

Geotechnical Report

Yonkers Public Schools St. Denis Community School

121 McLean Avenue
Yonkers, New York

February 5, 2021

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2-5-2021

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INTRODUCTION

This project consists of the design and construction of a new Yonkers Public Schools academic facility on the site of the previous St. Denis School, rectory and convent, within portions of the city block bounded by Radford Street, McLean Avenue, Lawrence Street, and Van Cortlandt Park Avenue (Block 6), and the northeast portion of the block bounded by Radford Street, Van Cortlandt Park Avenue, Lawrence Street and Western Ave. (Block 15), in the City of Yonkers, Westchester County, New York. A new Academic Building will be built in the southcentral/southeast portion of Block 6. This 4-sty, L-shaped building will replace the existing 2.5-sty to 4-sty St. Denis School building, will extend ± 200 ft. east-west along Lawrence Street and 120 ft. along McLean Avenue (north-south), and will cover $\pm 17,000$ SF. A basement is planned beneath the southeast quadrant of the building. A standalone ± 150 LF x ± 3 ft. tall retaining wall will replace existing retaining walls along the north side of the Academic Building site which provide grade separation for the higher school property.

A new gymnasium/auditorium Community Building will be built in the northwest quadrant of Block 6. This 2-sty, rectangular building will replace the existing 2.5-sty St. Denis rectory building, and cover an area ± 90 ft. x ± 100 ft., or $\pm 9,000$ SF. A basement is planned beneath the western half of the building.

A new Breezeway will connect the above two (2) buildings at the ground floor level.

At Block 15, a playground is proposed in the 40 ft. x 80 ft. northeast corner, and an underground stormwater management facility with parking lot will be constructed in the ± 50 ft. x ± 115 ft. adjoining area to the south. An existing Convent/chapel will be demolished prior to construction.

The site of the proposed school currently contains the old church buildings, grass and asphalt parking lots. Existing grades are generally uniform, with grades varying from El. ± 82 in the southeast of Block 6 to El. 81 across the majority of the proposed Academic Building footprint, to El. 78.5 in the northwest corner of Block 6 at the proposed Community Building. The grades at Block 15 are also generally uniform, with the southern end of the site at El. ± 80 and grades dropping to El. ± 77.5 at the northeast corner. The new Academic Building will be constructed with the ground floor at El. 81.2, and the new Community Building will be constructed at El 78.8. The Breezeway will be ramped between these two (2) elevations.

This report presents the findings of a subsurface investigation prepared and conducted by others specifically for this project, as well as recommendations for foundation design and construction of the proposed new structures.

GEOLOGY

Based on our review of topographic maps and published geologic data for this area of Yonkers, including the *Surficial Geologic Map of New York - Lower Hudson Sheet*, 1989, by Caldwell, Connally, et. al., this site is expected to be underlain by glacial till consisting of a mixture of grain sizes ranging from clay and silt, to sand, cobbles and boulders. Underlying bedrock is expected to be relatively shallow and consist of Fordham gneiss, based on the *(Bedrock) Geologic Map of New York - Lower Hudson Sheet*, 1970, by Rickard, Isachsen, and Fisher.

SUBSURFACE INVESTIGATION

Soiltesting, Inc. of Oxford, CT performed 32 borings, four (4) test pits, and three (3) field permeability tests between December 4, 2020 and January 8, 2021 to identify the subsurface conditions present beneath the project sites. Borings B-1 through B-29 (minus B-1, B-7 and B-11) were performed for consideration of the new buildings, while borings C-1 through C-3 and D-1 through D-3 were performed in support of subsurface drainage design. Test Pits were numbered A-1 through A-4 and were performed alongside the existing school building, rectory, convent, and St. Denis Catholic Church, respectively.

In the structural borings, soil samples were attempted generally continuously from the ground surface to a depth of 12 ft., then at 5 ft. intervals to the completion of each boring, which generally was 27 ft. Borings B-8 and B-26 were continued to depths of 62 ft. and 67 ft. respectively. All borings except B-26, were drilled using a nominal 4-¼ in. hollow stem auger to advance and maintain the hole. Boring B-26 was drilled using 3 in. diameter casing with a roller-bit and water/drilling mud. Sampling was performed using a 2 in. O.D. split spoon sampler driven by a 140 lb. safety hammer with a 30 in. drop and the number of blows for each 6 in. increment was recorded, in accordance with procedures outlined in ASTM D1586, Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils. Soil samples were classified by an experienced geologist from Soiltesting, Inc., in general agreement with D.M. Burmister's "Suggested Test Methods for Identification of Soils" (ASTM, 1958).

In the stormwater design borings, the "C" borings were drilled using a 4 in. diameter casing with a roller-bit and water to clean out each hole and no soil sampling was not performed. Auger cuttings were used to classify the soils. The "D" borings were drilled using a 2-½ in. hollow stem auger and sampling was performed at 5 ft. intervals beginning at or just below the ground surface.

Groundwater was recorded at each boring when it was first encountered since most of the borings were performed without the introduction of water.

Three (3) in situ permeability tests were performed at borings C-1 through C-3 inside a 4 in. I.D. steel casing installed ±8 ft. deep. C-1 was located in the open space immediately north of the proposed Academic Building, while C-2 and C-3 were located on Block 15. After installing the casing to the test depth, it was cleaned out of soil, and water added to the top of casing to allow the ground to soak for 13 days at C-1 and 1 day at C-2 and C-3. On January 5, 2021 a measurement was made of the drop in water level over the presoak period, then down-the-hole permeability tests were run by successively adding water to the casing and measuring the water drop vs. time, in general accordance with ASTM D6391 - Standard Test Method for Field Measurement of Hydraulic Conductivity Using Borehole Infiltration. This was continued until uniform readings were obtained.

A Boring Location Plan, boring logs, test pit logs are presented in the Appendix. The boring logs were amended by Skylands Engineering to include the approximate elevations and groundwater elevations at each boring.

SUBSURFACE CONDITIONS

The subsurface conditions encountered beneath the site are generally consistent with the published geologic literature. In the area of the proposed Academic Building, granular fill consisting of fine,

medium to fine, and coarse to fine sand, with varying minor amounts of coarse to fine and fine gravel, asphalt, brick, and concrete was encountered in most borings to depths ranging from ± 4 ft. to ± 8 ft. Beneath this fill, native, medium dense brown, mostly fine sand with minor amounts of fine gravel are present to a depth of ± 12 ft. Standard penetration test (SPT) N-values ranged from 6 blows per foot (bpf) to 36 bpf, with $N_{ave}=\pm 18$. Beneath a depth of ± 12 ft. and continuing to an estimated depth of ± 23 ft., a very loose to loose, mostly fine sand layer, approx. 5 ft. to 10 ft. thick, is present. N-values in this layer ranged from 3 bpf to 9 bpf, with $N_{ave}=\pm 5$ bpf. Below ± 23 ft. most borings encountered loose to barely-medium dense fine sand, with just three (3) of fifteen (15) borings encountering medium dense to dense sands. Most N-values in this layer ranged from 3 bpf to 12 bpf, with $N_{ave}=\pm 8$ bpf. The one (1) deeper boring here, B-26, encountered dense and very dense, medium to fine sand below a depth of 45 ft. and to the completion of the boring at 62 ft., with N-values ≥ 44 bpf and $N_{ave}=52$ bpf.

Soils beneath the proposed Community Building were very similar in composition and relative densities (SPT N-values). The surficial, granular fill was somewhat thinner, being encountered only to a depth of 4 ft. in half of the borings. Beneath this fill, a similar pattern of approx. 8 ft. to 10 ft. of medium dense sand, underlain by 5 ft. to 10+ ft. of loose sand, underlain by barely-medium dense sand was encountered to the bottom of the borings. Average N-values here were slightly higher than those recorded beneath the Academic Building. SPT N-values ranged from 3 bpf to 9 bpf with $N_{ave}=\pm 6$ bpf in the upper fill, ranged from 10 bpf to 31 bpf with $N_{ave}=\pm 17$ bpf in the medium dense sand layer between the depths of ± 4 ft. and ± 13 ft., ranged from 4 bpf to 10 bpf with $N_{ave}=\pm 7$ bpf in the lower loose sand layer from ± 13 ft. to ± 22 ft. to ± 27 ft., and ranged from 10 bpf to 29 bpf with $N_{ave}=\pm 15$ bpf in the lower medium dense sand layer.

At the Block 15 site, borings D-2 and D-3 encountered similar conditions as described above. Loose, granular fill was encountered in boring D-3 to a depth of 4 ft., then a ± 5 ft. thick layer of medium dense sand was present to a depth of ± 9 ft., and finally loose sands were present to the bottom of both borings at 27 ft. SPT N-values averaged 5 bpf in the upper 4 ft., $N_{ave}=\pm 20$ bpf at the 5 ft. samples, and $N_{ave}=\pm 7$ below 10 ft. and continuing to a depth of 27 ft.

Bedrock was not encountered in any boring and no estimation of its depth can be inferred from the boring logs.

Groundwater was encountered across all three (3) construction sites at depths of 10 ft. to 12 ft. (El. ± 71.7 to El. ± 67.3). Within Block 6, the groundwater surface appears to be tilted slightly downward to the northwest, while in Block 15 the groundwater surface also appears to dip to the north.

The permeability tests performed in proposed courtyard of the Academic Building site and at the Block 15 site were each located at a depth of 8 ft. Initial readings following the overnight (and longer) soak period indicated no water was present in the casing at the start of the permeability tests. During testing, the water level inside the casing dropped 52 in. to 300 in. per hour, for calculated permeability rates of 4 in./hr. to 21 in./hr. (see Field Permeability Test Results in the Appendix).

Complete records of the findings of the subsurface investigation are shown on the borings, test pit, and permeability test logs in the Appendix.

DESIGN RECOMMENDATIONS

Based on our review of the findings of this subsurface investigation program, it is recommended that conventional spread footings are suitable for support of the proposed Academic Building, Community Building, and retaining wall immediately north of the Academic Building. The recommended footing/frost depth for Yonkers is 40 in. below final exterior grade therefore perimeter footings should be constructed at or below this depth to prevent frost heave damage. The following sections present our recommendations for each of the separate areas of work on this project.

ACADEMIC BUILDING

The proposed finish floor of the Academic Building is El. 81.2. Assuming an 8 ft. ceiling height and 2 ft. beam and slab depths in the partial basement, we estimate the partial basement finish floor will be at El. ± 71.2 , or ± 6 in. below the highest recorded groundwater elevation. The soils present beneath the partial basement are expected to consist of loose fine sands. In order to provide suitable support and limit post construction settlements to acceptable tolerances, it is recommended that 24 in. of soil be over excavated from the bottom of footings, the subgrade be thoroughly compacted, then recycled concrete aggregate (RCA), crushed stone, or structural fill be placed and compacted in the excavations back up to the bottom of footing elevation. The excavations should also be widened 12 in. in all directions. Following this remediation, an allowable bearing capacity of 2 tons per square foot (tsf) is recommended for design. A coefficient of base sliding of 0.45 is recommended based on the in situ soils and anticipated structural fill properties. Minimum footing widths of 30 in. for wall footings and 36 in. for column footings are recommended to limit settlements.

