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Environmental/Civil Engineering & Hydrogeology

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January 6, 2015

Mr. Christopher J. Bonsignore, P.E.
Division of Environmental Compliance
Connecticut Department of Transportation
P.O. Box 317546
Newington, CT 06131-7546

Attention: Amie Maines

RE: TASK 210 SUBSURFACE SITE INVESTIGATION
RECONSTRUCTION OF METRO-NORTH RAILROAD BRIDGE OVER ATLANTIC AVENUE
STAMFORD, CONNECTICUT
CT DOT ASSIGNMENT # 404-5011; CT DOT PROJECT # 0135-0301
HRP # CTD3035.21 & CTD3035.FW

Dear Mr. Bonsignore:

Attached for your use is the summary report covering the Task 210 (Subsurface Site Investigation) performed by HRP Associates, Inc. (HRP) at the above-referenced site in Stamford, Connecticut.

If you have any questions or need further information, please do not hesitate to contact us at (203) 380-1395.

Sincerely yours,

HRP ASSOCIATES, INC.



Rachel B. Doery
Project Geologist



Walter A. Sepelak
Project Manager



Daniel D. Titus, LEP
Vice President

Attachment

Farmington, CT | Stratford, CT | Denver, CO | New Port Richey, FL | Auburn, MA | Buffalo, NY | Clifton Park, NY | Harrisburg, PA | Greenville, SC | Dallas, TX

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TASK 210:
SUBSURFACE SITE INVESTIGATION

**RECONSTRUCTION OF METRO-NORTH RAILROAD BRIDGE OVER ATLANTIC AVENUE
STAMFORD, CONNECTICUT**

**CT DOT Assignment No. 404-5011
CT DOT Project No. 0135-0301
HRP # CTD3035.21 & CTD3035.FW**



PREPARED FOR:

**State of Connecticut
Department of Transportation
2800 Berlin Turnpike
Newington, Connecticut 06131**

PREPARED BY:

HRP *Associates, Inc.*
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A handwritten signature in black ink, appearing to read "Rachel B. Doery".

Rachel B. Doery
Project Geologist

A handwritten signature in blue ink, appearing to read "Walter A. Sepelak".

Walter A. Sepelak
Project Manager

A handwritten signature in black ink, appearing to read "Daniel D. Titus".

Daniel D. Titus, LEP
Vice President

ISSUED ON: January 6, 2015

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1.0 INTRODUCTION

On behalf of the Connecticut Department of Transportation (CT DOT), HRP Associates, Inc. (HRP) has completed a Task 210 – Subsurface Site Investigation in association with the reconstruction of the Metro-North Railroad Bridge over Atlantic Avenue located in Stamford, Connecticut. The attached Figure 1 depicts the site location topographically.

The purpose of this Task 210 was to verify the presence or absence of contamination in subsurface soils that will be disrupted during the course of construction activities as well as the location and magnitude of any contaminated soil found. The investigation results were used to assess what subsurface media, if any, would require special handling and/or disposal practices.

All field investigation and sampling methods were conducted as specified in the Task 210 Subsurface Site Investigation Work Plan finalized on July 25, 2014.

2.0 SITE DESCRIPTION AND HISTORY

CT DOT is currently planning the reconstruction of the Metro-North Railroad Bridge over Atlantic Avenue in Stamford, Connecticut. The project limits are illustrated on Figures 2A and 2B.

No previous reports were available for review pertaining to the site's environmental history.

3.0 LOCAL ENVIRONMENT AND RECEPTORS

3.1 Geology

Surficial geology of the reconstruction zone and surrounding area is mapped as Till. Till is described as glacially deposited, unsorted, unconsolidated material of all sizes that varies depending on location deposited.

Bedrock geology of the construction zone and surrounding area is mapped as Pumpkin Ground Member of Harrison Gneiss (Ghp). Ghp is identified as grey to spotted, medium to coarse grained, foliated gneiss. Bedrock outcrops are not evident in the general area of proposed construction.

3.2 Hydrogeology

The groundwater classification of the site is "GB". A "GB" groundwater classification is defined as follows:

"Groundwater within a historically highly urbanized area or an area of intense industrial activity and where public water supply service is typically available. Such groundwater may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals or land use impacts."

The surface water classification of the site is "B". Class "B" surface water bodies are described as follows:

"Surface water known or presumed to meet Water Quality Criteria which support designated uses, which may include recreational use; fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation."

4.0 PRELIMINARY ACTIVITIES

4.1 Health and Safety

HRP developed a project-specific health and Safety Plan (HASP) for the Task 210 and included a copy as an attachment to the Work Plan when submitted. The HASP addressed the health and safety practices employed by all HRP staff. Subcontractors were under the direction of CT DOT's contracted geotechnical firm (GeoDesign, Inc.), and engaged in the specified scope of work including hand-clearance of soils, test pit excavation, soil boring/monitoring well installation, and sample collection. HRP was present in a secondary capacity specifically for environmental sample collection.

The HASP was developed in accordance with HRP's Corporate Safety and Health Program as required under OSHA's Hazardous Waste Operations Standard (29 CFR 1910.120) to establish minimum standards for project oversight and environmental sampling activities and to protect the health and safety of HRP personnel for the project. All HRP site personnel received the required level of training and field experience as required under subpart (e) of the Standard, and have received medical examinations in accordance with HRP's medical surveillance program as required under subpart (f) of the Standard. All HRP personnel were required to review and sign the HASP prior to field work commencement.

Additionally, based upon work location within the Metro-North Railroad (MNRR) project limits, all personnel were appropriately trained to work with the associated MNRR flagmen. Traffic control was provided by state/local police (as needed) for soil boring installation in roadway and highway locations.

4.2 Sample Location Marking and Utility Clearance

All of the boring/test pit locations were predetermined by Geodesign, Inc. Utility clearance was handled by GeoDesign, Inc. and their selected drilling contractor, New Hampshire Boring, Inc. dba New England Boring Contractors.

