



ADDENDUM

ADDENDUM NUMBER | 02

PROJECT | North Rockland Central School District
North Rockland High School – Gyms and Library Renovation
106 Hammond Rd, Thiells, NY 10984

OFFICE ADDRESS | KSQ DESIGN
286 Madison Avenue, 22nd Floor| New York, NY 10017 | 914.682.3700

PROJECT NUMBER | 2535401.00

Date | 3/6/2026

NOTICE TO CONTRACTORS|

This Addendum issued prior to receipt of Bid shall and does hereby become a part of the Construction Documents for the above project.

All principal Contractors shall be responsible for seeing that their Subcontractors are properly apprised of the contents of this Addendum.

All information contained in this Addendum shall supersede and shall take precedence over any conflicting information in the original Bidding Documents dated 2/23/2026 and all pervious addenda.

All Contractors shall acknowledge receipt of this Addendum in the space provided in the Proposal Form. Failure to do so may subject Bidder to disqualification.

A. CHANGES TO SPECIFICATIONS

- 00 43 25 - PRELIMINARY SCHEDULES (UPDATED)
- 01 11 00 - MILESTONE SCHEDULE
- 01 12 00 - MULTIPLE CONTRACT SUMMARY
- 01 50 00 - TEMP FACILITIES

B. CLARIFICATIONS

NONE

C. CHANGES TO DRAWINGS

NONE

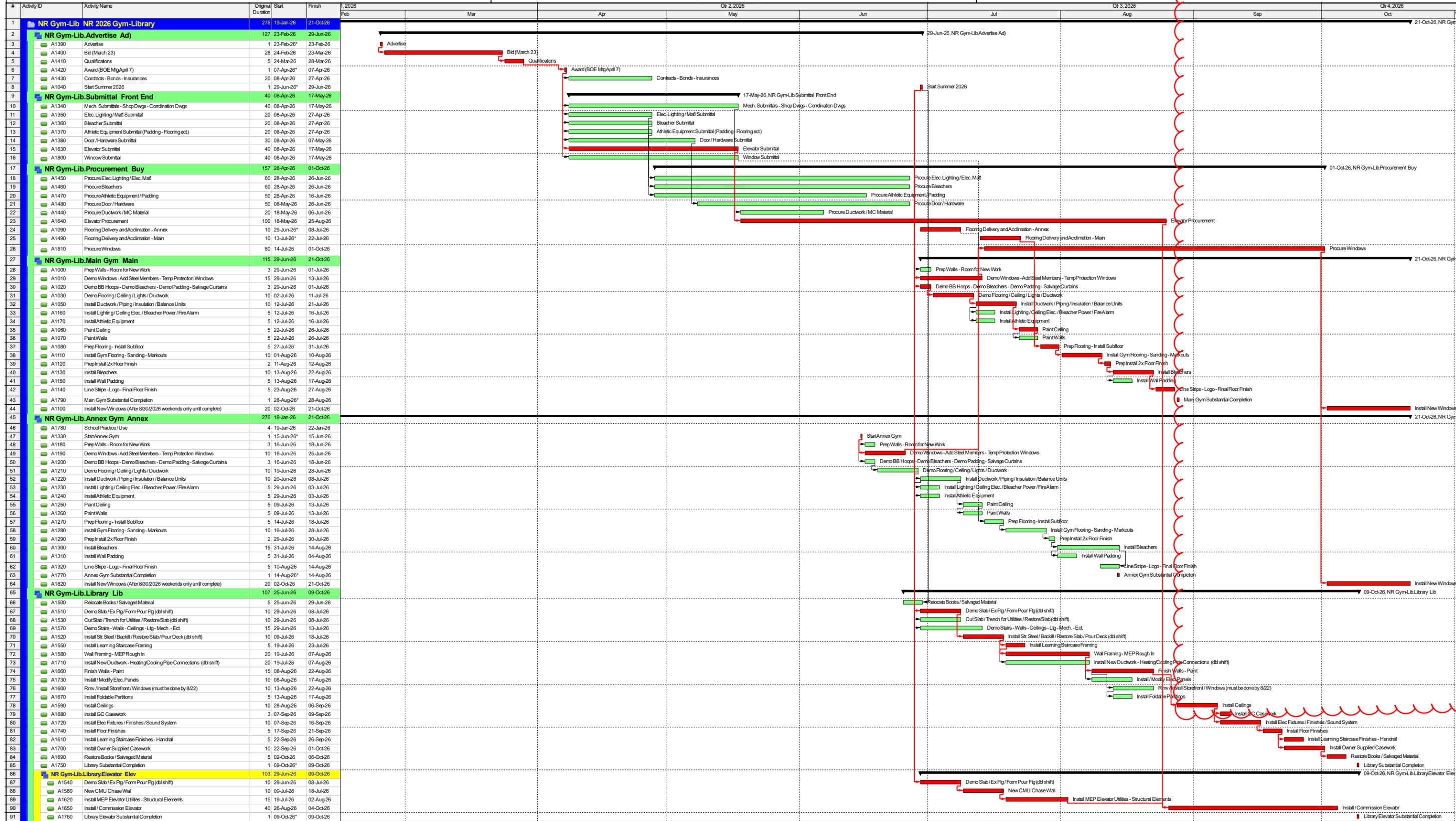
END OF ADDENDA No. 2

SECTION 00 43 25 - PRELIMINARY SCHEDULES

1.1 PROJECT SCHEDULE

A. This Document is part of the Procurement and Contracting Requirements for the Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but do not affect Contract Time requirements. This Document and its attachments are not part of the Contract Documents. The contractor is responsible to provide their own schedule and meet the substantial completion dates outlined on the contract documents.

END OF DOCUMENT 00 43 25



█ Actual Level of Effort
 █ Remaining Work
 █ Critical Remaining Work
 ◆ Milestone
 ◆ summary

SECTION 01 11 00 - MILESTONE SCHEDULE

PART 1 - GENERAL

1.1 Milestone

The following milestone schedule serves as a basis for bidding. A Master Schedule will be developed at a general meeting of all successful bidders within 21 days of Letter of Intent to Award the Contracts. This sequence and time frame has been coordinated with the school program; no acceleration or changes will be permitted. Each prime contractor will coordinate activities, forward submittals, deliver materials and provide necessary manpower to meet the milestones listed below.

- 1.2 Milestone Schedule - High School Projects: GC-01, MC 01, EC-01
- | | |
|-----------------------------------|---|
| Start of Construction Annex Gym: | 06/15/2026 |
| Start of Construction Main Gym: | 06/29/2026 |
| Start of Construction Library: | 06/29/2026 |
| Equipment Submittals & Approvals: | 04/08/2026 – 04/27/2026 and 05/17/2026
(Refer to Preliminary Schedule) |
| Substantial Completion Annex Gym: | 08/14/2026 |
| Substantial Completion Main Gym: | 08/28/2026 |
| Substantial Completion Library: | 10/09/2026 |

Note: Second shift/double shift work could be required to meet substantial completion dates. Second shift/ double shift work is expected to take place as required to meet the milestone schedule if necessary. The contractor will have blackout dates during school days where work may not take place. It is the contractor's responsibility to request in writing any blackout dates prior to commencement of work to coordinate schedule. Second shift hours are before 6AM or after 3:30 pm. Failure to meet the milestone schedule will result in a per day financial penalty as indicated in the AIA A232/A132

All work required by any of the Owner's representatives and consultants, including the Architect, Construction Manager and their consultants, Owner's Attorneys, etc., to execute final close-out of contract after 60 days beyond Milestone dates if determined to be caused by contractor, shall result in payment(s) to the Owner's representatives and consultants, including the Architect, Architect's consultants, Owner's Attorneys, etc., in the form of a change order deduct to the base contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 011100

SECTION 01 12 00 – SUMMARY OF WORK – MULTIPLE PRIME CONTRACTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions and Division 0 & 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Project Locations: 65 Chapel St, Garnerville, NY 10923
- B. Owner: North Rockland Central School District
- C. Architect Identification: KSQ Design, 286 Madison Avenue, 22nd Floor, New York, NY 10017
- D. Construction Manager: The Palombo Group, 22 Noxon Street, Poughkeepsie, NY 12601
1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to aid in administering the Contract for Construction between Owner and each Contractor, according to a separate contract between Owner and Construction Manager.
- E. Project Identification: North Rockland High School Main & Annex Gymnasiums Renovation

1.3 SUMMARY OF WORK – LIST OF CONTRACTS

- A. The work will be constructed under multiple prime contracts. One set of contract documents is issued covering multiple contracts. Each Prime Contract/Contractor is defined as:
1. CONTRACT GC1: GENERAL CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “General Contractor” or “GC”
 2. CONTRACT MC2: MECHANICAL CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Mechanical Contractor” or “MC”
 3. CONTRACT EC3: ELECTRICAL CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Electrical Contractor” or “EC”
 4. CONTRACT BC4: BLEACHER CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Bleacher Contractor” or “BC”
 5. CONTRACT RC5: RTU CONSTRUCTION WORK CONTRACT
 - a. Also referred to as “RTU Contractor” or “RC”
 6. CONTRACT CC6: CONTROLS CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Controls Contractor” or “CC”
 7. CONTRACT WC7: WINDOW CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Window Contractor” or “WC”
 8. CONTRACT FC8: FURNITURE CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Furniture Contractor” or “FC”
 9. CONTRACT LC9: LIGHTING CONSTRUCTION WORK CONTRACT
 - a. Also referred to as: “Lighting Contractor” or “LC”

1.4 GENERAL REQUIREMENTS FOR WORK UNDER SEPARATE CONTRACTS TO BE INCLUDED IN EACH CONTRACT:

A. GENERAL REQUIREMENTS

1. The project will be constructed under a multiple-prime contracting arrangement with the Owner awarding and holding separate Contracts. Each contractor shall furnish all labor, material, tools, equipment, access equipment, supervision, layout, delivery, trucking, material handling equipment, shop drawings, submittals, coordination, etc. necessary to complete the work described in the Division of Work of their respective Contracts and based upon a complete set of Contract Documents.
2. One set of documents is issued covering all multiple contracts. Each contractor is to review all drawings and specifications for complete understanding and knowledge of the work.
3. The following Contract Documents are specifically included and defined as integral to each Contract.
 - a. Bidding Requirements
 - b. **Performance and Payment Bonds: Required for all Contractors within Base Bid. Bleacher Contractor, RTU Contractor, Window Contractor, Controls Contractor, Furniture Contractor, Lighting Contractor, shall provide Cost Add Option Proposals to add Payment and Performance Bonds to their respective Proposals.**
 - c. Conditions of the Contract, including
 - 1) General Conditions.
 - 2) Insurance Requirements.
 - 3) NYS Prevailing Wage Rates.
 - 4) Procure Master Instructions.
4. Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, testing, and installation required by the Contract Documents.
5. All Contractors are responsible for reviewing Drawings and Specifications as they pertain to their scope of work mentioned in the contract documents. Scopes of work referenced may be found in multiple locations throughout the Drawings and Specifications. Each Contractor is responsible to review all Drawings and Specifications for every contract to gain a complete understanding and knowledge of the entire project, to determine how the work of each contract is to interface with every other contract.
6. Local customs and trade union jurisdictional settlements do not control the scope of work included in each prime contract.
7. Each Contractor has been given the opportunity prior to bid to inspect the entire Project site for interferences to their Contract work and agrees to accept the site as it exists on the date of the bid opening.
8. Each Contractor is to be registered with the New York State Department of Labor (DOL) including all subcontractors employed by the Contractor and supply.
9. Each Contractor shall submit a proposed Subcontractor and Suppliers List at the start of the Project including NYS DOL Registration Certificate and any other additional subcontractor qualification documents as required per Specifications. An updated copy of the Subcontractor and Supplier List is to be attached with each Application for Payment which includes each Subcontractor's Contract amount, Amount Paid to Date, Remaining Balance to Pay, and calculations to verify that the total amounts owed to all Subcontractors do not exceed the remaining balance owed to the Prime Contractor.

B. **SCHEDULE**

1. See Project Milestone Schedule.
2. **Contractor Construction Project Schedule:** Each Contractor is required to engage a qualified CPM Construction Scheduling Service to generate (or provide equivalent self-performed scheduling services with Construction Manager approval) and submit a construction schedule based on the dates of the Contract Milestone Schedule. See Construction Progress Documentation / Schedule Specifications for additional requirements.
 - a. Each Contractor's construction schedule is to be submitted for review and comment no later than 3 weeks after a Notice to Proceed for the work is issued.
 - b. Contractor Project Schedules are to be assembled in compliance with the Contract Milestone Schedule.
 - c. For the initial Construction Project Schedule, the Project Milestone Schedule is to be used as a basis for predecessor activities.
 - d. If there is schedule information pending from other Contractors to schedule an activity on the schedule, the Contractor shall indicate on the schedule the duration and sequence of the activity and further indicate the item as pending by others.
 - e. Include notes regarding activities that may impact other Contractor's activities.
 - f. A copy of the updated Project Schedule is to be included with each Application for Payment.
 - g. Multiple Crews: To maintain the project schedule, each Contractor is to provide multiple crews. Each crew is to be furnished with its own supervision, equipment, and other means necessary to maintain the Project Schedule.
3. **Master Construction Schedule:** The **General Contractor** is required to review all Construction Schedules submitted by the other Contractors and entities performing work on the Project and combine into a complete Master construction schedule that has been coordinated with all other work on the Project. To be submitted no later than 2 weeks after all other Contractors have submitted their respective Construction Schedules.
 - a. If the Critical Path of the projected Substantial Completion exceeds the Substantial Completion date of the Milestone Schedule or other dates listed in the Milestone Schedule, then the contractor designated as the entity responsible for producing the master schedule is to identify the critical path items and notify the Construction Manager. If the conflict cannot be resolved, then a meeting is to be scheduled between each Contractor to review the resolution options which may require Contractors to provide additional Crews/Manpower.
4. **Two Week Look Ahead Schedule:** Each Contractor will be required to submit a detailed 2 week look ahead schedule that indicates which activities are scheduled each day for all periods each contractor is performing any amount of work. This shall be submitted weekly on a date appropriate for review and discussion with Project Progress Meetings
5. **Submittal Schedule:** Each Contractor is required to review all Project Specifications and provide a list of all submittals and closeout documents expected to be submitted for the Project to be reviewed by the Architect/Construction Manager.
 - a. Submittal Schedule to be submitted on form specified by the Project or as directed by Construction Manager.
 - b. Submittal Schedule items to be broken down into a list by individual submittal document. **All expected individual closeout submittals** to also be included in the Submittal Schedule prior to approval. Closeout Submittals may include but are not limited to: Operation and Maintenance Data, Record Documents, Warranties, Start Up and Test Reports, Training Documentation, Material Transmittals.
 - c. Submittals to be grouped into the following types: Product Data, Shop Drawings, Samples/Mockups, and Closeout Documents: Maintenance Data, Record

Drawings/Specifications, Warranties, Test Reports, Training Agenda's, Training Sign in Sheets, Maintenance Materials; and type "other".