Beyond the limits of the partial basement, it is assumed footings will be founded at minimum depth for frost protection, or at approximately El. 76.5. At this elevation, the footings will be underlain mostly by native, medium dense sands, which are suitable for support, but also loose fills. The fill soils are expected to be encountered west of the basement, and at the north-center corner of the new building. The native soils present at the bottom of footing excavations should be compacted thoroughly and until no further settlement is visible. Where fill is present at the bottom of footing excavation, this material should be removed completely, the bottom of the excavation thoroughly compacted, then compacted structural fill placed back up to the bottom of footing elevation. It is expected that between 2 ft. and 4 ft. of fill will need to be removed from below these footings. Similar to above, such over excavations should also be widened 12 in. in all directions. Following this remediation, an allowable bearing capacity of 2 tsf and a coefficient of base sliding of 0.45 are recommended for design. Minimum footing widths of 30 in. for wall footings and 36 in. for column footings are recommended to limit settlements.

The following in situ soil properties are recommended for design of retaining wall portions of this building:

Moist unit weight of retained soil,	$\gamma_t = 120$ pcf
Angle of internal friction,	$\phi = 32^\circ$
Lateral earth pressure coefficients:	
Active,	$K_a = 0.31$
Passive,	$K_p = 3.25$
At-rest,	$K_o = 0.47$ (basement walls)
Coeff. of friction (sliding),	$\tan \delta = 0.45$ (CIP concrete on compacted subgrade)



Following the above recommendations, it is estimated that maximum post construction foundation settlement will be less than 1 in., with no more than ½ in. differential settlement between adjacent columns. These values are within generally accepted tolerance limits for this type of structure/use. Settlement will be elastic (instantaneous), with no long-term consolidation settlement occurring.

The new floor slabs may be constructed as slabs-on-grade following removal of the surficial asphalt and topsoil, removal of any deleterious material that may be present in the fill, proof rolling and compaction of the subgrade, placement of any required fill, then placement of capillary break material. The subgrade should be compacted using a 10 T vibratory roller away from building walls and a double-drum, walk-behind vibratory roller (ex. Rammax trench compactor) adjacent to the walls in order to provide uniform support beneath the slab. A minimum of two (2) passes should be made with the compactor on all areas of subgrade, and until no further settlement is visible. A modulus of subgrade reaction equal to 150 pci is recommended for design of these slabs.

The need for waterproofing is not anticipated in areas outside the partial basement since groundwater is expected to be ±10 ft. below the first floor elevation. Beneath the partial basement however, since the basement slab will be partially below the groundwater elevation, it is recommended to either waterproof the underside of the slab and walls, and/or install underslab drainage pipe in a bed of crushed stone or recycled concrete aggregate (RCA) and connect this piping to sump pumps in order to prevent water seepage into the basement. The elevator pit should be designed as a bathtub, assuming a pit depth of ±5 ft. We recommend using a groundwater elevation of El. 72.5 for waterproofing and buoyancy design.

In accordance with the provisions of Section 1613.3.2 of the New York 2015 Building Code, and ASCE 7-10/16 Chapter 20, a seismic site class of D, stiff soil, is recommended for design of the Academic Building, based on the average conditions encountered to a depth of 62 ft., then assumed similar conditions continuing to a depth of 100 ft. Note this is a somewhat conservative assumption since bedrock may be shallower than 100 ft. Based on the project location, in conjunction with the above site class, the following seismic parameters follow from the Code and ASCE 7-16:

$S_s = 0.296$	$S_1 = 0.061$
$F_a = 1.563$	$F_v = 2.4$
$S_{MS} = 0.463$	$S_{M1} = 0.147$
$S_{DS} = 0.309$	$S_{D1} = 0.098$

Seismic Design Category Based on Short Period Response Accelerations = B*

Seismic Design Category Based on 1-sec Period Response Accelerations = B*

* based on assumed Risk Category III

There is no evidence of past slope instability and none is expected under static or seismic loading.

Based on a screening of N-values vs. depth, we believe the fine sands present at a depth of ±13 ft. to 28 ft. may have potential to liquefy, although their effect may be limited due to their discontinuity and limited depth. A rigorous analysis is recommended to determine the actual factors of safety against liquefaction of these soils.

COMMUNITY BUILDING

The proposed finish floor of the Community Building is El. 78.8. Assuming an 8 ft. ceiling height and 3.5 ft. beam and slab depths in the partial basement, we estimate the partial basement finish floor will be at El. ± 67.3 , or 1 ft. to 2 ft. below the groundwater elevations recorded here. Similar to the findings and recommendations for the Academic Building, the soils present beneath this partial basement are also expected to consist of loose fine sands. Therefore, in order to provide suitable support and limit post construction settlements to acceptable tolerances, it is recommended that 24 in. of soil be over excavated from the bottom of footings, the subgrade be thoroughly compacted, then RCA, crushed stone, or structural fill be placed and compacted in the excavations back up to the bottom of footing elevation. The excavations should also be widened 12 in. in all directions. Similar to above, following this remediation, an allowable bearing capacity of 2 tsf and a coefficient of base sliding of 0.45 is recommended for design. Minimum footing widths of 30 in. for wall footings and 36 in. for column footings are also recommended here to limit settlements.

Beyond the limits of the partial basement, it is assumed footings will be founded at minimum depth for frost protection, or at approximately El. 75.5. At this elevation, the footings are expected to be underlain mostly by medium dense, native sands, which are suitable for support. Limited quantities of loose granular fill are also expected in the northeast corner of the building, near where boring B-8 was performed. The native soils present at the bottom of footing excavations should be compacted thoroughly and until no further settlement is visible. Where fill is present at the bottom of footing excavation, this material should be removed completely, the bottom of the excavation thoroughly compacted, then compacted structural fill placed back up to the bottom of footing elevation. It is expected that between 6 in. and 12 in. of fill will need to be removed from below some footings. Based on the limited depth of over excavation required, over excavations here should be widened 6 in. in all directions. Following this remediation, an allowable bearing capacity of 2 tsf and a coefficient of base sliding of 0.45 are recommended for design. Minimum footing widths of 30 in. for wall footings and 36 in. for column footings are recommended to limit settlements.

The in situ soil properties recommended above for the Academic Building are also recommended for design purposes of the Community Building. They are repeated here for clarity:

Moist unit weight of retained soil,	$\gamma_t = 120$ pcf
Angle of internal friction,	$\phi = 32^\circ$
Lateral earth pressure coefficients:	
Active,	$K_a = 0.31$
Passive,	$K_p = 3.25$
At-rest,	$K_o = 0.47$ (basement walls)
Coeff. of friction (sliding),	$\tan \delta = 0.45$ (CIP concrete on compacted subgrade)

Following the above recommendations, maximum post construction foundation settlements are expected to be less than $\frac{3}{4}$ in., with no more than $\frac{1}{2}$ in. differential settlement between adjacent columns. These values are within generally accepted tolerance limits for this type of structure/use. Settlement will be elastic (instantaneous), with no long-term consolidation settlement occurring.

The new floor slabs may be constructed as slabs-on-grade following removal of the topsoil and excess soil, removal of any deleterious material that may be present in the fill, proof rolling and compaction of the subgrade, then placement of capillary break material. The subgrade should be compacted using a



10 T vibratory roller away from building walls and a double-drum, walk-behind vibratory roller (ex. Rammax trench compactor) adjacent to the walls in order to provide uniform support beneath the slab. A minimum of two (2) passes should be made with the compactor on all areas of subgrade, and until no further settlement is visible. A modulus of subgrade reaction equal to 150 pci is recommended for design of these slabs.

The need for waterproofing is not anticipated in areas outside the partial basement since groundwater is expected to be ± 10 ft. below the first floor elevation. Beneath the partial basement however, since the basement slab will be below the groundwater elevation by 1 ft. to 2 ft., it is recommended to either raise the building to be above groundwater, or waterproof the underside of the slab and walls and construct the basement as a bathtub. The elevator pit should be designed as a bathtub, assuming a pit depth of ± 5 ft. We recommend a design groundwater elevation of El. 72 for waterproofing and buoyancy design.

Similar to above, based on the average conditions encountered to a depth of 67 ft., then assumed similar conditions continuing to a depth of 100 ft., a seismic site class of D, stiff soil, is recommended for design of the Community Building. The seismic parameters and derived seismic design categories shown above also apply to this building, based on an assumed Risk Category III.

Similar to above, there is no evidence of past slope instability and none is expected under static or seismic loading.

A screening of N-values vs. depth indicates the fine sands present at depths of ± 13 ft. to ± 23 ft. may have potential to liquefy, although their effect may be limited due to their discontinuity and limited depth. A rigorous analysis is recommended to determine the actual factors of safety against liquefaction of these soils.

BREEZEWAY

The Breezeway will connect the Academic Building to the Community Building and will be fully enclosed. Spread footings founded at frost depth are the recommended foundation choice since the underlying soils are expected to consist mostly of medium dense, native sands, which are suitable for support. Limited quantities of loose granular fill may be encountered in the southern portion, near where boring B-14 was performed. The native soils present at the bottom of footing excavations should be compacted thoroughly and until no further settlement is visible. Where fill is present at the bottom of footing excavation, this material should be removed completely, the bottom of the excavation thoroughly compacted, then compacted structural fill placed back up to the bottom of footing elevation. It is expected that between 12 in. and 24 in. of fill may need to be removed from below some footings. Based on the light loads, over excavations here should be widened 6 in. in all directions. Following this remediation, an allowable bearing capacity of 2 tsf and a coefficient of base sliding of 0.45 are recommended for design. Minimum footing widths of 20 in. for wall footings and 30 in. for column footings are recommended to limit settlements.

RETAINING WALL

In order to support the school property from the lower ground to the north, a ± 150 LF x 3 ft. tall (exposed height) retaining wall is proposed for replacement of existing walls of similar length and height. Given the low height of this wall, it is recommended to construct this wall as a cast-in-place

concrete wall with the footing founded at frost depth. Based on existing grades, the footing is expected to be set at El. ± 74 . Beneath this elevation the underlying soils are expected to consist mostly of loose to medium dense granular fills, especially in the center and east portions of the wall, and medium dense native sands in the western portion. Any fill material encountered should be removed to a maximum depth of 12 in., then the bottom of the excavation compacted thoroughly, and compacted structural fill placed back up to the bottom of footing elevation. Following this an allowable bearing capacity of 2 tsf is recommended for design. The following in situ soil properties are also recommended for design of this retaining wall:

Moist unit weight of retained soil,	$\gamma_t = 115$ pcf
Angle of internal friction,	$\phi = 32^\circ$
Lateral earth pressure coefficients:	
Active,	$K_a = 0.31$
Passive,	$K_p = 3.25$
At-rest,	$K_o = 0.47$
Coeff. of friction (sliding),	$\tan \delta = 0.45$ (CIP concrete on compacted granular soils)
	$\tan \delta = 0.30$ (Precast masonry on compacted granular soils)

CONSTRUCTION RECOMMENDATIONS

Footings should not be constructed on frozen or wet subgrade materials. All frozen or saturated subgrade soil should be removed and replaced with compacted structural fill, or clean crushed stone, as required.

All loosened soil present at the bottoms of footing excavations should be compacted using a jumping jack, or vibratory trench compactor such as a double-drum, pad foot roller (ex. Rammax). Such compaction should continue until all visible settlement is complete.