5.0 **SOIL INVESTIGATION METHODS**

5.1 **Field Screening**

Visual Screening

Soil samples collected as part of this investigation were visually inspected for evidence of contamination (i.e., color, odor, etc.). Any staining or unusual odors observed from the samples were recorded in the field notes.

Photo-ionization Detector (PID)

Soil samples were also field-screened for Volatile Organic Compounds (VOCs) using a PID in accordance with HRP Standard Operating Procedures (SOPs). A small portion of each sample was placed into a sealable plastic bag and allowed to equilibrate with the surrounding temperature. The bag's headspace was then screened and the results were recorded.

5.2 **Boring and Test Pit Installation and Sample Collection**

A total of 43 soil samples were collected from nine (9) roadway borings (R-1 to R-9), eighteen (18) retaining wall borings (RW-101-1 to RW-106-3), twelve (12) structure borings (SB-1 to SB-12), one (1) test pit (TP-3), and three (3) utility corridor borings (U-1 to U-3) between June 17, 2014 and October 7, 2014. Grab soil samples were collected from selected locations along the soil column from the surface down to various depths below grade (depending upon anticipated construction limits).

Structural (SB), utility corridor (U), and retaining wall (RW) borings were sampled between 1 and 3 feet below grade (fbg) using a split-spoon sampler. Steel casing and a roller bit were then advanced to the sample depth limit before a new sample interval was collected. The casing was advanced 5 feet if limited sample recovery was achieved from a 2-foot interval. Retaining wall borings were advanced until refusal was met, except for the borings installed on the highway. Structural and utility corridor borings were advanced to a depth of ten feet into bedrock. Roadway (RW) boring samples were collected using hollow-stem auger and split spoon methods. The test pits varied in size and depth were installed using an air knife with a vacuum truck.

Samples were placed in laboratory-provided and preserved glassware, stored on ice in coolers, and submitted under proper chain-of-custody to Phoenix Environmental Laboratory of Manchester, Connecticut (Phoenix), a CT-certified laboratory, for analysis of some/all of the following:

- VOCs via EPA Method 8260;
- Semi-volatile organic compounds (SVOCs) via EPA Method 8270;
- Extractable Total Petroleum Hydrocarbons (ETPH) via CT ETPH Methodology;
- Resource Conservation and Recovery Act (RCRA)-8 metals via mass and synthetic precipitation leaching procedure (SPLP) (methodology varies by metal);

- Poly-chlorinated biphenyls (PCBs) via EPA Method 8082;
- Pesticides via EPA Method 8081A and SPLP; and
- Herbicides via EPA Method 8151A and SPLP.

Sampling equipment was decontaminated between sampling locations in accordance with HRP SOPs. Field sampling protocols were performed in accordance with HRP's SOPs and CT DEEP's Guidance for Collecting & Preserving Soil & Sediment Samples for Laboratory Determination of Volatile Organic Compounds document dated March 1, 2006.

6.0 GROUNDWATER INVESTIGATION METHODS

The proposed plan was to collect a total of four (4) groundwater samples across the project limits. However, overburden groundwater was not encountered in multiple locations, therefore groundwater testing was limited to one (1) sample location (R-3).

Temporary monitoring well construction consisted of a 1-inch diameter 10-foot section of schedule-40 polyvinyl chloride (PVC) slotted screen and solid-walled PVC riser piping extended to a height slightly below existing grade. Groundwater was purged from the well using a peristaltic pump until turbidity was reduced. Following well purging, groundwater sampling commenced.

Samples were placed in laboratory-provided and preserved glassware, stored on ice in coolers, and submitted under proper chain-of-custody to Phoenix Environmental Laboratory of Manchester, Connecticut (Phoenix), a CT-certified laboratory, for analysis of some/all of the following:

- VOCs via EPA Method 8260;
- SVOCs via EPA Method 8270;
- ETPH via CT ETPH Methodology;
- RCRA-8 metals via mass and SPLP methodologies; and
- PCBs via EPA Method 8082.

After groundwater sample collection, the well piping was removed and the borehole was backfilled once geotechnical work on the boring was completed. Sample tubing and well piping was properly disposed after sample collection.

7.0 LABORATORY DATA RESULTS

7.1 Regulatory Criteria

Analytical results for soil obtained during this investigation were compared to the Connecticut Department of Energy and Environmental Protection (CT DEEP) Remediation Standard Regulations (RSRs). The RSRs (Regulations of Connecticut State Agencies, Section 22a-133k-1 to 3 and 22a-113q-1) were developed (adopted January 1996, amended 2013) with the purpose to define minimum remediation performance standards, specific numeric cleanup criteria, and a process for establishing an alternative site-specific numerical standards for certain sites, upon approval by the CT DEEP. The Remediation Standard Regulations apply to any site undergoing voluntary remediation under Public Acts 95-183 or 95-190, a transfer of an “establishment” under Public Act 95-183, or any site as ordered by the CT DEEP Commissioner.

Although the site is not an “establishment” nor is it associated with the CT DEEP Voluntary Remediation program, CT DEEP RSR numeric criteria were used in evaluation of environmental data for comparative purposes in order to determine proper soil management procedures. The applicable RSR standards based on general site location are as follows:

- Residential Direct Exposure Criteria (Res DEC)
- Industrial/Commercial Direct Exposure Criteria (I/C DEC)
- GB Pollutant Mobility Criteria (GB PMC)

7.2 Data Evaluation

7.2.1 **Roadway Boring Soil Sample Analytical Results**

Data from roadway boring soil samples compared to applicable RSR numeric criteria is presented in Table 1A. The following contaminants of concern were identified via lab analysis:

VOCs

VOCs were detected in exceedance of applicable RSR numeric standards in two (2) roadway boring soil samples (R-9 [1-3'] and R-9 [5-7']). Minor concentrations of VOCs were detected below RSR standards in two (2) roadway boring soil samples (R-6 [1-3'] and R-8 [1-3']).

SVOCs

SVOC concentrations were detected in exceedance of applicable RSR numeric standards in two (2) roadway boring soil samples (R-9 [1-3'] and R-9 [5-7']).

