price No. 27 - Roof Deck Infill: All work required for roof deck infill, for the unit price per each square foot of:

Dollars (\$ _____)

Unit Price No. 28 - Temporary Type 1 Wall: All work required for temporary Type 1 wall (one hour fire rated), for the unit price per each square foot of:

Dollars (\$ _____)

Unit Price No. 30 - Terrazzo Replacement: All work required for replacing terrazzo flooring, for the unit price per square foot of:

Dollars (\$ _____)

Unit Price No. 31 - Terrazzo Base Replacement: All work required for replacing terrazzo base, for the unit price per linear foot of:

Dollars (\$ _____)

Unit Price No. 32 - Control Joint Installation: All work required for installing control joints in flooring, for the unit price per linear foot of:

(Name of Bidder)

Dollars (\$ _____)

Unit Price No. 33 - VCT Replacement: All work required for replacing VCT flooring, for the unit price per square foot of:

Dollars (\$ _____)

Unit Price No. 34 - ACT and Grid Replacement: All work required for replacing ACT and grid, for the unit price per square foot of:

Dollars (\$ _____)

Unit Price No. 35 - ACT Tile Replacement: All work required for replacing ACT tile, for the unit price per carton of:

Dollars (\$ _____)

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

(Name of Bidder)

If a Corporation
Name

Address

_____, PRESIDENT _____
_____, SECRETARY _____
_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G2 - ABATEMENT WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Abatement Work:

\$ _____ (In numbers)

_____ Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES**

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given:

Unit Price No. 1 - Abatement of Floor Tile and Underlying Mastic: All work required for abatement of floor tile and underlying mastic, for the unit price per square foot of:

_____ Dollars (\$ _____)

Unit Price No. 2 - Abatement of Glazing Compound: All work required for abatement of glazing compound, for the unit price per linear foot of:

_____ Dollars (\$ _____)

Unit Price No. 3 - Abatement of Exterior Window Caulking and Sealants: All work required for abatement of exterior window caulking and sealants, for the unit price per linear foot of:

_____ Dollars (\$ _____)

(Name of Bidder)

Unit Price No. 4 - Re-Mobilization Outside of Base Bid Work: All work required for re-mobilization outside of Base Bid work, for the unit price per occurrence of:

_____ Dollars (\$ _____)

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership

(Name of Bidder)

Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G3 - MASONRY WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

- 1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
- 2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
- 3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
- 4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
- 5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
- 6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Masonry Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES** - none

9. **UNIT PRICES**

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given:

Unit Price No. 13 - Repointing Brick Masonry: All work required for repointing brick masonry, for the unit price per 10 square feet of:

_____ Dollars (\$ _____)

Unit Price No. 14 - Repointing Stone Masonry: All work required for repointing stone masonry, for the unit price per 10 square feet of:

_____ Dollars (\$ _____)

Unit Price No. 15 - Replacing Brick Masonry: All work required for replacing brick masonry, for the unit price per each brick of:

_____ Dollars (\$ _____)

Unit Price No. 16 - Replacing Expansion Joint Material: All work required for replacing expansion joint material, for the unit price per linear foot of:

_____ Dollars (\$ _____)

Unit Price No. 17 - Clean Masonry: All work required for cleaning masonry, for the unit price per each 10 square feet of:

_____ Dollars (\$ _____)

Unit Price No. 18 - Replacing Lintels (4" x 3" x 5/16", 5' to 6' long): All work required for replacing lintels, for the unit price per each lintel of:

_____ Dollars (\$ _____)

Unit Price No. 23 - CMU Wall Infill: All work required for 8" reinforced, fully grouted CMU wall infill, for the unit price per each square foot of:

_____ Dollars (\$ _____)

(Name of Bidder)

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

(Name of Bidder)

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G4 - STEEL WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Steel Work:

\$ _____ (In numbers)

Dollars
(in words)

- 8. **ALTERNATES** - none
- 9. **UNIT PRICES** - none
- 10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

(Name of Bidder)

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G5 - ROOFING WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Roofing Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

**BID FORM CONTRACT NO. G6 - WINDOWS WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL**

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Windows Work:

\$ _____ (In numbers)

Dollars
(in words)

- 8. **ALTERNATES** - none
- 9. **UNIT PRICES** - none
- 10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

(Name of Bidder)

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G7 - FLOORING WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Flooring Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. A2: CORRIDOR TERRAZZO

ADD _____ Dollars (\$ _____)

ALTERNATE NO. A3: CAFETERIA TERRAZZO (CAFETERIA, SERVERY AND CORRIDOR C111)

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES**

(Name of Bidder)

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given:

Unit Price No. 29 - Wood Floor Refinishing: All work required for refinishing existing wood flooring, for the unit price per square foot of:

_____ Dollars (\$ _____)

Unit Price No. 30 - Terrazzo Replacement: All work required for replacing terrazzo flooring, for the unit price per square foot of:

_____ Dollars (\$ _____)

Unit Price No. 31 - Terrazzo Base Replacement: All work required for replacing terrazzo base, for the unit price per linear foot of:

_____ Dollars (\$ _____)

Unit Price No. 32 - Control Joint Installation: All work required for installing control joints in flooring, for the unit price per linear foot of:

_____ Dollars (\$ _____)

Unit Price No. 33 - VCT Replacement: All work required for replacing VCT flooring, for the unit price per square foot of:

_____ Dollars (\$ _____)

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

(Name of Bidder)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature _____ Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G8 - TILE WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Tile Work:

\$ _____ (In numbers)

_____ Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R4: CORRIDOR WALL TILE AND WOOD TRIM (SHPO)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. G9 - PAINTING WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Painting Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

**BID FORM CONTRACT NO. FS1 - FOOD SERVICE EQUIPMENT WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL**

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Food Service Equipment Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

(Name of Bidder)

Name and title of signer (please type)

Signature _____ Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. FP1 - FIRE PROTECTION WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Fire Protection Work:

\$ _____ (In numbers)

_____ Dollars
(in words)

- 8. **ALTERNATES** - none
- 9. **UNIT PRICES** - none
- 10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

(Name of Bidder)

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. P1 - PLUMBING WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Plumbing Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. M1 - MECHANICAL WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

- 1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
- 2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
- 3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
- 4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
- 5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
- 6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

| <u>Addendum Number</u> | <u>Date of Addendum</u> |
|------------------------|-------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Mechanical Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

BID FORM CONTRACT NO. E1 - ELECTRICAL WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Electrical Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. A1: CENTRAL PREP FITOUT

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R1: PRE-ENGINEERING (TECH) AREA A RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R2: PRE-ENGINEERING (TECH) AREA C RENOVATIONS

ADD _____ Dollars (\$ _____)

ALTERNATE NO. R3: WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G)

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES** - none

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit
- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security

(Name of Bidder)

- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix
corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

If an Individual
Name of Individual

Address

(Name of Bidder)

If a Limited Liability Company (LLC)
Name of Members

Address

**BID FORM CONTRACT NO. L1 - SITE DEVELOPMENT PLAYFIELD AND COURTYARD WORK
FOR
ADDITIONS AND ALTERATIONS TO TWIN TOWERS MIDDLE SCHOOL**

Enlarged City School District of Middletown
District Administration Office
223 Wisner Road
Middletown, New York 10940
Attention: Mr. Michael Tuttle, Assistant Superintendent for Administration

1. The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
3. In submitting this Bid, the Undersigned agrees:
 - a. To hold the Bid open for forty-five (45) days after Bid Opening.
 - b. To accept the provisions of the Instructions to Bidders.
 - c. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
 - d. To commence the Work immediately upon receipt of Notice of Award.
4. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 - "Summary" and in the Project Milestone Schedule following Section 011000.
5. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
6. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number

Date of Addendum

7. **BASE BID**

(Name of Bidder)

All labor, material, services and equipment necessary for completion of the Work shown on the Drawings and the Technical Specifications for Site Development Playfield and Courtyard Work:

\$ _____ (In numbers)

Dollars
(in words)

8. **ALTERNATES**

The Undersigned agrees to provide all work in accordance with the requirements of the Specifications and the Drawings and includes all costs of related coordination, modification, or adjustment for the following:

ALTERNATE NO. S1: PLAY AREAS (FIELD AND COURTS)

ADD _____ Dollars (\$ _____)

ALTERNATE NO. S2: COURTYARD IMPROVEMENTS

ADD _____ Dollars (\$ _____)

9. **UNIT PRICES**

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given:

Unit Price No. 8 - Removal and Replacement of Unsuitable Soil: All work required for removal and disposal of unsuitable soil and replacement with structural fill, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

Unit Price No. 9 - Soil Remediation: All work required for providing soil remediation (removal and disposal) - ash, for the unit price per cubic yard of:

_____ Dollars (\$ _____)

10. **ALLOWANCES** - none

The Undersigned has attached the following documents to this Bid:

- a. Certificate of Compliance with the Iran Divestment Act
- b. Non-Collusion Affidavit

(Name of Bidder)

- c. Enlarged City School District of Middletown - Twin Towers - Bid Package Diversification Documents
- d. Sexual Harassment Policy and Training Certification
- e. Bid Security
- f. Statement of Bidder's Qualifications AIA Document A305, including Exhibits A, B, C, and D.

Legal name of person, partnership, joint venture, limited liability company, or corporation (please type)

(If corporation, affix corporate seal)

Address (please type)

Federal ID No. or Social Security No. (please type)

Phone No. (please type)

FAX No. (please type)

Name and title of signer (please type)

Signature

Date

If a Corporation
Name

Address

_____, PRESIDENT _____

_____, SECRETARY _____

_____, TREASURER _____

If a Partnership
Name of Partners

Address

If a Joint Venture
Name of Members

Address

(Name of Bidder)

If an Individual
Name of Individual

Address

If a Limited Liability Company (LLC)
Name of Members

Address

CERTIFICATION OF COMPLIANCE WITH THE IRAN DIVESTMENT ACT

As a result of the Iran Divestment Act of 2012 (the "Act"), Chapter 1 of the 2012 Laws of New York, a new provision has been added to State Finance Law (SFL) § 165-a and New York General Municipal Law § 103-g, both effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law) (the "Prohibited Entities List"). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date at which time it will be posted on the OGS website.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder/Contractor, any person signing on behalf of any Bidder/Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder/Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to SFL § 165-a(3)(b).

Additionally, Bidder/Contractor is advised that once the Prohibited Entities List is posted on the OGS Website, any Bidder/Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the School District receive information that a Bidder/Contractor is in violation of the above-referenced certification, the School District will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he/she/it has ceased engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the School District shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the Bidder/Contractor in default. The School District reserves the right to reject any bid or request for assignment for a Bidder/Contractor that appears on the Prohibited Entities List prior to the award of a contract and to pursue a responsibility review with respect to any Bidder/Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

I, _____, being duly sworn, deposes and says that
he/she is the _____ of the _____ Corporation
and that neither the Bidder/ Contractor nor any proposed subcontractor is identified on the Prohibited Entities List.

SIGNED: _____

SWORN to before me this _____ day of _____ 202_____

Notary Public: _____

OR

DECLARATION OF BIDDER'S INABILITY TO PROVIDE CERTIFICATION OF COMPLIANCE
WITH THE IRAN DIVESTMENT ACT

Bidders shall complete this form if they cannot certify that the bidder /contractor or any proposed subcontractor is not identified on the Prohibited Entities List. The District reserves the right to undertake any investigation into the information provided herein or to request additional information from the bidder.

Name of the Bidder: _____

Address of Bidder _____

Has bidder been involved in investment activities in Iran? _____

Describe the type of activities including but not limited to the amounts and the nature of the investments (e.g. banking, energy, real estate): _____

If so, when did the first investment activity occur? _____

Have the investment activities ended? _____

If so, what was the date of the last investment activity? _____

If not, have the investment activities increased or expanded since April 12, 2012? _____

Has the bidder adopted, publicized, or implemented a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran? _____

If so, provide the date of the adoption of the plan by the bidder and proof of the adopted resolution, if any and a copy of the formal plan. _____

In detail, state the reasons why the bidder cannot provide the Certification of Compliance with the Iran Divestment Act below (additional pages may be attached): _____

I, _____ being duly sworn, deposes and says that he/she is the
_____ of the _____ Corporation and
the foregoing is true and accurate.

SIGNED

SWORN to before me this _____ day of _____ 202_____

Notary Public: _____

NON-COLLUSION AFFIDAVIT

By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of the party's knowledge and belief:

1. the prices in this Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices, with any other Bidder or with any competitor,
2. unless otherwise required by law, the prices that have been quoted in this Bid have not been knowingly disclosed by the Bidder, and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
3. no attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a Bid for the purpose of restricting competition

I, hereby affirm under the penalties of perjury that the foregoing statement is true.

Dated: _____ Signed _____

(Print Name)

(Title)

December 14, 2023
Construction Documents
SED No. 44-10-00-01-0-001-041

Enlarged City School District of Middletown
Twin Towers Middle School
Additions and Alterations

**ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN - TWIN TOWERS BID PACKAGE
DIVERSIFICATION DOCUMENTS**

See the following page(s) for the instructions and the forms required to be submitted with the Bids

Please note that the instructions for the forms indicate that Bidders are to utilize the Excel form and e-mail to the ICO, but this is not correct. As per the Instructions to Bidders, fill in the Excel form, print it out, and include all of the Bid Package Diversification Documents in printed format with the Bid Form.

NOTE: The Excel worksheet for preparing bids is available as a download from the REV plan room site for the bid documents for the convenience of all bidders, whether downloading electronic copies or picking up paper copies of the Bid Documents, for use in preparing the required attachments to the bid form.



Development and Diversification Plan for Workforce and Business

Instructions for Enlarged City School District of Middletown (ECSDM) Utilization Plan Form

The ECSDM Utilization Plan must be completed by the Prime Contractor

Page 1

PRIME INFORMATION: Please select company service category. Enter full name of company, address, contact person, email address and contact phone number.

PROJECT INFORMATION: Please enter the Contract/Bid dollar amount.

Enter the MBE goal dollar value.

Enter the WBE goal dollar value.

Enter the LOCAL BUSINESS goal dollar value.

Enter the name of the school and/or the building if separate from the school.

Enter the address, city, county and zip code.

Enter a brief description of the work to be completed.

PROPOSED MWBE/LOCAL BUSINESS UTILIZATION: Complete and submit original Excel MWBE/LOCAL BUSINESS Utilization spreadsheet included as part of the diversity document package. See instructions for Page 2.

WORKFORCE GOAL PLAN FOR MINORITY AND FEMALE: You will need to submit a descriptive narrative for your firm and for **each subcontractor** that will contribute towards goal achievement. **Information provided must include: the name of the contractor/sub-contractor, the trade, the projected workforce utilization for minority and female workers.** *Workforce plan should be submitted on subcontractor letterhead.*

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form.

Principal or Officer must sign and date this form.

Page 2

Please utilize the Excel version of page 2 and submit the original with your plan.

List ALL subcontractors and suppliers that you plan to utilize during the performance of this contract.

Enter the complete firm name, a brief work description, the value of the proposed subcontractor contract, the name of the contact person, the telephone number of the contact person, the email address of the contact person, complete address of the firm. Please include the estimated start date for the work this firm will perform, and whether they are an MBE firm, a WBE firm, a Local Business, or other firm. If additional space is needed, please contact Landon & Rian Enterprise.



Development and Diversification Plan for Workforce and Business

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form

Principal or Officer must sign and date this form.

Page 3 – Standard Equal Opportunity Policy Statement

Indicate whether you are a Prime Contractor or Prime Consultant.

Enter the full name of the firm, the complete address, city, state and zip code.

Enter the name of the person to be contacted regarding the Utilization Form and their telephone number. This person should be prepared to answer questions regarding this plan.

Enter the name of the school and/or the building if separate from the school.

Enter the address, city, county and zip code.

Enter a brief description of the work to be completed.

Enter the full name of the firm completing this Plan in each of the spaces provided.

Page 4 – MWBE/LOCAL BUSINESS and EEO Contract Goals

Please enter initials of the person completing this form for MWBE/Local Business and EEO Contract Goals

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form.

Principal or Officer must sign and date this form.

Page 5 - Request for Waiver

Please indicate whether this is a request for a total waiver, a partial waiver or N/A because the goals are met.

Enter the % waiver requested from MBE goals.

Enter the % waiver requested from WBE goals.

Enter the % waiver requested from the LOCAL BUSINESS goals.



Development and Diversification Plan for Workforce and Business

1. Enter your statement of justification to support the request for a waiver of the goal requirements established by the Contract Documents. If additional space is needed, please contact Landon & Rian Enterprises.
2. Follow the guidelines on page 6. Provide proof for each guideline in an item-by-item format following the numerical sequence. DO NOT LEAVE ANY UNDOCUMENTED ITEMS. Failure to adequately document and respond to each item will result in your request for waiver being rejected. "Good Faith Effort" documentation will be verified by the ICO.

Submit the complete Utilization Plan and all supporting documentation to:

Landon & Rian Enterprises, Inc.

Ldickerson@landonrian.com, pwilkerson@landonrian.com, tmarshall@landonrian.com and sbeaumont@landonrian.com



UTILIZATION PLAN

ORIGINAL Submission

REVISED Submission

A. PRIME INFORMATION: CONTRACTOR

CONSULTANT

Name:

Address:

Contact Person:

City:

Email:

State:

Zip:

Phone #:

PROJECT INFORMATION:

Contract/Bid Amount: \$

MBE Goal = 9% \$

WBE Goal = 6% \$

Local Business Goal = 5% \$

School/Building(s) Name:

Address:

City:

County:

Zip:

Work Description:

B. PROPOSED MWBE UTILIZATION:

Complete and submit original Excel MWBE/Local Business Utilization spreadsheet included as part of the diversity document package. See example on page 2.

C. WORKFORCE GOAL PLAN FOR MINORITY AND FEMALE

Please describe plans to meet the 30% Minority and Female ECSDM Goal.

You will need to submit a descriptive narrative for your firm and for **each subcontractor** that will contribute towards goal achievement. Information provided must include: the name of the contractor/sub-contractor, the trade, the projected workforce utilization for minority and female workers.

Please see the example below. **Workforce plan should be submitted on subcontractor letterhead.**

Name of Firm: ABC Construction

Trade: drywall, painting, etc.

Workforce:

- 7 full time (40 hour per week) and 1 part time (25 hours per week) minority employees
- 3 full time (40 hour per week) non-minority female employees
- 2 full time (40 hour per week) minority female employees

Type Name of Principal or Officer

Type Title of Principal or Officer

Date

D. STANDARD EQUAL OPPORTUNITY POLICY STATEMENT

PRIME INFORMATION: CONTRACTOR CONSULTANT

Name:

Address:

City:

State:

Zip:

Contact Person:

Telephone:

PROJECT INFORMATION:

School/Building(s) Name:

Address:

City:

County:

Zip:

Work Description:

The following is a statement of _____'s commitment to provide participation by minority persons and women in the workforce at the above referenced project:

Will ensure and maintain a working environment free of harassment, intimidation and coercion and shall specifically ensure that all foremen, superintendents and other supervisory personnel are aware of and carry out our commitment to maintain such a working environment.

Will establish and maintain a current list of minority and women recruitment sources and notify such sources and minority and community organizations when employment opportunities are available and maintain a record of the sources and organizations' responses.

Will maintain a file of the names and address of each minority person and woman referred to it by any individual, recruitment source or community organization and of what action was taken with respect to each such referred individual. If the individual was not employed, the file will contain the reasons.

Will disseminate this equal employment opportunity policy statement within the organization and will provide all subcontractors with a copy, discussing it with them prior to commencing work at the job site. A copy of our equal employment policy shall be posted at the job site at all times.

Please initial below in acknowledgment of the individual participation goals per the Enlarged City School District of Middletown Diversification Plan.

MWBE Contract Goals

- 5% Local Business Enterprise Participation
- 9% Minority Business Enterprise Participation
- 6% Women's Business Enterprise Participation

EEO Contract Goals

- 20% Minority Labor Force Participation
- 10% Female Labor Force Participation

Type Name of Principal or Officer

Type Title of Principal or Officer

Signature of Principal or Officer

Date

E. REQUEST FOR WAIVER

TOTAL WAIVER

PARTIAL WAIVER

N/A – GOALS ARE MET

MBE Waiver (%) Requested

WBE Waiver (%) Requested

Local Business Waiver (%) Requested

NOTE: On Enlarged City School District of Middletown (ECSDM) Contracts, the overall goal percentages are applied to the entire contract dollar value. Therefore, if a waiver is requested for an individual work order, it is your responsibility to make up the shortfall on future work orders in order to maintain the overall MWBE goal percentage for the contract. In addition, your firm should maintain a record of the MWBE goal attainment for the overall contract which may be requested by the ICO at any given time. Failure to do so may jeopardize the award of future work orders.

1. Provide a statement of justification to support the request for a waiver of the goal requirements established by the Contract Documents.

2. "Good Faith Effort" Guidelines

The following guidelines must be used for the preparation of ALL "good faith effort" documentation. The responses to the information in the Guidelines should be given in an item-by-item format following the numerical sequence as presented and accompany the Utilization Plan. "Good Faith Effort" documentation will be verified by the ICO.

IF YOU FAIL TO ADEQUATELY DOCUMENT AND RESPOND TO EACH ITEM ON THE GOOD FAITH EFFORT GUIDELINES, THE REQUEST FOR WAIVER WILL BE DEEMED NON-RESPONSIVE, INCOMPLETE AND WILL BE REJECTED.

For Office Use Only

Independent Compliance Officer Name

Signature of ICO

Date

GOOD FAITH EFFORT GUIDELINES

1. Attach a copy of the completed Utilization Plan in accordance with MWBE/Local Business goals established in the Contract Documents.
2. Submit a written request for a list of trade and/or service specific Local Businesses and MWBE's, certified by Empire State Development, from the Independent Compliance Officer for subcontracting and procurement opportunities.
3. Contact all Empire State Development certified MWBE's posted in the list of certified subcontractors and suppliers posted on the New York State website: <https://ny.newnycontracts.com/>
4. Provide a record of advertisements placed in general circulation, trade and minority and women oriented publications. Include the name of publications and dates of advertisements.
5. Submit documentation that clearly demonstrates that you contacted all the MWBE/Local Businesses identified through the outreach activities outlined above to determine their capacity to perform the applicable scope of work. Include in your documentation a listing of the outreach measures, the results of your outreach and the responses received.
6. Provide a record of ALL written solicitations made to Local Businesses and Empire State Development certified minority and women-owned business enterprises obtained from the directory of certified businesses and/or the outreach efforts specified above. Include dates and copies of solicitations made.
7. Provide a record of ALL responses received from Local Businesses and Empire State Development certified minority or women owned business enterprises to any such advertisements and solicitations made. Include dates and copies of any written responses.
8. Provide a list of any pre-bid, pre-award, or other meetings attended with Local Businesses and Empire State Development certified minority or women owned businesses.
9. List the efforts undertaken to subdivide portions of the work into smaller components in order to increase Local Business and Empire State Development certified minority and women-owned business enterprise participation.
10. Did your firm seek additional assistance from the Independent Compliance Officer ? If yes, please provide supportive documentation of your interaction.
11. Provide a description of all relevant contract documents, plans or specifications, or documents describing the scope of work which was made available to Local Businesses and Empire State Development certified minority and women-owned business enterprises for the purpose of soliciting their bids. Include the dates and manner in which these documents were made available.
12. Were the same subcontract terms and conditions offered to Local Businesses and Empire State Development certified minority and women-owned business enterprises as those offered in the ordinary course of business and to other subcontractors?
13. Did you negotiate with Local Businesses and Empire State Development certified MWBE firms whose quotes originally submitted were deemed as too high? Provide written documentation, including the schedule of values, detailing this interaction.
14. Has your firm made payments for work performed by Local Businesses and Empire State Development certified minority and women-owned business enterprises in a timely fashion for past work and/or past projects so as to facilitate continued performance by the certified businesses?
15. List any special considerations and/or concerns, which are preventing adequate Local Businesses and Empire State Development certified minority and women-owned business enterprises to participate?
16. Have you successfully met or exceeded MWBE/Local Business goals on another project? Provide detailed documentation. If not, please explain in detail including the project name, location, goals, actual MWBE/Local Business participation and reasons goals were not achieved.

SEXUAL HARASSMENT POLICY AND TRAINING CERTIFICATION

I, _____, being duly sworn, deposes and
(Name of Individual Signing this Certification)

says that I am the _____ of the _____
(Title/Position of Signer) (Name of Bidder)

and that by submission of this bid, I certify on behalf of the above-named bidder, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the above-named bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. I certify on behalf of the above-named bidder/proposer, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that such policy, at a minimum, meets the requirements of Section 201-g of the New York State Labor Law.

By: _____
Signature

Title

Sworn to before me this
_____ day of _____, 20____

Notary Public

Commission Expires: _____

 **AIA**® Document A310™ – 2010**Bid Bond****CONTRACTOR:***(Name, legal status and address)***SURETY:***(Name, legal status and principal place of business)***OWNER:***(Name, legal status and address)*

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

BOND AMOUNT: \$**PROJECT:**

Additions and Alterations at Twin Towers Middle School
112 Grand Avenue
Middletown, NY 10940
SED #44-10-00-01-0-001-041

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

ADDITIONS AND DELETIONS:

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Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

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User Notes:

(1668757082)

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this day of ,

(Witness)

(Witness)

(Contractor as Principal)

(Seal)

(Title)

(Surety)

(Seal)

(Title)

Init.

/

 **AIA[®] Document A305™ – 2020****Contractor's Qualification Statement**

USE ADDITIONAL SHEETS IF THERE IS INSUFFICIENT SPACE PROVIDED IN THIS FORM OR AN EXHIBIT TO SUPPLY A COMPLETE ANSWER TO THE QUESTION.

SUBMITTED BY:

(Organization name and address.)

SUBMITTED TO:

(Organization name and address.)

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

TYPE OF WORK TYPICALLY PERFORMED

(Indicate the type of work your organization typically performs, such as general contracting, construction manager as constructor services, HVAC contracting, electrical contracting, plumbing contracting, or other.)

THIS CONTRACTOR'S QUALIFICATION STATEMENT INCLUDES THE FOLLOWING:

(Check all that apply.)

- Exhibit A – General Information
- Exhibit B – Financial and Performance Information
- Exhibit C – Project-Specific Information
- Exhibit D – Past Project Experience - Provide the required information on a separate sheet if there is insufficient space to provide complete answers on the Exhibit.
- Exhibit E – Past Project Experience (Continued)

CONTRACTOR CERTIFICATION

The undersigned certifies under oath that the information provided in this Contractor's Qualification Statement is true and sufficiently complete so as not to be misleading.

Organization's Authorized Representative Signature

Date

Printed Name and Title

NOTARY

State of:

County of:

Signed and sworn to before me this day of

Notary Signature

My commission expires:

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AIA[®] Document A305[™] – 2020 Exhibit A

General Information

This Exhibit is part of the Contractor’s Qualification Statement, submitted by _____ and dated the _____ day of _____ in the year _____.
(In words, indicate day, month and year.)

§ A.1 ORGANIZATION

§ A.1.1 Name and Location

§ A.1.1.1 Identify the full legal name of your organization.

§ A.1.1.2 List all other names under which your organization currently does business and, for each name, identify jurisdictions in which it is registered to do business under that trade name.

§ A.1.1.3 List all prior names under which your organization has operated and, for each name, indicate the date range and jurisdiction in which it was used.

§ A.1.1.4 Identify the address of your organization’s principal place of business and list all office locations out of which your organization conducts business. If your organization has multiple offices, you may attach an exhibit or refer to a website.

§ A.1.2 Legal Status

§ A.1.2.1 Identify the legal status under which your organization does business, such as sole proprietorship, partnership, corporation, limited liability corporation, joint venture, or other.

- .1 If your organization is a corporation, identify the state in which it is incorporated, the date of incorporation, and its four highest-ranking corporate officers and their titles, as applicable.
- .2 If your organization is a partnership, identify its partners and its date of organization.
- .3 If your organization is individually owned, identify its owner and date of organization.

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- 4 If the form of your organization is other than those listed above, describe it and identify its individual leaders:

§ A.1.2.2 Does your organization own, in whole or in part, any other construction-related businesses? If so, identify and describe those businesses and specify percentage of ownership.

§ A.1.3 Other Information

§ A.1.3.1 How many years has your organization been in business?

§ A.1.3.2 How many full-time employees work for your organization?

§ A.1.3.3 List your North American Industry Classification System (NAICS) codes and titles. Specify which is your primary NAICS code.

§ A.1.3.4 Indicate whether your organization is certified as a governmentally recognized special business class, such as a minority business enterprise, woman business enterprise, service disabled veteran owned small business, woman owned small business, small business in a HUBZone, or a small disadvantaged business in the 8(a) Business Development Program. For each, identify the certifying authority and indicate jurisdictions to which such certification applies.

§ A.2 EXPERIENCE

§ A.2.1 Complete Exhibit D to describe all projects, either completed within the last 10 years or in progress, that are representative of your organization's experience and capabilities relevant to this Project.

§ A.2.2 State your organization's total dollar value of work currently under contract.

§ A.2.3 Of the amount stated in Section A.2.2, state the dollar value of work that remains to be completed:

§ A.2.4 State your organization's average annual dollar value of construction work performed during the last five years.

§ A.3 CAPABILITIES

§ A.3.1 List the categories of work that your organization typically self-performs.

§ A.3.2 Identify qualities, accreditations, services, skills, or personnel that you believe differentiate your organization from others.

§ A.3.3 Does your organization provide design collaboration or pre-construction services? If so, describe those services.

§ A.3.4 Does your organization use building information modeling (BIM)? If so, describe how your organization uses BIM and identify BIM software that your organization regularly uses.

§ A.3.5 Does your organization use a project management information system? If so, identify that system.

§ A.4 REFERENCES

§ A.4.1 Identify three client references:

(Insert name, organization, and contact information)

§ A.4.2 Identify three architect references:

(Insert name, organization, and contact information)

§ A.4.3 Identify one bank reference:

(Insert name, organization, and contact information)

§ A.4.4 Identify three subcontractor or other trade references:

(Insert name, organization, and contact information)



AIA[®] Document A305™ – 2020 Exhibit B

Financial and Performance Information

This Exhibit is part of the Contractor’s Qualification Statement, submitted by _____ and dated the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

§ B.1 FINANCIAL

§ B.1.1 Federal tax identification number:

§ B.1.2 Attach financial statements for the last three years prepared in accordance with Generally Accepted Accounting Principles, including your organization’s latest balance sheet and income statement. Also, indicate the name and contact information of the firm that prepared each financial statement.

§ B.1.3 Has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, been the subject of any bankruptcy proceeding within the last ten years?

§ B.1.4 Identify your organization’s preferred credit rating agency and identification information.
(Identify rating agency, such as Dun and Bradstreet or Equifax, and insert your organization’s identification number or other method of searching your organization’s credit rating with such agency.)

§ B.2 DISPUTES AND DISCIPLINARY ACTIONS

§ B.2.1 Are there any pending or outstanding judgments, arbitration proceedings, bond claims, or lawsuits against your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A, Section 1.2, in which the amount in dispute is more than \$75,000?
(If the answer is yes, provide an explanation.)

§ B.2.2 In the last five years has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management:
(If the answer to any of the questions below is yes, provide an explanation.)

.1 failed to complete work awarded to it on time in compliance with the project schedule?

.2 had work taken over by an owner?

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- .3 had an owner file a notice of intent to declare a contractor default, notice of claim of other notice with your organization's performance bond surety?
- .4 been terminated for any reason except for an owner's convenience?
- .5 had any judgments, settlements, or awards pertaining to a construction project in which your organization was responsible for more than \$75,000?
- .6 filed any lawsuits, claims or requested mediation or arbitration regarding a construction project?
- .7 disputed the contents of a completion list of punch list and failed to complete the listed work?
- .8 refused or failed to complete warranty work related to a construction project?

§ B.2.3 In the last five years, has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management; or any of the individuals listed in Exhibit A Section 1.2:
(If the answer to any of the questions below is yes, provide an explanation.)

- .1 been convicted of, or indicted for, a business-related crime?
- .2 been determined not to be a responsible bidder by any public corporation, school district or BOCES?
- .3 had any business or professional license subjected to disciplinary action?
- .4 been penalized or fined by a state or federal environmental agency?



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Document A305™ – 2020 Exhibit C

Project Specific Information

This Exhibit is part of the Contractor’s Qualification Statement, submitted by _____ and dated the _____ day of _____ in the year _____.
(In words, indicate day, month and year.)

PROJECT:

(Name and location or address.)

CONTRACTOR’S PROJECT OFFICE:

(Identify the office out of which the contractor proposes to perform the work for the Project.)

TYPE OF WORK SOUGHT

(Indicate the type of work you are seeking for this Project, such as general contracting, construction manager as constructor, design-build, HVAC subcontracting, electrical subcontracting, plumbing subcontracting, etc.)

CONFLICT OF INTEREST

Describe any conflict of interest your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A Section 1.2, may have regarding this Project.

§ C.1 PERFORMANCE OF THE WORK

§ C.1.1 When was the Contractor’s Project Office established?

§ C.1.2 How many full-time field and office staff are respectively employed at the Contractor’s Project Office?

§ C.1.3 List the business license and contractor license or registration numbers for the Contractor’s Project Office that pertain to the Project.

§ C.1.4 Identify key personnel from your organization who will be meaningfully involved with work on this Project and indicate (1) their position on the Project team, (2) their office location, (3) their expertise and experience, and (4) projects similar to the Project on which they have worked.

ADDITIONS AND DELETIONS:

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§ C.1.5 Identify portions of work that you intend to self-perform on this Project.

§ C.1.6 To the extent known, list the subcontractors you intend to use for major portions of work on the Project.

§ C.2 EXPERIENCE RELATED TO THE PROJECT

§ C.2.1 Complete Exhibit D to describe up to four projects performed by the Contractor's Project Office, either completed or in progress, that are relevant to this Project, such as projects in a similar geographic area or of similar project type.

§ C.2.2 State the total dollar value of work currently under contract at the Contractor's Project Office:

§ C.2.3 Of the amount stated in Section C.2.2, state the dollar value of work that remains to be completed:

§ C.2.4 State the average annual dollar value of construction work performed by the Contractor's Project Office during the last five years.

§ C.2.5 List the total number of projects the Contractor's Project Office has completed in the last five years and state the dollar value of each of the three largest contracts the Contractor's Project Office has completed during that time.

§ C.3 SAFETY PROGRAM AND RECORD

§ C.3.1 Does the Contractor's Project Office have a written safety program?

§ C.3.2 List all safety-related citations and penalties the Contractor's Project Office has received in the last three years.

§ C.3.3 Attach the Contractor's Project Office's OSHA 300a Summary of Work-Related Injuries and Illnesses form for the last three years.

§ C.3.4 Attach a copy of your insurance agent's verification letter for your organization's current workers' compensation experience modification rate and rates for the last three years.

§ C.4 INSURANCE

§ C.4.1 Attach current certificates of insurance for your commercial general liability policy, umbrella insurance policy, and professional liability insurance policy, if any. Identify deductibles or self-insured retentions for your commercial general liability policy.

§ C.4.2 If requested, will your organization be able to provide property insurance for the Project written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis?

§ C.4.3 Does your commercial general liability policy contain any exclusions or restrictions of coverage that conflict with the insurance requirements for the Project? If so, identify.

§ C.5 SURETY

(Paragraphs deleted)

§ C.5.1 Modified AIA A312-310 Performance and Payment Bonds are required for this Project; will your organization be able to provide those required bonds for this Project?

§ C.5.2 Surety company name:

§ C.5.3 Surety agent name and contact information:

§ C.5.4 Total bonding capacity:

§ C.5.5 Available bonding capacity as of the date of this qualification statement:



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Document A305™ – 2020 Exhibit D

Contractor's Past Project Experience

| | 1 | 2 | 3 | 4 |
|--------------------------------|---|---|---|---|
| PROJECT NAME | | | | |
| PROJECT LOCATION | | | | |
| PROJECT TYPE | | | | |
| OWNER | | | | |
| ARCHITECT | | | | |
| CONTRACTOR'S PROJECT EXECUTIVE | | | | |
| KEY PERSONNEL (include titles) | | | | |
| PROJECT DETAILS | Contract Amount Completion Date % Self-Performed Work | Contract Amount Completion Date % Self-Performed Work | Contract Amount Completion Date % Self-Performed Work | Contract Amount Completion Date % Self-Performed Work |
| PROJECT DELIVERY METHOD | <input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other: | <input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other: | <input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other: | <input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other: |
| SUSTAINABILITY CERTIFICATIONS | | | | |



AIA[®] Document A132[™] – 2019

Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

AGREEMENT made as of the ____ day of _____ in the year Two Thousand Twenty-Two
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

and the Contractor:
(Name, legal status, address, and other information)

for the following Project:
(Name, location, and detailed description)

The Construction Manager:
(Name, legal status, address, and other information)

The Architect:
(Name, legal status, address, and other information)

KG+D Architects, PC
285 Main Street
Mount Kisco, NY 10549

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232[™]–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132[™]–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132[™]–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser. AIA Document A232[™]–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

TABLE OF ARTICLES

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| 9 | ENUMERATION OF CONTRACT DOCUMENTS <i>(Paragraphs deleted)</i> |

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, the Bidding Documents, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9. The Contractor represents that it has fully reviewed the Contract Documents and agrees that the Contract Documents describe, to the best of the Contractor's knowledge, the Work necessary to furnish and provide (and that the Contractor shall furnish and provide) a fully functioning Project consistent with the Contract Documents.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, or reasonably inferable by the Contractor as necessary to produce the results intended by the Contract Documents, for the Work under Contract #_____, except as specifically indicated in the Contract Documents to be the responsibility of others. It is the intent of the parties to include within the Work any and all labor, materials, equipment and services that, although not expressly indicated in the Contract Documents, are reasonably inferable therefrom to construct complete and workable systems for the satisfactory performance, execution, final completion and use of the Work and Project.

ARTICLE 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

Init.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work. The provisions of this Contract relating to the time for performance and completion of the Work are of the essence of this Contract. Accordingly, time is of the essence respecting the Contract Documents and all obligations thereunder.

§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:

(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

All of the Contractors for the Project shall achieve Substantial Completion of the Work in accordance with the schedule set forth in the Project Manual.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of all of the Contractors for the Project are to be completed prior to Substantial Completion of the entire Work of all of the Contractors for the Project, the Contractors shall achieve Substantial Completion of such portions by the following dates:

| Portion of Work | Substantial Completion Date |
|-----------------|-----------------------------|
|-----------------|-----------------------------|

§ 3.4 When the Work of this Contract, or any Portion Thereof, is Substantially Complete

§ 3.4.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall substantially complete the entire Work of this Contract:

(Check one of the following boxes and complete the necessary information.)

Not later than () calendar days from the date of commencement of the Work.

By the following date:

§ 3.4.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of this Contract are to be substantially complete prior to when the entire Work of this Contract shall be substantially complete, the Contractor shall substantially complete such portions by the following dates:

| Portion of Work | Date to be substantially complete |
|-----------------|-----------------------------------|
|-----------------|-----------------------------------|

§ 3.4.3 Time is of the essence in the performance of the Contract Documents, including, without limitation, the Substantial Completion dates established herein. The Contractor shall proceed expeditiously with adequate forces and shall use its best efforts to keep its Work and the Project on schedule, and the Contractor shall achieve the completion times established within the Contract Documents. Milestone dates set forth in the Construction Schedule are dates critical to the Owner's operations that establish when the Work or a part thereof is to commence and be complete. All milestone dates are of the essence.

§ 3.4.4 If the Contractor fails to substantially and finally complete the Work of this Contract, or portions thereof, as provided in Section 3.4 herein and the Milestone Schedule in the Project Manual, liquidated damages shall be assessed as set forth in Section 4.3 herein and Section 8.3.6.1 of the AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, as modified (the "General Conditions" or "AIA Document A232–2019").

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:

(Check the appropriate box.)

Stipulated Sum, in accordance with Section 4.2 below

Cost of the Work plus the Contractor's Fee, in accordance with Section 4.3 below

[] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below.)

§ 4.2 Stipulated Sum

§ 4.2.1 The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2.1.1 The Stipulated Sum shall not be adjusted for increased labor or material costs, whether foreseen or unforeseen, which may occur between the date of this Agreement and the Commencement Date, or which may occur between the Commencement Date and the Substantial Completion Date or Dates set forth in this Agreement.

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum:

| Item | Price |
|------|-------|
|------|-------|

§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

| Item | Price | Conditions for Acceptance |
|------|-------|---------------------------|
|------|-------|---------------------------|

§ 4.2.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

| Item | Price |
|------|-------|
|------|-------|

§ 4.2.4 Unit prices, if any:
(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

| Item | Units and Limitations | Price per Unit (\$0.00) |
|------|-----------------------|-------------------------|
|------|-----------------------|-------------------------|

§ 4.3 Liquidated Damages. The Contractor recognizes that achieving Substantial Completion of the Work in accordance with the time limits set forth in this Agreement and as further set forth in the Project Manual and/or Bidding Documents is a material condition of this Agreement, and that if the Contractor fails to achieve Substantial Completion of the Work, or designated parts thereof, in accordance with such schedule, the Owner will incur damages as a result. The Owner and Contractor agree that the amount of such damages is difficult to ascertain with any precision. Because of the difficulty of ascertaining all resulting and corresponding damages, it is hereby agreed that the Contractor shall be assessed in the amounts provided in Section 8.3.6.1 of the General Conditions for each day the Project, or a specific Work item, is not substantially complete after expiration of the Contract Time for Substantial Completion, and for each day the Project is not finally complete after the expiration of the Contract Time for final completion.

§ 4.3.1 The Contractor acknowledges that the liquidated damages amounts set forth in Section 8.3.6.1 of the General Conditions represent a fair and reasonable estimate of the Owner's probable losses, damages and/or expenses, and are not a penalty, for late completion of the Work and the phases thereof.

§ 4.3.2 The
(Paragraphs deleted)

Owner shall be entitled to offset any liquidated damages owed by the Contractor against any amounts owing by the Owner to the Contractor.

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§ 4.3.3 The Owner's right to liquidated damages shall survive abandonment of the Work by the Contractor and the Owner's termination of the Contract.

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and upon certification of the Project Application and Project Certificate for Payment or Application for Payment and Certificate for Payment by the Construction Manager and Architect and issuance by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.

§ 5.1.3 Provided that an acceptable Application for Payment, including all required lien waivers and certified payroll, is received by the Construction Manager not later than the 15th day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the last day of the next month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the amount certified shall be made by the Owner not later than 45 days after the Construction Manager receives the Application for Payment.

§ 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ 5.1.4.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Construction Manager and Architect may require. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.4.2 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. All progress payments made previous to the last and final payment shall be based on estimates and the right is hereby reserved by the Architect for the Owner to make all due and proper corrections in any payment for any previous error.

§ 5.1.4.3 In accordance with AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, as modified, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;

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- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019, as modified;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Owner, Construction Manager or Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019, as modified; and
- .5 Retainage withheld pursuant to Section 5.1.7.

(Paragraphs deleted)

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Five percent (5%)

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

None.

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to when the entire Work of this Contract is substantially complete, including modifications for completion of portions of the Work as provided in Section 3.4.2, insert provisions for such modifications.)

No retainage reduction prior to Substantial Completion of the entire Work.

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, when the Work of this Contract is substantially complete, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted when the Work of this Contract is substantially complete shall not include retainage as follows:

(Insert any other conditions for release of retainage when the Work of this Contract is substantially complete, or upon Substantial Completion of the Work of all Contractors on the Project or portions thereof.)

Upon Substantial Completion of the Work, the payment shall be less two times the value of any remaining Work to be completed as the Construction Manager recommends and the Architect determines for incomplete Work and an amount necessary to satisfy any claims, liens or judgments against the Contractor that have not been suitably discharged.

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, as modified, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect; and
- .3 the Contractor has fully performed and complied with the final payment and closeout provisions of the Project Manual.

§ 5.2.1.2 In addition to other required items, including but not limited to those required under Section 9.10 of the General Conditions, the final Application for Payment must be accompanied by the following, all in form and substance satisfactory to the Owner and in compliance with applicable law:

- .1 permanent certificate(s) of occupancy or use issued by the appropriate governmental authority;
- .2 all maintenance and operating manuals;

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- .3 marked sets of field drawings and specifications reflecting "as-built" conditions;
- .4 reproducible Mylar drawings reflecting the location of any concealed utilities, mechanical and electrical systems, and their components;
- .5 assignments of all guarantees and warranties to the Contractor from Subcontractors, materialmen, vendors, or manufacturers, together with a list of their names, addresses, telephone numbers, and corresponding guarantees and warranties from each; and
- .6 all other information and materials required to comply with the requirements of the Contract Documents or reasonably requested by the Owner, Architect, or Construction Manager.

(Paragraphs deleted)

§ 5.2.1.3 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment.

§ 5.3 Payments due and unpaid under the Contract shall bear interest from the date payment is due
(Paragraphs deleted)
 in accordance with Section 106-b(1)(b) of the New York State General Municipal Law.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232-2019,
(Paragraphs deleted)
 as modified.

§ 6.2 Binding Dispute Resolution

For any Claim, dispute or other matter in controversy arising out of or related to the Contract, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

Arbitration pursuant to Article 15 of AIA Document A232-2019.

Litigation in a court of competent jurisdiction located in Orange County, New York.

Other: *(Specify)*

(Paragraphs deleted)

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 Where the Contract Sum is a Stipulated Sum

§ 7.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232-2019, as modified.

(Paragraphs deleted)

§ 7.1.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232-2019, as modified.

(Paragraphs deleted)

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232-2019, as modified, or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

William Bartlett
 Enlarged City School District of Middletown
 223 Wisner Avenue
 Middletown, NY 10940

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in the Insurance Rider (Specifications Section 007002) of the Project Manual and Article 11 Insurance and Bonds of the General Conditions.

§ 8.5.2 The Contractor shall provide bonds as set forth in Bond Rider (Specifications Section 006100) and Bonding Company Rating Requirements (Specification Section 006101) of the Project Manual, and Article 11 Insurance and Bonds of the General Conditions.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A232–2019, as modified, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they will endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

§ 8.7 Intentionally omitted.

§ 8.8 Other provisions:

§ 8.8.1 The Contractor represents and warrants the following to the Owner (in addition to any other representations and warranties contained in the Contract Documents) as an inducement to the Owner to execute this Agreement, which representations and warranties shall survive the execution and delivery of this Agreement, any termination of this Agreement and the final completion of the Work:

- .1 that it and its Subcontractors are financially solvent, able to pay all debts as they mature and possessed of sufficient working capital to complete the Work and perform all obligations hereunder;
- .2 that it is able to furnish the plant, tools, materials, supplies, equipment, and labor required to complete the Work and perform its obligations hereunder;
- .3 that it is authorized to do business in the State of New York and the United States and properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the Project;
- .4 that its execution of this Agreement and its performance thereof is within its duly authorized powers;
- .5 that its duly authorized representative has visited the site of the Project, is familiar with the local and special conditions under which the Work is to be performed and has correlated on-site observations with the requirements of the Contact Documents; and
- .6 that it possesses a high level of experience and expertise in the business administration, construction, construction management and superintendence or projects of the size, complexity and nature of the particular Project, and that it will perform the Work with the care, skill and diligence of such a contractor.

The foregoing warranties are in addition to, and not in lieu of, any and all other liability imposed upon the Contractor by law with respect to the Contractor's duties, obligations, and performance hereunder. The Contractor's liability hereunder shall survive the Owner's final acceptance of and payment for the Work. All representations and warranties set forth in this Agreement, including without limitation, this Section 8.8.1, shall survive the final completion of the Work or the earlier termination of this Agreement. The Contractor acknowledges that the Owner is relying upon the Contractor's skill and experience in connection with the Work called for hereunder.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition
- .2 Bidding Documents
- .3 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, as modified
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

N/A

- .5 Drawings

| Number | Title | Date |
|--------|-------|------|
|--------|-------|------|

- .6 Specifications

| Section | Title | Date | Pages |
|---------|-------|------|-------|
|---------|-------|------|-------|

- .7 Addenda, if any:

| Number | Date | Pages |
|--------|------|-------|
|--------|------|-------|

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

AIA Document A132™–2019, Exhibit B, Determination of the Cost of the Work

AIA Document E235™–2019, Sustainable Projects Exhibit, Construction Manager as Adviser Edition, dated as indicated below:
(Insert the date of the E235-2019 incorporated into this Agreement.)

The Sustainability Plan:

| Title | Date | Pages |
|-------|------|-------|
|-------|------|-------|

Supplementary and other Conditions of the Contract:

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| Document | Title | Date | Pages |
|----------|-------|------|-------|
|----------|-------|------|-------|

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232–2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor’s bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

- .1 All documents listed in Article 1 of this Agreement
- .2 All documents in the Project Manual not included in the list in Article 1 of this Agreement, including, without limitation, New York State Prevailing Wage Rates

This Agreement is entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

(Printed name and title)

(Printed name and title)



AIA[®] Document A312™ – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Enlarged City School District of Middletown
223 Wisner Avenue, Middletown, NY 10940

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

Additions and Alterations at Twin Towers Middle School
112 Grand Avenue
Middletown, NY 10940
SED #44-10-00-01-0-001-041

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Performance Bond.)

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:**OWNER'S REPRESENTATIVE:**

(Architect, Engineer or other party:)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corporate Seal)

Signature: _____

Name and Title: _____

Address: _____

SURETY

Company: _____ (Corporate Seal)

Signature: _____

Name and Title: _____

Address: _____



AIA[®] Document A312[™] – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Enlarged City School District of Middletown
223 Wisner Avenue, Middletown, NY 10940

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

Additions and Alterations at Twin Towers Middle School
112 Grand Avenue
Middletown, NY 10940
SED #44-10-00-01-0-001-041

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Payment Bond.)

Signature: _____

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

SURETY

Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____



AIA® Document A232® – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:

(Name, and location or address)

THE CONSTRUCTION MANAGER:

(Name, legal status, and address)

Triton Construction Company, LLC
30 East 33rd Street, 11th Floor
New York, NY 10016

THE OWNER:

(Name, legal status, and address)

Enlarged City School District of Middletown
223 Wisner Avenue
Middletown, NY 10940

THE ARCHITECT:

(Name, legal status, and address)

KG+D Architects, PC
285 Main Street
Mount Kisco, NY 10549

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter, the "Agreement"), and consist of the Bidding Documents (including, but not limited to, Invitations to Bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of the addenda relating to bidding requirements), the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction (hereinafter, the "Contract"). The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

§ 1.1.2.1 Where the term "Agreement," "Contract" or "Prime Contract" is used in these General Conditions, and other Contract Documents, it shall mean the separate Owner-Contractor Agreement between the Owner and each Prime Contractor identified in Conditions of the Contract (General, Supplementary and other conditions).

§ 1.1.2.2 The Contractor acknowledges and warrants that it has closely examined all the Contract Documents, that they are suitable and sufficient to enable the Contractor to complete the Work in a timely manner for the Contract Sum, and that they include all work, whether or not shown or described, which reasonably may be inferred to be required or useful for the completion of the Work in full compliance with all applicable statutes, codes, laws, ordinances and regulations.

§ 1.1.3 The Work. The term "Work" means the construction and services required by the Contract Documents, or as reasonably inferable therefrom, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project. The Work includes all of the Contractor's responsibilities as to all labor, parts, supplies, equipment, skill, supervision, transportation services, storage requirements, and other facilities and things necessary, proper or incidental to the carrying out and completion of the terms of the Contract Documents and all other items of cost or value needed to produce, construct, and fully complete the Contractor's Work identified by the Contract Documents.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.8 The Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services and general requirements for the Project.

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials including those in electronic form.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.1.11 Miscellaneous Definitions

§ 1.1.11.1 The terms "knowledge," "recognize" and "discover," their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows (or should know), recognizes (or should recognize) and discovers (or should discover) in exercising the care, skill, and diligence required by the Contract Documents. The expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising care, skill, and diligence required of the Contractor by the Contract Documents.

§ 1.1.11.2 The term "any" in the Contract Documents shall be interpreted as "any and all" whenever one or more than one item would be applicable for completion of the Work.

§ 1.1.11.3 Except as otherwise explicitly provided, the words "approved" or "approval" shall mean the written approval of the Architect or the Construction Manager, or both.

§ 1.1.11.4 "Accepted," "directed," "permitted," "requested," "required," and "selected" are used herein as term connections and unless specifically noted otherwise are to mean "accepted by the Architect," "directed by the Architect," "permitted by the Architect," "requested by the Architect," "required by the Architect," and "selected by the Architect." However, no such implied meaning will be interpreted to extend the Architect's responsibility into the Contractor's areas of construction supervision.

§ 1.1.11.5 The term "as indicated" or "as shown" shall mean "as indicated in the Contract Documents."

§ 1.1.11.6 The term "include" in any form other than "inclusive" is non-limiting and not intended to mean "all inclusive."

§ 1.1.11.7 The terms "furnish" and "furnish all materials," unless specifically noted otherwise, mean "pay for, supply and deliver to the job site all new materials, systems, equipment, product, and/or other items so specified."

§ 1.1.11.8 The terms "install" and "furnish all labor," unless specifically noted otherwise, mean "pay for, perform all operations connected with installation of Work including unloading new product to be installed, supplying all necessary equipment and rigs to do the Work, test, place in operation and service, and remove all packing material."

§ 1.1.11.9 The term "product" includes materials, systems, equipment, and other items to be incorporated into the Work.

§ 1.1.11.10 The term "provide," unless specifically noted otherwise, means "furnish new, install, connect up, complete, test and place in operation and service."

§ 1.1.11.11 The term "replace" or similar term shall mean "restore," "renew," "make good," "reconstruct," or "as applicable using new product."

§ 1.1.11.12 The term "concealed" as used herein shall mean items hidden from sight in such locations as trenches, chases, shafts, furred spaces, walls, slabs, above ceilings and where in sight in crawl spaces or service tunnels.

§1.1.11.13 The term "exposed" as used herein shall mean not "concealed" as defined herein and the spaces behind normally closed doors such as interiors of cabinets.

§ 1.1.11.14 The terms "manufacturer" or "supplier" mean any person or entity which contracts to furnish materials to a Contractor, Subcontractor, or any Sub-subcontractor for use at the site of the Project.

§ 1.1.11.15 "Wiring" shall be understood to mean wires or cables with conduit, fittings, boxes, etc., installed complete.

§ 1.1.11.16 "Piping" shall be understood to mean all pipes, fittings, nipples, valves and all accessories connected thereto.

§ 1.1.11.17 The Contract Time is the period of time specified in Article 3 of the Agreement for completion of the Work.

§ 1.1.11.18 "Project Manual" is a volume assembled for the Work that includes the Instructions to Bidders, General Conditions, Supplementary General Conditions, the Specifications, and all Addenda issued prior to execution of the Contract. The Project Manual will additionally include bidding requirements and documents and sample forms.

§ 1.1.11.19 Terms not otherwise defined herein shall have the meanings set forth elsewhere in the Contract Documents.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. It is intended that all plumbing, mechanical, electrical, and other systems will be complete and in proper operation, and that all construction components, whether part of such systems or otherwise, will be complete and in compliance with accepted construction practice upon completion of the Work. Even if items are missing from the Drawings or Specifications, but are normally required for proper operation of plumbing, mechanical, electrical, and other systems, or to complete otherwise incomplete construction, or to meet governing code requirements, they shall be included by the Contractor, unless he sought and received contradictory interpretation or clarification from the Architect.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.1.2 The Contractor and its Subcontractors shall evaluate and satisfy themselves as to the conditions and limitations under which the Work is to be performed, including without limitation (1) location, layout, and nature of the Project site and surrounding areas, (2) generally prevailing climatic conditions, (3) anticipated labor supply and costs, (4) availability and cost of materials, tools, equipment, (5) Owner occupancy requirements and constraints, (6) site safety logistics plan and any phased construction plan and (7) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. No adjustments will be made in either the Contract Sum or Contract Time for any failure by the Contractor or any Subcontractor to comply with the requirements of this Section 1.2.1.2.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Instructions and other information furnished in the Specifications including, without limitation, items in connection with prefabricated or prefinished items, are not intended to supersede work agreements between employers and employees. Should the Specifications conflict with such work agreements, the work agreements shall be followed, provided such items are provided and finished as specified in the Contract Documents.

If necessary, such work shall be performed on the Project site, instead of at the shop, by appropriate labor and in accordance with the requirements of the Drawings and Specifications.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 In the event of inconsistencies within or between parts of the Contract Documents or between the Contract Documents and applicable standards, codes and ordinances, the Contractor shall (1) provide the better quality or greater quantity of work or (2) comply with the more stringent requirements; either or both in accordance with the Architect's interpretation. Where the Contractor perceives a conflict, it shall inform the Architect and Owner thereof and request a decision from the Architect, which shall be promptly communicated by the Architect to the Contractor so as not to cause any delay in the performance of the Work. Any Work performed after perceiving the conflict and prior to resolution by the Architect shall be at the Contractor's risk. The terms and provisions of this Section 1.2.4, however, shall not relieve the Contractor of any of the obligations set forth elsewhere herein.

- .1 The Contractor shall not scale Drawings. Dimensions on large scale drawings take precedence over dimensions on small scale drawings. The Contractor shall notify the Architect if additional dimensions are needed. The Contractor shall field verify all dimensions.
- .2 Before ordering any materials or doing any work, the Contractor and each Subcontractor shall verify measurements at the Project Site and shall be responsible for the correctness of such measurements. The Contractor shall confirm all dimensions by field measuring. No extra charge or compensation will be allowed on account of differences between actual dimensions and the dimensions indicated on the Drawings. Any difference that may be found shall be submitted to the Architect for resolution before proceeding with the Work.
- .3 If a minor change in the Work is found necessary due to actual field conditions, the Contractor shall submit detailed drawings of such departure for the approval by the Architect before making the change.
- .4 Certain portions of the Specifications are written in condensed outline form and omitted words are to be supplied by inference. Naming of an article or operations shall have the effect of stating "Contractor shall furnish, install and complete" said operation or article unless it is further qualified in the context in which it appears.
- .5 When reference is made to specifications of a manufacturer, trade association, governmental agency, reference standard or similar source (such as ASTM, ASA, AISC, ACI, etc.) such is made part of the Drawings and Specifications, having the force and effect as though reproduced therein, and upon entering into the Contract the Contractor acknowledges his familiarity with those pertaining to its Work. Furthermore, all Work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of the Contract unless it is specifically indicated in the Contract Documents that such work is to be done by others. All Work shall conform to the National Electric Code, New York State Uniform Fire Prevention and Building Code, and amendments thereto, New York State Energy Conservation Construction Code, State Education Department Manual of Planning Standards, New York State Department of Transportation, Office of Engineering, Standard Specification, Construction and Materials, latest edition, Life Safety Code – NFPA, and applicable City and State Building Codes and Authorities having jurisdiction. The date of the reference standard shall be the latest edition at the time of signing the Contract except as specifically indicated otherwise.
- .6 The Contract Drawings are intended to show the general arrangement, design, and extent of the Work and are partly diagrammatic. They are not intended to be scaled for any purpose, or to serve as shop drawings. The Contractor and its Subcontractors will cooperate with all other contractors and their respective subcontractors in determining the construction of systems, running of pipe, and locating equipment. The Contractor agrees that the failure to repeat typical details, figures, or notes on all Contract Drawings or other Contract Documents will not be a basis for claims for additional cost or time.
- .7 Any necessary variations in routing or installation shall be made to conform to the intent of the Contract Documents without additional costs. Where there are intersections or obstructions involving ducts, piping, or any other equipment requiring offset of materials, the Contractor acknowledges that it gave particular consideration to clearances in advance of submitting its bid, and that no additional costs for these issues will be considered by the Owner.
- .8 If conflicting conditions or interferences develop, the Contractor and its Subcontractors will confer with the other contractors and their respective subcontractors whose work is affected to determine a

solution acceptable to all interested parties. The suggested solution shall be submitted to the Architect for comment and, if necessary, written approval.

- .9 The Contract Documents intend a first class finished product of such character and quality as described in and reasonably inferred from the Contract Documents. The Contractor will perform its Work to be complete and operable, fitting with the work of other contractors and the Owner, and in compliance with best construction practices and the ordinances, codes, and regulations of all bodies or persons having governmental or regulatory authority over the Contractor and its Work.

§ 1.2.5 Execution of the Contract by the Contractor is a representation that the Contractor has carefully examined the Contract Documents and the Project site, and represents that the Contractor is thoroughly familiar with the nature and location of the Work, the Project site, the specific conditions under which the Work is to be performed, and all matters which may in any way affect the Work or its performance. The Contractor further represents that as a result of such examinations and investigations, the Contractor thoroughly understands the Contract Documents and their intent and purpose, and is familiar with all applicable codes, ordinances, laws, regulations, and rules as they apply to the Work, and that the Contractor will abide by same. Claims for additional time or additional compensation as a result of the Contractor's failure to follow the foregoing procedure and to familiarize itself with all conditions and the Contract Documents will not be permitted.

§ 1.2.5.1 The Contractor certifies that it is experienced and familiar with the requirements and conditions imposed during the construction of similar work in the area. This includes, but is not limited to, "out of sequence" or "come back" work for the removal of plant, equipment, temporary wiring or plumbing, etc. This "out of sequence" work may also include phasing of construction activities to accommodate the installation of the Work at various locations and orderly fashion and the completion of Work at various locations or levels at various times. This "phasing," "out of sequence," or "come back" work shall be done at no cost to other Contractors, the Owner or Architect.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers do not own and cannot claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.5.3 The Contractor may not reproduce the Contract Documents in whole or in part for use as shop drawing backgrounds without the prior written consent of the Architect. If consent is given, the Architect shall determine the extent that the Contract Documents may be used in the preparation of shop drawings, as well as the fee that the Architect will be paid, if any and in the Architect's sole discretion, by the Contractor for such use of copyrighted documents.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement. Notices given pursuant to this Section which are given by the attorney for the Owner shall have the same force and effect as notices given by the Owner.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights.

§ 2.1.3 The Owner, Architect or Construction Manager shall not supervise, direct or have control or authority over, nor be responsible for, the Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with laws and regulations applicable to the furnishing or performance of the Work. The Owner, Architect and Construction Manager shall not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

§ 2.2 Evidence of the Owner's Financial Arrangements – Intentionally Omitted.

(Paragraphs deleted)

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 All permits and fees, approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities are the responsibility of the Contractor under the Contract Documents with the exception of the building permit, which the Owner will obtain from the New York State Education Department. The Contractor shall furnish the Construction Manager with original copies of all permits prior to the commencement of the work, and shall prominently display a copy of all permits at a location approved by the Construction Manager.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 2.3.5 The Owner shall make available for inspection, upon request, that field survey or testing information of existing conditions that is known to be available and that is held by the Owner at its offices. Such records and documents are not Contract Documents, and the Owner makes no representation as to their accuracy or completeness. Notwithstanding the foregoing, information furnished by the Owner in the form of surveys, subsurface investigation reports, soil borings, and other material of a similar nature, is for general information only and is not a guarantee of the completeness or accuracy of such information, unless specifically noted otherwise herein. The Contractor shall verify all existing grades, conditions, and dimensions of existing physical conditions and structures and shall report any inconsistencies in writing to the Architect. The Contractor shall establish all lines and levels required to execute the Work and shall bear all costs involved, and shall be responsible for their accuracy and maintenance.

§ 2.3.6 Intentionally omitted.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor five (5) sets of Contract Drawings and Project Manuals for use during construction for their own use and for purposes of making reproductions pursuant to Section 1.5.2. The Owner shall furnish additional sets upon a Contractor's written request. Such additional sets will be provided at the cost of printing, postage and handling. Partial sets will not be provided. Subcontractors and other entities desiring copies of Drawings will be provided sets at the cost of printing, postage and handling. For expediency, at the discretion of the Architect, the Contractor may be directed to pick up documents at the Project-designated printing facility. This practice will not be permitted without authorization of/and coordination by the Architect.

§ 2.3.8 The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor (1) fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2, or (2) fails to carry out Work in accordance with the Contract Documents as determined by the Owner, Architect or Construction Manager, or (3) fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to be able to complete the Work within the Contract Time, or (4) fails to remove and discharge (within seven (7) days) any lien filed upon Owner's property by anyone claiming by, through, or under the Contractor, or (5) fails to perform the Work in a safe manner and in compliance with all applicable health and safety requirements and the Contractor's site specific health and safety plan or (6) disregards the instructions of the Architect, Owner or Construction Manager, as determined by the Owner, Architect or Construction Manager, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. Such order or stoppage by the Owner shall not constitute grounds for termination by the Contractor under Article 14 and shall not be a basis for an extension of the Contract Time under Section 8.3 or Article 15.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents (including but not limited to all applicable health and safety requirements) and fails within a three (3) work day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such three (3) work day period, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order or Construction Change Directive shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services and other expenses made necessary by such default, neglect or failure.

Such Change Order or Construction Change Directive shall be deemed to have been executed by the Contractor, whether or not actually signed by the Contractor. Such action by the Owner and amounts charged to the Contractor shall be equally binding upon the Contractor's performance and payment bond surety. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

§ 2.5.1 Where the Contractor's default and/or neglect to carry out its Work in accordance with the Contract Documents threatens the health, safety and/or welfare of the occupants of the Owner's facilities and/or threatens the structural integrity and/or preservation of the Owner's facilities, the Owner may proceed to carry out the Contractor's Work upon twenty-four (24) hours' notice of its intention to do so to the Contractor. In such case an appropriate Change Order or Construction Change Directive shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies and defaults, including the Owner's expenses and compensation for the Architect's and its respective consultants' additional services and other expenses made necessary by such default, neglect or failure.

§ 2.6 Extent of Owner's Rights

§ 2.6.1 The rights stated in this Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner (1) granted in the Contract Documents, (2) at law or (3) in equity.

§ 2.6.2 In no event shall the Owner, Architect or Construction Manager have any responsibility for the Contractor's construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work notwithstanding any of the rights and authority granted the Owner in the Contract Documents.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The plural term "Multiple Prime Contractors" when used herein refers to persons or entities who perform construction under contracts with the Owner that are administered by the Construction Manager. The term does not include the Owner's own forces, including persons or entities under separate contracts not administered by the Construction Manager.

§ 3.1.3 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.4 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor. The Contractor shall maintain complete inspection records and test date to ensure the quality of the Work is in strict compliance with the requirements of the Contract Documents.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.1.1 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the Contract Documents relative to that portion of the Work, as well as with information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, shall observe any conditions at the site affecting it, and shall at once report in writing to the Construction Manager and the Architect errors, inconsistencies or omissions discovered. The Contractor shall not be liable to the Owner, the Construction Manager or the Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor knew or reasonably should have known of such error, inconsistency or omission and failed to report it as required by this section to the Construction

Manager and the Architect. If the Contractor performs any construction activity knowing it involves, or reasonably should have known it involves, a recognized error, inconsistency or omission in the Contract Documents without such notice to the Construction Manager and the Architect, the Contractor shall assume full responsibility for such performance and shall bear sole responsibility for the costs for correction.

§ 3.2.1.2 The obligations of the Contractor under Section 3.2.1.1 and this Section 3.2.1.2 are for the purpose of facilitating construction by the Contractor and are not for the purpose of imposing an affirmative obligation on the Contractor to discover errors, omissions, or inconsistencies in the design information in the Contract Documents. The Contractor's review of the Contract Documents is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically so provided in the Contract Documents.

§ 3.2.1.3 Failure by the Contractor to promptly report any errors, inconsistencies, or omissions in the Contract Documents discovered by the Contractor, or which the Contractor reasonably should have known or discovered, shall constitute a waiver by the Contractor of any claim that otherwise might result in a change in the Contract Sum or Contract Time.

§ 3.2.1.4 The representations of the Contractor as set forth in these General Conditions shall survive expiration or termination of the Agreement.