Care shall be taken during compaction and construction of new footings adjacent to existing structures. A pre-construction condition assessment of all adjacent structures is highly recommended so that new movements may be detected, and corrective actions may be taken, as early as possible. If any cracks exist prior to the start of construction, crack gages should be installed and monitored through the time of foundation construction.

Organic soils were not encountered in the borings other than the surficial topsoil; however, if organic soils are encountered they should be removed completely from beneath the limits of work and replaced with compacted structural fill. Organic soils should not be used as site or structural backfill, but should be removed offsite.

Cobbles and boulders were not encountered in the borings and are therefore not expected to be encountered within the depths of excavation. Any cobbles or boulders encountered during construction should be removed so that no part protrudes into the bottom or sides of foundation or utility excavations.

Dewatering will be required during basement construction since groundwater was measured at or slightly higher than the planned basement elevations. Given the size and expected duration of each excavation, a construction dewatering consultant or specialty contractor should be engaged by the design team to assess the possible volumes of water that will need to be removed. Since cohesive soils



were not encountered in any of the borings to a depth of 60+ ft., some minor lowering of the groundwater table may be tolerable by the surrounding buildings. However, large-scale groundwater lowering will be difficult to achieve given the relatively flat groundwater surface and the anticipated moderately-high permeability rates of the in situ sands. It may be more economical to work smaller sections of basement or footings at a time, and to use RCA or crushed stone, in lieu of structural fill, so that footing excavations remain open for the shortest amount of time.

Structural fill material should consist of predominately well-graded, coarse to fine sand and/or gravel with a maximum 10% non-plastic fines (material passing a No. 200 sieve) and be free of organics and other deleterious materials. Soil with up to 20% fines may be used above 3 ft. higher than the groundwater level. Aggregate size should be limited to no bigger than 3 in. in the largest dimension. Based on the findings of this subsurface investigation, it is estimated that >½ of the in situ materials may be suitable for reuse as structural fill. Representative samples of any structural fill materials, whether on-site or imported, should be tested for gradation and moisture-density relationship prior to use to confirm its suitability.

Structural fill should be placed in maximum 12 in. loose lifts and compacted to 95% of its maximum dry density at optimum moisture content as determined by the Modified Proctor Density Test (ASTM D 1557). These operations should be performed under full-time geotechnical inspection and testing by either the Sand Cone Method (ASTM D 1556), Nuclear Density Gauge (ASTM D 2922 and D 3012), or other moisture/density test methods. These density tests should be performed by an experienced geotechnical inspector at sufficient frequency and spacing to ensure proper compaction, with the following criteria suggested as guidelines:

Location	Frequency of Testing
Structural fill beneath foundations, adjacent to structures & beneath slabs-on-grade	1 test every 2,500 SF min. 1 test per lift
Utility trenches	1 test every 50-100 LF per lift min. 3 tests per day
General site fill (beyond building limits)	1 test every 5,000 SF per lift min. 1 test per lift

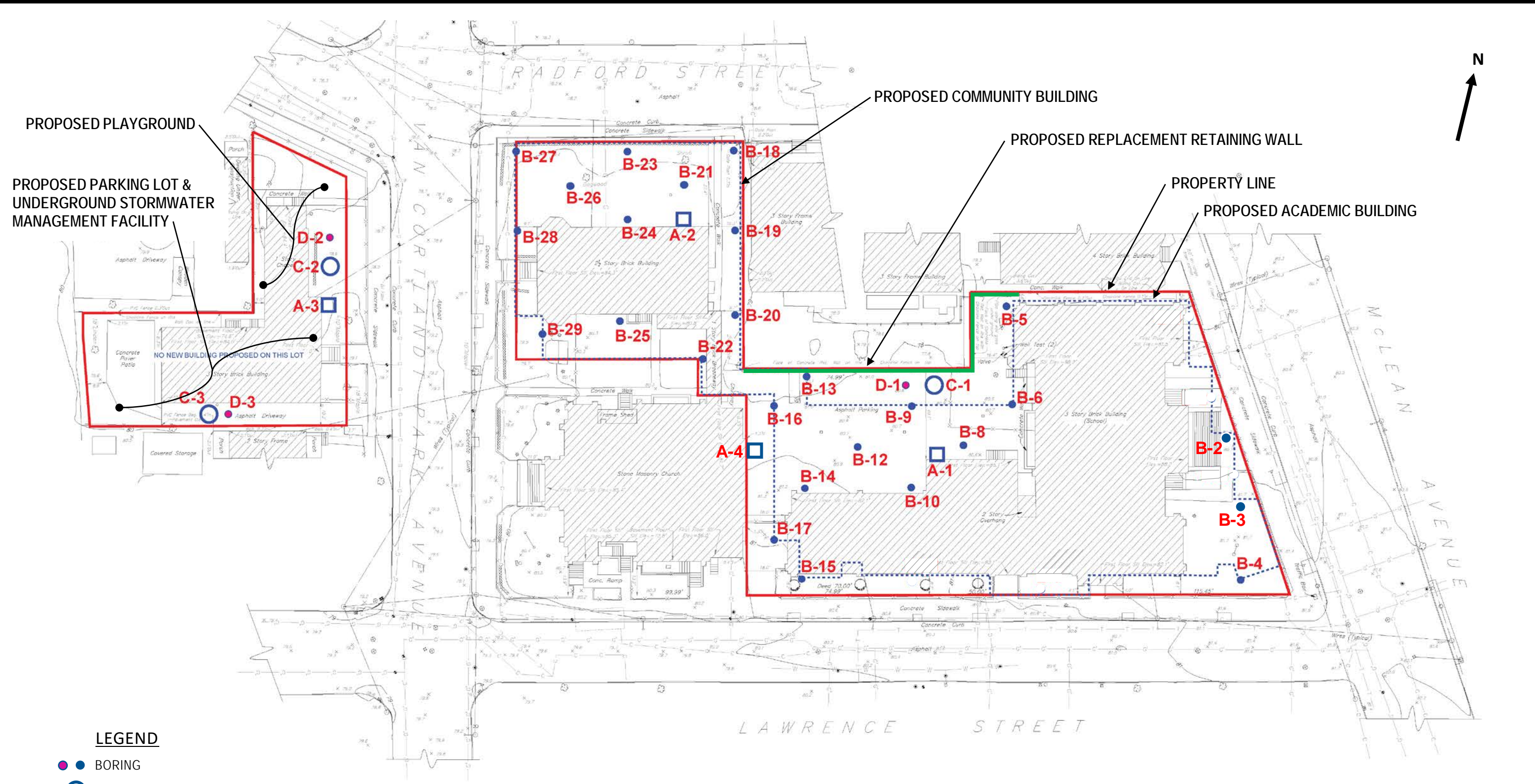
For excavations that extend deeper than 5 ft., sheeting, shoring, sloping, or benching of the excavation sidewalls is required per OSHA standards. Considering the relatively open space and lack of shallow bedrock at this site, all the above-mentioned means may be suitable for use at this project. Based upon the material characteristics and estimated strength of the soils encountered during the subsurface exploration, the soil present on site may be assumed to be Type C and should be sloped at a 1.5H:1V (34°) per OSHA requirements. For the design of temporary sheeting or shoring, the soil properties listed above for retaining wall design are recommended. All sheeting, shoring and bracing shall be designed by a professional engineer licensed in the State of New York.

It is recommended that all foundation construction and subgrade preparation procedures be inspected by a qualified geotechnical engineer experienced with these types of construction. Full time inspection



is recommended during placement of structural fill to ensure adequate testing is performed, and moisture contents are maintained at suitable levels.

APPENDIX



PROPOSED PLAYGROUND

PROPOSED PARKING LOT & UNDERGROUND STORMWATER MANAGEMENT FACILITY

PROPOSED COMMUNITY BUILDING

PROPOSED REPLACEMENT RETAINING WALL

PROPERTY LINE

PROPOSED ACADEMIC BUILDING

NO NEW BUILDING PROPOSED ON THIS LOT

LEGEND

- BORING
- FIELD PERMEABILITY TEST
- TEST PIT

SCALE
N.T.S.

- NOTES:**
1. BASE PLAN EXCERPTED FROM "LAYOUT FOR BORINGS FOR NEW SCHOOL" PLAN, PROVIDED BY KG&D.
 2. UPDATED BORING LOCATIONS PROVIDED BY SOILTESTING, INC.

EUGENE J. SCHWARZROCK
PROFESSIONAL ENGINEER
NEW YORK LICENSE NO. 077007-1

DATE

SUBSURFACE INVESTIGATION PLAN

ST. DENIS COMMUNITY SCHOOL
121 McLEAN AVENUE
YONKERS, NEW YORK

SKYLANDS ENGINEERING, LLC

124 MILTON ROAD
SPARTA, NJ 07871
CERTIFICATE OF AUTHORIZATION 0013524

DATE: 2-5-2021

Boring Logs

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-2
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±70.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	MOIST				
5	1	ss	24"	14"	2'0"	3	2			moist	2'0"	6" concrete, 6" brick/asphalt		
	2	ss	24"	12"	4'0"	1	2			v loose		Brn F SAND, sm silt (possible fill)		
						5	7			moist		Brn F SAND		
	3	ss	24"	18"	6'0"	7	12			compact		Brn F SAND		
						12	13			moist				
	4	ss	24"	18"	8'0"	24	15			compact		SAME		
						12	12			moist				
	5	ss	24"	17"	10'0"	6	7			compact		SAME		
						9	9			compact				
	6	ss	24"	20"	12'0"	10	4			wet		SAME		
10					5	4			loose					
	7	ss	24"	20"	17'0"	5	2			wet	SAME			
						1	2			v loose				
	8	ss	24"	20"	22'0"	8	7			wet	SAME			
						7	8			compact				
	9	ss	24"	24"	27'0"	5	5			wet	SAME			
						7	7			compact				
	27'0"										27'0"			
	30											E.O.B 27'0"		
	35													
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-2
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-3
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA SAMPLER SS* CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE START 1/8/21
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140# BIT	DATE FINISH 1/8/21
	HAMMER FALL 30"	SURFACE ELEV. EI. ±81.7
		GROUND WATER ELEV. EI. ±71.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	12"	2'0"	1	9		moist	4'0"	6" Topsoil	
		2	ss	24"	12"	4'0"	1	2		compact		Brn F SAND, tr gravel, brick (fill)	
10							3	4		loose	27'0"	Brn F SAND	
		3	ss	24"	18"	6'0"	8	4		moist		SAME	
		4	ss	24"	20"	8'0"	10	11		compact		SAME	
		5	ss	24"	18"	10'0"	13	15		moist		SAME	
15							7	8		compact		SAME	
		6	ss	24"	18"	12'0"	8	8		wet		SAME	
20							8	7		compact		SAME	
		7	ss	24"	20"	17'0"	4	3		wet		SAME	
25							2	2		loose		SAME	
		8	ss	24"	18"	22'0"	7	7		wet		SAME	
30							6	9		compact		SAME	
		9	ss	24"	20"	27'0"	6	5		wet		SAME	
35							6	7		compact		SAME	
40												E.O.B 27'0"	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-3**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