6. **Available Working Hours:** All contract scopes of work in unoccupied areas of work are to be performed **Weekdays + Saturdays from 7:00 AM to 3:30 PM** unless otherwise noted. Work cannot be performed in occupied areas. Work shall be scheduled off-hours, vacations, and weekends for occupied areas. A Construction Manager Superintendent must be always onsite when any work is being performed.
- a. **Multiple Crews:** To maintain the project schedule, the Prime Contractor is to provide multiple crews as required. Each crew is to be furnished with its own supervision, equipment, access, and other means necessary to maintain the Project Milestone Schedule.
 - b. **All Contractors to include Premium Time Labor Costs for work to be scheduled on all Saturdays between: 6/27 – 8/29; 7:00 AM to 3:30 PM.**
 - c. If a contractor fails to maintain the progress as indicated by the milestone schedule by no other fault but its own, or requires extended working hours for their own convenience outside of the scheduled Contract Working hours and requires overtime to complete the work; the contractor shall make arrangements with the Construction Manager 48 hours in advance and pay for a Construction Manager's superintendent at \$125.00 per hour via deduct change order. If the cause for delay is multi-contract, then the costs shall be distributed evenly among contracts. Advise the Construction Manager 48 hours prior to commencing work inside the building.
7. When work is scheduled for second shift or off hours and occupied by the owner during the day; work areas and finishes must be restored back to original finished conditions at the end of each day for occupancy the following day.
8. Coordination of any utility and/or power interruption must be done with the Construction Manager. Shutdowns must occur during off-hours and on days as directed by the owner. Contractor overtime costs for off hours work to be included in Base Bid.
9. Ceiling and Partition Inspections: Prior to installing finishes for ceilings or walls, the Contractor installing or reinstalling Walls or Ceilings (including Suspended Drop Ceilings and Drywall) is to send a written request for inspection to the Construction Manager and Architect with a minimum of 14 Day notice for areas scheduled to be concealed by Wall or Ceiling Finishes. Uncover finishes that have been installed without inspection or authorization to install finishes.
10. Project Schedules, Master Schedules, or Submittal Schedules created by Owner on behalf of the Contractor:
- a. If the Contractor fails to provide a detailed updated Project Schedule, Master Schedule, or Submittal Schedule within 14 days upon request by the Construction Manager or by date required on Project Milestone Schedule, then the Owner retains the right to hire outside services to:
 - 1) Review the work of the Contract Documents and coordinate with other Contractors to generate a detailed Project Schedule or Master Schedule to perform all activities needed to complete the work of their respective Contract and comply with the Date of Substantial Completion.
 - 2) Review the Contract Specifications and generate Submittal Schedule including the project specific list of expected Preconstruction Submittal and Closeout Submittal items.
 - 3) Deduct costs from the Contractor who has failed to provide these contractual required administrative services.
 - 4) If the Construction Manager must perform these services on behalf of the Contractor, then the Contractor shall be back charged for all costs incurred.

C. **SUPERVISION**

1. Each Contractor shall designate a full-time Field Superintendent to supervise the work of their own contract, who shall always be present on the job site when work is being performed; this person shall be familiar with Project and authorized to conclude matters relating to progress. In addition, each Contractor shall designate a single Project Manager to oversee all aspects of the Project.
 - a. The proposed Field Superintendent and Project Manager for the project is to have at least five years of experience in the proposed position.
 - b. Each Contractor shall submit resumes to the Construction Manager for the proposed Project Manager and Field Superintendent for the project. This information will be reviewed with the Owner, Architect and Construction Manager for approval.
 - c. Should the Project Managers or Superintendent prove to be unqualified for the position at any point in the project, the Construction Manager shall issue a letter stating that the person is to be removed from involvement in the project. Action by the contractor must be made within seven working days of receipt of such letter.
 - d. The Field Superintendent shall participate in providing scheduling information, Two Week Look Ahead Schedules, field coordination of layout when required, and provide quality control procedures of all work performed under the contract.
 - e. The Field Superintendent shall record and track all daily activities, record daily onsite manpower via an employee sign in sheet, and document progress daily via progress photos.
 - f. **Each Contractor is to provide a dedicated onsite Field Superintendent with the sole responsibility for supervision of the field work scheduled onsite each day work is performed.**
2. Each Prime contractor shall maintain within its field office a complete and current set of Contract Documents (including any Addenda, Change Orders, and Modifications thereto), Contract Record Drawings, approved shop drawings, samples, color schedules and other data pertinent to the Project.
3. Each Prime Contractor is to assemble an Employee List of all employees for all self-performed and subcontracted work and provide copies of OSHA cards for all employees on the Employee List.
4. Update the Employee List to add new employees which have been added to the project and include a copy of the employee list with each Application for Payment. Employee list with OSHA Cards to cross reference with the submitted Certified Payroll with each Application for Payment.
 - a. When criminal background checks are specifically required on a Project, provide copies of Driver Licenses for Employee for background check purposes.
5. Any person in the Contractor's organization who conducts themselves in a manner that violates safety protocols, demonstrates insufficient professional/personal conduct, or behaviors deemed problematic or unprofessional on the Project can be directed to be removed immediately and permanently from the Project site by the Construction Manager or Owner.
6. **Each Contractor** is to survey existing work and submit to the Construction Manager a list of damaged areas with preconstruction photos prior to commencing work. Any damage that occurs during construction and is not identified prior to the work shall be the responsibility of the contractor(s) working in that area to restore.
 - a. Each contractor shall return areas disturbed by their work activities to condition prior to start of work as initially documented by Contractor.

D. **COORDINATION BETWEEN PRIME CONTRACTS**

1. Provide all Coordination responsibilities as indicated in Specification 013115: Coordination Drawing Between Multiple Prime Contractors.
2. **Coordination Drawings in New Construction**: Each Contractor is required to engage a qualified drafting agency capable of producing coordination drawings and models utilizing various industry standards and file formats including but not limited to: (Revit, AutoCAD, etc.).
3. The **Mechanical Contractor** will take on the additional responsibility of overseeing the coordination modeling/drawing process and provide additional clash detection reports of all models by other Contractors. Examples would be using the BIM Modeling Software for **New Construction Building Work**. The Mechanical Contractor is to communicate any issues that arise from other Contractors not fulfilling their obligations to the Construction Manager.
4. The **Construction Manager** will provide direction and communications between each Contractor and schedule coordination meetings as required.
5. **For ALL Construction: Each Contractor that requires preceding support work by others such as: openings, penetrations, structural support, utility trench layout, equipment pads, and any other work needed by a following Contractor, the subsequent Contractor is required to provide a field mark out of their work** for any other Contractors who are to provide the preceding support work for the subsequent Contractor. Each Contractor is to provide personnel onsite to supervise the installation of the preceding support work as required. Layout to be based off the approved Shop Drawings generated from the Multi-Contractor Approved Coordination Model/Drawings.
 - a. Any roof openings or steel support required to be installed shall be marked out on the underside of the Roof Deck and on the Roof Exterior Surface by the contractor installing the items requiring the openings and support for the work of their own contract.
6. Access doors not shown on Architectural drawings and required for access to concealed systems for maintenance, access, or code requirements (valves, dampers, junction boxes) for the Work of each contract shall be furnished by each contract for its own Work to the **General Contractor** for installation in new wall, floor, or ceiling: construction. All access doors shall comply with Division 8 Section "Access Doors and Frames."
7. Items requiring coordination by each Contractor when item is applicable to Project:
 - a. Final Cleaning Schedule.
 - b. Mechanical, Electrical, and Plumbing Equipment and above ceiling work.
 - c. Casework with other wall mounted items.
 - d. Underground Utilities and Trench Locations.
 - e. Blocking for Wall Mounted Items.
 - f. Wall, Floor, Roof, Foundation: Penetrations, Openings, and Reinforcements.
 - g. Electrical Requirements and connections for Equipment.
 - h. Access Door locations.
 - i. Embed Floor Items: Floor Boxes, Floor Drains/Sinks/Clean Outs, etc.
 - j. Door Hardware Material Prep and Coordination with Security Contractor.
 - k. Temporary Enclosures and Building Access.
 - l. Temporary Facilities for use by other Contractors.

E. **OPENINGS, PENETRATIONS, EXISTING CEILINGS, PATCH TO MATCH RESTORATION, AND EMBEDDED ITEMS**

1. **Existing Ceilings (Ceiling Work):**

- a. In areas with existing suspended-drop-ceilings: **Each Contractor** shall provide ceiling removal/replacement/patching including ceiling grid for installation of new work, except for ceiling work specifically indicated on Architectural Drawings, in which case, the General Contractor shall be responsible for any Ceiling work indicated on Architectural Drawings. If Ceiling Types are not identified on drawings, then the Contractor shall figure drop ceiling removal and replacement. Replace damaged ceilings not identified as damaged prior to construction.

2. In **Renovation Construction**: (Existing: walls, partitions, floors, roofs, ceilings):

- a. **Each Contractor** shall provide: openings, sleeves, penetrations, lintels, round sleeves, roof steel reinforcement, concrete, masonry, cutting, patch to match after demolition, restoration, and painting as required to complete their respective work for a finished appearance, except when this work is specifically indicated on Architectural or Structural Drawings, in which case, the General Contractor shall provide the work indicated on Architectural or Structural Drawings. Each Contractor to reference typical details in Structural or Architectural Drawings for additional requirements of this work. All exposed finishes must be patched to match adjacent finishes etc.; all concealed openings (piping, ductwork, conduit, etc.) must be repaired to comply with specified wall or deck conditions.
- b. New roof openings and penetrations to be **provided by contractor responsible for Roofing** in that location as noted on Roofing or Architectural Drawings.
- c. Round Penetrations larger than 8" will be considered an **Opening** with structural reinforcement to be provided.

3. In **New Construction** (New: walls, partitions, floors, ceilings, and roofs):

- a. The **General Contractor** is required to review all Contract Drawings for all other Contractors to identify generally where Openings, Sleeves, Embedded items, or Roof items will be required for ductwork, piping, and electrical/low voltage devices as depicted on all other Contract Drawings. Insulation thickness of the penetrating/opening item is to be considered for sizing of openings.
- b. Notification of scheduling of new Wall, Floor, or Ceiling Construction is to be sent by the **General Contractor** at least 7 days prior to construction. Field Layout, Shop Drawings, Written Documentation, and onsite personnel are to be provided by the respective Contractor that requires the opening or sleeve during the new wall, floor, or ceiling construction. The **General Contractor** is to provide field layout of internal structural reinforcement to avoid conflict with new penetrations.
 - 1) If the **General Contractor** does not notify the Construction Manager and contractors associated with new work, sleeves, or openings of new wall or floor construction at least 7 days prior, then the GC is to provide the work needed to install these openings/penetrations once identified as missing. Submission of a Two-Week Schedule with specific locations sent directly to all Contractors and Construction Manager is sufficient for notification.
 - 2) If Field Layout information and has not been provided to the **General Contractor** prior to scheduled installation of new wall/partition/floor (with 7-day notice), then the **General Contractor** shall install openings per locations as required for work indicated on the MEP Contract Drawings and contractor that failed to provide the field layout will be responsible for correcting the new opening with any steel, lintel, or reinforcement required as well as installing any required penetration round sleeves after the new wall or floor has been constructed.

- c. **For new Masonry Walls, Concrete Walls, or Concrete floors:**
- 1) **Openings:** The **General Contractor** will provide all lintels, rebar, and other reinforcement for all through and recessed openings (rectangular, or as needed for round openings larger than 8” diameter) for all other contractors for work depicted on all other contract drawings associated with other contractors including masonry lintels for Duct Openings. **Each Contractor** is to provide sealing/fireproofing of these openings.
 - 2) **Penetration Round Sleeves:** Each respective Contractor will furnish their own sleeves (when penetration is larger than 1-1/4”) for their own work and turn them over to the **General Contractor** for installation.
 - a) **Round Openings larger than 8” Diameter in Masonry Walls will be considered an Opening** with reinforcement to be provided by **General Contractor**. Each respective Contractor requiring openings for round penetrations larger than 8” is still required to provide a sleeve for patching, firestopping, and sealing purposes.
 - b) Floor sleeves to be provided at sufficient height for “Water Dam” above finished floor.
 - c) Penetrations 1-1/4” or less shall be provided and installed by each respective contractor requiring penetration.
 - d) Each Contractor is to provide field layout of the installation location for their own sleeves.
 - e) Each Contractor is to provide sealing/fireproofing of penetrations and openings associated with their work. Escutcheons to be provided for all pipe penetrations in visible areas as needed.
 - 3) **Embedded Piping, Conduits, and back boxes:** Each respective Contractor requiring piping, conduits, device back boxes in walls or floors shall have manpower onsite during scheduled installation of new masonry walls, or concrete form assembly to install conduits, piping, and back boxes as required. Each Contractor is to provide sealing/fireproofing of penetrations and back boxes associated with their work.
- d. **For new Stud Frame; Partitions, Walls, and Ceilings:**
- 1) **Openings:** The **General Contractor** will provide all stud wall reinforcement for all through and recessed openings for all other contractors for work depicted on all other contract drawings associated with other contractors. **Each Contractor** is to provide sealing/fireproofing of these openings.
 - 2) **Penetration Round Sleeves:** Each respective Contractor will furnish and install sleeves for their own work. Each Contractor is to provide field layout of the installation location for their own sleeves. Each Contractor is to provide sealing/fireproofing of penetrations associated with their work. Escutcheons to be provided for all pipe penetrations in visible areas.
 - 3) **Embedded Piping, Conduits, and back boxes:** Each respective Contractor requiring piping, conduits, and device backboxes in walls, floors or ceilings shall have manpower onsite during scheduled installation of new stud framing assembly to install conduits, piping, and back boxes as required. Each Contractor is to provide sealing/fireproofing of penetrations and back boxes associated with their work.

e. **For embedded items in new floors and flooring finishes:**

- 1) The **General Contractor** shall provide field layout and benchmark of finished floor elevations for all areas of flooring.
- 2) Embedded items include but are not limited to: Floor Drains, Clean Outs, Floor Sinks, Electrical Floor Boxes, etc.
- 3) **Each Respective Contractor** shall install any items to be embedded in the floor (with all parts, accessories, or covers at the correct elevation required).
- 4) Each respective Contractor shall provide product data/shop drawings of the embedded items to the **General Contractor** and have all parts, accessories, or covers of the embed items onsite for review and coordination.
- 5) The **General Contractor** and the **respective contractor installing the embedded items** shall review together the elevations of the installed embedded items and check prior to floor install if all embed items are at the correct heights.
- 6) If **General Contractor** finds that the elevation of an embedded item is not at the correct elevation, then the **General Contractor** shall not proceed with floor/slab installation and instead notify the Construction Manager and associated contractor of the discrepancy and provide the associated contractor with the opportunity to correct. Any corrections required after Floor/Slab Installation shall be performed by the General Contractor.
- 7) Written Documentation of the embedded item height verification shall be recorded by each contractor and submitted to the Construction Manager prior to floor installation for finish floors, subfloors, or concrete slabs.

4. For Roof Construction:

(**General Contractor** shall provide responsibilities of **Roofing Contractor** for all locations.

- a. All cutting, of roof material/decking, flashing, and weathertightness of roof for all Roof Work, curb installation indicated on all Architectural or **MEP Roof Drawings** is by the **General Contractor**. The **General Contractor** will then install replacement/new roofing materials and flashing at all new curbs for weathertight conditions in compliance with the roof systems manufacturer's requirements to maintain the roof warranty. This work includes: All Roof Curbs, Equipment Curbs, Duct Curbs, Roof Drains, and Pipe Portals.
 - 1) Pipe boots/pitch pockets for Plumbing Vents are to be provided by **General Contractor**.
 - b. Once the Roof is opened, all curbs are to be installed by **each respective contractor furnishing the curb**, including all fasteners to attach the curbs to the building structure per the curb manufacturer's installation requirements.
 - 1) **General Contractor** shall provide all Pressure Treated Wood Blocking under curbs (to match insulation thickness) including attachment to the building structure.
 - c. Once curb/opening is installed, the **General Contractor** shall provide temporary covering and weathertightness of curb with plywood and suitable roofing materials until new equipment/work is installed.
 - d. Structural Steel Support framing for all roof openings, roof penetrations, roof drains and roof equipment is to be furnished and installed by the **General Contractor** from review of all Contract Drawings/MEP Roof Drawings for all roof opening or roof equipment locations.
5. Firestopping and penetration sealing for the Work of each contract shall be provided by each contractor for its own Work for all penetrations and openings. Firestopping shall comply with Division 7 Sections "Through-Penetration Firestop Systems". Products are to be submitted to the Architect for Approval.
- a. **Each contractor** is to provide acoustic sealants for all their respective penetrations, openings, and back boxes for items that do not require firestopping.