§ 3.2.2 The Contractor shall be presumed to have examined the Project site(s) to consider fully all conditions that may have a bearing on the Work and to have accounted for these conditions its proposal. The Contractor is deemed to be a qualified expert in the systems and construction requirements of the Work of its Contract. The Contractor hereby specifically acknowledges and declares that the Contract Documents are full and complete, are sufficient to have enabled it to determine the cost of the Work, and that the Drawings, the Specifications, and all Addenda are sufficient to enable the Contractor to construct the Work outlined therein in accordance with applicable laws, statutes, building codes, and regulations, and otherwise to fulfill all of its obligations under the Contract Documents. The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Construction Manager and the Architect at once. The exactness of grades, elevations, dimensions, or locations given on any Drawings issued by the Architect, or the work installed by other Contractors, is not guaranteed by the Architect, Construction Manager or the Owner. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, and locations. In all cases of interconnection of its Work with existing or other work, the Contractor shall verify at the site all dimensions relating to such existing or other work. Any errors due to the Contractor's failure to so verify all such grades, elevations, dimensions, or locations shall be promptly rectified by the Contractor without any additional cost to the Owner. Except as to any reported errors, inconsistencies or omissions, and except as to concealed or unknown conditions, by executing the Agreement, the Contractor represents to the Owner, Construction Manager, and the Architect that the Work required by the Contract Documents, including, without limitation, all construction details, construction means, methods, procedure and techniques necessary to perform the Work, use of materials, selection of equipment and requirements of product manufacturers are consistent with: (1) good and sound practices within the construction industry; (2) generally prevailing and accepted industry standards applicable to Work; (3) the requirements of any warranties applicable to the Work; and (4) all laws, ordinances, regulations, rules and orders which bear upon the Contractor's performance of the Work.

§ 3.2.3 The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Section 3.12.

§ 3.2.4 The Contractor may submit Requests for Information ("RFI") to the Architect to help facilitate the Contractor's performance of the Work. Prior to submitting each RFI, the Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor-prepared Coordination Drawings, and prior Project correspondence and documentation to determine that the information to be requested is not reasonably obtainable from such sources. The Contractor shall submit each RFI sufficiently in advance of the date by which such information is required in order to allow the Architect sufficient time to permit adequate review and response and to permit Contractor compliance with the latest construction schedule. The Contractor shall reimburse the Owner amounts charged by the Architect for RFI responses that in the opinion of the Architect were available from a careful review of the Contract Documents, field conditions, other Owner provided information, Contractor-prepared Coordination Drawings, and prior Project correspondence and documentation.

§ 3.2.4.1 RFIs are for requests on clarifications or questions on Drawings and Specifications, not Contract terms, scheduling items, or general correspondence, nor, as a means to describe or request approval of alternate construction means, methods or concepts or substitution of materials, systems means and methods. The Contractor shall fill all RFIs out in accordance with the provisions of the Project Manual. Neither the Architect nor the Construction Manager shall fill said forms out on the Contractor's behalf.

§ 3.2.5 If the Contractor, during the progress of the Work, discovers any discrepancies between the Drawings and the Specifications, errors and/or omissions on the Drawings, or any discrepancies between physical conditions of the Work and the Drawings, and has notified the Architect and Construction Manager in writing under Section 3.2.1, no deviations from the Contract Documents shall be performed by the Contractor until it receives approval in writing from the Architect through the Construction Manager. Any Work performed after such discovery without the approval of the Architect shall be at the Contractor's sole risk and expense.

§ 3.2.6 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and the Architect any nonconformity discovered by or made known to the Contractor as a RFI submitted to the Architect.

§ 3.2.7 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or RFIs pursuant to Sections 3.2.1, 3.2.2, 3.2.4, 3.2.5 or 3.2.6, the Contractor shall make a Claim as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.1, 3.2.2, 3.2.4, 3.2.5 or 3.2.6, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or the Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.2.8 The Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of Owner. The Contractor shall report to the Construction Manager and Architect whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

§ 3.2.8.1 The Contractor shall be required to establish centerlines, elevations and location of his work when it is required for the benefit of other Contractors needing the information to coordinate location of their work.

§ 3.2.9 Whenever the Drawings show existing or other construction not required as part of the Contract Work, it is understood that it is so shown as a matter of information and that the Owner, while believing such information to be substantially correct, assumes no responsibility thereof. The Contractor shall make itself familiar with all conditions affecting the nature and manner of conducting the Work.

§ 3.2.10 Claims for additional compensation or extension of time due to the Contractor's failure to familiarize itself with the conditions at the Project site will not be allowed.

§ 3.2.11 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention, and shall complete the Work in a good and workmanlike manner in accordance with the Contract Documents. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work subject to the coordination of the Construction Manager.

Where the Drawings or Project Manual make reference to particular construction means, methods, techniques, sequences or procedures or indicate or imply that such are to be used in connection with the Contractor's Work, such reference is intended only to indicate that the Contractor's Work is to produce at least the quality of the work implied by the operations described, but the actual determination as to whether or not the described operations may be safely or suitably employed in the performance of the Contractor's Work shall be the sole responsibility of the Contractor. All loss, damage, liability, or cost of correcting defective Work arising from the employment of a specific construction means, method, technique, sequence, or procedure shall be borne solely by the Contractor.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors, Suppliers, and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors, Suppliers or Sub-subcontractors, and for any damages, losses, costs and expenses resulting from such acts or omissions, including but not limited to reasonable attorneys' fees.

§ 3.3.3 The Contractor shall be responsible for coordinating the work of its own forces and the work of Subcontractors engaged by it to perform the Work of the Project on its behalf. The Contractor shall supply to its own work forces, and Subcontractors engaged by it to perform portions of its Work, copies of the Drawings and Project Manuals for the work to be performed by such individuals/entities on its behalf. The Contractor shall be responsible to the Owner for the acts or omissions of the Contractor's employees, the Contractor's Subcontractors, the Contractor's material suppliers, their respective agents and employees, and any other persons performing portions of the Work on behalf of the Contractor.

§ 3.3.3.1 The Contractor shall coordinate its operations and cooperate with those of other Contractors performing work on the Project or site thereof to ensure efficient and orderly installation of each part of the Work. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the Work. The Contractor shall remain informed of the progress and the detail work of other Contractors and shall notify the Construction Manager immediately of lack of progress or defective workmanship on the part of other Contractors, where such delay or such defective workmanship will interfere with Contractor's own operations. Failure of the Contractor to keep informed of the work progressing on the site or to give notice of lack of progress or defective workmanship by others shall be construed as acceptance of the progress of work and coordination with Contractor's own Work.

§ 3.3.3.2 The Contractor's obligations under the Contract Documents shall include, without limitation, the following:

- .1 Review of all specified construction and installation procedures with its employees and/or Subcontractors, including, without limitation, those recommended by manufacturers, prior to the commencement of the relevant portion of the Work to be performed.
- .2 Advising the Construction Manager and the Architect:
 - .1 if a specified procedure deviates from best construction practice;
 - .2 if following a procedure will affect any warranties, including the Contractor's general warranty; or
 - .3 of any objections the Contractor may have to a procedure.
- .3 Proposing alternative procedures, as appropriate, which procedures shall be covered by the Contractor's warranty as described in Section 3.5 hereof.
- .4 The Contractor shall be responsible for organizing and conducting pre-installation conferences and must coordinate such conferences with the Architect and the Construction Manager.

§ 3.3.3.3 The Contractor and its Subcontractors working on the Project shall attend a preconstruction conference(s) or meeting(s) as deemed necessary by the Construction Manager to coordinate all Work (e.g., demolition, installation, etc.), and as required by the Project Manual.

§ 3.3.4 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or the Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor. The Contractor shall maintain complete inspection records and test date to ensure the quality of the Work is in strict compliance with the requirements of the Contract Documents.

§ 3.3.5 Where equipment lines, piping, ductwork, and/or conduit are shown diagrammatically, the Contractor shall be responsible for the coordination and orderly arrangement of the various lines of piping and conduit included in the Work of its Contract. The Contractor shall coordinate the work of its Subcontractors and prevent all interferences between or among equipment, lines of piping, and architectural features, and avoid any unsightly arrangements in exposed areas. This Section shall not be construed as limiting any obligation of the Contractor under any other provision of the Contract Documents.

§ 3.3.6 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.7 The Contractor, its employees and Subcontractors, shall be subject to such rules and regulations for the conduct of Work as the Owner may establish, including but not limited to, the Construction Rules and Regulations set forth in Section 3.13.4. The Contractor shall be responsible for the enforcement among its employees of the Owner's instructions.

§ 3.3.8 The Contractor shall inspect all materials as delivered to the Project site and shall reject any materials that will not conform with the requirements of the Contract Documents when properly installed.

§ 3.3.9 The Contractor shall be responsible for and coordinate any and all inspections required by any governmental body having jurisdiction over the Project. Failure to obtain any permits, licenses or other approvals because of the failure of the Contractor to conform to this requirement shall not extend the Contract time, and the Contractor shall not be entitled to any increase in the Contract Sum therefore. In addition, any additional costs and expenses of any nature incurred by the Owner as a result of the Contractor's failure to conform to this requirement shall constitute a charge against the Contractor's Contract.

§ 3.3.10 **Shutdowns:** Such work as connections to existing sewers, plumbing, heating, and electrical systems shall be coordinated at a time agreeable to the Owner, the Architect, and the Construction Manager, and shall be determined and agreed to well in advance of the actual performance of such work so as to interfere as little as possible with the operation and use of the Owner's existing facilities. Shutdowns must be coordinated through the Construction Manager. The continued uninterrupted operation of all facilities of the Owner's buildings is essential. If any existing facilities must be interrupted, the Contractor for the Work shall provide all necessary temporary facilities and connections necessary for maintaining these existing facilities at no increase in the Contract Sum except as otherwise specified. No mechanical, heating, plumbing, sprinkler, or electric service shall be interrupted at any time except as approved in advance by the Owner or when the buildings are not occupied and shall be coordinated with the Owner, as well as the Construction Manager. All communication systems must be maintained without interruption. As much related work as possible shall be performed prior to shutdowns, so as to minimize the period of shut down. All material, equipment, and manpower necessary in the performance of a shutdown shall be on site prior to interruption of service.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor (at applicable prevailing wage rates), materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall work continuously and expeditiously through completion of the Work. Time is of the essence.

§ 3.4.1.1 A shortage of labor in the industry shall not be accepted as an excuse for not properly manning the Project at each site.

§ 3.4.1.2 The Contractor shall be responsible for the care and protection of all equipment and materials for its Work on the Project, including equipment and material furnished by the Owner.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a resulting Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them, or persons who within the last two weeks (a) having been exposed to someone having been diagnosed with a COVID-19 infection; or (b) having had a persistent cough, shortness of breath, or a fever of 100.4 or higher. The Owner reserves the right to have any persons removed from the Project upon reasonable objection.

§ 3.4.3.1 In addition to all other safety requirements, the Contractor shall provide suitable and a sufficient number of safety related facilities and personal protective equipment (PPE) at the site related to protection against the spread of COVID-19, including but not limited to handwashing stations, hand sanitizer, gloves, masks, faceshields, and other equipment as the Owner may reasonably request. Notwithstanding the foregoing, nothing herein shall be construed to delegate or relieve Contractor from having sole and exclusive responsibility for all worksite safety.

§ 3.4.4 All mechanics employed on the Project shall be persons skilled in that work which they are to perform. Work will not be approved if it does not meet the quality of workmanship as called for in the Contract Documents. If this quality of workmanship is not exactly defined herein, it shall be assumed to be the best standards of workmanship for the trade.

§ 3.4.5 Employees of the Contractor or its Subcontractors whose work is unsatisfactory to the Owner, Construction Manager or Architect, or considered by them to be unskilled or otherwise objectionable, will be immediately dismissed from the Project upon notice from the Construction Manager. Those dismissed employees shall be immediately replaced by the Contractor so as not to delay progress of the Work and at no additional cost to the Owner.

§ 3.4.6 On receipt of the signed Contract, the Contractor will be expected to place firm orders with vendors for needed materials, including Subcontractors and major material suppliers. If deemed necessary to assure delivery of materials at times needed, the Contractor may accept delivery of such materials at any time, and may include the cost of such materials in its next monthly Application for Payment, provided such materials have actually been delivered to Contractor and properly stored by it with approval or under direction of the Architect and the Construction Manager either at the Project site or in an approved storage shed or warehouse, as provided elsewhere in these General Conditions.

§ 3.4.6.1 To the fullest extent possible, the Contractor shall provide products of the same kind, from a single source. When two or more items of same material or equipment are required (pumps, valves, air conditioning units, etc.) they shall be of the same manufacturer. Product manufacturer uniformity does not apply to raw materials, bulk materials, pipe, tube, fittings (except flanged and grooved types), sheet metal, wire, steel bar stock, welding rods, solder, fasteners, motors for dissimilar equipment units, and similar items used in the work, except as otherwise indicated. The Contractor shall provide products which are compatible within systems and other connected items. If Contractor is given option of selecting between two or more products for use on the Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

§ 3.4.6.2 The Contractor is responsible for providing products and construction methods compatible with products and construction methods of other Contractors. If a dispute arises between the Contractor and other Contractors over concurrently selectable but incompatible products, the Architect will determine which products shall be used.

§ 3.4.6.3 With respect to sitework materials, all products submitted for use and incorporated into the Project shall be on the Approved List of Materials and Equipment published by the NYSDOT Materials Bureau, most recent edition.

§ 3.4.6.4 When required, off-site storage shall be the responsibility of the Contractor. If materials are stored off site, the Contractor shall furnish proof of title by Owner and provide a certificate of insurance demonstrating adequate insurance coverage.

§ 3.4.6.5 The Contractor shall deliver all materials at such times as will ensure speedy and uninterrupted progress of the Work.

§ 3.4.6.6 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Owner reserves the right to object to Contractor's use of persons who appear

unfit or not skilled in the tasks assigned to them. Should any disorderly, incompetent, unfit, unskilled or objectionable person be hired or employed by the Contractor, upon or about the Premises of the Owner, for any purpose or in any capacity, they shall, upon request of the Owner, be removed from the Project and not again be assigned thereon without the written permission of the Owner.

§ 3.4.7 The Contractor warrants that it has good title to all materials used by it in, on or in connection with the Work. No materials or supplies shall be purchased by the Contractor or any of its Subcontractors that are subject to any chattel mortgage, conditional sale, or other agreement by which an interest is retained by the seller.

§ 3.4.8 The Contractor shall make every reasonable effort to avoid labor disputes and to insulate the Owner, Architect and Construction Manager from the effects of labor disputes should any arise. There shall be no strikes, picketing, work stoppages, slowdowns, or other disruptive activity at the Project for any reason by anyone employed or engaged by the Contractor to perform its portion of the Work. There shall be no lockout at the Project by the Contractor. The Contractor shall be responsible for providing the manpower required to proceed with the Work under any circumstance. For the purposes of this Section, every reasonable effort shall include, but not necessarily be limited to:

- .1 make all necessary arrangements to reconcile, without delay, damage or cost to the Owner and without recourse to the Architect, the Construction Manager or the Owner, any conflict between its Agreement with the Owner and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities shall not be included in the work of any particular trade;
- .2 requiring employees, Subcontractors, suppliers and others to use reserve gates which shall be established for the Project;
- .3 rearranging work schedules for the Contractor's Work or the work of its Subcontractors; and
- .4 including in Contractor's agreements with its Subcontractors the right to fully implement all provisions of this Section.

§ 3.4.8.5 In case the progress of the Work is effected by any undue delay in furnishing or installing any items or materials or equipment required pursuant to the Contract because of a conflict involving any such labor agreement or regulation, the Owner may require that other material or equipment of equal kind and quality be provided pursuant to a Change Order or Construction Change Directive but in no case shall the amount of such change be charged by the Contractor to the Owner as an additional cost to perform the Work.

§ 3.4.8.5.1 No extension of the Contract Time shall be granted for delays caused by labor or material disputes.

§ 3.4.8.5.2 Should it become necessary to create a separate entrance for a Contractor involved in a dispute, all costs associated with creating that entrance shall be borne by the Contractor involved in the dispute. Such costs shall include, but not limited to signage, fencing, temporary roads and security personnel as deemed necessary by the Owner for the safety of the occupants of the site.

§ 3.4.8.6 The Contractor shall ensure that its Work continues uninterrupted during the pendency of a labor dispute.

§ 3.4.8.7 The Contractor shall be liable to the Owner for all damages suffered by the Owner occurring as a result of work stoppages, slowdowns, disputes or strikes arising from the labor practices of the Contractor or its Subcontractors, Suppliers or Sub-subcontractors.

§ 3.4.9 The Contractor and its Subcontractors employed upon the Work shall abide by and conform with all labor laws and to all other laws, ordinances, and legal requirements now or hereafter applicable to the Work and the construction area.

§ 3.4.10 The Contractor and its Subcontractors shall be responsible for protection of the Work, the work of Separate or other Contractors, and existing construction, both on and off the site, and in the event of damage, shall restore the same to the original condition at no additional cost to the Owner.

§ 3.4.11 If the Work is to be performed by trade unions, the Contractor shall, with the consent of the Owner and the Architect, which shall not be unreasonably withheld, make all necessary arrangements to reconcile, without delay, damage, or cost to the Owner, any conflict between the Contract Documents and any agreements or regulations of any

kind, at any time in force among members or councils that regulate or distinguish what activities are included in the work of any particular trade.

§ 3.4.12 No new asbestos containing building materials shall be used in construction. No materials containing asbestos in any form shall be used in, on, or around the Owner's buildings.

§ 3.4.13 Equivalents and Substitutions

§ 3.4.13.1 Equivalents. In the Specifications, one or more kinds, types, brands, or manufacturers or materials are regarded as the required standard of quality and are presumed to be equal. The Contractor may select one of these items or, if the Contractor desires to use any kind type, brand, or manufacturer or material other than those named in the Specifications, it shall indicate in writing, and prior to award of the Contract, what kind, type, brand or manufacturer is included in the base bid for the specified item. The Contractor shall follow the submission requirements for equivalents as provided in the Project Manual. Any proposed equivalent shall not be purchased or installed by the Contractor without the Architect's review process having been completed and the product accepted by written notification.

§ 3.4.13.2 Substitutions. After the Contract has been executed, the Owner, Construction Manager and Architect will consider a formal request for the substitution of products in place of those specified only under conditions set forth in the Specifications.

§ 3.4.13.3 By making said requests in conformance with procedures established herein and elsewhere in the Project Manual, the Contractor: (1) represents that it has personally investigated the proposed substitute product and has determined that it is equal to or superior in all respects to that specified; (2) represents that the warranty for the substitution will be the same, or greater than, that applicable to the specified product; (3) certifies that the cost data is complete and includes all related costs under the Contract, including professional services necessary and/or required for the Architect or its consultants to implement said substitution and waives any and all claims for additional costs related to the substitution which subsequently become apparent; (4) represents that it will coordinate the installation of the accepted substitute, making all such changes to the Drawings effected by the change, including but not limited to the electrical, plumbing, site work and heating and ventilating Specifications as may be required for the Work to be complete in all respects; and (5) represents that it will reimburse the Owner for all additional costs billed by the Architect or its consultants for the review of the substitution request(s), any redesign of the Work of this Contractor or associated contractors, additional site visits related to the substitution request and for the work to prepare Change Orders or Construction Change Directives.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. All warranties and guarantees specifically called for by the Contract Documents shall expressly run to the benefit of the Owner. If required by the Architect, the Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with instructions of the applicable supplier, except as otherwise provided in the Contract Documents. The Contractor shall perform the Work in strict accordance with the Contract Documents and best industry practices. The Contractor, at its expense, shall upon demand by the Owner, Construction Manager or Architect remove and replace materials not meeting specifications or materials failing to perform as represented or warranted by the manufacturer, regardless of whether incorporated into the Work. The Contractor shall promptly replace or correct any Work or materials that the Owner, Construction Manager or Architect rejects as failing to conform to the requirements of the Contract Documents. The foregoing warranty obligations shall survive completion or termination of the Contract, are not limited by the provisions of Article 12, and are in addition to and not in limitation of any other warranty, right or remedy set forth in the Contract Documents or otherwise prescribed by law.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4. The

Contractor shall assign to the Owner at the time of final completion of the Work any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties. The Contractor shall fully cooperate with the Owner in the event the Owner pursues remedies under any warranties assigned to the Owner. The Contractor acknowledges that its obligations to the Owner under Section 3.5 are joint and several with its Subcontractors, suppliers, and material or equipment manufacturers of all materials and equipment supplied on account of the Work.

§ 3.5.3 No warranties or guarantees by the Contractor will deprive the Owner of any cause of action, right, or remedy otherwise available for breach of any of the provisions of the Contract Documents. Neither final payment nor provision in the Contract Documents nor partial or entire occupancy of premises by Owner shall constitute an acceptance of Work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibilities for faulty or defective materials or workmanship.

§ 3.5.3.1 The Contractor shall deliver to the Owner upon completion of all work under its Contract, its written guarantee made out to the Owner in a form acceptable to the Owner, guaranteeing (and it does so guarantee) all of the Work under the Contract to be free from faulty materials, and free from improper workmanship, and guarantees against injury from proper and usual wear and aging.

§ 3.5.4 All required maintenance shall be the Contractor's responsibility until the Owner has accepted the Project as complete, all required maintenance and user's manuals have been turned over to the Owner, and the Owner's designated personnel have been instructed in the maintenance and operation of all applicable materials. This maintenance shall include a complete turnover procedure at the time of completion, including complete cleaning, testing and adjustment. The Contractor shall keep records of all such maintenance performed as required by this Section, including work performed and times and dates on which it was performed. These records shall be turned over to the Owner at closeout.

§ 3.5.5 The Contractor shall in case of work performed by its Subcontractors, and where guarantees are required, secure warranties from Subcontractors and deliver copies of same to the Construction Manager countersigned by the Contractor.

§ 3.6 Taxes

Except as otherwise specified, the Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.6.1 The Owner is exempt from payment of federal, state, and local sales and compensation use taxes on all supplies and materials incorporated into and becoming an integral component part of the structures, buildings, or real property pursuant to this Contract. Such taxes are therefore not to be included in the Contractor's bid or the Contract Sum. The Owner shall deliver to the Contractor the appropriate exemption certificate required to be supplied by the Owner, and the Contractor and its Subcontractors and materialmen shall be solely responsible for obtaining and delivering any and all exemption or other certificates and for furnishing a Contractor Exempt Purchase Certificate or other appropriate certificates to all persons, firms, or corporations from whom they purchase supplies, materials, and equipment for the performance of the Work.

§ 3.6.1.1 The Contractor's attention is called to fact that materials not actually incorporated into Work will not be exempt from payment of sales or compensating use taxes, and the Contractor and its Subcontractor shall be responsible for and shall pay any and all applicable taxes. This will apply to such things as:

- .1 construction machinery and equipment including rentals or repair parts;
- .2 The Contractor's office supplies;
- .3 The Contractor's supplies, tools and miscellaneous equipment including forms, materials, and scaffolding (whether purchased or rented);
- .4 temporary heat;
- .5 telephone or electric services; and
- .6 any other items purchased or rented by the Contractor for the Contractor's use in performing its Work and not incorporated into realty.

§ 3.6.2 The Contractor accepts full and exclusive liability for payment of any and all contributions, assessments or taxes for unemployment insurance or old age insurance, or annuities now or hereafter imposed by the government of

the United States, or by the government of any city, county or state of United States, which are measured by salaries or other remuneration paid to persons employed by the Contractor or any Subcontractor for Work performed under this Contract.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 The Contractor shall, as soon as practicable, furnish the Owner, Architect, and Construction Manager with copies or certificates of all permits, fees, licenses, and inspections necessary for the proper execution and completion of the Work, including, without limitation, all applicable building permits other than those required of the Owner under Sections 2.3.1. All inspection fees and other costs of such permits and licenses required to be obtained by the Contractor as may be imposed by any municipal or other entity shall be paid by the Contractor and shall not serve as the basis for any increase in the Contract Sum.

§ 3.7.2 The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor fails to give such notices, it shall be liable for and shall indemnify and hold harmless (a) the Owner, its consultants, employees, officers and agents and (b) the Architect, Construction Manager and their consultants, employees, officers and agents against any resulting fines, penalties, judgments, or damages, including reasonable attorney's fees, imposed on or incurred by the parties indemnified hereunder.

§ 3.7.2.1 In accordance with New York State Labor Law Article 8, Section 220, subd. 3-a(a), the Contractor shall submit to the Owner within 30 days after issuance of Contractor's first payroll, and every 30 days thereafter, a transcript of the original payroll record, subscribed and affirmed as true under the penalties of perjury.

§ 3.7.2.2 The Contractor shall comply with all applicable New York State Department of Labor requirements, including the provision that every worker employed in performance of a public work contract shall be certified as having completed an OSHA 10-hour safety training course. The Contractor and its Subcontractors shall be solely responsible for compliance with this requirement with respect to their employees. The Contractor's or Subcontractor's failure to comply with this requirement shall not transfer or in any way impose the responsibility for worker safety upon the Owner or the Architect.

§ 3.7.3 If the Contractor performs Work contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear all costs attributable to the correction thereof or related thereto, including reimbursement to the Owner for any additional services required of the Construction Manager or Architect, or both, as well as all fines and penalties, if any.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall give prompt written notice to the Owner, Construction Manager, and the Architect of such conditions before they are disturbed or affected work is performed and in no event later than three (3) business days after first observance of the conditions. The Architect or Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor in writing, stating the reasons. If the Contractor disputes the Architect's determination or recommendation, it may proceed as provided in Article 15. No adjustment in the Contract Time or Contract Sum will be permitted, however, in connection with a concealed or unknown condition that does not differ materially from those conditions disclosed or that reasonably should have been disclosed by the Contractor's (1) prior inspections, tests, and reviews, or (2) inspections, tests, and reviews the Contractor had the opportunity to make or should have performed in connection with the Project.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect.

Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2. The Contractor is not entitled to overhead and profit on unexpended allowance amounts or any portions thereof.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 Prior to starting the Work, the Contractor shall designate the Project Manager, a full-time Superintendent and other key individuals who shall be assigned to the Project through and including Final Completion. Such designations shall be in writing and provided to the Construction Manager, Architect and Owner and shall include the qualifications of such individuals. The Superintendent shall be in attendance at the Project site throughout the Work, remain on the Project site not less than eight hours per day, five days per week, until termination of the Contract, unless the job is suspended, work is stopped by the Owner, or no work is scheduled. The Superintendent shall be approved by the Owner in its sole discretion. Said representatives shall be qualified in the type of work to be undertaken and shall not be changed during the course of construction without the prior written consent of the Owner. Should a representative leave the Contractor's employ, the Contractor shall promptly designate a new representative. The Owner shall have the right, at any time and in its sole discretion, to direct a change in the Contractor's representatives if their performance is unsatisfactory. In the event of such a demand, the Contractor shall within seven (7) days after notification thereof, replace said individual(s) with an individual(s) satisfactory to the Owner, in the Owner's sole discretion. If said replacement is disapproved, the Contractor may, at the Owner's option, be terminated for cause. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be as binding as if given to the Contractor. The Owner shall have no obligation to direct or monitor the Contractor's employees. All references herein to the Superintendent shall be taken to mean the Contractor's superintending staff. Each Subcontractor shall designate the Project Manager, Superintendent and other key individuals who shall be assigned to the Project. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case. The Contractor's Superintendent shall attend all Project meetings, regardless of whether held prior to or following Substantial Completion of the Work.

§ 3.9.2 The Contractor shall provide, or otherwise see that, the Project Manager, or Superintendents or responsible workers of the Contractor and its major Subcontractors are equipped with cellular phones and radios. The Contractor shall provide the Owner, the Construction Manager, and the Architect with the number for each phone and worker.

§ 3.9.3 The Contractor's supervisory personnel, including Superintendents and their assistants, shall be versed in the English language. In the event the Contractor's supervisory personnel, Superintendents and their assistants are not versed in the English language, the Contractor shall employ the services of a full-time on-site interpreter to facilitate communications with such supervisory personnel.

§3.9.4 The Contractor shall not reduce or terminate supervision of the Work, nor change the superintendent without the

prior written approval of the Owner.

§ 3.9.5 If, for any reason, the Contractor takes an action resulting in any of the changes noted in Subsection 3.9.4, the Owner may take remedial action to insure continued progress of the Work, including the hiring of suitable supervisory personnel, and charge the Contractor all costs associated with these remedial actions including the costs of legal and additional construction management and architectural services.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly, but in no event later than 14 days, after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information and the Construction Manager's approval a Contractor's construction schedule for the Work in electronic format with predecessor logic. The construction schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The Contractor's construction schedule shall provide for the orderly progression of the Work to completion, and shall not exceed time limits current under the Contract Documents. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Multiple Prime Contractors or the construction or operations of the Owner's own forces. The Contractor's construction schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project but the Contract Time and any applicable Milestone Date shall not be changed except by fully executed Change Order.

(Paragraph deleted)

§ 3.10.1.1 Time is of the essence for this Project. The Work shall be performed continuously and without interruption, so that all Work can be completed in the time set forth in the Contract Documents. The accepted construction schedule shall be dated to reflect actual conditions (sometimes referred to as progress reports) as set forth in this Section or if requested by the Owner, Construction Manager or Architect.

§ 3.10.1.2 The sequence of the Work shall be scheduled with the Owner so as to minimize interference with the Owner's use of existing structures, and the Owner's approval shall be obtained prior to starting of the Work.

§ 3.10.1.3 The Contractor shall conform to the most recent Project Schedule, and all Work shall be completed on or before the dates established in the Contract Documents. The Contractor shall monitor the progress of the Work for conformance with the requirements of the Project Schedule and shall promptly advise the Owner and Construction Manager of any delays or potential delays.

§ 3.10.2.1 The Construction Manager shall prepare, publish, and, from time-to-time, revise a master integrated Project Schedule based upon the construction schedules submitted by the Contractor and other Contractors. Failure by the Contractor to furnish any required schedule or schedule revision in a timely manner shall entitle the Construction Manager to prepare a schedule for the Contractor's Work, to which the Contractor shall be bound.

§ 3.10.2.2 The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict, delay in or interference with the Work of other Contractors or the construction or operations of the Owner's own forces. The Owner shall have the right, without penalty, to direct the Contractor to delay, postpone or reschedule any portion of the Work that may interfere with or disrupt the operations of the Owner.

§ 3.10.3 The Contractor shall conform to the most recent Project Schedule.

§ 3.10.4 In the event the Owner determines that the performance of the Work has not progressed to the level of completion required of the Contract Documents or that the Contractor has failed to maintain its construction schedule or the Project Schedule, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction including without limitations, additional shifts, overtime, additional manpower or equipment as well as other similar measures (hereinafter referred to collectively as "extraordinary measures"). Such extraordinary measures shall continue until the progress of Work complies with milestone and critical path dates set forth in the Contract Documents and the Project Schedule. The Contractor shall not be entitled to an adjustment in Contract Sum or Contract Time in connection with extraordinary measures required by the Owner.

§ 3.10.5 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter update it as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.6 The Contractor shall participate with other Contractors, the Construction Manager and Owner in reviewing and coordinating all schedules for incorporation into the Project Schedule that is prepared by the Construction Manager. The Contractor shall revise the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project Schedule and the Contract Documents.

§ 3.10.7 The Contractor shall perform the Work in general accordance with the most recent construction schedules submitted to the Owner, Construction Manager and Architect and incorporated into the approved Project Schedule. The Contractor shall monitor the progress of the Work for conformance with the requirements of its construction schedule and Project Schedule and shall promptly advise the Owner of any delays or potential delays affecting the critical path.

§ 3.10.8 If the Contractor fails to maintain the approved construction schedule or Project Schedule and meet all critical path dates for the Work, the Owner may request a recovery plan from the Contractor and reserves the right to withhold payment until such time as the Contractor submits a recovery plan. The recovery plan must show how the Work may plausibly be brought on schedule, including, as necessary, acceleration of the Work by means of overtime, additional crews, additional shifts, additional equipment or re-sequencing of the Work to achieve completion of the remaining critical path dates in the construction schedule or Project Schedule. The Contractor shall submit as part of its recovery plan: (i) a "resource loaded" schedule showing the Contractor's plan to deploy manpower per trade, per work area, per day, together with essential materials and equipment, and other resources necessary to timely accomplish the Work; and (ii) a two-week "look ahead" schedule identifying tasks to be accomplished within the coming two week period, the work areas and categories of work, and necessary manpower resources, together with other data necessary to demonstrate to the Owner the viability of the Contractor's recovery plan ("2 Week Plans"). The Contractor shall continue to submit 2 Week Plans until either the Contractor demonstrates that the Project Schedule has recovered from the unexcused delay, or the Owner notifies the Contractor in writing that further 2 Week Plans are no longer required. The cost of preparing and performing the recovery plan shall be borne solely by the Contractor. No approval or consent by the Owner of any plan for resequencing or acceleration of the Work submitted by Contractor shall constitute a waiver by Owner of any damages or losses which the Owner may suffer by reason of such resequencing or the failure of the Contractor to meet the Substantial Completion Date or the final completion date.

§ 3.10.9 The Contractor specifically represents and warrants to the Owner that that the Contract Sum and the Contract Time contemplate compliance with all current, and reasonably foreseeable future, federal, state and local "Stay at Home," "Social Distancing" and related orders, regulations and guidance related to limiting the spread of COVID-19 disease (the "COVID Requirements"). Accordingly, the Contractor hereby waives any claim for an increase in the Contract Sum or an extension of the Contract Time on account of the COVID Requirements. The Contractor shall promptly notify the Owner of any COVID Requirements that would impact the Project.

§ 3.10.10 Due to the ongoing COVID-19 pandemic and the resulting uncertainty with regard to, among other things, (a) what restrictions, if any, will be applicable to construction activities due to federal, state or local orders, laws, regulations or rules related to the COVID-19 pandemic (including, without limitation, social distancing, PPE, cleaning and disinfection requirements) and (b) the duration of any restrictions imposed on construction activities, the Owner may modify the schedule set forth in the Contract Documents and the Project Schedule. Similarly, restrictions, if any, that will be or are applicable to construction activities due to federal, state or local orders, laws, regulations or rules related to the COVID-19 pandemic (including, without limitation, social distancing, PPE, cleaning and disinfection requirements) may cause the Owner to have the Work or the Project commence later than the date specified in the Contract Documents. The Contractor acknowledges and agrees that there should be no additional compensation paid for schedule modifications caused directly or indirectly by the COVID-19 pandemic. The Contractor further acknowledges and agrees that its sole remedy for any schedule modifications or delays caused directly or indirectly by the COVID-19 pandemic shall be an extension of the Contract Time, if warranted. The Contractor further acknowledges and agrees that it shall have on file and provide a copy to the Owner of its written COVID-19 business

reopening plan, and it shall comply in all respects with such plan for the duration of the Project. The Contractor, not the Owner, shall be responsible for compliance with its COVID-19 business reopening plan and all safety requirements associated with COVID-19 protections for workers and the general public.

§ 3.11 Documents and Samples at the Site

§ 3.11.1 The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These documents shall be available to the Architect and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.11.2 The Contractor shall maintain at the site, and shall make available to the Owner, Construction Manager and Architect, one record copy of the Drawings (the "Record Drawings") in good order. The Record Drawings shall be prepared and updated during the prosecution of the Contractor's Work. The prints for Record Drawing use will be a set of black line prints provided by the Architect to the Contractor at the start of construction. The Contractor shall maintain said set in good condition and shall use colored pencils to mark up said set with "record information" in a legible manner to show: (i) deviations from the Drawings made during construction; (ii) details in the Work not previously shown; (iii) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (iv) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings, and stub-outs, etc.; (v) architectural and structural changes in the design; and (vi) such other information as either the Owner or Architect may reasonably request. At the completion of the work, the Contractor shall transfer all information on record drawings to reproducible drawings with new information clouded and noted. Such drawings shall be stamped with the Contractor's name and "AS-BUILT" in the lower righthand corner. The colored record drawing and the as-built reproducible drawing shall be forwarded to the Construction Manager for delivery to the Owner. Final payment and any retainage shall not be due and owing to Contractor until the Record and As-Built drawings receive the approval from the Architect and the Owner (and all other closeout requirements are met).

§ 3.11.3 The Contractor shall maintain all approved permit drawings in a manner so as to make them accessible to government inspectors and other authorized agencies having jurisdiction over the Project. All approved drawings shall be wrapped, marked and delivered to the Owner within 60 days of final completion of the Contractor's Work.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work. Each submittal shall bear written confirmation that the Contractor has satisfied its obligations under the Contract Documents with respect to the Contractor's review and approval of the submittal. The Contractor shall comply with the provisions and procedures for Shop Drawings, Product Data, and Samples set forth in the Project Manual, including Specifications Section 013300, "Submittal Requirements."

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, operating and maintenance procedures, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to (1) demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents, and (2) show a system or product's ability to meet applicable criteria for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.4.1 Shop drawings and product submittals for all site improvement, architectural, structural, mechanical, electrical and signal work shall be submitted to the Architect for its review. Refer to Contract (General, Supplementary and other conditions) Section on "Submittal Requirements" for more complete information.

§ 3.12.4.2 The Contractor represents and warrants that all shop drawings shall be prepared by a person or entity possessing expertise and experience in the trade for which the shop drawing has been prepared and, if required by the Contract Documents or law, by a licensed professional engineer.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, with copies to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

§ 3.12.5.1 No extension of time will be granted to the Contractor because of failure to have shop drawings, product data, and samples submitted in ample time to allow for review by the Architect or its consultants.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Contractor shall be responsible for verification of field dimensions and conditions and shall furnish such information to the Architect when requested. Before the Contractor proceeds with the Work in question, the Contractor should field verify all dimensions. In case of doubt about dimensions, the Contractor should notify the Architect immediately for instructions.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect. Resubmission of rejected documents shall be performed within 10 calendar days, or sooner if required by the progress of construction. No claim for delay or cost shall be accepted as a result of rejected submittal documents. If the Architect is required to review the Contractor's submittal more than twice, the Contractor shall bear the cost and expense associated with such additional review as set forth in the Project Manual.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Construction Manager and Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions. Resubmission of rejected documents shall be performed within ten (10) calendar days. No claim for delay or cost shall be accepted as a result of rejected documents.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.12.11 The Architect's review of the Contractor's submittals will be limited to examination of an initial submittal and one resubmittal. The Owner is entitled to obtain reimbursement from the Contractor for amounts paid to the Architect for evaluation of additional resubmittals.

§ 3.13 Use of Site

§ 3.13.1 The Owner shall not be liable to the Contractor, subcontractors of any tier, suppliers, their employees or anyone else with respect to the condition of the Project site. The Owner shall have the right to refuse admittance to the site to any agent or employee of the Contractor, its subcontractors of any tier, or its suppliers whose presence the Owner deems hostile to the Owner's interests. The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. The use of the Owner's assets and property are extremely limited. The Contractor shall fully comprehend the intent of the Contract Documents pertaining to site and building limitations including, without limitation, Division 1 Specifications sections, the phased construction plan, and the site safety and logistics plan(s).

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

§ 3.13.3 The Contractor shall perform and shall ensure that all Subcontractors and suppliers perform all Work in a manner that permits reasonable access to the Project site and to all adjacent premises. The Contractor shall not, and shall not permit any Subcontractor or supplier to, conduct the Work in a manner that disturbs or that could be reasonably anticipated to disturb operations and persons located in or on portions of the site not affected by the Work. The occupied portion of any of the Owner's buildings shall always comply with the minimum requirements necessary to maintain a certificate of occupancy.

§ 3.13.4 Construction Rules and Regulations. The following rules and regulations shall be observed and enforced by all Contractors in connection with all phases of the Work:

- .1** In accordance with New York State law, smoking is prohibited anywhere on school property. Violators will be subject to arrest and/or fine of \$1,000 per occurrence. No alcoholic beverages or controlled substances are permitted on school property, and persons under the influence of alcoholic beverages or controlled substances may not enter in or remain on school property.
- .2** In accordance with the United States Gun-Free School Zones Act of 1994, no firearms are permitted within 1,000 feet of any school building, with certain limited exceptions as set forth therein. In addition to such limitations, no firearms shall be brought on school property without the Owner's express prior consent.
- .3** Appropriate protective gear (hard hats, safety shoes, goggles, etc.) are to be worn as required by OSHA standards, the New York State Department of Labor, and prudent practice. Shirts are to be worn at all times. No short pants are permitted.

- .4 Any person who uses inappropriate language, or who is disruptive to the school environment, will be banned from the site.
- .5 The Contractor's personnel shall not converse with school employees, students and or local residents.
- .6 All persons on the Project site will comply with all reasonable instructions regarding conduct and safety which are given by the Architect, the Construction Manager or the Owner's school administrators.
- .7 All construction materials shall be stored in a safe and secure manner. No deliveries will be allowed during school bus drop off or pick up hours as determined by the Owner. All deliveries shall be scheduled and coordinated with the Construction Manager and the Owner's security department. Unexpected or uncoordinated deliveries may be turned away by the Owner or the Construction Manager at the discretion or necessity of the Owner. The Owner's enforcement of this provision shall not be construed by the Contractor or Subcontractor as the basis for a claim of delay in time or monetary damages alleged to have been incurred as a result of refusal of delivery.
- .8 Use of the existing building facilities during construction is prohibited, specifically including toilet rooms, telephones and water fountains.
- .9 The Contractor's schedule shall allow for blackout dates during which no noisy Work will be allowed, as determined by the Construction Manager. The Contractor may consult the Owner's school calendar for all test and examination dates, but these dates are subject to change.
- .10 To gain access to the Work, entrances and parking areas will be designated by the Owner for the Contractor's use. Any vehicles or trucks in non-designated areas may be towed at the Contractor's expense. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
- .11 Should it become necessary to obtain access to the existing building during construction hours for measurements or other non-disruptive work, the Contractor shall be escorted by the Construction Manager.
- .12 All persons must wear photo identification badges at all times while working at the site. Identification badges must be provided by the Contractor for its personnel, including subcontractors, consultants, visitors and others.
- .13 No asbestos containing products are to be used anywhere on this Project.
- .14 No lead containing products are to be used anywhere on this Project.
- .15 Asbestos manifests showing the locations of all known asbestos bearing materials are available in each building, and should be consulted prior to the commencement of any work, including but not limited to demolition.
- .16 Demolition is to occur only when the building is unoccupied. Dust partitions and negative air are to be installed prior to commencing demolition. The Contractor must obtain Construction Manager approval on dust partitions and negative air prior to commencing demolition work. Debris shall be removed by using an enclosed chute or similar sealed system.
- .17
 - (a) Prior to the commencement of Work, the Contractor must submit construction plans, which show the location of dust particles, exhaust & fresh air fans and describe in detail the operation procedures during demolition and construction which may generate dust.
 - (b) All entrances to classrooms shall be sealed with at least 6 mil. polyethylene sheeting to prevent dust created by demolition and construction work from entering the classrooms. Entrances and egress to the work zone shall be covered with a triple flap 6 mil. polyethylene doorway to allow access to the area without the release of dust. The Contractor is, additionally, responsible for all debris and dust infiltrating adjacent and undisturbed areas of the building.
 - (c) Shut down and lock out all electrical and HVAC in the work area. Cut, cap, and seal all duct work where it enters the work area from another space. All duct work and conduit within the space shall be removed during demolition work.
 - (d) The Contractor shall install dust protection barriers and poly sheeting. There shall be no or minimum damage to adjacent surfaces. The Contractor is responsible to repair any damage to existing surfaces.
- .18 Painting or other chemical applications shall be done in the Owner's existing building only when it is unoccupied. Storage of chemicals and painting shall be outside the Owner's existing or new structures, and shall follow manufacturer's storage guidelines.
- .19 Oxygen or other gas containers shall be properly stored and secured per OSHA requirements, to the satisfaction of the Construction Manager. Failure to do so will result in a \$250 back-charge, per occurrence.

- .20 The Contractor is responsible for cleaning its own materials and debris. Failure to maintain a clean work site daily will result in others performing the work at the Owner's request, and the Contractor will be backcharged for the cleaning cost plus construction administration fees. This may be done without the typical 3-day notice to the Contractor.
- .21 The Contractor must send a qualified representative, knowledgeable in the Project and authorized to make decisions on behalf of the Contractor, to every Project meeting.
- .22 The Contractor shall cooperate with the Owner's school principal and custodial staff; however, if any additional work is requested the Contractor shall not proceed unless written approval is received from the Owner. The Contractor will not be compensated for any additional work performed without the Owner's prior written approval.
- .23 Deliveries sent to the Project site will not be signed for or unloaded by the Owner. They will be directed to the construction site and if no employee is on site, the delivery will be rejected, at the Contractor's expense.
- .24 The General Construction Contractor shall be responsible for managing dust and dirt. On the exterior, site shall be watered down frequently to prevent dust clouds from rising. Streets shall be maintained clean per the Construction Manager's request.
- .25 All hot tar roofing shall be installed after school hours or on weekends/holidays only. Kettles shall not be lit until all students have left the Owner's building.
- .26 The Contractor shall submit a weekly work schedule indicating workdays, work hours and manpower allocation.
- .27 No storage of materials will be permitted within the Owner's buildings at any time during construction. The Contractor must provide exterior storage containers when required. The Contractor shall be responsible for securing appropriate space for its material with the Construction Manager prior to delivery. Final location of storage containers shall be determined by the Owner and/or Construction Manager. If insufficient space is available on the site, the Contractor shall provide local off-site storage, storage containers, etc. at its own cost and expense. Should any of the material stored on-site obstruct the progress of any portion of the Work or the Project, this material shall be removed by the Contractor without reimbursement of cost, from place to place or from the premises, as the Construction Manager may direct.
- .28 The General Construction Contractor shall be responsible for maintaining all appropriate site safety signage.
- .29 The Contractor shall be responsible for protecting the Owner's property. All existing shrubs, trees, lawn fixtures, sculptures and miscellaneous equipment shall be protected at all times. Any removals or relocation of said objects, if allowed shall be as directed by the Owner in writing.
- .30 The General Construction Contractor shall provide and service portable lavatories for the duration of construction as provided in the Contract Documents. Lavatories shall be serviced by the General Construction Contractor on a regular basis to maintain sanitary conditions.
- .31 The General Construction Contractor shall protect all existing roofs during construction and shall be responsible for any damage to roofs during construction. The General Construction Contractor shall make all repairs to any damaged areas, as required by the manufacturer of the roof system.
- .32 The General Construction Contractor shall be responsible for providing weather-proof protection over all rough openings, including windows.
- .33 The Contractor shall be responsible for conducting pre-construction walk-throughs and videotaping existing conditions. The Contractor shall schedule a representative of both the Owner and the Construction Manager to be present at this taping. In the absence of this record, the Contractor shall be responsible for paying the costs associated with any and all repairs in an area where the Contractor is working or has worked, as may be deemed necessary by the Owner or the Construction Manager.
- .34 Manufacturers Material Safety Data Sheets (MSDS) shall be available at the site for all products used in the Project.
- .35 No weapons are permitted on the Owner's property by law.
- .36 Neither the Contractor nor any person on its behalf shall, in any manner, engage in discrimination, intimidation or harassment of any person on the Project site.
- .37 Proper attire is required for personal safety and clothing must not sexually explicit or contain messages of a vulgar nature, disrespectful of ethnic or religious groups, or which promote the use of tobacco, alcohol or drugs.
- .38 Only materials and equipment that are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be

promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor.

- .39 The Contractor will ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work will be performed in such a manner that public areas adjacent to the site of the Work will be free from all debris, building materials and equipment likely to cause hazardous conditions. Without limitation of any other provision of the Contract Documents, the Contractor will use its best efforts to minimize any interference with the occupancy or beneficial use of (1) any areas and buildings adjacent to the site of the Work; or (2) the Owner's building in the event of partial occupancy, as more specifically described in Section 9.9.
- .40 The Contractor is required to protect its own Work and work areas, preconstruction, during construction and post construction.
- .41 During exterior renovation work, overhead protection shall be provided for any sidewalks or areas immediately beneath the work site or such areas shall be fenced off and provided with warning signs to prevent entry.
- .42 The Contractor shall exert utmost care and diligence when working in or near any existing buildings or site work. The absence of protection around such items shall not excuse the Contractor from its liability to provide protection. Any damage to existing buildings, sitework or facilities due to the actions or inactions of the Contractor shall be repaired by and charged to the Contractor.
- .43 The Contractor shall be responsible for the removal and replacement of existing ceiling tiles and grid in areas of the existing building where its Work is required and new ceilings are not scheduled for installation. In the event that the existing ceilings are damaged and cannot be replaced to the satisfaction of the Owner, the responsible contractor shall be liable for the costs of replacing in kind, the existing ceilings with new tile and grid.
- .44 The General Construction Contractor shall provide necessary and required security measures to adequately safeguard the construction site from vandalism and intrusion of unauthorized persons. The General Construction Contractor shall submit its means and methods of security to the Construction Manager for review and comment. The Project site must be secured 24 hours a day, 7 days a week including holidays. The General Construction Contractor's failure to secure the site as required by this paragraph will result in the Owner engaging the services of such necessary personnel so as to provide such security. No notice will be given the General Construction Contractor of the Owner's intention to engage such security services and all costs and expenses associated with the Owner's security of the site in this regard will be back charged to the General Construction Contractor. While the Owner may have security guards patrolling the project areas, the function of such security guards is not for the purpose of specifically guarding the Contractor's property or operations of work.
- .45 The Contractor and any entity for which the Contractor is responsible shall not erect any sign on the Project site without the written consent of the Owner, which may be withheld in the sole discretion of the Owner.
- .46 Without limitation of any other provision of the Contract Documents, the Contractor will comply with all reasonable rules and regulations promulgated by the Owner or Construction Manager in connection with the use and occupancy of the Project site and the buildings, as amended from time to time by the Owner or the Construction Manager.

§ 3.13.5 Only materials and equipment that are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor.

§ 3.13.6 The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work will be performed in such a manner that public areas adjacent to the site of the Work will be free from all debris, building materials and equipment likely to cause hazardous conditions. Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to minimize any interference with the occupancy or beneficial use of (1) any areas and buildings adjacent to the site of the Work; or (2) the building in the event of partial occupancy, as more specifically described in Section 9.9.

§ 3.13.7 The Contractor shall not permit any workers to use any existing facilities at the Project site, including without limitation, lavatories and toilets. To gain access to the Work, entrances and parking areas will be designated by the Owner for the Contractor's use. Without limitation of any other provision of the Contract Documents, the Contractor will comply with all reasonable rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the Owner's building(s), as amended from time to time by the Owner.

§ 3.13.8 Construction areas that are under the control of the Contractor and therefore not occupied by the Owner's staff or students shall be separated from occupied areas. Provisions shall be made to prevent the passage of dust and contaminants into occupied parts of the Owner's building(s). Periodic inspection and repairs of the containment barriers must be made to prevent exposure to dust or contaminants. Gypsum board must be used in exit ways or other areas that require fire rated separation. Heavy duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.

§ 3.13.9 Prior to starting Work, the Contractor shall submit a written report to the Owner, Construction Manager and Architect identifying existing damage to roads, walks, lawns, buildings and other property to be affected by this Contract. Failure to submit the report shall render the Contractor responsible for existing damage. The Contractor may request and schedule an inspection with the Owner, Construction Manager and Architect prior to submittal of the report. The Contractor shall obtain the consent of adjoining property owners regarding temporary easements of any other manner of physical encroachment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.14.3 The word "new" used herein shall mean Work which has been or is to be installed under the terms of the Contract for this Project. The word "existing" used herein shall mean existing conditions previous to the award of a Contract for this Project. In order to eliminate cutting and patching as much as possible, the Contractor shall, during the progress of its Work, provide and set proper sleeves, inserts, and other fixtures as required for its new Work and shall give proper and detailed instructions to others where the Work may be affected by their work, with adequate notice prior to the erection of new Work. Cutting and patching work as required to install new Work or remove existing work shall be done carefully and neatly with as little damage as possible. The Contractor shall refer to the Specifications for proper cutting and patching requirements. Any costs caused by defective or ill-timed Work of the Contractor shall be borne by the Contractor. Cutting and patching of any Work shall be made in such a manner as to not breach any provisions of any guaranty or warranty on existing work left in place or any guaranty or warranty required for the Contractor's new Work. Patching of work shall match existing adjacent surfaces and patchwork shall be disguised completely to hide any trace of patching. All new Work on existing roofs must be provided by a company specializing in performing the Work and approved by the existing roofing material manufacturer. It shall be the responsibility of the Contractor performing the cutting and patching to maintain any existing roofing warranty.

§ 3.14.4 Only trades persons skilled and experienced in cutting and patching shall perform such work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. On a daily basis, the Contractor shall clean the areas in which it has performed work and shall remove all waste, materials, rubbish, its tools, construction equipment, machinery and surplus materials. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project. The Contractor shall completely clean the site of the Work, removing and disposing of all construction-related debris and rubbish, and

cleaning all Work-related stains, spots, marks, dirt, mortar smears, plaster smears, paint smears, caulking smears, and other foreign materials from exposed surfaces inside and outside the Owner's buildings and within the Project limit lines.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor. At its option, the Owner may deduct the cost of clean-up pursuant to this Section 3.15.2 from any payments otherwise due to the Contractor pursuant to this Contract.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located. Federal, state, and local agencies with jurisdiction over the Project shall at all times have access to the Work wherever it is in preparation or progress. The Contractor shall provide for such access so that such agencies may perform their functions. The Contractor shall also allow access for all required tests and inspections.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall, and cause its Subcontractors to, defend, indemnify and hold harmless the Owner, Construction Manager, Architect, the State of New York and their consultants, officers, directors, board members, agents and employees of any of them (collectively, "Indemnitees," individually, "Indemnitee") from and against all losses, damages, liabilities, actions, causes of action, claims, demands, fines, penalties, judgments, costs (including but not limited to attorneys' fees and expenses incurred in connection therewith and in the enforcement of this indemnification), charges, expenses and demands of whatever kind in connection with or arising from or out of (a) any negligent, willful or wrongful act or omission resulting in bodily injury (including death), personal injury or property damage (including loss of use) by the Contractor, its Subcontractors, Suppliers, their respective officers, employees, servants, agents, suppliers, invitees, successors and assigns (collectively, "Contractor Parties," and individually, "Contractor Party"), (b) performance of or failure to perform the Work or any breach of this Contract or infringement of any patent right by any Contractor Party, or (c) any statutorily imposed liability for injury to employees or failure to comply with any laws or regulations affecting the Work, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Nothing contained herein shall be construed to obligate the Contractor to indemnify, defend, and hold an Indemnitee harmless for claims caused solely by the Indemnitee's negligent acts or omissions. The State of New York is an Indemnitee if New York State funding, excluding SED state building aid, is used for this Project.

The Contractor agrees to include the following indemnity provision in each and every contract it enters into with a Subcontractor, and to require that Subcontractor to include such provision in each contract it enters into with any lower tier Sub-subcontractor: "To the fullest extent permitted by law, sub-contractor shall defend, indemnify and hold harmless the Contractor, the State of New York, Owner, Owner's Consultants, Construction Manager's and Architect's consultants, and each of their respective representatives, board members, employees, directors, officers, and agents, from and against any and all claims, suits, actions, damages, losses, fines, penalties, costs, charges and expenses, including but not limited to attorneys' fees and the costs of any proceeding, arising out of or resulting from any performance of or failure to perform the Work, acts or omissions of the Subcontractor, its lower-tier Sub-subcontractors, and others for whom the Subcontractor is responsible, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or economic losses or damages, damage to or destruction of property, and for environmental damage, or to injury to or destruction of tangible property and nuisance, but only to the extent caused by the acts or omissions or a breach of contract of the a Subcontractor, a Sub-Subcontractor to Subcontractor, and any person or entity directly or indirectly employed by them or any person or

entity for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder."

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.18.3 The Contractor's defense and indemnity obligations under this Section 3.18 shall specifically include all claims and judgments that may be made against the Indemnitees under the Labor Law of the State of New York, and similar laws of other state or governmental bodies having jurisdiction; and further, against claims and judgments arising from violation of public ordinances and requirements of governing execution of the Work.

§ 3.18.4 Claims by Governmental Authorities. To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Indemnitees from and against claims, damages, losses, and expenses arising out of any claims made against the Indemnitees under the laws of federal, state, or other governmental bodies having jurisdiction over the Work, including but not limited to claims arising from violation of public ordinances and other requirements of governing authorities, due to the Contractor's method of execution of the Work or implementation of any of the Contractor's other obligations under the Contract Documents.

§ 3.18.5 Liens and Security Interests. To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Indemnitees from and against any actions, lawsuits, or other proceedings brought against Indemnitees as a result of liens or security interests of any type arising from the Work and filed against the Work, the site of any of the Work, the Project site and any improvements thereon, payments due the Contractor, or any portion of the property of any of the Indemnitees.

§ 3.18.6 Intellectual Property. The Contractor shall defend, indemnify, and hold harmless the Indemnitees from and against any claim or demand for patent fees, royalties, or otherwise on account of any invention, machine, article, process, copyright, or arrangement that may be used by the Contractor in performing the Work, other than as to any of the foregoing expressly called for in the Contract Documents to be so used. In the event of any injunction or legal action regarding such claim or demand that results in stopping the Work in whole or part, the Owner shall have the right to direct the Contractor to change the manner of performance of the Work to avoid such stoppage, all cost and expense occasioned thereby to be borne solely by the Contractor.

§ 3.18.7 The Contractor shall further indemnify and hold harmless the Indemnitees from and against any costs and expenses (including reasonable attorneys' fees) incurred by any of the Indemnitees in enforcing any of the Contractor's defense, indemnity, and hold harmless obligations under this Section 3.18 or as may otherwise be provided elsewhere in the Contract.

§ 3.18.8 Subject to Section 3.18.9, all obligations of the Contractor under this Section 3.18 to defend the Indemnitees are obligations to provide full defenses at the sole cost and expense of the Contractor, regardless of any alleged culpability on the part of any Indemnitee or any ultimate determination of relative shares of liability of any Indemnitee or limitation of the Contractor's indemnity obligations in light of such determination.

§ 3.18.9 To the extent any defense, indemnity, or hold harmless obligations under this Section 3.18 are made void or otherwise impaired by any law controlling their construction (including but not limited to laws limiting such obligations to the extent of the portion of damages caused by an indemnitor), such obligations shall be deemed to conform to the greatest rights to defense and indemnity permitted by such law (including but not limited to New York State General Obligations Law Section 5-322.1).

§ 3.18.10 All provisions of this Section 3.18 shall survive termination of the Agreement or final completion. No obligations under this Section 3.18 shall be construed to negate, abridge, or reduce other rights or obligations to defense and indemnity, including but not limited to common law indemnity, which would otherwise exist as to a party or person described in this Section 3.18.

§ 3.19 Existing Features and Underground Data

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§ 3.19.1 The location of existing features shown on plans is intended for general information only. The Contractor, alone, is responsible for accurate determination of the location of all structures, and shall not be entitled to any increase in the Contract Sum or Contract Time due to difficulties or distances encountered in the Work, which should have been foreseeable thereby.

§ 3.19.2 The locations, depths and data as to underground conditions have been obtained from records, surface indications and data furnished by others. Information furnished is solely for the convenience of the Contractor without any warranty, expressed or implied as to its accuracy or completeness. The Contractor shall make no claim against the Owner, Construction Manager or Architect with respect to the accuracy or completeness of such information if it is erroneous, or if the conditions found at the time of construction are different from those as indicated.

§ 3.20 Construction Stresses

§ 3.20.1 The Contractor shall be solely responsible for the conditions which develop during construction and in the event any structure is dislocated, over strained, or damaged so as to affect its usefulness, the Contractor shall be solely responsible. The Contractor shall, at its own expense, take whatever steps necessary to strengthen, relocate, or rebuild the structure to meet all applicable requirements.

§ 3.20.2 The Contractor is responsible for restoration or repair of utilities, private property, buildings, pavement, walkways, roads, or other property damaged by its activities under this Agreement.

§ 3.21 Training and Instructions

§ 3.21.1 Upon Substantial Completion of the Work, the Contractor shall orient and instruct personnel of the Owner designated by it in the operation and maintenance of all equipment furnished by the Contractor and shall turn over all pertinent literature and operational manuals relating to the equipment. The format for organizing, binding, and delivering such manuals shall be as described in the Specifications.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.1.1 Architect's Consultants: All firms listed on the title sheet of the Specifications, except for the Owner and Construction Manager, are Consultants employed by the Architect, and are agents of the Architect and will make observation of their respective branches of the Work. All changes in the Work must be processed through the Architect. Consultants shall not order extra Work or make changes in the Work.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

§ 4.1.3 The Architect is the interpreter of the technical requirements of the Drawings and Specifications with regard to questions the Contractor may have concerning its obligations under either. The Architect shall render such interpretations with such promptness as necessary to maintain progress of the Work.

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment and during the correction period described in Article 12. The Construction Manager and Architect have the authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Multiple Prime Contractors in accordance with the latest approved Project Schedule. The Contractor shall participate with other Contractors and the Construction Manager, the Architect and Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary by the Owner or Construction Manager. The approved construction schedules shall be integrated into the Project Schedule and constitute the schedules to be used by the Contractor, other Contractors, the Architect, the Construction Manager and the Owner until subsequently revised.

§ 4.2.4.1 The Contractor shall assume full responsibility for the execution of its Work in the allotted duration times set forth in the Project Schedule.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, or charge of, construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of or be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

§ 4.2.6 **Communications Facilitating Contract Administration.** Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Construction Manager, and shall contemporaneously provide the same communications to the Architect about matters arising out of or relating to the Contract Documents. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with other Multiple Prime Contractors shall be through the Construction Manager and shall be contemporaneously provided to the Architect if those communications are about matters arising out of or related to the Contract Documents. Communications by and with the Owner's own forces shall be through the Owner.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9. The Construction Manager will assemble each of the Contractor's Applications for Payment with similar applications from other Prime Contractors into a Project Application and Certificate for Payment, all of which will be submitted to the Architect with the Construction Manager's recommendations as to certifications in whole or part by the Architect.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents and will notify each other about the rejection. The Construction Manager shall determine in general whether the Work of the Contractor is being performed in accordance with the requirements of the Contract Documents and notify the Owner, Contractor and Architect of defects and deficiencies in the Work. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require additional inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, upon written authorization of the Owner, whether or not such Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 The Construction Manager will receive and promptly transmit to the Architect all submittals from the Contractor such as Shop Drawings, Product Data and Samples. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.10 The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.11 Review of the Contractor's submittals by the Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.11.1 The Architect's review of Contractor's submittals shall be limited to an initial submittal and one (1) resubmittal. If the Architect is required to review additional submittals because the initial submittal and resubmittal failed to conform to the information given and the design concept expressed in the Contract Documents, the amount of compensation paid to the Architect by the Owner for additional services shall be deducted from the payments to the Contractor.

§ 4.2.11.2 The review will not be considered complete until an "ACTION" stamp or other written notice to that effect has been received by the Contractor.

§ 4.2.12 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.13 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7 and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.14 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.15 The Construction Manager will assist the Architect in conducting inspections to determine the dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.16 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.17 The Architect will interpret and decide matters concerning performance under, and requirements of the Contract Documents on written request of the Construction Manager, Owner or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.18 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

§ 4.2.18.1 If Work is described or indicated in a manner which makes it impossible to carry out the requirements of the Contract Documents, or should discrepancies appear among the Contract Documents, the Contractor shall request interpretation before proceeding with the Work. If the Contractor fails to make such a request, no excuse will be entertained for failure to carry out the Work of the Contract Documents. Should a conflict occur in or between Contract Documents, the Contractor is deemed to have included in the Contract Sum the more expensive manner of doing the Work.

§ 4.2.19 The Architect's decisions, after consultation with the Owner, on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.20 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing to the Construction Manager to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

(Paragraph deleted)

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, within ten (10) days after award of the Contract, shall furnish in writing to the Construction Manager for review by the Owner, Construction Manager and Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Construction Manager may reply within 14 days to the Contractor in writing stating (1) whether the Owner, the Construction Manager or the Architect has reasonable objection to any such proposed person or entity or, (2) that the Construction Manager, Architect or Owner requires additional time for review. Failure of the Construction Manager, Owner, or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.1.1 In no case shall payments be made on the Contract until a complete list of Subcontractors has been submitted by the Contractor to the Construction Manager for review by the Owner, Construction Manager, and Architect. Such list shall not be considered complete if the Owner, Construction Manager or Architect has any reasonable objection to any name listed thereon. Such list shall be submitted and resubmitted if necessary until it is considered complete.

§ 5.2.1.2 Subcontractors will not be acceptable unless, when requested by the Owner, Architect or Construction Manager, evidence is furnished by the Contractor that the proposed Subcontractor has satisfactorily completed similar subcontracts as contemplated under this Contract, and has the necessary experience, personnel, equipment, plant and financial ability to complete the proposed subcontract in accordance with the intent of the Contract Documents and the Project Schedule. As verification of financial ability, the Owner reserves the right to request and receive up to five (5)

years of financial statements, bank references, bond/insurance company references and all other information required to assess financial ability.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager and Architect have no objection. No increase in the Contract Sum shall be allowed where a Subcontractor is rejected by the Architect, Construction Manager or Owner who is (1) deemed unqualified to perform the particular work subcontracted by the Contractor, (2) does not have the necessary experience, personnel, equipment, plant and financial ability to complete the subcontract, or (3) has a history of poor performance of work of similar nature. Upon receipt of a rejection of a Subcontractor by the Architect, the Contractor shall have the right to request a meeting with the Architect, Construction Manager and the Owner to discuss the reasons it believes the proposed Subcontractor is qualified to perform the work. Upon review of such reasons, the Architect shall reconsider its determination and shall advise the Contractor of its determination upon such review. If the Architect still finds that such proposed Subcontractor does not meet the requirements above stated, it shall advise the Contractor. The Architect's determination upon such review shall be final and binding on the Contractor and its proposed Subcontractor and the Contractor hereby waives any and all claims it or its proposed Subcontractor might have against the Owner, the Construction Manager and the Architect concerning the rejection of such Contractor and shall require its Subcontractors to execute such similar waiver in its agreement with the Contractor.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

§ 5.2.5 The Maintenance of the Project Schedule is critical. The Contractor shall award subcontracts to entities capable of performing in a manner that will maintain the Project Schedule and require its subcontractors to complete their work in accordance with the Project Schedule.

§ 5.2.6 Upon written request from or on behalf of the Owner, the Contractor shall provide to the Owner executed, unredacted copies of all subcontracts, purchase orders or other agreements relating to the Work.

§ 5.3 Subcontractual Relations

§ 5.3.1 By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. Each subcontract shall contain provision for execution of lien waivers in form and substance acceptable to the Owner as a condition of payment by the Contractor. The Contractor shall require each Subcontractor to (1) inspect the Project site, including all relevant surfaces and job conditions, before beginning the Work and (2) accept or cite necessary corrections in the Project site, including surfaces or job conditions, before beginning the Work.

§ 5.3.2 The Contractor shall promptly notify the Owner and Architect of any material defaults by any Subcontractor or whether it has terminated its agreement with any of its Subcontractors for any reason.

§ 5.4 Contingent Assignment of Subcontracts

- § 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
- .1 assignment is effective only after termination of the Contract by the Owner pursuant to Article 14 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 60 days, through no fault of the Subcontractor, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity.