* SAFETY HAMMER CATHEAD & ROPE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. B-4
	PROJECT NO. G211-1671-20	
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA SAMPLER SS* CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE START 1/8/21
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140# BIT	DATE FINISH 1/8/21
	HAMMER FALL 30"	SURFACE ELEV. EI. ±81.5
		GROUND WATER ELEV. EI. ±71.5

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18	MOIST				
5	1	ss	24"	10"	2'0"	1	2			moist	5'0"	6" Topsoil concrete, brick Brn F SAND, sm silt (possible fill)		
	2	ss	24"	16"	4'0"	1	1			v loose				
						2	2			moist				
	3	ss	24"	18"	6'0"	2	3			v loose				
						1	2			moist				
10	4	ss	24"	18"	8'0"	13	13			compact		Brn F SAND LtBrn F SAND		
						16	16			moist				
						14	12			compact				
	5	ss	24"	20"	10'0"	6	8			moist				
						6	6			compact				
15	6	ss	24"	24"	12'0"	7	9			wet		SAME		
										compact				
	7	ss	24"	24"	17'0"	4	3			wet				
						4	5			loose				
20	8	ss	24"	24"	22'0"	3	6			wet		SAME		
						5	5			compact				
25	9	ss	24"	24"	27'0"	6	6			wet	27'0"	SAME		
						5	7			compact				
30												E.O.B 27'0"		
35														
40														* SAFETY HAMMER CATHEAD & ROPE

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT.	USED _____ CASING	THEN _____ CASING TO _____ FT.	HOLE NO. B-4
A = AUGER	UP = UNDISTURBED PISTON	T = THINWALL	V = VANE TEST
WOR = WEIGHT OF RODS	WOH = WEIGHT OF HAMMER & RODS	C = COARSE	M = MEDIUM
SS = SPLIT TUBE SAMPLER	H.S.A. = HOLLOW STEM AUGER	F = FINE	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%			

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-5
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/jk	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>11</u> ' FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> ' FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.9

DEPTH	CASING BLOWS PER FOOT	SAMPLE				DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.		0	6	6	12				
5	1	ss	24"	10"	2'0"	6	7				moist compact	8'0"	2" Asphalt; Brn FMC SAND, sm FC gravel	
	2	ss	24"	5"	4'0"	3	4				dry loose		brick, concrete	
	3	ss	24"	6"	6'0"	3	2				dry loose		Brn FMC SAND, lit FC gravel, brick, concrete frags	
	4	ss	24"	6"	8'0"	3	2				v loose		SAME (fill)	
	5	ss	24"	14"	10'0"	3	3				moist loose			
10	6	ss	24"	18"	12'0"	4	5				wet loose		Brn F SAND	
						5	7						Brn F SAND	
15	7	ss	24"	20"	17'0"	3	2				wet v loose		Brn F SAND	
						2	2							
20	8	ss	24"	22"	22'0"	3	2				wet loose		Brn F SAND	
						5	3							
25	9	ss	24"	20"	27'0"	3	4				wet loose		GreyBrn F SAND	
						4	5					27'0"		
30													E.O.B 27'0"	
35														
40													* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-5
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-6
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/jk	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	
		OFFSET
		DATE START 12/4/20
		DATE FINISH 12/4/20
		SURFACE ELEV. EI. ±80.7
		GROUND WATER ELEV. EI. ±70.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)		CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.	
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12					12 - 18
5		1	ss	24"	10"	2'0"	7	3		dry	3'6"	2" Asphalt; OrgnBrn F SAND, tr FC gravel, tr silt	
						2	2		loose	Brn F SAND & SILT, tr FC gravel (possible fill)			
		2	ss	24"	16"	4'0"	2	3				moist	
						4	8		loose				
		3	ss	24"	12"	6'0"	7	9				moist	
10						11	14		compact		Brn FMC SAND		
		4	ss	24"	18"	8'0"	11	14		dry		Brn FMC SAND, sm FC gravel	
						18	19		dense				
		5	ss	24"	20"	10'0"	6	8		dry			OrgnBrn F SAND, tr F gravel
						8	6		compact				
15		6	ss	24"	22"	12'0"	7	5		wet	Brn F SAND		
						5	4		loose				
		7	ss	24"	18"	17'0"	2	2		wet		SAME	
						2	2		v loose				
20													
		8	ss	24"	20"	22'0"	3	4		wet	SAME		
						3	5		loose				
	25												
		9	ss	24"	14"	27'0"	3	4		wet		SAME	
						4	5		loose				
30											E.O.B 27'0"		
35											* SAFETY HAMMER CATHEAD & ROPE		
40											* SAFETY HAMMER CATHEAD & ROPE		

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-6
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-7
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT ___ FT AFTER <u>0</u> HOURS AT ___ FT AFTER ___ HOURS	TYPE HSA SS*	DATE START
	SIZE I.D. 4 1/4" 1 3/8"	DATE FINISH
	HAMMER WT. 140# BIT	SURFACE ELEV.
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST MOIST	STRATA CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT					
5										THIS LOCATION OMITTED FROM SCOPE OF WORK	
40										* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. HOLE NO. **B-7**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>2</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-8
FOREMAN - DRILLER JK/eq	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
INSPECTOR	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
GROUND WATER OBSERVATIONS AT <u>10'</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	CASING TYPE HSA SAMPLER SS* CORE BAR SIZE I.D. 4 1/4" 1 3/8" HAMMER WT. 140# BIT HAMMER FALL 30"	OFFSET DATE START 12/21/20 DATE FINISH 12/23/20 SURFACE ELEV. EI. +80.7 GROUND WATER ELEV. EI. +70.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18				
5	1	ss	24"	14"	2'0"	6	3			moist loose	4'0"	BrnOrng FM SAND, sm silt, tr asphalt (fill)	
	2	ss	24"	4"	4'0"	4	4			moist loose		LtBrn FM SAND, sm silt, tr asphalt (fill)	
	3	ss	24"	16"	6'0"	7	12			moist compact		LtBrnGrey F SAND, lit M sand	
	4	ss	24"	12"	8'0"	15	15			moist dense		LtBrn F SAND, lit M sand	
	5	ss	24"	22"	10'0"	18	16			moist compact		LtBrnGrey FM SAND, lit C sand	
10	6	ss	24"	14"	12'0"	5	4			wet loose		LtBrnGrey FM SAND, lit C sand	
						3	3						
15	7	ss	24"	20"	17'0"	2	3			wet loose		GreyLtBrn F SAND, lit MC sand	
						2	2						
20	8	ss	24"	24"	22'0"	1	2			wet v loose		LtBrn F SAND, sm M sand	
						2	2						
25	9	ss	24"	23"	27'0"	6	11			wet compact		LtBrnGrey FM SAND, sm M sand	
						13	18						
30	10	ss	24"	24"	32'0"	6	13			wet compact		LtBrn F SAND, lit MC sand	
						15	17						
35	11	ss	24"	20"	37'0"	10	14			wet dense		LtBrn F SAND, sm M sand, tr C sand	
						17	22						
40												* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-8**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>2</u> OF <u>2</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-8
FOREMAN - DRILLER JK/eq	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
INSPECTOR	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
GROUND WATER OBSERVATIONS AT <u>10'</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	CASING TYPE HSA	OFFSET
	SAMPLER SS*	DATE START 12/21/20
	SIZE I.D. 4 1/4"	DATE FINISH 12/23/20
	HAMMER WT. 140#	SURFACE ELEV. EI. ±80.7
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±70.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0-6	6-12	12-18				
45		13	ss	24"	20"	42'0"	11	12		wet compact		LtBrn F SAND, sm M sand	
							15	22					
50		14	ss	24"	23"	47'0"	16	20		wet dense		LtBrn F SAND, lit M sand	
							24	28					
55		15	ss	24"	24"	52'0"	20	24		wet dense		LtBrn F SAND, sm M sand	
							25	30					
60		16	ss	24"	24"	57'0"	22	26		wet v dense		LtBrn F SAND, lit M sand	
							30	32					
65		17	ss	24"	23"	62'0"	26	27		wet v dense	62'0"	LtBrn F SAND, lit M sand	
							31	35					
70													
75													
80													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-8
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-9
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	TYPE HSA SS*	DATE START 12/21/20
AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE FINISH 12/21/20
	HAMMER WT. 140# BIT	SURFACE ELEV. EI. ±80.8
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±70.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.	
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18					
5		1	ss	24"	20"	2'0"	12	6			moist loose	6'0"	DkBrn FM SAND & SILT	
		2	ss	24"	6"	4'0"	4	3			dry/moist		LtBrn FM SAND, lit asphalt, lit silt	
							1	2			v loose			
		3	ss	24"	5"	6'0"	6	7			dry			LtBrn FM SAND, sm asphalt (fill)
							9	14			compact			
10		4	ss	24"	14"	8'0"	16	18			moist		LtBrn F SAND, lit M sand	
						18	22			dense				
		5	ss	24"	17"	10'0"	6	8			moist			GreyLtBrn F SAND, sm M sand, tr silt
							9	11			compact			
		6	ss	24"	16"	12'0"	5	3			wet			SAME
15							2	2			loose			
		7	ss	24"	12"	17'0"	1	2			wet		Grey F SAND	
							2	3			v loose			
20														
		8	ss	24"	16"	22'0"	4	6			wet		GreyBrn FM SAND	
							7	9			compact			
25														
		9	ss	24"	10"	27'0"	1	1			wet		Grey F SAND	
							2	2			v loose			
30														
35														
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-9
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-10
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/jk	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	CORE BAR BIT
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	OFFSET
	HAMMER FALL 30"	DATE START 12/4/20
		DATE FINISH 12/4/20
		SURFACE ELEV. EI. +80.9
		GROUND WATER ELEV. EI. +70.9

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	MOIST				
5	1	ss	24"	10"	2'0"	8	7				dry	8'0"	2" Asphalt; Brn FMC SAND, sm FC gravel, brick (fill)	
	2	ss	24"	8"	4'0"	6	3				compact dry		Brn F SAND, kit FC gravel, tr silt	
	3	ss	24"	14"	6'0"	5	4				loose dry		Brn FMC SAND, lit FC gravel, tr silt, asphalt (fill)	
	4	ss	24"	4"	8'0"	6	6				compact dry		SAME	
10	5	ss	24"	18"	10'0"	2	3				loose dry		Brn F SAND, lit FC gravel	
	6	ss	24"	20"	12'0"	9	8				compact wet		Brn F SAND	
						6	4				compact			
15	7	ss	24"	20"	17'0"	3	4				wet loose		GreyBrn F SAND	
						4	5							
20	8	ss	24"	22"	22'0"	5	4				wet loose		Grey F SAND	
						4	6							
25	9	ss	24"	20"	27'0"	4	4				wet loose		SAME	
						5	6					27'0"		
30													E.O.B 27'0"	
35														
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT.	USED _____ CASING	THEN _____ CASING TO _____ FT.	HOLE NO. B-10
A = AUGER	UP = UNDISTURBED PISTON	T = THINWALL	V = VANE TEST
WOR = WEIGHT OF RODS	WOH = WEIGHT OF HAMMER & RODS		C = COARSE
SS = SPLIT TUBE SAMPLER	H.S.A. = HOLLOW STEM AUGER		M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10%	LITTLE = 10 - 20%	SOME = 20 - 35%	AND = 35 - 50%
			F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-12
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>12</u> ' FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	CORE BAR BIT
AT <u> </u> ' FT AFTER <u> </u> HOURS	HAMMER WT. 140#	OFFSET
	HAMMER FALL 30"	DATE START 12/21/20
		DATE FINISH 12/21/20
		SURFACE ELEV. EI. ±80.7
		GROUND WATER ELEV. EI. ±68.7