F. **CONCRETE PADS AND BASES FOR EQUIPMENT**

1. Concrete for the Work of each contract shall be provided by **each Contractor** as needed for completion of their own Work, unless specifically assigned to another Contract.
 - a. Concrete Equipment Pads and Bases specifically shown to be provided on the Architectural or Structural Drawings are to be provided by the **General Contractor**. If Concrete Equipment Pads and Bases if specifically shown to be provided on the Civil Drawings, then those pads or bases are to be provided by the **General Contractor**.
 - b. All other pads or bases are to be provided by the contractor providing the equipment associated with the concrete pad or base.

G. **TRENCHES, EXCAVATION, BACKFILL, AND INFILL FOR UTILITIES**

1. Utility Trench Excavation is considered: Trenching, Excavation, Dewatering, Shoring, Bracing, Concrete Utility Encasement (when specifically indicated), Detectable Marking Tape, and Back Fill for work of all other contractors as indicated on all Contract Drawings; Review all contract drawings for all locations requiring Utility Trench Excavation for underground utilities.
 - a. Utility Trench Excavation, Back fill, and Infill shall be provided by General Contractor. **See Plumbing and Electrical Drawings at Library for specific locations.**
2. Utility Trench Excavation is to be provided for (but not limited to) the following utilities:
 - a. All underground Electrical, Telecommunications, Data, and Fiber utilities and conduits shown on Electrical, Civil, or Telecommunications Drawings.
 - b. Floor boxes and associated conduits indicated on Electrical Drawings.
 - c. Underground Water Line and Sanitary Piping.

H. **SAFETY**

1. Lead Based Paint precautions for the Work of each contract shall be provided by each contract for its own Work. Each Contractor shall provide procedures for OSHA Lead precautions.
2. Provide OSHA 10-hour training certificate for all employees prior to starting work on the site. In addition, these certificates must be sent in with certified payroll as new employees are hired in accordance with NYS DOL.
3. Contractor to provide potable cooled drinking water for its own employees.
4. Contractor to provide: Secure lockup of its own tools, materials, and equipment. Provide temporary enclosures/storage containers of materials as needed.
5. Contractor to provide: Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
6. All OSHA Safety, NYS Department of Labor, and Hazardous Materials Regulations will be enforced on this project. All Contractors must submit a site-specific safety plan, a hazardous materials program, (all required data must be maintained at the job site), designate contractor safety supervisor, and attend safety meetings.
 - a. Safety Meetings with Toolbox Talks will be required from each contractor weekly.
 - b. Each contractor to maintain on site Material Safety Data Sheets (MSDS) for all materials utilized on site.
7. All personnel working on site shall always wear personnel protective equipment as required. All construction personnel are required to wear high visibility vests and visible identification on Lanyards when onsite. Hard Hats are required to be worn per OSHA requirements.
 - a. Those without identification will be removed from the site at once. If the same individual fails to wear the identification a second time they will be removed and not be allowed back on site.
8. Provide material lifting equipment and licensed operators required for the completion of Contract requirements, and complying with NYS Labor Laws, OSHA requirements, and other Federal, State, and local laws. All lifting operations (i.e. rigging of rooftop equipment) will require a written lift plan and operator licenses to be submitted for record 2 weeks in advance of scheduled lift date.
9. Provide Fire Prevention materials and equipment for fire protection related to the work of their own Contract. Provide fire extinguishers, fire blankets, and fire watch supervision during all "Hot Work" operations and as required by OSHA requirements.
10. All existing Owner-occupied buildings need to always remain operational. The contractors are responsible for maintaining all systems, such as but not limited to communications, fire alarm, clocks, electric, public address system, gas service, heat, etc.
11. Active Smoke Detectors temporarily covered are to be uncovered at the end of each day. If smoke detectors are frequently found to be left covered, then the Owner reserves the right to schedule a Construction Management Superintendent on overtime to check all smoke detectors on the project to be free of obstructions at the end of each day and the responsible contractor is to bear this cost.
12. Each Contractor is responsible for cabling or roping off all roof/floor openings created from their own work in an OSHA approved manner. Provide all necessary fall protection. Each contractor shall provide their own Roof edge protection/barriers where roof work is required.
13. If another Contractor discovers building or site conditions do not meet OSHA requirements, then that Contractor must notify the Construction Manager and is to not proceed without having the condition corrected to meet OSHA requirements.
14. Each Contractor is to provide safety protections for conditions created by the installation of their own work as per OSHA Guidelines.

I. **SITE ACCESS AND MATERIAL STORAGE:**

1. It is the Owner's intention to continue to occupy the existing buildings and site for normal operations during the Construction process. The Contractors all agree to:
 - a. Cooperate with the Owner's personnel in maintaining and facilitating access to the buildings and its facilities by the staff, Owner's agents, service consultants and the public, throughout the construction process.
 - b. Keep driveways and entrances serving the occupied building clear and available to the Owner, the Owner's employees, the public, and to emergency vehicles. Do not obstruct access to, or use these areas for parking, staging of equipment or materials. All access through these existing areas must be coordinated in advance and in accordance with the Owner's usage and occupancy schedule.
 - c. Schedule construction operations to minimize any conflicts or interruptions to the daily functions. Coordinate any necessary interruptions with the designated project representative.
2. Each Contractor shall be onsite to receive their own material deliveries, store onsite, and protect until the material is ready to be installed in the final locations. Do not deliver materials directly to the Owner for receipt without acceptance of material approved by the Architect.
 - a. Additional costs for double handling will not be allowed. Provide secure lock up of materials and provide protection as needed.
 - b. Store all materials in conditions that are in accordance with manufacturers recommendations and requirements.
 - c. Provide Storage Containers as needed for materials, tools, and equipment delivered to the Site. Materials stored outside of the staging area are to be relocated as necessary or as directed by the Construction Manager to not impede the scheduled work of others.
 - 1) Long term storage of deliverable materials shall not be stored in building and shall be stored either offsite, in staging area, or containers outside of the building to not obstruct construction activities.
 - d. The Contractor shall replace all lost or damaged materials that have not been turned over to the Owner via signed and legible transmittal.
3. Secure Lock Up of Building and Site.
 - a. The **General Contractor** shall provide secure lockup of doors, windows, openings of the new building, and site gate/fence(s) at the end of each working day. If other contractors are working past the Project working hours preventing secure lock up, then the General Contractor is to notify the Construction Manager for further direction.
 - b. If the **General Contractor** is not scheduled to be onsite, then it will be the responsibility of the Contractors working onsite that day to provide building and/or site lock up.
 - c. Propping open locked doors and leaving unattended will not be allowed by any Contractors. Personnel observed leaving doorways unsecure/propped and unattended may be directed to be removed from site.
 - d. If the **General Contractor** or other solely working contractor (with no **GC** onsite) fails to provide secure lock up of the building and/or site at the end of each day, and has been documented at minimum of 3 instances, then the Construction Manager / Owner may provide their own building site lock up and deduct the labor costs from the responsible Contractor's contract sum.
4. Construction access to the site shall be limited to those designated for the contractor's personnel, equipment, and deliveries by the Owner. Contractors' staging, parking and storage shall be coordinated by the Construction Manager.

J. **CLEANING, AND PROTECTION**

1. All Contractors are responsible for any debris caused by their work. A Daily Debris Cleaning and disposal are required by each Contractor for the time periods and areas in which that Contractor is performing work.
2. If Contractor Daily Debris Cleaning is deemed insufficient, then on a day selected by the Construction Manager, each trade will assign at least one person to the weekly clean-up until cleaning is complete. The name of this person is to be submitted to the Construction Manager. Any Contractor not providing personnel will be charged for cleaning labor provided by others or as supplied by the Construction Manager.
3. The **General Contractor** shall provide Final Cleaning Service of all spaces in the building scheduled on the Contract Documents for Construction by themselves or any other Contractor including any other area's affected by Construction, and any equipment provided immediately before the final inspection.
 - a. Provide professional cleaning of all dust and debris beyond the general Daily Debris Cleaning responsible by each contractor to restore all surfaces to a dust free condition.
 - b. This includes any dust that have resulted from Construction by other Contractors and is to be included in the final cleaning if there is work indicated in these associate spaces on the Contract Drawings.
 - c. This clause does not alleviate the other Contractors responsibility for Daily Debris Cleaning of debris or material.
 - d. Close off cleaned spaces from entry by other Contractors with visible indication.
 - e. Maintain, lock down, and secures areas from unauthorized access in a clean condition until the owner occupies the space.
 - f. Personnel: Qualified Professional Cleaners. To be submitted to the Construction Manager and submitted 2 weeks prior to the scheduled cleaning for approval.
4. The **General Contractor** shall be responsible for performing a final cleaning of the exterior site areas.
5. If a Contractor fails to provide their contractually obligated debris cleaning or final cleaning, then the Owner reserves the right to hire an outside cleaning contractor to perform the work on behalf of the Contractor until the cleaning requirements have been met and as required to meet the schedule.
6. Protection to be installed on all new floor surfaces and maintained until final coatings/waxes are installed, and then continued to be maintained until turnover to the owner. Heavy Duty Ram board to be installed in high traffic areas/egress pathways into each space or in areas where lighter protections cannot be maintained.
7. Furniture and Equipment in work areas shall be protected with plastic sheeting and maintained dust free through the period of active construction in the space. Reinstall sheeting as necessary due to damage during construction. Cleaning of unprotected furniture or equipment shall be the responsibility of the Contractor working in the associated space if protection is not installed.
8. Each **Contractor** shall close and protect their installed equipment or plumbing fixtures to prevent use during construction until the equipment or space has been turned over to the owner.
9. The Building Ventilation system shall be disable by the **Contractor(s)** in areas under construction until the areas are cleaned and turned over to the owner. Dirty air filters from Construction are to be replaced with new filters and duct cleaning to be provided by Contractors who did not disable the Ventilation System during construction prior to Substantial Completion.

K. **EQUIPMENT AND SYSTEMS: START UP, DEMONSTRATION, AND TRAINING.**

1. Each Contractor is required to provide Start Up and Test Documentation for all equipment and systems installed under its respective contract, to be witnessed by Owner's representative and Construction Manager.
 - a. Submit Start Up and Test Documentation for approval prior to equipment acceptance and warranty start date.
2. Each Contractor is to provide Start-up Reports, any custom configurations of equipment, any observed issues/deficiencies with the equipment, and certification if equipment meets all per the Manufacturer and Engineer requirements.
 - a. Documentation of Construction Manager/Owners Representative witness of equipment or systems startup/testing does not constitute as acceptance of equipment or system.
 - b. Provide Serial Numbers of all equipment with Maintenance Data.
3. If Equipment or system failure is discovered during initial startup, testing, or commissioning, and work is considered deficient; then the warranty for the deficient equipment or system shall not start until the equipment or system is corrected. The Contractor shall pay for all costs to extend warranties as required for deficient work.
4. Contractor to prepare a written agenda for the Training sessions and provide training duration as required to review all agenda items. Submit Training Agenda for Architect Approval prior to scheduling training. The Contractor is to provide a sign-in sheet and video recording of session, Operation and Maintenance Data, and any other training documentation associated with training. Submit this Documentation with the Closeout Documents.
5. All Demonstration and Training shall be scheduled prior to the scheduled date of Substantial Completion.
6. If Construction Manager is not notified 48 hours in advance and available to witness Equipment Start Up or Training, then the Contractor shall pay all costs to repeat start up or Training procedures again with the Construction Manager/Owner's representative as witness.
7. In addition to specific training required by each specification section, each contractor is required to provide a General Usage and Maintenance Training Session for All Equipment, Systems, and any other items that require maintenance once the work is complete and all operations function as intended. This training session is to be scheduled prior to Substantial Completion. See 017900 - Demonstration and Training Specification for typical lists of Items and Systems that require Demonstration and Training.
8. If Equipment or System(s) being turned over to the Owner for use prior to final completion of equipment or System(s) and training is required due to the scheduled date of Substantial Completion, then the Contractor is to provide additional training upon equipment turn over to Owner to allow partial use of equipment without depleting original training sessions or hours required by contract which is to be scheduled once the Equipment or System(s) is complete and meets all design requirements.

L. **TEMPORARY FACILITIES RESPONSIBILITIES – DESIGNATED RESPONSIBLE CONTRACTORS.**

All sections shall be provided as referenced within Part 3 Execution Section of Specification: “011500 – Temporary Facilities and Controls.”

1. **Temporary Portable Chemical Toilet Facilities:** The **General Contractor** shall provide Temporary Portable Chemical Toilet Facilities for all construction personnel, Construction Manager, and all other Contractors.
2. **Dumpsters:**
 - a. Dumpsters for work associated with the New Building are to be provided by the **General Contractor** for use by all Contractors (including other contractors providing work associated with Contract Drawings).
3. **Temporary Electric Power Service:** The **Electrical Contractor** shall provide and maintain the Temporary Electric Power Service for: The Existing Building
4. **Temporary Lighting Service:** The **Electrical Contractor** shall provide the Temporary Lighting Service for use by all contractors.
5. **Temporary Water Service:** Each Contractor shall provide the Temporary Water Service as required.
6. **Winter Conditions and Temporary Heating Service:** Not required for this Project.
7. **Temporary Barricades and Building Signage:** The **General Contractor** shall provide Temporary Barricades and Building Signage.
 - a. See Staging and Logistics Plan for additional requirements.
8. **Temporary Building Storm Drainage:** Not required for this Project.
9. **Temporary Staging Area, Access Roads, Site Signage, and Site Fence:** Not required for this Project.
10. **Temporary Building & Temporary Site/Road Maintenance:** Not required for this Project.
11. **Temporary Fire Extinguishers for Building Construction:** The **General Contractor** shall provide Temporary Building Fire Extinguishers for Building Construction.
12. **Temporary Building Exhaust Ventilation for Dust Control:** The **General Contractor** shall provide Temporary Building Exhaust Ventilation for Dust Control.

1.5 CONTRACT GC-1 - GENERAL CONSTRUCTION WORK CONTRACT: (Also referred to as: “General Contractor” or “GC”)

- A. The Work of the General Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that together form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as General Construction Work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) All “A” Series Drawings (Architectural) – Provide all work shown.
 - a) See Scoping Delineation between GC and WC.
 - b) See Scoping Delineation between GC and FC.
 - c) See Scoping Delineation between GC, BC, and EC.
 - 3) All “S” Series Drawings (Structural) – Provide all work shown.
 - 4) All to be reviewed for Coordination:
 - a) All “M” (Mechanical), “E” (Electrical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 –General Requirements, all Sections,
 - 3) Division 2 –Existing Conditions, all sections.
 - 4) Division 3 –Concrete, all Sections.
 - 5) Division 5 – Metals, all Sections.
 - 6) Division 6 – Woods and Plastics, all Sections.
 - 7) Division 7 – Thermal and Moisture Protection, all Sections.
 - a) See Scoping Delineation between GC and WC.
 - 8) Division 8 – Openings, all Sections.
 - a) See Scoping Delineation between GC and WC.
 - 9) Division 9 – Finishes, all Sections.
 - 10) Division 10 – Specialties, all sections.
 - 11) Division 11 – Equipment, only includes 115213 Projection Screens.
 - 12) Division 12 – Furnishings, all sections except for: 126613 Telescoping Bleachers.
 - 13) Division 14 – Conveying Equipment, all sections.
 - 14) Division 26 – Required sections as they relate to this contract for electrical work specifically indicated as required for this contract.
 - 15) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.