ETPH

ETPH concentrations were detected in exceedance of applicable RSR numeric standards in one (1) roadway boring sample (R-8 [1-3']). Additionally, an elevated detection limit below RSR standards was noted in one (1) roadway boring sample (R-6 [1-3']).

RCRA-8 Metals

Minor concentrations of arsenic, barium, total chromium, and lead were detected below applicable RSR numeric standards in all roadway boring soil samples. Leachable arsenic, leachable barium, leachable total chromium, and leachable lead were detected below applicable RSR numeric standards in the roadway boring soil samples.

PCBs

PCB concentrations were not detected in any of the roadway boring soil samples.

Pesticides

Pesticide concentrations were not detected in any of the roadway boring soil samples.

Herbicides

Herbicide concentrations were not detected in any of the roadway boring soil samples.

7.2.2 Retaining Wall Soil Boring Sample Analytical Results

Data from retaining wall boring soil samples compared to applicable RSR numeric criteria is presented in Table 1B. The following contaminants of concern were identified via lab analysis:

VOCs

VOCs were detected in minor concentrations below RSR numeric standards in the two (2) retaining wall boring soil samples (RW-102-5 [5-7'] and RW-102-6 [1-3']).

SVOCs

SVOC concentrations were detected in exceedance of applicable RSR numeric standards in one (1) retaining wall boring soil sample (RW-105-2 [1-3']), and below RSR numeric standards in ten (10) retaining wall boring soil samples (RW-102-2 [7-9'], RW-102-5 [2-4'], RW-102-5 [5-7'], RW-103-2 [1-3'], RW-103-2 [5-9'], RW-105-1 [1-3'], RW-106-1 [1.5-3'], RW-106-2 [1-3'], RW-106-2 [4-6'], and RW-106-3 [2-4']).

ETPH

ETPH concentrations were detected in exceedance of applicable RSR numeric standards in two (2) retaining wall boring soil samples (RW-102-5 [2-4'] and RW-102-7 [2-3']) and below applicable RSR numeric standards in six (6) retaining wall boring soil samples (RW-101-1 [1-3'], RW-101-1 [5-7'], RW-102-4 [1-3'], RW-105-1 [1-3'], RW-105-2 [1-3'], and RW-106-2 [1-3']). Additionally, an elevated detection limit below RSR standards was noted in six (1) retaining wall boring samples (RW-102-2 [1-3'], RW-102-3 [1-3'], RW-102-6 [1-3'], RW-102-7 [5-7'], RW-104-1 [1-3'], and RW-104-2 [1-3']).

RCRA-8 Metals

Minor concentrations of arsenic, barium, cadmium, total chromium, lead, and mercury were detected below applicable RSR numeric standards in all retaining wall borings soil samples. Leachable arsenic, leachable barium, leachable total chromium, leachable lead, and leachable mercury were detected below applicable RSR numeric standards in retaining wall boring soil samples.

PCBs

PCB concentrations were not detected in any of the retaining wall boring soil samples.

Pesticides

Pesticide concentrations were detected in above applicable RSR numeric standards in one (1) retaining wall boring soil sample (RW-102-5 [2-4']).

Herbicides

Herbicide concentrations were not detected in any of the retaining wall boring soil samples.

7.2.3 Structure Boring Soil Sample Analytical Results

Data from structure boring soil samples compared to applicable RSR numeric criteria is presented in Table 1C. Note that samples SB-2 (1-3') and SB-2 (5-7') were incorrectly identified as TP-2 on the laboratory chain of custody. The following contaminants of concern were identified via lab analysis:

VOCs

Naphthalene was detected in minor concentrations below RSR numeric standards in one (1) structure boring soil sample (SB-2 [5-7']). No other VOCs were reported above laboratory detection limits in any of the structure boring soil samples.

SVOCs

SVOC concentrations were detected in exceedance of applicable RSR numeric standards in eight (8) structure boring soil samples (SB-2 [5-7'], SB-3 [1-3'], SB-4 [1-3'], SB-7 [1-3'], SB-7 [5-7'], SB-8 [1-3'], SB-9 [1-3'], and SB-10 [0.5-2.5']). SVOC concentrations were detected below applicable RSR numeric standards four (4) structure boring soil samples (SB-1 [1-3'], SB-2 [5-7'], SB-5 [1-3'], and SB-12 [1-3']).

ETPH

ETPH concentrations were detected in exceedance of applicable RSR numeric standards in two (2) structure boring soil samples (SB-2 [5-7'], SB-8 [1-3']) and concentrations were detected below applicable RSR numeric standards in five (5) structure boring soil samples (SB-1 [1-3'], SB-3 [1-3'],

SB-4 [1-3'], SB-9 [1-3'], and SB-10 [0.5-2.5']). Additionally, an elevated detection limit below RSR standards was noted in one (1) structure boring soil sample (SB-2 [1-3']).

RCRA-8 Metals

Arsenic was detected in exceedance of applicable RSR numeric standards in two (2) structure boring soil samples (SB-4 [1-3'] and SB-8 [1-3']). Lead was detected in exceedance of applicable RSR numeric standards in one (1) structure boring soil sample (SB-8 [1-3']). Minor concentrations of arsenic, barium, total chromium, lead, and mercury were detected below applicable RSR numeric standards in all structure borings. Leachable lead was detected above applicable RSR numeric standards in one (1) soil sample (SB-8 [1-3']).

PCBs

PCB concentrations were detected in exceedance of applicable RSR numeric standards in three (3) structure boring soil samples (SB-8 [1-3'], SB-10 [0.5-2.5'], and SB-12 [1-3']). PCB concentrations were detected below applicable RSR numeric standards in one (1) structure boring soil sample (SB-4 [1-3']).

Pesticides

Dieldrin was detected above applicable RSR numeric standards in one (1) structure boring soil sample SB-8 (1-3'). Gamma-BHC (Lindane) was detected below applicable RSR numeric standards in structure boring soil sample SB-2 (1-3').

Herbicides

Herbicide concentrations were not detected in any of the structure boring soil samples.

7.2.4 Test Pit Soil Sample Analytical Results

Data from test pit samples compared to applicable RSR numeric criteria is presented in Table 1D. The following contaminants of concern were identified via lab analysis:

VOCs

VOCs were not reported above laboratory detection limits in the test pit soil sample.