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5	1	ss	24"	6"	2'0"	12	10			dry		Brn FM SAND, lit asphalt, tr silt, tr F gravel	
	2	ss	24"	7"	4'0"	8	6			compact dry		Brn FMC SAND, lit asphalt, tr F gravel	
	3	ss	24"	8"	6'0"	5	3			compact dry		SAME	
	4	ss	24"	7"	8'0"	14	5			compact dry		Brn FM SAND, lit F gravel, tr silt, tr brick (fill)	
	5					12	18			compact dry	8'0"		
10	5	ss	24"	5"	10'0"	12	15			compact dry		Brn F SAND, sm F gravel	
	6	ss	24"	13"	12'0"	10	9			compact moist		LtBrn FM SAND, sm F gravel	
						7	5			compact			
15	7	ss	24"	16"	17'0"	10	3			wet loose		GreyBrn F SAND	
						2	2						
20	8	ss	24"	14"	22'0"	3	5			wet compact		GreyBrnBlk F SAND	
						6	3						
25	9	ss	24"	15"	27'0"	2	3			wet loose		Grey FM SAND, lit F gravel	
						2	2				27'0"		
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-12**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

* SAFETY HAMMER CATHEAD & ROPE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-13
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA SAMPLER SS* CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>11'0"</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE START 12/18/20
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140# BIT	DATE FINISH 12/18/20
	HAMMER FALL 30"	SURFACE ELEV. EI. ±81.1
		GROUND WATER ELEV. EI. ±70.1

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	6"	20"	5	4			moist loose	6'0"	BrnRed FM SAND, lit silt, tr asphalt
		2	ss	24"	5"	4'0"	3	2			moist loose		SAME
		3	ss	24"	4"	6'0"	7	5			dry loose		Brn FM SAND, lit silt, tr brick, tr F gravel (fill)
		4	ss	24"	5"	8'0"	3	2			dry compact		
10		5	ss	24"	4"	10'0"	11	10			dry dense		Brn FM SAND, sm F gravel, tr silt
		6	ss	1"	0"	10'1"	10	15			v dense		Brn FM SAND & F GRAVEL
15							20	22					No recovery C GRAVEL @ 10'
		7	ss	24"	11"	17'0"	50/1				wet loose		Brn FM SAND, tr silt
20							4	5					
		8	ss	24"	12"	22'0"					wet compact		Grey VFF SAND
25							11	13					
		9	ss	24"	20"	27'0"					wet dense	27'0"	Grey F SAND
30							14	17					
							17	14					
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-13**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

* SAFETY HAMMER CATHEAD & ROPE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-14
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/jk	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>11</u> ' FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> ' FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	CORE BAR
		OFFSET
		DATE START 12/4/20
		DATE FINISH 12/4/20
		SURFACE ELEV. EI. ±81.2
		GROUND WATER ELEV. EI. ±70.2

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18				
5		1	ss	24"	0"	12"	4	41		moist v dense		2" Asphalt, no recovery	
						50/2"							
		2	ss	24"	10"	5'0"	5	2		moist loose		Brn F SAND, lit FC gravel, tr silt (possible fill)	
		3	ss	24"	10"	7'0"	3	3		moist loose	6'6"	Brn F SAND, tr FC gravel (possible fill)	
10		4	ss	24"	18"	9'0"	14	12		moist compact		Brn VF SAND	
							14	17					
		5	ss	24"	20"	12'0"	8	7		wet compact		Brn VF SAND	
							8	6					
15		6	ss	24"	18"	17'0"	3	3		wet loose		Brn F SAND	
							4	5					
20		7	ss	24"	16"	22'0"	3	4		wet loose		Grey F SAND	
							4	6					
25		8	ss	24"	16"	27'0"	3	4		wet loose		Grey F SAND	
							5	5			27'0"		
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-14
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-15
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>11</u> FT AFTER <u>0</u> HOURS	TYPE HSA SS*	DATE START 12/18/20
AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE FINISH 12/18/20
	HAMMER WT. 140# BIT	SURFACE ELEV. EI. ±80.8
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5	1	ss	24"	10"	2'0"	5	4			moist	2'0"	LtBrn SILT & F SAND (possible fill)	
						4	2			stiff			
	2	ss	24"	15"	4'0"	2	4			moist		Brn FM SAND, sm silt, lit C sand (possible fill)	
						2	5			loose			
	3	ss	24"	14"	6'0"	6	9			moist		Brn F SAND, sm MC sand, lit VF sand	
						11	11			compact			
	4	ss	24"	16"	8'0"	11	12			dry		Brn F SAND, lit VF sand	
						12	10			compact			
	5	ss	24"	18"	10'0"	10	11			dry		LtBrn VFF SAND	
10	6	ss	24"	18"	12'0"	8	9			compact		Brn F SAND, sm VF sand, lit M sand	
					7	5			wet				
									compact				
15	7	ss	24"	22"	17'0"	1	2			wet		LtBrnGrey F SAND, sm VF sand	
						2	3			v loose			
20	8	ss	24"	18"	22'0"	5	5			wet		Grey F SAND, sm VF sand, lit M sand	
						9	11			compact			
25	9	ss	24"	0"	27'0"	3	4			wet		No recovery	
						6	4			loose	27'0"		
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-15**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

* SAFETY HAMMER CATHEAD & ROPE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-16
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>12</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.0

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.	
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18	MOIST					ELEV
5	1	ss	24"	8"	2'0"	2	4				moist loose		LtBrn FM SAND, lit silt, lit F gravel		
	2	ss	24"	6"	4'0"	3	4				noist compact		LtBrn FM SAND, sm F gravel, lit silt		
						3	4				moist compact		LtBrn FM SAND, lit silt, tr F gravel		
	4	ss	24"	12"	6'0"	7	8				compact dry		LtBrnOrng FM SAND, tr silt, tr F gravel		
						11	12				compact dry		LtBrn VFF SAND		
13						13				compact dry		LtBrnGrey F SAND, sm VF sand			
10	5	ss	24"	20"	10'0"	11	13				compact moist				
						14	16				compact				
15	6	ss	24"	16"	12'0"	9	11				compact				
						7	8								
20	7	ss	24"	16"	17'0"	3	3				wet loose		BrnLtBrn FM SAND, tr silt, tr F gravel		
						3	6								
25	8	ss	24"	14"	22'0"	6	10				wet compact		Grey F SAND, lit M sand		
						11	14								
30	9	ss	24"	24"	27'0"	16	15				wet dense	27'0"	Grey FM SAND, sm C sand		
						17	19								
35															
40															

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-16
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-17
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
	TYPE HSA SS*	DATE START 12/18/20
GROUND WATER OBSERVATIONS	SIZE I.D. 4 1/4" 1 3/8"	DATE FINISH 12/18/20
AT 12' FT AFTER 0 HOURS	HAMMER WT. 140# BIT	SURFACE ELEV. El. ±81.0
AT ___ FT AFTER ___ HOURS	HAMMER FALL 30"	GROUND WATER ELEV. El. ±69.0

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5	1	ss	24"	10"	2'0"	16	11			dry		BlkBrn FMC SAND, lit silt	
	2	ss	24"	8	4'0"	9	7			compact		Brn FM SAND, lit silt	
						5	4			compact			
	3	ss	24"	14"	6'0"	3	4			dry		LtBrn F SAND, lit M sand, tr VF sand	
						5	16			loose			
11						8			dry		LtBrn VFF SAND		
10	5	ss	24"	20"	10'0"	9	11			compact		LtBrn VFF SAND, lit F gravel	
						9	12			compact			
	6	ss	24"	21"	12'0"	11	9			moist		Brn F SAND, sm VF sand	
						10	11			compact			
15	7	ss	24"	11"	17'0"	1	2			wet		Brn F SAND, lit M sand, tr VF sand	
						3	4			loose			
20	8	ss	24"	23"	22'0"	4	6			wet		Grey F SAND, sm M sand, lit VF sand	
						9	10			compact			
25	9	ss	24"	12"	27'0"	3	4			wet		Grey FM SAND	
						7	9			compact	27'0"		
30												E.O.B 27'0"	
35													
40												* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-17**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-18
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MKJao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	
		OFFSET
		DATE START 1/4/21
		DATE FINISH 1/4/21
		SURFACE ELEV. EI. ±78.8
		GROUND WATER ELEV. EI. ±68.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18				
5	1	ss	24"	14"	2'0"	2	3			moist	4'0"	6" Topsoil	
	2	ss	24"	18"	4'0"	3	5			loose		Brn F SAND, sm silt, tr F gravel, tr brick	
						5	4			loose		Brn F SAND, str F gravel, tr brick (fill)	
	3	ss	24"	16"	6'0"	8	10			moist		Brn F SAND	
10	4	ss	24"	16"	8'0"	12	12			compact	27'0"	SAME	
						14	16			moist		SAME	
	5	ss	24"	20"	10'0"	6	6			moist		SAME	
	6	ss	24"	18"	12'0"	4	6			compact		SAME	
15	6	ss	24"	18"	12'0"	6	5			wet	27'0"	OrngBrn F SAND	
						6	5			compact			
	7	ss	24"	24"	17'0"	3	5			wet			
						5	7			loose			
20	8	ss	24"	24"	22'0"	3	4			wet	27'0"	Brn F SAND	
						4	11			loose			
	9	ss	24"	24"	27'0"	7	7			wet			
						12	10			compact			
30												E.O.B 27'0"	
35												* SAFETY HAMMER CATHEAD & ROPE	
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT.	USED _____ CASING	THEN _____ CASING TO _____ FT.	HOLE NO. B-18
A = AUGER	UP = UNDISTURBED PISTON	T = THINWALL	V = VANE TEST
WOR = WEIGHT OF RODS	WOH = WEIGHT OF HAMMER & RODS		C = COARSE
SS = SPLIT TUBE SAMPLER	H.S.A. = HOLLOW STEM AUGER		M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10%	LITTLE = 10 - 20%	SOME = 20 - 35%	AND = 35 - 50%
			F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-19
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.1