§ 5.4.4 All subcontracts over \$10,000 shall be in writing with copies of the written subcontract provided to the Owner promptly upon request.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, which include persons or entities under separate contracts not administered by the Construction Manager, and to award other contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.1.4 The Contractor accepts assignment of, and liability for, all purchase orders and other agreements for procurement of materials and equipment that are identified as part of the Contract Documents. The Contractor shall be responsible for such pre-purchased items, if any, as if the Contractor were the original purchaser. The Contract Sum includes, without limitation, all costs and expenses in connection with delivery, storage, insurance, installation and testing of items covered in any assigned purchase orders or agreements. All warranty and correction of the Work obligations under the Contract Documents shall also apply to any pre-purchased items, unless the Contract Documents specifically provide otherwise.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor recognizes and acknowledges that the Project is governed by and subject to the provisions of New York State General Municipal Law §101, et seq., governing the award of contracts on public improvement projects. As such, the Contractor recognizes and acknowledges that other Contractors or Separate Contractors will be performing work on the Project in conjunction with it. As such, the Contractor shall afford the Owner's own forces and other Contractors or Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.1.1 The Contractor shall not commit or permit any act which will interfere with the performance of the work of any other Contractor or Separate Contractor performing work on the Project. If the Contractor sustains any damage

through any act or omission of Separate or other Contractors having a contract with the Owner for the performance of work upon the site or of work which may be necessary to be performed for the proper execution of the work to be performed hereunder, or through any act or omission of a subcontractor of such Separate or other Contractor, the Contractor shall promptly notify the Owner and the Construction Manager of such damage

§ 6.2.1.2 The Contractor agrees to defend, indemnify and hold harmless the Owner, Architect, Construction Manager, Consultants and Sub-consultants, from all claims made against any of them arising out of the Contractor's acts or omissions or the acts or omissions of any Subcontractor of the Contractor which have caused damage to the Owner, Architect, Construction Manager, Separate Contractor or other Contractor on the Project. The Owner's right to indemnification hereunder shall in no way be diminished, waived or discharged, or by the exercise of any other remedy provided for by the contract or by law. Further, the Owner shall withhold from the Contractor's Contract Sum an amount sufficient to cover such damage and all expenses and costs associated with the damage sustained.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.

§ 6.2.2.1 The Contractor shall promptly correct discrepancies or defects in its Work identified by Separate Contractors as affecting proper execution and results of the work of the Separate Contractors.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5 or elsewhere in the Contract Documents.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 Should the Contractor or its Subcontractors cause damage to the work or property of any Separate Contractor or other Multiple Prime Contractor, the Contractor shall, upon due notice, promptly attempt to settle by agreement or otherwise resolve the dispute with the Separate Contractor or other Multiple Prime Contractor. If such separate trade contractor or other Multiple Prime Contractor sues or makes any other claim against the Owner, Construction Manager, or Architect on account of any damage alleged to have been caused by the Contractor or its Subcontractors, the Contractor shall defend, indemnify, and hold harmless the Owner, Construction Manager, and Architect against such claim or proceedings at the Contractor's own expense. The Owner's right to indemnification hereunder shall in no way be diminished, waived or discharged, or by the exercise of any other remedy provided for by the Contract Documents or by law. Further, the Owner shall be entitled to withhold from the Contractor's Contract Sum an amount sufficient to cover such damage and all expenses and costs associated with the damage sustained.

§ 6.2.7 When the Work of the Contractor or its Subcontractors overlap or dovetail with that of other Contractors, materials shall be delivered and operations conducted to carry on the Work continuously, in an efficient, workmanlike manner.

§ 6.2.8 In case of interference between the operations of the Contractor and other Contractors, the Construction Manager will be the sole judge of the rights of each contractor and shall have the authority to decide in what manner the Work may proceed, and in all cases its decision shall be final. Any decision as to the method and times of

conducting the Work or the use of space as required in this paragraph shall not be basis of any claim for delay or damages by the Contractor.

§ 6.2.9 The Contractor, including its Subcontractors, shall keep itself informed of the progress of other Contractors and shall notify the Architect or the Construction Manager immediately in writing of lack of progress on the part of other Contractors where such delay will interfere with its own operations. Failure of the Contractor to keep informed of the work progressing on the Project and failure to give notice of lack of progress by others shall be construed as acceptance by the Contractor of the status of the work as being satisfactory for proper coordination with the Contractor's Work.

§ 6.2.10 Delays or oversights on the part of the Contractor or its Subcontractors in getting any or all of the Work done in the proper way, thereby causing cutting, removing and replacing Work already in place, shall not be the basis for a claim for either an increase in the Contract Sum or Contract Time.

§ 6.2.11 The Contractor shall promptly correct discrepancies or defects in its Work which have been identified by Separate Contractor(s) or other Contractor(s) as affecting proper execution and results of the work of such Separate Contractor(s) or other Contractor(s).

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only by Change Order, Construction Change Directive or field order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. The Owner may in its sole discretion reduce the scope of the Contractor's Contract with or without any specific reasons therefor.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor; a Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor; a field order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.2.1 Field orders are an interpretation of the Drawings or Specifications which order minor changes in the Contractor's work which will not result in an increase or decrease in the Contract Sum. From time to time, the Architect may issue field orders to the Contractor. The work included in such field order shall be performed by the Contractor at no additional cost to the Owner and shall not form the basis for a claim for an extension of the Contract Time. Hence, the Contractor shall perform the work included in field orders so as to cause no delay to its Work and/or the work of other Contractors or Separate Contractors engaged by the Owner in connection with the Project. All field orders shall be given to the Contractor and the Construction Manager by the Architect in writing.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or field order for a minor change in the Work. Additional work performed without authorization of a Change Order will not entitle the Contractor to an increase in the Contract Sum or an extension of the Contract Time. No course of conduct or prior dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alteration or addition to the Work, whether or not there is, in fact, any unjust enrichment of the Owner, shall be the basis for any claim to an increase in any amounts due under the Contract Documents or a change in any time period provided for in the Contract Documents. No amount shall be payable by the Owner to the Contractor for performance of work without a written and fully executed Change Order.

§ 7.1.4 Costs for changes in the Work shall not be allowed in excess of usual rentals charged in the area where the Project is located for similar equipment of like size and condition, including costs of necessary supplies and repairs for

operating equipment on site in connection with other work unless its use incurs actual and additional costs to Contractor. If equipment not on Site is required for change in work only, cost of transporting equipment to and from Site will be allowed.

§ 7.1.5 When the Owner or Architect (in association with the Construction Manager) request that the Contractor perform work which is not included in the Contract Drawings or Specifications and which will result in additional cost to the Owner, the Architect shall request that the Contractor submit its proposal for performing such additional work. The Contractor shall submit its proposal to the Construction Manager and Architect for review. The Contractor's proposal shall include a complete itemization of the costs associated with performing its work including labor and materials. All proposals for any work that a Contractor, its Subcontractor(s) or Sub-subcontractor(s) perform in connection with additional work shall be properly itemized and supported by sufficient substantiating data, including but not limited to material descriptions, material quantities, material unit prices, labor trade listings, labor hour quantities, labor trade rates, equipment descriptions and equipment rates with a percentage allowance for overhead and profit as set forth in Section 7.3.11. The Contractor's proposal shall also set forth the impact on the milestone and critical path dates set forth in the Contract Documents, the construction schedule and the Project schedule, which would result from implementation of the change, and be accompanied by such other information as the Owner may request.

§ 7.1.6 Overtime, when specifically authorized by the Owner in writing, and not as a corrective measure by the Contractor to expedite the progress of construction as ordered by the Owner based on its determination that the performance of the Work has not progressed to the level of completion required by the approved Schedule, shall be paid for by the Owner on the basis of premium payment only, plus the cost of insurance and taxes based on the premium payment period. Overhead and profit will not be paid by the Owner for overtime.

§ 7.1.7 Unit prices shall be submitted in the Bid Form for various items as set forth therein, and are subject to approval and acceptance by the Owner. The Owner reserves the right to reject any unit price which is unreasonable or unbalanced, as compared with prevailing costs, or as compared with the unit prices submitted by other bidders for the Project. Approved unit prices quoted shall include all profit, overhead, bonds, insurance, labor, materials, equipment, tools, applicable taxes necessary to complete the work item and shall apply to all work added or work deducted.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.1.4 Changes in the Work involving additional Work or deletion of Work effecting an addition to or subtraction from the Contract Sum shall not be made until the Contractor submits to the Architect and Construction Manager the cost of the added or deleted Work with a complete and detailed listing of all Subcontractors involved, all materials, labor, overhead and profit, the impact on the Contract Time, and an appropriate Change Order has been issued. If requested, the Contractor shall submit detailed quotations for Subcontractors and material suppliers. Changes in the Work when not involving additions or deletions from the Contract Sum shall not be made until the Architect has issued an appropriate Change Order. All Change Orders must have the approval of the Owner, Construction Manager and Architect in writing. No change in Contract Time shall be allowed for Change Orders, except for substantial changes in scope determined by the Owner. In the case of increased scope, it is expected that Change Order work shall be performed by increased manpower.

§ 7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Section 7.3.3. The Owner shall have the right to select the method of pricing to be used by the Contractor.

§ 7.2.3 Agreement on any Change Order shall constitute a final settlement of all Claims and other matters related to the change in Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change (including, without limitation, all costs of associated delay, interference, acceleration, inefficiency, overhead, as well as costs of material, labor and supervision), and any and all adjustments to the Contract Sum and the Contract Time. Payment of a Change Order shall constitute accord and satisfaction of all Claims of the Contractor in connection with the change or changes to the Contract addressed by the Change Order and it is

understood and agreed that a signed Change Order shall be the complete and fully integrated agreement for all related costs and there are no oral or written understandings, reservations, representations or agreements, directly or indirectly, connected with the Change Order and not affirmatively stated on the signed Change Order. In the event a Change Order increases the Contract Sum, the Contractor shall include the Work covered by such Change Orders in Applications for Payments as if such Work were originally part of the Contract Documents.

§ 7.2.4 Upon the Contractor's completion of the Change Order work, and prior to payment being made to the Contractor for such work, the Contractor shall provide the Owner with the following information:

- .1 Certified payrolls itemizing the labor actually utilized in connection with the Change Order work; and
- .2 Copies of invoices from its Subcontractors supplying work in connection with the Change Order work.

§ 7.2.5 Additional work performed without authorization of a Change Order will not entitle the Contractor to an increase in the Contract Sum or an extension of the Contract Time, except as provided in Section 7.3, and except in the case of an emergency as provided in Section 10.4.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order or to direct the Contractor to remedy its nonconforming or defective Work. In the event the Contractor and the Owner cannot agree on the sum by which the Contract Sum or the amount of time by which the Contract Time is to be increased or reduced based upon changes to the scope of the Work as described in Article 7, or due to the Contractor's failure to perform the Work in accordance with the Contract Documents, the Architect or Construction Manager shall issue a Construction Change Directive directing the Contractor to proceed with the disputed Work or correct defective Work and, if applicable, reflecting the addition to or reduction of the scope of the Contractor's Contract and the corresponding change in the Contract Sum or Contract Time, if any.

§ 7.3.2.1 If the Owner and the Contractor cannot agree that the requested Work properly forms the basis for a Change Order or on the sum by which the Contract is to be increased or reduced based upon changes to the scope of Work, the Architect or Construction Manager shall issue a Construction Change Directive signed by the Owner, Construction Manager and Architect reflecting the addition to, or removal of, the scope of Work and the Contractor shall (a) in the case of additional work to be performed by the Contractor, perform such additional work in an expeditious manner so as not to delay the Work of the Contractor or other Contractors working at the site and keep records of its performance of such additional work, and (b) in the case of work to be removed from the scope of the Contractor's Work, refrain from taking any steps in connection with the work associated with the deduction of the Contractor's Work. The Construction Change Directive shall include: (a) a description of the work being added or removed from the Contractor's scope of Work; (b) the amount the Owner has determined to be the cost associated with the additional work (as those costs are identified and limited in Section 7.3.4) or removal of the scope of the Contractor's Work until the Owner and the Contractor agree upon the increase or decrease in the Contractor's Contract Sum, or until a claim filed by the Contractor has been determined; and (c) the extent to which the Contract Time will be adjusted as a result of the change in the scope of Work. Any claims must be filed in accordance with the requirements set forth in Article 15 of these General Conditions. Failure to timely file any claim in accordance with requirements set forth therein shall constitute a waiver of such claim.

§ 7.3.3 If the Construction Change Directive provides for a method for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon (unit prices shall be deemed to include all costs and expenses for the Contractor's changed Work, including costs of general conditions, insurance/bonds and overhead and profit attributable to the change);
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee subject to the limitations of Section 7.3.11;

- .4 As provided in Section 7.3.4 subject to the limitations of Section 7.3.11; or
- .5 As provided in Section 7.3.2.1.

§ 7.3.4 If the Construction Change Directive provides for a reasonable expenditure and savings method of adjusting the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in Section 7.3.11. In such case, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Actual costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers compensation insurance;
- .2 Actual costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed. Sales taxes, if any are required, shall be indicated and added after the cost of the change is calculated. No overhead or profit will be paid on sales tax;
- .3 Actual rental costs of machinery and equipment, exclusive of hand tools, rented from third parties; and
- .4 Actual costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the additional work. The Contractor shall submit with its proposal actual invoices from its insurance broker reflecting actual additional costs associated with the procurement of bonds and insurance. Bond premiums and/or credits shall be invoiced per Change Order. Lump sum bond premium requests will not be considered at the end of the Project.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Sum or Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with (1) the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time or (2) the amount of the increase or decrease in the Contract Sum and Contract Time as provided in Section 7.3.2.1. Any claims must be filed in accordance with the requirements set forth in Article 15 of these General Conditions. Failure to timely file any claim in accordance with requirements set forth therein shall constitute a waiver of such claim.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 When the Owner or Architect request that portions of the Contractor's Work originally included in the Drawings or Specifications be deleted and which will result in a reduction of the Contract Sum, the Architect shall request that the Contractor submit its proposal for deleting the scope of such Work from the Contract. The Contractor's proposal shall include a complete itemization of the costs associated with deducting such Work including labor, materials, overhead and profit. The Contractor shall not be entitled to retain its overhead or profit for such work nor shall any of its Subcontractors which were to perform the work being deducted from the Contractor's scope of Work. Additionally, the Contractor shall reflect the reduced cost of premiums on bonds which are to be supplied herein as a result of such change. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the

adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 The limit for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:

- .1 For the Contractor, for Work performed by the Contractor's own forces, fifteen percent (15%) of the direct cost for labor and materials.
- .2 For the Contractor, for Work performed by the Contractor's Subcontractor, maximum of five percent (5%) of the amount due the Subcontractor for the Contractor's overhead and profit. For the Subcontractor, for Work performed by the Subcontractor's own forces, ten percent (10%) of the direct cost for labor and materials. The total combined overhead and profit for a change order shall be limited to 15% of the direct cost regardless if the Work is performed by the Contractor or the Subcontractor.
- .3 The markup on any part of the Work a Subcontractor subcontracts will be limited to one overhead and profit figure, in addition to the Contractor's overhead and profit markup. The Subcontractor and Sub-subcontractor may divide the overhead and profit amount as they agree upon.
- .4 Costs to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.4.
- .5 In order to facilitate checking of quotations for extras and credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and subcontracts. Labor and material shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also.
- .6 Overhead and profit mark-up shall include, but not be limited to, the following:
 - .1 home office expense;
 - .2 field office expense;
 - .3 supervision;
 - .4 project management & estimation;
 - .5 small tools & equipment;
 - .6 research & layout;
 - .7 inspections & permits;
 - .8 material handling;
 - .9 record drawings: and
 - .10 safety and cleanup

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement. The date shall not be postponed or extended by the failure to act of the Contractor or persons or entities for whom the Contractor is responsible to act.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8. The date of final completion is the date certified by the Architect and Owner in accordance with Section 9.10. Unless otherwise agreed in writing by the Owner, the Contractor agrees that Final Completion shall occur not more than 30 calendar days after the date of Substantial Completion.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.1.5 Work remaining to be completed after Substantial Completion, shall be limited to items which can ordinarily be completed within a thirty (30) day period (one month) before final payment is made.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.1.1 The Contractor recognizes that the Project Schedule is of critical importance to the Owner and that failure by the Contractor to complete the Work in accordance with the construction schedule may cause significant damages to the Owner, including but not limited to the loss of State Aid from the State Department of Education. All aspects of construction must reflect a "time is of the essence" construction strategy. The "Bid Schedules" serve as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. If the Contractor's performance of the Work evidences, to the Owner, Construction Manager or Architect, that timely completion may be in jeopardy, this will mandate the Contractor to increase staff, work overtime, or use other means to recover time, at the costs of the Contractor responsible for such delays. In addition, all costs due to delays in completion of the Work shall be borne by Contractor(s) responsible for delays.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner and the Owner's approval of such insurance. The date of commencement of the Work shall not be changed by the effective date of such insurance. The Work can not start until the required insurance and bonds are provided and the Contract has been executed.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion and final completion within the Contract Time. The Contractor agrees that the Work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will ensure full completion thereof within the Contract Time specified and, further, to provide such protections as may be necessary. It is expressly understood and agreed by the Contractor that the time for the substantial and final completion of the Work is a reasonable time for its completion, taking into consideration, among other things, the average climatic range and usual weather conditions prevailing in the Project's locality. The Contractor shall cooperate with the Owner, Architect, and other Contractors on the Project, making every reasonable effort to reduce the Contract Time.

§ 8.2.4 In no case shall the Contractor delay the progress of the Work, or any part thereof, on account of changes in the Work or disputes caused by proposed or ordered changes in the Work (including the equitable value of the changes), or any disputes or disagreements as to the Work or extra work.

§ 8.2.5 If the Contractor is not maintaining the pace of the Work in accordance with the approved construction schedule or otherwise consistent with the Contract Time, and such delays are not excusable as set forth in Section 8.3, then the Owner may require the Contractor to undertake a time recovery plan (including more personnel, overtime and/or additional shifts) at the Contractor's sole expense, to reasonably assure substantial and final completion of the Work within the Contract Time.

§ 8.2.6 In the event the Contractor fails to complete all Work under this Contract by said scheduled dates, the Contractor will not be permitted to perform any work during normal school hours without the express written authorization of the Owner. Such Work shall only be performed after school hours, Saturdays, Sundays, holidays or periods when school is unoccupied at no additional cost of any kind to the Owner. In addition to damages incurred by the Owner in connection with the Contractor's delay, the Contractor shall be liable for all costs incurred by the Owner to provide staff, Architect and Construction Manager personnel as required to make facility accessible by Contractor and perform inspections during such off hours.

§ 8.2.7 The Contractor understands that in order to meet the requirements of the Project schedule, including intermittent milestone and critical path dates set forth in the Contract Documents, it may be required to work its personnel and equipment overtime on regular workdays and on Saturdays and holidays, the cost of which is included

in the Contract Sum. If the Owner specifically approves in writing reimbursement for overtime, the Contractor shall be paid by the Owner on the basis of the premium payment.

§ 8.2.7.1 The Contractor may request access to the site during times beyond the work hours permitted. Approval is solely at the discretion of the Owner. If approval is given, the Contractor is responsible for paying all additional costs incurred by the Owner, Architect and Construction Manager for providing the site to the Contractor during the additional time periods.

§ 8.2.8 The Owner shall have the right at any time to modify the Project Schedule; to suspend, delay or accelerate, in whole or in part, the commencement or execution of the Work or any portion thereof or to vary the sequence thereof; and to prescribe the time, order and priority of the various portions of the Work, and all other matters relating to the scheduling of the Work. The Contractor shall not be entitled to additional compensation for any such decisions made by the Owner.

§ 8.2.9 The Owner may request the Contractor to work overtime to expedite the completion of the Work or a portion of the Work, at a time when the Contractor is not behind schedule or otherwise in default of any of the provisions of the Contract. The Contractor agrees to work said overtime, and the Contractor shall be reimbursed only for the Contractor's extra labor cost over the amount of regular time during the period of such overtime, including additional fringe benefit costs, insurance and taxes incurred by it with respect thereto and only those other actual costs of the Contractor directly related to said overtime, which have been approved in advance by the Owner. Time slips covering said overtime must be submitted to the Owner on a daily basis for checking and approval. The Contractor shall not be compensated for any lost efficiency or production alleged to have resulted from said overtime work.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed in the commencement or progress of the Work as a result of: Acts of God (such as tornado, flood, hurricane, pandemics, epidemics, etc. making performance temporarily impossible); the negligent acts or omissions of the Owner, Architect, Construction Manager, other Contractors, or their agents or employees; strikes, lockouts or other labor disturbances (not arising from the labor practices of Contractor or its Subcontractors, Suppliers, or Sub-subcontractors to comply with their obligations arising under the Contract); unusually adverse weather conditions; freight embargoes (provided that delays by the Contractor, its Subcontractors, Sub-subcontractors or Suppliers do not constitute an excusable cause of delay); changes in the work to be performed by the Contractor (not caused or resulting from the failure of the Contractor or its Subcontractors, Suppliers or Sub-subcontractors); or changes to laws or regulations after the effective date of the Contract, provided the Contractor has used all reasonable efforts to mitigate the foregoing causes; then the Contractor shall be entitled to a day for day extension of the Contract Time for the established delay to the critical path of the Work subject to the provisions of this Article 8 and Article 15. All other delays of the Project, including but not limited to, Architect review and/or approval of shop drawings or other submittals, requests for information, clarifications, samples, and change orders; Owner schedule; Architect certification of payment; payment by Owner of Contractor's Application for Payment; coordination among the Multiple Prime Contractors; unavailability of materials and/or equipment; surveying/testing; closeout, etc. are deemed to be foreseeable and contemplated and, therefore, shall not form the basis for a claim for an extension of time or additional compensation by the Contractor. The extension of time provided under this Section 8.3.1 shall be the Contractor's exclusive remedy.

§ 8.3.1.1 The Contractor further acknowledges and agrees that adjustments in the Contract Time will be permitted for a delay only to the extent such delay (1) is not caused or could not have been anticipated by the Contractor, (2) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay or reasonable likelihood that a delay will occur, and (3) is of a duration of more than one (1) day.

§ 8.3.1.2 The Contractor's inability to secure sufficient personnel for the performance of the Work shall not constitute a basis for an extension of time. The Contractor shall not be entitled to an extension of time if the Architect or Construction Manager stops the Work due to the existence of or reasonable suspicion of a deficiency in the Work.

§ 8.3.1.3 An extension of the Contract Time, if requested by the Contractor, shall only be considered after the Contractor has made reasonable effort to recover the lost time. An extension, or extensions, of time may be granted subject to the provisions of this Article 8, but only after written application therefore by the Contractor. An extension of time shall be only for the number of days of delay which the Architect may determine to be due solely to the causes set forth in the application for extension of time. The Contractor shall not be entitled to receive a separate extension of

time for each one of several causes of delay operating concurrently; but if at all, only the actual period of delay as determined by the Construction Manager or Architect.

§ 8.3.1.4 All requests for additional time shall be made in writing, delivered to the Construction Manager within five (5) calendar days from the time when the circumstance with potential for delay becomes reasonably known to the Contractor, supported by documentation which demonstrates to the Architect and Construction Manager's satisfaction that the critical path of the Work has been significantly altered by the delays to the activities in question through no fault of the Contractor or anyone for whom the Contractor is responsible, and that the Project schedule cannot be maintained by re-ordering other activities within the Project at no cost. This request shall also contain, at a minimum, the following information: (1) date of start of delay; (2) specific cause of delay; (3) effect of delay on construction progress; and (4) date of termination of delay. Upon receipt of the Contractor's request for an extension of time, the Owner will ascertain the facts and extent of the delay, and may, in its sole discretion, extend the time for completion of the Contractor's Work when in its judgment such an extension is justified. The Owner's determination will be final and binding in any litigation commenced by the Contractor against the Owner which arises out of the Owner's denial of an extension of time to the Contractor. Any approval of an extension of the Contractor's time to complete its Work shall be memorialized by written change order, signed by the Owner, Contractor, Architect and Construction Manager. When the Owner determines that the Contractor will be granted an extension of time, such extension shall be computed in accordance with the following: for each day of delay in the completion of its Work, the Contractor shall be allowed one day of additional time to complete its Contract. The Contractor shall not be entitled to receive a separate extension of time for each one of several causes of delay operating concurrently; rather, only the actual period of delay as determined by the Owner or its Architect may be allowed.

§ 8.3.1.5 Failure of the Contractor to give written notice as required by Section 8.3.1.4 or to strictly comply with the requirements of Article 8 shall be deemed conclusively to be a waiver and release of such claim, and such notice shall be a condition precedent to the Contractor's right to make a claim for any claim arising out of, under or in connection with the Contractor or the performance of the Work.

§ 8.3.2 Notwithstanding anything to the contrary in the Contract Documents, an extension in the Contract Time, to the extent permitted and justified under Section 8.3.1, shall be the sole remedy of the Contractor for, and the Contractor waives its right to any claim for damages to the extent arising from, any (1) delay in the commencement, prosecution, or completion of the Work; (2) hindrance or obstruction in the performance of the Work; (3) loss of productivity or acceleration; or (4) other claims for disruption, interference, inefficiencies, impedance, hindrance, acceleration, resequencing, schedule impacts, lack of timeliness by the Owner or its consultants, and lack of coordination, errors or omissions in the design of the Project, cumulative impact of multiple change orders, unavailability of labor, materials or equipment, delays and other impacts (collective referred to herein as "Delay(s)"). In no event shall the Contractor be entitled to any compensation or recovery of any damages in connection with any Delay, including, but not limited to, delay costs, loss of productivity or efficiency, lost profits, extended jobsite general conditions and home office overhead, consequential damages, lost opportunity costs, impact damages, or other similar remuneration. The Owner's exercise of any of its rights or remedies under the Contract Documents (including, but not limited to, ordering changes in the Work, or directing suspension, rescheduling or correction of the Work), regardless of the extent or frequency of the Owner's exercise of such rights or remedies, shall not be construed as interference, hindrance or obstruction with the Contractor's performance of the Work and shall not entitle the Contractor to any additional compensation. The Contractor shall include a no-damages-for-delay clause in all subcontracts for the performance of the Work.

§ 8.3.3 Delays that affect the scheduled completion of the Work and are attributable to interference between Multiple Prime Contractors, Separate Contractors, Subcontractors, suppliers, utility companies or municipalities, shall be compensated solely by the granting of an extension of time to the Contractor by the Owner to complete the Work without charges to the Owner. The parties acknowledge that the Contract Time takes into account the time necessary for review of submittals and shop drawings, correcting design errors or omissions, coordination amongst Multiple Prime Contractors and Separate Contractors, change orders, delays incurred by seasonal limitations, work by utilities, and other administrative processing by all parties involved and are not compensatory. The Contractor agrees that it has included in its Bid prices the additional cost of doing work under this Contract caused by interference of the Architect, Construction Manager, other Multiple Prime Contractors, Separate Contractors, Subcontractors, utility companies, etc. and the other non-compensatory Delays described above.

§ 8.3.4 When the Contract Time has been extended, as provided under Section 8.3, such extension of time shall not be considered as justifying extra compensation to the Contractor for administrative costs, home office, estimating, extended general conditions or other similar impact costs. The Contractor acknowledges that in agreeing to the Contract Sum it assessed the potential impact of the limitations in Section 8.3.2 on its ability to recover additional compensation in connection with a Work delay, interference, impact or hindrance and agrees that those limitations shall apply regardless of the accuracy of the Contractor's assessment or actual costs incurred by the Contractor.

§ 8.3.5 If the Contractor submits a progress report indicating, or otherwise expresses an intention to achieve, completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

§ 8.3.6 The intent of the Contract is for Work to follow a logical sequence. The Contractor, however, may be required by the Owner, Construction Manager or Architect to temporarily omit or leave out any section of Work or perform Work out of sequence. Out of sequence work and come back time to these areas shall be performed at no additional cost to the Owner.

§ 8.3.6.1 This Project is to be physically completed in accordance with the Milestone Schedule included within Division 1 of the Project Manual. Liquidated damages will be assessed in the amounts specified below for each and every calendar day after such time allowed for Substantial Completion.

| | |
|--|-----------------|
| Total dollar amount of the contract is: Assessed amount of liquidated damages per day: | |
| Under \$50,000 | \$100 per day |
| \$50,001 - \$100,000 | \$250 per day |
| \$100,001 - \$500,000 | \$500 per day |
| \$500,001 - \$1,000,000 | \$750 per day |
| \$1,000,001 - \$5,000,000 | \$1,000 per day |
| Above \$5,000,001 | \$1,500 per day |

The Contractor realizes that time is of the essence on this Contract and the completion dates and milestone date for each work item in the Project Schedule or the date of Substantial Completion shall be no later than the date indicated in the Contract Documents. In the event the Contractor fails to complete any work or substantially complete the work under this Contract by said schedule date, the sum per calendar day for each date not met, as delineated above, will be subtracted from the payment due the Contractor (or, if the amount due the Contractor as payment is insufficient, any deficiency shall be paid by the Contractor to the Owner), except in cases where a delay is due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including acts of God, or of the public enemy, acts of the Government, in either its sovereign or contractual capacity, fires, flood, epidemics, quarantine restrictions. Freight embargoes will not constitute a delay excusable under this provision unless approved by the Owner in writing.

Within five (5) calendar days from occurrence of any such delay, the Contractor shall notify the Owner in writing of the cause of delay. The Owner will ascertain the facts and extent of the delay, and extend the time for completing the Work when in its judgment the findings of fact justify such an extension. The Owner's finding of fact will be final and binding in litigation.

The said sum per calendar day shall constitute the Liquidated Damages incurred by the Owner for each day of delay beyond the agreed upon Project Schedule dates for Substantial Completion and final completion. Such Liquidated Damages shall be in addition to any other damages (other than by reason of delay) Owner may incur as a result of Contractor's breach of Contract.

In the event the Contractor fails to complete all work under this Contract by said scheduled dates, the Contractor will not be permitted to perform any work during normal school hours. Such work shall only be performed after school hours, Saturdays, Sundays, holidays or periods when school is unoccupied at no additional cost of any kind to the Owner. In addition to Liquidated Damages, the Contractor shall be liable for all additional costs incurred by the Owner to provide staff, Architect's personnel as required to make facility accessible by Contractor and perform inspections during such off hours. In the event that Substantial Completion date is not met, inspections will be performed once each week unless the Owner or the Architect determine, at their sole discretion, that additional inspections are needed. All costs incurred by the Owner and the cost of additional inspections, at the rate of One Thousand Dollars (\$1,000)

per inspection, will be subtracted from the payment due the Contractor. If the amount due the Contractor for payment is insufficient, any deficiency shall be paid by the Contractor to the Owner. Attention is directed to Division 1, General Requirements of the Project Manual for additional requirements, including reimbursements.

§ 8.3.6.2 The Contractor acknowledges and agrees that time is of the essence on its Contract and the Construction Schedule shall be submitted per the Project Manual. In the event the Contractor fails to submit a Construction Schedule by said date, the sum per day, of FIVE HUNDRED DOLLARS (\$500) will be subtracted from the Payment due the Contractor or if the amount due Contractor as payment is insufficient, any deficiency shall be paid by the Contractor to the Owner.

§ 8.3.7 Claims relating to Contract Time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.8 The Contractor understands that the timely prosecution of its obligations under the Contract is essential to the efficient completion of the Project and may have a direct bearing on the costs incurred by all other Contractors and Separate Contractors. The Contractor's obligations in this regard include, but are not limited to: 1) completing the Work in an orderly fashion and in accordance with an agreed upon progress schedule; 2) timely coordination and cooperation with the Owner, the Architect and the other Contractors and Separate Contractors to resolve disruptions, interferences or other problems as they arise; 3) providing sufficient personnel, systems and procedures to ensure that required materials, supplies and skilled human resources are available so that the Work is timely understood, anticipated, progressed and communicated where required to others involved with the Project; 4) maintaining accurate job progress schedules and systems; 5) timely notifying others working on the site when delays or interferences occur that will affect the Contractor's or other's work pertaining to the Project; 6) providing a skilled, informed and properly supported superintendent at the Project sites and at all required job meetings to provide meaningful information and commitments to efficiently cooperate in coordinating the work of the various contractors; and 7) timely reviewing all job minutes, correspondence and other communications and responding to same when required.

§ 8.3.9 The Contractor agrees that its failure to timely cooperate and proceed can substantially increase the costs of other Contractors and Separate Contractors in attempting to timely prosecute their obligations under related contracts. Accordingly, the Contractor recognizes that other Contractors and Separate Contractors on the site are third-party beneficiaries of the Contractor's obligation to timely coordinate and prosecute its obligations under the Contract Documents. The Contractor hereby waives and shall not raise as a defense the absence of privity of contract between the Contractor and the other Contractors and Separate Contractors in any claim hereafter asserted by other Contractors or Separate Contractors to recover costs or damages for delay or interference and shall be responsible to other Contractors and Separate Contractors on the site for damages caused by the Contractor's failure to timely and properly perform its contractual obligations under the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents. Notwithstanding anything to the contrary contained in the Contract Documents, the Owner may withhold or offset any payment to the Contractor if and for so long as the Contractor fails to perform any of its obligations under any of the Contract Documents; provided, however, that any such holdbacks shall be limited to an amount sufficient in the reasonable opinion of the Owner to cure any default or failure of performance by the Contractor.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

§ 9.2.1 Within 30 days of Contract Award, the Contractor shall submit to the Construction Manager a schedule of values allocated to various portions of the Work for each building, prepared in the currently authorized form of AIA Document G703 – Continuation Sheet and supported by such data to substantiate its accuracy as the Construction Manager and Architect may require. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The schedule of values shall state the names of all Subcontractors, Sub-subcontractors and material suppliers and the amounts to become due to each breakdown by specification section. The schedule of values shall contain, along with individual work items, separate

line items for (1) mobilization, bonds, insurance, etc., (2) value of administrative close out submittals, (3) Allowance(s) if required elsewhere in the Project Manual, (4) separate subtotals by building, and (5) buildings further separated between "Additions/New Construction" and "Renovations/Reconstruction" as applicable. At the direction of the Architect, it shall include quantities, if applicable. The total for all items shall aggregate the Contract Sum.

§ 9.2.2 Any schedule of values that fails to include sufficient detail, is unbalanced or exhibits "front loading" of the value of the Contractor's Work will be rejected. Furthermore, if the schedule of values has been approved by the Construction Manager and the Architect and is subsequently used, but later is found by the Construction Manager or Architect to be improper for any reason, sufficient funds shall be withheld from the Contractor's future applications for payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Contractor's Work.

§ 9.2.3 The schedule of values shall be drafted so as to reflect multiple construction sites, multiple locations within each site, additions versus renovations of work, and the like so as to satisfy any New York State Education Department requirements for the Project.

§ 9.3 Applications for Payment

§ 9.3.1 In accordance with Article 5 of the Agreement and the Payment Procedures in the Specifications, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, notarized and reflecting retainage as provided elsewhere in the Contract Documents. Applications for Payment will be in the currently authorized form of AIA Document G732 - 2019, "Application and Certificate for Payment," accompanied by AIA Document G703-1992, "Continuation Sheet," and must include (add and/or deduct) adjustments to the Contract Sum resulting from Work performed under approved Change Orders (specified under Article 7) and shall be shown separately on the application for previous and current periods. Each Application and Certificate of Payment shall be accompanied by two (2) copies of the Pay Application Lien Waiver and Release in the form set forth in the Payment Procedures in the Specifications, certified payroll for employees of the Contractor and employees of Subcontractors performing work on the Project, and such other information required by the Owner. Each Application for Payment shall be prepared in such form and supported by such data to substantiate the Contractor's right to payments as the Owner, Construction Manager or Architect may require such as copies of requisitions from Subcontractor and material suppliers. Each Application for Payment forwarded to the Owner by the Construction Manager or Architect shall be subject to audit and approval by the Owner in accordance with the Owner's normal audit.

§ 9.3.1.1 The Construction Manager and Architect shall review the application for payment submitted by the Contractor and shall advise the Contractor of any adjustments to be made thereto. The Construction Manager and/or the Architect may make such adjustments under the circumstances set forth in Section 9.5.1. If any such adjustments are made by the Architect or Construction Manager, the Contractor shall submit an original itemized revised application with all documentation required by Section 9.3.1.

§ 9.3.1.2 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

§ 9.3.1.3 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.4 Until Substantial Completion, the Owner shall pay ninety-five percent (95%) of the amount due the Contractor on account of progress payments, less an amount necessary to satisfy any claims, liens, or judgments against Contractor, which have not been suitably discharged. In accordance with Section 9.8.5, the Owner shall pay the entire amount retained from previous progress payments less two (2) times the amount required to complete items identified in a list prepared in accordance with Section 9.8.2 and the amount required to satisfy any outstanding claims, liens, or judgments against the Contractor.

§ 9.3.1.5 The Contractor and its Subcontractors are required to submit certified payroll information to the Owner in accordance with New York State Law.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the Project site for subsequent incorporation in the Work. If approved in advance in writing by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest. The costs of applicable insurance, storage, and transportation to the site for such materials and equipment stored off the site shall not increase the Contract Sum.

§ 9.3.2.1 Payment may be made for materials and equipment delivered and suitably stored on-site for future incorporation in the Work, subject to the following conditions:

- .1 Request for payment shall be considered for material or equipment, which is in short or critical supply, which has been specially fabricated for the Project or, at the discretion of the Construction Manager and Architect, for other materials or equipment.
- .2 A request for payment of material stored on-site must be made by the Contractor ten (10) days prior to actual, monthly cut-off date for Payment Applications.
- .3 Procedures required by the Owner shall include, but not necessarily limited to, submission by the Contractor to the Construction Manager and Architect of bills of sale and bills of lading for such materials and equipment, provisions of opportunity for the Construction Manager's and Architect's visual verification that such materials and equipment are in fact in storage; and, if stored off-site, submission by the Contractor of verification that such materials and equipment are stored in a bonded warehouse.
- .4 All such materials and equipment, including materials and equipment stored on-site but not yet incorporated into the Work, upon which partial payments have been made shall become the property of the Owner, but the care and protection of such materials and equipment shall remain the responsibility of the Contractor until incorporation into the Work and accepted by the Owner at substantial completion, including maintaining insurance coverage on a replacement cost basis without voluntary deductible.

§ 9.3.2.2 Payment may be made for materials and equipment delivered and suitably stored off-site for future incorporation in the Work, subject to the following conditions:

- .1 The Contractor shall submit: a written validation by the Owner, Construction Manager or Architect that such materials are stored safely off site, in the quantities and condition stated by the Contractor; a copy of an invoice for the material and equipment; a bill of sale or equivalent indication of the quantity and value of the material or equipment; a written statement indicating the location and method of storage; and property insurance certificate or rider covering the specific material or equipment, which shall name the Owner as an additional insured party.
- .2 The Contractor shall submit a verification that such materials and equipment are stored in a bonded warehouse.
- .3 A request for payment of material stored off-site must be made by the Contractor 10 days prior to actual, monthly cut-off date for Payment Applications.
- .4 All such materials and equipment upon which partial payments have been made shall become the property of the Owner, but the care and protection of such materials and equipment shall remain the responsibility of the contractor until incorporation into the Work and accepted by the Owner at substantial completion, including maintaining insurance coverage on a replacement cost basis without voluntary deductible.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.3.4 The Contractor further expressly undertakes to defend the Indemnitees (as defined previously in Section 3.18), at the Contractor's sole expense, against any actions, lawsuits or proceedings brought against Indemnitees as a result of liens filed against the Owner, the Work, the site of any of the Work, the Project site and any improvements thereon,

payments due the Contractor or any portion of the property of any of the Indemnities (referred to collectively as liens in this Section 9.3.4). The Contractor hereby agrees to defend, indemnify, and hold Indemnitees harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such actions, lawsuits, or proceedings.

§ 9.3.5 The Owner shall release any payments withheld due to a lien or a claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond which is: (1) issued by a surety acceptable to the Owner, (2) in form and substance satisfactory to the Owner, and (3) in an amount not less than One Hundred Fifty percent (150%) of such lien claim. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this Section 9.3, including, without limitation, the duty to defend and indemnify the Indemnities in an action on the lien, lien discharge bond or underlying debt. The cost of any premiums incurred in connection with such bonds and security shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Sum.

§ 9.3.6 Notwithstanding the foregoing, the Owner reserves the right to settle any disputed public improvement lien claim by payments to the lien claimant or by such other means as the Owner, in the Owner's sole discretion, determines is the most economical or advantageous method of settling the dispute. The Contractor shall promptly reimburse the Owner, upon demand, for any payments so made.

§ 9.4 Certificates for Payment

§ 9.4.1 The Construction Manager will, within seven (7) days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven (7) days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either issue to the Owner a Certificate for Payment, with a copy to the Construction Manager, for such amount as the Architect determines is properly due, or notify the Construction Manager and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven (7) days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven (7) days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment shall be based upon the Construction Manager's evaluation of the Work and the information provided as part of the Application for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information and belief, the Work has progressed to the point indicated and the quality of the Work is in accordance with the Contract Documents. The certification will also constitute a recommendation to the Architect and Owner that the Contractor be paid the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and information provided as part of the Application for

Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated, that the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a separate Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed the Contractor's construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.4 and 9.4.5 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence or subsequent observations, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner, another Prime Contractor or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 failure to carry out the Work in accordance with the Contract Documents;
- .8 receipt by the Owner of a notice of withholding from the New York State Department of Labor or other administrative agencies having jurisdiction over the Project;
- .9 failure to comply with applicable federal, state or local statutes, regulations, and/or laws, including, without limitation, laws and regulations applicable to the provision of certified payrolls;
- .10 failure of the Contractor to provide executed performance and payment bonds and a current certificate of insurance and endorsements;
- .11 reasonable evidence that the Work has not progressed as indicated on the Application for Payment;
- .12 damages caused to the Owner, Construction Manager, the Architect or another Contractor as a result the Contractor's performance of its Work;
- .13 the Architect's and/or the Construction Manager's discovery or observation of work which has been previously paid for by the Owner which is defective and/or incomplete;
- .14 The amount requested exceeds the percent completion of Work on the site; or
- .15 breach of this Agreement.

Notwithstanding the extent to which the Construction Manager and/or Architect certify an Application for Payment, the Owner shall have the right to withhold payment, in whole or in part, should the Owner determine that any of the grounds for withholding certification set forth in this Section 9.5.1 do in fact exist. If the Owner withholds payment, in whole or in part, the Owner shall promptly provide to the Contractor, Architect and Construction Manager a written

explanation of the reason(s) for which payment is withheld and shall promptly pay, in accordance with the Contract Documents, all amounts which are not in dispute.

§ 9.5.2 If the Contractor disputes any determination by the Owner, Construction Manager or Architect with regard to any Certificate for Payment or in the event of a bona fide dispute between the Contractor and Owner, the Contractor nevertheless shall expeditiously continue to prosecute the Work and may submit a Claim in accordance with Article 15.

§ 9.5.3 When the above reasons for withholding certification or the Owner's withholding of payment are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, or if the Owner otherwise deems it necessary to protect its interests or the interests of the Project, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager and both will reflect such payment on the next Certificate for Payment.

§ 9.5.5 Notwithstanding anything above to the contrary, the Owner has the right to withhold payment to the Contractor to protect itself against damages incurred or which may be incurred as a result of the Contractor's breach or negligence, including, but not limited to, the items set forth in Section 9.5.1. With respect to any liens, claims, or other circumstances for which the Owner is entitled to withhold payments pursuant to decisions by the Architect pursuant to Section 9.5.1, the Owner shall be entitled to withhold a sum equal to twice the stated amounts of such liens or claims, or, where there is no stated amount, twice the amount determined by the Architect to be necessary to protect the interests of the Owner. The Owner will release payments withheld due to liens provided that the Contractor obtains a discharge of record of such lien, by bonding or otherwise. By posting a lien discharge bond, however, the Contractor shall not be relieved of any responsibilities or obligations under the Agreement, including, without limitation, the duty to defend, indemnify, and hold harmless the Indemnitees (as defined previously in Section 3.18). The cost of any premiums or other expenses incurred in connection with such bonds or other means of discharge of record shall be the sole responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Sum.

§ 9.5.6 If the Owner is entitled to reimbursement or payment from the Contractor under or pursuant to the Contract, including but not limited to these General Conditions, such payment shall be made promptly upon demand by the Owner. Notwithstanding anything contained herein to the contrary, if the Contractor fails to promptly make any payment due the Owner, or the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to: (1) deduct an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner, or (2) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents unless such requisition is not in accordance with the terms of the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 Payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held in trust by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contracts with the Contractor for which payment was made by the Owner. The Contractor shall strictly comply with any common law, statutory, or decisional law trust fund requirements in the State of New York (including, without limitation, the requirements of New York Lien Law Article 3-A), and hereby agrees that the Owner has the same rights as any beneficiary of such trusts to examine the books and records of the Contractor to determine such compliance, from time to time at the Owner's sole discretion. The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in similar manner.

§ 9.6.2.1 Within seven (7) days of receipt of a payment from the Owner, the Contractor shall pay each of its Subcontractors and suppliers for work performed and materials furnished by them as reflected in the payment from the Owner, less an amount necessary to satisfy any outstanding claims, liens, or judgments and less a retained amount of not more than 5%, except that the Contractor may retain not more than 10% provided that prior to entering into a Subcontract with the Contractor, the Subcontractor is unable or unwilling to provide a performance bond and labor and material payment bond both in the full amount of the subcontract at the request of the Contractor. The Contractor shall not retain portions of the proceeds owed any Subcontractor or supplier from the Owner's payment to the Contractor for the "contract balance." Similar provisions apply to the Subcontractor and/or supplier paying each of its Subcontractors and suppliers. Nothing in this Section shall create in the Owner any obligation to pay, or to ensure that the Contractor pays, any Subcontractor or supplier, or any relationship in contract or otherwise, implied or expressed, between any Subcontractor or supplier and the Owner. The Contractor agrees that it shall comply with the payment requirements of Section 106-b(2) of the New York General Municipal Law, as amended, and that to the extent there is any conflict between that statutory section and the provisions of this Section 9.6.2.1, the provisions of the statute shall prevail.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven (7) days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Construction Manager nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to its suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

(Paragraph deleted)

§ 9.7 Failure of Payment

§ 9.7.1 If, through no fault of the Contractor, the Construction Manager and Architect do not issue a Certificate for Payment within 20 days of the Construction Manager's receipt of the Contractor's Application for Payment or if, through no fault of the Contractor, the Owner does not pay the Contractor the amount certified by the Construction Manager and Architect, subject to the Owner's right to withhold payment under the terms of the Contract Documents, within 30 days of the date established for such payment in the Contract Documents, then the Contractor may, upon seven (7) additional days' written notice and opportunity to cure to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. To the extent it is determined that payment to the Contractor was improperly held through no fault of the Contractor and the Contractor elected to stop its Work consistent with the procedure set forth in this Section, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up as provided for in the Contract Documents. However, if the Contractor stops its Work and it is determined that the Owner had the right to withhold payment under the terms of the Contract Documents, then the Contractor shall be responsible to the Owner for all costs and damages (including attorneys' fees) arising from such stoppage of Work and the Contractor shall not be entitled to any adjustment in the Contract Sum or the Contract Time. This Section shall not apply: (a) to the extent that the Contractor owes to the Owner any amount pursuant to the provisions of this Contract,

or (b) to the extent the Owner is required to expend amounts to purchase additional insurance on behalf of the Contractor to meet the insurance requirements of this Agreement.

§ 9.7.2 If the Owner is entitled to payment from the Contractor under or pursuant to the Contract Documents, such payment shall be made promptly upon demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor fails to promptly make any payment due the Owner, or the Owner incurs any costs or expenses to cure any default of the Contractor or to correct defective work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to (1) deduct an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner, or (2) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled.

§ 9.8 Substantial Completion

§ 9.8.1 The date of Substantial Completion of the Project or a designated portion thereof is the date when construction is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the entire Project (or such portion thereof as Owner earlier elects to occupy or utilize) for the use for which it is intended. Minor items of completion or correction ("Punch List Work") may be performed after Substantial Completion, provided that such items can and shall be performed at such times and in such manner that such Work does not unreasonably interfere with the Owner's occupancy and use of the Project. Substantial Completion shall not be deemed to exist until (a) the Owner receives a Certificate of Occupancy for the Project (or such portion as elected by Owner) if such Certificate of Occupancy is required, and any other permits, approvals, licenses and any other documents from governmental authorities having jurisdiction therefore necessary for the beneficial occupancy of the Project and (b) the Contractor, Construction Manager, Architect and Owner have agreed upon a schedule for final completion and to provide the Owner with all as-built drawings, operating manuals, warranties and other required closeout documents. Warranties called for by the Agreement or by the Drawings and Specifications shall commence on the date of Substantial Completion of the Project or designated portion thereof, or any later date that the parties agree. This date shall be established by a Certificate of Substantial Completion signed by the Owner, Contractor, Architect and Construction Manager.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list which shall identify all non-conforming, defective and incomplete Work and establish the date of commencement of warranties in connection with any such Work. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the requirements of the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Construction Manager or Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion. If the Architect and the Construction Manager are required to perform additional substantial completion inspections because the Work fails to be substantially complete, the amount of compensation paid to the Architect and the Construction Manager by the Owner for additional services shall be deducted from the final payment to the Contractor.

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work or designated portion thereof is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all Punch List Work, which timeframe shall not exceed 30 days. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.8.5.1 In conformance with New York General Municipal Law Section 106-b(1)(a), upon proper execution of Certificate of Substantial Completion of Work, the Contractor shall submit a requisition for payment of the remaining amount of the Contract Sum. Upon certification of payment by the Architect, the Owner will approve and promptly pay the remaining amount of the Contract Sum less two times value of any remaining items to be completed or corrected and less an amount necessary to satisfy any claims, liens or judgments against Contractor which have not been suitably discharged. Such payment shall be made under terms and conditions governing final payment except that the Owner's making of such payment shall not constitute the Owner's waiver of any objection to all or any portion of the Work performed by the Contractor or any claims the Owner may then have against the Contractor.

§ 9.8.5.2 Neither the requisition for payment stipulated in Section 9.8.5.1 nor any portion of retained percentage shall become due until the Contractor submits to the Construction Manager:

- .1 an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the Owner or the Owner's property might in any way be responsible, have been paid or otherwise satisfied, the form of which will be the currently authorized AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims";
- .2 consent of all sureties, if any, to such payment, the form of which will be the currently authorized AIA Document G707A, "Consent of Surety to Reduction in or Partial Release of Retainage," but which will not be required if the amount withheld under Section 9.8.3.1 exceeds the amount of retainage;
- .3 if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases, and waivers of liens arising out of contract to such extent and in such form as may be designated by the Owner; and
- .4 all required closeout documents.

§ 9.8.5.3 As the Punch List Work is satisfactorily completed or corrected, the Contractor may submit a requisition for payment of these items. The Contractor shall submit with each such requisition for payment affidavits, consents of surety, and other data as described in Section 9.8.5.2 covering work for which payment is requested. Upon certification of such requisitions by the Architect and Construction Manager, the Owner will approve and promptly pay the requisition less an amount two times that which is necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged.

§ 9.8.5.4 Where the Project includes heating, air conditioning, electrical, communication, data or other systems which are not put into operation at the time of occupancy, a sum shall be withheld until these systems have operated to the general satisfaction of the Architect. The Contractor shall provide complete start up and commissioning of the systems with a detailed check list as recommended by the equipment or system manufacturer. The retained amount shall approximate five percent (5%) of the cost of the systems as determined by the cost breakdown submitted. The guaranty/warranty period for such systems will not commence until after such Architect approval.

§ 9.8.5.5 The Contractor shall complete the Punch List Work for the Project no later than 30 days after Substantial Completion of the Project. The Contractor shall be fully liable to the Owner for all damages suffered by the Owner as a result of delay in achieving final completion of the Work, including without limitation, additional architectural and construction management fees related to extended services.

§ 9.8.6 If the Architect or the Construction Manager is required to inspect the Work more than two (2) times prior to certifying the Work as being substantially complete on account of the discovery of one or more items that are not sufficiently complete, the Contractor shall be liable to the Owner for the amount of any costs, additional fees or compensation due from or paid by the Owner to the Architect and/or the Construction Manager for the additional inspections.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the

Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.9.4 The Contractor shall cooperate with the Owner in order to make portions of the Project available as soon as possible.

§ 9.9.4.1 The Project site and buildings, whether work of the Contractor is partially or fully completed or not, are property of the Owner who shall have certain rights and privileges in connection with use of same.

§ 9.9.4.2 Should there be, in the opinion of the Architect or Construction Manager, unwarranted delay on part of any Contractor in completion of incomplete or defective work or other Contract requirements, and the Architect so certifies, the Owner may have full or partial use and occupancy of any or all portions of buildings as required for moving in or installing furniture, fixtures, supplies, or equipment and for general cleaning and maintenance work. In such event, the Contractor whose unfinished work is done subsequent to installation of furniture, fixtures, equipment, etc., shall be responsible for the prevention of any damage to such installation. Such use or occupancy by the Owner shall in no instance constitute acceptance of any of the Work.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a written notice that the Work is ready for final inspection and acceptance and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager will evaluate the completion of Work of the Contractor and then forward the notice and Application, with the Construction Manager's recommendations, to the Architect who will promptly make such inspection. When the Architect, finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.1 If the Work is not accepted by the Owner after final inspection and additional time is required to complete items identified during the final inspection, the date starting the one-year correction period described in Article 12.2 shall be set by the Architect at his discretion, but not later than the date of the final Certificate for Payment.

§9.10.1.2 If the Architect and the Construction Manager are required to provide additional services, extend the duration of services to the Owner, and/or perform additional final inspections because the Work fails to comply with the requirements of the Contract Documents, or the Contractor did not complete the Work in accordance with the construction schedule or Project schedule, the amount of compensation paid to the Architect and the Construction Manager by the Owner for additional services shall be deducted from the final payment due to the Contractor.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) all closeout documents required by the Contract Documents, including, without limitation, as-built drawings, attic stock, maintenance manual, operating instructions and other

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documents required to be delivered under the Contract in connection with the Work in the form required by the Owner, (2) confirmation that all start-up, testing, balancing and commissioning of systems, equipment and other materials has been successfully completed as required by the Contract Documents, (3) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (4) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (5) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (6) consent of surety, if any, to final payment, (7), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner, and (8) all warranties and guarantees required by the Contract Documents. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.2.1 In addition to the submittals required in Section 9.10.2 above, the Contractor shall submit separate final release or waivers of lien for each Subcontractor, material supplier, or others with lien rights against the Project, and shall submit a list of such parties.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment
(Paragraphs deleted)

by the Owner shall not constitute a waiver of claims, causes of action, damages or complaints by the Owner.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing in accordance with Article 15 and identified by that payee in writing as unsettled at the time of the final Application for Payment.

§ 9.10.6 At any time a lien is filed against the Project funds, the Owner may demand that the Contractor discharge said lien, through bonding or otherwise, and the Contractor must obtain the discharge of said lien within seven (7) days of such demand at the Contractor's sole cost and expense, and at no cost to the Owner. If any lien or other encumbrance required to be removed at the Contractor's sole cost and expense pursuant to this Section is not discharged of record as aforesaid, the Owner shall have the right to take such action as the Owner shall deem appropriate (which shall include the right to cause such lien or other encumbrance to be canceled and discharged of record), and in such event, all costs and expenses incurred by the Owner in connection therewith (including, without limitation, premiums for any bond furnished in connection therewith, and reasonable attorneys' fees, court costs and disbursements), shall be paid by the Contractor to the Owner on demand or, at the option of the Owner, deducted from any payment then due or thereafter becoming due from the Owner to the Contractor in accordance with the provisions of these General Conditions.

§ 9.10.7 Existing warranties shall not deprive the Owner of any cause of action, right, or remedy otherwise available for breach of any of the provisions of the Contract Documents. The periods referred to above shall not be construed as limitations on the time in which the Owner may pursue any such action, right or remedy.

§ 9.10.8 The Contractor shall achieve final completion of all Work, including, without limitation, correction of punch-list items, preparation and delivery of all manuals, presentation of training and completion of final paper

submissions not later than 30 days following the date of Substantial Completion. In the event the Contractor shall fail to achieve final completion of the Work within such a period of time, the Contractor and the Contractor's surety, if any, shall be liable for and shall reimburse the Owner for any and all fees paid to the Architect and Construction Manager and other expenses made necessary by the Contractor's failure. Additional fees and expenses shall be charged by the Owner against any Final Payment due or which may become due to the Contractor, and the Contractor shall promptly pay or refund the Owner the excess, if any, upon the Owner's written request.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, implementing, directing, controlling, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager. The Contractor's safety precautions and programs shall include specific steps designed to minimize the risk of contracting or spread of COVID-19, including provision of all appropriate personal protective equipment, social distancing, avoiding stacking of trades, and other reasonable precautions.

§ 10.1.1 Prior to beginning any Work, the Contractor shall submit a copy of its corporate safety plan to the Owner and the Construction Manager. Two (2) weeks after receipt of the Notice to Proceed, the Contractor shall provide a site safety logistics plan to the Construction Manager. The site safety logistics plan should minimally include locations of the temporary fence and gates, traffic plans for deliveries and removals, refuse container locations, crane locations, pick locations, boom radius, and lift locations, stockpiles, toilet locations, site water and power locations, and safety. This plan shall also show the location of all staging and storage areas, clearly separating construction and school areas. The logistical information represented by the construction documents shall serve as a minimal guide. The Contractor is required to submit its corporate safety policy within ten (10) days of receipt of the Notice to Proceed. Said policy must minimally meet OSHA standards and define details concerning the maintenance of a safe work environment. The Contractor shall make the participation of its Subcontractors in its safety program mandatory. A list of key personnel, with addresses and telephone numbers for emergency purposes shall be forwarded to the Construction Manager and Architect. The Owner and the Construction Manager shall establish a fire coordination procedure and shall forward same to the Contractor for its use during the performance of its Work.

§ 10.1.2 The Contractor shall provide its own COVID-19 Safety Plan to the Owner prior to the start of any work. The Contractor shall designate a person on its staff to be responsible for monitoring the wearing of PPE by each person on site working with or for the Contractor. The Contractor shall strictly follow and ensure that its subcontractors follow the Contractor's COVID-19 Safety Plan as well as all applicable Center for Disease Control guidelines and federal, state and local orders and directives.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take necessary precautions for safety of, and shall provide reasonable protection to prevent damage, injury, infection or exposure to COVID-19, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 the Owner's real and personal property and other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction;
- .4 construction or operations by the Owner, Separate Contractors, or other Contractors; and
- .5 the existing buildings and premises in the vicinity of or affected by the Contractor's operations.

§ 10.2.1.6 Safe access to and egress from any building under construction as part of this Contract, or any existing building in which Work is being done under this Contract, shall be maintained and remain unencumbered by the Contractor in accordance with all applicable codes, rules and regulations of authorities having jurisdiction on the Work. The Contractor and its Subcontractors shall cooperate in maintaining this condition. Roadways, paths, walks, exits, service drives and other areas shall remain unobstructed and shall be maintained in a safe and satisfactory condition, for all persons using the building and premises. Materials shall not be stored promiscuously about the site or

in the building, but shall be carefully stored in areas which will not interfere with pedestrian traffic or with access to and egress from adjacent properties and use of the building. The Contractor shall provide and maintain such temporary Work as may be required for the protection of its finished Work where liable to injury. The Contractor will be responsible for all of its Work, materials and equipment that may be damaged or stolen during the duration of the Contract and until the Work is accepted by the Owner. The Contractor shall make good any such damage or loss without expense to the Owner. The Contractor shall not permit unnecessary hazards to be created nor permit them to continue if they are discovered. The Contractor's storage and staging areas shall be only in locations assigned or approved by the Owner and Architect and may be required to be relocated by the Contractor as building occupancy or use changes during the course of the Work. This relocation will be done by the Contractor at no additional cost to the Owner.

§ 10.2.2 The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.2.1 The Contractor acknowledges that the Labor Law of the State of New York, and regulations adopted thereunder, place upon both the Owner and the Contractor certain duties and that liability for failure to comply therewith is imposed on both the Owner and the Contractor regardless of their respective fault. The Contractor hereby agrees that, as between the Owner and the Contractor, the Contractor is solely responsible for compliance with all such laws and regulations imposed for the protection of persons performing the Contract. The Contractor shall indemnify and hold harmless the Owner of and from any and all liability for violation of such laws and regulations and shall defend any claims or actions which may be brought against the Owner as the result thereof. In the event that the Contractor shall fail or refuse to defend any such action, the Contractor shall be liable to the Owner for all costs of the Owner in defending such claim or action and all costs of the Owner, including attorney's fee, in recovering such defense costs from the Contractor.

§ 10.2.2.2 All laborers, workers, and mechanics employed in the performance of the Work of this Project shall be certified as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least 10 hours in duration. The Contractor and its Subcontractors shall conduct their operation in accordance with the Safety Guides for Construction as issued by State Education Department, and the Contractor's safety program.

§ 10.2.2.3 All safety equipment including hard hats, weather protective gear and PPE required for the Contractor to perform its Work are to be supplied by the Contractor or its Subcontractors. Within the designated construction areas, the Contractor's employees, superintendents, or other agents, and its Subcontractors, employees, superintendents, or other agents are required to wear hard hats and other required or essential safety equipment. Each person seen without a hard hat, or otherwise failing to comply with this requirement, will be ordered to leave the Project. No prior warnings will be given by the Owner, Construction Manager or Architect. The Contractor and its Subcontractors shall be solely responsible for making up and paying for any loss of production or required progress resulting from the removal of personnel from the Project as set forth herein including any costs incurred by the Owner in connection with the work of other contractors.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4, except damage or loss attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The

foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18, and shall not be limited by such damage or loss being insured under property insurance required by the Contract Documents.

§ 10.2.6 The Contractor shall schedule weekly safety meetings and each of its Subcontractors must be properly represented at such meetings. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition. The Contractor shall not load any part of the Work with materials, equipment, shores, bracing, or other items which in any way could cause damage to the Work or to other Work or could endanger persons in or about the Work.

§ 10.2.8 If, during the construction, public or private property is damaged or destroyed as a consequence of its Work, the Contractor shall, at its own expense, restore such property to a condition equal to that existing before such damage or injury was done, by repairing, rebuilding or replacing it, or otherwise making good such damage or destruction in an acceptable manner.

§ 10.2.9 The Contractor shall be responsible for all breakage of glass, which has been furnished and installed as part of Contract and existing glass that is broken due to operations under the Contract for Work. No matter by whom or what cause glass was broken, the Contractor shall replace all broken glass before completion and acceptance of the Contractor's Work. The Contractor may claim damages, if applicable.

§ 10.2.10 In addition to all requirements set forth herein, the Contractor and its Subcontractors shall fully comply with the provisions of the federal Occupational Safety and Health Act of 1970, as amended, and with any rules and regulations pursuant to the Act. This requirement shall apply continuously and not be limited to normal working hours.

§ 10.2.11 The Contractor shall also be responsible, at the Contractor's sole cost and expense, for all measures necessary to protect any property adjacent to the Project and improvements therein. Any damage to such property or improvements shall be promptly repaired by the Contractor at its sole expense.

§ 10.2.12 The Contractor shall immediately contact the Construction Manager and, within 24 hours, report, in writing, to the Owner, Architect and Construction Manager, all accidents arising out of or in connection with the Work which cause death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately by telephone or messenger to the Owner, Construction Manager, and Architect.

§ 10.2.13 The Contractor shall be solely responsible for any conditions that develop during construction and in the event any structure is dislocated, over strained, or damaged so as to affect its usefulness, the Contractor shall be solely responsible. The Contractor shall take whatever steps necessary to strengthen, relocate or rebuild the structure to meet requirements at the sole expense of the Contractor.

§ 10.2.14 The Contractor is responsible for restoration or repair of utilities, private property, buildings, pavement, walkways, roads, etc. damaged by its activities under this Agreement to the satisfaction of the Owner, Construction Manager and Architect.

§ 10.2.15 From the commencement to the final completion of the Work, the Contractor shall keep the Work and the Owner's building(s) free from accumulation of water no matter the source or cause of water infiltration.

§ 10.2.16 During construction, the Contractor shall be responsible for maintaining a watertight structure. This responsibility shall include additions/alterations of existing buildings. The Contractor shall be responsible for temporary roofing, tarps and other protection at roofs, cavity walls, etc. Should the Contractor fail to provide adequate protection causing flooding, damage or other disturbance to the existing building(s), the Contractor shall be responsible for all costs associated with clean up, remediation and repairs. Inasmuch as flooding and water damage have safety implications to the general public, clean up, remediation and repairs may be made by the Owner without prior notice to the Contractor. Administration costs incurred by the Owner, Construction Manager and Architect will

also be back charged to the Contractor. The Contractor, by entering into this Contract, agrees to be liable for these costs.

§ 10.2.17 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents and all applicable laws, rules and regulations regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to, asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner, Construction Manager and Architect in writing. The Owner shall arrange for the material to be tested and if the test reveals that the material is a hazardous material or substance which has not been rendered harmless, the Owner shall pay for the test; otherwise, the Contractor shall bear the cost of the test and the Contract Sum shall be reduced by the amount of that cost. The Contractor shall comply with the reasonable instructions of the Owner after the test is conducted. This Section shall not apply in the case of asbestos which is to be removed and disposed of as part of the Work of the Contract.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify a presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, but only to the extent of available insurance proceeds, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that the person seeking indemnification: (1) did not bring such material onto the Project site; (2) timely provided notice of the condition and stopped Work in the affected area as required by Section 10.3.1; and (3) has a claim, damage, loss or expense that is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself). The Owner shall have no indemnity obligation to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity or the fault or negligence of a third party for whom the Owner is not responsible.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence or fault on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance (that was not brought to the site by the Contractor or those for whom the Contractor is responsible) solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.3.7 The Contractor shall notify the Owner of any storage, use, or discovery of hazardous material on the Project site which the Contractor knows or reasonably should know could cause bodily injury or death and of any injury or death attributable to any such hazardous material.

§ 10.3.8 The Contractor shall take all reasonable precautions and measures to prevent any contamination by or spread or disturbance of hazardous or potentially hazardous substances or materials stored, used, or discovered on the Project site.

§ 10.3.9 For the avoidance of any doubt, COVID-19 shall not be considered a Hazardous Material for purposes of this Article 10.3.

§ 10.4 Emergencies

§ 10.4.1 The Contractor shall provide at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone at the Work.

§ 10.4.2 The Contractor must promptly report in writing to the Construction Manager all emergencies whatsoever arising out of, or in connection with the performance of the Work, whether on, or adjacent to the site, which caused death, personal injury or property damages, giving full details and statements of witnesses. In addition, if death, injury, or damages are caused, the emergency shall be reported immediately to the Construction Manager, Owner, and Architect.

§ 10.4.3 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

§ 10.4.4 All fire and emergency access, including roads, rights-of-way, corridors, doors, and stairs, and all existing fire and smoke detection systems shall be maintained at all times in accordance with fire safety laws. If the Work requires the temporary obstruction of any fire and emergency access or existing fire and smoke detection systems, the Construction Manager shall be notified at least 72 hours in advance.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor agrees to secure and maintain, at the Contractor's own expense, all insurance coverage required in this Article 11 and elsewhere in the Contract Documents from one or more insurance companies licensed to write such insurance in New York State or that are eligible non-admitted insurers, pursuant to the current Excess Line Association of New York's official list covering all operations under this Contract whether performed by him/her/it or his/her/its Subcontractors. Insurers must carry an A.M. Best Financial Strength rating of "secured" or higher. The Contractor's insurance must include the following, without limitation, and must be written with limits no less than specified in Section 11.1.2:

- .1 claims under workers' compensation, disability benefit, and other similar employee benefit acts applicable to the Work to be performed, including, without limitation, claims by the employees of private entities performing Work at the site that are exempt from workers' compensation insurance coverage requirements on account of number of employees or occupation, which entities must maintain voluntary compensation coverage at the same limits specified for mandatory coverage for the duration of the Project;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 claims for damages because of bodily injury, sickness, disease, or death of any person other than the Contractor's employees;
- .4 claims for damages insured by usual personal injury liability coverage sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;
- .5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including resulting loss of use resulting;
- .6 claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance, or use of a motor vehicle; and
- .7 claims involving contractual liability applicable to the Contractor's obligations under Section 3.18.

- .8 A fully completed New York Construction Certificate of Liability Insurance Addendum (Acord 855 2014/15) must be included with the certificates of insurance. For any "yes" answers on Items G through L on this Form – additional details must be provided in writing.