SVOCs

SVOC concentrations were not reported above laboratory detection limits in the test pit soil sample.

ETPH

ETPH was detected in exceedance of applicable RSR numeric standards one (1) test pit soil sample (TP-2 [5-7']).

RCRA-8 Metals

Minor concentrations of arsenic, barium, total chromium, and lead were detected below applicable RSR numeric standards in test pit soil sample TP-3 (1-2.5'). Leachable barium was also detected below applicable RSR numeric standards in test pit soil sample TP-3 (1-2.5').

PCBs

PCBs were not reported above laboratory detection limits in the test pit soil sample.

Pesticides

Pesticides were not reported above laboratory detection limits in the test pit soil sample.

Herbicides

Herbicides were not reported above laboratory detection limits in the test pit soil sample.

7.2.5 Utility Corridor Soil Boring Sample Analytical Results

Data from utility corridor samples compared to applicable RSR numeric criteria is presented in Table 1D. The following contaminants of concern were identified via lab analysis:

VOCs

Select VOCs was detected in minor concentrations below RSR standards in one (1) utility corridor soil sample (U-1 [1-3']). No other VOCs were reported above laboratory detection limits.

SVOCs

SVOC concentrations were detected in exceedance of applicable RSR numeric standards one (1) utility corridor soil sample (U-2 [1-3']). SVOC concentrations below applicable RSR numeric standards were detected two (2) soil samples (U-2 [6-10'] and U-3 [5-7']).

ETPH

ETPH concentrations were detected in exceedance of applicable RSR numeric standards one (1) utility corridor soil sample (U-2 [1-3']).

RCRA-8 Metals

Lead was detected in exceedance of applicable RSR numeric standards one (1) utility corridor soil sample (U-3 [5-7']). Minor concentrations of arsenic, barium, total chromium, and lead were detected below applicable RSR numeric standards in from all five (5) utility corridor soil samples. Leachable barium was detected below applicable RSR numeric standards in two (2) utility corridor soil samples (U-2 [1-3'] and U-2 [6-10']). Leachable

lead was detected below applicable RSR numeric standards in one (1) utility corridor soil sample (U-2 [1-3']).

PCBs

PCB concentrations were detected in exceedance of applicable RSR numeric standards one (1) utility corridor soil sample (U-2 [1-3']).

Pesticides

Pesticide concentrations were not detected in any of the utility corridor soil samples.

Herbicides

Herbicide concentrations were not detected in any of the utility corridor soil samples.

7.2.6 Groundwater Sample Analytical Results

Data from groundwater samples compared to applicable RSR numeric criteria is presented in Table 2. The following contaminants of concern were identified via lab analysis:

VOCs

Tetrachloroethylene was detected in exceedance of applicable RSR numeric standards in groundwater sample R-3-GW. No other VOCs were reported above laboratory detection limits.

SVOCs

Bis(2-ethylhexyl)phthalate was detected in exceedance of applicable RSR numeric standards in groundwater sample R-3-GW. No other SVOCs were detected above laboratory reporting limits.

ETPH

ETPH was not detected in groundwater sample R-3-GW.

RCRA-8 Metals

Minor concentrations of barium, total chromium, lead, and selenium were detected below applicable RSR numeric standards in the groundwater sample (R-3-GW).

PCBs

PCBs were not detected in groundwater sample R-3-GW.

Pesticides

Pesticides were not detected in groundwater sample R-3-GW.

Herbicides

Herbicides were not detected in groundwater sample R-3-GW.

Laboratory analytical reports are provided in Appendix A.

7.2.7 Quality Assurance/Quality Control (QA/QC)

Quality assurance and quality control (QA/QC) samples were collected during sampling activities to assess the effectiveness of practiced decontamination procedures. Two (2) equipment blank samples (EB061914 and EB072914) were used for QA/QC purposes to ensure decontamination effectiveness, glassware quality, de-ionized water quality, and laboratory sample handling/analytical procedures. The equipment blanks were analyzed for the same parameters as the submitted soil samples.

All samples collected in the field were handled in a manner that preserved the integrity of their chemistry and placed in an ice-filled cooler immediately following collection until delivery to the laboratory. Chain-of-Custody (COC) forms were completed and accompanied the sample group as a legal record of possession. HRP requested all analyses to be performed under the Connecticut Reasonable Confidence Protocols (RCP). The RCP are established protocols that analytical laboratories must follow to assure acceptable data quality.

QA/QC Results

Trace levels of barium were detected in both equipment blanks while no other metals or other compounds were detected above laboratory reporting limits. The barium detections are not considered to be an issue given the reported concentration levels in the blanks and the lack of barium concentration issues in soil sample results.