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	14"	2'0"	1	2		moist		6" Topsoil	
							3	6		loose		Brn F SAND, tr F gravel	
5		2	ss	24"	12"	4'0"	8	5		moist		Brn F SAND, lit F gravel, tr silt	
							4	4		loose			
5		3	ss	24"	20"	6'0"	5	6		moist		GreyBrn F SAND	
							12	12		compact			
10		4	ss	24"	16"	8'0"	18	13		moist		Brn F SAND	
							12	13		compact			
10		5	ss	24"	18"	10'0"	8	7		moist		SAME	
							7	6		compact			
15		6	ss	24"	16"	12'0"	8	5		wet		SAME	
							5	6		loose			
20		7	ss	24"	22"	17'0"	2	3		wet		SAME	
							5	5		loose			
25		8	ss	24"	20"	22'0"	4	10		wet		SAME	
							14	14		compact			
30		9	ss	24"	22"	27'0"	3	5		wet		SAME	
							5	11		loose	27'0"		
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-19
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-20
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	OFFSET
GROUND WATER OBSERVATIONS AT <u>11</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	SAMPLER SS*	DATE START 1/4/21
	SIZE I.D. 4 1/4"	DATE FINISH 1/4/21
	HAMMER WT. 140#	SURFACE ELEV. EI. ±79.8
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±68.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5	1	ss	24"	16"	20"	1	3			moist		8" Topsoil; Brn F SAND, tr F gravel (possible fill)	
						3	3			loose			
	2	ss	24"	14"	40"	2	3			moist/wet		Brn F SAND, lit F gravel, tr silt (possible fill)	
						3	2			loose			
	3	ss	24"	20"	6'0"	11	5			moist		GreyBrn F SAND, tr F gravel	
						5	6			loose			
	4	ss	24"	18"	8'0"	8	9			moist		Brn F SAND	
						12	12			compact			
	5	ss	24"	16"	10'0"	10	14			moist		Brn F SAND	
10					11	10			compact				
	6	ss	24"	17"	12'0"	9	8			moist/wet		SAME	
						7	8			compact			
15													
	7	ss	24"	22"	17'0"	3	4			wet		SAME	
						3	5			loose			
20													
	8	ss	24"	22"	22'0"	3	15			wet		SAME	
						14	12			compact			
25													
	9	ss	24"	24"	27'0"	4	3			wet		SAME	
						4	10			loose	27'0"		
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-20
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE	

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-21
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±79.2
		GROUND WATER ELEV. EI. ±69.2

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	12"	2'0"	1	3			moist	6" Topsoil; Brn F SAND, sm F gravel	
						3	2			loose			
		2	ss	24"	14"	4'0"	4	6			moist		OrgBrn F SAND, sm F gravel, tr silt
							7	4			compact		
		3	ss	24"	20"	6'0"	13	11			moist		OrgBrn F SAND
10						10	11			compact	Brn F SAND		
		4	ss	24"	18"	8'0"	15	12		moist			
						12	15			compact			
		5	ss	24"	18"	10'0"	10	6		moist			
						6	7			compact			
15						6	4			wet	SAME		
						6	4			compact			
		7	ss	24"	16"	17'0"	2	4		wet			
							4	6		loose			
20											SAME		
		8	ss	24"	20"	22'0"	3	9		wet			
							12	16		compact			
25											SAME		
		9	ss	24"	20"	27'0"	4	4		wet			
							6	9		loose			
30											E.O.B 27'0"		
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-21
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-22
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±70.4

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	14"	2'0"	1	3		moist		6" Topsoil; Brn F SAND	
							3	4		loose			
		2	ss	24"	16"	4'0"	4	6		moist		SAME	
							6	4		compact			
		3	ss	24"	18"	6'0"	5	6		moist		Brn FMC SAND, sm F gravel	
10							10	10		compact			
		4	ss	24"	16"	8'0"	12	15		moist		Brn F SAND	
							15	13		compact			
		5	ss	24"	20"	10'0"	5	8		moist		SAME	
							8	10		compact			
15							10	6		wet		SAME	
							5	5		compact			
		7	ss	24"	22"	17'0"	2	2		wet		SAME	
							3	5		loose			
20													
		8	ss	24"	24"	22'0"	4	5		wet		SAME	
							4	7		loose			
25													
		9	ss	24"	24"	27'0"	6	7		wet		SAME	
							6	5		compact	27'0"		
30											E.O.B 27'0"		
35													
40											* SAFETY HAMMER CATHEAD & ROPE		

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT.	USED _____ CASING	THEN _____ CASING TO _____ FT.	HOLE NO. B-22
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST			
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE			
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM			
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE			

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-23
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±68.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5		1	ss	24"	4"	2'0"	1	2		moist	4'0"	4" Topsoil	
		2	ss	24"	3"	4'0"	5	4		loose		Brn F SAND, sm silt (possible fill)	
							1	3		moist		SAME	
		3	ss	24"	18"	6'0"	3	3		loose			
							5	5		moist		GreyBrn F SAND	
10							5	7		loose	27'0"	Brn F SAND	
		4	ss	24"	18"	8'0"	12	10		moist		SAME	
							10	11		compact			
		5	ss	24"	16"	10'0"	5	6		moist		SAME	
							6	5		compact		SAME	
15							5	5		wet	27'0"	SAME	
							5	5		loose			
		7	ss	24"	18"	17'0"	3	3		wet		SAME	
							4	6		loose			
20											27'0"		
		8	ss	24"	24"	22'0"	4	5		wet		SAME	
							10	13		compact			
25											27'0"		
		9	ss	24"	24"	27'0"	4	5		wet		SAME	
							7	7		compact			
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-23
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-24
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.5

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)			CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18				
5	1	ss	24"	14"	2'0"	1	3			moist	5'0"	6" Topsoil; Brn FM SAND, tr F gravel, concrete	
	2	ss	24"	0"	4'0"	4	2			loose		No recovery (fill)	
	3	ss	24"	4"	6'0"	3	3			v loose			
10	4	ss	24"	16"	8'0"	17	12			loose	5'0"	Grey F SAND, lit FC gravel	
	5	ss	24"	16"	10'0"	13	11			moist		Brn F SAND	
	6	ss	24"	20"	12'0"	9	6			compact		SAME	
15						6	5			wet	5'0"	SAME	
	7	ss	24"	24"	17'0"	3	2			loose		SAME	
						3	5						
20											5'0"	SAME	
	8	ss	24"	24"	22'0"	3	4			wet		SAME	
						4	6			loose			
25											5'0"	SAME	
	9	ss	24"	22"	27'0"	5	7			wet		SAME	
						7	9			compact			
30												E.O.B 27'0"	
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-24
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>2</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-26
FOREMAN - DRILLER MK/ao/ak	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
INSPECTOR	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	CASING SAMPLER CORE BAR TYPE NW SS* SIZE I.D. 3" 1 3/8" HAMMER WT. 300" 140# BIT HAMMER FALL 24" 30"	OFFSET DATE START 1/6/21 DATE FINISH 1/7/21 SURFACE ELEV. EI. ±79.2 GROUND WATER ELEV. EI. ±69.2

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	MOIST				
5	1	ss	24"	14"	20"	1	2			moist loose		10" Topsoil Brn F SAND, lit F gravel (possible fill) Brn F SAND, sm silt (possible fill) DkBrn F SAND Brn F SAND		
	2	ss	24"	12"	40"	2	3			moist loose				
	3	ss	24"	16"	60"	3	3			moist compact				
	4	ss	24"	14"	80"	9	9			moist compact				
	5	ss	24"	14"	100"	11	13			moist compact				
10	6	ss	24"	18"	120"	7	7			moist compact	SAME			
	7	ss	24"	18"	120"	10	8			wet compact				
	8	ss	24"	22"	220"	6	7			wet compact				
15	9	ss	24"	24"	170"	7	6			wet v loose	SAME			
	10	ss	24"	22"	220"	2	2			wet loose				
20	11	ss	24"	22"	220"	2	3			wet loose	SAME			
	12	ss	24"	22"	220"	3	3			wet loose				
25	13	ss	24"	24"	270"	3	3			wet compact	SAME			
	14	ss	24"	24"	270"	8	8			wet compact				
30	15	ss	24"	0"	320"	4	4			wet compact	No recovery			
	16	ss	24"	0"	320"	8	6			wet compact				
35	17	ss	24"	12"	370"	6	7			wet compact	Brn F SAND			
	18	ss	24"	12"	370"	8	5			wet compact				
40	19	ss	24"	12"	370"	7	9			wet compact				
	20	ss	24"	12"	370"									

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-26
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>2</u> OF <u>2</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-26
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao/ak	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	TYPE NW SS*	DATE START 1/6/21
AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 3" 1 3/8"	DATE FINISH 1/7/21
	HAMMER WT. 300" 140# BIT	SURFACE ELEV. EI. ±79.2
	HAMMER FALL 24" 30"	GROUND WATER ELEV. EI. ±69.2

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	MOIST				
45		12	ss	24"	14"	42'0"	7	7			wet compact		Brn F SAND	
							6	11						
50		13	ss	24"	16"	47'0"	7	8			wet compact		Brn F SAND	
							10	10						
55		14	ss	24"	14"	52'0"	7	7					SAME	
							9	10						
60		15	ss	24"	16"	57'0"	8	7			wet compact		SAME	
							9	11						
65		16	ss	24"	14"	62'0"	7	7			wet compact		Brn F SAND	
							8	10						
70		17	ss	24"	24"	67'0"	9	15			wet compact	67'0"	SAME	
							15	21						
75														
80														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-26
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. B-27
	PROJECT NO. G211-1671-20	
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	TYPE HSA SS*	DATE START 1/5/21
AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4 1/4" 1 3/8"	DATE FINISH 1/5/21
	HAMMER WT. 140# BIT	SURFACE ELEV. EI. ±78.9
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±68.9

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	MOIST				
5		1	ss	24"	12"	2'0"	1	2			moist		6" Topsoil; Brn F SAND, sm F gravel	
							3	3			loose			
		2	ss	24"	14"	4'0"	2	4			moist		LtBrn F SAND, lit silt, lit gravel	
							4	5			loose			
		3	ss	24"	16"	6'0"	6	6			moist		Brn F SAND	
10							7	8			compact			
		4	ss	24"	18"	8'0"	11	12			moist		LtBrn F SAND	
							11	11			compact			
		5	ss	24"	20"	10'0"	6	8			moist		Brn F SAND	
							7	6			compact			
15		6	ss	24"	18"	12'0"	5	7			wet		SAME	
							7	5			compact			
		7	ss	24"	22"	17'0"	3	3					SAME	
							4	4						
20														
		8	ss	24"	24"	22'0"	4	6			wet		SAME	
							6	7			compact			
25														
		9	ss	24"	22"	27'0"	6	4			wet		SAME	
							4	4			loose	27'0"		
30												E.O.B 27'0"		
35														
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-27**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-28
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.1

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0 - 6	6 - 12	12 - 18	MOIST				
5	1	ss	24"	14"	20"	1	1			moist	4'6"	6" Topsoil; Brn F SAND, tr F gravel		
	2	ss	24"	10"	4'0"	3	2			v loose		Brn F SAND, tr gravel, tr brick (fill)		
	3	ss	24"	16"	6'0"	2	2			v loose		SAME		
	4	ss	24"	16"	8'0"	7	10			compact		OrgBrn F SAND		
	5	ss	24"	16"	10'0"	12	14			moist		Brn F SAND		
10	6	ss	24"	18"	12'0"	14	15			compact	27'0"	SAME		
	7	ss	24"	22"	17'0"	7	10			compact		SAME		
	8	ss	24"	24"	22'0"	11	11			wet		SAME		
15	9	ss	24"	24"	27'0"	10	7			compact	27'0"	SAME		
	10	ss	24"	24"	27'0"	7	8			wet		SAME		
20	11	ss	24"	24"	27'0"	5	4			wet	27'0"	SAME		
	12	ss	24"	24"	27'0"	3	5			loose		SAME		
25	13	ss	24"	24"	27'0"	4	6			wet	27'0"	SAME		
	14	ss	24"	24"	27'0"	6	5			compact		SAME		
30	15	ss	24"	24"	27'0"	4	6			wet	27'0"	SAME		
	16	ss	24"	24"	27'0"	6	7			compact		SAME		
35	17	ss	24"	24"	27'0"						27'0"	SAME		
	18	ss	24"	24"	27'0"							SAME		
40	19	ss	24"	24"	27'0"						27'0"	SAME		
	20	ss	24"	24"	27'0"							SAME		