§ 11.1.2 Coverages, whether written on an occurrence or claims-made basis, must be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment. Claims-made coverage will only be allowed when the Contractor demonstrates that occurrence-based coverage is not available for a specific type of required coverage. The Contract shall indemnify the Owner for any applicable deductibles. The insurance required by Section 11.1.1 must be written for not less than the following limits, or greater limits as may be required by law, and include the following terms:

- .1 **Commercial General Liability.** Occurrence-based Commercial General Liability coverage to include bodily injury, personal injury, and property damage applicable to ongoing operations, products & completed operations, and contractual liability, all with a per-project aggregate endorsement. No XCU exclusion is allowed for explosion, collapse, and underground operations. Products and Completed Operations coverage must be maintained in force for a minimum of two (2) years following Final Completion of the Project.

Minimum limits are:

| | |
|-------------|---|
| \$2,000,000 | General Aggregate (per project basis) |
| \$2,000,000 | Products and Completed Operations Aggregate |
| \$1,000,000 | Personal and Advertising Injury |
| \$1,000,000 | Each Occurrence |
| \$ 100,000 | Fire Damage (any one fire) |
| \$ 10,000 | Medical Expense (any one person) |

The commercial general liability policy shall be endorsed to waive the right of subrogation against the Owner and its Board of Education, employees and volunteers.

- .2 **Automobile Liability.** Bodily Injury and Property Damage coverage for the Contractor as the owner or lessee of automobiles, trucks, trailers, self-propelled Contractor's equipment, and all other owned and non-owned vehicles registered for use on the public highway and/or used in operations relating to the Contractor's Work, with a minimum Combined Single Limit of \$1,000,000. If any such vehicles are to be used to transport hazardous materials, the Contractor shall also provide pollution liability broadened coverage evidenced by ISO Form CA 99 48. The automobile liability policy shall be endorsed to waive the right of subrogation against the Owner and its Board of Education, employees and volunteers.

- .3 **Excess Liability and/or Umbrella Liability.** Minimum limits are:

- .1 \$5,000,000 per occurrence and \$5,000,000 aggregate for construction contracts with a contract sum of less than \$1,000,000;
- .2 \$10,000,000 per occurrence and \$10,000,000 aggregate for construction contracts with a contract sum of \$1,000,000 or higher.

The umbrella liability policy shall be endorsed to waive the right of subrogation against the Owner and its Board of Education, employees and volunteers.

- .4 **Workers' Compensation**

.1 **Workers' Compensation Requirements.** To comply with the New York State Workers' Compensation Law, the Contractor must (1) be legally exempt from obtaining workers' compensation insurance coverage, or (2) obtain such coverage from insurance carriers, or (3) be self-insured or participate in an authorized group self-insurance plan.

.2 **Workers' Compensation Coverage Evidence.** To demonstrate compliance with the New York State Workers' Compensation Law, the Contractor must provide one of the following forms to the Owner:

- .1 **Either** CE-200, "Affidavit For New York Entities And Any Out Of State Entities With No Employees, That New York State Workers' Compensation And/Or Disability Benefits Insurance Coverage Is Not Required"; **or** CE-200, "Affidavit That An Out-Of-State Or Foreign Employer Working In New York State Does Not Require Specific New York State Workers' Compensation And/Or Disability Benefits Insurance Coverage" (either affidavit must be stamped as received by the New York State Workers' Compensation Board); **or**
- .2 **Either** C-105-2, "Certificate of NYS Workers' Compensation Insurance Coverage" (for employers insured for workers' compensation through a private insurance carrier – the Contractor's insurance carrier must send this form to the Owner), or U-26.3, "New York State Insurance Fund Certificate of Workers' Compensation Coverage" (for employers insured for workers' compensation through the State Insurance Fund); **or**

- .3 **Either** SI-12, "Certificate of Workers' Compensation Self-Insurance," or GSI-105-2, "Certificate of Participation in Workers' Compensation Group Self-Insurance (for employers participating in group self-insurance for workers' compensation – the Contractor's Group Self-Insurance Administrator must send this form to the Owner).

The workers' compensation and employers' liability policies shall be endorsed to waive the right of subrogation against the Owner and its Board, employees and volunteers.

.5 Employer's Liability/Disability

.1 Disability Benefits Requirements. To comply with the New York State Disability Benefits Law, the Contractor must (1) be legally exempt from obtaining disability benefits insurance coverage, (2) obtain such coverage from insurance carriers, or (3) be self-insured.

.2 Disability Benefits Coverage Evidence. To demonstrate compliance with the New York State Disability Benefits Law, the Contractor must provide one of the following forms to the Owner:

- .1 **Either** CE-200, "Affidavit For New York Entities And Any Out Of State Entities With No Employees, That New York State Workers' Compensation And/Or Disability Benefits Insurance Coverage Is Not Required" **or** CE-200, "Affidavit That An Out-Of-State Or Foreign Employer Working In New York State Does Not Require Specific New York State Workers' Compensation And/Or Disability Benefits Insurance Coverage" (either affidavit must be stamped as received by the New York State Workers' Compensation Board); or
- .2 **Either** DB-120.1, "Certificate of Disability Benefits," or DB-820/829, "Certificate/Cancellation of Insurance" (the Contractor's insurance carrier must send either form to the Owner); or
- .3 DB-155 (3/04), "Certificate of Disability Benefits Self-Insurance."

The employers' liability policies shall be endorsed to waive the right of subrogation against the Owner and its Board, employees and volunteers.

.6 Hazardous Materials. If the Contractor's Work involves handling or disturbance of asbestos or other hazardous materials, the Contractor shall provide bodily injury and property damage liability insurance applicable to such operations, covering both ongoing operations and products & completed operations. Products and Completed Operations coverage must be maintained in force for a minimum of two (2) years following Final Completion of the Project. Coverage must be for limits not less than:

- .1 If covered by the Contractor's umbrella/excess liability policy:
 - \$2,000,000 General Aggregate
 - \$2,000,000 Each Occurrence or Incident
- .2 If not covered by the Contractor's umbrella/excess liability policy:
 - \$6,000,000 General Aggregate
 - \$6,000,000 Each Occurrence or Incident

The pollution legal liability policy shall be endorsed to waive the right of subrogation against the Owner and its Board of Education, employees and volunteers.

.7 Owner's Protective Liability Policy. The XCU exclusion must be deleted, and the Named Insured will be "Enlarged City School District of Middletown." Minimum limits are:

- \$1,000,000 Each Occurrence
- \$2,000,000 Aggregate

* OCP coverage is required for construction projects in excess of \$200,000.

§ 11.1.3 Certificates of insurance acceptable to the Owner, together with copies of all insurance policies procured by the Contractor pursuant to this Article 11, including, without limitation, terms, conditions, declarations, riders, and endorsements, must be submitted to the Construction Manager for transmittal to the Owner, with copies to the Architect, prior to commencement of the Work. The certificate of insurance must describe the specific services provided by the contractor (e.g., roofing, carpentry, plumbing) that are covered by the liability policies. If any of the foregoing insurance coverages are required to remain in force after final payment, an additional certificate evidencing continuation of such coverage must be submitted with the final Application for Payment as required by Section 9.10.2.2. Information concerning reduction of coverage must be furnished by the Contractor with reasonable promptness. In addition to the Certificates of Insurance and accompanying documents, the Contractor shall provide to the Certificate Holders, on a timely basis, copies of any subsequently issued endorsements that amend any coverages or limits. In addition:

- .1 "Certificate Holders" are the Enlarged City School District of Middletown, 223 Wisner Avenue, Middletown, New York 10940.

- .2 Coverages reflected in certificates of insurance and underlying policies must comply with all requirements of this Article 11.
- .3 All insurance documents must be executed with *authorized* signatures.
- .4 All required liability policies must be endorsed to provide that any Notice of Cancellation or Notice of Non-Renewal given to the First Named Insured must also be given to the Additional Insureds identified in Section 11.1.4. Such endorsement shall provide that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been provided to the Owner.
Copies of such endorsements must be furnished to the Certificate Holders.
- .5 Failure of the Owner to object to the Contractor's failure to furnish a certificate or other evidence of required insurance coverages, or to object to any defect in such certificate or other evidence, or to demand receipt of such certificate or other evidence, is not a waiver of the Contractor's obligation to furnish the required insurance coverages. Furthermore, nothing contained in this Article 11 imposes on the Owner a duty or obligation to review any certificates or other evidence of insurance coverages or to issue any formal approval or acceptance of such evidence, the duty and obligation of the Contractor being to provide insurance meeting the requirements of this Article 11 regardless of any review or lack of review by the Owner of the Contractor's evidence of insurance.
- .6 The Contractor's liability to and indemnification of the Owner is not relieved or diminished by the Contractor securing insurance coverage in accordance with this Article 11. Any acknowledgement of receipt of, or lack of objection by the Owner to, the Contractor's evidence of required insurance coverage is not acceptance in any way of any deficiencies in the Contractor's insurance coverage.

§ 11.1.4 Additional Insureds

§ 11.1.4.1 Policies of insurance required under Sections 11.1.2.1 (Commercial General Liability), 11.1.2.2 (Automobile Liability), 11.1.2.3 (Excess Liability and/or Umbrella Liability), and 11.1.2.6 (Hazardous Materials – if applicable) must also apply to the following as Additional Insureds on a primary and non-contributory basis, with the following designation, unaltered:

Enlarged City School District of Middletown and their respective employees, interim administrators, authorized volunteers, committee members, student teachers, auxiliary instructors, members of the Board of Education, and consultants (the "District Indemnitees"); State of New York; KG+D Architects, PC and its consultants ("Designers"), and Triton Construction ("Construction Manager"), during both ongoing and completed operations. The additional insured coverage provided shall not preclude coverage in favor of the any District Indemnitees, the State of New York, Designers, or Construction Manager, based on its lack of privity with the Contractor or other third party additional insured. Further, such coverage shall not exclude or deny coverage to District Indemnitees, State of New York, Designers, or the Construction Manager on the basis that the named insured Contractor's Work or operations are not performed directly for the District Indemnitees, State of New York, Designers, or Construction Manager or other third party additional insured.

**If NY State funding is used for any project, excluding SED state aid, then the State of New York is required to be named as additional insured, and indemnity/hold harmless certificates. Otherwise, the State of NY is not required to be added as additional insured or on the indemnity/hold harmless certificates.

§ 11.1.4.2 Coverage Evidence. Additional Insured coverage shall be provided by ISO endorsement CG 20 10 11 85 or its equivalent. Examples of equivalent ISO additional insured endorsements include using both CG 20 33 10 01 and CG 20 37 10 01 together. Completed copies of all endorsements must be attached to the certificate of insurance. Certificates of Insurance must clearly state how coverage is effected in the Excess/Umbrella Liability layer. Certificates of Insurance must show the form numbers used to effect all of the Additional Insured coverages. A copy of the actual policy language or endorsement that effects this coverage in each policy must be provided to the Owner and Construction Manager with the Certificate of Insurance. In the event Contractor is unable to procure such coverage specifically naming the "District Indemnitees," the State of New York, "Designers," "Construction Manager," or any other third party as an additional insured as required above, Contractor shall notify the Owner and Construction Manager prior to commencing Work and shall not proceed with any Work until authorized by the Owner to do so.

§ 11.1.4.3 No Reliance on "Following Form." The Contractor acknowledges that "Following Form" wording generally does not meet the primary and non-contributory coverage requirement for Additional Insureds, and that the coverage primacy aspect of Additional Insured coverage is typically addressed in the "Other Insurance" provisions of a policy's "Conditions" section, and often requires an amending endorsement to effect coverage on a primary and

non-contributory basis. The Contractor therefore must provide such endorsements to the Owner, or other documentation acceptable to the Owner evidencing that the primary and non-contributory coverage requirements are met as to all policies for which they are required under Section 11.4.1.1.

§ 11.1.5 Normal Expiration/Renewal. When any required insurance is to expire due to a normal expiration or renewal date, the Contractor shall supply the Owner, at least ten (10) days prior to either such date, in addition to Certificates of Insurance, with either (1) copies of all renewed insurance policies, including, without limitation, terms, conditions, declarations, riders, and endorsements evidencing continuation of all coverages in the same manner, limits of protection, and scopes of coverage as was provided by the previous policy, or (2) if acceptable to the Owner, all declaration pages, mandatory riders, and/or endorsements that clearly evidence the continuation of all coverages in the same manner, limits of protection, and scope of coverage as provided by the previous policy.

§ 11.1.6 Subcontractors. The Contractor shall cause each Subcontractor to (1) procure insurance reasonably satisfactory to the Owner and written by companies meeting the same criteria as required under Section 11.1.1, and (2) cause the issuers of those insurance policies to name the Additional Insureds as Additional Insureds under each Subcontractor's comprehensive general, automobile, excess/umbrella, and hazardous materials liability policies. The Additional Insured endorsement included in each such Subcontractor's policies must state that coverage is afforded to all Additional Insureds with respect to any and all claims arising out of operations performed by or on behalf of the Contractor. If the Additional Insureds have other insurance otherwise applicable to a loss, such other insurance will only apply, if at all, on an excess or contingent basis. The amount of each Subcontractor's insurers' liability under each such insurance policy will not be reduced by the existence of such other insurance.

§ 11.1.7 Owner Insurer Loss Payments. In the event the Owner's insurer(s) make(s) any payment toward any loss covered under any policy of insurance the Contractor is required to procure under this Article 11, the Owner's insurer(s) are subrogated to all of the Contractor's rights of recovery against any person or organization including, but not limited to, the Contractor's insurer(s), and the Contractor shall execute and deliver all instruments, papers, and whatever else is necessary to secure those rights. The Contractor shall do nothing after the payment of any damages to prejudice those rights.

§ 11.1.8 Waiver of Subrogation. All insurance policies maintained by the Contractor shall include a waiver of any and all rights of subrogation of the Contractor or its Insurers against the Owner, State of New York, Construction Manager and Architect, along with all other Additional Insureds/Indemnified Parties and their agents, officers, directors and employees for recovery of damages. The Contractor further waives its right of subrogation against the Owner and any Additional Insured or Indemnified Party for any damage or loss to the Contractor's scope work, tools, equipment, materials or any other loss within the scope of any insurance maintained by the Owner.

§ 11.2 Owner's Liability Insurance

The Owner shall purchase and maintain the Owner's usual liability insurance. The Owner may also, at its sole option, purchase and maintain other insurance for protection against claims that may arise from operations under the Contract Documents. The Contractor is not responsible for purchasing and maintaining such optional Owner's liability insurance unless specifically required in the Contract Documents. Neither the Owner's usual liability insurance nor any other insurance obtained by the Owner reduces or otherwise affects the Contractor's insurance requirements under Section 11.1.

(Paragraphs deleted)

§ 11.3 Property Insurance

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the State of New York, property insurance on a replacement cost basis. Such property insurance will be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment is made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance will include interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance will be on a builder's risk, "all-risk," or equivalent policy form and include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework,

testing and startup, temporary buildings, and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and will cover reasonable compensation for the Architect's, Contractor's, and Construction Manager's services and expenses required as a result of such insured loss. Coverage for other perils is not required unless otherwise provided in the Contract Documents. The form of policy for this coverage shall be Completed Value.

§ 11.3.1.1.1 The Contractor is responsible for all tools, equipment, materials, Work, etc., until Substantial Completion and possession by Owner. The Contractor shall provide insurance for theft as he may require for himself, his subcontractors, and his employees' protection. The insurance coverage referred to in this subparagraph shall be in accordance with a standard Builder's Risk Policy used in the State of New York.

§ 11.3.1.2 The Contractor shall provide insurance coverage for portions of the Work stored off the site, in transit and stored on the site but not incorporated into the Work as full replacement cost basis without voluntary deductible. The Contractor shall provide Certificate copies to the Construction Manager showing the coverage for their materials in transit or stored off site.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 The property insurance will cover portions of the Work stored off the site, and also portions of the Work in transit. The insurance required by this Section 11.3 will not, however, cover machinery, tools, equipment, vehicles, shanties, tool houses, trailers, or other temporary or permanent structures owned or rented by the Contractor, a Subcontractor, or a Sub-subcontractor, or their employees, utilized in performance of the Work but not incorporated into the permanent improvements. The Contractor is solely responsible for all such items of its own and any under its control. The Contractor shall, at the Contractor's own expense, provide insurance coverage for all of the items described in this Section 11.3.1.4, which is subject to the provisions of Section 11.3.7.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 may not commence until the insurance company or companies providing property insurance consent to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance.

§ 11.3.1.6 The Owner shall not be responsible to or for the Contractor or Subcontractor against any loss by fire, lightning, extended coverage, all risk, theft or vandalism and malicious mischief, or any tools, equipment, vehicles, shanties, tool houses, trailers or other temporary or permanent structures wherever located and owned by the Contractor, Subcontractors, their employees or agents.

§ 11.3.1.7 The form of policy for the coverage required by 11.3.1 shall be Completed Value.

§ 11.3.2 **Boiler and Machinery Insurance.** The Owner, if applicable to the Work and at its sole option, may purchase and maintain boiler and machinery insurance or shall do so if required by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner. This insurance will include interests of the Owner, Construction Manager, Contractor, Subcontractors and Sub-subcontractors in the Work.

§ 11.3.3 **Intentionally omitted.**

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described in this Section 11.3 or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost for it will be charged to the Contractor by appropriate Change Order.

§ 11.3.5 **Intentionally omitted.**

§ 11.3.6 Upon the Contractor's request, the Owner will provide copies of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project.

§ 11.3.7 Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their respective subcontractors, sub-subcontractors, agents and employees, and (2) the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their respective subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire or other causes of loss to the extent of proceeds under property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as the Owner and Contractor may have to the proceeds of such insurance held by the Owner. The Owner or Contractor, as appropriate, shall require of the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, Owner's separate contractors described in Article 6, if any, and any of their respective subcontractors, sub-subcontractors, agents, and employees, by appropriate written agreements, similar waivers each in favor of other parties enumerated in this Section 11.3.7. The policies must provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation is effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity has an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance will be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear, subject to requirements of any applicable mortgage clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate written agreements shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner shall, upon occurrence of an insured loss, give a bond for proper performance of the Owner's duties. The cost of the bond will be charged against proceeds received. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement. If after such loss no other special agreement is made, and unless the Owner terminates the Contract for convenience, replacement of damaged property will be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner will adjust and settle a loss with insurers unless one of the parties in interest objects in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute will be resolved in the manner selected as the method of binding dispute resolution in the Agreement. Nothing in this Agreement calls for the name of any party other than the Owner as loss payee on the Owner's insurance and no draft or other instrument in payment of any loss will name any other party as a joint payee.

§ 11.3.11 The Contractor's Insurance Company shall acknowledge in writing to the Construction Manager that they have read and will comply with all requirements under Indemnification Section 3.18 of the General Conditions.

§ 11.4

(Paragraphs deleted)

Performance Bond and Payment Bond

(Paragraphs deleted)

§ 11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising under it. Bonds must be obtained from a surety company or companies satisfactory to the Owner, licensed to do business in the State of New York, and listed in the latest issue of U.S. Treasury Circular 570. The amount of each bond will be equal to one hundred (100) percent of the Contract Sum. Each bond must be maintained throughout the duration of the Project, and subsequently to the extent the Contractor has ongoing performance and payment obligations following completion of the Project.

§ 11.4.1.1 No Performance or Payment Bond shall require, as a condition precedent to termination of a Contract or Contractor, that any notice be sent to or meeting be arranged or held with a Contractor (Principal) and/or surety, prior to such termination. Any such requirement(s) shall be void and unenforceable and the Owner shall have the right to reject any such bond(s) and/or ignore such condition. The exclusive method of termination of a Contract or Contractor is contained in the Contract Documents and a Contractor and surety expressly agreed to be bound thereby.

§ 11.4.1.2 Rider including the following provisions shall be attached to each Performance Bond: "Surety agrees that it consents to and waives notice of any addition, alteration, omission, change or other modification of the Contract

Documents. Such addition, alteration, change extension of time or other modification of the Contract Documents or a forbearance on the part of either the Owner or the Contractor to the other, shall not relieve the surety of its obligations hereunder and notice to the surety of such matters is hereby waived."

§ 11.4.2 Bonds must be prepared on the forms of AIA Documents A312-2010 - Performance Bond and A312-2010 - Payment Bond, without modifications other than (1) a mandatory statement in Section 16 of the Performance Bond that it is given as a statutory or other legally required bond and that Section 13 of the Performance Bond applies in full, without exception, (2) a mandatory statement in Section 16 of the Performance Bond that it includes performance by the Contractor of any correction and warranty obligations in the Contract Documents, including such performance after the dates of Substantial and Final Completion, and (3) a mandatory statement in Section 18 of the Payment Bond that it is given as a statutory or other legally required bond and that Section 14 of the Payment Bond applies in full, without exception. The cost of the bonds is included in and will not increase the Contract Sum.

- .1 The Contractor shall deliver the required bonds to the Owner not later than 7 days following the date the Agreement is entered into and before commencing any of the Work.
- .2 The Contractor shall require any attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bonds a certified and current copy of their power of attorney authorizing him or her to sign the bond.
- .3 The bonds must specifically name the Enlarged City School District of Middletown as Obligee.

§ 11.4.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered which the Construction Manager or Architect has not specifically requested to observe prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or one of the other Contractors in which event the Owner shall be responsible for payment of such costs.

§ 12.2 Correction of Work

§ 12.2.1 Before or After Substantial Completion

The Owner, through its Architect or Construction Manager, shall have the authority to reject Work performed by the Contractor that does not conform to the requirements of the Drawings, Specifications, or both. The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 If, within two (2) years after the date of Substantial Completion of the Work or a designated portion of the Work, or the date of acceptance of a portion of the Work that is subject to correction or completion after the date of Substantial Completion of the Work, whichever is later, or after the date for commencement of warranties established under Section 9.8.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The obligation set forth hereunder shall survive acceptance by the Owner of the Work or termination of the Contract. The Owner shall give such notice promptly after discovery of the condition. The

Contractor's Performance Bond shall remain in full force and effect through this two-year comeback correction period.

§ 12.2.2.2 The two-year period for correction of the Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 Upon completion of any Work under or pursuant to this Section 12.2, the two-year period for correction of Work in connection with the Work requiring correction shall be renewed and recommence.

§ 12.2.2.4 The obligations shall cover any repair and replacement to any part of the Work or other property caused by the defective or nonconforming Work.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.3.1 If the Contractor fails to commence to correct, repair and make good any defects in its Work within a reasonable time, not to exceed ten (10) days from the date the Contractor received written notice from the Owner per Section 12.2.2.1, the Owner may correct it in accordance with Section 2.5 and the Contractor shall, upon demand, pay to the Owner all amounts which it expends for such corrective work.

§ 12.2.3.2 In emergencies occurring during the two-year correction period, the Owner may correct any defect immediately and charge the cost to the Contractor. The Owner shall at once notify the Contractor, who may take over the Work and make any corrections remaining after its forces arrive at the Work. Repair work not started within ten (10) days following notice to the Contractor of any defect may be considered an emergency.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Multiple Prime Contractors or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents. The Contractor shall also replace or repair to satisfaction of Owner any and all damage done to the building or its contents in consequence of work performed in fulfilling any applicable warranty. This clause is general in nature and will not operate to waive stipulations of other clauses that specify warranty periods in excess of two (2) years.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the two-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as determined by the Owner, with the advice of the Construction Manager and Architect. Such adjustment shall be effected whether or not final payment has been made. For this Section to apply, the Owner must accept non-conforming Work in writing specifying the non-conforming Work being accepted. Notwithstanding any acceptance by the Owner, if the Owner discovers non-conforming Work that the Owner has not expressly accepted in writing, the Owner may demand that the Contractor correct such Work as per the provisions of Article 12 hereof.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the State of New York, and the parties expressly agree that any claim, dispute, or other controversy of any nature arising out of the Contract or performance of the Work shall be commenced and maintained in New York State Supreme Court, Orange County.

§ 13.1.2 The Contractor shall at all times observe and comply with all federal, state and local laws and all laws, ordinances and regulations of the Owner, in any manner affecting the Work and all such orders decreed as exist at

present and those which may be enacted later, by bodies or tribunals having jurisdiction or authority over the Work, and the Contractor shall defend, indemnify and save harmless the Owner and its Board of Education, officers, agents, or servants against any claim or liability arising from, or based on, a violation of any such law, ordinances, regulation, order or decree, whether by himself or by his employee or agents. Historical lack of enforcement of any law, local or otherwise, shall not constitute a waiver of Contractor's responsibility for compliance with such law in a manner consistent with the Agreement unless and until the Contractor has received written consent for the waiver of such compliance from the Owner and the agency responsible for the enforcement of such law.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 Neither the acceptance of all or any part of the work covered by the Contract; nor any payment therefore; nor any order or application for payment issued under the Contract or otherwise issued by the Owner, Architect, Construction Manager, or any board member, officer, agent or employee of the Owner; nor any permission or direction to continue with the performance of the Contract before or after its specified completion date; nor any performance by the Owner of any of the Contractor's duties or obligations; nor any aid lent to the Contractor by the Owner in its performance of such duties or obligations; nor any delay or omission by the Owner to exercise any right or remedy accruing to it under the terms of the Contract or existing at law or in equity or by statute or otherwise; nor any other thing done or omitted to be done by the Owner, its commissioners, officers, agents or employees; shall be deemed to be a release to the Contractor or its sureties from any obligations, liabilities or undertakings in connection with the Contract or the performance bond or a waiver of any provision of the Contract or of any rights or remedies to which the Owner may be entitled because of any breach thereof, excepting only a written instrument expressly providing for such release or waiver. No cancellation, rescission or annulment hereof, in whole or as to any part of the Contract, because of any breach hereof, shall be deemed a waiver of any money damages to which the Owner may be entitled because of such breach. No waiver by the Owner of any breach of the Contract shall be deemed to be a waiver of any other or any subsequent breach.

§ 13.3.3 The rights stated in these General Conditions and the Contract Documents are cumulative and not in limitation of any rights of the Owner at law or in equity.

§ 13.3.4 The Owner shall not be responsible for damages or for loss of anticipated profits on Work not performed on account of any termination of the Contractor by the Owner or by virtue of the Owner's exercise of its right to take over the Contractor's Work.

§ 13.3.5 The Owner shall not be liable to the Contractor for punitive damages on account of its termination of the Contractor or any other alleged breach of the Agreement and the Contractor hereby expressly waives its right to claim such damages against the Owner.

§ 13.3.6 The Contractor hereby expressly waives any rights it may have in law or in equity to lost bonding capacity as a result of any of the actions of the Owner, the Architect or the Construction Manager taken in connection with the Contractor's Work on the Project.

§ 13.3.7 The Contractor agrees that it waives the defense of privity of contract as between itself and each other Prime Contractor. In the event that an act or omission by a Prime Contractor or its Subcontractors of any tier causes impact,

damage or loss in any form to the Contractor, then the Prime Contractor responsible in whole or in part for such impact, damage or loss agrees it is directly responsible and liable to the Contractor. The Contractor acknowledges and agrees that this waiver of the defense or privity of contract permits and requires it to commence an action or suit directly against the responsible Prime Contractor. The Owner, Architect and the Construction Manager shall not be parties to such suit. The Contractor waives and relinquishes any right and claim as against the Owner, to the extent such claim is caused, or contributed to, by a Prime Contractor or its Subcontractors of any tier.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Tests, inspections and approvals of portions of the Contractor's Work required by the Drawings or Specifications shall be made at an appropriate time. Unless otherwise provided, the Contractor shall arrange for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.4.2 If the Construction Manager, Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.4.1, the Construction Manager or Architect shall, upon written authorization from the Owner, instruct the Contractor to arrange for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If such procedures for testing, inspection or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses shall be at the Contractor's expense, including the cost of retesting for verification of compliance if necessary until the Architect certifies that the Work in question does comply with the requirements of the Contract Documents, and none of such costs shall be included in computing the Contract Sum.

§ 13.4.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.4.7 Any material to be furnished shall be subject to inspections and tests in the shop and field by the Architect. Shop inspection shall not relieve the Contractor of the responsibility to furnish satisfactory materials and the right is reserved to reject any material at any time before final acceptance of the Work, when in the opinion of the Architect the materials and/or workmanship do not conform to the Specification requirements.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the legal rate as required in General Municipal Law Section 106-b.

§ 13.6 Time Limits on Claims

§ 13.6.1 No action or proceeding shall lie or be maintained by the Contractor, nor anyone claiming under or through the Contractor, against the Owner upon any claim arising out of or based on the Agreement or the Contract Documents or by reason of any act or omission or requirements relating to the giving of notices and information, unless such action or proceeding shall be commenced within one (1) year after submission to the Owner of the final Application for Payment. As to a claim based upon money required to be retained for any period after the date of the final Application for Payment, such action must be commenced within six (6) months after such money becomes due and payable under the terms of the Contract. Notwithstanding, if the Contract is terminated by the Owner, any action or proceeding by the Contractor must be commenced within six (6) months after the date of such termination. The Contractor's acceptance of final payment shall constitute a release of all claims against the Owner. This provision shall not relieve the Contractor of the obligation to comply with the provisions of the law relating to notices of claim.

§ 13.6.2 Acts or failures to act occurring during the construction of the Project or following the issuance of the final certificate for payment, which give rise to a cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor, whichever occurs last.

§ 13.7 No Oral Waiver or Constructive Changes

The provisions of the Contract Documents shall not be changed, amended, waived, or otherwise modified in any respect except by a writing signed by the Owner. No person is authorized on behalf of the Owner to orally change, amend, waive, or otherwise modify the terms of the Contract Documents or any of the Contractor's duties or obligations under or arising out of the Contract Documents. Any change, waiver, approval, or consent granted to the Contractor shall be limited to the specific matters stated in the writing signed by the Owner, and shall not relieve the Contractor of any other of the duties and obligations under the Contract Documents. No "constructive" changes shall be allowed.

§ 13.8 Notices Regarding Liens

The Contractor shall provide to the Owner copies of all notices of any type regarding liens received from Subcontractors, Sub-subcontractors, or suppliers to the Contractor.

§ 13.9 Wages Rates

The Contractor shall, and cause its Subcontractors to, comply with prevailing wage rate determinations as issued by the State of New York Department of Labor for the location and duration of this Project. Current wage rates for this Project are included in the Project Manual.

§ 13.10 General Provisions

Any specific requirement in this Contract that the responsibilities or obligations of the Contractor also apply to a Subcontractor is added for emphasis and is also hereby deemed to include a Subcontractor of any tier. The omission of a reference to a Subcontractor in connection with any of the Contractor's responsibilities or obligations shall not be construed to diminish, abrogate or limit any responsibilities or obligations of a Subcontractor of any tier under the Contract Documents or the applicable subcontract.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 90 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; or
- .3 Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4 and 9.5, or because the Owner has not made payment after 14 days written notice of such failure to make payment provided that such failure is not due to a disputed amount, and except to the

extent the Owner is excused from timely making all or part of any payment on a Certificate for Payment as per any other provisions of the Contract Documents.

Notwithstanding the preceding or anything else in the Contract Documents, the Contractor shall not cease or delay the progress of the Work for any reason other than one set forth in Section 9.7.1, it being agreed that monetary damages shall be an adequate remedy for the Contractor for any breach of this Agreement or the Contract Documents by the Owner.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon 30 days' written notice and opportunity to cure to the Owner, terminate the Contract and recover from the Owner payment for such Work properly performed for which it has not otherwise been compensated, but in no event shall the Owner be liable to the Contractor for any prospective loss, including, but not limited to, termination expenses, loss of anticipated profits, impact damages, unabsorbed overhead, or the like. Notwithstanding the foregoing, any such payments to the Contractor shall be less any setoffs to which the Owner may be entitled as per any other provision of the Contract Documents.

§ 14.1.4 If the Work is stopped for a period of 90 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon 30 additional days' written notice to the Owner, Construction Manager and Architect (during which the Owner shall have the right and opportunity to cure), terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 refuses or fails to supply enough properly skilled workers or proper materials or equipment to complete the Work in a diligent, efficient, timely, workmanlike, skillful, and careful manner;
- .2 fails to make payment to Subcontractors or Suppliers for materials or labor in accordance with the respective agreements between the Contractor and its Subcontractors or Suppliers;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority, or its health and safety plan;
- .4 otherwise is guilty of substantial breach of or default under a provision of the Contract Documents;
- .5 cannot complete the Work within the Contract Time or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the Owner's opinion, attributable to conditions within the Contractor's control;
- .6 breaches any warranty made by the Contractor under or pursuant to the Contract Documents;
- .7 is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the Work, or the award of necessary subcontracts, or the placing of necessary material and equipment orders;
- .8 fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with all requirements of the Contract Documents;
- .9 refuses to proceed with the Work or extra work when and as directed by the Owner, Construction Manager or Architect;
- .10 fails after commencement of the Work to proceed continuously with the construction and completion of the Work for more than 10 days, except as permitted under the Contract Documents;
- .11 fails or neglects to complete the Work within the Contract Time or in accordance with the Construction Schedule;
- .12 refuses or fails to correct deficient Work performed by it;
- .13 the Contractor's progress of the Work is such that the Owner reasonably believes that the Contractor shall not be able to achieve Substantial Completion by the Substantial Completion Date and the Contractor has not delivered and implemented a recovery plan required under the Contract or has not

recovered the schedule sufficient to meet the respective Contract Time requirements as required by written notice to the Contractor by the Owner; or

- .14 disregards the instructions of the Construction Manager, Architect or Owner (when such instructions are based on the requirements of the Contract Documents).

§ 14.2.2 When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice, terminate employment of the Contractor at the expiration of such seven (7) day period, and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and take possession of materials stored off-site by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient utilizing for such purpose such of the Contractor's plant, materials, equipment, tools and supplies remaining on the site, and also such subcontractors as it may deem advisable, or if may call upon the Contractor's surety at its own expense to do so. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work. Such accounting shall be final, binding and conclusive upon the Contractor, its surety, and any person claiming under or through the Contractor, as to the amount thereof.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

§ 14.2.4.1 The costs of finishing the Work also include, without limitation, all reasonable attorneys' fees incurred in responding to the default and enforcing the Owner's rights and remedies under the Contract Documents, additional title costs, insurance, additional interest because of any delay in completing the Work, loss of State Building Aid, and all other direct and consequential damages incurred by the Owner by reason of the termination of the Contractor as stated herein.

§14.2.4.2 It is recognized that: (1) if an order for relief is entered on behalf of Contractor pursuant to Title 11 of the United States Code, (2) if any other similar order is entered under any other debtor relief laws, (3) if Contractor makes a general assignment for the benefit of its creditors, (4) if a receiver is appointed for the benefit of its creditors, or (5) if a receiver is appointed on account of its insolvency, any such event could impair or frustrate Contractor's performance of the Contract. Accordingly, it is agreed that upon the occurrence of any such event, Owner shall be entitled to request of Contractor or its successor in interest adequate assurance of future performance in accordance with the terms and conditions of the Contract. Failure to comply with such request within ten (10) days of delivery of the request, or Owner's determination that the assurances are not adequate, shall entitle Owner to terminate the Contract and to the accompanying rights set forth in Subparagraphs 14.2.1 through 14.2.4 hereof. In all events pending receipt of adequate assurance of performance and actual performance in accordance therewith, Owner shall be entitled to proceed with the Work with its own forces or with other Contractors on a time and material or other appropriate basis, the cost of which will be back charged against the Contract Sum.

§ 14.2.5 If the Owner wrongfully terminates the Contract for cause, the rights, remedies and obligations of the parties will be the same as if the Owner had terminated the Contract for convenience under Section 14.4.

§ 14.2.6 In the event that the Contractor, or the Contractor's surety, challenges the Owner's termination of the Contract for cause, and the Owner prevails in litigation in connection with such challenge, whether initiated by the Owner or by the Contractor or the Contractor's surety, the Owner shall be entitled to its costs, including reasonable

attorney's fees, incurred as a result of such litigation, as part of any judgment against the Contractor or the Contractor's surety. Such costs, including reasonable attorney's fees, shall be deemed a cost of finishing the Work.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine. The Owner shall incur no liability by reason of such suspension, delay, or interruption except that the Contractor may request an extension of its time to complete its Work in accordance with Article 8 hereof.

§ 14.3.2 The Contract Time shall be adjusted for increases in time caused by suspension, delay or interruption as described in Section 14.3.1. No adjustment shall be made to the extent:

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the whole or any portion of the Contract for the Owner's convenience and without cause upon not less than seven (7) days' written notice to the Contractor. Notwithstanding any other provision to the contrary in the Contract, the Owner reserves the right at any time and in its absolute discretion to terminate the services of the Contractor or the Work by giving written notice to the Contractor. This termination for convenience of the Owner provision allows and authorizes the Owner to terminate this Contract at any time and for any reason whatsoever. This right may be exercised by the Owner in its complete discretion. Termination by the Owner under this Section shall be by Notice of Termination delivered to the Contractor specifying the extent of termination and the effective date.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall immediately and in accordance with instructions from the Owner:

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work;
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders; and
- .4 proceed to complete the performance of the Work required under portions of the Contract not terminated, if any.

§ 14.4.3 Upon receipt of written notice of the Owner's exercise of such termination, the Contractor shall, as the Contractor's sole and exclusive remedy, be paid for the Work properly executed in accordance with the Contract Documents prior to the effective date of termination and for items properly fabricated off-site, delivered and stored in accordance with the Owner's instructions or the Contract Documents before such effective date. The Contractor's entitlement to payment for all such work shall be predicated on its performance of such work in accordance with the Contract Documents as certified by the Architect and Construction Manager. The Contractor shall be entitled to no other payment and waives any claim for damages including, but not limited to, lost profits, any prospective loss, underutilization of personnel or equipment, unabsorbed overhead, and any and all items of consequential loss or damage. The Owner shall be entitled to credit against any payment to be made to the Contractor pursuant to this Section 14.4 the following: (1) payments previously made to the Contractor for the terminated portion of the Work; (2) claims which the Owner has against the Contractor under the Contract Documents; and (3) the value of the materials, supplies, equipment, or other items that are to be disposed of by the Contractor, the cost of which is included in the Contract Sum. Notwithstanding the foregoing, in the event of a termination under Section 14.4.1 prior to the issuance of a Notice to Proceed, the Contractor shall not be entitled to any compensation whatsoever.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Neither a Request for Information, nor a Construction Change Directive, nor a Change Order, nor a reservation of rights, nor minutes of a

meeting, nor a daily report, nor any log entry, nor an Owner's request for or the Contractor's response to a Change Order proposal, nor notice of a potential or future claim shall constitute a Claim.

§ 15.1.2 Time Limits on Claims

(Paragraph deleted)

§ 15.1.2.1 Claims by the Contractor must be initiated by written notice to the Owner and the Initial Decision Maker. Claims by the Contractor must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the Contractor first recognizes the condition giving rise to the Claim, whichever is earlier.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by the Contractor must be initiated by written notice to the Owner and to the Architect with a copy sent to the Construction Manager within the time limits set forth in Section 15.1.2.1 above. The purpose of the written notice is to give the Owner prompt opportunity: (a) to cancel or revise orders or directions, change plans, mitigate or remedy circumstances giving rise to the Claim or to take other action that may be desirable; (b) to monitor and verify the facts and circumstances as they occur; and (c) to verify any costs and expenses claimed by the Contractor contemporaneously as they are incurred. Written notice is required whether or not the Owner, Construction Manager or Architect is aware of the facts or circumstances that constitute the basis for the Contractor's Claim, and no action or conduct of the Owner, Construction Manager, Architect or any other person will be regarded as a waiver of such notice requirement except only a written statement to such effect signed by the Owner. Failure of the Contractor to give written notice as required by this Section shall be deemed conclusively to be a waiver and release of any Claim, and such written notice shall be a condition precedent to the Contractor's right to make any Claim arising out of, under or in connection with the Contract or its performance of the Work.

§ 15.1.3.2 Written notice shall contain a heading stating "Notice of Claim" to clearly identify it as such. Such notice shall set forth in detail the circumstances that form the basis for the Claim and shall include the following: (1) a clear statement of the claim, including background and chronology; (2) documentation in support of the claim; (3) documentation in support of claimed damages; and (4) certification by responsible officer of the Contractor. The responsibility to substantiate Claims shall rest with the Contractor. An additional Claim arising from the same occurrence or condition made after the Initial Claim has been implemented by Change Order shall not be considered.

§ 15.1.3.3 The Contractor agrees that it has and will make no claim for damages against the Owner by reason of any act or failure to act by any other Contractor, Separate Contractor or Subcontractors having contracts for performance of any portion of work of the Project or in connection with the Owner's, Architect's or Construction Manager's acts or omissions to act in connection with such other Contractors, Separate Contractors or Subcontractors.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim by the Contractor, except as otherwise agreed in writing or as provided in Section 9.7, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments of undisputed amounts in accordance with the Contract Documents; provided, however, that the Contractor shall use its best efforts to furnish the Architect and Owner, as expeditiously as possible, with notice of any Claim including, without limitation, those in connection with concealed or unknown conditions, once such Claim is recognized, and shall cooperate with the Architect and the Owner in any effort to mitigate the alleged or potential damages, delay or other adverse consequences arising out of the condition which is the cause of such a Claim. The Construction Manager will prepare Change Orders and the Architect will issue a Certificate for Payment or Project Certificate for Payment in accordance with the decisions of the Initial Decision Maker.

(Paragraph deleted)

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.3. The Contractor agrees that an express condition precedent to the Contractor's entitlement to any increase in the Contract Sum shall be full and complete compliance to the satisfaction of the Owner with the requirements of Article 15. The Contractor acknowledges the no damages for delay provisions set forth in Sections 8.3.2 and 15.1.6.1.4 hereof.

§ 15.1.5.1 The Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time if:

- .1 The Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner in respect of Contract Sum and Contract Times by the submission of a bid or becoming bound under a negotiated contract; or
- .2 The existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for the Contractor prior to Contractor's making such final commitment;
- .3 The Contractor failed to give the written notice within the time and as required by Section 15.1.2; or
- .4 If the Owner and the Contractor are unable to agree on entitlement to or as to the amount or length of any such equitable adjustment in the Contract Sum or Contract Times, a claim may be made therefore as provided in Article 15. However, the Owner, Construction Manager, and Architect shall not be liable to the Contractor for any claims, costs, losses or damages sustained by the Contractor on or in connection with any other project or anticipated project.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Sections 15.1.2 and 15.1.3 shall be given. The Contractor's Claim shall include an estimate of the probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.1.1 An application for extension of time must set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner, Construction Manager or Architect may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim for an increase in the Contract Time.

§ 15.1.6.1.2 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

§ 15.1.6.1.3 The Contractor agrees that an express condition precedent to the Contractor's entitlement to any extension of the Contract Time shall be full and complete compliance to the satisfaction of the Owner with the requirements of Articles 8 and 15.

§ 15.1.6.1.4 The Owner shall not be liable to the Contractor or any of its Subcontractor for claims, impact costs, extended general conditions, unabsorbed overhead, or delay damages of any nature caused by or arising out of delay, disruption, interference, inefficiencies, impedance, hindrance, acceleration, resequencing, schedule impacts, lack of timeliness by the Owner or its Architect or Construction Manager, and lack of coordination or scheduling, cumulative impact of multiple change orders, errors or omissions in the design of the Project, delay and other performance impacts. The sole remedy against the Owner for such delays shall be the allowance of additional time for completion of the Work, the amount of which shall be subject to the Claims procedure set forth herein. Except to the extent, if any, expressly prohibited by law, the Contractor expressly agrees not to make and hereby waives any claim for damages for delay, including, but not limited to, those resulting from increased labor or material costs, extended general conditions, directions given or not given by the Owner, Construction Manager, or Architect, including scheduling and coordination of the Work; the Architect's preparation of drawings and specifications or the Construction Manager's or Architect's review of shop drawings and requests for instructions; errors or omissions in the design of the Project; or, on account of any delay, disruption, interference, impedance, inefficiency, lack of productivity, obstruction or hindrance for any cause whatsoever by the Owner, Construction Manager, Architect or any other Contractor or Separate Contractor on the Project whether or not foreseeable or anticipated. The Contractor agrees that its sole right and remedy therefore shall be an extension of time, if appropriate. It is emphasized that no monetary recovery may be obtained by the Contractor for delay against the Owner, Construction Manager, Architect, other Contractor or Separate Contractor based on any reason and that the Contractor's sole remedy, if appropriate, is additional time.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. In planning his construction schedule within the

agreed Contract Time, it shall be assumed that the Contractor has anticipated the amount of adverse weather conditions normal to the site of the Work for the season or seasons of the year involved. Only those weather delays attributable to other than normal weather conditions will be considered by the Architect.

§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor waives any and all claims for consequential damages of any kind and nature arising out of or relating to this Contract. This

(Paragraphs deleted)

waiver includes, without limitation, damages incurred by the Contractor for principal office expenses including compensation for personnel stationed there, unabsorbed overhead, for losses of financing, business and reputation, and loss of profit and anticipated profit. This waiver of consequential damages shall survive termination of the Contract.

§ 15.2 Initial Decision

§ 15.2.1 Claims by the Contractor, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims by the Contractor excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to binding dispute resolution of any Claim. If an initial decision has not been rendered within 30 days after the Contractor's Claim has been referred to the Initial Decision Maker, the Contractor may proceed with binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims by the Contractor and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims by the Contractor, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim by the Contractor or to furnish additional supporting data, such party shall respond, within 10 days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim by the Contractor in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim by the Contractor, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect and Construction Manager, if the Architect or Construction Manager is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to binding dispute resolution.

§ 15.2.6 Intentionally omitted.

§ 15.2.6.1 Intentionally omitted.

§ 15.2.7 Intentionally omitted.

§ 15.2.8 If a Claim by the Contractor relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

ARTICLE 16 SPECIAL CONDITIONS

§ 16.1 Equal Opportunity

§ 16.1.1 The Contractor shall maintain policies for equal employment opportunity for construction employment. During performance of the Agreement, the Contractor agrees as follows:

§ 16.1.2 The Contractor and its Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to ensure that all applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship and on-the-job training.

§ 16.1.3 The Contractor will post and keep posted in conspicuous places, for employees and applicants for employment, notices obtained by the Contractor from the New York State Division of Human Rights as set forth in the General Regulations of that Division at 9 NYCRR 466.1(a), such conspicuous places to be as defined in 9 NYCRR 466.1(b), and such other postings as that Division may require with respect to New York State's laws, codes, rules, and regulations governing discrimination in employment.

§ 16.1.4 The Contractor will state in all solicitations or advertisements for employees placed by, or on behalf, of the Contractor, that all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color or national origin.

§ 16.1.5 The Contractor will comply with provisions of Sections 290-299 of the Executive Law and with the Civil Rights Law, will furnish all information and reports deemed necessary by the State Commissioner of Human Rights under these non-discrimination clauses and such sections of the Executive Law, and will permit access to the Contractor's books, records and accounts by the Owner, the State Commissioner of Human Rights, the Attorney General and the Industrial Commissioner for the purposes of investigation to ascertain compliance with these nondiscrimination clauses and such sections of the Executive Law and Civil Rights Law.

§ 16.1.6 The Contractor will send to each labor union, or representatives of workers, with which it has, or is bound by a collective bargaining or other Agreement or understanding notices obtained from the State Commissioner of Human Rights, advising such Labor Union or representative of the Contractor's Agreement under requirements of this Article. If the Contractor was directed to do so by Owner as part of the Bid, the Contractor shall request such labor union or representative to furnish him with a written statement that such labor union or representative will not discriminate because of race, creed, color or national origin and that such labor union or representative either will affirmatively cooperate within the limits of its legal and contractual authority in the implementation of the policy and provisions of these non-discrimination clauses or that it consents and agrees that recruitment accordance with the purposes and provisions of these non-discrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the Contractor shall promptly notify the Owner and State Commissioner of Human Rights of such failure or refusal.

§ 16.1.7 The Agreement may be forthwith canceled, terminated or suspended in whole, or in part, by Owner upon the basis of a finding made by the State Division of Human Rights, that the Contractor has not complied with these non-discrimination clauses, and the Contractor may be declared ineligible for future Contracts made by, or in behalf of, the State, or Authority or Agency of the State, or Housing Authority or an Urban Renewal Agency, or Contracts requiring the approval of the Commissioner of Housing and Community Renewal, until it has satisfied the State Division of Human Rights, that it has established and is carrying out a program in conformity with the provisions of these non-discrimination clauses. Such findings shall be made by the State Division of Human Rights after conciliation efforts by the Division have failed to achieve compliance with these non-discrimination clauses and after a verified complaint has been filed with the Division, notice thereof has been given to the Contractor, and an opportunity has been afforded by the Contractor to be heard publicly in accordance with the Executive Law. Such sanctions may be imposed and remedies invoked immediately of, or in addition to sanction in remedies otherwise provided by law. If the Agreement is canceled or terminated under provisions of this Article, in addition to other rights of Owner provided in the Agreement upon its breach by the Contractor, the Contractor will hold Owner harmless against any additional expenses or costs incurred by Owner in completing the work or in purchasing the services, materials, equipment or supplies contemplated by Agreement and Owner may withhold payments from the Contractor

in an amount sufficient for this purpose and recourse may be had against authority on the Performance Bond if necessary.

§ 16.1.8 The Contractor will include the provisions of this Article in every subcontract or purchase order in such a manner that such provisions will be binding upon each subcontractor or vendor as to operations to be performed within the State of New York. The Contractor will take such action in enforcing such provisions of such subcontractor or purchase order as the State Division of Human Rights or the Owner may direct, including sanctions or remedies for non-compliance. If the Contractor becomes involved in or is threatened with litigation with a subcontractor or a vendor, as a result of such direction by the State Division of Human Rights, the Contractor shall promptly so notify the Owner and the Attorney General, requesting the Attorney General to intervene and protect the interests of the State of New York.

§ 16.2 Waiver of Immunity

§ 16.2.1 The Contractor hereby agrees to the provisions of Paragraph 139-a and 139-b of the New York State Finance Law and Section 103-a of the New York General Municipal Law, which require that upon the refusal of a person, when called before a grand jury, head of a State department, temporary State commission or other State agency, or the organized crime task force in the Department of Law, which is empowered to compel the attendance of witnesses and examine them under oath, to testify in an investigation concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the State or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract.

§ 16.2.1.1 Such person, and any firm, partnership or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with New York State or any public department, agency or official thereof for goods, work or services, for a period of five years after such refusal.

(Paragraph deleted)

§ 16.2.1.2 Any and all contracts made with the State of New York, or any public department, agency or official thereof since the effective date of this law, by such person, and by an firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the State of New York without incurring any penalty or damages on account of such cancellation or termination, but any moneys owing by the State of New York for goods delivered or work done prior to the cancellation or termination shall be paid.

§ 16.3 Non-Collusive Clause as Required by NYS General Municipal Law Section 103-d

(Paragraph deleted)

§ 16.3.1 Every bid or proposal hereafter made to a political subdivision of the state or any public department, agency or official thereof where competitive bidding is required by statute, rule, regulation or local law, for work or services performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under the penalties of perjury: Non-collusive bidding certification.

(Paragraph deleted)

§ 16.3.2 By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief, the following:

(Paragraph deleted)

§ 16.3.2.1 The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competitions, as to any matter relating to such prices with any other bidder or with any competitor.

§ 16.3.2.2 Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor.

(Paragraph deleted)

§ 16.3.2.3 No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

§ 16.3.3 A bid shall not be considered for award nor shall any award be made where requirements of this Article have not been complied with; provided however, that in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which set forth in detail the reasons therefore. Where requirements of this Article have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing agent of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

(Paragraph deleted)

§ 16.3.4 The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed, or pending, publication of new or revised price list for such items, or (c) has sold the same items to other customers at the same prices being bids, does not constitute a disclosure within the meaning of this Article.

§ 16.3.5 Any bid hereafter made to any political subdivision of the state or any public department, agency official thereof by a corporate bidder for work or services performed or to be performed or good sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

(Paragraph deleted)

§ 16.4 Assignment of Public Contracts

As provided in Section 109 of the General Municipal Law, the Contractor is prohibited from assigning, transferring, conveying, subletting or otherwise disposing of the same, or of his right title, or interest therein, or his power to execute such contract or any other person or corporation without the previous consent in writing of the officer, board or agency awarding the contract. If any contractor, to whom any contract is let, granted and awarded, as required by law, by any officer, board or agency in a political subdivision, or of any district therein, shall without the previous written consent specified in subdivision one of this section, assign, transfer, convey, sublet or otherwise dispose of such contract, or his right, title or interest therein, or his power to execute such contract, to any other person or corporation, the officer, board or agency which let, made, granted, or awarded such contract shall revoke and annul such contract, and the political subdivision or district therein, as the case may be, and such officer, board or agency shall be relieved and discharged from any and all liability and obligations growing out of such contract to such contractor, and to the person or corporation to which such contract shall have been assigned, transferred, conveyed, sublet or otherwise disposed of, and such contractor, and his assignees, transferees or sublessees shall forfeit and lose all moneys, theretofore earned under such contract, except so much as may be required to pay his employees. The provisions of this section shall not hinder, prevent, or affect an assignment by any such contractor for the benefit of his creditors made pursuant to the laws of this state.

§ 16.5 Fingerprinting

Pursuant to the Safe Schools Against Violence in Education Act ("SAVE" legislation) and Part 87 of the Regulations of the Commissioner of Education, any individual who, as a result of their work on this capital project, will move (or migrate) in and out of student occupied areas for more than five (5) days a year, must be fingerprinted. The Contractor shall be responsible to ensure that it (and its employees) are in full compliance with the fingerprinting provisions New York's SAVE Legislation and Part 87 of the Regulations of the Commissioner of Education at the Contractor's sole cost and expense.

(Paragraph deleted)

ARTICLE 17 NEW YORK STATE LABOR LAW REQUIREMENTS

§ 17.1 Working Hours

(Paragraph deleted)

§ 17.1.1 The Contractor specifically agrees as required by the New York State Labor Law ("Labor Law"), Sections 220 and 220-d, as amended, that:

- .1 No laborer, worker, or mechanic in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or any part of the work included in the Contract Documents shall be permitted or required to work more than eight hours in any one calendar day or more than five (5) days in any one week, except to the extent permitted in the case of extraordinary emergencies described in the Labor Law.
- .2 The wages to be paid to each laborer, worker, or mechanic in the employ of the Contractor, Subcontractor, or other person doing or contracting to do all or any part of the work included in the Contract Documents for a legal day's work shall be not less than the prevailing rate of wages as defined by the Labor Law.
- .3 Each laborer, workman or mechanic employed by the Contractor, a Subcontractor, or other person doing or contracting to do all or any part of the work included in the Contract Documents shall be provided the supplements required by Article 8 of the Labor Law.
- .4 The minimum hourly rate of wage to be paid shall be not less than that stated in the General Conditions, and shall be as designated by the industrial Commissioner.
- .5 The Contractor's and any Subcontractor's or other person's filing of payrolls in a manner prescribed by subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to the to the Owner's payment of any sums due and owing to the Contractor, Subcontractor or other party for work done on or with respect to the Project.

§ 17.2 Wage Rates

(Paragraph deleted)

§ 17.2.1 The Contractor specifically agrees, as required by the Labor Law, that the Contract may be forfeited and no sum paid for any work done thereunder on a second conviction for willfully paying less than:

- .1 the prevailing wage rates as provided in Labor Law Section 220(3) as amended, or,
- .2 the minimum wage rates as provided in Labor Law Section 220-d, as amended.

§ 17.2.2 The Contractor shall comply with Prevailing Wage Rates as issued by the State of New York Department of Labor for the location and duration of this Project. Current wage rates for this project are included in the Project Manual as part of the Contract Documents. The Contractor is responsible to regularly review "Prevailing Wage Schedules/Updates" available on the "Prevailing Wage/Public Work" link on State of New York Department of Labor "Business in New York" web page (www.labor.state.ny.gov) to identify and implement any applicable changes to Prevailing Wage Rates during the Project.

(Paragraph deleted)

§ 17.2.3 The Contractor shall comply with all the requirements of the Labor Law Section 220-a, as amended, regarding mandatory submission of certified payroll records, which shall be included with each application for payment.

(Paragraphs deleted)

§ 17.3 Anti-Discrimination

§ 17.3.1 The Contractor specifically agrees, as required by the provisions of Section 220-e of the Labor Law, as amended, that:

- .1 In the hiring of employees for the performance of work under the Contract or any subcontract hereunder, no contractor, subcontractor, nor any person acting on behalf of such contractor or subcontractor, shall be reason of race, creed, color, sexual orientation, or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;
- .2 No contractor, subcontractor, nor any person on its behalf, shall in any manner, discriminate or intimidate any employee hired for the performance of work under the contact on account of race, creed, color, sexual orientation, or national origin.
- .3 There may be deducted from the amount payable to the Contractor by the Owner under the contract a penalty at fifty dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the contract; and

- .4 The Contract may be canceled or terminated by the Owner, and all monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the Contract.

ARTICLE 18 GENERAL MUNICIPAL LAW REQUIREMENTS OF THE STATE OF NEW YORK

§ 18.1 Payment of Contractors and Subcontractors

§ 18.1.1 The Contractor specifically agrees it is bound by Section 106-b of the New York General Municipal Law.

ARTICLE 19 SPECIFIC CONFORMANCE TO THE LAWS OF THE STATE OF NEW YORK

§ 19.1 Statutory Requirements

§ 19.1.1 The parties agree that each is bound to the provisions of the laws of the State of New York governing bidding and contracting for public improvement projects, including but not limited to applicable provisions of the General Obligations Law, Labor Law, and General Municipal Law. To the extent any provisions in the Contract Documents conflict with any provisions of New York Law, the statutory provisions shall prevail and the conflicting provisions in the Contract Documents shall be deemed to conform to the statutory provisions.

§ 19.1.2 To the extent the laws of the State of New York governing bidding and contracting for public improvement projects mandate inclusion of specific terms in contracts for such improvements, but which are not already included in these General Conditions, such terms shall be deemed and hereby are incorporated into these General Conditions.

Insurance requirements for Enlarged City School District of Middletown bid document:PROTECTION AND INSURANCE:

TWENTY-THIRD: The Contractor and his/her/its sureties shall be responsible for and shall protect all parts of the work against loss or injury by water, frost, wind, hail or fire, lightning, windstorm, explosion, riot, riot attending strike, civil commotion, aircraft, vehicles, smoke vandalism and malicious mischief, or accident or other cause and from any interference and shall protect and indemnify the Owner and the State of New York, by adequate insurance or other means approved by the Owner, against any such loss or injury resulting from such causes whether or not they are within human control.

The Contractor shall, prior to the commencement of work, procure and thereafter maintain at his/her/its own expense, until final acceptance by the Owner of the work and terms covered by the Contract, insurance for damages imposed by law, of the kind and in the amount hereinafter provided, in insurance companies authorized to do such business in the State of New York, covering all operations under this contract whether performed by him/her/it, or his/her/its subcontractors. Before commencing the work, the Contractor shall furnish to the Owner the original policies or certified copies of the original policies and such number of certificates of insurance in form satisfactory to the Owner showing that the Contractor has complied with this Section, which certificates shall provide that the policies shall not be changes or cancelled until thirty (30) days written notice has been given to the Owner.

The Contractor shall take and assume all responsibility for the work, and take all precautions for the prevention of injuries to persons and property in or about the work; s/he/it shall bear all losses resulting to him/her/it on account of, the amount, or character, or upon which the work is done different from that which was estimated or expected, or on account of the weather, elements or other causes and s/he/it and his/her/its Surety or Insurance Company shall assume the defense of, and indemnify and save harmless the State of New York, the Owner and its officers, employees, and agents, from any and all claims relating to labor, equipment, or materials furnished for the work, and to inventions, patents, and patent rights used in doing the work, and to injuries or damages to persons, corporations or property caused by or in any way arising out of the work performed by the Contractor, Subcontractor and the employees under this Contract.

The Contractor shall provide insurance coverage as follows:

1. Notwithstanding any terms, conditions or provisions, in any other writing between the parties, the contractor hereby agrees to effectuate the naming of the Enlarged City School District of Middletown as an unrestricted additional insured on the contractor's insurance policies, with waiver of subrogation on both the general liability and worker's compensation.
2. The policy naming the Enlarged City School District of Middletown as an

additional insured shall:

- a) Be an insurance policy from an A.M. Best rated "secured" or better, New York State admitted insurer.
- b) State that the organization's coverage shall be primary and noncontributory coverage for the municipality, its Board, employees and volunteers.
- c) Additional insured status shall be provided by ISO endorsement CG 2010 11 85 or its equivalent. Examples of equivalent ISO additional insured endorsements include using both CG 20 33 10 01 and CG 20 37 10 01 together. Completed copies of all endorsements must be attached to the certificate of insurance.
- d) The certificate of insurance must describe the specific services provided by the consultant (e.g. asbestos testing, consulting) that are covered by the professional or errors and omissions policy.

3. The contractor agrees to indemnify the Enlarged City School District of Middletown for any applicable deductibles.

4. Required Insurance:

- Contractor's Commercial General Liability Insurance:
\$1,000,000 per occurrence/ \$2,000,000 general & products/completed operations aggregates
The general aggregate shall apply on a per-project basis.
Enlarged City School District of Middletown must be named as Additional Insured including Waiver of Subrogation, 30 day notice of cancellation and include Primary & Non-contributory.
- Automobile Liability:
\$1,000,000 combined single limit for owned, hired or borrowed and non-owned motor vehicles. Enlarged City School District of Middletown must be named as Additional Insured including Waiver of Subrogation.
- Statutory Workers' Compensation Insurance and Employer's Liability Insurance for all employees. Include Waiver of Subrogation.
- Owners Contractors Protective Insurance:
\$1,000,000 per occurrence
\$2,000,000 aggregate, naming the Enlarged City School District of Middletown as the insured.
Required for construction projects in excess of \$200,000
- Umbrella Liability:
\$5,000,000 per occurrence

- \$5,000,000 aggregate, with the Enlarged City School District of Middletown named as additional insured. Include Waiver of Subrogation.
- Builders Risk Insurance or Installation Floater: Builders risk coverage can be provided by the municipality, or required of the contractors. Installation floaters are provided by the contractor(s).
 - Bid, Performance and Labor & Material Bonds:
Shall be provided by a New York State-admitted surety company, in good standing.
5. The insurance producer must indicate whether or not they are an agent for the companies providing the coverage.
6. Contractor acknowledges that failure to obtain such insurance on behalf of the Enlarged City School District of Middletown constitutes a material breach of contract and subjects it to liability for damages, indemnification and all other legal remedies available to the Enlarged City School District of Middletown. The contractor is to provide the Enlarged City School District of Middletown with a certificate of insurance, evidencing the above requirements have been met, prior to the commencement of work.

HOLD HARMLESS (INDEMNITY)

The Contractor shall defend, indemnify and hold harmless, the State of New York, the Enlarged City School District of Middletown, its agents, servants and employees from any and all damages or claims whatsoever, occasioned by or caused to any person, partnership, association or corporation, or occasioned by or caused to any property arising out of the performance of this Contract or from any defective condition of the materials furnished or supplied or contemplated to be furnished or applied under this Contract. This is to include inventions, royalties, patents and patent rights. To the greatest extent permitted by law, the liability of the Contractor under this Section is shall be absolute and is not dependent upon any question of negligence, on the part of the Contractor, the State of New York, the Owner or their agents or employees.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
1/21/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | |
|---|---|--|
| PRODUCER Name of insurance agent 123 Main St Anywhere, NY 12345 | CONTACT NAME: Name of agent | |
| | PHONE (A/C, No., Ext): Agent's phone | FAX (A/C, No): |
| | E-MAIL ADDRESS: Agent's e-mail address | |
| INSURER(S) AFFORDING COVERAGE | | NAIC # |
| INSURED Name of vendor, contractor or sub-contractor Mailing address Anywhere, NY 12345 | INSURER A : | Letters A, B, etc should match "Type of Insurance" |
| | INSURER B : | on left column titled "INSR LTR". |
| | INSURER C : | |
| | INSURER D : | |
| | INSURER E : | |
| | INSURER F : | |

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL INSD | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|--|-----------|----------|-----------------|-------------------------|-------------------------|---|
| A | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR | X | X | Insert policy # | 00/00/0000 | 00/00/0000 | EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 |
| | GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER: | | | | | | |
| B | <input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY | X | X | " " | 00/00/0000 | 00/00/0000 | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ |
| | <input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$ 10,000 | X | X | " " | 00/00/0000 | 00/00/0000 | EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 |
| D | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below | | X | " " | 00/00/0000 | 00/00/0000 | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000 |
| | All states except ND, OH, WA, WY | | | | | | |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Certificate holder is an Additional Insured on a Primary & Non-contributory basis on both the General Liability and Umbrella policies per endt's #xxx. Waiver of Subrogation applies to General Liability, Business Auto, Umbrella and Workers' Compensation policies per endt's #xxx. 30 day Notice of Cancellation applies per endt #xxx. ***POLICY HOLDER MUST SHOW EVIDENCE OF ADDITIONAL INSURED COVERAGE, PRIMARY & NON-CONTRIBUTORY AND WAIVER OF SUBROGATION BY ENDORSEMENT. PLEASE ATTACH COPIES OF ALL ENDORSEMENTS TO THE CERTIFICATE.

CERTIFICATE HOLDER

CANCELLATION

| | |
|---|--|
| Town of Anyplace 123 Main St Anywhere, NY 12345 | SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. |
| | AUTHORIZED REPRESENTATIVE Must be signed |



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ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN



Twin Towers - Development and Diversification Plan for Workforce & Business



Introduction

The Enlarged City School District of Middletown School Board acting as the authorized agent of the City of Middletown and the Enlarged City School District of Middletown (ECSDM) recognizes the need to take action to ensure that minority and women-owned business enterprises (“MBE”, “WBE”, “MWBE”), as well as minority and women workers and the Enlarged City of Middletown residents are given the opportunity to participate in the performance of the contracts issued by the Board as part of the Phase 1 construction program (“Program”). The Board recognizes that this opportunity for the participation in our free enterprise system by persons traditionally, socially and economically disadvantaged is essential to obtain social and economic equality. In addition, the Board has been authorized by New York State (Chp. 58A-4 of the laws of 2006 as amended in 2014) to develop and adopt a Diversity Plan.

Accordingly, the Board fosters and promotes the participation of such individuals and business firms in all contracts with the Board and sets forth this initiative (the “Plan” or “Diversification Plan”).

The Board envisions the participation goals increasing as capacity increases and plans to;

- a. Develop strategies that will create and coordinate efforts to ensure a more diverse workforce for the projects as well as ensure the participation of minority and women-owned business enterprises; and
- b. Address accountability for attainment of the diversity goals -- providing a description of the forms of monitoring that will be used, and how such information will be communicated to the public and most importantly to potential participants.

The finalization and implementation of this Plan prior to any start of construction on the Program will result in an effective process for increasing the purchase of goods and services from minority and women-owned businesses. It will also provide for coordination of local workforce development plans to ensure local capacity for the new job opportunities for minority, women and City resident workers that will be created through the Program.

Goals of the Enlarged City School District of Middletown Construction Program

- a. Renovate the existing school to create learning environments that are at the forefront of educational design and that deliver the flexible spaces, instructional technology and social support necessary to enhance student achievement equal to or exceeding the New York State Regents standards.
- b. Renovate the existing school such that the quality of facilities district-wide is equitable and such that the quality of facilities is equal to or superior to those of any other school district in the state.
- c. Develop shared facilities for educational, public safety, health, social support, and recreational purposes.
- d. Maximize the economic benefit from school construction and reconstruction to neighborhood development and economic revitalization throughout the City.
- e. Assist the Enlarged City School District of Middletown, local labor, government, and not-for-profit agencies to develop, recruit and train a new diverse workforce.



- f. Encourage, assist and sustain business development of underrepresented populations (i.e. people of color and women) and maximize the use of Middletown based labor and local professional and construction-related business enterprises through a progressive and comprehensive Workforce and Business Diversification Plan.
- g. Identify and utilize innovative financing techniques to provide sources for the local share – that portion of the cost that is not reimbursable under this project’s State Educational Department (SED) reimbursement formula – and to minimize (i) the local share of the costs of the Program, (ii) debt incurred by the City for the Program and (iii) net debt service and operation and maintenance costs.
- h. Find creative solutions to interim school space during project build-out in a manner that minimizes disruption to existing school operations and classroom instruction.