- B. Common General Construction Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development and incorporate schedule data from other Prime Contractors.
 3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”
 4. Provide removal and disposal of miscellaneous materials and equipment including materials not shown if impacting work to be demolished.
 5. Removal of all interior finishes, including but not limited to ceilings, walls, floors, doors/frames, windows, casework, seating, structures, railings, fence, slabs, as shown or described as it relates to the scope shown or required to install new work to the interior of the building. Floors, walls and ceilings needed to be “trenched” or removed for finishes or in set utilities will be removed and replaced/restored by the General Contractor.
 6. Access Doors
 - a. Furnish Access Doors as needed for access of concealed items installed under this contract to be installed by General Contractor as required for maintenance, service, or code.
 - b. Provide installation of Access Doors furnished by other contractors in new wall or ceiling construction.
 - c. Include in base bid to furnish and install the following access doors beyond those already shown on drawings:
 - 1) (2) 18” x 18” fire-rated access doors for either gypsum or masonry construction.
 7. Provide structural support of all wall or ceiling hung equipment from Building Super Structure for equipment installed under this Contract.
 8. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.
 9. Wall and Ceiling Blocking: Provide shop drawings for wall/ceiling blocking/reinforcement locations as needed for all wall/ceiling mounted items including wall mounted items provided by other Contractors as indicated on Contract Drawings or identified during coordination. Acquire Written Confirmation from Architect that Owner does not require any more additional wall/ceiling blocking prior to wall or ceiling construction.
- C. Identification and Labeling: Provide Labeling of all equipment installed under this Contract.
1. Equipment Labelling shall be sized to be visible from ground level.
 2. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - 1) (Filters, Belts, Seals, Fluids, etc.)
 3. Provide additional labels for equipment above ceilings or behind an Access Door and install Labels on Ceiling or Access Door.
- D. Electrical Wiring of Equipment and Devices:

1. Provide all control wiring for equipment and devices installed under this Contract utilizing a licensed Electrician for a fully functioning system except when control wiring is specifically indicated to be provided by the Electrical Contractor on Electrical Drawings.
 - a. See “Electrified Door Hardware Wiring” Section of Electrical Contractor’s Contract Summary for wiring supplied by **Electrical Contractor** for Electrified Door Hardware. GC shall complete installation of Electrified Door Hardware after power is brought to the location by the EC.
 - b. See Elevator Specification for Control Wiring by GC/Elevator Subcontractor.
- E. Concrete and Masonry:
1. **Utility Trench Excavation to support other Contractors:** For **Renovation Construction** under existing floors and walls within the building footprint: The **General Contractor** shall provide: Utility Trench Excavation for the work of all contracts as shown on all MEP contract drawings. Backfill, Floor Infill, Reinforcement, and Patching/Restoration shall be provided by the **General Contractor**. See Plumbing and Electrical Drawings for Trenches required in Library.
 2. Provide equipment pads when indicated on Architectural or Structural Contract Drawings.
 3. Provide all concrete and masonry work indicated on Structural or Architectural Drawings.
 - a. Coordinate with all other Contractors for openings and penetrations shown on all other Contract Drawings.
 4. Loose Masonry lintels are furnished, installed, and grouted by **General Contractor** for openings required for their own work in new and existing walls and **openings required by Other Contractors in new walls**, and existing walls if indicated on Structural or Architectural Drawings for work shown on all other MEP Contract Drawings.
 5. Install concrete and masonry sleeves as furnished by **Other Contractors** in new wall or floor construction for work shown on other Contract Drawings.
- F. Roofing:
1. Provide all roofing work for **Existing Building**.
 2. See 011200 Section 1.4 for General **Roof Construction** requirements.
- G. Doors, Frames, and Hardware:
1. The **General and Window Contractor** shall schedule a Preconstruction Meeting with the Owner, Architect, and Construction Manager to review proposed Door Hardware Functions of each Hardware Set prior to ordering materials. The Contractor is to review each hardware set with the Owner and receive written confirmation that the selected functions and options meets the Owner’s expectations. Submit this Documentation with Hardware Schedule Submittal noting any changes from original specifications to the Architect for final approval.
 2. The **General or Window Contractor (Contractor furnishing associated Materials)** is required field verify and measure all existing conditions and openings prior to ordering Door/Frame/Hardware material (or **Window Contractor** is to coordinate fixed rough opening sizes with the **General Contractor** to be constructed in new walls). The **General/Window Contractor** is to coordinate hardware selections to confirm there are no interference between selected hardware and/or recessed/morticed hardware prep or glazing in doors. The **General/Window Contractor** is to coordinate and confirm there will be no conflicts between glazing, closers, overhead stops, coordinators, or door holders.
 3. The **General or Window Contractor (Contractor furnishing associated Materials)** is required to verify closer type/configuration/mounting position submitted is coordinated with installation conditions and includes sufficient swing radius for electromagnetic door holders, or closer stop position where wall stop will not properly stop door and overhead

- stop is not included in hardware schedule. Coordinate with adjacent wall conditions. Provide blocking in partitions behind all new Door Wall Stops.
4. The **General Contractor** is to provide continuous adjustment of Door Hardware until all hardware functions properly for 1 final inspection of all Door Hardware.
- H. Electrified Door Hardware Wiring:
1. Electrified Door Hardware listed on Hardware Schedule to be furnished and mounted by the **Window Contractor**.
 2. Line Voltage Power Wiring to be provided by **Electrical Contractor** to Electrified Door Hardware or Door Hardware Equipment per Hardware Schedule.
 3. Low Voltage Control Wiring for electrified hardware between devices listed on Hardware Schedule to be provided by **Electrical Contractor**.
 4. The **General Contractor** is to provide start up, configuration, and programming of all electrified door hardware and any ADA Electrified Hardware equipment listed in Hardware Schedule or furnished by the respective **General/Window Contractor**.
 5. The **Window Contractor** shall provide continuous internal raceways/pathways within new doors and frames for wiring all electric hardware or devices indicated on Contract Documents or Hardware Schedule to an accessible location for future wiring. **General Contractor** to install Access Door if needed. The **General Contractor** shall provide pull strings from all device locations on hardware schedule to the accessible location above the ceiling.
- I. Finishes: Provide all finishes indicated in Division 9. Review existing conditions and confirm acceptable substrates prior to installing new finishes. Do not proceed with installations if conditions are not satisfactory for new work.
1. Provide Substrate Moisture Test Reports to confirm Moisture Conditions are acceptable for Finish Material installation.
 2. Provide Floor Leveling Underlayment as required to allow for acceptable flooring installation per manufacture's requirements and Project Specified Tolerances. Review existing conditions to confirm proper Floor Flatness and Levelness conditions can be achieved through Floor Leveling Underlayment, including verification of Elevations at Floor Transitions to Existing Floors and Doorways. Floor Preparation may include but not limited to: Grinding, Shot Blasting, Scarifying, Chipping, Patching as required for new Floor finishes.
 - a. After Floor Leveling Underlayment is complete, the **General Contractor** shall review current prepped floor conditions and verify floor flatness & levelness conditions to confirm conditions meet Project Specified Tolerances.
 - b. At Minimum, Floor Flatness shall meet the standard of less than +/- 1/8-inch deviation over 10 Feet Span Verified with Calibrated 10' Straight Edge or as specified per Manufacturer or Project Specifications and Floor Levelness shall meet the Standard required per Project Specifications.
 - c. Provide Documentation including a written test report on the Floor Flatness and Levelness Conditions and verification of areas meeting acceptable conditions.
 - d. Notify Construction Manager 48 Hours prior to scheduling Flatness and Levelness Testing for tests to be witnessed.
 3. If conditions/substrates are not acceptable for Finish work installation, notify the Construction Manager/Architect and/or submit an RFI requesting directions if further action is needed. Do not install finishes if existing conditions are not acceptable per manufacturers requirements.
- J. Commissioning:
1. Provide commissioning and startup of all equipment installed under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.

- K. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. Maintenance for new Flooring Finishes.
 - b. Conveying Equipment: Elevator
 - c. Door Hardware Operation and Maintenance Training.
- L. Quantities of Work to be included within Base Bid:
1. Provide within the Base Bid, furnish and install additional to the contract documents, **2,000 square feet** of finished sheetrock and support/framing, paint, etc. at the direction of the CM. This work shall be used for Owner requested items, bulk heads, chase-ways, infills and excessive patch areas.
 2. Provide within the Base Bid, furnish and installation of a minimum of ¼” of Leveling under all new Wood Floor Systems in both the Main Gymnasium and Annex Gymnasium. Provide Field verification that ¼” of Leveling is sufficient to achieve specified Flatness and Levelness tolerances.
 3. See Unit Price Specification for additional scope to be included within base bid if indicated so.
- M. Project Specific Requirements:
1. The General Contractor shall provide monitoring of HVAC and Humidity Conditions of Construction Areas to ensure ambient conditions meet the requirements for installation of all new work including but not limited to new Wood Floor Materials. Provide Data logs of time stamped conditions for humidity and temperature for entire project duration. Ensure new Wood Floor Materials are properly acclimated for the conditions of the space that materials are installed in.
 2. The General Contractor shall coordinate with Owner/Construction Manager to adjust and control Owner’s HVAC equipment as required to maintain conditions as required as well as limiting equipment function during demolition and other dust operations that may contaminate HVAC Equipment.
 3. Replace all HVAC equipment filters for equipment operating during Construction including Gymnasium Units.
 4. **Scope Delineation between General Contractor and Window Contractor:**
 - a. Design Intent: Intention of Window Contractor and General Contractor delineation is to release Window Storefronts for Manufacturing earlier in schedule to ensure Library 123 is completed per the Milestone Schedule. Gymnasium Windows will have to be installed at later dates per Milestone Schedule.
 - b. Library Windows: The **Window Contractor** shall furnish and turn over to the **General Contractor** for installation all materials associated with Aluminum Windows/Storefronts/Curtain Walls, and Aluminum Door Systems (exception for Type O NanaWall furnished by GC) in Library Room 123 and associated ancillary offices/spaces at the Library Renovation Area.
 - c. NanaWall Storefront shall be furnished and installed entirely by General Contractor (Type O on A621).
 - d. All Hollow Metal Steel Frames and associated wood/HM Steel Doors shall be furnished and installed entirely by GC.
 - e. See Addendum Documents for further updated details.
 - f. Installation: The **General Contractor** shall follow all Manufacturers installation requirements for installation of the specified materials. The **General Contractor** shall provide all rough openings for window/storefront installation, and coordinate size with **Window Contractor**.

- g. Gymnasium Windows: Windows/Storefronts/Curtain Walls and miscellaneous materials in the Main Gymnasium Room 83 and Annex Gym Room 10 shall be furnished and installed by **General Contractor**.
- h. Contract Document Reference: See Library Drawings: Window Elevations A-621, Door Schedule A-601, and Window Details A-631, and Interior Elevations A-831. See Specifications: 083513 Thermally Broken Aluminum Framed Folding Glass System, 084113 Aluminum Framed Entrances and Storefronts, 087100 Door Hardware, 088000 Glazing.
- i. Materials: Materials Furnished by the **Window Contractor** at their designated areas shall include Window Storefront Systems/Window Framing, Glazing, Aluminum Doors (See Door Schedule) with all associated Door Hardware (See Door Hardware Schedule) indicated on Hardware Schedule including any Electrified Hardware Materials, and any miscellaneous installation materials required such as: fasteners, joint sealant, shims, caulking, and all other materials required for installation of window systems. Roller Window Shades, and Windowsills shall be provided by **General Contractor**.
 - 1) Window Contractor shall calculate and furnish materials at required quantities and an additional furnish 5% of loose miscellaneous installation materials such as fasteners, caulking, shims, etc.

5. Scope Delineation between General Contractor and Furniture Contractor:

- a. The **Furniture Contractor** shall provide and install all Furniture indicated on A-822 Furniture Plans. Materials include Chairs, Tables, Shelving and Desks indicated on A-822. All Casework or Millwork not tagged on this Drawings shall be provided by the General Contractor. Furniture Contractor and General Contractor shall coordinate material sizes prior to release of Furniture or Casework.

6. Scope Delineation between Bleacher Contractor, General Contractor, and Electrical Contractor:

- a. The **Bleacher Contractor** shall provide complete installation of Telescoping Bleachers indicated on Contract Drawings and 126613 Telescoping Bleachers Specifications.
- b. The **Bleacher Contractor** shall provide complete installation of Basketball Backstops indicated on Contract Drawings and 116623.13 Gymnasium Equipment. **Bleacher Contractor** shall provide Demolition of Existing Backstops and preparation for new work. **Bleacher Contractor** shall provide touch up paint as required if materials are not installed prior to General Contractor's Painting.
- c. The **Bleacher Contractor** shall provide complete installation of Gymnasium Wall Padding indicated on Contract Drawings and 116623.53 Gymnasium Wall Padding. **General Contractor** shall provide Demolition of Existing Wall Pads and patching.
- d. The **Bleacher Contractor** shall provide complete Installation of Multi Sport Cages indicated on Contractor Drawings.
- e. The **Bleacher Contractor** shall coordinate all attachments, shop drawings, layout with **General Contractor** prior to release of any materials. Bleacher Contractor shall coordinate Bleacher Dimensions, and Back Stop Hoop Locations with Court Line Striping and provide Shop Drawings coordinating these layouts. Submit detailed Shop Drawings on ADA Seating components within Bleacher assemblies.
- f. The **Bleacher Contractor** and **Electrical Contractor** shall coordinate Power Requirements and Electrical Connection locations for all equipment prior to installation of any Electrical Materials.