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. B-28**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. B-29
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER MK/ao	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>10</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4 1/4"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.9

DEPTH	CASING BLOWS PER FOOT	SAMPLE				DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.		0	6	12	18				
5	1	ss	24"	14"	2'0"	2	3				moist loose		6" Topsoil; Brn F SAND, tr F gravel, tr silt	
	2	ss	24"	8"	4'0"	2	2				moist v loose		SAME	
	3	ss	24"	20"	6'0"	3	5				moist compact		OrngBrn F SAND	
	4	ss	24"	16"	8'0"	9	10				moist compact		Brn F SAND	
	5	ss	24"	20"	10'0"	10	11				moist compact		Brn F SAND	
10	6	ss	24"	18"	12'0"	11	8				wet compact		SAME	
						9	8							
15	7	ss	24"	24"	17'0"	3	3				wet loose		SAME	
						7	6							
20	8	ss	24"	24"	22'0"	3	4				wet loose		SAME	
						4	3							
25	9	ss	24"	24"	27'0"	5	3				wet loose		SAME	
						4	3					27'0"		
30													E.O.B 27'0"	
35														
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. B-29
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. D-1
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS
GROUND WATER OBSERVATIONS AT <u>12</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 2 1/2"	1 3/8"
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	GROUND WATER ELEV. El. ±68.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12	12 - 18	MOIST				
5		1	ss	24"	16"	20"	1	2			moist v loose	8'0"	Bm FM SAND, sm silt, tr F gravel	
							2	2						
10		2	ss	24"	22"	7'0"	6	9			dry compact	8'0"	LtBrn F SAND, sm MC sand, tr F gravel, tr brick (fill)	
							12	18						
15		3	ss	24"	21"	12'0"	8	6			moist loose	8'0"	LtBrnOrg F SAND, sm VF sand, lit M sand	
							4	4						
20		4	ss	24"	20"	17'0"	2	2			wet loose	8'0"	Grey FM SAND, lit C sand	
							3	4						
25		5	ss	24"	21"	22'0"	3	5			wet compact	8'0"	GreyLtBrn FM SAND	
							6	7						
30		6	ss	24"	0"	27'0"	2	2			wet v loose	27'0"	No recovery	
							2	1						
35														
40														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT. **HOLE NO. D-1**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
 WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE
 SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM
 PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. D-2
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HSA	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>11</u> ' FT AFTER <u>0</u> HOURS	SIZE I.D. 2 1/2"	1 3/8"
AT <u> </u> ' FT AFTER <u> </u> HOURS	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	30"
		OFFSET
		DATE START 1/4/21
		DATE FINISH 1/4/21
		SURFACE ELEV. EI. ±78.3
		GROUND WATER ELEV. EI. ±67.3

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)				CORE TIME PER FT (MIN)	DENSITY OR CONSIST M	STRATA CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT	0-6	6-12	12-18	18-24				
5	1	ss	24"	12"	2'0"	1	2	3	3		moist loose	3'0"	12" Topsoil DkBrnGrey VFFM SAND, lit FC gravel	
10	2	ss	24"	20"	7'0"	6	13	12	14		moist v stiff	5'6"	OrngBrn SILT & FM SAND	
15	3	ss	24"	18"	12'0"	4	4	4	5		moist/vmoist loose		LtBrn FM SAND LtBrnGrey FM SAND	
20	4	ss	24"	18"	17'0"	3	4	4	4		wet loose		GreyBrn FM SAND	
25	5	ss	24"	18"	22'0"	3	3	4	4		wet loose		SAME	
30	6	ss	24"	17"	27'0"	2	3	3	4		wet loose	27'0"	LtBrn Grey FM SAND	
35														
40														
E.O.B 27'0"														
* SAFETY HAMMER CATHEAD & ROPE														

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. D-2
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. D-3
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>10</u> ' FT AFTER <u>0</u> HOURS	TYPE HSA SS*	DATE START 1/4/21
AT <u> </u> ' FT AFTER <u> </u> HOURS	SIZE I.D. 2 1/2" 1 3/8"	DATE FINISH 1/4/21
	HAMMER WT. 140# BIT	SURFACE ELEV. EI. ±79.8
	HAMMER FALL 30"	GROUND WATER ELEV. EI. ±69.8

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE)		CORE TIME PER FT (MIN)	DENSITY OR CONSIST M OIST	STRATA CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC.	DEPTH @ BOT	0 - 6	6 - 12				
5	1	ss	24"	20"	2'6"	2	2		moist/vmoist loose	0'6"	2" Asphalt, Process stone BrnBrn VFF SAND & SILT, lit cinders, cobbles, FC gravel (fill)	
						3	3					
10	2	ss	24"	18"	7'0"	7	9		moist/vmoist compact	5'0"	LtBrnLtGrey VFF SAND	
						7	10					
15	3	ss	24"	18"	12'0"	2	3		moist/vmoist loose		LtBrnLtGrey VFFM SAND	
						2	3					
20	4	ss	24"	20"	17'0"	3	3		wet loose		LtBrnLtGrey VFFMC SAND	
						4	4					
25	5	ss	24"	15"	22'0"	3	3		wet loose		SAME	
						4	4					
30	6	ss	24"	18"	27'0"	3	4		wet loose	27'0"	SAME	
						4	4					
35											E.O.B 27'0"	
40											* SAFETY HAMMER CATHEAD & ROPE	

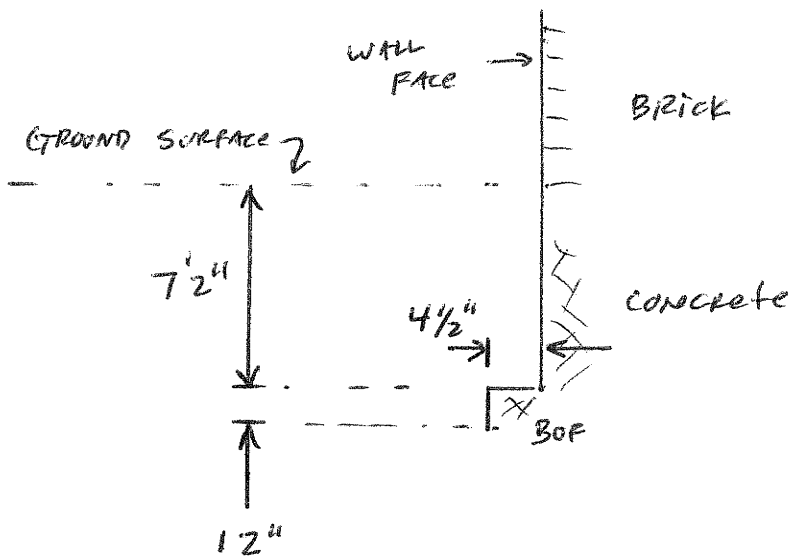
NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. D-3
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

Test Pit Logs

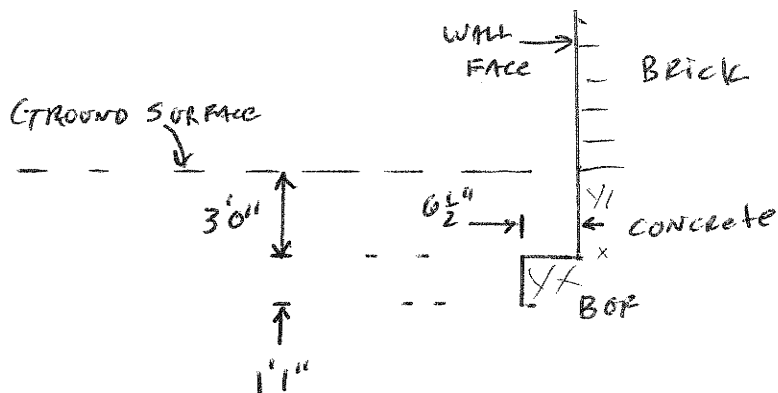
SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. TP A-1
	PROJECT NO. G211-1671-20	BORING LOCATIONS plan
PROJECT NAME Former St. Denis Parochial School		
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	OFFSET
INSPECTOR James DeAngelis	TEST PITS EXCAVATOR	DATE START 1/6/21
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER 12 HOURS AT <u> </u> FT AFTER <u> </u> HOURS		DATE FINISH 1/6/21
		SURFACE ELEV. GROUND WATER ELEV.

TEST pit - A-1



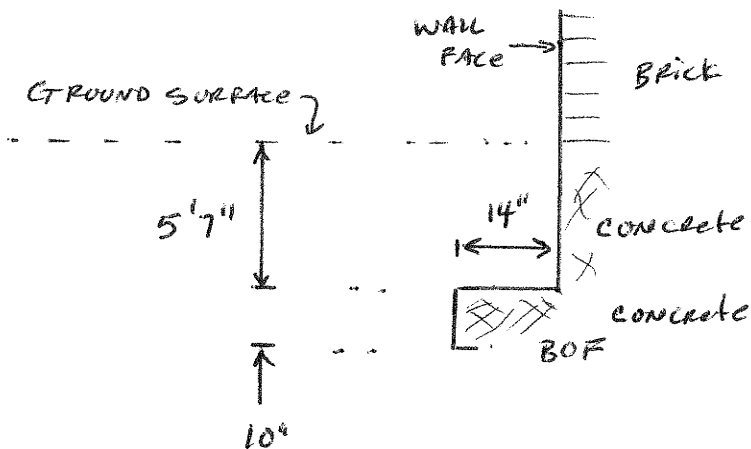
SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. TP A-2
	PROJECT NO. G211-1671-20	BORING LOCATIONS , plan
PROJECT NAME Former St. Denis Parochial School		
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	OFFSET
INSPECTOR James DeAngelis	TEST PITS EXCAVATOR	DATE START 1/6/21
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER <u>12</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS		DATE FINISH 1/6/21
		SURFACE ELEV. GROUND WATER ELEV.