MBE & WBE Meaningful Participation

The actual services provided by the MBE or WBE must be essential in the performance of the scope of work for the applicable contract. Utilization of a certified MBE or WBE as a conduit or pass through for participation credit is strictly prohibited. It is within the discretion of the Enlarged City School District of Middletown (or its designee) to determine whether services are essential in the performance of the scope of work and offer a determination of the appropriateness of work allowed for lower tier subcontracting in accordance with practices generally accepted in the construction industry. The services the MBE or WBE will provide must be among those explicitly identified in the profile of a firm as listed in the NYS Contract System (<https://ny.newnycontracts.com/>). Firms submitted or who participate in the Program outside of these conditions and without specific prior approval by the Enlarged City School District of Middletown will not be credited toward the MWBE Utilization Plan and goals for the contract.

Workforce Development and Diversification Principles and Rules

Workforce Development and Diversification Principles

One of the principal goals of this Plan is to support workforce development and diversification opportunities that can be created by the Program. This Diversification Plan acknowledges the diverse community of the City of Middletown. It also provides an opportunity to create an environment that engages and encourages the participation of this community. It also acknowledges the historical disparity experienced by MWBE and minority, women and local resident labor in gaining access to participate in projects.

Following is the statement of these principles.

- 1.) The Plan envisions the use of a workforce reflective of the Enlarged City of Middletown’s population and diversity. Where qualified workers are not available from the local workforce, the Program will coordinate with local workforce training and development programs to develop new capacity. The multi-year duration of the Program provides the opportunity for planned development of a workforce, which meets this diversity objective.
- 2.) The capital investment represented by the Enlarged City School District of Middletown Construction Program requires development of a workforce reflective of the City’s population and diversity.
- 3.) In order to achieve the development of a diverse workforce for the Program, the Program Manager (PM), Construction Manager (CM) and/or Prime Contractor(s) shall assist the Independent Compliance Officer (ICO) in overseeing, facilitating, developing, and/or implementing the following:



Development and Diversification Plan for Workforce and Business

- a. A community-wide public relations campaign to provide specific information about the Program's employment opportunities, referral and training plans.
- b. A methodology which assists contractors, suppliers, professional service firms, or any other businesses providing goods and services to the Program to effectuate the workforce diversity goals of the Plan and the minimum standards to be attained when providing such goods and services to the Program. All contracts shall include remedies and sanctions for noncompliance and identify a means by which inquiries and disputes about Plan requirements may be addressed.
- c. An independent compliance plan which monitors performance of contractors, suppliers, and professional service firms.
- d. Regular monthly reporting process to the Board setting forth the results of all employment and compliance activity and dispute resolution activities.

Workforce Development and Diversification Rules

- 1.) All contractors, suppliers, professional service firms or other businesses providing goods or services with a ECSDM contract of \$50,000 or more shall comply with the Workforce Diversification Goals set out in subparagraph 2 below, as well as the other provisions of this Diversification Plan. In the event a business believes that it cannot meet the Workforce Diversification Goals, that business shall submit to the ECSDM and ICO for approval documented evidence of its Good Faith Effort to meet those goals within **5 workdays of being notified by ECSDM that they will be awarded a Contract.** Within 7 workdays of submission of the documented evidence of its Good Faith Effort, the ECSDM and ICO will review all demonstrated efforts to meet the established goals and determine whether the business has sincerely attempted to meet the established goals in the Plan. If the ECSDM and ICO determine that a Good Faith Effort has not been made, the business can request an ECSDM hearing within 3 days of receiving notification from the ICO. For more information regarding Good Faith Efforts, please refer to pages A9-A12.
- 2.) In order to achieve the goals of the Plan, each contractor, supplier, professional service firm or other business providing goods or services shall strive to and use best efforts to ensure that the workforce it engages to perform work for the Program shall demonstrate, in terms of the percentage of actual hours worked under the contract and/or contract as amended, participation rates as follows (collectively, Workforce Diversification Goals):
 - a. **Minority Workforce:** 20% of project personnel hours including professional services and skilled trade's people, journeymen, apprentices, and supervisory staff.
 - b. **Female Workforce:** 10% of project personnel hours including professional services and skilled trade's people, journeymen, apprentices, and supervisory staff.
 - c. Each contractor, supplier, professional service provider, or other business providing goods and services shall strive to maximize the use of Middletown-based labor, contractors, suppliers, and service providers.
- 3.) In order to achieve such development and diversification in its workforce, each contractor, supplier, professional service firm or other business providing goods or services shall:
 - a. **With bid submission,** present a proposed written recruiting Plan directed at attracting candidates to fill positions of employment in order to meet Workforce Diversification Goals.
 - b. **With bid submission,** provide a statement committing to training or participation in training programs provided by third parties to train new employees in meaningful ways to succeed in their employment opportunities and to promote long-term employment within



Development and Diversification Plan for Workforce and Business

the industry or profession.

- c. Provide the ICO with a monthly EEO-Workforce Utilization Report and such other workforce census/employment data and/or certified payroll records necessary to verify achievement of the Workforce Diversification Goals and demonstrate compliance with the minimum standards. Employee zip code information must be listed on this monthly EEO –Workforce Utilization Report. Workforce data will be uploaded and recorded in the compliance program designated by the ICO.
 - b. Provide on-demand access and cooperation to the ICO to review records on-site and/or at work-site premises to validate workforce participation. This may include unannounced visits and on-the-spot interviews that the ICO and its inspectors may hold with workers at the job site or at off-site work premises to verify their work status and claimed job classifications.
- 4.) In the event any contractor, supplier, professional service firm or other business providing goods or services fails to maintain the Workforce Diversification Goals and/or provide the information required above through the duration of the project on their contract or purchase order, the ICO in conjunction with the ECSDM can delay payment of outstanding monies pending compliance. In addition, the ICO and ECSDM may summon the contractor, supplier, professional service firm or other businesses providing goods or services to appear before an ECSDM selected hearing panel. The hearing shall be held within ten (10) business days of the notice of non-compliance by the ICO. After the contractor has had such a hearing the Board may elect to:
- a. Withhold payment of any amounts due on the disputed item pending resolution of the non-compliance issue.
 - b. Assess liquidated damages in an amount equal to the dollar value that would have been realized if the minority/women workforce goals would have been met.
 - c. Withhold, suspend, cancel or terminate the contract or purchase order.
 - d. Identify such contractor as a non-responsive bidder for future contracts within the Program. (Requires approval by full Board.)
 - e. All of the mentioned penalties would be upon a prime contractor, supplier, and professional service firm or other business providing goods or services to the ECSDM who failed to comply with the approved utilization plan submitted with its bid for contracts.

Business Development and Diversification Principles and Rules

The other major goal of this Plan is to provide for business development opportunities and participation in the Program by minority-owned and women-owned businesses. Following are the principles associated with the implementation of that part of the Plan:

Business Development Principles

- 1.) The capital investment represented by the Enlarged City School District of Middletown Construction Program creates a unique opportunity for participation of minority-owned and women-owned business enterprises. To ensure that contracts for goods and services are placed with qualified minority and women-owned business enterprises, the Program Manager will oversee, facilitate, develop and/or assist the ICO in implementing the following:
 - a. Identify firms as listed in the NYS Contract System (<https://ny.newnycontracts.com/>) certified MBE and WBE firms available to provide goods and services to the Program and to create a reference list for all Program participants.
 - b. Ensure that contractors and suppliers divide the goods or services to be provided into



Development and Diversification Plan for Workforce and Business

- Scopes, where economically and technically feasible, to create opportunities for participation.
- c. Coordinate activities and services with organizations such as chambers of commerce, trade groups, and community - based groups/organizations that promote MBE and WBE interests.
 - d. Create opportunities for mentoring less experienced and/or start-up MWBE's.
 - e. Encourage the formation of joint ventures, partnerships, or other similar arrangements where feasible to provide for greater opportunity for MWBE owned firms to participate in the Program.
 - f. Develop a methodology that assists contractors, suppliers, professional service firms, or any other business providing goods or services to the Program to effectuate the business development and diversification goals of the project and the minimum standards to be attained when providing such goods and services to the project. All contracts shall include remedies and sanctions for non - compliance and identify a means by which inquiries and disputes about the project requirements may be addressed.

Business Development and Diversification Rules

All contractors, suppliers, professional service firms or other businesses providing goods or services with an Enlarged City School District of Middletown contract of \$50,000 or more shall comply with the Business Development/MWBE goals set forth in subparagraph 2 below, as well as the other provisions of this Diversification Plan. **At the time of bid tender each bidder shall be required to submit to the ICO a preliminary Contractor Utilization Plan** (which will include preliminary workforce projection information). The ICO shall review the plan and issue a written notice of acceptance or deficiency. Any deficiency must be cured within seven days. **No contract or letters of intent will be issued until ALL compliance documentation has been submitted to and approved by the ICO.**

In the event a business believes that it cannot meet the Business Development/MWBE Goals, it shall submit to the ECSDM and ICO for approval documented evidence of its Good Faith Effort **within 5 workdays of being notified by ECSDM that they will be awarded a Contract.** Within 7 workdays of submission to meet these goals of the Good Faith Effort, the ECSDM and ICO will review all demonstrated efforts to meet the established goals and determine whether the business has sincerely attempted to meet the established goals in the Plan. If the ECSDM and ICO determine that a Good Faith Effort has not been made, the business can request a ECSDM hearing within 3 days of receiving notification from the ICO. For more information regarding Good Faith Efforts, please refer to pages A16 - A20.

- 1) In order to achieve the Business Development/MWBE goals of the Diversification Plan, each contractor, supplier, professional service firm or other business providing goods or services with a Board contract of **\$50,000** or more shall strive to and use Good Faith Efforts to engage disadvantaged, or woman- owned business to provide for the following:
 - a. MBE: **9%** of each contract or purchase order
 - b. WBE: **6%** of each contract or purchase order
 - c. **Change Orders:** The above-mentioned goals shall apply to **all** change orders issued during the project.
- 2) The value of the work procured from certified MBEs and WBEs to accomplish these goals shall be determined as follows:
 - a. The dollar value of the work contracted to MBEs and WBEs through a purchase order,



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less any portion of that value paid by the MBE or WBE to any non-MBE or non-WBE manufacturer or producer to provide such goods and services as a subcontractor or sub-supplier to the MBE/WBE.

- b. The full dollar value of a sub-contract with all MWBE firms will be counted toward the diversification goals of the project.
 - c. In the instance of a joint venture, the percentage of the joint venture's profits (or losses) that are to accrue to the MBE or WBE joint venture partner.
- 3) In the case of a certified minority or women owned supplier that is in the business of supplying goods and materials by maintaining accounts with product manufacturers, paying for goods and materials directly, warehouses goods and materials, provide shipping and handling, and conducts its business as an industry supplier and not a broker, **75%** of such contract or purchase order shall meet the project goals. Broker participation will **not be** counted on this project and **will not** count toward the Prime Contractors diversity goals.
 - 4) Each contractor, supplier, professional service firm or other business providing goods or services shall solicit bids for subcontractors and suppliers from certified MBE and WBEs including circulation of solicitations to minority contractors, suppliers, trade associations and/or employment and business advocacy groups/organizations. When evaluating bids and/or proposals received, each contractor, supplier, or professional service firm shall act in "good faith" and shall exercise good faith efforts to assist M/WBE firms to secure such work.
 - 5) To be deemed an MBE or WBE a certification and/or letter from New York State so designating such must be presented prior to contract award. Failure to produce an authentic certificate/letter will result in the firm not receiving an MBE or WBE designation for the project, thereby jeopardizing compliance with diversification goals.
 - 6) MBE and WBE designations are honored only for the area/component for which the designation has been provided by an authorizing agent.
 - 7) New York State is the authorizing agent for MBE and WBE designations. The ECSDM reserves the right to revise the Diversity Plan once the goals of **9% MBE participation and 6% WBE participation** are met through NYS certified firms.
 - 8) Each prime contractor, supplier, professional service firm, or other business providing goods or services under a contract with the ECSDM shall provide the ICO with a monthly report demonstrating compliance with the Business Development and Diversification Rules. Initially, in order to obtain certification of any claims for participation, the information submitted must include a signed contract or purchase order that the contractor, supplier, or professional service firm or business has finalized with the certified MBE or WBE firm specifying the level of participation along with the up-to-date certification information on the listed firm. During the term of the contract or purchase order, the contractor, supplier, or professional services firm will need to submit periodic reports to verify the continued participation and final percentage participation of the certified firms. This verification should include monthly payment records, any change orders with the certified contractor and any other supporting data required by the ICO to verify the claimed level of participation by the certified firms.
 - 9) In the event any contractor, supplier, and professional service firm or other business providing goods or service fails to maintain the Business Diversification Goals and/or submit the information listed in subparagraph 9 above to verify participation or achieve the stated goals through the duration of the contract or purchase order the ICO in conjunction with the ECSDM



Development and Diversification Plan for Workforce and Business

can delay payment of outstanding monies pending compliance. In addition, the ICO and ECSDM may summon the contractor, supplier or professional service firm or other business providing goods or services to appear before an ECSDM selected hearing panel designated by the Board. The hearing shall be held within ten (10) business days of the notice of non-compliance by the ICO. After the contractor has had such a hearing the Board may elect to:

- a. Withhold payment of amounts due pending resolution.
- b. Assess liquidated damages in an amount equal to the contract dollar value that has not been successfully contracted to meet the MBE or WBE goals.
- c. Withhold, suspend, cancel or terminate the contract or purchase order.
- d. Identify such firms as a non-responsive bidder for future contract bids on the Program.

All of the above-mentioned penalties would be upon a prime contractor, supplier, and profession service firm or other business providing goods or services to the ECSDM who failed to comply with the approved utilization plan submitted with its bid for contracts.



APPENDIX A:

SUPPLEMENTAL INFORMATION, TERMS AND CONDITIONS

A. COMPLIANCE MONITORING

I. Procedure

1. Contract awardees will be notified in the award letter that MWBE, EEO-Workforce Utilization Report (**Form E**), **Scope Verification form** and an EEO Policy Statement are due within 7 working days of the date of the award letter.
2. MWBE and EEO-Workforce Utilization Reports, Scope Verification Forms and EEO Policy Statement will be submitted to the ICO for initial review.
3. The Prime Contractor will forward MWBE and EEO-Workforce Utilization reports, Scope Verification forms to the ICO for approval.
4. Approved MWBE and EEO-Workforce Utilization Reports will be forwarded to the ECSDM prior to contract execution.
5. Once a contract is executed, the Prime Contractor will submit Form C, along with copies of all written subcontracts, invoices and purchase orders and corresponding proof of payments to the ICO for review by the 15th of each month for the duration of its contract.
6. The Program Manager and Prime Contractor will forward Form C, copies of invoices and purchase orders and corresponding proofs of payment to the Independent Compliance Officer for approval.
7. The ICO will produce & submit monthly reports to the Board regarding the ECSDM Diversity Plan of all open contracts.
8. Once all work has been completed on a contract and prior to close out, the Prime Contractor will submit Form B's to the ICO stating the total amount actually paid to the MWBE along with corresponding proof of payment. A separate Form B is needed for each MWBE participating in the contract. Each Form B must be signed by both the prime contractor and the MWBE firm.
9. The Independent Compliance Officer shall review all Form B's for completeness and accuracy.
10. The ECSDM will be notified of all approved Form B's **prior to release of retainage.** Actual compliance statistics will be included in the Monthly Compliance Report to the Board.



B. DEFINITIONS

For the purpose of this Plan, the following words, terms, phrases and abbreviations shall have the following meanings:

1. "Bidder" shall mean any contractor, vendor or other person, partnership, corporation or other business entity that submits a bid to the ECSDM Program Manager or a Prime Contractor relative to the Enlarged School City School District of Middletown Reconstruction Plan.
2. "Broker" shall mean a concern that adds no material value to an item being supplied to a procuring activity or which does not take ownership or possession of or handle the item being procured with its own equipment or facilities.
3. "Certification" shall mean the qualifying process that ensures Prime & Plan Managers that a particular business is an eligible MWBE which performs a commercially useful function.
4. "Commercially Useful Function" shall mean the execution by an MWBE that contracts with the ECSDM, or subcontracts with another business enterprise that contracts with the ECSDM, of a distinct element of the work of the contract by actually performing, managing, and supervising the work involved. A business enterprise that serves as a conduit for another business shall not be deemed to perform a commercially useful function. In determining whether an MWBE prime or subcontractor is performing a commercially useful function, factors, including but not limited to the following, will be considered:
 - a. The nature and amount of work subcontracted.
 - b. Whether the MWBE has the skill and expertise to perform work for which it has been certified, as heretofore defined.
 - c. Whether the MWBE actually performs, manages and supervises the work.
 - d. Whether the MWBE intends to purchase commodities and/or services from a non- MWBE and simply resell same to the general or prime bidder for the purpose of allowing those commodities and/or services to be counted toward assessment of a benchmark or fulfillment of a goal.
 - e. Standard industry practices relating to the use of the second tier subcontractors. Consistent with standard industry practices, an MWBE subcontractor may enter into second tier subcontracts. If an MWBE subcontractor subcontracts a significantly greater portion of the work of its subcontractor to a non-MWBE inconsistent with standard industry practices, the MWBE subcontractor shall be presumed not to be performing a commercially useful function.
5. "Compliance" shall mean the condition existing when a bidder has met the requirements of this Plan.
6. "Conduit" shall mean a business that purchases goods or services that are not normally purchased or sold as a part of its daily business from another business for the sole purpose of resale to the Board or a contractor doing business with the board.



7. "Contract" shall mean any binding legal obligation of the ECSDM created to acquire some good and/or service from one or more contractors (bidders), which is paid for or which is to be paid for, in whole or in part, with monetary appropriations of the Board. In this context, the terms contracting, purchasing, and procurement are synonymous and refer to the process or processes under which the Board undertakes such acquisitions.
8. "Diversification Goals" mean the MWBE and Minority, Women and City Residency goals, collectively, set out in this Plan.
9. "Good Faith Efforts" shall mean a documented sincere intention to meet all of the established JSCB Diversification Goals.
10. "Independent" shall mean that with respect to the ownership, control and activity of an MWBE, the business shall operate separately and apart from the ownership, control or undue influence of another business owned and controlled by one or more non-MWBEs.
11. "Joint Venture" shall mean an association of two or more independent persons, partnerships, corporations (or any combination of them) formed, consistent with the laws of the State of New York, to perform one or more specific contracts limited in scope and duration; and for which purpose, the entities combined their property, capital, effort, skills, knowledge and other assets.
12. "Minority" shall mean African American(s) (a person(s) having origins in any of the indigenous sub-Saharan racial groups of Africa), Native Americans, Hispanic Americans, and Asian Americans and any other racial group(s) for which there is a legally sufficient statistical disparity indicated, and an underutilization attributable to the effects of past or present discrimination in the local industry.
13. "Minority Business Enterprise" (MBE) shall mean, for the purpose of this Plan, an independent concern which is at least 51% owned, operated and controlled by a minority who is a citizen of the United States, or a permanent resident of the United States and provides a commercially useful function, as defined herein.
14. "MWBE" shall mean, severally or collectively, a Minority Business Enterprise (MBE) and/or a Women Business Enterprise (WBE).
15. "Non-Compliance" shall mean the condition existing when a bidder has failed to meet the requirements of this Plan.
16. "Independent Compliance Officer" (ICO) shall mean the ICO who is responsible for administration of this Plan.
17. "Owned" shall mean that the minority, female, disadvantaged owner(s) possess an ownership interest of at least fifty-one percent (51%) of the business, for purposes of determining whether a business is a Minority Business Enterprise, Disadvantaged or Women Business Enterprise.



18. "Promise of Non-Discrimination" shall mean, collectively, one or more voluntary contractual affirmative promises and other promises of forbearance made by a bidder relating to the bidder's conduct occurring prior to submission of a bid as well as after award of a contract: (1) to adopt the policies of the Board relating to the participation of M/WBEs in the procurement process; (2) to undertake certain affirmative good faith effort measures to ensure the maximum practicable participation by M/WBEs; and (3) not to otherwise engage in discriminatory conduct against M/WBEs inconsistent with said policies.
19. "Review" shall mean a hearing upon a complaint filed by the ICO to determine whether a bidder has satisfactorily implemented good faith efforts to include M/WBEs in the procurement process and if so, the bidder shall be deemed to be responsive.
20. "Significant Business Presence" shall mean that an M/WBE has an established place of business in the [Orange County](#) area at which one or more of its employees are regularly based and that such place of business has a substantial role in the M/WBE's performance of a commercially useful function as herein defined. A location utilized solely as a post office box, mail drop or telephone message center or any combination thereof, with no other substantial work function, shall not be construed to constitute a significant business presence.
21. "Women Business Enterprise" (WBE) shall mean, for the purpose of this Plan, an independent concern that is at least 51% owned, operated and controlled by female member(s) who are citizens of the United States or permanent residents of the United States and provides a commercially useful function, as defined herein.

C. PLAN SCOPE AND APPLICABILITY

The following categories are initially established to identify the nature and types of goods and services the ECSDM is contracting for.

Category A - Construction: Includes all contracting relating to buildings, facilities and other erected structures on school projects in the Program.

Category B - Services: Encompasses the procurement of advertising, printing, non-construction repairs, janitorial services, training seminars and workshops, computer and information systems, security, shipping and mailing, microfiche and microfilm, courier, storage, travel, and consulting.

Category C - Commodities: Includes the purchase of all goods, equipment, food, office and other supplies, art, furniture and other tangible personal property not associated with under the provision of a service identified in Categories A and B.

Category D - Employment Compliance: This Plan segment ensures workforce Diversification Goals (minority, female and City Residency employment goals) are met and maintained through the life of each Program.



Category E - Professional Services: This Plan segment covers: (1) professional design contracts requiring the services of licensed architects, engineers, planners and surveyors; (2) regulated professional contracts requiring the services of individuals and firms whose practices are regulated by the State of New York; (3) general consultant contracts such as program and construction management services, affirmative action services and general business services; and (4) general service contracts such as janitorial, snow removal and printing.

Independent Compliance Officer: The ECSDM will hire and will retain an Independent Compliance Officer, herein referred to as ICO to administer and enforce the Diversity Plan. The ICO, working closely with the ECSDM, will be responsible for the performance of the following duties and obligations for purposes of implementing and achieving the policies and objectives of the Plan:

- a. To administer and enforce ECSDM policy.
- b. To promulgate rules, regulations and procedures consistent with this Plan and publish and make public said rules, regulations and procedures for MWBE, minority, women Participation.
- c. To verify MWBEs are appropriately certified in accordance with the provisions set forth by a recognized certification ECSDM.
- d. To initiate and maintain outreach plans for all MWBEs, minorities, and women.
- e. To develop, maintain and make available a database of certified MWBEs.
- f. To make a recommendation regarding reasonable and market based MWBE Goals and Workforce Diversification Goals and to annually assess such goals.
- g. To pursue applicable MWBE and Workforce Diversification Goals as provided for in this Plan.
- h. To attend pre-bid, pre-award, post-bid and bid-award meetings.
 - i. To receive and investigate written complaints as provided in the written complaint and post bid review sections of this Plan.
 - j. To notify all parties of the right to review any decision of the ICO.
- k. To provide recommendations to the ECSDM, Program Manager and other pertinent personnel to effectuate the policies and objectives of this Diversification Plan.
 - l. To prepare and submit monthly, quarterly and annual reports.
- m. To perform other tasks necessary to fulfill the above duties and to carry out the intent of the ECSDM.

D. RIGHT TO INVESTIGATE

Investigate Non-Compliance Practices: The Independent Compliance Officer shall be authorized to determine compliance by contractors with Diversification Goals (i.e, Workforce Diversification Goals and Business (MWBE), Diversification (collectively "Diversification Goals") established in ECSDM contracts. Such a determination of compliance or non-compliance may be based on whether the contractor is complying with goals set forth in an approved utilization plan; or the determination is consistent with the procedures or action described in the ECSDM goal plan; or the information made available to the ECSDM through monitoring, onsite inspections, progress meeting, review of payrolls or other ECSDM action to provide evidence of compliance. (NYCRR 143.5)



E. MONITORING, EVALUATION AND REPORTING

ICO Authorization to Monitor: The ICO shall be authorized to collect from all contractors doing business with the ECSDM information as to business ownership, supplier information, subcontractor information, and other data that reflects the race, gender, and ethnic origin of bidders, vendors, contractors and subcontractors, as well as information regarding workforce composition.

Duty to Monitor Contracting: The ICO shall continuously monitor the participation of MWBEs, minorities and women in the procurement and provision of goods and services for the ECSDM. Such monitoring shall include, but is not necessarily limited to, a statistical analysis of each commodity, construction trade and professional services, financial services, employment compliance monitoring and a determination as to whether there is utilization of minorities and women in a manner that is proportioned to their availability range. While this monitoring function may be performed on an ongoing, as needed basis after the completion of construction, the ICO will provide monthly, quarterly and annual written reports to the ECSDM during preconstruction and construction phase and post-construction phase.

Reporting: The ICO will gather statistical data and report to the ECSDM a summary of the purchases and contracts placed with MWBEs for the period and the relative percentage to the total of purchases and contracts for that period. All reports submitted shall specify the percentage of MWBEs that are minority and/or women-owned businesses as defined herein, with each minority category reported separately. Payments made to non-certified minority and women-owned businesses and other MWBEs shall be included as a separate set of figures for purposes of tabulating the total contract dollars going to minority and women-owned businesses.

The reports will emphasize quantity and quality of MWBE involvement by dollar volume. Reporting will serve the dual purpose of giving credit where due and highlighting areas needing additional effort. Monthly reports to the ECSDM shall also include information relevant to efforts to employ minorities and women.

F. MWBE ELIGIBILITY

General Eligibility: Generally, any business enterprise certified as a New York State MWBE as earlier defined under this Plan is eligible to participate in the Program. Current contact information about the NYS certifying agency is: <https://ny.newnycontracts.com/>.

G. PROVISIONS RELATING TO MWBE

Establishment of Annual Participation Goals: Based on the historical underutilization of MWBEs, there is a compelling interest within the City of Middletown & Orange County to establish goals. In fulfillment of the policy to promote equal business opportunity with the ECSDM. The ECSDM will establish MWBE goals for all subcategories.

Contractors and Subcontractors Must Meet Participation Goals:

It is agreed that all prime contractors and subcontractors, who have been awarded contracts for work covered by this Agreement shall be bound to meet all established Diversification Goals They shall evidence their acceptance of this provision in the Letter of Intent to Perform. This Agreement is made a part of the contract and incorporated by reference into the contract document.



Project Goals: In addition to the annual overall Plan goals and category goals, the goals for each project will be established and reported.

Notice of Bid Opportunities: The ICO and all bidders shall give notice of bid opportunities for each contract to all known available MWBEs with capabilities consistent with the requirements of the specific contract.

Consideration of Goals in Bid Evaluation: Where the ECSDM establishes goals, the inclusion of underutilized MWBEs shall become an additional factor considered in the evaluation of bids submitted by contractors, in addition to, but not limited to all other generally accepted considerations.

Assessment of Goals: For the purposes of reporting only those dollars paid to certified MWBE will be counted.

H. COUNTING OF MWBE PARTICIPATION

Types of participation that may be counted towards the goal:

- (1.) The total dollar value of the contract may be counted toward the specified goal. This includes reasonable fees charged for professional services, legal counsel and financial consultants.
- (2.) The actual portion of the MWBEs participation in a joint venture is counted toward the goal.

In the event that goals are established, all bidders, including MWBE bidders, shall make good faith efforts to attain goals through all tiers of participation (all subcontractor work).

1. **Supplier Participation:** Where a prime contractor utilizes suppliers to satisfy the goal(s) in whole or in part, the MWBE suppliers must perform a commercially useful function. Participation may be approved upon review of the following factors:
 - a. the nature and amount of supplies to be furnished.
 - b. whether the MWBE is a manufacturer, wholesaler or distributor of the supplies and has the capabilities to deliver the goods in accordance with its certification.
 - c. whether the MWBE actually performs, manages and supervises the work to furnish the supplies.
 - d. whether the MWBE intends to purchase supplies from a non-MWBE and simply resell same to the general or prime bidder for the purpose of allowing those supplies to be counted towards fulfillment of the goal(s).
 - e. **Seventy-Five percent (75%)** of the contract amount for suppliers and vendors shall count towards the goal on construction contracts.

J. REQUIREMENTS OF CONTRACTORS

Contractor's Preliminary Utilization Plan: **At the time of bid tender each bidder shall be required to submit to the ICO a preliminary Contractor Utilization Plan** (which will include preliminary workforce projection information). The ICO shall review the plan and issue a written notice of acceptance



or deficiency. Any deficiency must be cured within seven days.

Promise of Non-Discrimination: At the time of bid tender each bidder shall be required to submit to the ICO a duly-executed and attested Promise of Non-Discrimination, enforceable by law, which shall contain the following provisions. The bidder voluntarily agrees:

1. To adopt the policies of the ECSDM relating to equal opportunity in contracting on projects and contracts funded, whole or in part, with monetary appropriations of the ECSDM.
2. To undertake certain good faith efforts as set forth herein to attain the maximum practicable participation of MWBEs on said projects and contracts.
3. Not to otherwise engage in discriminatory conduct against MWBEs.
4. That the Promise of Non-Discrimination shall be continuing in nature and shall remain in full force and effect without interruption.
5. That the Promise of Non-Discrimination is made a part of the contract and incorporated by reference into. The failure of the bidder to uphold the promises of non-discrimination shall constitute a material breach of contract. The ECSDM may declare the contract in default and may exercise any and all applicable rights and remedies, including but not limited to, cancellation of the contract, termination of the contract, rejection of bids for future ECSDM contracts, and withholding and/or forfeiture of compensation due and owing on a contract.

K. GOOD FAITH EFFORTS

Mandatory Good Faith Efforts: Every bidder shall submit with the bid evidence of Good Faith Efforts to meet the Diversification Goals of this Plan in the form of a checklist. A showing of Good Faith Efforts shall be mandatory for all bidders in construction, commodities and professional services.

With respect to Business Diversification Goals:

1. Delivery of written notice to the following:
 - a. All of the available certified MWBEs whose names, addresses, and telephone numbers are provided by the ICO to all bidders for each potential subcontracting or supply category in the Contract; AND
 - b. All MWBEs which requested information on the Contract.
2. The written notice must contain:
 - a. Adequate information about the plans, specifications, and relevant terms and conditions of the Contract and about the work to be subcontracted to or the goods to be obtained from subcontractors and suppliers.
 - b. A contact person knowledgeable of the project documents within the bidder's office to answer questions.
 - c. Information as to the bidder's bonding requirements, the procedure for obtaining any needed bond, and the name and telephone number of one or more acceptable surety companies to contact.
 - d. The last date and time for receipt by bidder of MWBE bids or price quotations.



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3. Attendance at any special pre-bid meeting called to inform MWBEs of subcontracting or supply opportunities.
4. Division of the contract, in accordance with normal industry practice, into small, economically feasible segments that could be performed by an MWBE. Under no circumstances, however, shall a bidder be required to segment work solely for the purpose of utilizing MWBE participants as subcontractors where such segmentation is not in accordance with common and accepted industry practices relating to the utilization of other firms as subcontractors.
5. Providing a written explanation to the ICO for why any MWBE considered for any portion of the work was not given the work, unless another MWBE is accepted for the same work, including the name of the non- MWBE firm proposed to be given the subcontract or supply agreement. Providing to the CCO and ICO records of all MWBEs' price quotations and the successful non-MWBEs' price quotations, where appropriate.
6. Providing a non-discriminatory work site. Bidders shall ensure and maintain a work environment free of harassment, intimidation and coercion at all construction sites, offices and other facilities at which the bidder's employees are assigned to work. The contractor shall specifically ensure that all labor supervisors, superintendents, and other on-site supervisory personnel are aware of and carry out the bidder's obligation to maintain a non-discriminatory work environment.
7. Reporting improper conduct and all known violations of this Plan.

Additional Good Faith Efforts: In addition to, but not in lieu of the above mandatory minimum good faith efforts required under this Plan, a bidder at its option may also make a showing of good faith by providing evidence that it performed the following tasks to encourage and obtain the maximum practicable participation of MWBEs:

1. Soliciting specific individual MWBEs whose availability as potential sources of goods or services can be reasonably ascertained. This measure includes the sending of letters or making other personal contacts with specific certified MWBEs including those with whom the bidder has contracted with in the past as well as other MWBEs with whom the bidder may be unfamiliar, but whose identities can be ascertained from a Directory of Certified MWBEs maintained by the ICO.
2. Sending letters or making other personal contacts with other minority and women business enterprise plans as well as private minority trade associations and plans known to publicize contracting and procurement opportunities for the benefit of their respective participants and/or members. Such contacts shall be relevant to the ECSDM bid under consideration and the type of minority and/or women-owned business needed; and shall provide the same information required by a contractor or vendor to effectuate direct contacts with MWBEs.
3. Advertising in publications of general circulation in the Middletown area, trade publications that are otherwise focused or marketed to a minority and/or woman business enterprise. The business must be owned and operated by them not less than twenty (20) days prior to the date bids are due. The publication or media shall be one which reasonably covers the metropolitan area. The advertisement shall identify and describe the specific subcontracting



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or other opportunity in reasonable detail and shall state the MWBE goal(s) applying thereto.

4. Conducting follow-up of initial solicitations of interest by contacting MWBEs to determine, with certainty, whether these firms are interested.
5. Providing reasonable assistance to an otherwise qualified MWBE in need of communication with the Prime contractor.
6. Providing equal opportunity to MWBEs when replacing non- performing MWBEs. If an MWBE subcontractor or supplier fails to perform successfully, the bidder must provide other MWBEs an equal opportunity to replace the non-performing subcontractor or supplier; and shall exercise the same good faith affirmative action efforts to secure the replacement.

With respect to Workforce Diversification Efforts:

1. The contractor shall supply written documentation of its efforts to recruit/hire minorities and women including:
 - a. communications with the appropriate building trades.
 - b. communications with area training programs, including the ECSDM program.
 - c. communications with other employment agencies.
 - d. communications with the ICO regarding recruitment and hiring.

Evaluation of Good Faith Efforts: In order to assure that bidders comply with the ECSDM's Plan, successful bidders must demonstrate good faith efforts. In evaluating good faith efforts, the ICO will determine whether the apparent low bidder has made reasonable efforts to obtain MWBE/minority/women participation. The ICO may evaluate not only the different kinds of efforts made by a bidder, but also the quantity and intensity of those efforts.

The bidder may submit additional documentation to the ICO for consideration in the evaluation of the bidder's good faith efforts.

Required Documentation: To demonstrate compliance with the good faith requirements of this Plan, bidders shall keep detailed records of all correspondence and responses thereto, logs of all telephone calls made and received regarding the project or contract, copies of advertisements in publications and other media, and other relevant papers as required by this Plan for a minimum period of three (3) years.

Award of Contract: The ECSDM in accordance with the applicable law retains the right to determine the action to be taken on the contract. The ECSDM reserves the right to reject bids and perform project re-bids for the purpose of attaining its Diversification Goals, in accordance with applicable law.

Contractors' Post-Award Reporting and Maintenance of Records Successful bidders awarded contracts incorporating **must submit MWBE and workforce participation reports by the designated date set forth by the Program Manager and the ICO.** These reports shall summarize the number and dollar amounts of payments made during the terms of the contract to MWBEs and the monthly Workforce participation. This report shall count payments to MWBE separately. This report shall be submitted to the ICO on the designated date set forth by the Program Manager.



L. WRITTEN COMPLAINT AND POST-BID REVIEW

Any bidder allegedly aggrieved by the provisions of this Plan may seek review of any written complaint to the ECSDM and Program Manager/Construction Manager.

Consideration of Bids: The ICO shall evaluate the apparent low bidder's good faith efforts for compliance. Upon a determination of compliance by the apparent low bidder, the ICO shall forward the apparent low bidder's bid to the Program Manager/Construction Manager as the recommended low bid. If there is an issue of non-compliance within the meaning of this Plan, or for any other written complaint alleging any violations or non-compliance with this Plan, the ICO shall notify the affected party in writing and by registered mail (hereinafter "Notice of Non-Compliance Review") setting forth with particularity the reasons for the review and scheduling a Post-Bid Review Conference.

1. **Post-Bid Review Conference:** A Post-Bid Review Conference shall be held with the ICO, the apparent low bidder, and if applicable, the Program Manager.
2. **Declaration of Non-Responsiveness:** Following the Post-Bid Review conference the ICO and Program Manager/Construction Manager may make a recommendation to the ECSDM that an apparent low bidder's bid be rejected as non-responsive for failing to demonstrate Good Faith Efforts or any other provisions of this Plan, as determined by the ICO.

M. SANCTIONS AND PENALTIES FOR NON-COMPLIANCE

ECSDM to Impose Sanctions/Penalties: The ECSDM, in consultation with the ICO, shall have the authority and power to enforce the provisions of this Plan. Failure by a bidder to comply with the requirements shall subject the non-complying party to administrative sanctions, after the opportunity to attend a hearing before a panel selected by the ECSDM Board for that purpose. In addition, a violation of this Plan shall constitute a material breach of contract enforceable by law or in equity as will all other contract provisions, including the imposition of penalties. The following sanctions and penalties are established for the enforcement of this Plan:

1. **Declaration of Non-Responsiveness:** In addition to standard factors in bid evaluation, the ECSDM may declare a bid non-responsive where it is determined that a bidder: Has not filed with the ECSDM a duly executed "**Contractor's Utilization Plan**" or "**Promise of Non-Discrimination**"; or has failed to implement Good Faith Efforts.
2. **Cancellation of Contract:** The ECSDM may declare a contract as null and void where, after such contract has been awarded, if an investigation determines that the bidder's Workforce or MWBE utilization documents contain false, fictitious, or fraudulent information.
3. **Rejection of Future Bids:** The ECSDM may reject any or all future bids of a bidder until such time as the bidder shall have demonstrated that it is or shall come into compliance.
4. **Withholding Payment, Limited Suspension and Debarment:** For falsifications, misrepresentations, or engaging in subterfuge to obtain a contract, the ECSDM may remove a bidder from its list of pre-qualified or otherwise eligible firms entitled to do business with the



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ECSDM for a period not to exceed one (1) year or withhold payment after notice and opportunity for due process hearing before a panel selected by the ECSDM Board for that purpose.

5. Permanent Debarment: For repeated violations, the ECSDM may remove a bidder from its list of pre-qualified or otherwise eligible firms entitled to do business with the ECSDM, in accordance with applicable law.

N. SANCTIONS GUIDELINES

Guidelines for Imposition of Sanctions: The sole authority for imposition of sanctions shall lie with the ECSDM, in accordance with applicable law.

1. General: No suspension shall be imposed by the ECSDM except upon evidence of specific conduct on the part of an MWBE or other contractor that is inconsistent with or in direct contravention of the applicable provisions of this Plan. Furthermore, the imposition and enforcement of sanctions shall be consistent with applicable state and federal law. In addition, sanctions may only be imposed after the MWBE contractor or bidder has had the opportunity of a hearing before a panel selected by the ECSDM Board for that purpose.
2. Severity of Sanctions: In determining the length of any suspension, the ECSDM shall consider the following factors:
 - a. Whether the failure to comply with applicable requirements involved intentional conduct or, alternatively, may be reasonably concluded to have resulted from a misunderstanding on the part of the contractor of the duties imposed on them by this Plan.
 - b. The number of specific incidences of failure by the contractor to comply.
 - c. Whether the contractor has been previously suspended.
 - d. Whether the contractor has failed or refused to provide the ECSDM or the ICO with any information required by this Plan.
 - e. Whether the contractor has materially misrepresented any applicable facts in any filing or communication to the ECSDM or the ICO.
 - f. Whether any subsequent restructuring of the subject business or other action has been undertaken to cure the deficiencies in meeting applicable requirements.
3. Length of Suspension: Suspensions may be for any length of time not to exceed two (2) years. Suspensions in excess of one year shall be reserved for cases involving intentional or fraudulent misrepresentation or concealment of material facts, multiple acts in contravention of applicable requirements, cases where the contractor has been previously suspended, or other similarly egregious conduct.

December 14, 2023
Construction Documents
SED No. 44-10-00-01-0-001-041

Enlarged City School District of Middletown
Twin Towers Middle School
Additions and Alterations

**ENLARGED CITY SCHOOL DISTRICT OF MIDDLETOWN - TWIN TOWERS
CONSTRUCTION PHASE DIVERSIFICATION DOCUMENTS**

See the following pages for the instructions and the forms required to be submitted by the Contractor after the bid is awarded.

NOTE: The Excel worksheets for preparing the monthly reports will be furnished to the successful bidder upon award of contract.



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Instructions for Enlarged City School District of Middletown (ECSDM) Utilization Plan Form

The ECSDM Utilization Plan must be completed by the Prime Contractor

Page 1

PRIME INFORMATION: Please select company service category. Enter full name of company, address, contact person, email address and contact phone number.

PROJECT INFORMATION: Please enter the Contract/Bid dollar amount.

Enter the MBE goal dollar value.

Enter the WBE goal dollar value.

Enter the LOCAL BUSINESS goal dollar value.

Enter the name of the school and/or the building if separate from the school.

Enter the address, city, county and zip code.

Enter a brief description of the work to be completed.

PROPOSED MWBE/LOCAL BUSINESS UTILIZATION: Complete and submit original Excel MWBE/LOCAL BUSINESS Utilization spreadsheet included as part of the diversity document package. See instructions for Page 2.

WORKFORCE GOAL PLAN FOR MINORITY AND FEMALE: You will need to submit a descriptive narrative for your firm and for **each subcontractor** that will contribute towards goal achievement. **Information provided must include: the name of the contractor/sub-contractor, the trade, the projected workforce utilization for minority and female workers.** *Workforce plan should be submitted on subcontractor letterhead.*

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form.

Principal or Officer must sign and date this form.

Page 2

Please utilize the Excel version of page 2 and submit the original with your plan.

List ALL subcontractors and suppliers that you plan to utilize during the performance of this contract.

Enter the complete firm name, a brief work description, the value of the proposed subcontractor contract, the name of the contact person, the telephone number of the contact person, the email address of the contact person, complete address of the firm. Please include the estimated start date for the work this firm will perform, and whether they are an MBE firm, a WBE firm, a Local Business, or other firm. If additional space is needed, please contact Landon & Rian Enterprise.



Development and Diversification Plan for Workforce and Business

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form

Principal or Officer must sign and date this form.

Page 3 – Standard Equal Opportunity Policy Statement

Indicate whether you are a Prime Contractor or Prime Consultant.

Enter the full name of the firm, the complete address, city, state and zip code.

Enter the name of the person to be contacted regarding the Utilization Form and their telephone number. This person should be prepared to answer questions regarding this plan.

Enter the name of the school and/or the building if separate from the school.

Enter the address, city, county and zip code.

Enter a brief description of the work to be completed.

Enter the full name of the firm completing this Plan in each of the spaces provided.

Page 4 – MWBE/LOCAL BUSINESS and EEO Contract Goals

Please enter initials of the person completing this form for MWBE/Local Business and EEO Contract Goals

Type the name of Principal or Officer completing this form.

Type the title of Principal or Officer completing this form.

Principal or Officer must sign and date this form.

Page 5 - Request for Waiver

Please indicate whether this is a request for a total waiver, a partial waiver or N/A because the goals are met.

Enter the % waiver requested from MBE goals.

Enter the % waiver requested from WBE goals.

Enter the % waiver requested from the LOCAL BUSINESS goals.



Development and Diversification Plan for Workforce and Business

1. Enter your statement of justification to support the request for a waiver of the goal requirements established by the Contract Documents. If additional space is needed, please contact Landon & Rian Enterprises.
2. Follow the guidelines on page 6. Provide proof for each guideline in an item-by-item format following the numerical sequence. DO NOT LEAVE ANY UNDOCUMENTED ITEMS. Failure to adequately document and respond to each item will result in your request for waiver being rejected. "Good Faith Effort" documentation will be verified by the ICO.

Submit the complete Utilization Plan and all supporting documentation to:

Landon & Rian Enterprises, Inc.

Ldickerson@landonrian.com, pwilkerson@landonrian.com, tmarshall@landonrian.com and sbeaumont@landonrian.com



UTILIZATION PLAN

ORIGINAL Submission

REVISED Submission

A. PRIME INFORMATION: CONTRACTOR

CONSULTANT

Name:

Address:

Contact Person:

City:

Email:

State:

Zip:

Phone #:

PROJECT INFORMATION:

Contract/Bid Amount: \$

MBE Goal = 9% \$

WBE Goal = 6% \$

Local Business Goal = 5% \$

School/Building(s) Name:

Address:

City:

County:

Zip:

Work Description:

B. PROPOSED MWBE UTILIZATION:

Complete and submit original Excel MWBE/Local Business Utilization spreadsheet included as part of the diversity document package. See example on page 2.

C. WORKFORCE GOAL PLAN FOR MINORITY AND FEMALE

Please describe plans to meet the 30% Minority and Female ECSDM Goal.

You will need to submit a descriptive narrative for your firm and for **each subcontractor** that will contribute towards goal achievement. Information provided must include: the name of the contractor/sub-contractor, the trade, the projected workforce utilization for minority and female workers.

Please see the example below. **Workforce plan should be submitted on subcontractor letterhead.**

Name of Firm: ABC Construction

Trade: drywall, painting, etc.

Workforce:

- 7 full time (40 hour per week) and 1 part time (25 hours per week) minority employees
- 3 full time (40 hour per week) non-minority female employees
- 2 full time (40 hour per week) minority female employees

Type Name of Principal or Officer

Type Title of Principal or Officer

Date

D. STANDARD EQUAL OPPORTUNITY POLICY STATEMENT

PRIME INFORMATION: CONTRACTOR CONSULTANT

Name:

Address:

City:

State:

Zip:

Contact Person:

Telephone:

PROJECT INFORMATION:

School/Building(s) Name:

Address:

City:

County:

Zip:

Work Description:

The following is a statement of _____'s commitment to provide participation by minority persons and women in the workforce at the above referenced project:

Will ensure and maintain a working environment free of harassment, intimidation and coercion and shall specifically ensure that all foremen, superintendents and other supervisory personnel are aware of and carry out our commitment to maintain such a working environment.

Will establish and maintain a current list of minority and women recruitment sources and notify such sources and minority and community organizations when employment opportunities are available and maintain a record of the sources and organizations' responses.

Will maintain a file of the names and address of each minority person and woman referred to it by any individual, recruitment source or community organization and of what action was taken with respect to each such referred individual. If the individual was not employed, the file will contain the reasons.

Will disseminate this equal employment opportunity policy statement within the organization and will provide all subcontractors with a copy, discussing it with them prior to commencing work at the job site. A copy of our equal employment policy shall be posted at the job site at all times.

Please initial below in acknowledgment of the individual participation goals per the Enlarged City School District of Middletown Diversification Plan.

MWBE Contract Goals

- 5% Local Business Enterprise Participation
- 9% Minority Business Enterprise Participation
- 6% Women's Business Enterprise Participation

EEO Contract Goals

- 20% Minority Labor Force Participation
- 10% Female Labor Force Participation

Type Name of Principal or Officer

Type Title of Principal or Officer

Signature of Principal or Officer

Date

E. REQUEST FOR WAIVER

TOTAL WAIVER

PARTIAL WAIVER

N/A – GOALS ARE MET

MBE Waiver (%) Requested

WBE Waiver (%) Requested

Local Business Waiver (%) Requested

NOTE: On Enlarged City School District of Middletown (ECSDM) Contracts, the overall goal percentages are applied to the entire contract dollar value. Therefore, if a waiver is requested for an individual work order, it is your responsibility to make up the shortfall on future work orders in order to maintain the overall MWBE goal percentage for the contract. In addition, your firm should maintain a record of the MWBE goal attainment for the overall contract which may be requested by the ICO at any given time. Failure to do so may jeopardize the award of future work orders.

1. Provide a statement of justification to support the request for a waiver of the goal requirements established by the Contract Documents.

2. “Good Faith Effort” Guidelines

The following guidelines must be used for the preparation of ALL “good faith effort” documentation. The responses to the information in the Guidelines should be given in an item-by-item format following the numerical sequence as presented and accompany the Utilization Plan. “Good Faith Effort” documentation will be verified by the ICO.

IF YOU FAIL TO ADEQUATELY DOCUMENT AND RESPOND TO EACH ITEM ON THE GOOD FAITH EFFORT GUIDELINES, THE REQUEST FOR WAIVER WILL BE DEEMED NON-RESPONSIVE, INCOMPLETE AND WILL BE REJECTED.

For Office Use Only

Independent Compliance Officer Name

Signature of ICO

Date

GOOD FAITH EFFORT GUIDELINES

1. Attach a copy of the completed Utilization Plan in accordance with MWBE/Local Business goals established in the Contract Documents.
2. Submit a written request for a list of trade and/or service specific Local Businesses and MWBE's, certified by Empire State Development, from the Independent Compliance Officer for subcontracting and procurement opportunities.
3. Contact all Empire State Development certified MWBE's posted in the list of certified subcontractors and suppliers posted on the New York State website: <https://ny.newnycontracts.com/>
4. Provide a record of advertisements placed in general circulation, trade and minority and women oriented publications. Include the name of publications and dates of advertisements.
5. Submit documentation that clearly demonstrates that you contacted all the MWBE/Local Businesses identified through the outreach activities outlined above to determine their capacity to perform the applicable scope of work. Include in your documentation a listing of the outreach measures, the results of your outreach and the responses received.
6. Provide a record of ALL written solicitations made to Local Businesses and Empire State Development certified minority and women-owned business enterprises obtained from the directory of certified businesses and/or the outreach efforts specified above. Include dates and copies of solicitations made.
7. Provide a record of ALL responses received from Local Businesses and Empire State Development certified minority or women owned business enterprises to any such advertisements and solicitations made. Include dates and copies of any written responses.
8. Provide a list of any pre-bid, pre-award, or other meetings attended with Local Businesses and Empire State Development certified minority or women owned businesses.
9. List the efforts undertaken to subdivide portions of the work into smaller components in order to increase Local Business and Empire State Development certified minority and women-owned business enterprise participation.
10. Did your firm seek additional assistance from the Independent Compliance Officer ? If yes, please provide supportive documentation of your interaction.
11. Provide a description of all relevant contract documents, plans or specifications, or documents describing the scope of work which was made available to Local Businesses and Empire State Development certified minority and women-owned business enterprises for the purpose of soliciting their bids. Include the dates and manner in which these documents were made available.
12. Were the same subcontract terms and conditions offered to Local Businesses and Empire State Development certified minority and women-owned business enterprises as those offered in the ordinary course of business and to other subcontractors?
13. Did you negotiate with Local Businesses and Empire State Development certified MWBE firms whose quotes originally submitted were deemed as too high? Provide written documentation, including the schedule of values, detailing this interaction.
14. Has your firm made payments for work performed by Local Businesses and Empire State Development certified minority and women-owned business enterprises in a timely fashion for past work and/or past projects so as to facilitate continued performance by the certified businesses?
15. List any special considerations and/or concerns, which are preventing adequate Local Businesses and Empire State Development certified minority and women-owned business enterprises to participate?
16. Have you successfully met or exceeded MWBE/Local Business goals on another project? Provide detailed documentation. If not, please explain in detail including the project name, location, goals, actual MWBE/Local Business participation and reasons goals were not achieved.



Instructions for Enlarged City School District of Middletown (ECSDM)

Scope Verification Form

PROJECT INFORMATION

School: Specify individual school building

SED#: Specify SED Number

PRIME CONTRACTOR

Enter the Prime Contractor's full company name, contact person, contact phone number, and email address in the spaces provided.

MWBE/LOCAL BUSINESS SUBCONTRACTOR

Specify MWBE/LOCAL BUSINESS status. Enter the full company name, contact person, contact phone number, and email address in the spaces provided.

SUBCONTRACTOR SCOPE OF SERVICES

Certified to Perform: Enter the scope of work they are certified to perform.

Description of Work: provide a detailed scope of services to be performed by the proposed MWBE/LOCAL BUSINESS Firm listed.

Price: Enter the proposed contract value for the services of the proposed MWBE/LOCAL BUSINESS Firm listed.



MWBE/LOCAL BUSINESS SUBCONTRACTOR

SCOPE VERIFICATION FORM

This form must be submitted with the Utilization Plan for each MWBE/LOCAL BUSINESS subcontractor listed on the Utilization Plan. Failure to submit will delay acceptance of the Utilization Plan and award of the Contract. Please make copies as needed.

| A. PROJECT INFORMATION | |
|-------------------------------|--|
| School: | |
| SED # | |

| B. PRIME CONTRACTOR | C. SUBCONTRACTOR MBE | WBE | LOCAL |
|----------------------------|-----------------------------|------------|--------------|
| COMPANY: | COMPANY: | | |
| CONTACT: | CONTACT: | | |
| TELEPHONE: | TELEPHONE: | | |
| E-MAIL: | E-MAIL: | | |

D. MWBE/LOCAL BUSINESS SUBCONTRACTOR SCOPE OF SERVICES

In the box below, provide a detailed scope of services to be performed by the proposed MWBE/LOCAL BUSINESS Subcontractor listed above.

| Certified to Perform | DESCRIPTION OF WORK | Contract Amount | Anticipated Start Date | Anticipated End Date |
|-----------------------------|----------------------------|------------------------|-------------------------------|-----------------------------|
| | | | | |

The official schedule of values for the above scope of services must be submitted along with the applicable subcontract agreement within 10 days of the Utilization Plan approval.

MWBE/LOCAL BUSINESS

PRIME CONTRACTOR

Print Name of Principal or Officer

Print Title of Principal or Officer

Signature of Principal or Officer

Signature of Principal or Officer

Date

Date



Development and Diversification Plan for Workforce and Business

Instructions for Enlarged City School District of Middletown Form C

NOTE: Gray shaded areas contain self-calculating formulas. **DO NOT** enter information in these cells.

Month: Pay Application reporting month

Contractor: Specify Contractor/Sub-contractor Name

School Name #: Specify School

Contract Amount: Enter Contract amount.

Amount Paid to Prime Contractor this Month: The amount paid to the Prime Contractor/Consultant by the ECSDM for the Pay Application Reporting Month

MBE Goal: 9%

MBE Amount: This is automatically calculated. **DO NOT** enter information here.

WBE Goal: 6%

WBE Amount: This is automatically calculated. **DO NOT** enter information here.

LOCAL BUSINESS Goal: 5%

LOCAL BUSINESS Amount: This is automatically calculated. **DO NOT** enter information here.

“Subcontractor” column:

Please list all subcontractors and sub-consultants that are being utilized on this project. This includes MBE, WBE, Local Businesses and non-MWBE firms, currently active, currently inactive, and firms that have completed their scope of work.

Note: All firms must be on the latest approved Utilization Plan. If you have new firms, you MUST submit a revised Utilization Plan to the ICO within 5 business days.

“Work Status this Report”:

Please indicate whether the subcontractor/sub-consultant is currently “Active”, “Inactive” or “Complete” (has completed their scope of work and all payments have been made to the subcontractor/sub-consultant).



Development and Diversification Plan for Workforce and Business

“Total Subcontract Amount \$”:

Enter the total value of the subcontract that is listed on your latest approved Utilization Plan. *Note: If this amount has changed, you must submit a revised Utilization Plan to the ICO within 5 business days.*

“Payments This Month”:

Enter the total amount paid to the respective MWBE/LOCAL BUSINESS subcontractor/sub-consultant. **The payments listed must have corresponding invoices and canceled checks/eDeposit log/direct deposit log/wire transfer log included as verification of payment.**

“Previous Payments”:

Enter all previous payments made to the MWBE/LOCAL BUSINESS subcontractor or sub-consultant that have been reported prior to this reporting month.

“Total Payment Made to Date”: **DO NOT** enter any information in these columns. These cells contain self-calculating formulas.

“% To Date”: **DO NOT** enter any information in these columns. These cells contain self-calculating formulas.

Please Sign and Date at the bottom of the form before submission so that processing is not delayed.

CONTRACTOR'S MINORITY AND WOMEN'S BUSINESS (M/WBE) MONTHLY REPORT

MONTH YEAR CONTRACTOR
 SCHOOL NAME CONTRACT AMOUNT AMOUNT PAID TO PRIME CONTRACTOR THIS MONTH
 MBE Goal: 9.00% MBE Amount: \$0.00 WBE GOAL: 6.00% WBE Amount: \$

| Subcontractor | Work Status This Report | Total Subcontract Amount \$ | | | | Payments This Month \$ | | | | Previous Payments \$ | | | | Total Payment Made to Date \$ | | | | % To Date | | | | |
|---------------|--|-----------------------------|------|------|----------------|------------------------|------|------|----------------|----------------------|------|------|----------------|-------------------------------|------|------|----------------|-----------|---------|---------|----------------|---------|
| | | Non M/WBE | MBE | WBE | LOCAL BUSINESS | Non M/WBE | MBE | WBE | LOCAL BUSINESS | Non M/WBE | MBE | WBE | LOCAL BUSINESS | Non M/WBE | MBE | WBE | LOCAL BUSINESS | Non M/WBE | MBE | WBE | LOCAL BUSINESS | |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| | Active <input type="checkbox"/> Inactive <input type="checkbox"/> Complete | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |
| TOTAL | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! |

Signature _____ Date _____

Reports must include subcontractor invoice for payment and proof of payment from contractor



Instructions for Enlarged City School District of Middletown Form E

Contract # and School: Specify Contract # and School

Contractor: Specify Contractor/Sub-contractor Name

Contract Amount: Enter Contract amount

Reporting Period: Specify beginning and end dates of corresponding certified payroll. DO NOT USE 1ST DAT OF MONTH TO THE LAST DAY OF THE MONTH UNLESS THESE ARE THE ACTUAL DATES OF YOUR CERTIFIED PAYROLL.

Column “(A) Job or Trade Category”:

Enter title of Job or Trade category as needed in spaces provided.”

Column “(B) Total Employee Hours”:

Hours are automatically calculated. Do not need to enter anything.

Column “(C) Caucasian”:

Enter total number of hours worked, for each job category, for Caucasian Male employees and Caucasian Female employees, in their respective columns.

Column “(D) Black (Not of Hispanic Origin)”:

Enter total number of hours worked, for each job category, for Black Non-Hispanic Male employees and Black Non-Hispanic Female employees, in their respective columns.

Column “(E) Hispanic:

Enter total number of hours worked, for each job category, for Hispanic Male employees and Hispanic Female employees, in their respective columns.

Column “(F) Asian or Pacific Islander:



Development and Diversification Plan for Workforce and Business

Enter total number of hours worked, for each job category, for Asian or Pacific Islander Male employees and Asian or Pacific Islander Female employees, in their respective columns.

Column “(G) Native American or Alaskan Native:

Enter total number of hours worked, for each job category, for Native American or Alaskan Native Male employees and Native American or Alaskan Native Female employees, in their respective columns.

Column “(H) Total # of Employees:

Enter total number of employees. ***Include all male, female, Caucasian and minority employees.***

Column “(I) Total # of Minority Employees:

Enter total number of ***minority*** employees. Include all male and female, minority employees.

Column “(J) Minority %”:

Automatically calculated. Do not need to enter anything.

Column “(K) Female %”:

Automatically calculated. Do not need to enter anything.



Development and Diversification Plan for Workforce and Business

FORM B

Final MWBE Utilization Report

School Name: _____ Total Contract Amount: \$ _____

Amount of MBE Participation: \$ _____ Amount of WBE Participation: \$ _____

Amount of Local Business Participation: \$ _____

General/Prime Contractor Information

Name of General/Prime Contractor: _____ Phone: _____

Address: _____

I hereby certify that the above listed amount is correct and accurate to the best of my knowledge.

Name (print): _____ Title: _____

Signature: _____ (General/Prime Contractor) Date: _____

Minority/Women/Local Business Enterprise Information

Name of MWBE/Local Business: _____

MBE/WBE/Local Business: _____

Address: _____ Phone: _____

Please state total amount received by the MWBE/Local Business on the above-named project to date:

\$ _____ % _____

Please state the remaining balance on the above-named project to the MWBE/Local Business:

\$ _____ % _____

Please state the remaining retention balance on the above-named project to the MWBE/Local Business:

\$ _____

I hereby certify that the above listed amount is true and accurate to the best of my knowledge.

Name (print): _____ Title: _____

Signature _____ (Sub Contractor) Date: _____

Notary Stamp & Signature: _____

NEW YORK STATE WAGE RATE SCHEDULES

1.1 GENERAL

- A. The following minimum prevailing rate of wages, health and welfare and pension fund contributions are as determined by the Industrial Commissioner of the State of New York in accordance with the provisions of Section 220 of the Labor Law of New York State.
- B. It shall be the sole responsibility of each Contractor to pay wages at least equal to current and future Wage Rate Schedules which are applicable to this project throughout the entire duration of the Contract without claiming extra costs.
- C. Current Wage Rate Schedules are included herein. The Owner and the Architect do not warrant the accuracy or pertinency of the wage rates stated. The Contractor shall be solely responsible for verifying the accuracy of the current and future Prevailing Wage Schedule.
- D. Prevailing Rate Case Number (PRC# 2023003150 - Twin Towers MS Addition & Alts) has been assigned to the project. To access the PDF file of your schedule, click on the following link or copy and paste into your browser.

<https://apps.labor.ny.gov/wpp/doFindProject.do>

- E. Notice of Award: Each Prime Contractor shall submit a notice of award of contract to the Department of Labor upon signing of contract. The above link for the PRC has a tab to submit such notice.

Prevailing Wage

[Home](#) > Prevailing Wage

[Wage Schedule](#) · [Submit Notice Of Award](#) · [Submit Notice Of Project Completion](#)

PRC#: 2023003150

Type of Contracting Agency: Local School District

Acceptance Status: Accepted Article 8

Contracting Agency

ECSD of Middletown
William Bartlett
Director of Facilities
223 Wisner Avenue
Middletown NY 10940

(845) 326-1194
william.bartlett@ecsdm.org

Send Reply To

Ryan Carper
Project Manager
KG+D Architects, PC
285 Main Street
Mount Kisco NY 10549

(914) 666 -5900
sannar@kgdarchitects.com

Project Information

| | |
|----------------------------------|--|
| Project Title | Twin Towers MS Addition & Alts |
| Description of Work | Renovation of existing school building, traffic flow and playing field, and a new, multi-story classroom addition with cafeteria and fitness room. |
| Contract Id No. | 2021-1087 |
| Project Location(s) | Twin Towers Middle School |
| Route No / Street Address | 112 Grand Avenue |
| Village / City | |
| Town | Middletown |
| State / Zip | NY 10940 |
| Nature of Project | Addition to Existing Structure |
| Approximate Bid Date | 08/01/2023 |
| Checked Occupation(s) | Construction (Building, Heavy & Highway, Sewer, Water, Tunnel) |

Applicable Counties

Orange

Department of Labor

[Accessibility](#)

[Contact](#)

[Language Access](#)

[Privacy Policy](#)



SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Intent of the Contract Documents
4. Type of contract
5. Scope of Work – separate Prime Contracts
6. Owner-Furnished, Contractor-Installed products
7. Owner-Furnished, Owner-Installed products
8. Work schedule and phasing
9. Coordination of Work of Separate Prime Contracts
10. Access to site.
11. Coordination with occupants.
12. Work restrictions.
13. Specification and drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

- A. Project Identification: The project consists of Additions and Alterations at the Twin Towers Middle School located at 112 Grand Ave, Middletown, NY 10940.
- B. Owner: Enlarged City School District of Middletown in Middletown, NY.
- C. Architect: The Contract Documents were prepared for Project by KG+D Architects, PC.
- D. Construction Manager: Triton Construction Management has been engaged as Construction Manager for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Project is defined by the Contract Documents and consists of the following:

1. Renovations to existing school building to provide new music-related rooms, health-related rooms, offices, psychology suite, library, locker rooms, weight room, main office suite, security vestibule, classrooms, and related support spaces.
 2. Provision of new multi-story addition housing classrooms, cafeteria, kitchen, server, fitness room and related support spaces.
 3. Exterior improvements include work at the Courtyard, and new play areas and sports facilities.
- B. Work in Existing Building at Existing Site: Existing conditions are shown on the drawings to the best knowledge of the Architect. The Architect, however, cannot guarantee the correctness of the existing conditions shown and assumes no responsibility therefore. It shall be the responsibility of the Contractor to verify all existing conditions.
1. Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.

1.4 INTENT OF THE CONTRACT DOCUMENTS

- A. If, in the interpretation of Contract Documents, requirements within the Drawings and Specifications conflict, or it appears that the Drawings and Specifications are not in agreement, the Contractor shall provide (1) the greater quantity, where there is a discrepancy in quantity, and (2) the superior quality, where there is a discrepancy in quality. All discrepancies shall be brought to the attention of the Architect. The Architect's decision on resolving the discrepancy shall be final.

1.5 TYPE OF CONTRACT

- A. The Work of the project will be let in sixteen (16) separate contracts; separate Prime Contracts will be awarded for the following categories of work:
1. Contract No. G1: General Construction Work
 2. Contract No. G2: Abatement Work
 3. Contract No. G3: Masonry Work
 4. Contract No. G4: Steel Work
 5. Contract No. G5: Roofing Work
 6. Contract No. G6: Windows Work
 7. Contract No. G7: Flooring Work
 8. Contract No. G8: Tile Work
 9. Contract No. G9: Painting Work
 10. Contract No. G10: Door Hardware Work
 11. Contract No. FS1: Food Service Equipment Work
 12. Contract No. FP1: Fire Protection Work
 13. Contract No. P1: Plumbing Work.
 14. Contract No. M1: Mechanical Work.
 15. Contract No. E1: Electrical Work
 16. Contract No. L1: Site Development Playfield and Courtyard Work

- B. Responsibilities assigned to each separate Prime Contractor and the scope of the Work included in each contract is clearly identified in the Specifications and Drawings.
 - 1. Refer to the "Scope of Work for Separate Prime Contractors" attached to this section for the scope of Work for each contract.
 - 2. Refer to the "Multiple Prime Contractor Coordination Chart - Individual Scope Sheets by Trade" attached to this section for the scope of Work for each contract and for coordination requirements for the Work as a whole.
- C. One set of Documents is issued covering all contracts. Each Prime Contractor shall review all drawings and specifications for complete understanding and knowledge of the Work.

1.6 SCOPE OF WORK – SEPARATE PRIME CONTRACTS

- A. Each Prime Contractor is responsible for all of Procurement and Contracting Requirements (Division 00), General Requirements (Division 01), and all work specifically indicated, including the following:
 - 1. Refer to the "Scope of Work for Separate Prime Contractors" attached to this section for the scope of Work for each contract.
 - 2. Refer to the "Multiple Prime Contractor Coordination Chart - Individual Scope Sheets by Trade" attached to this section for the scope of Work for each contract and for coordination requirements for the Work as a whole.
 - 3. In addition, Contract G1 will be required to hire the land surveyor to set benchmarks and building levels.
- B. All Prime Contractors are responsible to provide a complete installation of their work with the exception of such work that is specifically indicated to be by another Contractor.

1.7 OWNER-FURNISHED CONTRACTOR-INSTALLED PRODUCTS

- A. Owner will furnish products indicated. The Work includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products and making building services connections.
- B. Owner-Furnished Contractor-Installed Products:
 - 1. Toilet accessories in classrooms and toilet rooms.
 - 2. Projection screens.