**1.6 CONTRACT MC-2 - MECHANICAL CONSTRUCTION WORK CONTRACT:
(Also referred to as: “Mechanical Contractor” or “MC”)**

- A. The Work of the Mechanical Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Heating, ventilating, cooling, and controls work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) All “M” Mechanical Series Drawings – Provide all work.
 - 3) All “P” Plumbing Series Drawings – Provide all work.1) All to be reviewed for typical details and coordination of all work:
 - a) All “A” (Architectural), “S” (Structural), and “E” (Electrical), series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all sections.
 - 2) Division 1 –General Requirements, all sections.
 - 3) Division 2 –Selective Structure Demolition, as required.
 - 4) Division 3 Concrete – as required.
 - 5) Division 7 –Penetration & Joint Firestopping and Joint Sealants, as required for the Work of this Contract.
 - 6) Division 8 – Access Doors and Louvers as required.
 - 7) Division 9 – Painting and Ceiling Work as required.
 - 8) Division 22 – Plumbing, all sections.
 - 9) Division 23 – HVAC, all sections with exceptions per below.
 - a) See scoping delineation between Mechanical Contractor and Controls Contractor for 230900 Instrumentation and Control for HVAC and 230923 Direct-Digital Control System for HVAC.
 - b) See scoping delineation between Mechanical Contractor, Controls Contractor, and RTU Contractor for 237433 Packaged Outdoor Heating and Cooling Units.
 - 10) Division 26 – Required sections as they relate to this contract for electrical work specifically indicated as required for this contract.
 - 11) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Mechanical requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”

4. Provide removal and disposal of miscellaneous materials and equipment including materials not shown if impacting work to be demolished.
 5. Access Doors: Furnish Access Doors as needed for access of concealed items installed under this contract to be installed by **General Contractor** as required for maintenance, service, or code.
 6. Provide structural support of all wall or ceiling hung equipment from Building Super Structure for equipment installed under this Contract.
 7. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.
 8. Furnish motor controllers, equipment disconnects, and variable frequency drives to Electrical Contract for installation and wiring where not indicated on Electrical Drawings.
 9. Furnish HVAC equipment roof supports, curbs, and pipe portals.
 10. Provide insulation of all modified piping, ductwork, and equipment.
 11. Provide additional isolation valves as needed for contractor's convenience or as needed to maintain project schedule via means and methods.
 12. Provide complete finished installation of equipment, duct work, metal chases with all paint as needed to provide a complete finished system.
 13. Provide Duct painting of all exposed ductwork not covered by a ceiling unless indicated painting of exposed ceiling system / mechanical systems by **General Contractor** per Architectural Drawings / Architectural Finish Schedule.
 14. Filters: Provide at minimum: (1) replacement set of filters for all equipment to be turned over to the owner with equipment filter schedule that includes all information/sizes/models/quantities needed for the owner to purchase new filters for all equipment.
 - a. Provide replacement filters for any equipment that ran during construction prior to final cleaning. Provide duct cleaning for any ductwork utilized during construction as needed.
- C. Identification and Labeling: Provide Labeling of all piping, duct work, equipment, valves, control valves, dampers, junction boxes, panels, electrical devices, and electrical connections installed under this Contract.
1. For electrical connection labelling: Indicate Panel and Circuit of all electrical devices, outlets, or other power connections for all equipment.
 2. Equipment, Piping, Control Valve, and Duct Labelling shall be sized to be visible from ground level.
 3. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - 1) (Filters, Belts, Seals, Fluids, etc.)
 - d. Valve Tag / Valve Label Schedule. (Indicate Normal Position (Open or Closed), and Valve Function).
 - e. Panel Schedules for all new or modified Electrical/Control Panels by this Contract.
 4. Provide additional labels for valves, dampers, devices, or equipment above Ceilings or behind an Access Door, and install Labels on Ceiling or Access Door.
- D. Electrical Wiring of Equipment and Devices:
1. Provide all control wiring for equipment and devices installed under this Contract utilizing a licensed Electrician for a fully functioning system except when control wiring is specifically indicated to be provided by the Electrical Contractor on Electrical Drawings.

- E. **HVAC Controls: Controls Contractor** to provide complete Building Management System Controls per **Controls Specification and as delineated within 011200 Multiple Contract Summary**.
1. Controls System Specified Manufacturer/Installer: SIEMENS
- F. Scope of Work between Mechanical Contractor and Controls Contractor:
1. Control Valves, Dampers, and Sensors:
 - a. **Controls Contractor** to furnish all Control Valves and Dampers that is not specified to be supplied by Manufacturer with new equipment. The **Mechanical Contractor** shall install all **Controls Contractor** furnished Control Valves and Dampers.
 - b. **Mechanical Contractor** to provide pipe fittings for mounting of controls sensors and other controls items as required in piping. Sensors to be provided and installed by **Controls Contractor**.
- G. Testing, Adjusting, and Balancing:
1. Provide Testing, Adjusting, balancing of all new HVAC systems to be included in this contract per **Testing and Balancing Specification**.
 2. The **Mechanical Contractor, RTU Contractor, and Controls Contractor** shall provide personnel available to support: **Testing and Balancing Contractor** for the duration required to complete all procedures required for Testing and Balancing. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.
- H. Commissioning:
1. Provide commissioning and startup of all equipment installed under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.
 2. The **Mechanical Contractor, RTU Contractor and Controls Contractor** shall provide personnel available to support: **Commissioning** for the duration required to complete all procedures required for Commissioning Procedures. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.
- I. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. Air Terminal Units.
 - b. Piping and Ductwork Infrastructure Review.
 - c. Bottle Filler Maintenance.
- J. Quantities of Work to be included within Base Bid:
1. Contractor to provide and install new additional valves above and beyond what is shown on the drawings – (5) 1”, (5) 1 ½”. Exact sizes and location to be determined in the field, at the direction of the construction manager.

K. Project Specific Requirements:

1. Scope Delineation between **Roof Top Unit Contractor, Mechanical Contractor, and Controls Contractor:**

- a. The **Roof Top Unit Contractor (RC)** shall furnish all materials required for the installation of Library RTU-E7 such as: the RTU Equipment itself, Roof Top Unit Roof Curbs Side Mounted Pipe Chase, Field Installed Flashing. Fasteners for Field Installation including Fasteners to attach curb to Building Structure, Sealant, and all other miscellaneous materials required is to be installed in the field and shall be provided by the **Mechanical Contractor**.
- b. All Materials to be turned over to the **Mechanical Contractor** for field installation. RTU Unit and Curb to be delivered to a ground location for Mechanical Contractor to take custody of for Crane Pick Installation per Milestone Schedule.
- c. The **Roof Top Unit Contractor** and **Controls Contractor** shall provide jointly a complete Start Up and Commissioning Service of the RTU with onsite personnel to support Commissioning and Functional Testing.
- d. Control Valves and Automatic Air Dampers are to be furnished by the Controls Contractor and turned over to the **Mechanical Contractor** for installation within RTU-E7. Actuator installation and connections to be made by the **Controls Contractor**.
- e. Piping, Piping Specialties, Valves, Ductwork, and related insulation Materials is to be provided and installed by the **Mechanical Contractor**.
- f. **Library RTU-E6** is an existing RTU which will have no scope required by **Mechanical Contractor** or the **RTU Contractor**. **All Scope relating to existing RTU-E6 will be by the Controls Contractor**.
- g. Gymnasium RTU's: RTU-3, RTU-4, RTU-5, RTU-6, RTU-D1, RTU-D2 shall be rebalanced by **Mechanical Contractor** with Controls Support from **Controls Contractor**. **Controls Contractor** to hire Equipment Manufacturer Technician to assist with adjusting Package Controls on these units if current Controls do not allow complete control as required such as Damper Position and VFD Fan Speed Adjustment.

1.7 CONTRACT EC-3 - ELECTRICAL CONSTRUCTION WORK CONTRACT: (Also referred to as: “Electrical Contractor” or “EC”)

- A. The Work of the Electrical Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Electrical Construction work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) All “E” Electrical Series Drawings – Provide all work.
 - 3) All to be reviewed for typical details and coordination of all work:
 - a) All “A” (Architectural), “S” (Structural), “M” (Mechanical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 –General Requirements, all sections.
 - 3) Division 2 –Selective Demolition, as required.
 - 4) Division 3 Concrete – as required.
 - 5) Division 7 –Penetration & Joint Firestopping and Sealants, as required.
 - 6) Division 8 – Access Doors as required.
 - a) Door Hardware Schedule for Electrified Hardware Wiring, as required.
 - 7) Division 9 – Painting and Ceiling Work as required.
 - 8) Division 12 - All sections as relates to this contract for electrical connections to equipment.
 - 9) Division 14 - All sections as relates to this contract for electrical connections to equipment.
 - 10) Division 23 - All sections as relates to this contract for electrical connections to equipment.
 - 11) Division 26 – Electrical, all sections.
 - 12) Division 27 – Communications, all sections.
 - 13) Division 28 – Electronic Safety and Security, all sections.
 - 14) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Electrical Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”

4. Provide removal and disposal of miscellaneous materials and equipment including materials not shown if impacting work to be demolished.
 5. Access Doors: Furnish Access Doors as needed for access of concealed items installed under this contract to be installed by **General Contractor** as required for maintenance, service, or code.
 6. Provide structural support of all wall or ceiling hung equipment from Building Super Structure for equipment installed under this Contract.
 7. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes, cover plates, exposed conduits/wire mold, and any other pre-painted finished items or devices prior to ordering of material.
 8. See Architectural Elevations for additional information for locations of wall mounted devices and coordination with other wall mounted items or finishes.
 9. Provide all power wiring to all HVAC equipment.
 - a. (Install motor controllers or disconnects supplied by Mechanical Contractor when motor controllers or disconnects are not indicated on Electrical Drawings).
- C. Identification and Labeling: Provide Labeling of all equipment, junction boxes, panels, electrical devices, and electrical connections installed under this Contract.
1. For electrical connection labelling: Indicate Panel and Circuit of all electrical devices, outlets, or other power connections for all equipment.
 2. Equipment Labelling shall be sized to be visible from ground level.
 3. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - d. Panel Schedules for all new or modified Electrical/Control Panels by this Contract.
 4. Provide additional labels for equipment above Ceilings or behind an Access Door and install Labels on Ceiling or Access Door.
- D. Electrical Wiring of Equipment and Devices:
1. Provide all control wiring for equipment and devices installed under this Contract utilizing a licensed Electrician for a fully functioning system when control wiring is specifically indicated to be provided by the Electrical Contractor on Electrical Drawings.
- E. Electrified Door Hardware Wiring:
1. Electrified Door Hardware listed on Hardware Schedule to be furnished and mounted by the **Window Contractor**.
 2. Line Voltage Power Wiring to be provided by **Electrical Contractor** to Electrified Door Hardware or Door Hardware Equipment per Hardware Schedule.
 3. Low Voltage Control Wiring for electrified hardware between devices listed on Hardware Schedule to be provided by **Electrical Contractor**.
 4. The **General Contractor** is to provide start up, configuration, and programing of all electrified door hardware and any ADA Electrified Hardware equipment listed in Hardware Schedule or furnished by the respective **General/Window Contractor**.
 5. The **Window Contractor** shall provide continuous internal raceways/pathways within new doors and frames for wiring all electric hardware or devices indicated on Contract Documents or Hardware Schedule to an accessible location for future wiring. **General Contractor** to install Access Door if needed. The **General Contractor** shall provide pull strings from all device locations on hardware schedule to the accessible location above the ceiling.

- F. Telecommunications and Data Systems:
1. Provide complete Telecommunications Data Wiring tested and terminated.
 2. Provide all Commissioning and Testing Procedures and Documentation for Telecommunications Work.
- G. Fire Alarm System
1. Provide complete Fire Alarm system as indicated in Contract Documents.
 2. Provide integration to existing fire alarm devices and systems where required.
 3. Provide complete test reports verifying the function of equipment provided by others in which connection is made to the Fire Alarm System and document observed results from functional testing of Fire Alarm Integration.
 4. Fire Alarm System Specified Manufacturer/Installer: Fire Lite Alarms by Honeywell ES-200X Addressable Fire Alarm Control Panel.
- H. Identification of Electrical:
1. Provide updated Panel Schedules and Labeling in Electrical Panels for all circuit breakers installed or changed under this contract.
 2. Provide Labelling all electrical junction boxes with Panel Labels and Circuit Breaker Number that feeds each Junction Box.
 3. Provide Labelling of all outlets, devices, and equipment indicating Panel Labels and Circuit Breaker Numbers.
 4. Provide Labelling of all Data/Telecommunication Lines installed under this Contract at each end of the line.
- I. Commissioning:
1. Provide commissioning and startup of all equipment installed under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.
 2. Provide all responsibilities associated with the **Electrical Contractor** as indicated in Electrical Commissioning Specifications.
- J. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. Lighting Control System.
 - b. Fire Alarm System.
 - c. Electrical Infrastructure Review for new/modified Panels.
- K. Project Specific Requirements:
1. Cameras, access control, speakers and other ceiling/wall devices shall be surveyed and protected during the work, relocated as necessary for the performance of the scope within the project. Contractor shall maintain all safe and operable systems during construction, up until the new system is operational. Contractor shall provide labor to assist in reinstallation, focusing as needed for the Owner to return to operations as was prior to the start on construction. Contractor shall be responsible for re-installing cameras in the ceiling.
 2. Provide only if required: Should the need for a temporary full building generator be required for Electrical Prime Contractor scope during the main and sub panel outages. Electrical Contractor shall carry within the Bid the cost for such, assume a 24hrs per day running rental, including transportation, installation, fuel, maintenance, servicing, extended hours charges, etc. for the outage necessary to perform the service scope as described within the Contract.

3. Scope Delineation between Bleacher Contractor, General Contractor, and Electrical Contractor:

- a. The **Bleacher Contractor** shall provide complete installation of Telescoping Bleachers indicated on Contract Drawings and 126613 Telescoping Bleachers Specifications.
 - b. The **Bleacher Contractor** shall provide complete installation of Basketball Backstops indicated on Contract Drawings and 116623.13 Gymnasium Equipment. **Bleacher Contractor** shall provide Demolition of Existing Backstops and preparation for new work. **Bleacher Contractor** shall provide touch up paint as required if materials are not installed prior to General Contractor's Painting.
 - c. The **Bleacher Contractor** shall provide complete installation of Gymnasium Wall Padding indicated on Contract Drawings and 116623.53 Gymnasium Wall Padding. **General Contractor** shall provide Demolition of Existing Wall Pads and patching.
 - d. The **Bleacher Contractor** shall provide complete Installation of Multi Sport Cages indicated on Contractor Drawings.
 - e. The **Bleacher Contractor** shall coordinate all attachments, shop drawings, layout with **General Contractor** prior to release of any materials. Bleacher Contractor shall coordinate Bleacher Dimensions, and Back Stop Hoop Locations with Court Line Striping and provide Shop Drawings coordinating these layouts. Submit detailed Shop Drawings on ADA Seating components within Bleacher assemblies.
 - f. The **Bleacher Contractor** and **Electrical Contractor** shall coordinate Power Requirements and Electrical Connection locations for all equipment prior to installation of any Electrical Materials.
4. See Contract Documents for requirements relating to Audiovisual System in the Library.
5. See Contract Documents for requirements relating to Audiovisual System in the Gymnasiums.

6. Scope Delineation between Electrical Contractor and Lighting Contractor (MUSCO):

- a. See Contract Documents Issued and updates made via Addendum for information relating to delineation of Scope between **Electrical Contractor** and **Lighting Contractor**. **Lighting Contractor** to furnish materials such as Equipment, Lights Fixtures, and Devices as indicated on Documents and materials to be installed by **Electrical Contractor**. All Wiring Line and Low Voltage/Control Wiring (including test reports of all wiring), Conduits, Backboxes, Labeling, and other Electrical Infrastructure required to support equipment is to be furnished and installed by the **Electrical Contractor**.

1.8 CONTRACT BC-4 – BLEACHER CONSTRUCTION WORK CONTRACT: (Also referred to as: “Bleacher Contractor” or “BC”)

- A. The Work of the Bleacher Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Bleacher Construction work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) “A” Architectural Series Drawings – Provide all work associated with new Bleachers, Backboards, and Wall Pads.
 - 3) All to be reviewed for typical details and coordination of all work:
 - a) All “A” (Architectural), “S” (Structural), “M” (Mechanical), and “E” (Electrical) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 – Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 – General Requirements, all sections.
 - 3) Division 2 – Existing Conditions, as required.
 - 4) Division 7 – Penetration & Joint Firestopping and Sealants, as required.
 - 5) Division 11 – Only Includes Section 126613 – Telescopic Bleachers, 116623.13 Gymnasium Equipment (Back Stops + Multi Sport Cages), 116623.53 Gymnasium Wall Padding.
 - 6) Division 26 – Required sections as they relate to this contract for electrical work specifically indicated as required for this contract.
 - 7) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Bleacher Construction Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 3. Access Doors
 - a. Furnish Access Doors as needed for access of concealed items installed under this contract to be installed by General Contractor as required for maintenance, service, or code.
 4. Provide structural support of all wall or ceiling hung equipment from Building Super Structure for equipment installed under this Contract.
 5. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.
- C. Identification and Labeling: Provide Labeling of all equipment installed under this Contract.
1. Equipment Labelling shall be sized to be visible from ground level.

2. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - 1) (Filters, Belts, Seals, Fluids, etc.)
 3. Provide additional labels for equipment above ceilings or behind an Access Door and install Labels on Ceiling or Access Door.
- D. Electrical Wiring of Equipment and Devices:
1. Provide all control wiring for equipment and devices installed under this Contract utilizing a licensed Electrician for a fully functioning system except when control wiring is specifically indicated to be provided by the Electrical Contractor on Electrical Drawings.
- E. Commissioning:
1. Provide commissioning and startup of all equipment installed under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.
- F. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. Telescoping Bleachers
 - b. Gymnasium Equipment (Back Boards)
- G. Project Specific Requirements:
1. **Scope Delineation between Bleacher Contractor, General Contractor, and Electrical Contractor:**
 - a. The **Bleacher Contractor** shall provide complete installation of Telescoping Bleachers indicated on Contract Drawings and 126613 Telescoping Bleachers Specifications.
 - b. The **Bleacher Contractor** shall provide complete installation of Basketball Backstops indicated on Contract Drawings and 116623.13 Gymnasium Equipment. **Bleacher Contractor** shall provide Demolition of Existing Backstops and preparation for new work. **Bleacher Contractor** shall provide touch up paint as required if materials are not installed prior to General Contractor's Painting.
 - c. The **Bleacher Contractor** shall provide complete installation of Gymnasium Wall Padding indicated on Contract Drawings and 116623.53 Gymnasium Wall Padding. **General Contractor** shall provide Demolition of Existing Wall Pads and patching.
 - d. The **Bleacher Contractor** shall provide complete Installation of Multi Sport Cages indicated on Contractor Drawings.
 - e. The **Bleacher Contractor** shall coordinate all attachments, shop drawings, layout with **General Contractor** prior to release of any materials. Bleacher Contractor shall coordinate Bleacher Dimensions, and Back Stop Hoop Locations with Court Line Striping and provide Shop Drawings coordinating these layouts. Submit detailed Shop Drawings on ADA Seating components within Bleacher assemblies.
 - f. The **Bleacher Contractor** and **Electrical Contractor** shall coordinate Power Requirements and Electrical Connection locations for all equipment prior to installation of any Electrical Materials.

1.9 CONTRACT RC-5 - RTU CONSTRUCTION WORK CONTRACT: (Also referred to as: "RTU Contractor" or "RC")

- A. The Work of the RTU Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as RTU work.
 - a. Drawings:
 - 1) All "G" Series Drawings (General)
 - 2) "M" Mechanical Series Drawings – Provide work associated with RTU/Packaged Outdoor Heating and Cooling Units: Unit Tag Library RTU E-7.
 - a) See scoping delineation between Mechanical Contractor and RTU Contractor for 237433 Packaged Outdoor Heating and Cooling Units.
 - 3) All to be reviewed for typical details and coordination of all work:
 - a) All "A" (Architectural), "S" (Structural), 2) "M" Mechanical Series Drawings, and "E" (Electrical), series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all sections.
 - 2) Division 1 –General Requirements, all sections.
 - 3) Division 23 – HVAC:
 - a) 237433 Packaged Outdoor Heating and Cooling Units.
 - b) See scoping delineation between Mechanical Contractor, Controls Contractor, and RTU Contractor for 237433 Packaged Outdoor Heating and Cooling Units.
 - c) 230800 Commissioning of HVAC, for CxA Support.
 - 4) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common requirements:
1. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 2. Furnish motor controllers, equipment disconnects, and variable frequency drives to Electrical Contract for installation and wiring where not indicated on Electrical Drawings.
 3. Furnish HVAC equipment roof supports, curbs, and pipe portals associated with 237433 Packaged Outdoor Heating and Cooling Units.
 4. Filters: Provide at minimum: (1) replacement set of filters for all equipment to be turned over to the owner with equipment filter schedule that includes all information/sizes/models/quantities needed for the owner to purchase new filters for all equipment.
 - a. Provide replacement filters for any equipment that ran during construction prior to final cleaning. Provide duct cleaning for any ductwork utilized during construction as needed.

- C. Identification and Labeling: Provide Labeling of all piping, duct work, equipment, valves, control valves, dampers, junction boxes, panels, electrical devices, and electrical connections installed under this Contract.
1. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - 1) (Filters, Belts, Seals, Fluids, etc.)
- D. **HVAC Controls: Controls Contractor** to provide complete Building Management System Controls per **Controls Specification and as delineated within 011200 Multiple Contract Summary**.
1. Controls System Specified Manufacturer/Installer: SIEMENS
- E. Scope of Work between Mechanical Contractor and Controls Contractor:
1. Control Valves, Dampers, and Sensors:
 - a. **Controls Contractor** to furnish all Control Valves and Dampers that is not specified to be supplied by Manufacturer with new equipment. The **Mechanical Contractor** shall install all **Controls Contractor** furnished Control Valves and Dampers.
 - b. **Mechanical Contractor** to provide pipe fittings for mounting of controls sensors and other controls items as required in piping. Sensors to be provided and installed by **Controls Contractor**.
- F. Testing, Adjusting, and Balancing:
1. The **Mechanical Contractor, RTU Contractor, and Controls Contractor** shall provide personnel available to support: **Testing and Balancing Contractor** for the duration required to complete all procedures required for Testing and Balancing. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.
- G. Commissioning:
1. Provide commissioning and startup of all equipment furnished under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.
 2. The **Mechanical Contractor, RTU Contractor and Controls Contractor** shall provide personnel available to support: **Commissioning** for the duration required to complete all procedures required for Commissioning Procedures. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.
- H. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. Packaged Outdoor Heating and Cooling Units

I. Project Specific Requirements:

1. Scope Delineation between **Roof Top Unit Contractor, Mechanical Contractor, and Controls Contractor:**

- a. The **Roof Top Unit Contractor (RC)** shall furnish all materials required for the installation of Library RTU-E7 such as: the RTU Equipment itself, Roof Top Unit Roof Curbs Side Mounted Pipe Chase, Field Installed Flashing. Fasteners for Field Installation including Fasteners to attach curb to Building Structure, Sealant, and all other miscellaneous materials required is to be installed in the field and shall be provided by the **Mechanical Contractor**.
- b. All Materials to be turned over to the **Mechanical Contractor** for field installation. RTU Unit and Curb to be delivered to a ground location for Mechanical Contractor to take custody of for Crane Pick Installation per Milestone Schedule.
- c. The **Roof Top Unit Contractor** and **Controls Contractor** shall provide jointly a complete Start Up and Commissioning Service of the RTU with onsite personnel to support Commissioning and Functional Testing.
- d. Control Valves and Automatic Air Dampers are to be furnished by the Controls Contractor and turned over to the **Mechanical Contractor** for installation within RTU-E7. Actuator installation and connections to be made by the **Controls Contractor**.
- e. Piping, Piping Specialties, Valves, Ductwork, and related insulation Materials is to be provided and installed by the **Mechanical Contractor**.
- f. **Library RTU-E6** is an existing RTU which will have no scope required by **Mechanical Contractor** or the **RTU Contractor**. **All Scope relating to existing RTU-E6 will be by the Controls Contractor.**
- g. Gymnasium RTU's: RTU-3, RTU-4, RTU-5, RTU-6, RTU-D1, RTU-D2 shall be rebalanced by **Mechanical Contractor** with Controls Support from **Controls Contractor**. **Controls Contractor** to hire Equipment Manufacturer Technician to assist with adjusting Package Controls on these units if current Controls do not allow complete control as required such as Damper Position and VFD Fan Speed Adjustment.

1.10 CONTRACT CC-6 – CONTROLS CONSTRUCTION WORK CONTRACT: (Also referred to as: “Controls Contractor” or “CC”)

- A. The Work of the Controls Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Heating, ventilating, cooling, and controls work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) All “M” Mechanical Series Drawings – Provide all work specific to new and existing Controls.
 - 3) All to be reviewed for typical details and coordination of all work:
 - a) All “A” (Architectural), “S” (Structural), “C” (Civil), “E” (Electrical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all sections.
 - 2) Division 1 –General Requirements, all sections.
 - 3) Division 2 –Selective Structure Demolition, as required.
 - 4) Division 7 –Penetration & Joint Firestopping and Joint Sealants, as required for the Work of this Contract.
 - 5) Division 8 – Access Doors, as required.
 - 6) Division 9 – Painting and Ceiling Work as required.
 - 7) Division 23 – All sections as they relate to this Contract for Controls Work.
 - a) Specifically includes 230900 Instrumentation and Control for HVAC and 230923 Direct-Digital Control System for HVAC.
 - b) Specifically include all Controls Contractor responsibilities indicated in: Commissioning Specification, Testing Adjusting and Balancing Specification, and Common Work Results Specification.
 - c) See scoping delineation between Mechanical Contractor, Controls Contractor, and RTU Contractor for 237433 Packaged Outdoor Heating and Cooling Units.
 - 8) Division 26 – Required sections as they relate to this contract for electrical work specifically indicated as required for this contract.
 - 9) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Controls System Specified Manufacturer/Installer: SIEMENS
- C. Common Controls Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.

3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”
 4. Provide removal and disposal of miscellaneous materials and equipment including materials not shown if impacting work to be demolished.
 5. Access Doors: Furnish Access Doors as needed for access of concealed items installed under this contract to be installed by **General Contractor** as required for maintenance, service, or code.
 6. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.
 7. Provide complete finished installation of equipment with all paint as needed to provide a complete finished system.
- D. Controls Specific Requirements:
1. Provide all wiring, devices, and accessories for a complete system to meet all design intent requirements.
 2. Provide all electrical work required for Controls Systems in compliance with respective sections of Division 26 – Electrical/Communication for wiring, cables, boxes, conduits, breakers, thermostats, identification.
 3. Provide integration into Fire Alarm System to monitor and process Fire Alarm Control Sequences.
 4. Provide log of issues identified to impact the performance of system meeting design requirements and identify the Ball in Court of the issue and provide to Construction Manager on a biweekly basis.
 5. Provide Demolition, Patch to Match, Painting, and Restoration of all Existing Controls indicated to be removed.
 6. Provide Adjustments and Programming from 6 Months after acceptance to adjust Controls System as requested by Owner to meet design intent and improve ease of use. Owner to provide a single itemized list of requested changes.
- E. Graphical User Interface of Building Manage System:
1. Graphical User Interface shall be a complete and intuitive system to achieve operation as designed in Controls Specification. Provide symbols and graphics that accurately represent the system installed.
 - a. Provide Submittal of Sample Graphics or Screenshots of all graphics for review. Graphics to be reviewed by Architect and Owner prior to Acceptance.
 - b. Final Sequence of Operations shall be available to be viewed per space in BMS.
 - c. All Symbols, Abbreviations, Colors, and other distinctions shall be referenced with a key that displays the definition of each item.
 - d. Provide Alarm Tracking with date and time stamps. Allow filtering to distinguish between alarms per area, per equipment, and status of alarm. Provide distinctions between alarms that have been acknowledged vs have not been acknowledged, and alarms that are currently active vs inactive. Highlight areas that have an active alarm on the Floor Plan that displays the equipment.
 - e. Provide tracking of equipment monitoring history to allow the Owner to view the status of the equipment from previous points in time for all equipment.
 - f. Request information from the Owner for Default Settings of Controls systems, including but not limited to Default Temperature Set Points, Building Schedules, Occupancy Schedules. Include a copy of the default settings with Record

- Documents. Provide Function to allow owner to reset the system to default settings.
- g. Identify on BMS the adjustments that correspond with Testing and Balancing Reports for each adjustable setting at each adjustment field (Motor Speeds, Damper Positions, Control Valve positions, etc.). Include these values with Record Documents.
- F. Scope of Work between Mechanical Contractor and Controls Contractor:
1. Control Valves, Dampers, and Sensors:
 - a. **Controls Contractor** to furnish all Control Valves and Dampers that is not specified to be supplied by Manufacturer with new equipment. The **Mechanical Contractor** shall install all **Controls Contractor** furnished Control Valves and Dampers.
 - b. **Mechanical Contractor** to provide pipe fittings for mounting of controls sensors and other controls items as required in piping. Sensors to be provided and installed by **Controls Contractor**.
- G. Identification and Labeling: Provide Labeling of all equipment, control valves, dampers, junction boxes, panels, electrical devices, and electrical connections.
1. For electrical connection labelling: Indicate Panel and Circuit of all electrical devices, outlets, or other power connections for all equipment.
 2. Equipment and Piping Labelling shall be sized to be visible from ground level.
 3. Provide complete schedules of the following items:
 - a. Equipment Label Schedule with Equipment Model and Serial Numbers.
 - b. Maintenance and Test Interval Schedule of all equipment.
 - c. Replaceable Maintenance Item Schedule with part numbers for all equipment.
 - d. Valve Tag / Valve Label Schedule. (Indicate Normal Position (Open or Closed), and Valve Function)
 - e. Panel Schedules for all new or modified Electrical/Control Panels by this Contract.
 4. Provide additional labels for valves, dampers, devices, or equipment above Ceilings or behind an Access Door, and install Labels on Ceiling or Access Door.
- H. Electrical Wiring of Equipment and Devices:
1. Provide all control wiring for equipment and devices installed under this Contract utilizing a licensed Electrician for a fully functioning system except when control wiring is specifically indicated to be provided by the Electrical Contractor on Electrical Drawings.
- I. Testing and Balancing:
1. The **Mechanical Contractor, RTU Contractor, and Controls Contractor** shall provide personnel available to support: **Testing and Balancing Contractor** for the duration required to complete all procedures required for Testing and Balancing. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.
- J. Commissioning:
1. Provide commissioning and startup of all equipment installed under this contract. Submit Documentation for approval prior to equipment acceptance and warranty start date.
 2. Provide all responsibilities associated with **Controls Contractor** as indicated in Mechanical Commissioning Specification.
 3. The **Mechanical Contractor, RTU Contractor and Controls Contractor** shall provide personnel available to support: **Commissioning** for the duration required to complete all procedures required for Commissioning Procedures. Provide 2nd shift hours when these activities are scheduled while spaces are occupied by the Owner.