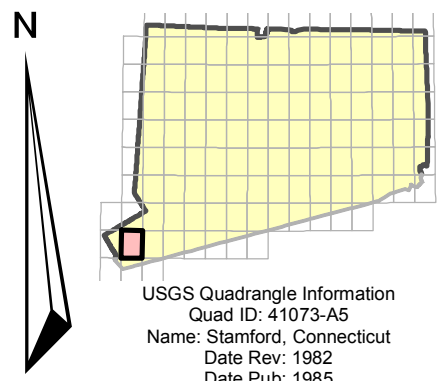
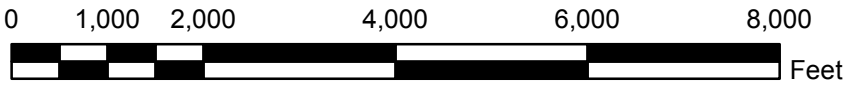
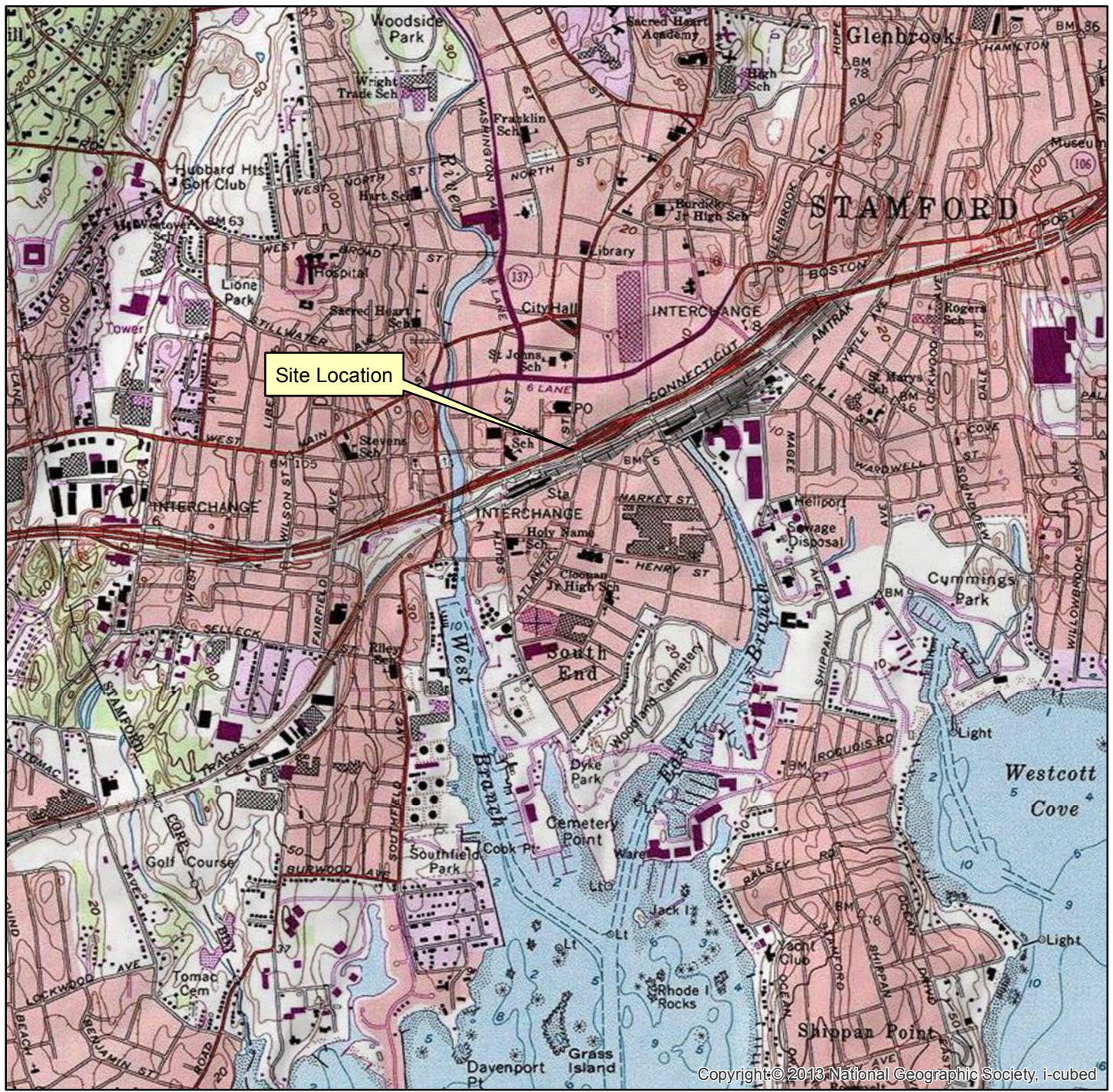
HRP reviewed the data results and QA/QC documentation including the lab report case narratives. HRP did not note any issues or discrepancies and determined that the data results are suitable for their intended purpose. According to the *Laboratory Analysis QA/QC Certification Form*, Question #1 (For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed?) was answered "Yes" on all of the reports. The affirmative responses indicate that the laboratory's QA Director certifies the reports' conformance with RCP requirements.

8.0 CONCLUSIONS

HRP completed a Task 210 (Subsurface Site Investigation) on behalf of the CT DOT in association with DOT Project No. 404-5011, reconstruction of Metro-North Railroad Bridge over Atlantic Avenue located in Stamford, Connecticut. The investigation focused on soils within the project in the planned construction limits including, roadway borings, retaining wall borings, structure borings, test pits, and utility corridor borings. Based on the data presented in this report, HRP has made the following conclusions:

- Seventeen (17) of the 43 collected samples contained concentrations of VOCs, SVOCs, ETPH, RCRA-8 metals, and/or PCBs in exceedance of applicable RSR numeric standards. Several additional soil samples contained concentrations of one or more of the analyzed parameters below the applicable RSR numeric standards.
- A few sample locations contained RCRA-8 metal detections that exceed RSR criteria and should be addressed accordingly. However, the majority of low-level RCRA-8 metal detections appear to be comparable to general background conditions.
- The solitary groundwater sample collected during the investigation contained concentrations of VOCs and SVOCs exceeding the applicable RSR numeric standards. Given that groundwater sampling was limited due to lack of overburden water and/or slow recharge, all groundwater encountered within the project limits should be considered impacted and handled accordingly.
- Project areas with RSR exceedances should be considered Areas of Environmental Concern (AOECs). Excavated materials from these locations should be considered "Controlled Material" and would require proper handling during disruption activities. The excavated soil should be transported to an approved disposal facility once the disposal application and profiling process has been completed.
- Project areas with concentrations of pollutants below RSR criteria, but greater than background conditions, should be considered Low-Level Areas of Environmental AOEC (LLAOECs). Excavated materials from these locations should be considered "Controlled Material" if not able to be reused within the project limits.