1.8 OWNER-FURNISHED, OWNER-INSTALLED PRODUCTS

- A. Owner will furnish and install products indicated.
- B. Owner-Furnished, Owner-Installed Products:
 - 1. A/V equipment: Displays, video displays, monitors, etc.
 - 2. Furniture
 - 3. Telephones

4. Music instrument storage units.
5. Vending machines
6. Office equipment

1.9 WORK SCHEDULE AND PHASING

- A. The Work of the Project will be constructed in phases to meet the Owner's requirements for occupying the school building and grounds, with each phase substantially complete as indicated on the Project Milestone Schedule A Certificate of Substantial Completion will be issued for each phase of the Work.
- B. The Work shall be substantially complete for each Phase of the Work on or before the dates indicated in the Project Milestone Schedule attached to this Section. It is extremely important that the Owner resume its full use of the portions of the buildings and sites included in each Phase on the completion dates specified. Liquidated damages will be assessed by the Owner for each day the work continues past the Substantial Completion date for each phase.
- C. The Work shall be conducted in accordance with the logistics and phasing drawings PH001, LP001, and LP002 and the milestone schedules included in the contract documents.
- D. Work may be commenced in the building and on the site for each phase of the Work on the dates indicated in the Project Milestone Schedule attached to this Section.
- E. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule, showing the sequence, commencement and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.

1.10 COORDINATION OF WORK OF SEPARATE PRIME CONTRACTS

- A. Project Coordinator shall be responsible for coordination between the Separate Prime Contracts
 1. Construction Manager shall act as Project Coordinator.

1.11 ACCESS TO SITE

- A. Limits: Confine constructions operations to areas within contract limits indicated. Do not disturb portions of the building and site beyond the areas in which the Work is indicated. All areas of the building and site with the exception of the project area where the Work is being performed are off limits to Contractor and his employees.
 1. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, students, the public and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.

- b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - c. Coordinate staging, parking and storage areas with the Construction Manager.
- B. Damages: Promptly repair damages caused to adjacent facilities by work of the Contract to a good-as-new condition acceptable to the Owner.
- C. Existing Facilities: The following facilities are specifically noted as not to be used by Contractor or his employees:
 - 1. Toilet facilities.
 - 2. Food service facilities, including kitchen and dining areas.
 - 3. Parking lots (outside of the parking areas designated for Contractor's use).
 - 4. Telephones.
 - 5. Elevators.
- D. Security: The Contractor and all employees of the contractor shall be subject to the security provisions required by the Owner. Such provisions shall include, but not be limited to, the following:
 - 1. Contractor and all their employees shall use a single means of access and egress to the building, except in the case of emergency, as designated by the Construction Manager.
 - 2. Photo identification badges shall be procured for all persons entering the Project building or site and shall be worn continuously while the person is in the building or on the site.
 - 3. All persons entering the building or site shall be subject to the Owner's visitor management system, Raptor screening, and may be subject to fingerprinting or other security-related screenings.
 - 4. Contractor shall maintain a daily list of their personnel at the Project site.

1.12 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations.
 - 1. Maintain access to existing adjacent occupied or used facilities. Do not close or obstruct adjacent drives, walkways, or other occupied or used facilities other than those obstructions currently indicated on the Contract Documents without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Occupancy level will be reduced during summer months when school is not in session.
- B. Utility Shutdowns: Coordinate all utility shut downs and cross overs with the Construction Manager, schedule during off hours and non-occupied times only.

1. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations. Include planned shut-downs and interruptions in Construction Schedule.
 2. Electrical and mechanical services to functioning spaces shall be maintained at all times. Swing-overs to new services shall be made so as to cause the least interruption to the facilities' operations and shall be performed in off-hours only.
- C. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.13 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours and Days: Limit work on the site and in the building to working hours indicated below, Monday through Friday, unless otherwise indicated.
1. The school will be closed on Saturdays, Sundays, regularly scheduled district holidays and school vacations, and at night after cleaning crews have finished. If any Contractor wishes to work at any time when the school is normally closed, that Contractor must receive prior approval by the Owner and also shall arrange and pay for custodial services for the building at the applicable district pay rates. All work taking place within the schools/buildings/grounds on weekends, holidays and school vacations must be approved in advance by the Owner.
 2. Summer Work Period Hours and Days: During the Summer work will be permitted between 7:00 AM and 4:00 PM all days except Saturday and Sundays. Any special work arrangements must be made through the Owner.
 3. School-in-Session Period Hours and Days: Work during the School Year must be scheduled after School Hours between 3:00 PM until 10:00 PM in any occupied spaces. The Work at the new additions and renovation areas may be performed between 7 am to 4 pm. During the school year the school will be closed at 11:00 PM. Any requests to work during school hours must be

submitted in writing to the School District for approval. For after-hours work in occupied areas of the school, provide temporary measures to be installed such as ventilation, screening, dust protection, fire separation, etc. The School District reserves it's right to accept or reject the request at their discretion.

4. Blackout Dates (No work is permitted at the building or site): Concerts and testing dates, other days as directed by the Owner. Allow for 10 blackout days per calendar year, taken during the weekdays, as selected by the Owner.
 5. The school district's academic calendar listing school-in-session period, summer period, school holidays and vacation days, and Regents Exam days can be found here <https://www.middletowncityschools.org/domain/449>
- C. Delivery Restrictions: Coordinate with the Owner for permissible times and locations/truck access for deliveries on site.
- D. Noise, Vibration, and Odors: Notify Owner and coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to surrounding spaces.
1. Notify Architect and Owner not less than two days in advance of proposed disruptive operations.
 2. Construction activity noise levels for a period extending from the reading days before exams until the final day of exams (ten days) shall not exceed 60 dBA
- E. Comply with Owner's standards for construction projects as follows:
1. Interaction with employees, students and the public is strictly forbidden.
 2. Use of offensive or inappropriate language is strictly forbidden .
 3. The use of radios, tape and CD players is prohibited on the site and in the buildings.
 4. Smoking, use of alcohol, and possession of firearms of any type is prohibited on the site and in the buildings.
 5. Fraternalizing with students or staff at the school is prohibited.
 6. Use of controlled substances on Project site is not permitted.

1.14 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

Attachments: Project Milestone Schedule
Scope of Work for Separate Prime Contractors
Multiple Prime Contractor Coordination Chart - Individual Scope Sheets by Trade

| Enlarged City School District of Middletown Twin Towers Addition and Renovation Project | | Page 1 | |
|--|-------------------|--|--|
| Task Name | Start Date | Milestone Substantial Completion Date | |
| Middletown - Twin Towers Addition & Renovations Project | | | |
| Milestones | | | |
| Pre-Con | 4/16/2024 | 6/10/2024 | |
| Mobilize and Prepare for Construction Start | | | |
| Start Construction | | | |
| Submittals Complete | | | |
| Coordination | 4/16/1934 | 12/12/2024 | |
| Steel/Concrete/Structural Masonry/Elevator/Mechanical - Final Coordination Drawings Complete | | | |
| Underslab / Thru-Wall / In-Wall Concrete/Mason/M/E/P/FP - Final Coordination Drawings Complete | | | |
| Steel/Curtain Wall/Finish Mason - Final Coordination Drawings Complete | | | |
| MEP/FP/Kitchen Equipment Coordination - Final Coordination Drawings Complete | | | |
| PA/Security - Final Coordination Drawings Complete | | | |
| Building Construction Addition and Renovations | | | |
| Phase 1 - Addition (General) | | | |
| Building Façade | 6/3/2024 | 1/7/2026 | |
| Start Abatement For Addition Work | | | |
| Abatement Complete For Addition Work | | | |
| Exterior Walls - Weather Tight Temp Protections Complete | | | |
| Façade Masonry Start | | | |
| Start Windows/Curtain Walls | | | |
| Exterior Building Façade Complete | | | |
| Building: Structural/Shell | 11/1/2024 | 2/27/2025 | |
| Concrete Footings and Piers Complete | | | |
| Masonry Elevator/Stair Towers Complete | | | |
| Start Steel Erection | | | |
| Steel/Decking/Shear Studs Complete | | | |
| All Concrete Slabs Poured | | | |
| All Stairs Pans Poured | | | |
| Roof Complete | | | |
| Utilities | 6/3/2024 | 7/8/2025 | |
| Grease Trap Utility Complete | | | |
| Milestone Bid Schedule January 13, 2024 | | | |

| Enlarged City School District of Middletown Twin Towers Addition and Renovation Project | | Page 2 | |
|--|-------------------|--|--|
| Task Name | Start Date | Milestone Substantial Completion Date | |
| Underground Storm Utilities Complete | | | |
| Sewer Utilities Complete | | | |
| Underground Domestic Water Utilities Complete | | | |
| Underground Electrical Services Complete | | | |
| Switch Gear Delivered | | | |
| Mechanical Equipment Delivered | | | |
| Underground Tele/Data Utilities Complete | | | |
| Permanent Power | | | |
| Finish Site Work | 3/30/2026 | 8/19/27 | |
| Synthetic Turf Field Start | | | |
| Synthetic Turf Field Complete | | | |
| Exterior Sidewalks & Landscaping Complete | | | |
| Sports-Scape Play Area Complete | | | |
| Courtyard Complete | | | |
| Phase 1A - Classrooms, Library and Mechanical Room | | | |
| Interior Classroom Renovations - Phase 1A | 6/3/2024 | 12/18/2025 | |
| Phase 1A Interior Renovation Construction Start | | | |
| 3rd Floor - Classrooms & Toilet Corridor Complete | | | |
| Ground Floor Area S - Proposed Mechanical/Electrical Room Complete | | | |
| 2nd Floor - Classrooms & Toilet Corridor Complete | | | |
| Ground Floor - Classrooms Complete | | | |
| 1st Floor Library Media Center Complete | | | |
| Classroom Addition -Phase 1A | 6/3/2024 | 12/18/2025 | |
| Phase 1B Addition Construction Start | | | |
| 3rd Floor Area A Classrooms Complete | | | |
| 2nd Floor Area A Classrooms Complete | | | |
| 1st Floor Area A Classrooms Complete | | | |
| Ground Floor Area A (Classrooms & Lobby) Complete | | | |
| Phase 1B- Cafeteria and Kitchen Addition | 6/3/2024 | 6/25/2026 | |
| Phase 1B Construction Start | | | |
| 1st Floor Area B Cafeteria/Servery Complete | | | |
| 1st Floor Area B Fitness Complete | | | |
| Ground Floor Area B (Kit Stor/Prep/Off) Complete | | | |
| Area B Complete (Ground & 1st Floor) - Teacher/Staff Move-In | | | |

Milestone Bid Schedule January 13, 2024

**Enlarged City School District of Middletown
 Twin Towers Addition and Renovation Project**

Page 3

| Task Name | Start Date | Milestone Substantial Completion Date |
|---|------------------|---------------------------------------|
| Phase 2A - Locker Rooms, Small Gym, Weight Room and Classrooms | 1/23/2026 | 10/23/2026 |
| Phase 2A Construction Start | | |
| 3rd Floor New Faculty Lounge, House Suite & Classrooms Complete | | |
| 2nd Floor Classrooms and SE/Resource Rooms | | |
| 1st Floor Locker Rooms - Complete | | |
| 1st Floor Psych Suite/Support Suite/Courtyard Entrance Complete | | |
| Weight Room Complete | | |
| Small Gym Complete | | |
| Phase 2B - Big Gym and 2nd Floor House Suite/Faculty Lounge | 6/1/2026 | 9/25/2026 |
| Phase 2B Construction Start | | |
| Big Gym Complete | | |
| 1st Floor Gym Lobby and Bathrooms - Complete | | |
| 2nd Floor House Suite and Faculty Lounge Complete | | |
| Phase 3A - Music Band/Orchestra Classrooms & Pre-Engineering Digital Arts/E-Sports | 1/4/2027 | 8/25/2027 |
| Phase 3A Construction Start | | |
| 1st Floor - Area C Band and Orchestra Classrooms Complete | | |
| Ground Floor - Area C Pre Engineering and Digital Arts/E-Sports Classrooms Complete | | |
| 3rd Floor - Area N SE Classrooms Complete | | |
| 2nd Floor - Area N SE Classrooms Complete | | |
| 1st Floor - Area N Music Classrooms Complete | | |
| Phase 3B - Auditorium Mech, Auditorium Lobby and 2nd Floor Classrooms, Courtyard | 6/1/2027 | 8/31/2027 |
| Phase 3B Construction Start | | |
| 1st Floor - OT+PT, Health, ISS and Professional Development Offices Complete | | |
| Auditorium Lobby & Bathrooms Complete | | |
| Main Office and Nurses Suite Complete | | |
| Phase 4 - Front of Building Classrooms and Bathrooms | 6/1/2027 | 1/17/2028 |
| Phase 4 Construction Start | | |
| 3rd Floor Classrooms and Bathrooms Complete | | |
| 2nd Floor Classrooms and Bathrooms Complete | | |
| Date of Project Substantial Completion | | 1/17/2028 |
| Punchlist and Closeout | | |
| Phase 1 Punchlist and Closeout Complete | | 8/21/2026 |
| Phase 2 Punchlist and Closeout Complete | | 12/24/2026 |

| | |
|---|-------------------|
| Phase 3 Punchlist and Closeout Complete | 10/29/2027 |
| Phase 4 Punchlist and Closeout Complete | 3/17/2028 |
| Project Completion Date | 3/17/2028 |
| Milestone Bid Schedule January 13, 2024 | |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| | Contract # G1 - General Construction |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | This Prime General Construction Contractor shall provide all the building construction work, all necessary site refuse containers, and disposal services to maintain the site in a clean and safe condition. This Prime Contractor shall be responsible for emptying and/or replacing all containers on a regular basis or when full. All containers and disposal services shall be provided by a single entity. Prime General Construction Contractor shall provide sufficient labor to keep the site clean daily and shall be responsible for providing the daily broom cleaning as necessary to maintain site safety. All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | GC shall provide all equipment, tools, materials, and labor for snow removal to assure work can continue through the winter months. Any accumulation of snow in the areas within the construction fencing and at temporary construction roads, shall be removed <u>immediately</u> . The contractor will work in-hand with the District with their snow removal efforts to ensure access to the site. GC will repair, correct or replace for finished grade and seed all areas within the construction site disturbed by the project, including staging material areas. |
| Temporary Utilites | GC shall provide temporary heat and enclosures. As dictated by the bid schedule this Prime Contractor shall provide temporary heat from October 15 to April 15 to assure that the work of all trades can continue through the winter months. This includes temporary heating equipment, fuel, fire watch (if required), necessary labor/supervision, ventilation, temporary enclosures etc. In no case shall the temperature be less than 50 degrees F. Temporary heating plants using electric power as an energy source shall not be used. |
| Site Safety | GC will provide safe egress between floors to include the use of temporary stairs w/hand rails; temporary wood treads in metal pan stairs until concrete is poured, ladders, etc. GC shall provide fire extinguishers for the life of the project, the extinguishers are to be hung and identified as per OSHA requirements (1 per 3000 sq ft, or better). These extinguishers are to be re-charged and inspected for the life of the project. GC shall furnish, install, and maintain an OSHA (3) three line guardrail system (toe board, 2 mid rails and top rails) at stairwells, open slab edges, MEP shafts, elevator shafts and other openings leading to fall hazards. GC shall furnish, install, and maintain perimeter protection at all floors and roof areas of the new additions. These safety cables must meet all OSHA requirements. The safety cables must be installed with turnbuckles in such a manner as to allow access to the exterior of the building for completion of work by others shall not be used. |
| Trenching & Backfill for Utilities | GC will be responsible to provide the trenching interior and exterior, backfill and compaction for such MEP under-slab items. GC will provide necessary cutting of all existing slabs excavate all trenching locations marked by MEP primes. Trenching at existing slabs and asphalt: GC will be responsible to sawcut, trench, backfill trench, dowel existing slabs and place new concrete or asphalt to be level to receive finishes. |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | New Mechanical Roof Top Units and Exhaust Fans will be furnished and installed by the HVAC Prime, with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs will be furnished, lifted/picked, and set/installed by the HVAC Prime. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the GC Prime. Coordination between each trade to install the roof system in a seamless matter is required per each Prime's contract. |
| Opening & Temporary Protections | Temporary protection of open roof curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | GC will be responsible to connect to the stormwater piping 5' outside the building foundation. Plumbing Prime Contractor will be responsible to core drill, seal and install all pipping from 5' outside the building into the building. |
| New Electric Service | GC provides all trenching and backfill outside of the building footprint for the electric Utility service connections |
| Caulking | GC provides all caulking doors and all other items not outline in bid drawings. |
| Interior/ Exterior Glazing | All interior glazing, glass walls, glass partitions, transaction window. |
| Light Pole Bases | Provide all trenching and coordination with the Prime Electrical Contractor for the installation new concrete bases for the light towers, lighting/lights, and rigging; The Prime Electrical Contractor will be responsible to provide electrical provisions and final connection to each Light Pole. |
| New Transformer/ Generator and Base | Provide all trenching and backfill outside of the building footprint for the Electrical contractor connections if not provide by the Utility company. Refer to the MEP drawings for concrete housekeeping pads & other concrete required outside the building footprint. |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract. Spray foam Fire retardant on steel. |
| Building Connections, Concrete, Waterproofing | Concrete Slab repair for door way openings at building connections. Waterproofing. |
| Blinds & Shades in Addition | Provide all blinds and shades, material and labor. Coordinate with Electrical Prime for all motorized shades. |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | Remove & replace existing plaster ceilings with ACT as specified. Repairall plaster/lathe walls or ceilings where other trades performed cutting & pathcing. |
| Final Cleaning | Provide final cleaning of all areas |

| Enlarged City School District of Middletown | |
|--|--|
| Twin Towers Middle School Additions and Alterations | |
| Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
| | |
| | Contract # G2 - Abatement |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule . Each Prime’s Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor’s staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached ‘Bid Schedule’, are to be coordinated and shall be inclusive of other Prime Contractor’s activity. The “Final” agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor’s Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical “ties” of coordinated Work must be detailed on the Project Schedule. All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a ‘time is of the essence’ construction strategy. The attached ‘Bid Schedules’ serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | ACM contacting materials must be removed in accordance with DOL guidelines. All non-containing ACM materials will be the Abatement Primes responsibility to stockpile and place their debris in the Prime General Construction Contractor’s containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilities | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | All ACM and associated removals will be by this Contractor under abatement DOL guidelines. |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor’s Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels & Windows | Prime Abatement contractor will remove all windows and doors that are noted on the Abatement plan. |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown | |
|--|--|
| Twin Towers Middle School Additions and Alterations | |
| Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
| | Contract # G3 - Masonry |
| General Requirements | All Contracts Responsible Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Project Scheduling | |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/Maintennace & repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building ceilings | |
| Eliminated Louvers, lintels and Windows | Masonry Prime will be removing all lintels above all doors and window. Masonry Prime is required to provide infill for all louvers, doors, windows and all openings that will be eliminated per contract drawings. |
| Storm Water/Sanitary/Roof Drains & Piping | |
| New Electric Service | |
| Caulking | Masonry Prime to provide caulking masonry joints, insulation and water proofing at masonry |
| Interior/Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/Generator and base | |
| Patching & Firestopping | |
| Building Connections, Concrete, water proofing | |
| Blinds & Shades in Addition | |
| Drop ceilings, Plaster/Lathe ceiling/wall repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|---|
| | Contract # G4 - Steel |
| General Requirements | All Contracts Responsible |
| Project Scheduling | <p>Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates.</p> |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| Contract # G5 - Roofing | |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime’s Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor’s staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached ‘Bid Schedule’, are to be coordinated and shall be inclusive of other Prime Contractor’s activity. The “Final” agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor’s Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical “ties” of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a ‘time is of the essence’ construction strategy. The attached ‘Bid Schedules’ serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor’s containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | New Mechanical Roof Top Units and Exhaust Fans will be furnished and installed by the HVAC Prime, with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs will be furnished, lifted/picked, and set/installed by the HVAC Prime. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the GC Prime. Coordination between each trade to install the roof system in a seamless matter is required per each Prime’s contract. |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| Contract # G6 - Windows | |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | Window Prime provides all caulking of windows interior and exterior. |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| | Contract # G7 - Flooring |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract |
| Building Connections, Concrete, Waterproofing | Finish repair for door way openings at building connections. Repair any damaged floor, install expansion joints and leveling as required. |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| | Contract # G8 - Tile |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | Existing corridor glazed unit tile wainscot to remain where existing walls are to remain. Existing display cases to remain. Infill existing corridor wall at MEP removals, finish to match existing. Provide wall tile as scheduled at new corridor walls & openings. |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| Contract # G9 - Painting | |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| Contract # FS1 - Food Service Equipment | |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all areas |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| | Contract # FP1 - Fire Protection |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | Each MEP Prime will be responsible to survey and provide a final layout to the GC, prior to trenching. Each MEP Prime contractor will be responsible for bedding to level the piping and testing the piping prior to back filling. For Exterior provide bedding and piping for all new connections from building to utility service. |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all fixtures, equipment and systems installed by this Contractor. |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|---|
| | Contract # P1 - Plumbing |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | Plumbing prime must install temporary water sevice with hose bib and winter protection for all other Prime usage. |
| Site Safety | |
| Trenching & Backfill for Utilites | Each MEP Prime will be responsible to survey and provide a final layout to the GC, prior to trenching. Each MEP Prime contractor will be responsible for bedding to level the piping and testing the piping prior to back filling. For Exterior provide bedding and piping for all new connections from building to utility service. |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | Prime will be responsible to connect to the stormwater piping 5' outside the building foundation. Contractor will be responsible to core drill, seal and install all pipping from 5' outside the building into the building. |
| New Electric Service | |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all fixtures, equipment and systems installed by this Contractor. |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|---|
| Contract # M1 - Mechanical | |
| General Requirements | All Contracts Responsible Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Project Scheduling | |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilities | |
| Site Safety | |
| Trenching & Backfill for Utilities | Each MEP Prime will be responsible to survey and provide a final layout to the GC, prior to trenching. Each MEP Prime contractor will be responsible for bedding to level the piping and testing the piping prior to back filling. For Exterior provide bedding and piping for all new connections from building to utility service. |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | New Mechanical Roof Top Units and Exhaust Fans will be furnished and installed by the HVAC Prime, with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs will be furnished, lifted/picked, and set/installed by the HVAC Prime. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the GC Prime. Coordination between each trade to install the roof system in a seamless matter is required per each Prime's contract. |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | All ventilators and louvers will be removed so Mason Prime can infill openings. |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | |
| Caulking | Mechanical Prime provides all caulking of louvers interior and exterior. |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract. |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all fixtures, equipment and systems installed by this Contractor. |
| Project Closeout | All Contracts Responsible |

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|---|
| | Contract # E1 - Electrical |
| General Requirements | All Contracts Responsible |
| Project Scheduling | Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates. |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in the Prime General Construction Contractor's containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster supplied by the GC. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilities | Prime Electrical contractor shall provide and keep temporary light and power operational throughout the life of the project. Light and power shall be turned "ON" fifteen minutes before the earliest starting time of the earliest trade, and turned "OFF" fifteen minutes after the established quitting time of the trade which stops latest in the evening; typical normal working hours are 7:00 am to 7:00 pm. This applies to all scheduled workdays, Monday through Saturday inclusive, which are established as regular workdays for any trade engaged in the work, including such days that are holidays for Electricians but are regular workdays for other trades. These services are to be kept operational until the CM determines that they are no longer required for the execution of the work. Temporary light shall consist of a minimum of (1) bulb and cage per 10 square feet of floor space in all spaces no matter of size throughout the existing building spaces being renovated. |
| Site Safety | |
| Trenching & Backfill for Utilities | Each MEP Prime will be responsible to survey and provide a final layout to the GC, prior to trenching. Each MEP Prime contractor will be responsible for bedding to level the piping and testing the piping prior to back filling. For Exterior provide bedding and piping for all new connections from building to utility service. |
| Disconnects and Removals | Selective and structural demo, GC will provide new ductwork penetrations greater than 12"x12" for the MEP Prime Contractors in walls, ceilings, or floors, as well as any structural support necessary. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors, and ceilings after completion of all their own work. |
| Cutting and Patching of Finished Surfaces | New Mechanical Roof Top Units and Exhaust Fans will be furnished and installed by the HVAC Prime, with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs will be furnished, lifted/picked, and set/installed by the HVAC Prime. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the GC Prime. Coordination between each trade to install the roof system in a seamless matter is required per each Prime's contract. |
| Opening & Temporary Protections | Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the General Construction Contractor in cooperation of all other trades. Water infiltration as a result the HVAC or Electrical Prime not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the GC Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions. |
| Existing Building Ceilings | All Primes should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor. |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | Provide bedding and conduit / wire for new electric service from building to utility connection. |
| Caulking | |
| Interior/ Exterior Glazing | |
| Light Pole Bases | Provide all trenching and coordination with the Prime Electrical Contractor for the installation new concrete bases for the light towers, lighting/lights, and rigging; The Prime Electrical Contractor will be responsible to provide electrical provisions and final connection to each Light Pole. |
| New Transformer/ Generator and Base | Provide transformer and base as per Utility Requirements. |
| Patching & Firestopping | Provide all patching & firestopping for work of this Contract. |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | Provide all blinds and shades, material and labor. Coordinate with GC for all motorized shades |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all fixtures, equipment and systems installed by this Contractor. |
| Project Closeout | All Contracts Responsible |

This Chart is in addition to the requirements of the Contract Documents and is to be interpreted in conjunction with these documents.

| Enlarged City School District of Middletown Twin Towers Middle School Additions and Alterations Multiple Prime Contractor Coordination Chart - Individual Scope Sheets By Trade | |
|--|--|
| | Contract # L1 - Site Development Playfield & Courtyard |
| General Requirements | All Contracts Responsible |
| | <p>Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. Within (3) weeks of NTP all Prime Contractors will provide a coordinated Draft master schedule. Each Prime's Project Schedule is to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the GC for General Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. 1.All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays. Each Prime Contractor shall provide the GC with all information necessary to provide these updates.</p> |
| Project Scheduling | |
| Coordination Drawings | All Contracts Responsible |
| Cleaning During Construction | All Contracts Responsible |
| Waste removal | All other Prime Contractors will be responsible to stockpile and place their debris in Construction containers. Each Prime Contractor is responsible for their own daily clean up, including but not limited to collecting, moving, placing, breaking down boxes and pallets, disposing rubbish and all debris from their activities into a dumpster. |
| Snow Removal/ Maintenance & Repair | |
| Temporary Utilites | |
| Site Safety | |
| Trenching & Backfill for Utilities | Provide all trenching and backfill & concrete outside of the building footprint pertaining to the play field and courtyard |
| Disconnects and Removals | Courtyard removals of all site work adjacent to the existing building including trees, walks, etc. but not including steps attached to the existing building. |
| Cutting and Patching of Finished Surfaces | |
| Opening & Temporary Protections | |
| Existing Building Ceilings | |
| Eliminated Louvers, Lintels and Windows | |
| Storm Water/ Sanitary /Roof Drains & Piping | |
| New Electric Service | Provide all trenching and backfill outside of the building footprint. |
| Caulking | Provide all trenching and backfill outside of the building footprint. |
| Interior/ Exterior Glazing | |
| Light Pole Bases | |
| New Transformer/ Generator and Base | |
| Patching & Firestopping | |
| Building Connections, Concrete, Waterproofing | |
| Blinds & Shades in Addition | |
| Drop Ceilings, Plaster/Lathe Ceiling/Wall Repair | |
| Final Cleaning | Provide final cleaning of all fixtures, equipment and systems installed by this Contractor. |
| Project Closeout | All Contracts Responsible |

SECTION 011011 - REGULATIONS OF THE COMMISSIONER OF EDUCATION - 8 NYCRR 155.5 - UNIFORM SAFETY STANDARDS FOR SCHOOL CONSTRUCTION AND MAINTENANCE PROJECTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes Regulations of the Commissioner of Education - 8 NYCRR 155.5 - Uniform Safety Standards for School Construction and Maintenance Projects.

1.2 REGULATIONS OF THE COMMISSIONER OF EDUCATION - 8 NYCRR 155.5 - UNIFORM SAFETY STANDARDS FOR SCHOOL CONSTRUCTION AND MAINTENANCE PROJECTS

- A. This Article indicates requirements for school construction and maintenance projects required under New York Codes Rules and Regulations, Regulations of the Commissioner of Education, Part 155, Section 155.5, and are binding on all Contracts of this Project.
- B. The occupied portion of the school building shall always comply with the minimum requirements necessary to maintain a certificate of occupancy.
- C. Comply with general safety and security standards for construction projects as follows:
 - 1. Store all construction materials in a safe and secure manner.
 - 2. Provide and maintain fences around construction supplies or debris.
 - 3. Maintain all gates locked at all times when school is in session, unless a worker is in attendance to prevent unauthorized entry.
 - 4. Provide overhead protection during exterior renovation work, for any sidewalks or areas immediately beneath the work site, or fence off such areas and provide with warning signs to prevent entry.
 - 5. Provide all workers with photo-identification badges that are required to be worn at all times for identification and security purposes while working at the project site.
- D. Separation of Construction Areas from Occupied Spaces: Separate construction areas which are under the control of a contractor and therefore not occupied by district staff or students from occupied areas. Provide dust proof partitions to prevent dust and contaminants into occupied parts of the building. Provide periodic inspection and repairs of the containment barriers to prevent exposure to dust or contaminants. Gypsum board must be used in exit ways or other areas that require fire rated separation. Heavy duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.
 - 1. Workers may not use corridors, stairs or elevators designated for students or school staff.

2. Large amounts of debris must be removed by using enclosed chutes or a similar sealed system. No movement of debris through halls of occupied spaces of the building is permitted. No material shall be dropped or thrown outside the walls of the building.
 3. Clean all occupied parts of the building affected by renovation activity at the close of each workday. Maintain required health, safety and educational capabilities at all times for school buildings occupied during a construction project when classes are in session.
- E. **Exiting:** Maintain all building exits during construction. Comply with exiting plans incorporated in the Construction Documents. If exiting is modified other than as shown on the Contract Documents, provide a plan for Architect's review detailing how exiting required by the applicable building code will be maintained during construction. The plan shall indicate temporary construction required to isolate construction equipment, materials, people, dust, fumes, odors, and noise during the construction period. Temporary construction details shall meet code-required fire ratings for separation and corridor enclosure. At a minimum, required exits, temporary stairs, ramps, exit signs, and door hardware shall be provided at all times.
- F. **Ventilation:** Comply with the ventilation plan incorporated in the Construction Documents. The plan shall indicate ductwork which must be rerouted, disconnected, or capped in order to prevent contaminants from the construction area from entering the occupied areas of the building. The plan shall also indicate how required ventilation to occupied spaces affected by construction will be maintained during the project.
- G. **Fire and Hazard Prevention:** Areas of buildings under construction that are to remain occupied shall maintain a certificate of occupancy. In addition, the following shall be strictly enforced:
1. No smoking is allowed on public school property, including construction areas.
 2. During construction daily inspections of district occupied areas shall be conducted by the Contractor's personnel to assure that construction materials, equipment or debris do not block fire exits or emergency egress windows.
 3. Proper operation of fire extinguishers, fire alarm, and smoke/fire detection systems shall be maintained throughout the project.
- H. **Noise Abatement During Construction Activities:** Contain noise from construction operations so as to not produce noise in excess of 60 dba in occupied spaces when school is in session, or schedule work for times when the building or affected building spaces are not occupied (school is not in session), or provide acoustical abatement measures to reduce noise to acceptable levels.
1. Noise level measurements (dba) shall be taken with a type 2 sound level meter in the occupied space in a location closest to the source of the noise.
- I. **Control of Chemical Fumes, Gases, and Other Contaminants during Construction and Maintenance Projects:** Control exhaust fumes from welding, gasoline engines, roofing, paving, painting, VOC fumes, or other fumes to assure they do not enter occupied portions of the building or fresh air intakes.

1. Schedule, cure or ventilate materials and activities to allow for "off-gassing" of volatile organic compounds introduced during construction before occupancy of school. Specific attention is warranted for materials and activities including, but not limited to, glues, paint, furniture, carpeting, wall coverings, and drapery.
 - a. Air out building materials or furnishings which "off-gas" chemical fumes, gases, or other contaminants in one of the following manners:
 - 1) Air out in a well-ventilated heated warehouse before they are brought to the project for installation.
 - 2) Air out installed products in accordance with the manufacturer's recommended "off-gassing" periods by allowing this period of time to elapse prior to Substantial Completion date.
 - b. If the work will generate toxic gases that cannot be contained in an isolated area, the work must be done when school classes and programs are not in session. The building must be properly ventilated and the material must be given proper time to cure or "off-gas" before re-occupancy.
 2. Manufacturer's Material Safety Data Sheets (MSDS) shall be maintained at the site for all products used in the project. MSDS must be provided to anyone who requests them.
- J. Large and small asbestos abatement projects as defined by 12NYCRR56 shall not be performed while the building is occupied. Note, It is The State Education Department's interpretation that the term "building", as referenced in this Paragraph, means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non combustible construction. The isolated portion of the building must contain exits that do not pass through the occupied portion and ventilation systems must be physically separated and sealed at the isolation barrier.
1. Exterior work such as roofing, flashing, siding, or soffit work may be performed on occupied buildings provided proper variances are in place as required, and complete isolation of ventilation systems and at windows is provided. Care must be taken to schedule work so that classes are not disrupted by noise or visual distraction.
- K. Lead-Based Paint Sampling and Analysis Notification: Surfaces containing lead will not be disturbed during construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011011

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1 - Abatement of Floor Tile and Underlying Mastic: All work required for abatement of floor tile and underlying mastic.
 - 1. Unit of Measurement: Per square foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G2

- B. Unit Price No. 2 - Abatement of Glazing Compound: All work required for abatement of glazing compound.
 - 1. Unit of Measurement: Per linear foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G2

- C. Unit Price No. 3 - Abatement of Exterior Window Caulking and Sealants: All work required for abatement of exterior window caulking and sealants.
 - 1. Unit of Measurement: Per linear foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G2

- D. Unit Price No. 4 - Re-Mobilization Outside of Base Bid Work: All work required for re-mobilization outside of Base Bid work.
 - 1. Unit of Measurement: Per occurrence, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G2

- E. Unit Price No. 5 - Asphalt Pavement: All work required for provision of full depth asphalt pavement, as indicated on the Drawings.
 - 1. Unit of Measurement: Per square foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G1

- F. Unit Price No. 6 – Concrete Sidewalk: All work required for provision of full depth concrete sidewalk, as indicated on the Drawings.
 - 1. Unit of Measurement: Per square foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G1

- G. Unit Price No. 7 – Concrete Curb: All work required for provision of concrete curb, as indicated on the Drawings.
 - 1. Unit of Measurement: Per linear foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G1

- H. Unit Price No. 8 - Removal and Replacement of Unsuitable Soil: All work required for removal and disposal of unsuitable soil and replacement with structural fill, as indicated on the Drawings.
 - 1. Unit of Measurement: Per cubic yard, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings.
 - 3. Applicable to Contract G1 and L1

- I. Unit Price No. 9 - Soil Remediation: All work required for providing soil remediation (removal and disposal) - ash, as indicated on the Drawings.
 - 1. Unit of Measurement: Per cubic yard, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G1 and L1

- J. Unit Price No. 10 - Clean Crushed Stone: All work required for providing 2" clean crushed stone, as indicated on the Drawings.
 - 1. Unit of Measurement: Per cubic yard, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G1

- K. Unit Price No. 11 - Item 4 Subbase: All work required for providing Item 4 subbase, as indicated on the Drawings.
 - 1. Unit of Measurement: Per cubic yard, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G1

- L. Unit Price No. 12 - Construction Fencing: All work required for providing construction fencing beyond what is shown, as indicated on the Drawings.
 - 1. Unit of Measurement: Per linear foot, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G1

- M. Unit Price No 13 - Repoint Brick Masonry: All work required for repointing of brick masonry.
 - 1. Unit of Measurement: Per 10 square feet, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G3

- N. Unit Price No 14 - Repoint Stone Masonry: All work required for repointing of stone masonry.
 - 1. Unit of Measurement: Per 10 square feet, measured in place.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G3

- O. Unit Price No 15 - Replace Brick Masonry: All work required for replacement of damaged brick masonry.
 - 1. Unit of Measurement: Per each brick.
 - 2. Base Bid includes amounts as indicated on Drawings
 - 3. Applicable to Contract G3

- P. Unit Price No 16 - Replace Expansion Joint Material: All work required for replacement of expansion joint material.
1. Unit of Measurement: Per linear foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G3
- Q. Unit Price No 17 - Clean Masonry: All work required for masonry cleaning.
1. Unit of Measurement: Per 10 square feet, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G3
- R. Unit Price No 18 - Replace Lintels: All work required for replacement of lintels (4" x 3" x 5/16", 5'-6" long).
1. Unit of Measurement: Per each lintel.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G3
- S. Unit Price No. 19 - Slate Window Stools Replacement: All work required for replacing slate window stools, as indicated on the Drawings.
1. Unit of Measurement: Per each stool, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- T. Unit Price No. 20 - Window Shades Replacement: All work required for replacing single roller window shades, as indicated on the Drawings.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- U. Unit Price No. 21 - Plaster and Lath Repair at Wall: All work required for repairing plaster and lath wall finish.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- V. Unit Price No. 22 - Plaster and Lath Repair at Ceiling: All work required for repairing plaster and lath ceiling finish.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1

- W. Unit Price No. 23 - CMU Wall Infill: All work required for 8" reinforced, fully grouted CMU wall infill.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1 and G3
- X. Unit Price No. 24 - Concrete Slab Repair for Openings 0" to 4" in Diameter: All work required for repairing concrete slab openings 0" to 4" in diameter.
1. Unit of Measurement: Per opening, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- Y. Unit Price No. 25 - Concrete Slab Repair for Openings 4" to 12" in Diameter: All work required for repairing concrete slab openings 4" to 12" in diameter.
1. Unit of Measurement: Per opening, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- Z. Unit Price No. 26 - Concrete Slab Repair for Openings 12" to 16" in Diameter: All work required for repairing concrete slab openings 12" to 16" in diameter.
1. Unit of Measurement: Per opening, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- AA. Unit Price No. 27 - Roof Deck Infill: All work required for roof deck infill.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- BB. Unit Price No. 28 - Temporary Type 1 Wall: All work required for temporary Type 1 wall (one hour fire rated)
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- CC. Unit Price No. 29 - Wood Floor Refinishing: All work required for refinishing existing wood flooring.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G7

- DD. Unit Price No. 30: Terrazzo Flooring Replacement: All work required for provision of terrazzo flooring removal, substrate preparation and replacement.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings.
 3. Applicable to Contract G1 and G7.
- EE. Unit Price No. 31: Terrazzo Base Replacement: All work required for terrazzo base replacement.
1. Unit of Measurement: Per linear foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1 and G7.
- FF. Unit Price No. 32: Control Joint Installation: All work required for installation of control joints.
1. Unit of Measurement: Per linear foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1 and G7
- GG. Unit Price No. 33: VCT Flooring Replacement: All work required for replacement of VCT flooring.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1 and G7.
- HH. Unit Price No. 34: ACT and Grid Replacement: All work required for replacement of ACT and grid at ceiling.
1. Unit of Measurement: Per square foot, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1
- II. Unit Price No. 35: ACT Tile Replacement: All work required for replacement of ACT tile at ceiling.
1. Unit of Measurement: Per carton, measured in place.
 2. Base Bid includes amounts as indicated on Drawings
 3. Applicable to Contract G1

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate #S1 (ADD ALTERNATE) PLAY AREAS (FIELD AND COURTS): State the amount to be added to the Base Bid for additional work as shown on Landscape & Civil drawings. Additional underground filtration chambers are required. Base Bid includes exterior work on the South side of the building as shown on Civil drawings.
- B. Alternate #S2 (ADD ALTERNATE) COURTYARD IMPROVEMENTS: State the amount to be added to the Base Bid for additional work as shown on Drawing L400. Base Bid includes work shown on L400.
- C. Alternate #A1 (ADD ALTERNATE) CENTRAL PREP FITOUT: State the amount to be added to the Base Bid for additional work as shown on the Drawings. Base Bid includes no architectural work except structure, firesafing, suitable fill & gravel subbase to underside of slab, exterior walls & corridor wall assemblies within outlined area as shown in plans – Elevator B, Fire Pump G76, Stair C, Stair P, Vest G72, all doors into kitchen are base bid (exception: door G70z). All duct risers from first floor above. Cap ducts below first floor slab. Provide exhaust & intake piping for domestic hot water heater. Provide associated roof equipment curbs and cap. Install panelboards & branch circuitry as indicated. No Food Service Work in Central Prep Commissary.
- D. Alternate #A2 (ADD ALTERNATE) CORRIDOR TERRAZZO: State the amount to be added to the Base Bid for providing terrazzo w/ terrazzo saddles as scheduled. Base Bid includes porcelain tile with stone saddles as scheduled.
- E. Alternate #A3 (ADD ALTERNATE) CAFETERIA TERRAZZO (CAFETERIA, SERVERY, AND CORRIDOR C111): State the amount to be added to the Base Bid for providing terrazzo w/ terrazzo saddles as scheduled. Base Bid includes porcelain tile with stone saddles as scheduled.
- F. Alternate #R1 (ADD ALTERNATE) PRE-ENGINEERING (TECH) AREA A RENOVATIONS: State the amount to be added to the Base Bid for additional renovation work as shown on the Drawings. Base Bid includes no architectural work within outlined area except as required to connect to classroom addition corridor. No mechanical work within outlined area except refrigerant piping to roof & cap. Provide roof duct penetrations & cap. Refeed HVAC equipment from new panel as indicated.
- G. Alternate #R2 (ADD ALTERNATE) PRE-ENGINEERING (TECH) AREA C RENOVATIONS: State the amount to be added to the Base Bid for additional renovation work as shown on the Drawings. Base Bid includes no architectural work within outlined area except as required to connect to classroom addition corridor. Patch & match existing finishes. No mechanical work within outlined area except to run refrigerant piping to roof & cap. Provide associated refrigerant piping as shown up through roof & cap. Refeed all electrical loads from new panel as indicated.

- H. Alternate #R3 (ADD ALTERNATE) WEST ROOMS RENOVATIONS (MAIN OFFICE, NURSE AND CLASSROOMS BETWEEN STAIR F AND STAIR G): State the amount to be added to the Base Bid for additional renovation work as shown on the Drawings. Base Bid includes shaft assemblies as shown on the drawings in rooms 307, 309, 207 & 209. Limited removal of existing casework as required to construct shafts. In classrooms 307, 309, 207 & 209 provide ceilings, lighting & ceiling mounted devices as shown on the drawings. All duct risers from second floor above. Cap ducts below second floor slab. Provide rescue assistance system as shown. Refeed panels as indicated. Install branch circuitry associated with 2nd & 3rd floor mechanical equipment.

- I. Alternate #R4 (ADD ALTERNATE) CORRIDOR WALL TILE AND WOOD TRIM (SHPO): State the amount to be added to the Base Bid for providing corridor wall tile & wood trim detailing as shown & scheduled on the drawings within renovation areas. Infill existing display cases as shown. Base Bid includes existing corridor glazed unit tile wainscot to remain where existing walls are to remain. Existing display cases to remain. Infill existing corridor wall at MEP removals, finish to match existing. Provide wall tile as scheduled at new corridor walls & openings.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Section 012300 "Alternates" for products selected under an alternate.
 - 2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and assemblies which deviate from the requirements of the Contract Documents and proposed by Contractor which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit requests for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use the electronic version of form included as an attachment to this Section; submit in portable document format (.pdf).
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures in .pdf format.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days after Notice of Award.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution does not require revisions to the Contract Documents.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified or superior warranty.
 - i. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; or if requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - j. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
 - k. Maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
 - l. Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
 - m. Proposed substitution does not affect dimensions and functional clearances.
 - n. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 15 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied,

Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require revisions to the Contract Documents or, if revisions are required, the Contractor acknowledges that the cost of the Architect's redesign fee will be deducted from the Contract Price.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified or superior warranty.
- j. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule; or if requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- k. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- l. Maintenance service and source of replacement parts, as applicable, is available similar to the specified product.
- m. Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- n. Proposed substitution does not affect dimensions and functional clearances.
- o. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

ATTACHMENT: SUBSTITUTION REQUEST FORM

SUBSTITUTION REQUEST FORM

To:

Project:

| <u>Section</u> | <u>Page</u> | <u>Paragraph</u> | <u>Specified Item</u> |
|----------------|-------------|------------------|-----------------------|
| | | | |

THE UNDERSIGNED REQUESTS CONSIDERATION OF THE FOLLOWING SUBSTITUTION:

Attached data shall include, in a tabular format to provide a line by line comparison - product description, specifications, drawings, photographs, performance and laboratory tests and the like with applicable portions of said data clearly identified.

FURTHER, The Proposed Substitution WILL (OR WILL NOT) Affect:

- Dimensions indicated on the drawings? _____
- Wiring, piping, ductwork, or other building services indicated on the drawings? _____
- Other trades and abutting or interconnection work? _____
- Manufacturer's guarantees and warranties? _____
- The construction schedule? _____
- Maintenance and service parts locally available? _____

(NOTE - If Substitution WILL affect any item above, explain in detail.)

In addition to the above, the undersigned agrees to pay for -

1. Any and all changes to the building design, including structural, civil or electro/mechanical systems engineering (if any), detailing; and
2. Any and all additional construction costs caused by the requested substitution.

The undersigned further states that the function, appearance and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

| SUBMITTED: | | DESIGN PROFESSIONAL'S COMMENTS | |
|---------------------------------------|--|---------------------------------------|-------------------|
| By: | | Accepted | Accepted as Noted |
| Firm: _ | | Not Accepted | Received Too Late |
| Address: | | | |
| | | | By: |
| Date: | | | Date: |
| Telephone/Fax: | | | Remarks: |
| Approved For Subcontractor Submittal: | | | |
| By: | | Contractor: | Date: |

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Architect.

1.4 ADMINISTRATIVE CHANGE ORDERS

- A. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

December 14, 2023
Construction Documents
SED No. 44-10-00-01-0-001-041

Enlarged City School District of Middletown
Twin Towers Middle School
Additions and Alterations

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect and Construction Manager within 10 days after Notice of Award of Contract or at the preconstruction meeting, whichever comes first.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Name of Construction Manager
 - d. Architect's project number.
 - e. SED number
 - f. Contractor's name and address.
 - g. Date of submittal.
 - 2. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related specification section or division.

- b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that reflect value.
 - g. Dollar value as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum. No line item should exceed 10% of the contract sum.
 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
 6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
 9. Include a line item for each of the following in the specified percentage of the Contract Sum:
 - a. Submittals and Shop Drawings: 1%
 - b. Meetings and Documentation: 2%
 - c. O&M and Closeout: 3%
 - d. Punch List: 1%
 10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when fully executed Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
 - 2. Each Application for Payment after the Initial Application for Payment shall include lien wavers for amounts paid with respect to the immediately preceding Application for Payment.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
 - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect and Construction Manager.
- C. Application for Payment Forms: Use AIA Document G732 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
 - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 - 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.

- c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Payrolls and Payroll Records:

1. In accordance with Article 8, Section 220 of the New York State Labor Law, every contractor and subcontractor must keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three years from the project's date of completion. At a minimum, payrolls must show the following information for each person employed on a public work project:
 - a. Name
 - b. Classification(s) in which the worker was employed
 - c. Hourly wage rate(s) paid
 - d. Supplements paid or provided
 - e. Daily and weekly number of hours worked in each classification.
2. Every contractor and subcontractor shall submit, within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
2. When an application shows completion of an item, submit final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit partial waivers of lien on form included at the end of this Section, executed in a manner acceptable to Owner.

H. Attachments to Applications for Payment: In addition to other requirements stated in the Contract Documents, include with each Application for Payment fully executed Partial Release and Waiver of Liens and Payroll Certification on the forms included at the end of this Section. In addition, provide a current copy of the approved Contractor's Construction Schedule, signed by all Prime Contractors, indicating agreement to the schedule.

I. Transmittal: Submit two signed and notarized original copies of each Application for Payment to the Construction Manager by a method ensuring receipt within 24 hours. Both copies shall include waivers of lien, payroll certification forms and all other required attachments.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- J. Initial Application for Payment: Administrative actions and submittals (that have been previously approved) that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule.
 4. Products list.
 5. Submittal schedule.
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
 13. Performance and payment bonds.
 14. Data needed to acquire Owner's insurance.
 15. Initial settlement survey and damage report if required
- K. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- L. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

December 14, 2023
Construction Documents
SED No. 44-10-00-01-0-001-041

Enlarged City School District of Middletown
Twin Towers Middle School
Additions and Alterations

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

Attachments: Partial Waiver of Liens Form
Payroll Certification Form

REQUISITION FOR PARTIAL PAYMENT - WAIVER OF LIENS

| | |
|---------------------------|-----------------------------|
| PROJECT | OWNER |
| | |
| | |
| GENERAL CONTRACTOR | SUBCONTRACTOR/VENDOR |
| | |
| | |
| CONTRACT | WORK COMPLETE |
| PROJECT: | CONTRACT - \$ |
| TRADE: | CHANGE ORDERS - \$ |
| CONTRACT - \$ | TOTAL COMPLETE - \$ |
| CHANGE ORDERS - \$ | RETAINAGE (___%) - \$ |
| TOTAL CONTRACT - \$ | LESS PRE. REQ. - \$ |
| | THIS REQUISITION - \$ |

Waiver of Lien

The undersigned, upon receipt of the above requisition payment hereby releases and discharges the Owner of and from any liability or obligation in any way related to or arising out of this project up to and including the date of this document.

The undersigned further covenants and agrees that it shall not in any way claim or file a mechanic's or other lien against the premises of the above designated project, or any part thereof, or against any fund applicable thereto for any of the work, labor, materials heretofore furnished by it in connection with the improvement of said premises.

The undersigned further warrants that, in order to induce the Owner to release this partial payment, they have paid all claims for labor, material, insurance, taxes, equipment, etc., employed in the prosecution of the work above, to date of this requisition.

The undersigned hereby releases and agrees to hold the Owner harmless from any and all claims in connection with the furnishing of such labor and materials, etc., for the construction of the aforementioned project.

The undersigned further guarantees that all portions of the work furnished and/or provided by them are in accordance with the contract and that the terms of the contract with respect to these guarantees will hold for the period specified in said contract.

IN WITNESS WHEREOF, we have executed under seal this release on the date below and to be legally bound hereby:

WITNESS: _____ FIRM: _____

BY: _____ DATE: _____

CORPORATE ACKNOWLEDGEMENT

State of

)SS.
)

County of

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____; that he is the officer of the said corporation executing the foregoing instrument, that he knows the seal of said corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.

Notary Public

INDIVIDUAL ACKNOWLEDGEMENT

State of

)SS.
)

County of

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____ that he is the individual who executed the foregoing instrument.

Notary Public

PARTNERSHIP ACKNOWLEDGEMENT

State of

)SS.
)

County of

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____; that he is the partner in the firm of _____ doing business under the name of _____ and that he executed the foregoing instrument on behalf of said partnership.

Notary Public

PAYROLL CERTIFICATION

_____ am an officer with the title of _____

in the firm of _____ and am authorized by that firm to sign and swear, under penalty of perjury, to the validity and accuracy of the statements below.

(1) I pay or supervise the payment of laborers, workers and mechanics employed by _____ on the _____ project. During the payroll period commencing on the _____ day of _____ 20__ and ending the _____ day of _____ 20__ all laborers, workers and mechanics employed on said project were paid the wages and supplements recorded as earned on the attached payroll records. No deductions have been made either directly or indirectly from the wages and supplements other than deductions shown on the payroll records.

(2) The payroll records submitted for the above project and attached hereto are correct and complete, and the wage rates for laborers, workers, and mechanics contained therein are not less than the applicable wage rates stated in the Contract and as designated by the State Labor Department. The number of hours shown for each employee reflects the actual hours worked by that employee. The classification shown for each employee is accurate and conforms with the work he or she performed.

(3) Supplements required in the Contract that are in addition to the basic hourly wages have been or will be paid to the appropriate plans, funds or programs.

(4) Such statement so to be filed shall be verified by the oath of the Contractor that he or she has read such statement subscribed by him or her and knows the content thereof, and that the same is true of his or her own knowledge except with respect to wages and supplements owing by subcontractors which may be certified upon information and belief.

(5) All employees of this firm have submitted completed Form I-9, Employment Eligibility Verification Form which has been reviewed and signed by authorized representatives of the firm and are kept in the employees' file. Also, any and all subcontractors have certified to us that all of their employees have submitted completed Form I-9 Employment Eligibility Verification Form, which have been reviewed and signed by authorized representatives of the firm and are kept in the employees' file.

By: _____

Firm Name _____

Title: _____

Firm _____

Date: _____

Address _____

Prime

Subcontractor

| |
|--------|
| NOTARY |
|--------|

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Requests for Information (RFIs).
 - 3. Project Information Management (PIM) software.
 - 4. Project meetings.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.2 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.
- B. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
 - 4. Submit list of subcontractors within 10 days after Notice of Award of Contract or at the preconstruction meeting, whichever comes first.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list

addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.4 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Coordination, Multiple Prime Contracts: Each Contractor shall coordinate its construction operations with those of other Contractors and entities to ensure efficient and orderly installation of each part of the Work. Each Contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation
- C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.

- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.
- F. Use of the Site: The Construction Manager will administer allocation of available space equitably among separate Prime Contractors and other entities needing access and space, so as to produce the best overall efficiency in performance of the total work of the project. Each Contractor shall schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. Requests for Information (RFI's) are requests for clarifications or questions regarding the contract drawings and specifications, not contract terms, scheduling items, or general correspondence, nor, are they to be as a means to describe or request approval of alternate construction means, methods or concepts or substitution for materials, systems means and methods.
 - 1. Carefully study and compare the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, and prior Project correspondence and documentation prior to submitting a Request for Information.
- B. Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- C. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date.
 - 4. Name of Contractor.
 - 5. Name of Architect and Construction Manager
 - 6. RFI number, numbered sequentially.
 - 7. RFI subject.
 - 8. Specification Section number and title and related paragraphs, as appropriate.
 - 9. Drawing number and detail references, as appropriate.
 - 10. Field dimensions and conditions, as appropriate.

11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- D. RFI Forms: Architect will furnish electronic version of form bound in Project Manual.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. Based upon the amount of RFI's received and their level of content, the Architect will establish the level of importance of each RFI and allow sufficient time in the Architect's professional judgment to permit adequate review.
 2. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 3. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 4. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit a change proposal according to the General Conditions of the Contract
 - a. If the Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 15 calendar days of receipt of the RFI response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly; include the following: .
1. Project name.
 2. Name and address of Contractor.

3. Name and address of Architect and Construction Manager.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

- G. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1.6 PROJECT INFORMATION MANAGEMENT (PIM) SITE

- A. Use Architect's Project Information Management (PIM) software transmission server software for purposes of hosting and managing project communication and documentation until Final Completion. Project Information Management (PIM) software site includes the following functions:

1. Project directory.
2. Project correspondence.
3. Meeting minutes.
4. Contract modifications forms and logs.
5. RFI forms and logs.
6. Task and issue management.
7. Photo documentation.
8. Schedule and calendar management.
9. Submittals forms and logs.
10. Payment application forms.
11. Drawing and specification document hosting, viewing, and updating.
12. Online document collaboration.
13. Reminder and tracking functions.
14. Archiving functions.

- B. Architect will provide Project Information Management (PIM) software user licenses for use of the Owner, Contractor, Construction Manager, and Architect's consultants.

- C. The Architect utilizes Submittal Exchange Project Information Management (PIM) software to track submittals and RFI's.

- D. Post electronic submittals as PDF electronic files directly to Architect's submittal Exchange server, specifically established for Project.

1.7 PROJECT MEETINGS

- A. General: The Construction Manager will schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Construction Manager will inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Construction Manager will notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Construction Manager will prepare the meeting agenda and distribute the agenda to all invited attendees.
 3. Minutes: Construction Manager will record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned, including Owner, and Architect, within three days of the meeting.
- B. Preconstruction Conference: Construction Manager will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 14 days after Notice to Proceed.
- a. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - b. Agenda: Discuss items of significance that could affect progress, including the following:
 - 1) Tentative construction schedule.
 - 2) Phasing.
 - 3) Critical work sequencing.
 - 4) Designation of responsible personnel.
 - 5) Procedures for processing field decisions and Change Orders.
 - 6) Procedures for processing Applications for Payment.
 - 7) Distribution of the Contract Documents.
 - 8) Submittal procedures.
 - 9) Preparation of Record Documents Procedures for RFIs.
 - 10) Use of the premises and existing building.
 - 11) Work restrictions.
 - 12) Working hours.
 - 13) Owner's occupancy requirements.
 - 14) Procedures for moisture and mold control.
 - 15) Procedures for disruptions and shutdowns.
 - 16) Construction waste management and recycling.
 - 17) Parking availability.
 - 18) Office, work, and storage areas.
 - 19) Equipment deliveries and priorities.
 - 20) First aid.
 - 21) Progress cleaning.
 - 22) Responsibility for temporary facilities and controls.
 - 23) Security
 - 24) Waste management protocols.
 - c. Contractor shall submit the following items at this meeting:

- 1) Preliminary Contractor's Construction Schedule (if schedule has not yet been submitted).
 - 2) List of Subcontractors.
 - 3) Schedule of Values.
 - 4) Submittal Schedule.
 - 5) Products List (Proposed products and manufacturers including any substitution products proposed).
2. Minutes: Construction Manager will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Construction Manager of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Construction Manager will schedule and conduct a project closeout conference, at a time convenient to Contractor, Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Construction Manager will conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Coordination of separate contracts.
 - k. Owner's partial occupancy requirements.
 - l. Installation of Owner's furniture, fixtures, and equipment.
 - m. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Construction Manager will conduct progress meetings at bi-weekly or twice monthly intervals.
1. Coordinate preparation of payment requests with dates of meetings.
 2. Attendees: In addition to representatives of Owner, Contractor and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

- a. A representative of Contractor shall be present at every progress meeting, regardless of whether or not that Contractor is performing work at the site at the time.
 - b. Any decision reached at a job meeting shall be binding on a Contractor, whether or not he or his representative is present at such job meeting.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
- a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period (2-week look ahead schedule)
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Construction Change Directives.
 - 17) Status of Change Orders.
 - 18) Pending claims and disputes.
 - 19) Documentation of information for payment requests.
 - 20) Waste management.
4. Minutes: Construction Manager will record and distribute the meeting minutes to each party present, to others affected by decisions or actions resulting from each meeting and to parties requiring information.

- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting
- F. Coordination Meetings: Construction Manager will conduct Project coordination meetings at bi-weekly intervals or as required by the Construction Manager. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
1. Attendees: In addition to representatives of Owner, Construction Manager and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work
 2. Agenda: Coordinate work for the ensuing two weeks. Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. At the close of the meeting, each prime Contractor shall, in an agreed format, provide a summarized two week work plan to the Construction Manager.
 3. Any decision reached at a job meeting shall be binding on a Contractor, whether or not he or his representative is present at such job meeting
 4. Reporting: Construction Manager will record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

ATTACHMENT:

REQUEST FOR INFORMATION FORM

REQUEST FOR INFORMATION (RFI FORMAT)

| | | |
|--|---------------------------------------|---|
| Contractor: | | Architect: KG&D Architects, PC |
| Address: | | Address: 285 Main Street, Mt. Kisco, NY 10549 |
| Telephone: | | Telephone: 914-666-5900 |
| Fax: | | Fax: 914-666-0051 |
| Email: | | Email: rcarper@kgdarchitects.com |
| Project Name: | | Project Location: |
| RFI Number: | Date of Request: | Requested Date of Response (5 business days minimum): |
| Description, complete with backup data as necessary attached hereto: | | |
| Sketches of Conditions | Specification Paragraph Reference(s): | Drawing Reference(s): |
| Proposed Solution: | | |
| Cost Impact: | | Time Impact: |
| Trade/Specialty Contractors Affected: | | |
| Trade/Specialty Contractors Coordinated With: | | |
| Submitted By: | | |
| Architect's Response: | | |
| By: | | Date of Response: |

SECTION 013115 – COORDINATION DRAWINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes preparation of coordination drawings for architectural, structural, mechanical, plumbing, fire protection, fire alarm, lighting, information technology, security, and electrical Work.
- B. Related Sections include the following:
 - 1. Division 21, 22, 23, 26, 27 and 28 for additional requirements.

1.2 DEFINITION AND INTENT

- A. The Contract Drawings are diagrammatic only and are not intended to show the alignment, exact physical locations, or configurations of such Work. Performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. Where possible, the Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing coordination drawings.
- B. Coordination drawings are drawings prepared by Contractor that superimpose Work of multiple trades involved in the construction process. Coordination drawings indicate systems and components to be installed by the Contractor to maximize clear height and free area in ceiling cavities, allow for proper and adequate equipment service clearances, minimize space required by shafts and chases and provide the most efficient functioning and use of materials possible while complying with the final performance and finished appearance required by the Contract Documents.
- C. Coordination drawings are intended to show the relationship and integration of different construction elements that require coordination during fabrication or installation to fit in the space provided, to function as intended, and to present the intended final finished appearance.
- D. Coordination Drawings are not a replacement for shop drawings specified in the technical specifications or the Record Drawings required in Division 01.
- E. The Contractor shall manage the process so that each trade/ sub contractor provides all required information in a timely manner. Coordination Drawings may be completed on a phased basis so as not to delay the overall project schedule. The CPM Schedule specified elsewhere in Division 01 Section “Construction Progress Documentation” shall include the submission of Coordination Drawings. The same shall demonstrate how the Contractor intends to integrate the submission of Coordination Drawings to suit the overall project schedule. The Contractor shall pay all costs for reproducing copies of coordination drawings for use in the field.

- F. Contractor shall maintain equipment access and pathways as indicated on the Drawings. Floor space in MEP equipment rooms shall be maintained as indicated on the Architectural Drawings. Contractor shall clearly indicate access and floor space to be maintained in coordinated shop drawings submitted to the Owner and Architect as per the Specifications.
- G. Fully coordinated Ceiling Coordination Drawings must be received and approved by the Architect before any associated ceiling shop drawings of any trade will be reviewed.
- H. Sprinkler heads depicted on architectural drawings are intended to indicate design intent of layout only.

1.3 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES

- A. Refer to Division 01 Section "Submittal Procedures" for availability of and use of Architect's CAD Background Drawings.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare and submit as informational submittal within 15 days of Notice to Proceed.
- B. Submit coordination drawings in the same manner as shop drawings; refer to Section 013300 Submittal Procedures.

1.5 PROJECT CONDITIONS

- A. Maintain marked up set of coordination drawings at Project site available for reference by Owner, Construction Manager and Architect.
- B. Maintain original CAD drawings or base drawings used to produce coordination drawings updated with revisions to reflect actual construction. Make drawing revisions at time of change to construction; Transfer information to CAD drawings no later than every 7 days.
- C. Failure to submit coordination drawings will result in no changes to contract sum for necessary corrections to uncoordinated work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION OF COORDINATION DRAWINGS, GENERAL

- A. Prepare coordination drawings for Project using CAD drawings or similar coordination documentation overlay drawings indicating coordination of the project.

- B. CAD Drawings: Produce coordination drawings and overlays using Architect's electronic base drawings furnished by the Architect.
 - 1. Each Prime Contractor shall be assigned a layer to create the detailing work of each section or division of the Specifications requiring coordination. Each Prime Contractor shall ensure that the layer assigned to them cannot be modified by another Contractor or trade, and that the final product clearly differentiates which Contractor or trade is responsible for the respective information shown. The latter may occur through the use of colors or other distinct graphic methods.
- C. The Construction Manager will assume overall coordination responsibilities for the preparation of the coordination drawings, and shall work in collaboration with each Prime Contractor to coordinate work by more than one contract.
 - 1. The Construction Manager will coordinate the addition of trade-specific information to coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components.

3.2 INFORMATION REQUIRED IN COORDINATION DRAWINGS

A. Architectural Work Information Required in Coordination Drawings:

- 1. Items which are recessed into ceilings and ceiling plenums, or surface mounted to ceilings.
- 2. Anchorages, fastenings, and supporting for items recessed in, attached to, or suspended from ceilings or structure above ceilings.
- 3. Firewalls, Fire Barrier, Fire partitions and smoke partitions on coordination drawings for coordination of life safety requirements.

B. Plumbing Work Information Required in Coordination Drawings:

- 1. Sizes and bottom elevations of piping with insulation thickness included.
- 2. Dimensions of major components, such valves, access doors and cleanouts.
- 3. Fire-rated enclosures around piping
- 4. Support of all roof mounted plumbing piping and equipment.
- 5. Required space to install, service and maintain all plumbing mechanical items and systems.

C. HVAC Work Information Required in Coordination Drawings:

- 1. Sizes and bottom elevations of ductwork, piping with insulation thickness included.
- 2. Fire dampers.
- 3. Acoustical lining in ductwork.
- 4. Identification of ductwork pressure class.
- 5. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
- 6. Fire-rated enclosures around ductwork.
- 7. Support of all roof mounted HVAC piping and equipment.

8. Required space to install, service and maintain all HVAC items and systems.

D. Electrical Work Information Required in Coordination Drawings:

1. Electrical Work, including telecommunications, data, security, lighting and fire alarm systems.
2. Runs of vertical and horizontal conduit 1-1/4-inch diameter and larger.
3. Light fixture locations.
4. Emergency egress light locations.
5. Smoke detector, and other fire alarm device locations.
6. Panelboard, switchboard, transformer, cable tray, and motor control center, and exit signs.
7. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Bottom elevation of all conduit runs 1-1/4 -inch diameter and larger and of all cable trays.
9. Support of all roof mounted conduit and photovoltaic equipment, cameras, and security system devices.
10. Required space to install, service and maintain all electrical items and systems.
11. Lightning protection.

E. Fire Protection System Information Required in Coordination Drawings:

1. Locations of standpipes, valves, mains piping, branch lines, pipe drops, and sprinkler heads.
2. Bottom elevation of main and branch lines.

F. Structural Work Information Required in Coordination Drawings:

1. Ceiling system.
2. Openings and sleeve locations required in slabs, walls, beams and other structural elements, including required openings not indicated on Contract Documents.
3. Slab edge locations and locations of sleeves dimensioned from building lines and floor lines.

G. Ceiling Systems and Plenum Space in Coordination Drawings:

1. For mechanical, plumbing, fire protection, fire alarm, electrical, controls, and telecommunications Work penetrating acoustical ceilings, show locations of each item (including sprinkler heads, diffusers, grilles, access doors, light fixtures, smoke detectors, exit signs, speakers, and other visible ceiling mounted devices) relative to acoustical ceiling grid or to wall in gypsum board ceilings.
2. Locate components within ceiling plenums to maximize clear area for future installations of lights and equipment.
3. Clearly indicate areas of conflict between light fixtures, diffusers and grilles and plenum boxes and other components on coordination drawings.
4. Draw elements to dimensions appropriate for products to be installed. Use of symbols is not acceptable.

3.3 CONFLICTS IN COORDINATION DRAWINGS

- A. The Construction Manager will review the Coordination Drawings to identify areas of conflicts and obstacles, and together with the separate Prime Contractors, work to resolve the trade conflicts as well as clashes within each trade, until all conflicts are fully coordinated.
 - 1. Each Prime Contractors shall revise their respective portions of the Coordination Drawings to eliminate the collisions and interferences identified.
 - 2. Each Prime Contractor shall determine that all work can be installed without interference.
 - 3. Each Prime Contractor shall approve the revised Coordination Drawings in writing indicating approval of installation coordination and clearances.

- B. In the case of unresolved interference, the Construction Manager will notify the Architect. The Architect will then suggest to the Construction Manager as to how to revise the Coordination Drawings to eliminate interference. The Prime Contractors shall then revise their respective Drawings to eliminate the interference.
 - 1. Each Prime Contractor shall approve the revised Coordination Drawings in writing indicating approval of installation coordination and clearances.