- K. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide General Overall Systems Training.
 2. Provide all Demonstration and Training Requirements per Specifications.
 3. In addition to specification requirements, provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. (2) 4 Hour Sessions of Training on Building Management System/HVAC Controls.
- L. Project Specific Requirements:
1. The **Controls Contractor** shall provide all Scope relating to the Controls Integration of the Existing Library RTU-E6. Include in base bid for costs associated with scheduling Manufacturer's Service Team to be scheduled to adjust the existing units controls to integrate the existing Unit to the BMS and perform new Start up, Commissioning, and support for Functional Test Procedures for RTU-E6.
 2. The **Controls Contractor** is to confirm the ability to perform complete integration of RTU-E6's functions into Building Management System to meet Project Specifications prior to performing work and submission of Controls Submittals. This includes a list of Integration Control Points for the equipment and equipment Sequence of Operations to the Engineer as Submittal for Engineer approval prior to integration.
 3. **Scope Delineation between Roof Top Unit Contractor, Mechanical Contractor, and Controls Contractor:**
 - a. The **Roof Top Unit Contractor (RC)** shall furnish all materials required for the installation of Library RTU-E7 such as: the RTU Equipment itself, Roof Top Unit Roof Curbs Side Mounted Pipe Chase, Field Installed Flashing. Fasteners for Field Installation including Fasteners to attach curb to Building Structure, Sealant, and all other miscellaneous materials required is to be installed in the field and shall be provided by the **Mechanical Contractor**.
 - b. All Materials to be turned over to the **Mechanical Contractor** for field installation. RTU Unit and Curb to be delivered to a ground location for Mechanical Contractor to take custody of for Crane Pick Installation per Milestone Schedule.
 - c. The **Roof Top Unit Contractor** and **Controls Contractor** shall provide jointly a complete Start Up and Commissioning Service of the RTU with onsite personnel to support Commissioning and Functional Testing.
 - d. Control Valves and Automatic Air Dampers are to be furnished by the Controls Contractor and turned over to the **Mechanical Contractor** for installation within RTU-E7. Actuator installation and connections to be made by the **Controls Contractor**.
 - e. Piping, Piping Specialties, Valves, Ductwork, and related insulation Materials is to be provided and installed by the **Mechanical Contractor**.
 - f. **Library RTU-E6** is an existing RTU which will have no scope required by **Mechanical Contractor** or the **RTU Contractor**. **All Scope relating to existing RTU-E6 will be by the Controls Contractor.**
 - g. Gymnasium RTU's: RTU-3, RTU-4, RTU-5, RTU-6, RTU-D1, RTU-D2 shall be rebalanced by **Mechanical Contractor** with Controls Support from **Controls Contractor**. **Controls Contractor** to hire Equipment Manufacturer Technician to assist with adjusting Package Controls on these units if current Controls do not allow complete control as required such as Damper Position and VFD Fan Speed Adjustment.

1.11 CONTRACT WC-7 - WINDOW CONSTRUCTION WORK CONTRACT: (Also referred to as: “Window Contractor” or “WC”)

- A. The Work of the Window Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that together form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Window Construction Work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) All “A” Series Drawings (Architectural) – See Scoping Delineation between GC and WC for Materials Furnished and turned over to GC by WC at “Library” Locations.
 - 3) See Window Elevations A-621, Door Schedule A-601, and Window Details A-631, and Interior Elevations A-831.
 - 4) All to be reviewed for Coordination:
 - a) All “A” Series Drawings (Architectural) “S” Series Drawings (Structural), “M” (Mechanical), “E” (Electrical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 –General Requirements, all Sections,
 - 3) Division 7 – Thermal and Moisture Protection, as required.
 - 4) Division 8 – Openings, all Sections.
 - a) See Scoping Delineation between GC and WC.
 - b) See: 083513 Thermally Broken Aluminum Framed Folding Glass System, 084113 Aluminum Framed Entrances and Storefronts, 087100 Door Hardware, 088000 Glazing.
 - 5) Division 9 – Finishes, all Sections, as required.
 - 6) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Window Construction Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”
 4. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.

- C. Owner Training: (all Training to meet requirements of Demonstration Training Specification)
1. Provide Demonstration and Training on the following items upon equipment/system completion and acceptance:
 - a. (1) 1 Hour Session of Training on ADA / Electrified Door Hardware.
- D. Doors, Frames, and Hardware:
1. The **General and Window Contractor** shall schedule a Preconstruction Meeting with the Owner, Architect, and Construction Manager to review proposed Door Hardware Functions of each Hardware Set prior to ordering materials. The Contractor is to review each hardware set with the Owner and receive written confirmation that the selected functions and options meets the Owner's expectations. Submit this Documentation with Hardware Schedule Submittal noting any changes from original specifications to the Architect for final approval.
 2. The **General or Window Contractor (Contractor furnishing associated Materials)** is required field verify and measure all existing conditions and openings prior to ordering Door/Frame/Hardware material (or **Window Contractor** is to coordinate fixed rough opening sizes with the **General Contractor** to be constructed in new walls). The **General/Window Contractor** is to coordinate hardware selections to confirm there are no interference between selected hardware and/or recessed/morticed hardware prep or glazing in doors. The **General/Window Contractor** is to coordinate and confirm there will be no conflicts between glazing, closers, overhead stops, coordinators, or door holders.
 3. The **General or Window Contractor (Contractor furnishing associated Materials)** is required to verify closer type/configuration/mounting position submitted is coordinated with installation conditions and includes sufficient swing radius for electromagnetic door holders, or closer stop position where wall stop will not properly stop door and overhead stop is not included in hardware schedule. Coordinate with adjacent wall conditions. Provide blocking in partitions behind all new Door Wall Stops.
 4. The **General Contractor** is to provide continuous adjustment of Door Hardware until all hardware functions properly for 1 final inspection of all Door Hardware.
- E. Electrified Door Hardware Wiring:
1. Electrified Door Hardware listed on Hardware Schedule to be furnished and mounted by the **Window Contractor**.
 2. Line Voltage Power Wiring to be provided by **Electrical Contractor** to Electrified Door Hardware or Door Hardware Equipment per Hardware Schedule.
 3. Low Voltage Control Wiring for electrified hardware between devices listed on Hardware Schedule to be provided by **Electrical Contractor**.
 4. The **General Contractor** is to provide start up, configuration, and programing of all electrified door hardware and any ADA Electrified Hardware equipment listed in Hardware Schedule or furnished by the respective **General/Window Contractor**.
 5. The **Window Contractor** shall provide continuous internal raceways/pathways within new doors and frames for wiring all electric hardware or devices indicated on Contract Documents or Hardware Schedule to an accessible location for future wiring. **General Contractor** to install Access Door if needed. The **General Contractor** shall provide pull strings from all device locations on hardware schedule to the accessible location above the ceiling.

F. Project Specific Requirements:

1. Scope Delineation between **General Contractor** and **Window Contractor**:

- a. Design Intent: Intention of Window Contractor and General Contractor delineation is to release Window Storefronts for Manufacturing earlier in schedule to ensure Library 123 is completed per the Milestone Schedule. Gymnasium Windows will have to be installed at later dates per Milestone Schedule.
- b. Library Windows: The **Window Contractor** shall furnish and turn over to the **General Contractor** for installation all materials associated with Aluminum Windows/Storefronts/Curtain Walls, and Aluminum Door Systems (exception for Type O NanaWall furnished by GC) in Library Room 123 and associated ancillary offices/spaces at the Library Renovation Area.
- c. NanaWall Storefront shall be furnished and installed entirely by General Contractor (Type O on A621).
- d. All Hollow Metal Steel Frames and associated wood/HM Steel Doors shall be furnished and installed entirely by GC.
- e. See Addendum Documents for further updated details.
- f. Installation: The **General Contractor** shall follow all Manufacturers installation requirements for installation of the specified materials. The **General Contractor** shall provide all rough openings for window/storefront installation, and coordinate size with **Window Contractor**.
- g. Gymnasium Windows: Windows/Storefronts/Curtain Walls and miscellaneous materials in the Main Gymnasium Room 83 and Annex Gym Room 10 shall be furnished and installed by **General Contractor**.
- h. Contract Document Reference: See Library Drawings: Window Elevations A-621, Door Schedule A-601, and Window Details A-631, and Interior Elevations A-831. See Specifications: 083513 Thermally Broken Aluminum Framed Folding Glass System, 084113 Aluminum Framed Entrances and Storefronts, 087100 Door Hardware, 088000 Glazing.
- i. Materials: Materials Furnished by the **Window Contractor** at their designated areas shall include Window Storefront Systems/Window Framing, Glazing, Aluminum Doors (See Door Schedule) with all associated Door Hardware (See Door Hardware Schedule) indicated on Hardware Schedule including any Electrified Hardware Materials, and any miscellaneous installation materials required such as: fasteners, joint sealant, shims, caulking, and all other materials required for installation of window systems. Roller Window Shades, and Windowsills shall be provided by **General Contractor**.
 - 1) Window Contractor shall calculate and furnish materials at required quantities and an additional furnish 5% of loose miscellaneous installation materials such as fasteners, caulking, shims, etc.

1.12 CONTRACT FC-8 - FURNITURE CONSTRUCTION WORK CONTRACT: (Also referred to as: “Furniture Contractor” or “FC”)

- A. The Work of the Furniture Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that together form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference, and any other construction operations traditionally recognized as Furniture Construction Work.
 - a. Drawings:
 - 1) All “G” Series Drawings (General)
 - 2) A-822 Furniture Plans - See Scoping Delineation between GC and FC.
 - 3) All to be reviewed for Coordination:
 - a) All “A” Series Drawings (Architectural) “S” Series Drawings (Structural), “M” (Mechanical), “E” (Electrical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 –General Requirements, all Sections,
 - 3) Division 11 – Only Includes 115123 Library Stack Systems.
 - 4) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Furniture Construction Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
 3. Temporary Facilities: Provide Temporary Facility responsibilities indicated in “011200 - Multiple Contract Summary: “Temporary Facilities Responsibilities – Designated Responsible Contractors” Section.
 - a. Additional Requirements indicated in “011500 - Temporary Facilities and Controls.”
 4. Provide Submittal of finishes for color selections of all exposed finished products or equipment:
 - a. Includes Equipment Finishes and any other pre-painted finished items or devices prior to ordering of material.
- C. Project Specific Requirements:
1. **Scope Delineation between General Contractor and Furniture Contractor:**
 - a. The **Furniture Contractor** shall provide and install all Furniture indicated on A-822 Furniture Plans. Materials include Chairs, Tables, Shelving and Desks indicated on A-822. All Casework or Millwork not tagged on this Drawings shall be provided by the General Contractor. Furniture Contractor and General Contractor shall coordinate material sizes prior to release of Furniture or Casework.

1.13 CONTRACT LC-9 – LIGHTING CONSTRUCTION WORK CONTRACT: (Also referred to as: “Lighting Contractor” or “LC”)

- A. The Work of the Lighting Construction Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that together form the contract documents. The Contractor is directed to examine **ALL** drawings and specifications since certain details and/or notes may appear anywhere therein that apply to their work.
1. This prime contract is defined as, and includes, Drawings and Specifications as indicated by reference:
 - a. Drawings: “E” Series Drawings (Electrical). See Scope Delineation between EC and LC.
 - 1) All to be reviewed for Coordination:
 - a) All “A” Series Drawings (Architectural) “S” Series Drawings (Structural), “M” (Mechanical), “E” (Electrical), and “P” (Plumbing) series drawings as it relates to the work of this contract.
 - b. Specifications:
 - 1) Division 0 –Procurement and Contracting Requirement, all Sections.
 - 2) Division 1 –General Requirements, all Sections.
 - 3) Division 26 – Electrical, all sections as required.
 - 4) Division 27 – Communications, all sections as required.
 - 5) Each Contractor is responsible to review all Project Specifications for Coordination of their work with all other Contractors.
- B. Common Lighting Construction Requirements:
1. Provide all Coordination Responsibilities per 011315 Coordination Drawings between Multiple Prime Contractors.
 2. Provide Project Master Schedule development assistance and submissions of 2-week look-ahead schedules.
- C. Project Specific Requirements:
1. Provide submittals that include complete controls Sequence of Operation, all Graphics, Equipment, Materials, Color Selections, and Field Verified+Coordinated+Dimensioned Layout Shop Drawings.
 2. Provide a dedicated Shop Drawing that specifically depicts all work required by the Electrical Contractor to support the Lighting Contractor’s Equipment.
 3. Provide complete commissioning and functional testing of complete system and all functions. Submit written functional test reports documenting that all new equipment is operating as designed per approved submittals.
 4. Provide (2) 4 Hour Training Sessions for complete Demonstration and Training of the Entire system, 1 Training at Substantial Completion, and 1 Training at Final Completion.
 5. Include costs for programming adjustments after installation per Owner requested list of adjustments.
 6. See Contract Documents Issued and updates made via Addendum for information relating to delineation of Scope between **Electrical Contractor** and **Lighting Contractor**. **Lighting Contractor** to furnish materials such as Equipment, Lights Fixtures, and Devices as indicated on Documents and materials to be installed by **Electrical Contractor**. All Wiring Line and Low Voltage/Control Wiring (including test reports of all wiring), Conduits, Backboxes, Labeling, and other Electrical Infrastructure required to support equipment is to be furnished and installed by the **Electrical Contractor**.

SECTION 01 50 00

TEMPORARY FACILITIES & CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Portable Chemical Toilet Facilities.
 - 2. Dumpsters.
 - 3. Temporary Electric Power.
 - 4. Temporary Lighting.
 - 5. Water service and distribution.
 - 6. Temporary heat.
 - 7. Temporary Barricades.
 - 8. Temporary Storm Drainage.
 - 9. Temporary Staging Area, Access Roads, Site Signage, and Site Fence
 - 10. Building and Site Maintenance
 - 11. Temporary Fire Extinguishers and Signage for Building Construction:
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds.
 - 2. Architects/Engineers field office.
 - 3. Telecommunication service.
 - 4. Dewatering facilities and drains.
 - 5. Temporary enclosures.
 - 6. Hoists and temporary elevator use.
 - 7. Rodent and pest control.
 - 8. Construction aids and miscellaneous services and facilities.

D. Security and protection facilities include, but are not limited to, the following:

1. Environmental protection.
2. Tree and plant protection.
3. Pest control.
4. Security enclosure and lockup.

1.2 DIVISION OF RESPONSIBILITIES

A. General: Each prime contractor is specifically assigned certain responsibilities for temporary services and facilities to be used by other prime contractors, and other nonprime contractors and separate entities at the site, Owner's workforces, Construction Manager, Architect, testing agencies, personnel of governing authorities, and personnel authorized to be at project site during contract time.

1.3 USE CHARGES

A. General: Cost or use charges for temporary facilities are not chargeable to the Owner or the Architect. The Architect will not accept a prime contractor's cost or use charges for temporary services or facilities as a basis of claim for an adjustment in the Contract Sum or the Contract Time.

B. Water Service: Use water from the Owner's existing water system (when available) without metering and without payment of use charges. Access to water shall be designated by the Owner. If existing water supply system is not available, then provide water tanks as required and fill with potable water to supply the Temporary Water Distribution System.

C. Electric Power Service:

1. Use of electric power from the Owner's permanent power system (when available) will be granted to all prime contractors without payment of use charges. Temporary Heating shall not use electricity as primary heat source.
2. Use of electric power from Electrical Utility shall be paid for by the Owner when Owner's permanent power system is not available.

1.4 SUBMITTALS

A. Temporary Utilities: The prime contractor shall submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

B. Implementation and Termination Schedule: Within 15 days of the date established for submittal of the Contractor's Construction Schedule, each prime contractor shall submit a schedule indicating implementation and termination of each temporary utility for which the Contractor is responsible.

C. Temporary Signage: Provide shop drawings, indicating the size and layout of the signs, color choices for Owner selection and installation details.