FIGURES

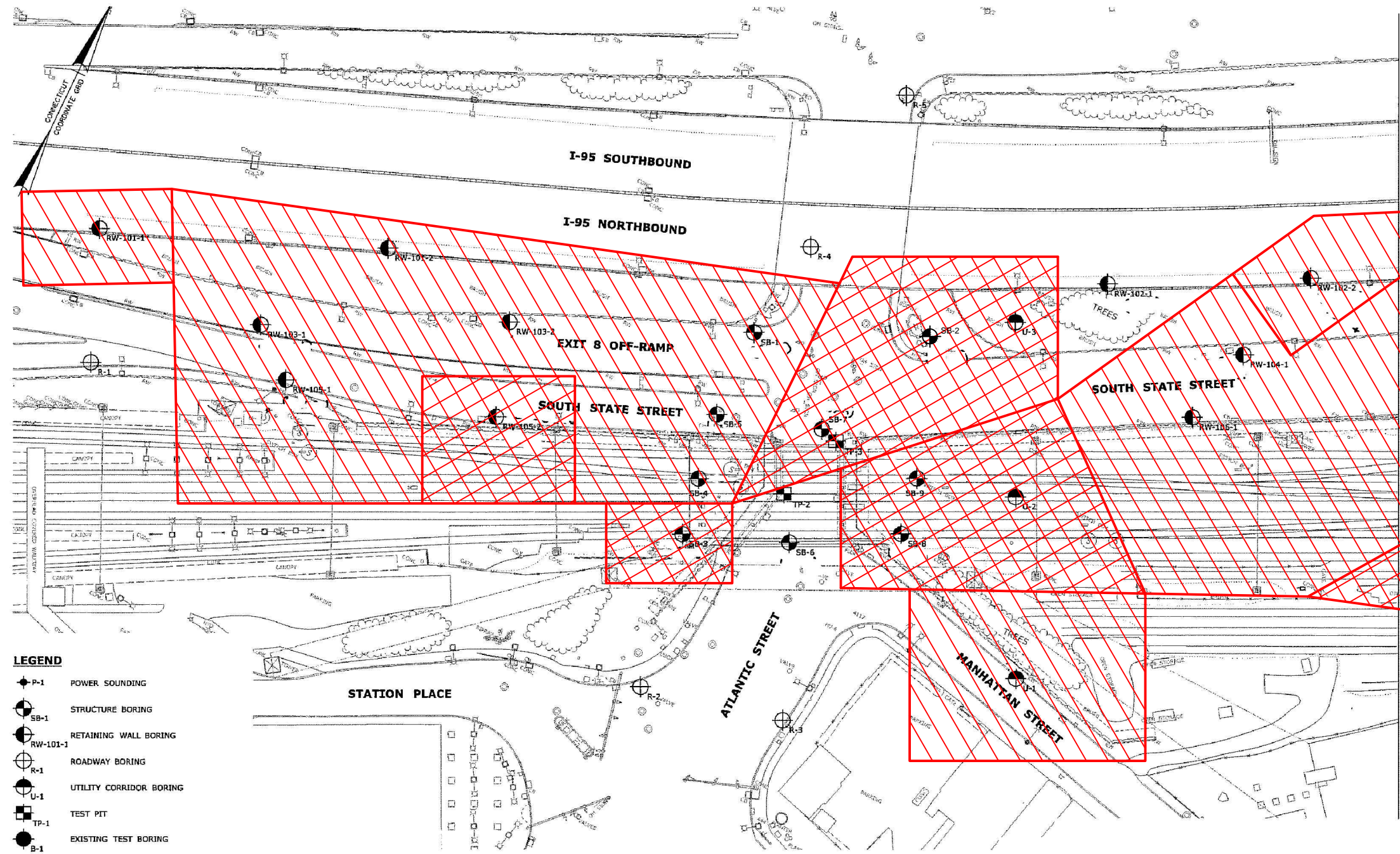


USGS Quadrangle Information
 Quad ID: 41073-A5
 Name: Stamford, Connecticut
 Date Rev: 1982
 Date Pub: 1985

Figure 1
Site Location
Metro North Railroad
Bridge over Atlantic Street
Stamford, Connecticut
HRP# CTD3035.21
Scale 1" = 2,000'

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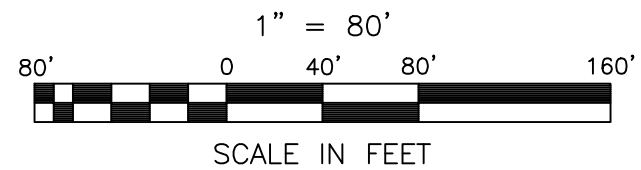
DRAWING NAME: V:\Data\C\CONND - CONNECTICUT DEPARTMENT OF TRANSPORTATION\Stamford - Stamford\MNRR BRIDGE OVER ATLANTIC STREET\CTD303521\CAD\20150105\Figure 2A-B - Site Plan with Boring Locations.dwg
 LAYOUT: Figure 2A PLOT DATE: Jan 05, 2015 - 2:22pm OPERATOR: DML