3.4 PREPARATION OF COORDINATION DRAWINGS

- A. Organize coordination drawing submittals as follows:
 - 1. Floor Plans: Provide floor plans and reflected ceiling plans for all floors. Show architectural, structural, mechanical, plumbing, fire protection, fire alarm, electrical, and telecommunications elements on floor plans and reflected ceiling plans.
 - 2. Equipment Rooms and Spaces: Provide large scale drawings for equipment rooms and spaces showing plans and elevations of mechanical, plumbing, fire protection, electrical, and telecommunications equipment.
 - 3. Structural Penetrations: Provide coordination drawings for each floor indicating penetrations and openings required for all trades.
 - 4. In public and occupied areas without scheduled finish ceilings, appearance is a major coordination factor. Reposition proposed locations of work after Coordination Drawing review by the Architect. Provide adjustments to the exact size, location and offsets of ducts, pipes, and conduit to achieve reasonable appearance objectives. Provide these adjustments as part of the Contract or notify the Architect immediately as to why the adjustment cannot be made.

- B. Prepare coordination drawings to a scale of 1/4" = 1'- 0" or larger (1/2"= 1'-0" for mechanical room plans); detailing major elements, components, and systems of mechanical equipment and materials in relationship with other systems, installations, and building components. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are of importance to the efficient flow of the Work, including (but not necessarily limited to) the following:
 - 1. Detail complex areas at larger scale than typical floor plans.

2. Use a common architectural layout as background.
3. Indicate ductwork, pipes with 6-inch diameter and greater, and conduits with 3-inch diameter and greater by double lines. Use single lines for smaller mechanical piping and all electrical conduits. Draw piping, ductwork, lighting fixtures, and cable trays in scale.
4. Circle and clearly note deviations from Contract Documents with reason for deviation stated.
5. Provide name of representative of each subcontractor whose Work is indicated on coordination drawings, verifying their review and approval that their Work has been coordinated with each other trade and with architectural and structural Work.

END OF SECTION 013115

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Startup construction schedule.
 2. Contractor's construction schedule.
 3. Construction Manager's construction schedule.
 4. Project construction schedule
 5. Construction schedule updating reports.
 6. Daily construction reports.
 7. Site condition reports.
 8. Special reports.
- B. Related Requirements:
1. Section 013300 "Submittal Procedures" for submitting schedules and reports.
 2. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 2. Predecessor Activity: An activity that precedes another activity in the network.
 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.

1. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 2. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Milestone: A key or critical point in time for reference or measurement.
- G. Contractor's Construction Schedule: A construction schedule for the Work of a Prime Contractor, prepared by that Prime Contractor.
- H. Construction Manager's Construction Schedule: A construction schedule for the Project, prepared by the Construction Manager with no input from Prime Contractors, indicating milestones, Phasing, and other general requirements for the prosecution of the Work of all Contracts.
- I. Project Construction Schedule: A coordinated construction schedule for the Project, prepared and maintained by the Construction Manager, indicating an overall construction schedule for the entire Project with input from all Prime Contractors, coordinated by the Construction Manager, and accepted by all Prime Contractors.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
1. PDF electronic file.
- B. Startup construction schedule.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals
 2. Construction Manager will review schedule for compliance with Construction Manager's Construction Schedule
- E. Construction Schedule Updating Reports: Submit with Applications for Payment.
- F. Daily Construction Reports: Submit at monthly intervals.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Special Reports: Submit at time of unusual event.
- I. Qualification Data: For scheduling personnel.

1.4 QUALITY ASSURANCE

- A. Scheduling Personnel Qualifications: A consultant or a person in the Contractor's employ who is experienced in CPM project scheduling and reporting, with capability of reviewing Construction Manager's Construction Schedule and Project Construction Schedule, correlating them with Contractor's Construction Schedule, and providing feedback reports within time schedule specified.
- B. Prescheduling Conference: After receipt of preliminary Contractor's Construction Schedule from all Prime Contractors, Construction Manager will conduct a schedule review and coordination conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Construction Manager will review methods and procedures related to the Project Construction Schedule including, but not limited to, the following:
 - 1. Review software limitations and content and format for reports.
 - 2. Verify availability of qualified personnel needed to develop and update schedule.
 - 3. Review submittal requirements and procedures.
 - 4. Discuss constraints, including phasing, area separations, interim milestones and partial Owner occupancy.
 - 5. Review delivery dates for Owner-furnished products.
 - 6. Review schedule for work of Owner's separate contracts
 - 7. Review time required for review of submittals and resubmittals.
 - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 9. Review time required for completion and startup procedures.
 - 10. Review and finalize list of construction activities to be included in schedule.
 - 11. Review procedures for updating schedule.
 - 12. Discuss constraints, including phasing work

1.5 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. The form of the Contractor's Construction Schedule will be a CPM schedule.
- B. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

- C. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.
 - 1. In-House Option: Owner may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 - 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.

- D. Time Frame: Extend schedule from date established for the Notice of Award to date of final completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

- E. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 - 4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 - 6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

- F. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Phasing: Arrange list of activities on schedule by phase.
 - 2. Work under More Than One Contract: Include a separate activity for each contract.
 - 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 - 4. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 - 5. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.

- b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use-of-premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
6. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
- a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Startup and placement into final use and operation.
- G. Milestones: Include milestones indicated in the Contract Documents and in the Construction Manager's Construction Schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, and the interim milestones indicated on the Schedule.
- H. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
- 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and Contract Time.
- I. Contractor's Construction Schedule Updating: At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
- 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.

3. As the Work progresses, indicate final completion percentage for each activity.
 4. In no event shall any progress report constitute an adjustment in the Contract Time, any Milestone Date or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.
- J. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- K. Distribution: Distribute copies of approved schedule to Architect, Construction Manager, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.
- 1.7 PROJECT CONSTRUCTION SCHEDULE
- A. Form: The form of the Project Construction Schedule will be a CPM schedule.
- B. Responsibilities: The Construction Manager will provide services as the overall project scheduling coordinator for Project planning, scheduling and control. The Construction Manager will prepare and maintain the overall Project Construction Schedule with input from the Prime Contractors.
- C. Preparation: The procedure for the preparation of the Project Construction Schedule shall be as follows:
1. Within 10 days after Notice of Award of Contract or at the preconstruction meeting, whichever comes first, each Prime Contractor shall prepare and submit to the Construction Manager, for review and coordination, a detailed start up Contractor's Construction Schedule for his Work showing the details of his compliance with the Construction Manager's Construction Schedule. Contractor's Construction Schedule shall indicate that the Phases of the Project be Substantially Complete by the dates indicated in the Construction Manager's Construction Schedule.
 2. The Construction Manager will review the Contractor's Construction Schedule and shall advise the Contractor if its schedule is acceptable for incorporation into the Project Construction Schedule, or if revisions will have to be made.
 3. Each Prime Contractor shall cooperate with each other and with the Construction Manager in coordinating each Contractor's Construction Schedule to produce the Project Construction Schedule.

4. When the coordinated Project Construction Schedule is produced by the Construction Manager, each Prime Contractor shall signify acceptance of Schedule by signing the schedule.
- D. Updates/Revisions: The Construction Manager will update the Project Construction Schedule at bi-weekly intervals to reflect actual construction progress and activities, based on feedback reports of Prime Contractors. Each Prime Contractor shall issue revised scheduling report (update) to the Construction Manager one week before each regularly scheduled progress meeting.
1. Construction Manager will revise Project Construction Schedule immediately after each meeting or other activity where revisions have been recognized or made. Construction Manager will issue updated schedule concurrently with the report of each such meeting.
 2. As the Work progresses, Project Construction Schedule will indicate Actual Completion percentage for each activity.
 3. The Contractor shall monitor the progress of its work for conformance with the requirements of the construction schedule and shall promptly advise the Construction Manager of any delays or potential delays.
 4. If a schedule update is not submitted by the Contractor in a timely fashion, the Contractor shall accept the Project Construction Schedule prepared by the Construction Manager as the construction schedule to be used in carrying out its work and the Contractor waives its rights to claim damage or delay associated with the time requirements set forth in the updated Project Construction Schedule.
 5. The Owner reserves the right to adjust the Project Construction Schedule from time to time during construction to mitigate unavoidable problems and ensure that the Project Completion Date is achieved. Contractor shall comply with the adjusted Project Construction Schedule without additional cost.
 6. When an updated Project Construction Schedule is produced by the Construction Manager, each Prime Contractor shall signify acceptance of Schedule by signing the schedule.
- E. Distribution: Construction Manager will distribute copies of approved schedule to Prime Contractors, Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Construction Manager with a need-to-know schedule responsibility.
1. Construction Manager will post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, Construction Manager will distribute updated schedules to the same parties and post in the same locations. Parties will be deleted from distribution list when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.
- F. Prime Contractors' Acceptance of Project Construction Schedule: The initial and each updated Project Construction Schedule shall be signed by each Prime Contractor, indicating acceptance of such schedule.

1. A copy of the initial Project Construction Schedule signed and accepted by Prime Contractor shall be attached to the initial Application for Payment. No payment will be processed by the Owner until such document has been received.
2. A copy of the most current Project Construction Schedule signed and accepted by Prime Contractor shall be attached to each succeeding Application for Payment. No payment will be processed by the Owner until such document has been received.

1.8 STARTUP CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit startup, horizontal, Gantt-chart-type construction schedule within 10 days after Notice of Award of Contract or at the preconstruction meeting, whichever comes first.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

1.9 CPM SCHEDULE REQUIREMENTS

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within 14 days of date established for the Notice of Award. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.
 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice of Award.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to coordinate with the Contract Time.

- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Preparation and processing of coordination drawings.
 - c. Mobilization and demobilization.
 - d. Purchase of materials.
 - e. Delivery.
 - f. Fabrication.
 - g. Utility interruptions.
 - h. Installation.
 - i. Work by Owner that may affect or be affected by Contractor's activities.
 - j. Testing and commissioning.
 - k. Punch list and final completion.
 - l. Activities occurring following final completion.
 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Main events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.

8. Total float or slack time.
 9. Average size of workforce.
 10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in the Contract Time.
- H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.
1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
 2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
 3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
 4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.
 - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
 - b. Submit value summary printouts one week before each regularly scheduled progress meeting.
- 1.10 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Accidents.
 8. Meetings and significant decisions.
 9. Unusual events (see special reports).
 10. Stoppages, delays, shortages, and losses.
 11. Meter readings and similar recordings.
 12. Emergency procedures.

13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions.

1.11 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

END OF SECTION 013200

SECTION 013233 – PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following work by the Contractor:
1. Preconstruction photographs.
 2. Preconstruction videos.

1.2 SUBMITTALS

- A. Key Plan: Submit key plan of Project site and buildings with notation of vantage points marked for location and direction of each photograph and video. Indicate elevation or story of construction. Include same label information as corresponding set of photographs or video.
- B. Photographs: Submit two prints of each photographic view
1. Format: 8-by-10-inch smooth-surface matte prints on single-weight commercial-grade photographic paper, enclosed back to back in clear plastic sleeves that are punched for standard 3-ring binder.
 2. Identification: On back of each print, provide an applied label or rubber-stamped impression with the following information:
 - a. Name of project.
 - b. Name of Architect and Construction Manager
 - c. Name of Contractor.
 - d. Date photograph was taken if not date stamped by camera.
 - e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - f. Unique sequential identifier.
 3. Digital Images: Submit a complete set of digital image electronic files with each submittal of prints as a Project Record Document on CD-ROM. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as the sensor, uncropped.
- C. DVD's: Submit 2 copies of each DVD with protective sleeve or case within seven days of recording.
1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name of Architect and Construction Manager.

- c. Name of Contractor.
- d. Date video was recorded.
- e. Description of vantage point, indicating location, direction (by encompass point), and elevation or story of construction.
- f. Weather conditions at time of recording.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Photographic Film: Medium format, 2-1/4 by 2-1/4 inches
- B. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1600 by 1200 pixels.
- C. Digital Video Recordings: Provide high-resolution, digital video disc in format acceptable to the Owner.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
 - 1. Maintain key plan with each set of photographs that identifies each photographic location.
- B. Film Images:
 - 1. Date Stamp: Unless otherwise indicated, date and time stamp each photograph as it is being taken so stamp is integral to photograph.
 - 2. Field Office Prints: Retain one set of prints of photographs in the field office at Project site, available at all times for reference.
- C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in filename for each image.
 - 2. Field Office Images: Maintain one set of images on CD-ROM in the field office at Project site, available at all times for reference.
- D. Preconstruction Photographs: Before commencement of demolition, or starting construction, take color and digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points.

1. Take 20 photographs of each existing building to accurately record physical conditions at start of demolition or construction.
2. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

3.2 CONSTRUCTION DIGITAL VIDEO

- A. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of construction. Display continuous running time and date. At start of each video, record weather conditions from local newspaper or television and the actual temperature reading at Project site.
- B. Narration: Describe scenes on video by audio narration by microphone while video is recorded. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.
 1. Confirm date and time at beginning and end of recording.
 2. Begin each video with name of Project, Contractor's name, videographer's name, and Project location.
- C. Preconstruction Video: Before starting demolition or construction record video of Project site and surrounding properties from different vantage points.
 1. Show existing conditions adjacent to Project site before starting the Work.
 2. Show existing buildings either on or adjoining Project site to accurately record physical conditions at the start of demolition, or construction.
 3. Show protection efforts by Contractor.

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 5. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

2. All submittals shall be submitted to Architect and Construction Manager within 25 days of contract signing.
 3. Allow sufficient processing time; as a minimum, as indicated in this Section.
 4. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include all submittals for the project in the initial submittal schedule.
 5. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 6. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.
- B. Architect will review Submittal Schedule for concentrations, overloading and similar conflicts which will impact the Architect's ability to meet the schedule and propose revisions to the duration of processing time to the Contractor.
- C. No payment will be made to Contractor until complete Schedule of Submittals has been received and accepted by Owner and Architect.
- D. The Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals if the Contractor fails to submit a Submittal Schedule.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files:
1. Any request for digital data files shall be solely and exclusively for use related to this Project.
 2. CAD Background Drawings: Electronic copies of CAD Background Drawings of the Contract Documents in editable file format will be available from the Architect as a convenience to the Contractor for use in preparing shop drawings for this Project. Refer to "Contractor Request for Electronic Drawing Files" attached to the end of this Section for procedures for ordering and transfer of files and for Architect's limitations of liability for transfer.
 - a. CAD Background Drawings files requested will be delivered in editable file format indicated, and will not be further altered by the Architect prior to delivering them to any said party.
 3. Each contractor requesting electronic data file shall submit a request for Electronic Drawing Files, prior to delivery of said files. No contractor, shall transfer these

- Electronic Files received from the Architect, or any portion thereof to any third party (“Transferee”) without written permission of the Architect.
4. The Architect will transfer files to the requesting entity via the Project Information Management (PIM) software.
 5. All files are a schematic representation of elements within the project. All Contractors are responsible for field verification and coordination with other trades.
 6. Use of these files does not relieve the Contractor from producing Coordination Drawings and Shop Drawings required by the Contract.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Submit product data, shop drawings and samples relating to a complete assembly at one time. Partial submittals will be returned without action.
 5. Interrelated color selections will not be made until all pertinent samples are received by the Architect.
 6. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow sufficient time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect’s receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow a minimum of 15 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Resubmittal Review: Allow a minimum of 15 working days for review of each resubmittal.
 3. Sequential Review: Where sequential review of submittals by Architect’s consultants, Owner, or other parties is indicated, allow a minimum of 21 calendar days for initial review of each submittal. Any sequential reviews shall be identified on the Submittal Schedule by the Architect and agreed upon by the Project team.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Place fully executed “Submittal Cover Sheet” attached to the end of this Section as first page of every paper submittal. Complete all required information before

- submitting to Architect. Submittals received without Submittal Cover Sheet or with incomplete information on cover sheet will be returned for resubmission
3. Include Contractor's stamp indicating information complies with Contract Document requirements.
 4. Submittals indicating less than complete review by Contractor will be returned for Contractor's compliance without Architect's review.
 5. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 6. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form acceptable to Architect and Owner. Architect will return without review submittals received from sources other than Contractor.
 - a. Transmit all submittals to Architect with a copy to the Construction Manager unless otherwise indicated.
 - b. When submittal requires review of data by Structural Engineer or Mechanical or Electrical Engineers, submit a copy directly to such engineer with a copy to the Architect and the Construction Manager.
- E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Place fully executed "Submittal Cover Sheet" attached to the end of this Section as first page of every electronic submittal. Complete all required information before submitting to Architect. Submittals received without Submittal Cover Sheet or with incomplete information on cover sheet will be returned for resubmission.
 3. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of firm or entity that prepared submittal.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. Category and type of submittal.
 - h. Submittal purpose and description.
 - i. Specification Section number and title.
 - j. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - k. Drawing number and detail references, as appropriate.

- l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Indication of full or partial submittal.
 - o. Submittal and transmittal distribution record.
 - p. Other necessary identification.
 - q. Remarks.
- F. Options: Identify options requiring selection by Architect.
- G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- H. Resubmittals: Make resubmittals in same form and manner as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
 - 4. Architect's Re-review of Submittals: When resubmittals are required due to Contractor's failure to properly coordinate submittals, including coordination with other Prime Contractors, Contractor shall reimburse the Owner for fees paid to the Architect for re-review of submittals through a credit change order, in accordance with the Architect's current fee schedule.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.
 - 1. The Contractor shall perform no portion of its work requiring submittal and review of shop drawings, product data, samples or similar submittals until the respective submittal has been approved by the Architect. Such work shall be in accordance with approved submittals.
 - 2. The Contractor shall supply shop drawings to other Contractors engaged by the Owner to perform work in connection with the project to ensure proper coordination of its work with theirs.
 - 3. Do not proceed with installation until an applicable copy of the submittal is in the installer's possession.
 - 4. Do not permit use of unmarked copies of submittals in connection with construction.
- K. Project Information Management System: The submittal process will be implemented through the use of a digital processing and tracking software similar to "Submittal Exchange". Use this Project Information Management (PIM) software to transmit all submittals. Contractors must participate in and become capable in using this system.

1.5 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections. All submittals shall be submitted to Architect and Construction Manager within 25 days of contract signing.
1. Post electronic submittals as PDF electronic files directly to Architect's project information transmission web based software specifically established for Project.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Action Submittals: Submit electronic file except where paper copies of submittals are specifically required.
 3. Informational Submittals: Submit electronic file except where paper copies of submittals are specifically required.
 4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
 3. Mark each copy of each submittal to show which products and options are applicable. Strike extraneous information prior to submittal
 4. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 5. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 6. Submit Product Data before or concurrent with Samples.
 7. Submit Product Data in the following format:
 - a. PDF electronic file, unless requested by Architect.

- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted. Standard information prepared without specific reference to the Project is not considered a Shop Drawing. Verify field measurements prior to preparation of shop drawings.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file, unless requested by Architect.
 - b. In addition to submission of electronic files, submit 3 paper copies of fire alarm shop drawings and sprinkler shop drawings with Contractor approval stamps applied, for submittal to the AHJ Code Review for review and comment, as required.
 - c.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.

- b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 013115 "Coordination Drawings."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Section 01 7823 "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research/Evaluation Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.

- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

1.6 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 2 - EXECUTION

2.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect .
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 7700 "Closeout Procedures."

- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

2.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Architect's Actions:
 - 1. Contractor may proceed with fabrication on submittals marked "No Exception Taken" or "Make Corrections Noted" provided that the Contractor adheres to the corrections noted.
 - 2. Contractor may not proceed with fabrication on shop drawings noted "Revise and Resubmit" or "Rejected" until "No Exception Taken" or "Make Corrections Noted" stamp is received on resubmitted drawing.
 - 3. Contractor may not proceed with fabrication on the specific shop drawings noted "Partial Resubmit" until "No Exception Taken" or "Make Corrections Noted" stamp is received on resubmitted drawing.
 - 4. Do not permit submittals marked "Revise and Resubmit," or "Rejected," to be used at Project site, or elsewhere where Work is in progress.
 - 5. Other Action: Where submittal is primarily for information or record purposes, special processing or other activity, submittal will be returned, marked "No Action Taken."
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- F. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 013300

ATTACHMENTS:

Submittal Cover Sheet
Contractor's Request for Electronic Drawing

SUBMITTAL COVER SHEET

Contractor: _____

Address: _____ Telephone: () _____

| |
|------------------------|
| Owner: _____ |
| Name of Project: _____ |

TYPE OF SUBMITTAL:

- | | | |
|---|--------------------------------------|--|
| <input type="checkbox"/> Shop Drawings | <input type="checkbox"/> Schedule | <input type="checkbox"/> Physical Sample |
| <input type="checkbox"/> Technical Data | <input type="checkbox"/> Certificate | <input type="checkbox"/> Color Sample |
| <input type="checkbox"/> Test Report | <input type="checkbox"/> Warranty | <input type="checkbox"/> _____ |

Submission #: (circle one) 1st 2nd 3rd 4th

| |
|---|
| <p>Description:</p> <p>Product Identification: _____</p> <p>Manufacturer: _____</p> <p>Subcontractor/Supplier: _____</p> <p style="text-align: center;">DOCUMENT REFERENCES: (Must be fully filled out)</p> <p>Spec Section No.: _____ Drawing No(s): _____</p> <p>Paragraph: _____ Rm. Or Det. No(s): _____</p> |
|---|

Contractor Remarks:

Contractor Submittal Review Stamp

THE ATTACHED MATERIAL HAS BEEN REVIEWED BY THE UNDERSIGNED AND IS BELIEVED TO COMPLY WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE UNDERSIGNED UNDERSTANDS VERIFICATION OF FIELD DIMENSIONS, AND COORDINATION WITH OTHER TRADES, REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

DATE: _____ BY (SIGN): _____

Consultant use below this line:

Architect Submittal Review Stamp

- | | |
|--|---|
| <input type="checkbox"/> NO EXCEPTIONS | <input type="checkbox"/> MAKE CORRECTIONS NOTED |
| <input type="checkbox"/> REJECTED | <input type="checkbox"/> REVISE AND RESUBMIT |
| <input type="checkbox"/> EXAMINED | <input type="checkbox"/> SUBMIT SPECIFIED ITEM |

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS & SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED & CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES & THE SATISFACTORY PERFORMANCE OF HIS WORK

KG+D ARCHITECTS, P.C.

DATE _____ BY _____

CONTRACTOR REQUEST FOR ELECTRONIC DRAWING FILES

The Architect, for the convenience of the Client/Owner, has electronic copies or representations of Drawings, Specifications and Project Manuals. Requests for electronic copies of such Drawings, Specifications and Project Manuals by the Contractor, for the Contractors use or the use of Subcontractors, shall be made in writing to the Client/Owner as outlined hereinbelow and shall outline the benefit derived from such a request. The Contractor shall be prepared to reimburse the Client/Owner for any costs involved in preparing such electronic documents for the Contractors use.

| | |
|---------------------------------|--|
| Architect's Project Number: | |
| Project Name: | |
| Architect: | |
| Client/Owner: | |
| | |
| Contractor/Recipient's Name: | |
| Attention to: | |
| Contractor/Recipient's Address: | |
| | |
| Date of Request: | |
| Date of Release: | |

As requested, attached is a list of electronic drawing files. For the release of these electronic drawing files to the recipient, the following items shall be understood, acknowledged and signed by the authorized personnel of the recipient with the fee included.

- A. The electronic drawing files are the property of the Architect and the Contractor is granted a license to use the electronic files only in connection with the subject project.
- B. The electronic drawing files do not necessarily represent the Contract Documents associated with the referenced project. These files are solely for the use of the recipient and are not a representation of the scope of work for the project. Any use by contractors, subcontractors or fabricators shall be on all of the same terms and conditions being applicable to such users who shall acknowledge the same in writing. The Recipient may use the electronic drawing files only. Electronic drawing files or portions thereof, shall not be provided to anyone else without the written approval of the Client/Owner. The use of the electronic drawing files, documents and any reprographics shall not identify any member of the Architect or Architect's consultants or sub-consultants or the Client/Owner without the written approval from the parties.
- C. The entire risks as to the results and performance of the package including the electronic drawing files, are assumed by the Contractor/recipient. The Client/Owner, the Architect

and the Architect's consultants and sub-consultants, including directors, employees, representatives, and licensors of the company, shall not have any liability to the Contractor/recipient or any other person or entity for any direct, indirect, incidental special or consequential damages whatsoever, including, but not limited to, the loss of revenue or profit, lost data, or any other personnel, commercial or economic loss, and claims by third parties. Even if the Client/Owner and Architect and the Architect's consultants and sub-consultants has been advised of the possibility of such damages; said Client/Owner and Architect and the Architect's consultants and sub-consultants shall not be held liable as stated above.

- D. The Contractor/recipient hereby agrees to indemnify and hold the Client/Owner, the Architect and the Architect's consultants and sub-consultants harmless from and against any cost, damage, liability, loss or claim arising from violation of this license. The Contractor/recipient and all subcontractors of all tiers also agrees that, in addition to all other remedies hereunder, the Contractor/recipient and such parties grant the Client/Owner the right to seek injunctive or other equitable relief to prevent the violation or require the performance of any of the Contractor's/recipient's obligations under this license, and the Contractor/recipient hereby consents to the issuance of such relief by any court of competent jurisdiction without the need to post any bond or security.
- E. The electronic files requested are as follows:

| Electronic file name | Corresponding Drawing (close approximation) |
|------------------------|--|
| 1. | |
| 2. | |
| 3. | |
| Etc. | |
| | |
| Total number of files: | |

CONTRACTOR'S/RECIPIENT'S AGENT SIGNATURE: _____
NAME IN BLOCK LETTERS: _____
AUTHORIZED POSITION HELD: _____
DATE OF SIGNATURE: _____

End of Attachment

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
 - 1. This Section does not include requirements for performing Special Inspections and Tests in compliance with Chapter 17 of the Building Code of New York State; refer to Section 014100.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Construction Manager or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Owner.
- C. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- J. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
 - 1. Mockups are used for one or more of the following:
 - a. Verify selections made under Sample submittals.
 - b. Demonstrate aesthetic effects.
 - c. Demonstrate the qualities of products and workmanship.
 - d. Demonstrate successful installation of interfaces between components and systems.
 - e. Perform preconstruction testing to determine system performance.
 - 2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
 - 3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.

1.3 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data For Contractor's quality-control personnel.
- B. Contractor's Statement of Responsibility: Submit copy of written statement of responsibility, acknowledging awareness of the special requirements contained in the Statement of Special Inspection, to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspection.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspection.
- C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.6 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.

3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- 1.7 QUALITY ASSURANCE
- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. **Specialists:** Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. **Testing Agency Qualifications:** An NRTL, an NVLAP, an agency accredited by the International Accreditation Service, Inc. or an equivalent accreditation agency accrediting in accordance with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. **Manufacturer's Technical Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. **Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:

- a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies; do not reuse products on Project.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, Construction Manager and Owner's Commissioning Authority, through Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups of size indicated.
 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
 3. Notify Architect and Construction Manager minimum seven days in advance of dates and times when mockups will be constructed.
 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
 5. Demonstrate the proposed range of aesthetic effects and workmanship.
 6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
 - a. Allow minimum seven days for initial review and each re-review of each mockup.
 7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
 8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 10. Demolish and remove mockups when directed or incorporate approved in-place mock-ups in the finished work, as specifically instructed in each specification section where a mock-up is required.

1.8 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 3300 "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect, Construction Manager and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, Construction Manager and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.

3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
1. Distribution: Distribute schedule to Owner, Architect, Construction Manager, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.
- 1.9 SPECIAL INSPECTIONS
- A. Special Inspections: Owner will engage qualified testing agency(ies) and special inspectors to conduct special inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in Division 01 Section "Special Inspections and Tests".

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Architect.
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and Construction Manager's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014100 - SPECIAL INSPECTIONS AND TESTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for performing Special Inspections and Tests in accordance with requirements of Chapter 17 of the *Building Code of New York State (BCNYS)*. Testing and inspecting services are required to verify compliance with requirements specified or indicated in the contract documents. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1.2 DEFINITIONS

- A. Registered Design Professional: The Registered Architect whose seal appears on the Construction Drawings.
- B. Testing/Inspecting Agency: An agent retained by the Owner and coordinated by the Special Inspector, to perform some of the testing and/or inspection services on behalf of the Special Inspector. (An example of an Inspecting Agency would be a Geotechnical Engineer).
- C. Statement of Special Inspections: A document prepared by the Registered Design Professional that includes the Schedule of Special Inspections listing the materials and work requiring Special Inspections. A copy of this document is included at the end of this Section.
- D. Continuous Special Inspection: The full-time observation of work requiring Special Inspections by the Special Inspector who is present in the area where the work is being performed.
- E. Periodic Special Inspections: The part-time or intermittent observation of work requiring Special Inspections by the Special Inspector who is present in the area where the work has been or is being performed and at the completion of the work

1.3 CONTRACTOR RESPONSIBILITIES

- A. Contractor shall cooperate with the Special Inspector and his agents so that Special Inspections and testing may be performed without hindrance.
- B. Contractor shall notify the Special Inspector and/or Testing/Inspecting Agency at least 48 hours in advance of a required inspection or test. Contractor shall coordinate sequence of activities to accommodate required inspection and testing services with a

minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- C. The Contractor shall provide incidental labor and facilities to provide access to the work to be inspected or tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, and for storage and curing of test samples.
- D. The Contractor shall keep at the project site the latest set of Construction Drawings, field sketches, accepted shop drawings, and specifications for field use by the Inspectors and Testing Technicians.
- E. The Special Inspection program shall in no way relieve the Contractor of his obligation to perform work in accordance with the requirements of the Contract Documents or from implementing an effective Quality Control program.

1.4 QUALITY CONTROL

- A. Construction Manager will hold a Special Inspections preconstruction meeting at least 7 days prior to the initial planned date for start of construction.
1. Discussion shall include review of specifications and Schedule of Special Inspections for work requiring Special Inspections; responsibilities of Contractor, Owner, Testing Agency, Special Inspector, and Registered Design Professional; notification procedures; and reporting procedures.
 2. Attendees shall include the Contractor, Owner's representative, Testing Agency, Special Inspector, and Registered Design Professionals for Structural Engineering and for Architecture.

1.5 LIMITS ON AUTHORITY

- A. The Special Inspector or Testing/Inspecting Agency shall not release, revoke, alter, or enlarge on the requirements of the Contract Documents.
- B. The Special Inspector or Testing/Inspecting Agency shall not have control over the Contractor's means and methods of construction.
- C. The Special Inspector or Testing/Inspecting Agency shall not be responsible for construction site safety.
- D. The Special Inspector or Testing/Inspecting Agency shall not have the authority to stop the work.

1.6 STATEMENT OF SPECIAL INSPECTIONS

- A. The Statement of Special Inspections and Tests, on the form included at the end of this Section, will be prepared by the Registered Design Professional.
- B. Required inspections and tests are described in the Schedule of Special Inspections and Tests attached to the end of this Section and in the individual specification sections for the items to be inspected or tested .

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used).

END OF SECTION 014100

ATTACHMENTS

SPECIAL INSPECTION NON-CONFORMANCE REPORT FORM

NYSED STATEMENT OF SPECIAL INSPECTIONS AND TESTS

SPECIAL INSPECTION NON-CONFORMANCE REPORT NO.

DATE:

TO: Registered Design Professional (RDP)
KG+D Architects, PC
285 Main St., Mount Kisco, NY 10549

CC: Contractor:

FROM: _____, Special Inspector

PROJECT: Twin Towers Middle School Additions and Alterations for Enlarged City
School District of Middletown

PART I: REFERENCE SPECIAL INSPECTION REPORT NO. _____

(Attach copy of report.)

DESCRIPTION OF NON-CONFORMANCE:

RDP RESPONSE: (PROVIDE ATTACHMENTS IF NECESSARY)



RDP SIGNATURE _____ DATE _____

IS REINSPECTION BY SPECIAL INSPECTOR REQUIRED YES NO

PART II: CONTRACTOR VERIFICATION (To be completed by either the **[General Contractor or Construction Manager]** or Subcontractor and returned to the Special Inspector and the RDP.)

I verify that as of the date listed, the non-conforming item noted above has been corrected as required.

SIGNATURE _____ DATE _____

| | | |
|--|---|-----------|
|  <p>NYS EDUCATION DEPARTMENT Office of Facilities Planning 89 Washington Avenue, Room 1060 EBA Albany, NY 12234</p> | <p>STATEMENT OF SPECIAL INSPECTIONS AND TESTS As required by the Building Code of NYS (2020 BCNYS)</p> <p style="color: red; font-style: italic;">Note: The code listings below are not to be considered all inclusive.</p> | |
| <p>BCNYS § 1704.2.3 requires the NYS Licensed Design Professional (of record) to complete the Statement of Special Inspections and Tests. Completion of the Statement of Special Inspections & Tests, and; Submission to the Office of Facilities Planning with the Construction Permit Application is a condition for issuance of the Building Permit.</p> | | |
| School District | Project Title | |
| ECSD of Middletown | Additions & Alterations | |
| Building | | |
| Twin Towers Middle School | | |
| SED Project # | Project Address | |
| 441000-01-0001-041 | 112 Grand Avenue, Middletown, NY 10940 | |
| Architect/Engineer: Stephen Lehigh, PE | | |
| Sign and Stamp  | | |
| A/E Firm (or dba): | Phone | Date |
| The DiSalvo Engineering Group | 203-490-4140 | 4/14/2023 |
| Comments: | | |

| INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record. | CONTINUOUS | PERIODIC | REFERENCE STANDARD | BCNYS REFERENCE | CHECK IF REQUIRED | IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY |
|---|------------|----------|---|--|---|---|
| A. Steel Construction Ch. 22 | | | | | | |
| 1. Material verification of high-strength bolts, nuts and washers. | | X | AISC 360 | 1705.2 2204 | <input checked="" type="checkbox"/> | 051200 |
| 2. Inspection of high-strength bolting. | X | X | AISC 360 ACI 318 | 1705.2 2204.2 | <input checked="" type="checkbox"/> | |
| 3. Material verification of Structural Steel. Open Web Steel Joist and Girders. Basic protection of steel members, Seismic Resistance | | | AISC 360 ASTM A6, A514, A29 SJ100, 200 AISC 341 | 1705.2 2203, 2205 1705.2 2207 | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 4. Spray Applied Fire Resistant Materials & Specialized Finishes | | | ASTM E605, E736 | 1705.14 1705.15 | <input checked="" type="checkbox"/> | |
| 5. Cold Formed Steel Construction- load bearing. Seismic Resistance | | | AISI S100, S220, S240 ANSI/SDI -NC1.0, RD1.0, SDI-C, ASCE 7, 8 AISI S400 | 1704.2.5 2210 2211 | <input type="checkbox"/> <input type="checkbox"/> | |
| 6. Material verification of weld filler materials. | | | AWS D1.1, D1.3 | 1705.2 2204.1 | <input checked="" type="checkbox"/> | |
| 7. Inspection of welding: | | | ACI 318: 26.6.4 | T 1705.3 2204 | <input checked="" type="checkbox"/> | |
| a. Structural steel | X | X | AWS D1.1, D1.3 | 1705.2 | <input checked="" type="checkbox"/> | |
| b. Reinforcing steel | X | X | AWS D1.1, D1.3 | 1705.3.1 | <input type="checkbox"/> | |
| c. Cold Formed Steel Deck | | | AISC S100, ASCE 7, 8 | 1705.2.2 | <input checked="" type="checkbox"/> | 053100 |
| 8. Inspection of steel frame joint details. | | X | | 1705.2 | <input checked="" type="checkbox"/> | |

| INSPECTION AND TESTING Continuous & Periodic as Defined by the BCNYS CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record. | | CONTINUOUS | PERIODIC | REFERENCE STANDARD | BCNYS REFERENCE | CHECK IF REQUIRED | IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY |
|--|--|---------------|----------|---|----------------------------------|-------------------------------------|---|
| B. Concrete Construction | | Ch. 19 | | | | | |
| 1. | Inspection of reinforcing steel, including prestressing tendons, and verify placement. | | X | Ch. 21, 22 ACI 318; Ch 20, 25.2, 25.3, 26.6.1, 26.6.3 AISC 360 | T 1705.3 1901 1905 | <input checked="" type="checkbox"/> | 033000 |
| 2. | Inspection of reinforcing steel bar welding. | | | ACI 318, AWS D1.4 | T 1705.3 | <input type="checkbox"/> | Not Permitted |
| 3. | Inspection of anchors to be installed in concrete prior to and during placement. | X | | ACI 318: 17.8.2, 17.8.2.4 | T 1705.3 | <input checked="" type="checkbox"/> | |
| 4. | Verify use of required design mix. | | X | ACI 318: Ch. 19, 26.4.3, 26.4.4 | T 1705.3 1904 1908 | <input checked="" type="checkbox"/> | |
| 5. | Sampling fresh concrete: slump, air content, temperature, strength test specimens. | X | | ASTM C172, C31 ACI 318: 26.5, 26.9, 26.10, 26.11 | T 1705.3 1901 1905 1908 | <input checked="" type="checkbox"/> | |
| 6. | Inspection of placement for proper application techniques. | X | | ACI 318: 26.5 | T 1705.3 | <input checked="" type="checkbox"/> | |
| 7. | Inspection for maintenance of specified curing temperature and techniques. | | X | ACI 318: 26.5 | T 1705.3 1908 1909 | <input checked="" type="checkbox"/> | |
| 8. | Inspection of prestressed concrete. | X | | ACI 318: 26.10 | T 1705.3 | <input type="checkbox"/> | Not Applicable |
| 9. | Erection of precast concrete members. | | X | ACI 318: 26.9 | T 1705.3 | <input type="checkbox"/> | Not Applicable |
| 10. | Verification of in-situ concrete strength prior to stressing of tendons and prior to removal of shores and forms from beams and slabs. | | X | ACI 318: 26.11.2 | T 1705.3 | <input type="checkbox"/> | Not Applicable |
| 11 | Inspection of formwork | | X | ACI 318: 26.11.1.2 (b) | T 1705.3 | <input checked="" type="checkbox"/> | |

| C. Masonry Construction | | | | | Ch. 21 | | |
|---|--------------|--------------|---|-----------------------------------|-------------------------------|-------------------------------------|---|
| INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record. | CONTINUOUS | PERIODIC | REFERENCE STANDARD | | BCNYS REFERENCE | CHECK IF REQUIRED | IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY |
| <p>L1 = Level 1 Inspection required for nonessential facilities.</p> <p>L2 = Level 2 Inspection required for essential facilities.</p> <p>* In general, schools are not considered essential facilities unless they are a designated emergency shelter.</p> | | | ASTM E119 UL 263 ASTM C1364 ASTM C1670 ASTM A706 ASCE 7, 8 | TMS 402, 403, 404, 504, 602 | 1705.4 2101 1604 | X | |
| 1. <u>Verify to ensure compliance:</u> | | | | | | | |
| a. Proportions of site prepared mortar and grout. | | X L1 & L2 | | | 1705.4 2103.2 | <input checked="" type="checkbox"/> | 042000 |
| b. Placement of masonry units and construction of mortar joints. | | X L1 & L2 | | | 1705.4 T 1705.3 | <input checked="" type="checkbox"/> | |
| c. Location and placement of reinforcement, connectors, tendons, anchorages. | | X L1 & L2 | | | 1705.45 2103.4 T 1705.3 | <input checked="" type="checkbox"/> | |
| d. Prestressing technique. | | X L1 | | | 1705.4 | <input type="checkbox"/> | Not Applicable |
| Grout space prior to grouting. | X L2 | | | | 1705.4 | <input type="checkbox"/> | |
| e. Grade and size of prestressing tendons and anchorages. | | X L1 | | | 1705.4 | <input type="checkbox"/> | Not Applicable |
| Placement of grout. | X L2 | | | | 1705.4 | <input type="checkbox"/> | |
| f. Grout specs prior to grouting. | X L2 | | | | 1705.4 | <input checked="" type="checkbox"/> | |
| 2. <u>Inspection program shall verify:</u> | | | | | | | |
| a. Size and location of structural elements. | | X L1 & L2 | | | 1704.5 1705.4 | <input checked="" type="checkbox"/> | |
| b. Type, size, and location of anchors. | X L2 | X L1 | | | 1705.4 T 1705.3 | <input checked="" type="checkbox"/> | |
| c. Specified size, grade, and type of reinforcement. | | X L1 & L2 | | | 1704.5 | <input checked="" type="checkbox"/> | |
| d. Welding of reinforcing bars. | X L1 & L2 | | | | 1704.5 | <input type="checkbox"/> | Not Permitted |
| e. Cold/hot weather protection of masonry construction. | | X L1 & L2 | | | 1704.5, 2104.3, 2104.4 | <input checked="" type="checkbox"/> | |
| f. Prestressing force measurement and application. | X L2 | X L1 | | | 1704.5 | <input type="checkbox"/> | Not Applicable |
| 3. <u>Verification accessory placement prior to grouting:</u> | X L2 | X L1 | | | 1704.5, 2105.2.2, 2105.3 | <input checked="" type="checkbox"/> | |
| 4. Grout placement. | X L1 | | | | 1704.5 | <input checked="" type="checkbox"/> | |
| 5. Preparation of grout specimens, mortar specimens, and/or prisms. | X L1 & L2 | | | | 1704.5, 2105.2.2, 2105.3 | <input type="checkbox"/> | Volumetric Proportions |
| 6. Compliance with documents and submittals. | | X L1 & L2 | | | 1704.5 | <input checked="" type="checkbox"/> | |

| INSPECTION AND TESTING Continuous & Periodic is as Defined by the BCNYS CHAPTER 17 All reports to be submitted to the owners representative for use, approval and record. | CONTINUOUS | PERIODIC | REFERENCE STANDARD | BCNYS REFERENCE | CHECK IF REQUIRED | IDENTIFY SPEC SECTION AND PROVIDE CLARIFYING NOTES IF NECESSARY |
|--|------------|----------|--|--|--|---|
| D. Wood Construction Ch. 23 | | | | | | |
| 1. Fabrication process of prefabricated Wood Structural Elements and assemblies. | | X | Ch. 16 AWC, APA, CPA, DOC PS1, PS2 | 1704.6, 1705.5 2302, 2303 2304 | <input type="checkbox"/> | Not Applicable |
| 2. High-load diaphragms Seismic Resistance | | X | | 1704, 1705, 1704.6 2304, 2305 2306, 2307, 2308 | <input type="checkbox"/> | Not Applicable |
| E. Soils Ch. 18 | | | | | | |
| 1. Geotechnical Investigations, Excavations, Grading, Fill Damp-proofing/ Water-Proofing | | X | ASTM, NYS DOT OSHA Appendix J- BCNYS | 1704, 1706 1803, 1804, 1805 | <input checked="" type="checkbox"/> | |
| 2. Flood & Stormwater Hazards [per BCNYS 106] | | X | <u>Local Highway Authority</u> <u>Flood Plain Admin.</u> Appendix G- BCNYS | 1703 1610, 1611, 1612 1805.1.2.1 | <input type="checkbox"/> <input type="checkbox"/> | Not Applicable |
| F. Specialized Foundations- Piers, Piles Ch. 16 | | | | | | |
| 1. Deep Foundation Elements: Driven Piles Cast in Place Helical Piles | | X | | T 1705.7 T 1705.8 1705.7 1705.8 1705.9 | <input type="checkbox"/> | Not Applicable |
| G. Exterior Wall Coverings Ch. 14 | | | | | | |
| 1. Exterior Insulation and Finish Systems (EIFS) MCM, HPL, Other Combustible Materials | | X | ASTM E2568, E2273, E2570 E2393, E84 Ch. 16 NFPA 268, 275, 285, 286 | 1405, 1406, 1407, 1408 1704.2, 1705.12.5 1705.16 | <input type="checkbox"/> | Not Applicable |
| H. Misc. | | | | | | |
| 1. Access Floors and Storage Racks Other Architectural, MEP Components Seismic Resistance | | X | | 1705.12 | <input type="checkbox"/> | Not Applicable |
| 2. In-Situ Testing | | X | | 1604.6, 1708 | <input type="checkbox"/> | Not Applicable |
| 3. Pre-Construction Load Testing | | X | | 1604.7, 1709 | <input type="checkbox"/> | Not Applicable |
| 4. Fire Resistant Penetrations & Joints Fire Stops Testing for Smoke Control | | X | Ch. 7 ASTM E119 UL 263 | 1705.17 1705.18 | <input checked="" type="checkbox"/> | |
| 5. Pre-Submission: Inventory of all Fire-Resistant-Rated Construction- Level 2 Alterations and greater [per BCNYS 106] | X | | verification required EBCNYS Ch. 3 C. of E. 155 Regulations. | <u>FCNYS 701.6</u> <u>BCNYS 703.7</u> 19CRR-NY XXXII | <input type="checkbox"/> | |
| 6. Pre-Submission: Hazardous Material Survey Water Quality Survey | X X | | verification required <u>ACM Letter- Certificate</u> C. of E. 155 Regulations. | US-EPA NYS-DOH | <input type="checkbox"/> | Not Applicable |
| 7. Other: | | | | | <input type="checkbox"/> | |

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Refer to Drawing PH001, LP001, and LP002 for additional requirements.
- C. Refer to "Scope of Work for Separate Prime Contractors" and "Multiple Prime Contractor Coordination Chart - Individual Scope Sheets by Trade" attached to Section 011000 for additional requirements relating to temporary facilities and controls.

1.2 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Owner will pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Owner will pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Owner will pay electric-power-service use charges for electricity used by all entities for construction operations.

1.3 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.

2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- D. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
1. HVAC system isolation schematic drawing.
 2. Location of proposed air-filtration system discharge.
 3. Waste handling procedures.
 4. Other dust-control measures.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- B. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches (914 by 1624 mm).
- C. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

- A. Project Meeting Space: Project progress meetings will be held in the Construction Manager's job site trailer.
- B. Contractor's Site Trailers: Each Prime Contractor may provide their own job site trailer if it is desired, and must provide their own utilities and supplies. Coordinate

with Construction Manager for permitted location. Maximum sizes of contractor's site trailers are indicated on Drawings.

- C. Storage and Fabrication Sheds: Each Prime Contractor may provide their own job site storage and fabrication shed if it is desired. Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Contract No. G1 shall provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to existing system.

- C. Water Service: Connect to Owner's existing water service source. Install water service distribution piping in sizes and pressures adequate for construction. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Contract No. G1 shall provide temporary toilets, wash facilities, and drinking water for use of construction personnel for all contracts, including all paper supplies and service for these toilets. Provide one toilet per 10 people with a minimum of 4 toilets. All toilets shall be cleaned once a week. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
 - 1. Toilets: Use of Owner's existing toilet facilities will not be permitted
- E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
 - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- F. Electric Power Service: Contract No. E1 shall provide temporary power of adequate capacity to power all construction tools and equipment, including welding machines. Connect temporary service to Owner's existing power source, as directed by Owner. Provide separate metering. Provide electric power service distribution system of sufficient size, capacity, and power characteristics required for all construction operations.
 - 1. Install electric power service overhead.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

H. Telephone Service: Each Prime Contractor shall provide telephone service for their own field office if desired. If land-line telephone service is desired, arrange with Owner to have this service installed. Cost of installation and use of temporary telephone land-line service shall be borne by Contractor.

1. Post a list of important telephone numbers in the field office including:
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Contractor's emergency after-hours telephone number.
 - e. Architect's office.
 - f. Engineers' offices.
 - g. Owner's office.
 - h. Principal subcontractors' field and home offices.
2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

I. Electronic Communication Service:

1. Internet Service: Contractor may not connect to the Owner's data network. Cost of the connection and arrangements for service shall be borne by the Contractor.

J. Temporary Heating and Cooling: Contract No. G1 shall provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying
2. Provide all the required facilities and fuel for the entire construction period.
3. Use of the existing HVAC system will not be possible for any of the phases of the Work.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

- B. Parking: Use Owner designated areas of existing parking lots for construction personnel.
- C. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas as indicated on Drawings.
 - 1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- D. Temporary Use of Permanent Roads and Paved Areas: Limit use of existing roads on campus to those designated by Owner as assigned construction route. Maintain roads in clean dust-free and dirt-free condition; clean roads of mud and debris caused by construction traffic.
- E. Traffic Controls: Provide traffic control signage of type approved by Owner to direct traffic at and around construction site. Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 - 2. Remove snow and ice as required to minimize accumulations.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 - 1. Identification Signs: Provide Project identification signs to comply with JPEG files supplied by the Architect.
 - 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 - 3. Maintain and touchup signs so they are legible at all times
- H. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal." All waste disposal facilities shall be by Contract No. G1.
- I. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

- J. Temporary Elevator Use: Not permitted.
- K. Temporary Stairs: Provide temporary stairs where ladders are not adequate. Erach phase they will be entering the building and using different satirs coordinate with CM
- L. Temporary Use of Permanent Stairs: Use of existing interior stairs for construction traffic may be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion. Coordinate usage of particular stair with Owner, depending on location. Provide directional signs indicating temporary use of stairs.
- M. Scaffolding: Provide scaffolding systems and/or lifts as required for the performance of the Work. Scaffolding shall be designed by a NYS licensed Professional Engineer and signed and sealed drawings of scaffolding shall be submitted for Architect's and Construction Manager's information. Scaffolding shall be designed so as to not cause damage to the building
 - 1. The following Contracts shall provide their own scaffolding: Contract No, G6 Windows, Contract No. G3 Masonry. All other contracts shall provide scaffolding for their work as needed.
- N. Cranes: All crane picks, material delivery, etc. must be coordinated so as not to lift over any occupied area of the building. If necessary, this work shall be done on off hours to ensure the safety of the building occupants. Crane location must be carefully chosen to ensure the safety of building occupants. Crane picks cannot be conducted during academic hours within 30' of an occupied building.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of Erosion and Sediment Control Drawings and specification in Division 31.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.

4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
 3. Provide tennis court mesh over the fencing and cut vision panels it. Fencing can be chain link or ballasted unitized at contractor's option.
- G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Comply with logistics plans for egress requirements.
- J. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
 2. Provide weatherproof, secure temporary enclosures for all window openings where windows have been removed.
- K. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise. Provide types of partitions approved by Owner in Owner occupied areas.

1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
 2. In areas where containment of airborne particles is critical to Owner operations, construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
 3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies for a minimum of one hour rating.
 - a. Temporary partitions shall comply with NFPA 241
 4. Insulate partitions to control noise transmission to occupied areas.
 5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 6. Protect air-handling equipment.
 7. Provide walk-off mats at each entrance through temporary partition.
- L. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with Owner and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 015719 - ENVIRONMENTAL PROTECTION DURING CONSTRUCTION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Scope
- B. Applicable Regulations
- C. Notification
- D. Implementation
- E. Protection of Land Resources
- F. Recording and Preserving Historical and Archaeological Finds
- G. Protection of Water Resources
- H. Burning
- I. Dust and Mud Control
- J. Maintenance of Pollution Control Facilities During Construction

1.2 SCOPE

- A. The work covered by this section consists of furnishing all labor, material and equipment and performing all work required for the prevention of environmental pollution during and as the result of construction operations under this contract except for those measures set forth in other Technical Provisions of these specifications.

For the purpose of this specification environmental pollution is defined by regulatory authorities as the presence of chemical, physical or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and recreational purposes.

The control of environmental pollution requires consideration of air, water and land, and involves noise, solid waste-management and management of radiant energy and radioactive materials, as well as other pollutants.

- B. Compliance with the provisions of this section by all Subcontractors shall be the responsibility of the Contractor.

1.3 APPLICABLE REGULATIONS

- A. In order to provide for abatement and control of any environmental pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, they shall comply with all applicable Federal, State and local laws, and regulations concerning environmental pollution control and abatement as well as the specific requirements stated elsewhere in the contract specifications.

1.4 NOTIFICATION

- A. The Construction Manager will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Construction Manager may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost on account of any such stop orders shall be made the subject of a claim for extension of time or for extra costs or damages by the Contractor unless it was later determined that the Contractor was in compliance.

1.5 PROTECTION OF LAND RESOURCES

- A. It is intended that the land resources within the project boundaries and outside the limits of permanent work performed under this contract be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the project. Insofar as possible, the Contractor shall confine his construction activities to areas defined by the plans or specifications.
- B. The following additional requirements are intended to supplement and clarify the requirements contained in the General Conditions.

The location on the project site of the Contractor's storage and other construction buildings, required temporarily in the performance of the work, shall be upon assigned portions of the job site and shall require written approval of the Construction Manager.

The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the overall construction of buildings.

Plans showing storage and office facilities shall be submitted for approval of the Construction Manager.

- C. If the Contractor proposes or is required to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval at least 21 days prior to scheduled start of such temporary work.
1. A layout of all temporary access roads, excavations and embankments to be constructed with the work area.
 2. Plans and cross sections of proposed embankments and their foundations, including a description of proposed materials.

1.6 RECORDING AND PRESERVING HISTORICAL AND ARCHAEOLOGICAL FINDS

- A. All items having any apparent historical or archaeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archaeological find undisturbed and shall immediately report the find to the Construction Manager so that the proper authorities may be notified.

1.7 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute streams, lakes, reservoirs or public waters with fuels, oils, bitumens, calcium chloride, acids or harmful materials. It is the responsibility of the Contractor to investigate and comply with all applicable Federal, State, County and Municipal laws concerning pollution of surrounding public waters. All work under this contract shall be performed in such a manner that objectionable conditions will not be created in public waters through or adjacent to the project areas.
- B. Prior to any major construction the Contractor shall submit a plan for approval by the Construction Manager showing his scheme for controlling erosion and disposing of waste.
- C. Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation ponds or shall be graded to control erosion within acceptable limits.

Temporary erosion and sediment control measures such as berms, dikes, drains, or sedimentation basins, if required to meet the above standards, shall be provided until permanent drainage and erosion control facilities are completed and operative.

Fills and waste areas shall be constructed by selecting placement to eliminate silts or clays on the surface that will erode and contaminate adjacent public waters.

- D. At all times of the year, special measures shall be taken to prevent chemicals, fuels, oils, grease, bituminous materials, waste washings, herbicides and insecticides, and cement and surface drainage from entering public waters.
- E. Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., in areas adjacent to public waters shall be subject to the approval of the Construction Manager. If any waste material is dumped in unauthorized areas the Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. If necessary, contaminated ground shall be excavated, disposed of as directed by the Construction Manager, refilled with clean material and compacted all at the expense of the Contractor.

1.8 BURNING

- A. Burning will not be permitted.

1.9 DUST AND MUD CONTROL

- A. The Contractor shall at all times provide adequate dust control measures. He shall accomplish this, without interference to the public and vehicular transportation.
- B. To control dust, it is required that all vehicles transporting dust producing materials to and from the job shall be covered with tarpaulins securely tied down, be sprinkled when necessary or be satisfactorily treated by other approved methods.
- C. Trucks leaving excavations shall be water washed prior to entry on access roads

or public streets to remove mud and other deleterious substances from wheels and undercarriages.

- D. All public and private ways adjacent to the site shall be broomed and flushed whenever necessary in the opinion of the Construction Manager. Drainage systems shall be cleaned and flushed whenever mud or debris hinders the flow of storm water to or in the sewers.
- E. The Contractor shall immediately remove refuse, rubbish, debris and soil accumulations on roads, streets and on sidewalks, caused by wind, rain and snow erosions or by his own operations to prevent traffic hazards or interference with road drainage.

1.10 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

- A. During the life of this contract the Contractor shall maintain all facilities constructed for pollution control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. During the construction period the Contractor shall conduct frequent training courses for his maintenance personnel. The curriculum shall include methods of detection of pollution, familiarity with pollution standards, and installation and care of vegetation covers, plants and other facilities to prevent and correct environmental pollution.

End of Section

SECTION 015723 - TEMPORARY EROSION AND SEDIMENT CONTROL AND STORM
WATER POLLUTION CONTROL

1.1 GENERAL

A. The attached Stormwater Pollution Prevention Plan (SWPPP) contains requirements for temporary stormwater pollution controls and temporary erosion and sediment controls which shall be performed as part of the Work of this Project. Provide all the construction phase activities described in the SWPPP and as indicated on the Drawings for temporary stormwater pollution controls and temporary erosion and sediment controls.

B. Refer to Section 312500 for additional information.

Attachment: SWPPP

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 012300 "Alternates" for products selected under an alternate.
 - 2. Section 012500 "Substitution Procedures" for requests for substitutions.
 - 3. Section 014200 "References" for applicable industry standards for products specified.

1.2 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
- B. Mechanical Materials and Equipment: When two or more items of same material or equipment are required (pumps, valves, air conditioning units, etc.), they shall be of the same manufacturer. Product manufacturer uniformity does not apply to raw materials, bulk materials, pipe, tube, fittings (except flanged and grooved types), sheet metal, wire, steel bar stock, welding rods, solder, fasteners, motors for dissimilar equipment units, and similar items used in the work, except as otherwise indicated. Provide products which are compatible within systems and other connected items.
- C. Asbestos in Materials: All products submitted for use and incorporated into this project shall be asbestos free.
- D. Mercury-Free Products: All products submitted for use and incorporated into this Project shall be mercury-free. In the absence of mercury-free products, provide products with the lowest amount of mercury possible.
- E. Lead-Free Products: All products submitted for use and incorporated into this Project shall be lead-free. .

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.6 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. **Manufacturer's Warranty:** Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. **Special Warranty:** Written warranty required by the Contract Documents to provide specific rights for Owner.

B. **Special Warranties:** Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. **Manufacturer's Standard Form:** Modified to include Project-specific information and properly executed.
2. **Specified Form:** When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.

3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Project Closeout."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. A named product and model number establishes the characteristics and salient features of the specifications even when they are not fully described and will serve as the basis of comparison.
8. Whenever a material, article, device, piece of equipment or type of construction is identified by reference to manufacturers' or vendors' names, trade names, catalog numbers, or similar specific information, it is so identified for the purpose of establishing a standard of quality, and such identification shall not be construed as limiting competition. Comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product

B. Product Selection Procedures:

1. Named Product: Where Specifications name a single manufacturer and product, and "no substitutions" is indicated, provide the named product. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Named Manufacturer/Source: Where Specifications name a single manufacturer or source and "no substitutions" is indicated, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed

- product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. **Manufacturers:** Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product
 5. **Basis-of-Design Product:** Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. **Visual Matching Specification:** Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
- D. **Visual Selection Specification:** Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. **Conditions for Consideration:** Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Evidence that the proposed product provides sustainable design characteristics that specified product provides for achieving LEED prerequisites and credits.
 3. Evidence that the proposed product will not adversely affect Contractor's construction schedule.
 4. Evidence that the proposed product has received necessary approvals of authorities having jurisdiction.
 5. Evidence that the proposed product will have no adverse effect on other trades and will not affect or delay progress schedule; or if proposed product involves more than one contractor, proposed product has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 6. Evidence that the proposed product maintenance service and source of replacement parts, as applicable, is available similar to the specified product.

7. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
8. Evidence that proposed product provides specified warranty.
9. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
10. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.

- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 013300 "Submittal Procedures" for submitting surveys.
 - 3. Section 017329 "Cutting and Patching" for cutting and patching portions of the building.
 - 4. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor.

- A. Final As-Built Survey of Underground Utilities: Submit two paper copies and one electronic (.pdf) file, signed by land surveyor.

1.3 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services:
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- D. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- E. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and/or Owner as required, that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are

indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 2. Establish limits on use of Project site.
 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 4. Inform installers of lines and levels to which they must comply.
 5. Check the location, level and plumb, of every major element as the Work progresses.
 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.

- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Final Survey for Underground Utilities: Engage a land surveyor to prepare a final survey of all utilities installed during the project, including all elevations and inverts.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces without ceilings.
- B. Mechanical Installations: Comply with the following requirements:
 - 1. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible.
 - 2. Coordinate connection of mechanical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service.
 - 3. Install all equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Extend grease fittings to an accessible location.
- C. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- D. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- E. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- F. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- G. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

- H. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- I. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- J. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- K. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

- A. General: Clean Project site, public pedestrian paths and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended,

use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017329 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes procedural requirements for cutting and patching.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 024119 "Selective Structure Removal and Demolition" for demolition of selected portions of the site for alterations.
 - 3. Section 078413 "Penetration Firestopping" for patching penetrations in fire-rated construction.
- C. Coordinate cutting and patching requirements with selective demolition. Removal of portions of existing construction required for the installation or performance of other work may be indicated as selective demolition on the demolition drawings. Cut and patch all construction when not shown on the demolition drawings, or when additional cutting and patching is required after the completion of selective demolition.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.3 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
 - 3. Products: List products to be used for patching and firms or entities that will perform patching work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
 - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

1.4 QUALITY ASSURANCE

- A. Minimize cutting and patching of work by properly coordinating construction sequences with Construction Manager.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Fire-detection and -alarm systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Sprayed fire-resistive material.
 - e. Equipment supports.
 - f. Piping, ductwork, vessels, and equipment.
 - g. Noise- and vibration-control elements and systems.
 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

- C. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
- D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
 - 1. Cutting and Patching of Existing Roofing System: Contractors performing cutting and patching of the existing roof membrane shall be certified installers by the existing roof membrane manufacturer for their products. When existing roofing system is still under warranty, coordinate all work on the existing roofing system with manufacturer. All cutting and patching work on roofing system shall be performed in a manner that does not void the warranty.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 1000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

END OF SECTION 017329

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 15 days of date established for commencement of the Work.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, and waste reduction work plan. Distinguish between demolition and construction waste.
- B. Waste Identification: Indicate anticipated types of demolition and construction waste generated by the Work.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials.

1. Construction Waste:

- a. Packaging: Salvage or recycle 100 percent of the following uncontaminated packaging materials:

- 1) Paper.
- 2) Cardboard.
- 3) Boxes.
- 4) Plastic sheet and film.
- 5) Polystyrene packaging.
- 6) Wood crates.
- 7) Wood pallets.
- 8) Plastic pails.

- b. Construction Office Waste: Salvage or recycle 100 percent of the following construction office waste materials:

- 1) Paper.
- 2) Aluminum cans.
- 3) Glass containers.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
 2. Review waste management procedures with all entities when they first begin work on-site, including locations established for salvage, recycling, and disposal.
- B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.

- B. Related Requirements:
 - 1. Section 013233 "Photographic Documentation" for submitting final completion construction photographic documentation.
 - 2. Section 017300 "Execution" for progress cleaning of Project site.
 - 3. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 5. Section 017900 "Demonstration and Training" for requirements for instructing Owner's personnel.

1.2 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

- B. Attic stock in the required amount/percentage shall be turned over to the Owner immediately after the first delivery of the material is received on the site, not at the end of the project.

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
5. Submit test/adjust/balance records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
7. Submit fully executed Certification of Drawings and Specification Compliance form included at the end of this Section.

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.

4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
6. Advise Owner of changeover in heat and other utilities.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Architect will perform inspection in areas no smaller than a floor plate. Inspection of individual rooms or spaces will not be performed.
2. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - a. Reinspection Limits: The Architect and Construction Manager are limited to performing the original inspection and two reinspections of the same area as part of their services. The cost of any reinspections required beyond this amount will be borne by the Contractor. Contractor shall reimburse Owner for reinspection fees paid to the Architect and/or Construction Manager through a credit change order in the amount stipulated by the Owner
3. Results of completed inspection will form the basis of requirements for final completion.

1.6 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

3. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - a. Reinspection Limits: The Architect and Construction Manager are limited to performing the original inspection and two reinspections of the same area as part of their services. The cost of any reinspections required beyond this amount will be borne by the Contractor. Contractor shall reimburse Owner for reinspection fees paid to the Architect and/or Construction Manager through a credit change order in the amount stipulated by the Owner

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.

1.8 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - 1) Clean HVAC system in compliance with NADCA ACR. Provide written report on completion of cleaning.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

- D. Construction Waste Disposal: Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

Attachment: Certification of Drawing and Specification Compliance form

CERTIFICATION OF DRAWING AND SPECIFICATION COMPLIANCE

The Undersigned Prime Contractor does herein certify that:

1. All materials furnished for this project do fully comply with all specification requirements as stated within the Contract Documents;
2. That no asbestos containing materials of any nature are used in the work;
3. That execution of the Work covered by this certification has been performed in accordance with the Contract Document drawings.

CONTRACT NUMBER AND CONTRACT NAME: _____

NAME OF CONTRACTOR: _____

CERTIFICATION BY: _____ TITLE: _____

ADDRESS: _____

DATED: _____

CORPORATE ACKNOWLEDGEMENT

)SS.
)

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____ that he is the officer of the said corporation executing the foregoing instrument, that he knows the seal of said corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.

Notary Public

INDIVIDUAL ACKNOWLEDGEMENT

State of

)SS.
)

County of

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____

_____ that he is the individual who executed the foregoing instrument.

Notary Public

PARTNERSHIP ACKNOWLEDGEMENT

State of

)SS.
)

County of

On the _____ day of _____, before me came _____ to me known and who by me being duly sworn did depose and say that he resides at _____ that he is the partner in the firm of _____ doing business under the name of _____ and that he executed the foregoing instrument on behalf of said partnership.

Notary Public

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
 - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.2 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.3 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file complete with Table of Contents and book marked by equipment. Submit on digital media acceptable to Architect.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.

2. Three paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 60 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 30 days before commencing demonstration and training. Architect will return copy with comments.
 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of documents.
 2. List of systems.
 3. List of equipment.
 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of

equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Architect.
 7. Name and contact information for Commissioning Authority.
 8. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 9. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.

5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
 2. Shutdown instructions for each type of emergency.
 3. Operating instructions for conditions outside normal operating limits.
 4. Required sequences for electric or electronic systems.
 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria if Contractor has delegated design responsibility.
 3. Operating standards.
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

- G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous Record Submittals.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for final property survey.
 - 2. Section 017700 "Closeout Procedures" for general closeout procedures.
 - 3. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Submit PDF electronic files of scanned record prints and one set of prints.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record ("As- Built") Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding archive photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Field Order.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

7. Format: Submit PDF electronic files of scanned record prints and one set of prints.
 - a. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - b. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - c. Identification: As follows:
 - 1) Project name.
 - 2) Date.
 - 3) Designation "PROJECT RECORD DRAWINGS."
 - 4) Name of Architect
 - 5) Name of Contractor.

B. Record Digital Data Files: In addition to submitting paper Record Drawings, transfer information to electronic CAD drawings in .DXF format and prepare set of digital record drawings. Architect will supply a set of base electronic drawings for Contractor's use. Submit electronic Record Drawings to Owner in same manner as paper Record Drawings.

C. The following certification shall appear on all Record Drawings: "These record drawings prepared by _____ for the following work _____ have been reviewed by the undersigned and appear to be an accurate representation of the work incorporated within the project and are accepted as submitted in accordance with the technical documents. This record document review made by this office is for determination of compliance with the requirements of the contract documents.

Firm Name: _____ Date: _____ Reviewer Name: _____ I

D. If the Construction Manager or Architect determines the Record Drawings are not complete or contain inaccurate information, they will return the documents to the Contractor for correction and resubmission.

E. Final payment will not be made to Contractor until complete and accurate Record Drawings both on paper and electronic media have been received and accepted by Owner.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
5. Note related Change Orders, record Product Data, and record Drawings where applicable.

- B. Format: Submit record Specifications as scanned PDF electronic file(s) of marked-up paper copy of Specifications.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, record Specifications, and record Drawings where applicable.

- B. Format: Submit record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

- B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's and Construction Manager's reference during normal working hours.

END OF SECTION 017839

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training video recordings.

1.2 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Attendance Record: For each training module, submit list of participants and length of instruction time.
- C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.3 CLOSEOUT SUBMITTALS

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
 - 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of videographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date of video recording.

1.4 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.
- B. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- C. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor has delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.

2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.

5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 1. Owner will furnish Contractor with names and positions of participants.

- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner, through Architect, with at least seven days' advance notice.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- D. Provide operating and maintenance instruction to Owner's personnel for systems and components as indicated in individual Specification Sections. Provide instruction periods, comprised of approximately 50 percent classroom instruction and 50 percent "hands-on" instruction.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids.
- B. Video: Provide minimum 640 x 480 video resolution converted to .mp4 format file type, on electronic media.
 - 1. Electronic Media: CD ROM or thumb drive, with computer made label.
 - 2. File Hierarchy: Organize folder structure and file locations according to project manual table of contents. Provide complete screen-based menu.
 - 3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
 - 4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
 - a. Name of Contractor/Installer.
 - b. Business address.
 - c. Business phone number.
 - d. Point of contact.
 - e. E-mail address.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
 - 1. Film training session(s) in segments not to exceed 15 minutes.
 - 2. Produce segments to present a single significant piece of equipment per segment.
 - 3. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.

4. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.
- D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording. Furnish additional portable lighting as required.
- E. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION 017900

SECTION 019113 - GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 CONDITIONS AND REQUIREMENTS

- A. The General Conditions, Supplementary Conditions, and Division 1 – General Requirements apply.

1.2 SECTION INCLUDES

- A. Commissioning of building systems, including but not limited to the following:
 - 1. Mechanical Systems & Indoor Air Quality Systems

1.3 RELATED SECTIONS

- A. Division 1 – Submittal Procedures
- B. Division 22 – Commissioning of Plumbing
- C. Division 23 – Commissioning of HVAC
- D. Division 26 – Commissioning of Electrical

1.4 DEFINITIONS

- A. Acceptance Phase: Phase of construction after startup and initial checkout when functional performance tests, O&M documentation review and training occur.
- B. Approval: Acceptance that a piece of equipment or system has been properly installed and is functioning in the tested modes according to the Contract Documents.
- C. Architect / Engineer (A/E): The prime consultant (Architect) and sub-consultants who comprise the design team, generally the HVAC mechanical designer/engineer and the electrical designer/engineer.
- D. Basis of Design: The basis of design is the documentation of the primary thought processes and assumptions behind design decisions that were made to meet the design intent. The basis of design describes the systems, components, conditions and methods chosen to meet the intent. Some reiterating of the design intent may be included.
- E. Commissioning: A systematic process of ensuring that all building systems perform interactively according to the design intent and the owner's operational needs through the construction, acceptance and the warranty period with actual verification of performance. The commissioning process encompasses and coordinates the traditionally separate functions of system documentation, equipment startup, control system calibration, testing and balancing, performance testing and training.

Commissioning during the construction phase is intended to achieve the following specific objectives in accordance with the Contract Documents:

1. Verify that applicable equipment and systems are installed in accordance with manufacturer's recommendations and to industry accepted minimum standards and that they receive adequate operational checkout by installing contractor.
2. Verify and document proper performance of equipment and systems.
3. Verify that O&M documentation left on site is complete.
4. Verify that Owner's personnel are adequately trained.

The commissioning process does not take away from or reduce the responsibility of the system designers or installing contractor to provide a finished and fully functioning product.

- F. Commissioning Agent (CA): The CA directs and coordinates the day-to-day commissioning activities. The CA does not take an oversight role like the CM. The CA shall report directly to the Owner.
- G. Commissioning Plan: An overall plan, developed before or after bidding that provides the structure, schedule and coordination planning for the commissioning process.
- H. Contract Documents: The documents binding on parties involved in the construction of this project (drawings, specifications, change orders, amendments, contracts, *Cx Plan*, etc.).
- I. Contractor: The general contractor or authorized representative.
- J. Control System: The central building energy management control system.
- K. Construction Manager (CM): The prime contractor for this project. Generally refers to all the Trades as well. Also referred to as the Contractor, in some contexts. The CM is hired by the owner to and is authorized to oversee the fulfillment of all requirements of the Contract Documents.
- L. Datalogging: Monitoring flows, currents, status, pressures, etc. of equipment using stand-alone dataloggers separate from the control system.
- M. Deferred Functional Tests: FPT's that are performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions that disallow the test from being performed.
- N. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents (that is, does not perform properly or is not complying with the design intent).
- O. Design Intent: A dynamic document that provides the explanation of the ideas, concepts and criteria that are considered to be very important to the owner. It is initially the outcome of the programming and conceptual design phases.

- P. Design Narrative or Design Documentation: Sections of either the Design Intent or Basis of Design.
- Q. Factory Testing: Testing of equipment at the factory with an Owner's representative present.
- R. Functional Performance Test (FPT): Test of the dynamic function and operation of equipment and systems using manual (direct observation) or monitoring methods. Functional testing is the dynamic testing of systems (rather than just components) under full operation (e.g., the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure setpoint). Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc. The systems are run through all the control system's sequences of operation and components are verified to be responding as the sequences state. Traditional air or water test and balancing (TAB) is not functional testing, in the commissioning sense of the word. TAB's primary work is setting up the system flows and pressures as specified, while functional testing is verifying that which has already been set up. The commissioning authority develops the functional test procedures in a sequential written form, coordinates, oversees and documents the actual testing, which is performed by the installing contractor or vendor. FPT's are performed after prefunctional checklists and startup are complete.
- S. Indirect Indicators: Indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100 percent closed.
- T. Manual Test: Using hand-held instruments, immediate control system readouts or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").
- U. Monitoring: The recording of parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of control systems.
- V. Non-Compliance: See Deficiency.
- W. Non-Conformance: See Deficiency.
- X. Over-written Value: Writing over a sensor value in the control system to see the response of a system (e.g., changing the outside air temperature value from 50 to 75 degrees F to verify economizer operation). See also "Simulated Signal."
- Y. Owner-Contracted Tests: Tests paid for by the Owner outside the CM's contract and for which the CA does not oversee. These tests will not be repeated during functional tests if properly documented.
- Z. Phased Commissioning: Commissioning that is completed in phases (by floors, for example) due to the size of the structure or other scheduling issues, in order minimize the total construction time.

- AA. Prefunctional Tests and Checklists (PFT's): A list of items to inspect and elementary component tests to conduct to verify proper installation of equipment, provided by the CA to the Contractor. Prefunctional checklists are primarily static inspections and procedures to prepare the equipment or system for initial operation (e.g., belt tension, oil levels OK, labels affixed, gages in place, sensors calibrated, etc.). However, some prefunctional checklist items entail simple testing of the function of a component, a piece of equipment or system (such as measuring the voltage imbalance on a three phase pump motor of a chiller system). The word prefunctional refers to before functional testing. Prefunctional checklists augment and are combined with the manufacturer's start-up checklist. Even without a commissioning process, the contractor typically perform some, if not many, of the prefunctional checklist items a commissioning authority will recommend. However, few contractors document in writing the execution of these checklist items. Therefore, for most equipment, the contractor executes the checklists on their own. The CA only requires that the procedures be documented in writing, and does witness much of the prefunctional checklisting only items listed to be tested by sampling will not be witnessed fully.
- BB. Project Manager (PM): The individual employed by the Owner to be responsible for the overall management and oversight of the Project.
- CC. Sampling: Functionally testing only a fraction of the total number of identical or near identical pieces of equipment.
- DD. Seasonal Performance Tests: FPT's that are deferred until the system(s) will experience conditions closer to their design conditions.
- EE. Simulated Condition: Condition that is created for the purpose of testing the response of a system (e.g., applying a hair blower to a space sensor to see the response in a VAV box).
- FF. Simulated Signal: Disconnecting a sensor and using a signal generator to send an amperage, resistance or pressure to the transducer and DDC system to simulate a sensor value.
- GG. Startup: The initial starting or activating of dynamic equipment, including executing prefunctional checklists.
- HH. Trades: The contractor who provides and installs building components and systems.
- II. Test Procedures: The step-by-step process that must be executed to fulfill the test requirements. The test procedures are developed by the CA.
- JJ. Test Requirements: Requirements specifying what modes and functions, etc. shall be tested. The test requirements are not the detailed test procedures.
- KK. Trending: Monitoring using the building control system.
- LL. Vendor: Supplier of equipment.

- MM. Warranty Period: Warranty period for entire project, including equipment components. Warranty begins at Substantial Completion and extends for a period indicated in the Contract Documents and accepted submittals.

1.5 ABBREVIATIONS

- A. Abbreviations: The following are common abbreviations used in the Project Manual and in the Commissioning Plan.

| | |
|---|--|
| A/E - Architect and design Engineers | FPT - Functional performance test |
| CA - Commissioning Agent | MC - Mechanical Trade |
| CC - Controls Trade | PFT - Prefunctional tests and checklists |
| CM/PC - Construction Manager or Prime Contractor | PM - Project Manager (of the Owner) |
| Cx - Commissioning | Trades - The contractor or various trades |
| Cx Plan - Commissioning Plan document | TAB - Test, Adjusting & Balancing Trade |
| EC - Electrical Trade | |

1.6 COORDINATION

- A. Commissioning Team: The members of the commissioning team consist of the following:
1. Owner's Project Manager (PM);
 2. Commissioning Agent (CA);
 3. Designee of the Owner's Construction Management firm (CM);
 4. Architect and/or design engineers (particularly the mechanical engineer);
 5. Mechanical Trades (MC);
 6. Electrical Trades (EC);
 7. Representative of TAB Trades (TAB);
 8. Controls Trades (CC);
 9. Any other installers or suppliers of equipment;
 10. The building or plant operator/engineer.
- B. Management: The CA is hired by the Owner. The CA directs and coordinates the commissioning activities and reports to the Owner and CM. All members work together to fulfill their respective contracted responsibilities and to meet the objectives of the Contract Documents.
- C. Scheduling: The CA will work with the CM and the trades according to established protocols to schedule the commissioning activities. The CA will provide sufficient notice to the CM and Trades for scheduling commissioning activities. The CM will integrate all commissioning activities into the master schedule. All parties will address

scheduling problems and make necessary notifications in a timely manner in order to expedite the commissioning process.

1. The CA will provide the initial schedule of primary commissioning events at the commissioning coordination meeting. The "Commissioning Plan" provides a format for this schedule. As construction progresses more detailed schedules are developed by the CA in coordination with the Commissioning Team.

1.7 COMMISSIONING PROCESS

- A. Commissioning Plan: The "Commissioning Plan," is binding on the Contractor. The "Commissioning Plan" provides guidance in the execution of the commissioning process. After the initial commissioning coordination meeting the CA will update the plan, which will continue to evolve as the project progresses.
- B. Commissioning Process: The following narrative provides a brief overview of the typical commissioning tasks during construction and the general order in which they occur.
 1. Commissioning during construction begins with a coordination meeting conducted by the CA where the commissioning process is reviewed with the commissioning team members.
 2. Additional meetings will be required throughout construction, scheduled by the CA with necessary parties attending, to plan, scope, coordinate, and schedule future activities and resolve problems.
 3. Equipment documentation is submitted to the CA during normal submittals, including detailed start-up procedures.
 4. The CA works with the CM and Trades in developing startup plans and prefunctional documentation formats.
 5. In general, the checkout and performance verification proceeds from simple to complex, from component level to equipment to systems and intersystem levels with prefunctional checklists being completed before functional testing.
 6. The Trades, under the direction of the CM, execute and document the prefunctional checklists and perform startup and initial checkout. The CA documents that the checklists and startup were completed according to the approved plans. This will include the CA witnessing start-up of equipment.
 7. The CA develops specific equipment and system functional performance test procedures. The CM and Trades review the procedures and provide comments to CA.
 8. The procedures are executed by the Trades, under the direction of the CM, and documented by the CA.
 9. Items of non-compliance in material, installation or setup are corrected and the system retested.
 10. The CA reviews the O&M documentation for completeness.
 11. The CA reviews and pre-approves the training provided by the contractor and verifies that was completed.

12. The CM coordinates and facilitates the training sessions and is responsible for recording attendance at each session.
13. The contractor conducts the training sessions.
14. Commissioning is completed before Substantial Completion.
15. Deferred testing is conducted, as specified or required.

1.8 SUBMITTALS

- A. Submit under provisions of Div 1.
- B. The CA will provide the contractor with a specific request for the type of submittal documentation the CA requires to facilitate the commissioning work. These requests will be integrated into the normal submittal process and protocol of the construction team. At minimum, the request will include the manufacturer and model number, the manufacturer's printed installation and detailed start-up procedures, full sequences of operation, O&M data, performance data, any performance test procedures, control drawings and details of owner contracted tests. In addition, the installation and checkout materials that are actually shipped inside the equipment and the actual field checkout sheet forms to be used by the factory or field technicians shall be submitted to the Commissioning authority. All documentation requested by the CA will be included by the Trades in their O&M manual contributions.
- C. The CA will review and approve submittals related to the commissioned equipment for conformance to the Contract Documents as it relates to the commissioning process, to the functional performance of the equipment and adequacy for developing test procedures. This review is intended primarily to aid in the development of functional testing procedures and only secondarily to verify compliance with equipment specifications. The CA will notify the CM, PM or A/E as requested, of items missing or areas that are not in conformance with Contract Documents and which requires resubmission.
- D. The CA may request additional design narrative from the A/E and CC, depending on the completeness of the design intent documentation and sequences provided with the Specifications.
- E. These submittals to the CA do not constitute compliance for O&M manual documentation. The O&M manuals are the responsibility of the Contractor, though the CA will review and approve them.

1.9 OPERATION AND MAINTENANCE MANUALS

- A. Standard O&M Manuals:
 1. The specific content and format requirements for the standard O&M manuals are detailed in Division 1. Special requirements for the CC and TAB are found in Div 23.
 2. CA Review and Approval: Prior to substantial completion, the CA shall review the O&M manuals, documentation and redline as-builts for commissioned

systems to verify compliance with the Specifications. The CA will communicate deficiencies in the manuals to the CM, PM or A/E, as requested. Upon a successful review of the corrections, the CA recommends approval and acceptance of these sections of the O&M manuals to the CM, PM or A/E. The CA also reviews each equipment warranty and verifies that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

1.10 COMMISSIONING RECORD

A. Documentation of Commissioning Process:

1. The CA is responsible to compile, and organize the following commissioning data, by system, into indexed three-ring binders for delivery to the Owner. The Commissioning Record shall include 5 main sections:
 - a. Commissioning Plan
 - b. Final Commissioning Report
 - c. Systems and Energy Management Manual
 - d. Commissioning Testing Record
 - e. Training Record
 - f. Issues and Deficiencies Record
2. The Final Commissioning Report shall include:
 - a. Executive summary
 - b. List of participants and roles
 - c. Brief building description
 - d. Overview of commissioning and testing scope
 - e. General description of testing and verification methods.
 - f. Assessment of the adequacy of each system in the following areas:
 - 1) Meeting the equipment specifications
 - 2) Installation in accordance with design documents
 - 3) Functional performance and efficiency
 - 4) Meeting design intent
 - 5) Documentation and O&M manual content
 - 6) Conduct of operator training
3. The Commissioning Testing Record shall include:
 - a. Completed Prefunctional checklists and system startup forms
 - b. Completed functional performance testing forms for each system
4. The Training Record shall include:
 - a. Overall Training Plan
 - b. Written training plans
 - c. Attendance records

- d. Video training record (if required).
- 5. The Issues and Deficiencies Record shall include:
 - a. Open Items Listing
 - b. Closed Items Listing

1.11 COMMISSIONING RESPONSIBILITIES

- A. The responsibilities of various parties in the commissioning process are provided in this section. The responsibilities of the mechanical Trade, TAB Controls Trade are in Division 23 commissioning specifications. The responsibilities of the Electrical Trade are in Division 26 commissioning specifications. The services of the Project Manager, Construction Manager, Architect, HVAC mechanical and electrical designers/engineers, and Commissioning Agent are not provided for in this contract. That is, the Contractor is not responsible for providing their services. Their responsibilities are listed here to clarify the commissioning process.
- B. All Parties:
 - 1. Follow the Commissioning Plan.
 - 2. Attend the commissioning coordination meeting and additional meetings, as necessary.
- C. Architect (or A/E):
 - 1. Construction and Acceptance Phase:
 - a. The CM coordinates with the CA contract for the Owner.
 - b. Attend the commissioning coordination meeting and selected commissioning team meetings.
 - c. Perform normal submittal review, construction observation, record drawing preparation, O&M manual preparation, etc., as contracted.
 - d. Provide any design narrative documentation requested by the CA.
 - e. Coordinate resolution of system deficiencies identified during commissioning, according to the contract documents.
 - f. Provide design intent (BOD) and owners project requirement (OPR)
 - 2. Warranty Period:
 - a. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.
- D. Mechanical and Electrical Designers/Engineers (of the A/E):
 - 1. Construction and Acceptance Phase:
 - a. Perform normal submittal review, construction observation, record drawing preparation, etc., as contracted. One (1) site observation should be completed just prior to system startup.
 - b. Provide any design narrative and sequences documentation requested by the CA. The designers shall assist (along with the contractors) in clarifying the operation and control of commissioned equipment in areas where the

specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.

- c. Attend commissioning coordination meetings and other selected commissioning team meetings.
- d. Participate in the resolution of system deficiencies identified during commissioning, according to the contract documents.
- e. Review and approve the O&M manuals.
- f. From the Contractor's red-line drawings, edit and update one-line diagrams developed as part of the design narrative documentation and those provided by the vendor as shop drawings for the commissioned systems.
- g. Provide system overviews at the training sessions for the Owner's personnel.

2. Warranty Period:

- a. Participate in the resolution of non-compliance, non-conformance and design deficiencies identified during commissioning during warranty-period commissioning.

E. Commissioning Agent (CA):

1. The CA is not responsible for design concept, design criteria, compliance with codes, design or general construction scheduling, cost estimating, or construction management. The CA may assist with problem solving, non-conformance issues or deficiencies, but ultimately that responsibility resides with the CM and the A/E. The primary role of the CA is to develop and coordinate the execution of a testing plan, observe and document performance to verify that systems are functioning in accordance with the Contract Documents. The Contractors will provide all tools or the use of tools to start, check out and functionally test equipment and systems.
2. Construction and Acceptance Phase:
 - a. Coordinate and direct the commissioning activities in a logical, sequential and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consult with all necessary parties, frequently updated timelines and schedules and provide technical expertise.
 - b. Coordinate the commissioning work and, with the CM, ensure that commissioning activities are being scheduled into the master schedule.
 - c. Update the Commissioning Plan as the project progresses
 - d. Plan and conduct a commissioning coordination meeting and other commissioning meetings.
 - e. Request and review additional information required to perform commissioning tasks, including O&M materials, contractor start-up and checkout procedures.
 - f. Before startup, gather and review the current control sequences and interlocks and work with contractor and design engineers until sufficient

clarity has been obtained, in writing, to be able to write detailed testing procedures.

- g. Concurrent with the A/E reviews, review Contractor submittals for systems being commissioned for compliance with commissioning needs.
- h. Review and, where necessary, write and distribute prefunctional tests and checklists.
- i. Perform site visits, as necessary, to observe component and system installations.
- j. Attend selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.
- k. Witness selected parts of the piping tests and flushing procedures, sufficient to be confident that proper procedures are being followed. The contractor shall provide a minimum of two days notice to CA as to when testing shall be completed. Include Contractor's documentation of this testing and include the commissioning record.
- l. Witness selected parts of the ductwork testing and cleaning procedures, sufficient to be confident that proper procedures are being followed. The contractor shall provide a minimum of two days notice to CA as to when testing shall be completed. Include Contractor's documentation of this testing and include the commissioning record.
- m. Obtain Contractor Signature, fill in Prefunctional startup checklists, review and approve completed Prefunctional test and startup reports.
- n. Review TAB execution plan and readiness of CC to assist in the process.
- o. Review completed air and water balancing reports and verify by spot testing, and selected site observation.
- p. Write the functional performance test procedures for equipment and systems with assistance from installing contractors.
- q. Coordinate, witness and approve functional performance tests. Coordinate retesting as necessary until satisfactory performance is achieved.
- r. Analyze sufficient functional performance trend logs and monitoring data to verify performance.
- s. Maintain a master issues and deficiencies log separate from the testing record.
- t. Provide the CM and Owner with written progress reports noting substantive issues with recommended actions.
- u. Oversee and approve (but do not conduct) the training of the Owner's operating personnel.
- v. Review and approve the O&M manuals.
- w. Provide a final commissioning report (as described in this section).

3. Warranty Period:

- a. Coordinate and supervise required seasonal or deferred testing and deficiency corrections.
- b. Return to the site at 2 months prior to the end of the warranty period and review the commissioned systems and any outstanding issues with CM, contractors and the facilities staff. Identify issues requiring resolution prior to end of warranty.

F. Construction Manager (CM):

1. Construction and Acceptance Phase:

- a. Include the cost of commissioning (CM's and Trade content) in the total contract price.
- b. In each purchase order or subcontract written, include requirements for submittal data, O&M data, commissioning tasks and training.
- c. Furnish in a timely manner a copy of all construction documents, addenda, change orders and approved submittals and shop drawings related to commissioned systems and equipment to the CA.
- d. Ensure that all Trades execute their commissioning responsibilities according to the Contract Documents and schedule.
- e. Facilitate the coordination of the commissioning work by the CA, and, with the CA, ensure that commissioning activities are being scheduled into the master schedule.
- f. Attend a commissioning coordination meeting and other commissioning team meetings.
- g. Perform the normal review of submittals.
- h. Review the functional performance test procedures submitted by the CA, prior to testing.
- i. When necessary, observe and witness prefunctional checkout, startup and functional testing of selected equipment.
- j. Review commissioning progress and deficiency reports.
- k. Coordinate the resolution of non-compliance and design deficiencies identified in all phases of commissioning.
- l. Coordinate the training of owner personnel.
- m. Prepare O&M manuals, according to the Contract Documents, including clarifying and updating the original sequences of operation to as-built conditions.

2. Warranty Period:

- a. Assist the CA as necessary in the seasonal or deferred testing and deficiency corrections required by the specifications.
- b. Ensure that Trades execute seasonal or deferred functional performance testing, witnessed by the CA, according to the specifications.

- c. Ensure that Trades correct deficiencies and make necessary adjustments to O&M manuals and as-built drawings for applicable issues identified in any seasonal testing.
- G. Owner's Project Manager (PM):
 1. Construction and Acceptance Phase:
 - a. Manage the contract of the A/E and of the CM.
 - b. Arrange for facility operating and maintenance personnel to attend various field commissioning activities and field training sessions.
 2. Warranty Period:
 - a. Ensure that any seasonal or deferred testing and any deficiency issues are addressed.
- H. Trade Contractors (Division 23 and 26):
 1. Construction and Acceptance Phase:
 - a. Include and itemize cost of commissioning in contract price.
 - b. Include requirements for submittal data, commissioning documentation, O&M data and training in each subcontract written.
 - c. Attend commissioning scoping meeting and other meetings necessary to facilitate commissioning process.
 - d. Provide CA with normal cut sheets and shop drawing submittals of commissioned equipment.
 - e. Provide additional requested documentation to CA for development of start-up and functional testing procedures. This data request may be made prior to normal submittals.
 - f. Assist in clarifying operation and control of commissioned equipment in areas where the specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.
 - g. Provide assistance to the CA in preparing the specific functional performance test procedures. Review test procedures to ensure feasibility, safety and equipment protection and provide necessary written alarm limits to be used during the tests.
 - h. Develop full start-up and initial checkout plan using manufacturer's start-up procedures and prefunctional checklists from CA for commissioned equipment. Submit to CA for review and approval prior to startup.
 - i. Perform and document prefunctional checks, startup, and initial checkout for commissioned equipment. Provide a copy of all checklists and startup forms to the CA.
 - j. Address punch list items before functional testing.
 - k. Verify that air and water TAB is complete with discrepancies and problems remedied before performing functional testing of respective systems.

- l. Provide skilled technicians to execute starting of equipment and functional performance tests. Ensure that they are available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustments and problem solving.
 - m. Correct issues and deficiencies and retest equipment.
 - n. Prepare O&M manuals in accordance with Division 23, including clarifying and updating original sequences of operation to as-built conditions.
 - o. During construction, maintain as-built drawings. Update and submit after completion of commissioning.
 - p. Provide training of Owner's operating staff using qualified personnel familiar with the project.
 - q. Coordinate with equipment manufacturers to determine specific requirements to maintain warranty.
2. Warranty Period:
 - a. Execute seasonal or deferred functional performance testing, witnessed by CA in accordance with the specifications.
 - b. Correct deficiencies and make necessary adjustments to O&M manuals and as-built drawings for applicable issues identified in any seasonal testing.

1.12 SYSTEMS TO BE COMMISSIONED

A. The following systems will be commissioned on this project:

1. Mechanical Systems
 - a. Boiler Heating System – two existing boilers
 - b. Heating Hot Water Pumps and VFD's
 - c. Water to Water Ground Source Heat Pumps
 - d. Dual Temperature Primary/Secondary Pumps and VFD's
 - e. Rooftop Air Handling Units (Water-Source)
 - f. Distributed Outdoor Air Units (Air-Source)
 - g. Kitchen Make-Up Rooftop Units/Exhaust Air Systems
 - h. Existing and New Fan Coil Units
 - i. Existing and New Exhaust Fans
 - j. Kitchen Make-up Air Unit and Exhaust Fans
 - k. Split Air Conditioning Units
 - l. Piping and Valves
 - m. Ducts and Dampers
 - n. Duct and Piping Insulation
 - o. Building Management System
2. Plumbing Systems
 - a. Domestic Hot Water System
3. Electrical Systems
 - a. Lighting Controls

PART 2 - PRODUCTS

2.1 TEST EQUIPMENT

- A. All testing equipment required to perform startup, initial checkout, and functional performance testing shall be provided by the Division Contractor.
- B. Two-way radios shall be provided by the Division Contractor during functional testing activities.
- C. Include special tools and instruments required for testing, according to the Contract Documents. Refer to Trade Divisions for details.
- D. All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Project Specifications.

PART 3 - EXECUTION

3.1 MEETINGS

- A. Commissioning Kick-Off Meeting: Within 90 days of commencement of construction, the CA will schedule, plan and conduct a commissioning coordination meeting with the entire commissioning team in attendance. Meeting minutes and updated test plans will be distributed to all parties by the CA.
- B. Routine Commissioning Meetings: Periodic meetings will be planned and conducted by the CA as construction progresses. These meetings will cover coordination, deficiency resolution and planning issues with particular Trades. The CA will plan these meetings to minimize time spent by Trades. These meetings will increase in frequency as the project draw closer to completion.

3.2 REPORTING

- A. The CA will provide regular reports to the Owner and CM, with increasing frequency as construction and commissioning progresses.
- B. The CA will regularly communicate with all members of the commissioning team, keeping them apprised of commissioning progress, issues and deficiencies, and scheduling changes through memos, progress reports, etc.
- C. The CA will provide a Final Commissioning Report to the Owner and CM as described in Section 1.10, Commissioning Record.

3.3 PREFUNCTIONAL CHECKLISTS AND START-UP

- A. The following procedures apply to all systems and equipment to be commissioned.

- B. General: Prefunctional tests and checklists (PFT's) are important to ensure that the equipment and systems are connected properly and are operational. PFT's ensure that functional performance testing may proceed without unnecessary delays. The Contractor shall be responsible for performing Prefunctional testing. EVERY piece of equipment receives a full Prefunctional checkout.
- C. The primary role of the CA in this process is to ensure that there is written documentation and that each of the manufacturer-recommended procedures have been completed.
 - 1. The CA prepares prefunctional checklists for typical MEP systems. These checklists are provided to the CM for distribution to the responsible trade(s). Each form may have more than one trade responsible for its execution.
 - 2. The Trade responsible for the purchase of the equipment develops a full start-up plan by combining the CA's checklists with the manufacturer's detailed start-up and checkout procedures.
- D. Execution of Prefunctional Checklists and Startup:
 - 1. Trade schedule startup and checkout with the CM and CA.
 - 2. The Trades and vendors shall execute startup in the presence of the CA and provide the CA with a signed and dated copy of the completed start-up and prefunctional tests and checklists. Only individuals that have direct knowledge and have witnessed that a line item task on the Prefunctional checklist was actually performed shall initial or check off that item.
 - 3. The CA will observe selected Prefunctional tests and startup procedures.
 - 4. The CA will review ALL Prefunctional test forms furnished by the Trades and compile in Commissioning Record.
- E. Issues and Deficiency Resolution:
 - 1. The Trades shall clearly list any issues and deficiencies identified in the initial start-up and PFT procedures and return the completed test form to the CA within two days.
 - 2. Problem Solving: The CA shall work with the CM and Trades to correct issues or deficiencies. The CA will involve the CM, the A/E and others as necessary. The CA may recommend solutions to problems found, however the burden of responsibility to solve, correct and retest problems is with the CM, Trades and A/E.
 - 3. The installers shall correct all areas that are deficient in a timely manner and notify the CA as soon as outstanding items have been corrected. An updated PFT form shall be submitted to CA when complete.
 - 4. Upon completion of all associated PFT's, the system will then be scheduled for functional performance testing by the Commissioning Team.

3.4 FUNCTIONAL PERFORMANCE TESTING

- A. This article applies to all commissioning functional testing for all divisions.
- B. A detailed list of systems to be commissioned is referenced in Section 1.12, "SYSTEMS TO BE COMMISSIONED". The specific equipment to be tested is found in the applicable commissioning sections of Divisions 23 and 26.
- C. The appropriate parties responsible to execute each portion of the functional test shall be coordinated by the CA.
- D. Objectives and Scope: The objective of functional performance testing is to demonstrate that each system is operating according to the design intent and Contract Documents.
- E. In general, each system will be tested in all modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load, etc.).
- F. Development of Test Procedures:
 - 1. The Trades provide CM and CA with documents describing final approved equipment, configuration and control sequences.
 - 2. The CA develops specific test procedures and forms to verify and document proper operation of each system.
 - 3. Prior to execution, the CA shall provide a copy of the test procedures to the Contractor who shall review the tests for feasibility, safety, equipment and warranty protection.
 - 4. The CM will provide the CA with copies of owner-contracted, factory testing or acceptance tests that the CA is not responsible to oversee. The CA shall include these tests in the Commissioning Record.
- G. Sample Forms:
 - 1. The test procedure forms developed by the CA shall include (but not be limited to) the following information:
 - a. System and equipment or component name(s)
 - b. Equipment location and ID number
 - c. Unique test ID number, and reference to unique prefunctional checklist and start-up documentation ID numbers for the piece of equipment
 - d. Date
 - e. Project name
 - f. Participating parties
 - g. A copy of the specification section describing the test requirements
 - h. A copy of the specific sequence of operations or other specified parameters being verified
 - i. Formulas used in any calculations

- j. Required pre-test field measurements
- k. Instructions for setting up the test.
- l. Special cautions, alarm limits, etc.
- m. Specific step-by-step procedures to execute the test, in a clear, sequential and repeatable format.
- n. Acceptance criteria of proper performance with a Yes / No check box to allow for clearly marking whether or not proper performance of each part of the test was achieved.
- o. A section for comments
- p. Signatures and date block for the CA

H. Test Methods:

- 1. Functional performance testing and will generally be achieved by manipulating the control systems or equipment and observing system response. Means by which manipulation may occur include:
 - a. Simulated Conditions
 - b. Overwritten Values
 - c. Simulated Signals
 - d. Altering Setpoints
- 2. Setup: Each test shall be performed under conditions that simulate actual conditions as close as practically possible.
- 3. Trend logging or data loggers may be used to confirm short or long term system response and performance.
- 4. At completion of a test, the Trade shall return all affected building equipment and systems to their pre-test conditions.
- 5. Sampling: Multiple identical pieces of non-life-safety or non-critical equipment may be functionally tested using a sampling strategy. Systems to be tested by sampling methods, if any, are identified in Section 1.12 "SYSTEMS TO BE COMMISSIONED". If sampling strategy is applied, the CA shall define systems appropriate for sampling and specify sampling population. Note: No sampling will be allowed in prefunctional checklist execution.
 - a. The following strategy ("xx% Sampling—yy% Failure Rule") shall be utilized when functional performance testing is applied to a sample of the project systems:
 - xx = the percent of the group of identical equipment to be included in each sample.
 - yy = the percent of the sample that if failing, will require another sample to be tested.
 - b. The example below describes a 20% Sampling—10% Failure Rule.
 - 1) Randomly test at least 20 percent (xx) of each group of identical equipment. In no case test less than three units in each group. This 20 percent, or three, constitute the "first sample."

- 2) If 10 percent (yy) of the units in the first sample fail the functional performance tests, test another 20 percent of the group (the second sample).
- 3) If 10 percent of the units in the second sample fail, test all remaining units in the whole group.
- 4) If at any point, frequent failures are occurring and testing is becoming more troubleshooting than verification, the CA may stop the testing and require the responsible Trade to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

I. Coordination and Scheduling:

1. The contractor shall provide sufficient notice to the CA regarding their completion schedule for the prefunctional checklists and startup of all equipment and systems. The CA will schedule functional tests through the CM and related Trades. The CA shall direct, witness and document the functional testing of all equipment and systems. The Trades shall execute the tests.
2. Functional testing is conducted after prefunctional testing and startup has been satisfactorily completed. The control system is sufficiently tested and approved by the CA before it is used for TAB or to verify performance of other components or systems. The air balancing and water balancing is completed and debugged before functional testing of air-related or water-related equipment or systems. Testing proceeds from components to subsystems to systems. When the proper performance of all interacting individual systems has been achieved, the interface or coordinated responses between systems is checked.

J. Test Equipment: Refer to Section 2.1, "TEST EQUIPMENT", for test equipment requirements.

K. Issues and Deficiency Resolution: (See Section 3.5, "ISSUES, DEFICIENCIES AND COST OF RETESTING")

3.5 ISSUES, DEFICIENCIES AND COST OF RETESTING

A. Issues and Deficiencies:

1. All issues and deficiencies shall be noted in the Issues and Deficiencies Log by the CA.
2. The CA shall work with the CM and Trades to correct issues or deficiencies identified during functional testing. The CA will involve the CM, the A/E and others as necessary. The CA may recommend solutions to problems found, however the burden of responsibility to solve, correct and retest problems is with the CM, Trades and A/E.
3. Corrections of minor deficiencies identified may be made during the tests at the discretion of the CA. In such cases the deficiency and resolution will be documented on the procedure form.

4. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the CA will not be pressured into overlooking deficient work or loosening acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so at the request of the CM or Owner.
5. As tests progress and a deficiency is identified, the CA discusses the issue with the contractor.
 - a. When there is no dispute on the deficiency and the Trade accepts responsibility to correct it and notifies the CA of completion.
 - 1) The CA reschedules the test and the test is repeated.
 - b. If there is a dispute about a deficiency, regarding whether it is a deficiency or who is responsible:
 - 1) Once the interpretation and resolution have been decided, in cooperation with the CM, the appropriate party corrects the deficiency and notifies the CA of completion.
 - 2) The CA reschedules the test and the test is repeated.
6. The CA retains the original Issues and Deficiencies Log until the end of the project.

B. Cost of Retesting:

1. The cost for the Trade to retest a prefunctional or functional test, if they are responsible for the deficiency, shall be theirs. If they are not responsible, any cost recovery for retesting shall be negotiated with the CM.
2. For a deficiency not related to any prefunctional checklist or start-up fault, the following shall apply: The CA and CM will direct the retesting of the equipment once at no "charge" for their time. However, the CA's time for a second retest will be charged to the CM.
3. The time for the CA and CM to direct any retesting on systems or equipment reported to have been successfully completed, but determined during functional testing to be faulty, will be back charged by the CM to the trade responsible for necessitating the retesting.
4. Refer to the sampling article of this section for requirements for testing and retesting identical equipment.
5. Any required retesting shall not be considered a justified reason for a claim of delay or for a time extension by the Contractor or any trade.

3.6 TRAINING OF OWNER'S PERSONNEL

A. Training – General Responsibilities

1. The CM and the trades shall be responsible for training coordination, scheduling, and ultimately for ensuring that training is completed.
2. The CM shall be responsible for recording attendance at each training session.

3. The CA develops an overall training plan and coordinates this with the CM. The CA develops criteria for determining that the training was satisfactorily completed.

B. Training Planning

1. The CA shall be responsible for overseeing and approving the content and adequacy of the training of Owner personnel for commissioned equipment.
 - a. The CA shall interview the facility manager and lead engineer to determine the special needs and areas where training will be most valuable. The Owner and CA shall decide how rigorous the training should be for each piece of commissioned equipment. The CA shall communicate the results to the contractor and trades who have training responsibilities.
 - b. Major training topics and minimum contractor/vendor training time requirements are specified in Division 23 and 26.
 - c. Each Trade is responsible for training will submit a written training plan to the CA 2 months prior to planned training for review and approval. The plan will cover the following:
 - 1) Equipment included in training
 - 2) Intended audience
 - 3) Location of training
 - 4) Objectives
 - 5) Subjects covered (description, duration of discussion, special methods, etc.)
 - 6) Duration of training on each subject
 - 7) Instructor for each subject
 - 8) Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
 - 9) Instructor and qualifications
 - d. For the primary HVAC equipment, the Controls trade shall provide a short discussion of the control of the equipment during the mechanical or electrical training conducted by others.

C. Training Execution

1. Training shall occur after functional testing is complete, unless approved otherwise by Owner's representative.
2. Training shall normally start with classroom sessions followed by hands-on sessions for each piece of equipment. Various modes of operation shall be demonstrated.
3. Training shall include:
 - a. Use of printed installation, operation and maintenance instruction material included in O&M manuals.
 - b. Review of written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. Training shall include start-up, operation in modes possible, shutdown, seasonal changeover and any emergency procedures.
 - c. Discussion of relevant health and safety issues and concerns.
 - d. Discussion of warranties and guarantees.

- e. Common troubleshooting problems and solutions.
 - f. Explanatory information included in O&M manuals and location of plans and manuals in the facility.
 - g. Discussion of any peculiarities of equipment installation or operation.
 - h. Classroom sessions shall include use of overhead projections, slides, video and audio taped material as might be appropriate.
4. Hands-on training shall include start-up, operation in all modes possible, including manual, shutdown and any emergency procedures and preventative maintenance for all pieces of equipment.

3.7 DEFERRED AND SEASONAL TESTING

- A. **Seasonal Testing:** During the warranty period, seasonal testing (tests delayed until weather conditions are closer to the system’s design) shall be completed as part of this contract. The CM shall coordinate this activity. Tests will be executed, documented and deficiencies corrected by the appropriate Trades, with facilities staff and the CA witnessing. Any final adjustments to the O&M manuals and as-built documentation will be made.
- B. **Unforeseen Deferred Tests:** If any check or test cannot be completed due to building readiness, required occupancy, or specific deficiency, functional testing may be delayed upon approval of the PM. These tests will be conducted in the same manner as the seasonal tests.

3.8 WRITTEN WORK PRODUCTS

- A. The commissioning process generates a number of written work products described in various parts of the Project Manual. The Commissioning Plan lists all the formal written work products, describes briefly their contents, who is responsible to create them, their due dates, who receives and approves them and the location of the specification to create them. In summary, the written products are:

| | Product | Developed By |
|----|--|------------------------------|
| 1. | Final commissioning plan | CA |
| 2. | Meeting minutes | CA |
| 3. | Commissioning schedules | CA with CM |
| 4. | Equipment submittals | Contractor |
| 5. | Sequence clarifications | Contractor and A/E as needed |
| 6. | Prefunctional checklist forms | CA with assistance of Trades |
| 7. | Prefunctional checklist and contractor/vendor startup forms (filled out) | Trades in presence of CA |
| 8. | Preliminary and Final TAB reports | TAB |
| 9. | Issues and Deficiencies Log | CA |

| | Product | Developed By |
|-----|--|-------------------------------------|
| 10. | Commissioning Progress Reports | CA |
| 11. | Functional Performance Test forms | CA |
| 12. | Functional Performance Test forms (filled out) | CA with assistance of Trades |
| 13. | O&M manuals | Contractor |
| 14. | Commissioning Record | CA |
| 15. | Overall training plan | CA and CM with assistance of Trades |
| 16. | Specific training agendas | Trades with assistance of vendors |
| 17. | Final Commissioning Report | CA |

PART 4 – SAMPLE PREFUNCTIONAL CHECKLISTS

- A. The following pages are not project specific however these checklists are meant to give an example of the rigor test that is expected for checklists, tests, etc.

Client – Project Name

Air Handling Unit

PRE-FUNCTIONAL SYSTEM CHECKLIST

| | | | |
|------------------------------|-------------|-------------------------------|-------------|
| Mechanical Contractor | Date | Controls Contractor | Date |
| Electrical Contractor | Date | Sheet Metal Contractor | Date |
| Contractor | Date | General Contractor | Date |

| | | | |
|---|-----------|---------------------|------------|
| PROJECT: <i>Project Name</i> | | SYSTEM I.D.# | |
| LOCATION: <i>City, NY</i> | | EQUIPMENT | AHU |
| | | I.D.# | |
| B. ITEM | OK | COMMENT | |
| AHU | | | |
| 6" housekeeping pad installed | | | |
| Check mountings (shipping bolts removed) | | | |
| Verify equipment guards installed | | | |
| Pulleys aligned and belt tension correct | | | |
| Plenums clear and free of loose material | | | |
| Fan rotates freely | | | |
| Fan motor and linkages lubricated | | | |
| Fire and balance dampers free to operate | | | |
| Motorized dampers move freely and stroke when commanded | | | |
| Temporary start-up construction filters installed. | | | |
| Electrical connections complete | | | |
| Disconnect switch installed | | | |
| VFD installed and started | | | |
| Fan room clean for start-up | | | |
| Hot water coil clean and clear-piping complete | | | |
| Cooling coil clean and piping complete | | | |
| Condensate drains clear and piped | | | |
| Humidifier section installation completed | | | |

| | | |
|---|-----------|-----------------------------------|
| PROJECT: <i>Project Name</i> | | SYSTEM I.D.# |
| LOCATION: <i>City, NY</i> | | EQUIPMENT I.D.# AHU |
| B. ITEM | OK | COMMENT |
| Safety controls operational | | |
| Ductwork clean and sealed | | |
| ATC controls complete (point to point checkout) | | |
| Bump fan to check rotation (VFD and bypass) | | |
| CHILLED WATER COIL EQUIPMENT | | |
| Shut off valves supply and return installed. | | |
| Strainer installed. | | |
| (2) Way modulating control valve installed. | | |
| Thermometers -supply and return installed. | | |
| Flushing connection / air vent installed. | | |
| Drain valve installed. | | |
| Balancing valve installed. | | |
| Flow measurement device installed | | |
| Condensate drain pan trapped and piped. | | |
| HOT WATER PREHEAT COIL | | |
| Supply shut off valve installed. | | |
| Strainer installed. | | |
| Flow measurement device installed | | |
| Thermometers - supply and return installed. | | |
| Automatic air vent installed. | | |
| Drain valve installed. | | |
| Balancing valve installed. | | |
| Flow measurement device installed | | |
| (2) Way modulating control valve installed. | | |
| Return shut off valve with memory stop installed. | | |
| HUMIDIFIER BANK EQUIPMENT | | |
| Shut off valve installed. | | |
| Strainer installed. | | |
| Steam trap assembly installed | | |
| Steam modulating control valve installed. | | |
| Steam trap assembly installed | | |
| Condensate bypass with shut-off installed | | |
| Min 6" dirt leg installed | | |
| Gate valve shut off installed. | | |
| Aftercooler with cooling water piped to drain | | |

| | | | |
|--|-----------|---------------------|------------|
| PROJECT: <i>Project Name</i> | | SYSTEM I.D.# | |
| LOCATION: <i>City, NY</i> | | EQUIPMENT | AHU |
| | | I.D.# | |
| | | | |
| B. ITEM | OK | COMMENT | |
| Check vertically mounted dispersion tube is clean. | | | |
| Casing penetrations are sealed and will not leak | | | |
| Drain pan trapped and piped | | | |
| COMMENTS: | | | |
| | | | |
| PRE-START BY: | | DATE: | |
| START-UP BY: | | DATE: | |
| | | | |

SAMPLE

Client – Project Name

Air Handling Unit

FUNCTIONAL PERFORMANCE TEST – RECORD SHEET

A. Documentation Requirements

Prior to the functional performance test and verification process, the Commissioning Agent requires the following documentation:

1. Air and Water Balancing Report
2. Operations and Maintenance Data
3. Verification of Warranty Periods on Equipment
4. Verify Owner Training is Complete

PRODUCT DATA SHEET 1 - B. System Components

Prior to the functional performance and verification process, the Commissioning Agent shall verify all major system components, capacities, configurations and support functions are consistent with the design or documentation received. The following shall be verified:

1. AHU Identification

Supply Fan Identification _____

Return Fan Identification _____

| HP | RPM | Voltage | Phase | FLA |
|----|-----|---------|-------|-----|
| | | | | |
| | | | | |

2. Supply Fan Motor Performance:

Return Fan Motor Performance:

3. Verify factory start-up has been performed and reports submitted:

- AHU per specification section XXXX-XX.
- VFD's per specification section XXXX-XX.

Compliance: _____

Non-compliance: _____

Remarks:

4. Verify duct insulation is applied in accordance with specification section XXXXX:

- Air conditioning ducts in concealed locations are to be insulated with XX" rigid or flexible fiberglass.
- Air conditioning ducts in exposed locations and mechanical rooms are to be insulated with XX" rigid fiberglass

Compliance: _____

Non-compliance: _____

Remarks:

5. Verify installation of duct lagging (acoustic insulation) where required per the contract documents:
 ➤ Verify that duct lagging has been installed per detail X on drawing XXXX.

Compliance: _____
 Non-compliance: _____

Remarks:

6. Verify fan rotation, lubrication and belt alignment for both supply fans and the return fan.

Compliance: _____
 Non-compliance: _____

Remarks:

7. Verify construction start-up filters were removed and replaced with new filters:
 ➤ Pre-filters (30% pleated)
 ➤ Final Filters (60% pleated)
 ➤ HEPA Filters (90% cartridge)

Compliance: _____
 Non-compliance: _____

Remarks:

8. Verify unit is installed with ample clearance for maintenance and repair of all components.
 ➤ Verify supply and return fan access and coil pull space.

Compliance: _____
 Non-compliance: _____

Remarks:

9. Verify fans have been statically and dynamically balanced:
 ➤ Observe operation for evidence of extensive vibration or noise.

Compliance: _____
 Non-compliance: _____

Remarks:

10. Verify motor efficiency complies with specification section XXXXX.

Compliance: _____
 Non-compliance: _____

Remarks:

| | | | |
|----------------------------------|------------|--|-----------|
| 11. Verify unit installation: | | | |
| | Yes | | No |
| Return Fan Section | | | |
| Belt Guard | N/A | | |
| Fan Spring Isolators | N/A | | |
| Extended Lube Lines | N/A | | |
| Economizer/Mixing Section | | | |

| | | | |
|--------------------------------------|-----|--|--|
| Outdoor Air Damper w/ Actuator | X | | |
| Mixed Air Damper w/ Actuator | X | | |
| Exhaust Air Damper | X | | |
| Pre-Filter Section | | | |
| 2" Pleated Pre-Filter Section | X | | |
| Filter Rack Blank-off Plates | X | | |
| Filter Section | | | |
| 4" (65%) Pleated Pre-Filter Section | X | | |
| Filter Rack Blank-off Plates | X | | |
| Heating Coil Section | | | |
| Hot Water Heating Coil | X | | |
| Stainless Steel Drain Pan | X | | |
| Cooling Coil Section | | | |
| Chilled Water Cooling Coil | X | | |
| Stainless Steel Condensate Drain Pan | X | | |
| Condensate Drain Line and Trap | X | | |
| Supply Fan Section | | | |
| Belt Guard | N/A | | |
| Fan Spring Isolators | N/A | | |
| Extended Lube Lines | N/A | | |
| Discharge Plenum | | | |
| | | | |

Remark

s:

12. Verify installation of convenience outlet, sectional marine lights and single point power connection with non-fused disconnect per schedule notes on drawing XXXX.

Compliance: _____
Non-compliance: _____

Remarks:

13. Verify installation of maganhelic filter differential pressure gauge per specification section XXXXX.
- Record gauge range and compare with specification section XXXXX.
 - Verify gauges installed across each filter bank.

Compliance: _____
Non-compliance: _____

Remarks:

14. Verify installation of supply and return smoke/isolation dampers as required per the contract documents.
- Verify that access doors have been installed for visual inspection per specification section XXXX.

Compliance: _____
Non-compliance: _____

Remarks:

15. Verify installation of fire dampers as required per the contract documents.
- Verify that access doors have been installed for visual inspection per specification section XXXX.

Compliance: _____
 Non-compliance: _____

Remarks:

16. Verify chilled water coil piping arrangement per detail X on drawing XXXX:

| | Yes | No |
|------------------------------------|-----|----|
| CHWS Isolation Valve | | |
| CHWS Strainer w/ Blowdown Valve | | |
| CHWS 2-Way Control Valve | | |
| CHWS Thermometer | | |
| CHWS Automatic Air Vent w/ Petcock | | |
| CHWS Hose End Drain Valve | | |
| CHWR Balancing Valve | | |
| CHWR Thermometer | | |
| CHWR Automatic Air Vent w/ Petcock | | |
| CHWR Hose End Drain Valve | | |
| Coil Automatic Air Vent w/ Petcock | | |
| Coil Hose End Drain Valve | | |
| Piping Insulation Complete | | |
| Piping Identification Installed | | |
| Valve Tagging Complete | | |

Remarks:

17. Verify installation of CHWS/CHWR manifold pressure gauge with petcocks per detail X on drawing XXXX.
- Record gauge range and compare with specification section XXXX.

Compliance: _____
 Non-compliance: _____

Remarks:

18. Verify installation of stainless steel CHW coil condensate drain pan.
- Verify drain pan is pitched towards drain connections.

Compliance: _____
 Non-compliance: _____

Remarks:

19. Verify installation of cooling condensate drain line and trap per detail X on drawing XXXX.

Compliance: _____
 Non-compliance: _____

Remarks:

20. Verify hot water coil piping arrangement per detail 11 on drawing M402:

| | Yes | No |
|------------------------------------|-----|----|
| HWS Isolation Valve | | |
| HWS Strainer w/ Blowdown Valve | | |
| HWS 2-Way Control Valve | | |
| HWS Thermometer | | |
| HWS Automatic Air Vent w/ Petcock | | |
| HWS Hose End Drain Valve | | |
| HWR Balancing Valve | | |
| HWR Thermometer | | |
| HWR Automatic Air Vent w/ Petcock | | |
| HWR Hose End Drain Valve | | |
| Coil Automatic Air Vent w/ Petcock | | |
| Coil Hose End Drain Valve | | |
| Piping Insulation Complete | | |
| Piping Identification Installed | | |
| Valve Tagging Complete | | |

Remark
s:

21. Verify installation of HW coil freeze protection pump.

Compliance: _____
Non-compliance: _____

Remarks:

22. Freeze Pump Identification
Motor Performance:

| HP | Voltage | Phase |
|----|---------|-------|
| | | 3 |

Nameplate FLA (amps)

23. Verify piping arrangement and support equipment to heating coil freeze pump per detail on drawing XXXXX:

| | Yes | No |
|---------------------------------------|-----|----|
| Suction Side Isolation Valve | | |
| Freeze Pump | | |
| Discharge Side Isolation Valve | | |
| Pressure Gauge w/ Shut-Off Valves | | |
| Differential Pressure Switch (Status) | | |
| By-Pass Line w/ Check Valve | | |

Remarks:

24. Verify installation of HWS/HWR manifold pressure gauge with petcocks per detail X on drawing XXXX.

- Record gauge range and compare with

Compliance: _____
Non-compliance: _____

specification section XXXX.

Remarks:

25. Verify installation of supply and return fan variable speed drive(s) w/ HOA switch. Compliance: _____
Non-compliance: _____
- Record make and model.
 - Record minimum drive speed.

Remarks:

26. Verify installation of vibration isolation and seismic restraint as required per specification section XXXX. Compliance: _____
Non-compliance: _____
- Compare with vibration/seismic submittal.
 - Verify compliance with vibration/seismic engineer final report as required per specification section XXXX.

Remarks:

27. Verify all equipment (supply fan, return fan, air handling unit, VFD) have been labeled. Compliance: _____
Non-compliance: _____

Remarks:

28. Verify installation of **supply** and **return** duct smoke detector(s) and associated remote test switches. Compliance: _____
Non-compliance: _____
- Verify multiple detectors have been installed as required per drawings.
 - Record location(s).

Remarks:

29. Verify rooftop air handling unit is power under stand-by/emergency power per drawing XXXX: Compliance: _____
Non-compliance: _____
- Record panel designation.

Remarks:

PRODUCT DATA SHEET 2 - C. Functional Performance Testing

1. Verify start/stop capability and occupancy schedule operation through the BAS: Compliance: _____
Non-compliance: _____
- Record occupancy schedule parameters.

Remarks:

2. Verify installation/operation of the **return** air duct temperature sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The return air temperature sensor is calibrated within X deg F.***

3. Verify installation/operation of the **return** air duct relative humidity sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The return air humidity sensor is calibrated within X % RH.***

4. Verify installation/operation of the **return** duct CO₂ sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The return air CO₂ sensor is calibrated within X ppm.***

5. Verify installation/operation of the **return** duct static pressure sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The return duct static pressure sensor is calibrated within X inches.***

6. Verify installation/operation of the **mixed air** temperature sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The mixed air temperature sensor is calibrated within X deg F.***

7. Verify installation/operation of the **heating coil discharge air** temperature sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The discharge air temperature sensor is calibrated within X deg F.***

8. Verify installation/operation of the **supply** air duct temperature sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The supply air temperature sensor is calibrated within X deg F.***

9. Verify installation/operation of the **supply** air duct relative humidity sensor: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks: ***The supply air humidity sensor is calibrated within X % RH.***

10. Verify installation/operation of the **supply air distribution system** duct static pressure sensor(s): Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.
 - Record setpoint.

Remarks: ***The supply air distribution duct static pressure sensor are calibrated within X inches.***

11. Verify installation/operation of the **supply** airflow measuring station: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks:

12. Verify installation/operation of the **return** airflow measuring station: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks:

13. Verify installation/operation of the **outdoor air** airflow measuring station: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks:

14. Verify operation of supply and return fan VFD w/ HOA switches. Compliance: _____
Non-compliance: _____
- Verify start/stop capability through the BAS.
 - Verify operation of HOA switch.

Remarks:

15. Verify supply and return fan status is properly reported through the BAS. Compliance: _____
Non-compliance: _____
- Record parameters.

Remarks:

16. Verify freeze pump status is properly reported through the BAS.
 ➤ Record parameters.

Compliance: _____
 Non-compliance: _____

Remarks:

17. Verify that the supply and return fans are interlocked with the smoke/isolation dampers.
 ➤ Record parameters.

Compliance: _____
 Non-compliance: _____

Remarks:

18. Verify outdoor air, return air and exhaust air damper operation through the BAS.
 ➤ Record parameters for damper tracking.

Compliance: _____
 Non-compliance: _____

Remarks:

Fan Performance

19. Record fan performance at full flow (60 Hz.) w/ all terminal boxes commanded open:
 a. Supply Fan
 b. Return Fan

| Airflow (cfm) | Total Pressure (inches) | |
|---------------|-------------------------|-----------|
| | Inlet | Discharge |
| | | |
| | | |

Remarks:

20. Record fan motor performance at full flow:
 a. Supply Fan
 b. Return Fan

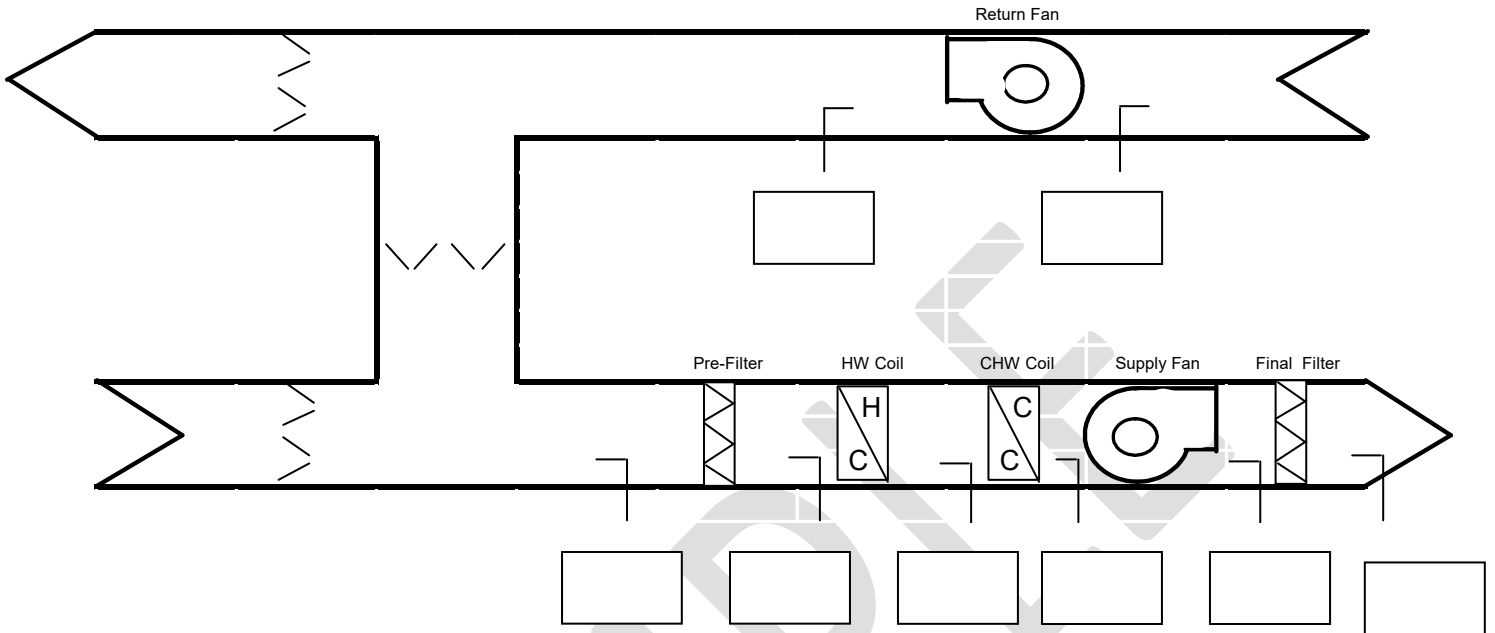
| Voltage (volts) | Amperage (amps) | Frequency (Hz.) |
|-----------------|-----------------|-----------------|
| | | |
| | | |

Remarks:

21. Measure and record unit static pressure profile during full flow performance (see diagram below).

Compliance: _____
 Non-compliance: _____

Remarks:



Unoccupied Mode

22. Verify unit operation during unoccupied mode when the **outdoor air temperature is above 45 deg F**.
Verify the following occurs:
- The supply and return fans are de-energized.
 - The outdoor air and exhaust air dampers are closed and the return air damper is open.
 - The heating coil and cooling coil control valves are commanded closed.
 - The freeze pump is commanded OFF.

Compliance: _____
Non-compliance: _____

Remarks:

23. Verify unit operation during unoccupied mode when the **outdoor air temperature is below 45 deg F**.
Verify the following occurs:
- The supply and return fans are de-energized.
 - The outdoor air and exhaust air dampers are closed and the return air damper is open.
 - The cooling coil control valve is commanded closed.
 - The heating coil valve modulates open to maintain a mixed air temperature setpoint (65 deg F, adjustable).
 - The freeze pump is commanded ON.

Compliance: _____
Non-compliance: _____

Remarks:

Night Set-Up Mode

24. Verify unit operation during unoccupied cooling mode. Verify the following occurs:

- If the average zone temperature rises above setpoint (80 deg F, adjustable) then the air handling unit will be indexed to occupied mode (see below).
- Record final night setback temperature setpoints (average zone temperature, etc.).

Compliance: _____
Non-compliance: _____

Remarks:

Night Set-Back Mode

25. Verify unit operation during unoccupied heating mode. Verify the following occurs:

- If the average zone temperature drops below setpoint (65 deg F, adjustable) then the air handling unit will be indexed to occupied mode (see below).
- Record final night setback temperature setpoints (average zone temperature, etc.).

Compliance: _____
Non-compliance: _____

Remarks:

Occupied Mode

26. Verify unit operation during occupied mode. Verify the following occurs:

- The supply fan is energized and modulates to maintain the duct static pressure setpoint.
- The return fan is energized and modulates to maintain the SA/RA differential setpoint. Record setpoint.
- The outdoor air damper will modulate open to maintain the minimum outdoor airflow setpoint.
- The return and exhaust/relief dampers will modulate to maintain design airflow.
- The outdoor air damper, HW coil and CHW coil modulate, without overlap, to maintain the discharge air temperature setpoint.

Compliance: _____
Non-compliance: _____

Remarks: ***The supply and return fans are programmed to track 1:1 and are offset through the variable frequency drive offset (see fan performance above).***

CO₂ Control

27. Verify operation of CO₂ control mode sequence: Compliance: _____
 Non-compliance: _____
- The BAS will modulate the outdoor air damper open to maintain the return air CO₂ setpoint.
 - Record final setpoint (1000 ppm, adjustable).

Remarks: ***The return air CO₂ setpoint has been set at 900 ppm through the ATC system. A return air CO₂ setpoint was not provided. Is current setpoint acceptable? Engineer to review and advise.***

If the measured value CO₂ increases above setpoint then the mixing dampers begin to open and allow more outdoor air to enter the unit.

28. Verify that the CO₂ control mode is subject to a mixed air temperature low limit as measured by the mixed air temperature sensor. Compliance: _____
 Non-compliance: _____
- Verify that the BAS modulates the dampers back to minimum outdoor air position.
 - Record final setpoint (55 deg F, adjustable).

Remarks: ***The mixing dampers are subject to a mixed air low limit of 40 deg F (10 deg F less then setpoint) as measured at the mixed air temperature sensor. If the mixed air temperature drops below setpoint then the dampers are indexed to minimum position.***

Hot Water Coil

29. Verify hot water heating coil maximum capacity (control valve 100% open, airflow set, etc.): Compliance: _____
 Non-compliance: _____
- Record airflow, discharge air temperature, intake air temperature.

Remarks:

30. Verify operation of heating hot water coil control valve as it modulates to maintain setpoint: Compliance: _____
 Non-compliance: _____
- Record parameters.
 - Record parameters regarding overlap prevention with chilled water coil control valve.

Remarks: ***The hot water coil, chilled water coil and economizer mode are all controlled through one temperature control PID loop.***

From 0% to 45% of the control PID loop the hot water coil valve is allowed to operate. The hot water coil control valve will modulate open to maintain a discharge air temperature setpoint of 50 deg F.

Chilled Water Coil

31. Verify chilled water cooling coil maximum capacity (control valve open, airflow set, etc.):
- Record airflow, discharge air temperature/humidity, intake air temperature /humidity.
- Compliance: _____
Non-compliance: _____

Remarks: **Unable to verify under current season – to be verified during differed seasonal testing.**

32. Verify operation of chilled water coil control valve as it modulates to maintain setpoint:
- Record parameters.
 - Record parameters regarding overlap prevention with hot water coil control valve.
- Compliance: _____
Non-compliance: _____

Remarks: **The hot water coil, chilled water coil and economizer mode are all controlled through one temperature control PID loop.**

From 65% to 100% of the control PID loop the chilled water coil valve is allowed to operate. The chilled water coil control valve will modulate open to maintain a discharge air temperature setpoint of 50 deg F.

Economizer Mode

33. Verify comparative enthalpy economizer operation:
- The BAS will modulate the outdoor air damper above minimum position when the **outdoor air** enthalpy is **less** than the **return air** enthalpy.
 - The return damper will track accordingly.
 - The heating coil control valve and the cooling coil control valve are locked out of operation.
- Compliance: _____
Non-compliance: _____

Remarks:

34. Verify that the chilled water coil, heating hot water coil and economizer operation modulate without overlap to maintain the discharge air temperature setpoint.
- Record discharge air temperature setpoint.
 - Record parameters regarding overlap prevention.
- Compliance: _____
Non-compliance: _____

Remarks: **The hot water coil, chilled water coil and economizer mode are all controlled through one temperature control PID loop.**

From 50% to 65% of the control PID loop the mixed air dampers are allowed to modulate above minimum position (from minimum position to 100% open, if required). The economizer mode is enabled when the outdoor air enthalpy is less then the return air enthalpy.

35. Verify that the economizer mode is subject to a mixed air temperature low limit as measured by the mixed air temperature sensor. Compliance: _____
Non-compliance: _____
- Verify that the BAS modulates the dampers back to minimum outdoor air position.
 - Record final setpoint (55 deg F, adjustable).

Remarks: ***If the outdoor air temperature is above 50 deg F, the mixing dampers modulate to maintain the discharge air temperature setpoint. If the outdoor air temperature is below 50 deg F then the mixing dampers modulate to maintain mixed air temperature 2 deg F below the discharge air temperature setpoint.***

Alarms and Safeties

36. Verify supply fan failure condition on a loss of supply fan status: Compliance: _____
Non-compliance: _____
- The return fan is de-energized. The outdoor air damper is commanded closed and the return air damper is commanded open.
 - An alarm is generated at the facilities workstation.

Remarks:

37. Verify return fan failure condition on a loss of return fan status: Compliance: _____
Non-compliance: _____
- The supply fan is de-energized. The outdoor air damper is commanded closed and the return air damper is commanded open.
 - An alarm is generated at the facilities workstation.

Remarks:

38. Verify installation/operation of the **supply** duct high static pressure switch: Compliance: _____
Non-compliance: _____
- Verify calibration.
 - Record location.

Remarks:

39. Verify high duct static pressure condition when duct static pressure is above setpoint: Compliance: _____
Non-compliance: _____
- The supply and return fans are de-energized.

The outdoor air damper is commanded closed and the return air damper is commanded open.

- An alarm is generated at the facilities workstation.
- Record setpoint (3.5 inches, adjustable).

Remarks:

40. Verify installation/operation of the **dirty filter** differential pressure switches:
- Verify calibration.
 - Record location.
 - Record setpoint.

Compliance: _____
Non-compliance: _____

Remarks:

41. Verify dirty filter condition when differential pressure is above setpoint:
- An alarm is generated at the facilities workstation.

Compliance: _____
Non-compliance: _____

Remarks:

42. Verify installation/operation of the **freezestat** sensor(s):
- Verify calibration.
 - Record location.
 - Record setpoint.

Compliance: _____
Non-compliance: _____

Remarks:

43. Verify freezestat condition when air temperature is below temperature setpoint :
- The supply and return fans are de-energized. The outdoor air damper is commanded closed and the return air damper is commanded open.
 - The heating coil control valve is commanded 100% open.
 - An alarm is generated at the facilities workstation.
 - Record setpoint (38 deg F, adjustable).
 - Verify freezestat must be manually reset.

Compliance: _____
Non-compliance: _____

Remarks:

44. Verify that the activation of the **supply and return** duct smoke detectors will:
- The supply and return fans are de-energized.

Compliance: _____
Non-compliance: _____

- The outdoor air damper is commanded closed and the return air damper is commanded open.
- An alarm is generated at the facilities workstation.

Remarks:

| 45. Verify the following information is available and accurate at the operator's workstation: | Yes | No |
|---|-----|----|
| a. Occupied/Unoccupied Schedule | X | |
| b. Occupied/Unoccupied Status | X | |
| c. Supply Fan Start/Stop | X | |
| d. Supply Fan Status | X | |
| e. Supply Fan Speed | X | |
| f. Return Fan Start/Stop | X | |
| g. Return Fan Status | X | |
| h. Return Fan Speed | X | |
| i. Outdoor Air Temperature | X | |
| j. Outdoor Air Relative Humidity | X | |
| k. Return Air CO2 | X | |
| l. OA damper command | X | |
| m. OA damper position | X | |
| n. RA damper command | X | |
| o. RA damper position | X | |
| p. EA damper command | N/A | |
| q. EA damper position | N/A | |
| r. Mixed Air Temperature | X | |
| s. Discharge Air Static Pressure | X | |
| t. Discharge Air Static Pressure Setpoint | X | |
| u. Discharge Air Temperature | X | |
| v. Discharge Air Temperature Setpoint | X | |
| w. Hot Water Coil Valve Position | X | |
| x. Chilled Water Coil Valve Position | X | |
| y. Outdoor Airflow Setpoint | X | |
| z. Graphic Display | X | |

Remarks: ***The dampers do not provide a feedback signal indicating damper position. The dampers value on the graphic display indicates the damper command only.***

Notes:

END OF TEST