TEST PIT - A-2



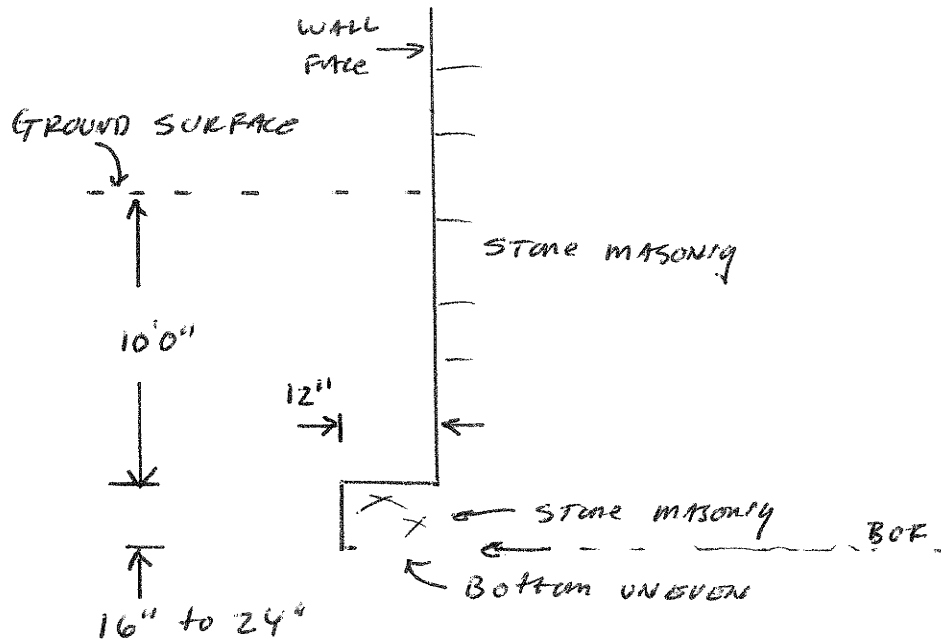
SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. TP-A3
	PROJECT NO. G211-1671-20	BORING LOCATIONS plan
PROJECT NAME Former St. Denis Parochial School		
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	OFFSET
INSPECTOR James DeAngelis	TEST PITS EXCAVATOR	DATE START 1/6/21
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER <u>12</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS		DATE FINISH 1/6/21
		SURFACE ELEV. GROUND WATER ELEV.

TEST pit - A-3



SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. TP-A4
	PROJECT NO. G211-1671-20	BORING LOCATIONS plan
	PROJECT NAME Former St. Denis Parochial School	
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	OFFSET
INSPECTOR James DeAngelis	TEST PITS EXCAVATOR	DATE START 1/6/21
GROUND WATER OBSERVATIONS AT <u>10'</u> FT AFTER <u>12</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS		DATE FINISH 1/6/21
		SURFACE ELEV. GROUND WATER ELEV.

TEST PIT - A-4



NOTE: EXCAVATE UNSTABLE, F-SAND

∴ WATER WEEPING AT 10' DEPTH

Field Permeability Test Results

**ST. DENIS COMMUNITY SCHOOL
YONKERS, NY**

PERMEABILITY TEST RESULTS

Boring	Ground Elev., ft.	Test	Hole Diam., in.	Test Depth, ¹		Stickup, in.	Test Elev., ft.	Soil Immediately Below Test Depth	N-value	Water Depth	Water Depth	Δ Time, min.	Permeability (in./hr)	
				in Casing at t ₀ , in.	in Casing at t ₁₀₀ , in.					in./hr	cm/s			
C-1	El. 80.9	1	4.0	96.00	8.00	30	72.9	Brown silty f SAND	NR	99	114	14	3.970	2.80E-03
		2	4.0	96.00	8.00	30		Brown silty f SAND	NR	98	116.5	20	3.704	2.61E-03
		3	4.0	96.00	8.00	30		Brown silty f SAND	NR	99	121	25	4.624	3.26E-03
C-2	El. 78.6	1	4.0	96.00	8.00	30	70.6	Brown f SAND	NR	91	119.5	5	23.079	1.63E-02
		2	4.0	96.00	8.00	30		Brown f SAND	NR	97	117	4	20.050	1.41E-02
		3	4.0	96.00	8.00	30		Brown f SAND	NR	98	118	4	21.467	1.51E-02
C-3	El. 79.8	1	4.0	96.00	8.00	30	71.8	Brown f SAND	NR	96	119	10	9.975	7.04E-03
		2	4.0	96.00	8.00	30		Brown f SAND	NR	96	110	5	8.617	6.08E-03
		3	4.0	96.00	8.00	30		Brown f SAND	NR	97	116	7	10.426	7.36E-03
		4	4.0	96.00	8.00	30		Brown f SAND	NR	98	117	7	11.114	7.84E-03

Notes: 1) Test Depth is measured from the ground surface to the bottom of hole

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. C-1
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER JK/eq	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING TYPE HW	SAMPLER SS*
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER <u>0</u> HOURS AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4"	1 3/8"
	HAMMER WT. 140#	BIT
	HAMMER FALL 30"	
		OFFSET
		DATE START 12/23/20
		DATE FINISH 12/23/20
		SURFACE ELEV. EI. ±80.8
		GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE				DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC						
5										2" Asphalt 4" Gravel Base Brn VFFM SAND, lit silt	
10									8'0"	E.O.B 8'0"	
15											
20											
25											
30											
35											
40										* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. C-1
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE	
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM	
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOIL TESTING, INC.

90 DONOVAN RD.
 OXFORD, CT 06478
 CT (203) 262-9328
 NY (914) 946-4850

CLIENT:

KGTD ARCHITECTS & ENGRS

PROJECT NO.

G 211-1671-20

PROJECT NAME

FORMER ST. DENIS PAROCHIAL SCHOOL

LOCATION

VAN CORTLANDT PARK AVE & LAWRENCE ST, YONKERS, NY.

PERCOLATION TEST

BORING / PERCOLATION TEST LOCATION:

C-1

CASING DIAMETER:

4"

TECHNICIAN:

JAMES DEANGELO

OVERALL CASING LENGTH:

10'6"

TEST DATE:

1-5-2021

CASING STICK-UP (A.G. SURFACE):

2'6"

ADJACENT OBSERVATION WELL GROUNDWATER LEVEL READING:

N/A

Depth to Groundwater Level

(Date:

and Time:

)

PRESOAK DATE:

12-23-20

TIME	WATER LEVEL from TOP of CASING	NOTES
9:25 AM	None	AFTER PRE-SOAK
9:27	8'3"	INITIAL FILL
9:34	8'11"	
9:41	9'6"	15" / 14 min
11:40	8'2"	2 nd FILL
11:45	8'7"	
11:50	8'11 1/2"	
11:55	9'4"	
12:00	9'8 1/2"	18 1/2" / 20
12:04	8'3"	3 rd FILL
12:14	9'0"	
12:19	9'4 1/2"	
12:24	9'9"	
12:29	10'1"	22" / 25 min
		PERC RATE:
		22" / 25 min
		52" / HOUR

COMMENTS:

ALL WATER LEVEL READINGS FROM TOP OF CASING

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u>
	PROJECT NO. G211-1671-20	HOLE NO. C-2
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER <u>0</u> HOURS	TYPE HW SS*	DATE START 1/4/21
AT <u> </u> FT AFTER <u> </u> HOURS	SIZE I.D. 4" 1 3/8"	DATE FINISH 1/4/21
	HAMMER WT. 140# BIT	SURFACE ELEV. EI. ±78.6
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE					BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC	DEPTH @ BOT					
5										Bm VFFM SAND	
10									8'0"	E.O.B 8'0"	
15											
20											
25											
30											
35											
40										* SAFETY HAMMER CATHEAD & ROPE	

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. C-2
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

SOILTESTING, INC.

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 NY (914) 946-4850

CLIENT:

KGTD ARCHITECTS & ENGRS

PROJECT NO.

G 211-1671-20

PROJECT NAME

Former ST. DENIS PAROCHIAL SCHOOL

LOCATION

VAN CORTLANDT PARK AVE & LAWRENCE ST, YONKERS, NY.

PERCOLATION TEST

BORING / PERCOLATION TEST LOCATION:

C-2

CASING DIAMETER:

4"

TECHNICIAN:

JAMES DEANGELO

OVERALL CASING LENGTH:

10'6"

TEST DATE:

1-5-2021

CASING STICK-UP (A.G. SURFACE):

2'6"

ADJACENT OBSERVATION WELL GROUNDWATER LEVEL READING:

N/A

Depth to Groundwater Level

(Date:

and Time:

)

PRESOAK DATE:

1-4-2021

TIME	WATER LEVEL from TOP of CASING	NOTES	
9:47am	NONE	AFTER PRE-SOAK	
9:50	8'	INITIAL FILL	
10:10	NONE		
10:16	7'7"] F	
10:17	8'3"		2 ND FILL
10:18	8'10"		
10:19	9'4"		
10:21	9'11 1/2"		
11:01	8'1"	3 RD FILL	
11:03	8'11"		
11:05	9'9"	20" / 4 min	
11:11	8'2"	4 TH FILL	
11:15	9'10"	20" / 4 min	
		PERC RATE:	
		20" / 4 min	
		300" / HOUR	

COMMENTS:

ALL WATER LEVEL READINGS FROM TOP OF CASING

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: KG&D Architects & Engineers	SHEET <u>1</u> OF <u>1</u> HOLE NO. C-3
	PROJECT NO. G211-1671-20	
	PROJECT NAME Former St Denis Parochial School	BORING LOCATIONS per Plan
FOREMAN - DRILLER PD/ak/rc	LOCATION Van Cortlandt Park Ave & Lawrence St Yonkers, NY	
INSPECTOR	CASING SAMPLER CORE BAR	OFFSET
	TYPE HW SS*	DATE START 1/4/21
GROUND WATER OBSERVATIONS AT <u>none</u> FT AFTER <u>0</u> HOURS	SIZE I.D. 4" 1 3/8"	DATE FINISH 1/4/21
AT <u> </u> FT AFTER <u> </u> HOURS	HAMMER WT. 140# BIT	SURFACE ELEV. El. ±79.8
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE				DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 6 - 12 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST	STRATA CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		NO	Type	PEN	REC						
5										Brn VFFM SAND	
10									8'0"	E.O.B 8'0"	
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____ FT. USED _____ CASING THEN _____ CASING TO _____ FT.	HOLE NO. C-3
A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST	
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS	C = COARSE
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER	M = MEDIUM
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND = 35 - 50%	F = FINE

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PROJECT NO.

G 211-1671-20

PROJECT NAME

Former ST. DENIS PAROCHIAL SCHOOL

LOCATION

VAN CORTLANDT PARK AVE & LAWRENCE ST, Yonkers, NY.

PERCOLATION TEST

BORING / PERCOLATION TEST LOCATION: **C-3**

CASING DIAMETER: **4"**

TECHNICIAN: **JAMES DeAngelis**

OVERALL CASING LENGTH: **10'6"**

TEST DATE: **1-5-2021**

CASING STICK-UP (A.G. SURFACE): **2'6"**

ADJACENT OBSERVATION WELL GROUNDWATER LEVEL READING: **N/A**

Depth to Groundwater Level

(Date: _____ and Time: _____)

PRESOAK DATE: **1-4-2021**

TIME	WATER LEVEL from TOP of CASING	NOTES
10:31 am	None	AFTER PRE-SOAK
10:34	8'0"	INITIAL Fill
10:36	8'7"	
10:39	9'1"	
10:42	9'6 1/2"	
10:44	9'11"	23" / 10 min
10:45	6'0"	2 nd Fill
10:51	8'0"	
10:56	9'2"	14" / 5 min
11:17	8'1"	3 rd Fill
11:22	9'3"	
11:24	9'8"	19" / 7 min
11:27	8'2"	4 th Fill
11:34	9'9"	19" / 7 min
		PERC RATE:
		19" / 7 min
		163" / Hour

COMMENTS:

All WATER LEVEL READINGS FROM TOP OF CASING