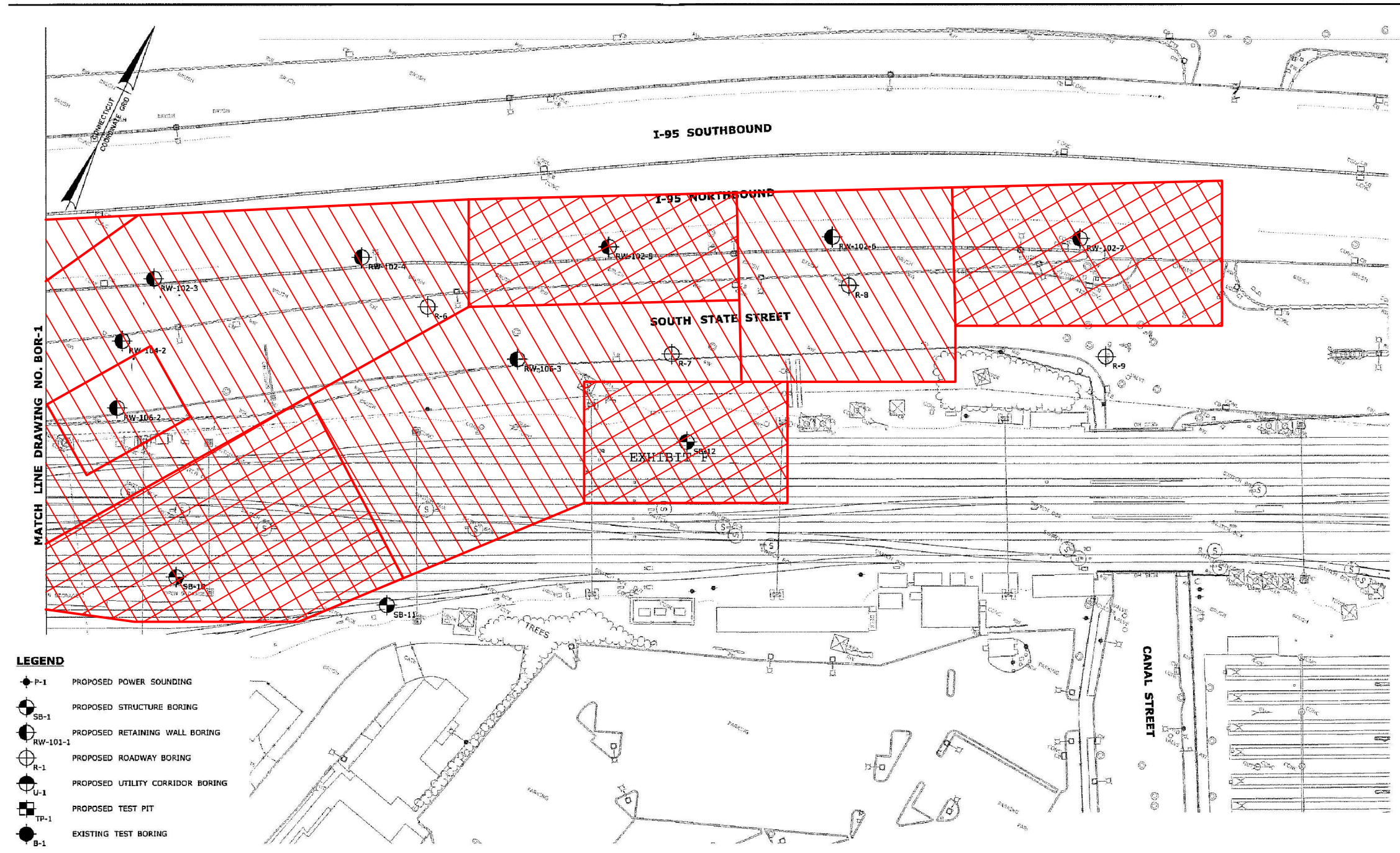
- LEGEND**
- ◆ P-1 POWER SOUNDING
 - SB-1 STRUCTURE BORING
 - RW-101-1 RETAINING WALL BORING
 - ⊕ R-1 ROADWAY BORING
 - ⊕ U-1 UTILITY CORRIDOR BORING
 - TP-1 TEST PIT
 - B-1 EXISTING TEST BORING

- CONTROLLED MATERIAL (AOEC)
- CONTROLLED MATERIAL (LLAOEC)

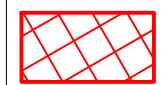

MAP REFERENCE:
 PLAN ENTITLED "PROPOSED EXPLORATION LOCATION PLAN, RECONSTRUCTION OF THE METRO-NORTH RAILROAD BRIDGE OVER ATLANTIC STREET, STAMFORD, CONNECTICUT"
 PREPARED BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION



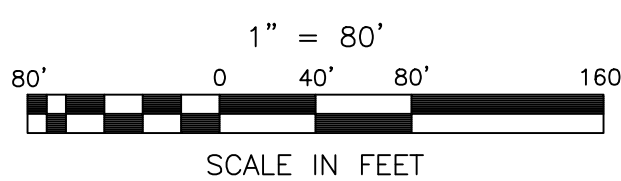
SITE PLAN WITH BORING LOCATIONS	1" = 80' SCALE: 01/02/2015 ISSUE DATE: CTD3035.21 PROJECT NUMBER:
METRO NORTH RAILROAD BRIDGE OVER ATLANTIC STREET STAMFORD, CONNECTICUT	
<p>HRP Associates, Inc. Environmental/Civil Engineering & Hydrogeology Creating the Right Solutions Together Offices in CT, SC, NY, FL, MA, TX and PA 197 Scott Swamp Road Farmington, Connecticut 06032 Ph: (860)674-9570 Fax: (860)674-9624 www.hrpassociates.com</p>	
FIGURE NO. 2A	



- LEGEND**
- P-1 PROPOSED POWER SOUNDING
 - SB-1 PROPOSED STRUCTURE BORING
 - RW-101-1 PROPOSED RETAINING WALL BORING
 - R-1 PROPOSED ROADWAY BORING
 - U-1 PROPOSED UTILITY CORRIDOR BORING
 - TP-1 PROPOSED TEST PIT
 - B-1 EXISTING TEST BORING

 CONTROLLED MATERIAL (AOEC)
 CONTROLLED MATERIAL (LLAOEC)

MAP REFERENCE:
 PLAN ENTITLED "PROPOSED EXPLORATION LOCATION PLAN, RECONSTRUCTION OF THE METRO-NORTH RAILROAD BRIDGE OVER ATLANTIC STREET, STAMFORD, CONNECTICUT"
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<p>SITE PLAN WITH BORING LOCATIONS</p>	<p>1" = 80' SCALE:</p> <p>01/02/2015 ISSUE DATE:</p> <p>CTD3035.21 PROJECT NUMBER:</p>
<p>METRO NORTH RAILROAD BRIDGE OVER ATLANTIC STREET STAMFORD, CONNECTICUT</p>	
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<p>FIGURE NO. 2B</p>	