D. Submit Product Data and Shop Drawings of Proposed Temporary Facilities.

1.5 QUALITY ASSURANCE

- A. Regulations: The prime contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
1. Building code requirements.
 2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, fire department and rescue squad rules.
 5. Environmental protection regulations.
- B. Standards: The prime contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
1. Local custom and trade union jurisdictional settlements do not control the scope of work included in each prime contract.
 2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. Temporary Utilities: The prime contractor shall prepare a schedule indicating dates for implementation and termination of each temporary utility for which the Contractor is responsible. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.
1. Temporary Use of Permanent Facilities: The Installer of each permanent service shall assume responsibility for its operation, maintenance, and protection during use as a construction facility prior to the Owner's acceptance, regardless of previously assigned responsibilities.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: The prime contractor shall provide new materials. If acceptable to the Architect, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for use intended.
- B. Lumber and Plywood:
 - 1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thicknesses indicated.
 - 3. For fences and vision barriers, provide minimum 3/8-inch- thick exterior plywood.
 - 4. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch-thick exterior plywood.
- C. Insulation: Unfaced mineral-fiber blanket manufactured from glass, slag wool, or rock wool; with maximum flame spread and smoke developed indices of 25 and 50, respectively.
- D. Gypsum Wallboard: Provide gypsum Type X wallboard on interior walls of temporary barricades or partitions.
- E. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
- F. Paint: Comply with requirements of Division 9 Section "Painting."
 - 1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 - 2. For sign panels and applied graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
 - 3. For interior walls, provide 2 coats interior latex eggshell wall paint.
- G. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- H. Water: Provide potable water approved by local health authorities.
- I. Open-Mesh Fencing: Provide 0.12-inch- thick, galvanized 2-inch chain-link fabric fencing 8 feet high with galvanized barbed-wire top strand and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.2 EQUIPMENT

- A. General: The prime contractor shall provide new equipment. If acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide 20AMP Quad receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment. Each Quad Outlet to be connected to Temporary Electric Panel(s) with dedicated 20 Amp Circuits.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide service lamps of wattage required for adequate illumination per OSHA requirements. Provide guard cages or tempered-glass enclosures, when exposed to breakage. Provide lamps suitable for exterior conditions when lamps are exposed to exterior conditions or moisture.
- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
 - 1. The use of indirect fired source heaters (Heat source placed outside the building, ducted into the building) shall be the primary source of temporary heat.
 - 2. Use of gasoline-burning space heaters, direct fire, open flame, or salamander-type heating units is prohibited. Temporary heating sources utilizing electric power as energy source, shall not be used on this project.
- G. Temporary Offices: Each contractor shall provide its own prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers, or a combination of extinguishers of NFPA-recommended classes for the exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 EXECUTION

3.1 TEMPORARY FACILITIES RESPONSIBILITIES - DESIGNATED IN 011200 MULTIPLE CONTRACT SUMMARY.

See 011200 – Multiple Contract Summary for designated Contractor responsibility of temporary facilities indicated below.

1. Temporary Portable Chemical Toilet Facilities

- a. Temporary Portable Chemical Toilet Facilities shall comply with regulations, CDC guidelines, and health codes for type, location, operation, and maintenance of fixtures and facilities.
- b. Provide enough portable toilet facilities in suitable quantity to service all workers who are to utilize facilities.
- c. Provide Portable Toilet Facility at Staging area and areas near building.
- d. Provide enough portable toilet facilities in suitable quantity to service all workers who are to utilize facilities.
- e. Provide toilet tissue, paper towels, paper cups, hand sanitizer, and similar disposable materials for each facility. Provide covered waste containers for used material.
- f. Provide separate facilities for male and female personnel.
- g. Provide portable handwash sink(s) with soap dispensers and paper towels.
- h. Provide at minimum (1) portable handwash sink at staging area.
- i. Install Portable Toilets and Portable Sinks. where facilities will best serve the Project's needs.
- j. Replenish consumable materials as utilized. Provide cleaning of facilities when required.
- k. Contractors are to not use owner's existing restrooms or facilities.

2. Dumpsters:

- a. Dumpsters are to be provided as needed to dispose of all materials needing to be removed from the building/site and waste materials associated with the new building/site work indicated on milestone schedule or when complete with their own work (whichever occurs later).
- b. Dispose of materials lawfully.
- c. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials will be by the contractor designated responsible for removing the hazardous waste.
- d. Surfaces/Pavement below dumpsters are to be protected and restored.

3. Temporary Electric Power Service:

- a. **Temporary Electric Power Service** shall consist of main power hook-up and panel board for the new building and site. Temporary service shall be maintained during all workdays and shall comply with all codes and regulations. System shall be modified as required or as directed by the Construction Manager as work progresses.
- b. Obtain temporary service from existing building service or local power pole. If practical, power to each location shall be tapped at transformer vault or main distribution panel, ahead of main breakers to minimize demand on service equipment from operations. Over-current protection shall be installed as required. Provide disconnect at connection to service.
- c. The Contractor shall pay all fees to Utility Company for Temporary Electric Power Service Connection when an existing Power Source is not indicated to already be available for connection in the Contract Documents.
- d. Minimum power characteristics: 240/120-volt, single phase.
- e. Provide distribution equipment, feeders, and branch circuit panelboards to serve:
 - 1) **Temporary Lighting Service.**
 - 2) Temporary convenience receptacles.
 - a) Quad 20AMP 120V Outlet boxes to allow for 25' extension cord with walls in place; enough to accommodate requirements of the entire building.
 - 3) To accommodate construction operations requiring power, use of power tools, and start up testing of permanent electric powered equipment prior to its permanent connection to electrical system.
- b) Each Contractor shall provide his own extension lines, and other special equipment. Welding equipment shall run from generator trucks. Any specialty high voltage/amperage power required beyond what's provided by under the Temporary Electric Power Service is to be provided by the contractor requiring the specialty power.
- c) The Contractor shall be responsible for initial connections and final demolition of all temporary fixtures and wiring at direction of the Construction Manager.
- d) Provide Electric Service and connection to Trailers as shown on Staging and Logistics Plans. Each Trailer to receive 100 AMP Service.
- e) For additional Trailers not indicated on Staging and Logistics plan, each Contractor will be responsible for hookup of their own project trailers by a

licensed electrician to existing service or temporary electric panel provided per Staging Area and Logistics Plan if indicated for Contractor Trailer Power. The Contractor shall erect poles safely and sufficient for site overhead power and telephone service. The Contractor shall disconnect all items and restore damaged areas upon project completion. If abused, power from temporary service will be disconnected.

4. **Temporary Lighting Service:**

- a) When an overhead floor or roof deck has been installed obstructing daylight from overhead, the Contractor shall provide temporary lighting with local switching suitable for exterior weather conditions within the building under the roof deck prior to building weathertight roof enclosure.
- b) Temporary lighting shall be maintained in accordance with OSHA standards for power and foot candle levels in all areas, rooms, and corridors while workers occupy the space. Temporary lighting shall be controlled by time clocks and lighting contactors; settings to be coordinated by the Construction Manager.
- c) Additional lighting beyond OSHA standards for specialty work is to be provided by **each contractor** performing specialty work requiring the additional lighting.
- d) As ceilings are installed, the Contractor is to move temporary lights as needed to maintain lighting in all work areas during working hours.
- e) Security lighting for building exteriors shall be continuously operational and maintained. The Contractor shall provide a minimum of (6) exterior temporary site lights at 10,000 Lumen each, **ON SITE TO BE LOCATED by CM.**
- f) Temporary Site Lighting: The Contractor is to maintain existing exterior lighting to adequately light the entrances and exits of project site.
- g) Temporary lighting shall be controlled by time clocks and lighting contactors; settings to be coordinated by the Construction Manager.

5. **Temporary Water Service:**

- a) If existing water service is available by Owner, the Contractor shall provide and maintain temporary water service from Owner existing water source.
- b) If existing water service is not available, then the Contractor designated as responsible for the Temporary Water service shall supply potable water tank(s). The Contractor shall refill water tank(s) with potable water as other contractors utilize the supplied water until final water service is installed.
- c) Provide distribution piping of sizes and pressures adequate for construction and hose bibs on site as to provide service to all areas of construction activities as required throughout the construction period. (Allow for 50' water extension hose to work areas.)
- d) **Each Contractor** shall provide temporary water as needed for their own work until Temporary Water Service is installed.
- e) Water service shall be potable and modified as required or as directed by the Construction Manager as work progresses.
- f) Sterilization: Sterilize temporary water piping.
- g) Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly.

6. **Winter Conditions and Temporary Heating Service:**
 - a) Not Required for this Project.
7. **Temporary Barricades and Building Signage:**
 - a) Provide Temporary lockable entrances / doorways and exits to the building, which is to be furnished, installed, and maintained.
 - 1) Exits shall be maintained for exiting in emergency conditions which include doors with lockable panic hardware and closers until permanent structures are in place. Maintain Doorways throughout construction to ensure all hardware functions, and closers automatically close doors.
 - 2) Provide copies of keys to Owner, Construction Manager, and each Contractor for temporary Doors.
 - 3) Provide copies of keys to Owner, Construction Manager, and each Contractor for temporary Doors.
 - b) Provide Temporary Interior/Exterior Partitions, which shall be at minimum fire rated 1-hour constructed of: metal stud framing, acoustic insulation, sealant.
 - 1) For interior partitions utilize painted gypsum. For Exterior Partitions, utilize painted 5/8" Fire Retardant Plywood.
 - 2) Provide sealant of all seams to prevent migration of dust.
 - 3) Adjust and Reinstall Ceiling as required at Temporary Partitions for a finished appearance from the occupied side of partition.
 - 4) Temporary interior partitions and interior doorways shall be provided to separate construction areas from occupied areas.
 - c) The Construction Manager may direct the **Contractor** to install and maintain Temporary Plastic Sheeting Partitions as needed to separate the construction areas from the occupied areas at no additional cost.
 - d) Additional Temporary Barricades may be required due to delay of substantial completion for owner's use of section(s) of building(s) and are to be provided contractor responsible for the delay.
 - e) The Contractor shall provide and maintain OSHA Minimum perimeter and stairwell barricades/railings at grade changes, multiple levels, and floor/roof openings.
 - 1) Provide Top & Mid railings, and Toe boards per OSHA requirements.
 - 2) Install posts as required to support railings.
 - 3) Provide fluorescent ribbons to accent floor/roof openings.
 - 4) If a Contractor should need to temporarily relocate barrier, same Contractor shall protect personnel in the area and replace barrier to original location.
 - f) Each Contractor that creates any opening shall provide Temporary Opening Infills and Coverings including insulation and other materials required for weathertightness. Temporary Opening Infills and Coverings are to meet Structural requirements as per OSHA guidelines and are to be weathertight to allow building to remaining enclosed.
 - g) Provide Temporary Sealed, Weathertight and Insulated Infills at new Window/Door openings until new Windows and Doors are installed to maintain building enclosure.

- h. Provide Temporary Emergency Exit Signage within the new building to direct personnel to nearest emergency exits. Provide at all exits, stairwells, and areas where exit signs cannot be seen.
- i. Provide Project Identification Signage at Building Entrance (Indicate Contact Names and Phone numbers of all Contractor, Construction Manager, and Owner Contacts.)
- j. Restore all surfaces after removal of Temporary Barricades.
- 8. **Temporary Building Storm Drainage:**
 - a. Not required for this Project.
- 9. **Temporary Staging Area, Access Roads, Site Signage, and Site Fence:**
 - a. Not required for this Project.
- 10. **Temporary Building & Temporary Site/Road Maintenance:**
 - a. Not required for this Project.
- 11. Temporary Fire Extinguishers for Building Construction:
 - a. The Contractor shall provide, until fire-protection needs are supplied by permanent facilities, install, and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10, "Standard for Portable Fire Extinguishers," and NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 - 7) Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
 - 8) Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
- 12. **Temporary Building Exhaust Ventilation for Dust Control:**
 - a. The Contractor shall provide indoor air quality management as specified by the Department of Labor and OSHA for the building, when the building is enclosed, as determined by the Construction Manager.
 - 7) Provide an exhaust air system for the project indoor areas that could produce fumes, VOC's off-gasses, gases, dust, mist, or other emissions.
 - 8) Provide temporary partitions and air seals to prevent the migration of airborne contaminants from unoccupied areas to occupied areas when applicable.
 - 9) Maintain a negative pressure between the work area and the space surrounding the work area.
 - b. Quality assurance:
 - 7) Before the start of any work, submit a Shop Drawing submittal for the exhaust air system. Do not begin work until approval of the Owner is obtained. The following shall be included in submittal:
 - a) The type and number of Exhaust Machines required.
 - b) Location of the Exhaust Machines in the workspace.
 - c) Temporary Exhaust Ducting Layout, materials, and duct supports.
 - d) Methods used to test air flow and pressure differential.

- c. System Operation:
 - 7) Provide a quantity of Filtered Exhaust Fan Machines sufficient for spaces served to obtain sufficient negative differential pressure. Utilize existing window openings, doorways, or other approved locations.
 - 8) Exhaust air system shall operate for a minimum of 72 hours after work is completed, or until all materials have cured sufficiently to stop out-gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
 - 9) Maintain twenty-five (25) feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
 - 10) Secure all openings at the end of each day for Building Security.
 - 11) Replace air filters and repair ductwork as required.

3.2 TEMPORARY TELECOMMUNICATIONS SYSTEMS (TO BE PROVIDED BY ALL CONTRACTORS)

- A. General: The Contractor shall engage the appropriate local telecommunication, internet service provider, or utility company to install temporary telecommunication service or connect to existing service. Where the company provides only part of the service, the contractor shall provide the remainder with matching, compatible materials, and equipment. Comply with utility company recommendations.
- B. Temporary Telephones: Each Prime Contractor shall provide temporary telephone service throughout the construction period for all personnel engaged in construction activities.
 - 1. Contractors are required to lease or purchase a cellular telephone – to be used by their site superintendents for communication with the other contractors and the Architect.

3.3 TEMPORARY FACILITIES INSTALLATION (TO BE PROVIDED BY ALL CONTRACTORS)

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. The prime contractor shall provide each facility ready for use when needed to avoid delays. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of complete permanent facilities.

3.4 SUPPORT FACILITIES INSTALLATION (TO BE PROVIDED BY ALL CONTRACTORS)

- A. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access as directed by the Construction Manager.

1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Provide incombustible construction for offices, shops, and sheds located within the construction area or within 50 feet of building. Comply with requirements of NFPA 241.
- C. Field Offices: Each prime contractor shall provide an insulated, weathertight temporary office of sufficient size to accommodate required office personnel at the Project Site. Keep the office clean and orderly for use for small meetings. Furnish and equip offices as follows:
 1. Furniture: Furnish with a desk and chairs, a 2-drawer file cabinet, plan table, plan rack, and a bookcase.
- D. Storage and Fabrication Sheds/Containers: Install storage and fabrication sheds/containers sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site. Flammable liquids are not to be stored in buildings at any time and to be stored in proper rated containers.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION (TO BE PROVIDED BY ALL CONTRACTORS)

- A. Operations of the Contractor may not block, hinder, impede, or otherwise inhibit the safe and expeditious exiting of the building's occupants during an emergency.
- B. In the event of an emergency, (designated by the sounding of the fire alarm system) all construction activities must immediately cease. Contractor's work force will evacuate themselves from work areas and remain outside of work areas until the "all clear" is given. No work operations will be tolerated during the evacuation of the building or during an emergency.
- C. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.
- D. Building Security Enclosure and Lockup: Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- E. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from people or firms near the site.

- 3.6 OPERATION, TERMINATION, AND REMOVAL (TO BE PROVIDED BY ALL CONTRACTORS)
- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
 - B. Maintenance: Maintain facilities and good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 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.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
 - C. Termination and Removal: Unless the Construction Manager requests that it be maintained longer, remove each temporary facility when the need has ended, when 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 the 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 the property of each prime contractor. The Owner reserves the right to take possession of project identification signs.

END OF SECTION 015000

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