TABLES

TABLE 1A
Soil Sample Analytical Results (Roadway Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.: GBG64924			GBG64924	GBG64924	GBG64924	GBG64924	GBG71240	GBG71240	GBG98032	GBG63064	GBG63064	GBG66665	GBG66665	GBG63064	GBG63064	GBG71240	GBG71240			
Lab Sample No.: BG64928SITE			BG64928SITE	BG64929SITE	BG64926SITE	BG64925SITE	BG71243SITE	BG71244SITE	BG98034SITE	BG63069SITE	BG63070SITE	BG66668SITE	BG66669SITE	BG63071SITE	BG63072SITE	BG71241SITE	BG71242SITE			
Sample ID: R-1			R-1	R-2	R-3	R-4	R-4	R-5	R-6	R-6	R-7	R-7	R-8	R-8	R-9	R-9				
Sample Depth (ft.): (1-3)			(6-8)	(1-3)	(1-3)	(1.5-3)	(5-7)	(1-3)	(1-3)	(5-7)	(1-3)	(7-9)	(1-3)	(9-11)	(1-3)	(5-7)				
Date Collected: 6/24/2014			6/24/2014	6/23/2014	6/23/2014	7/7/2014	7/7/2014	8/19/2014	6/17/2014	6/17/2014	6/27/2014	6/27/2014	6/17/2014	6/17/2014	7/7/2014	7/7/2014				
SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC																
Arsenic	7440-38-2	mg/kg	10	10	1.6	2.7	1.2	2.6	2.3	2.5	0.9	1.9	3.1	1.7	1.9	1.8	2.4	1.1		
Barium	7440-39-3	mg/kg	4,700	140,000	92.2	82.8	82.5	75.1	108	586	76.0	118	68.3	114	237	78.3	42.2	76.2	33.8	
Cadmium	7440-43-9	mg/kg	34	1,000	<0.38	<0.33	<0.36	<0.33	<0.35	<0.36	<0.36	<0.36	<0.36	<0.40	<0.35	<0.34	<0.36	<0.34	<0.35	
Chromium, Total	7440-47-3	mg/kg	100	100	31.9	33.4	17.3	34.0	25.6	45.4	13.4	32.1	21.3	28.4	18.5	22.0	13.2	89.8	14.7	
Lead	7439-92-1	mg/kg	400	1,000	23.3	9.07	18.2	5.14	19.8	6.23	14.3	37.9	7.03	25.4	4.88	7.40	3.15	103	20.9	
Mercury	7439-97-6	mg/kg	20	610	<0.09	<0.08	<0.06	<0.06	<0.07	<0.07	<0.06	<0.08	<0.08	0.34	0.36	<0.07	<0.08	1.01	<0.08	
Selenium	7782-49-2	mg/kg	340	10,000	<1.5	<1.3	<1.4	<1.3	<1.4	<1.4	<1.5	<1.5	<1.6	<1.4	<1.3	<1.4	<1.4	<1.4	<1.7	
Silver	7440-22-4	mg/kg	340	10,000	<0.38	<0.33	<0.36	<0.33	<0.35	<0.36	<0.36	<0.36	<0.40	<0.35	<0.34	<0.36	<0.34	<0.35	<0.42	
SOIL-Metals-SPLP				2008 - 2013 CT DEEP RSR - GB PMC																
Arsenic	7440-38-2	mg/l		0.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.006	0.008	0.005	
Barium	7440-39-3	mg/l		10.0	0.033	<0.010	0.027	0.080	<0.010	<0.010	0.034	<0.010	0.027	<0.010	0.019	0.021	0.070	0.014	<0.010	
Cadmium	7440-43-9	mg/l		0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Chromium, Total	7440-47-3	mg/l		0.5	<0.010	<0.010	<0.010	0.022	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Lead	7439-92-1	mg/l		0.15	0.012	<0.010	0.013	0.013	<0.010	<0.010	0.028	<0.010	<0.010	<0.010	<0.010	<0.010	0.015	0.031	<0.010	
Mercury	7439-97-6	mg/l		0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Selenium	7782-49-2	mg/l		0.5	<0.020	<0.020	<0.020	0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Silver	7440-22-4	mg/l		0.36	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC															
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	<370	<340	<360	<340	<700	<700	<350	<1800	<370	<350	<360	<3700	<360	<720	<860
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<1100	<1000	<1000	<990	<2000	<2000	<1000	<5300	<1100	<1000	<1000	<11000	<1000	<2100	<2500
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<1100	<1000	<1000	<990	<2000	<2000	<1000	<5300	<1100	<1000	<1000	<11000	<1000	<2100	<2500
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	1200
Benzidine	92-87-5	µg/kg	200	200	1,000	<450	<410	<430	<410	<840	<840	<420	<2200	<450	<420	<430	<4500	<430	<870	<1000
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	<260	<240	<250	<240	<490	<490	<250	<1000	<260	<240	<250	<1000	<250	3300	6100
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	<260	<240	<250	<240	<490	<490	<250	<1000	<260	<240	<250	<1000	<250	5200	4000
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	<260	<240	<250	<240	<490	<490	<250	<1000	<260	<240	<250	<1000	<250	6800	5500
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	2100	880
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	<260	<240	<250	<240	<490	<490	<250	<1000	<260	<240	<250	<1000	<250	1800	2100
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<370	<340	<360	<340	<700	<700	<350	<1800	<370	<350	<360	<3700	<360	<720	<860
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<260	<240	<250	<240	<490	<490	<250	<1000	<260	<240	<250	<1000	<250	<510	<600
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<560	<520	<540	<510	<1100	<1000	<530	<2700	<560	<520	<540	<5600	<530	<1100	<1300
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	3300	4900
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	2600	7800
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	<600
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<260	<240	<250	<240	<490	<490	<250	<1300	<260	<240	<250	<2600	<250	<510	

TABLE 1A
Soil Sample Analytical Results (Roadway Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG64924	GBG64924	GBG64924	GBG64924	GBG71240	GBG71240	GBG98032	GBG63064	GBG63064	GBG66665	GBG66665	GBG63064	GBG63064	GBG71240	GBG71240
Lab Sample No.:			BG64928SITE	BG64929SITE	BG64926SITE	BG64925SITE	BG71243SITE	BG71244SITE	BG98034SITE	BG63069SITE	BG63070SITE	BG66668SITE	BG66669SITE	BG63071SITE	BG63072SITE	BG71241SITE	BG71242SITE
Sample ID:			R-1	R-1	R-2	R-3	R-4	R-4	R-5	R-6	R-6	R-7	R-7	R-8	R-8	R-9	R-9
Sample Depth (ft.):			(1-3)	(6-8)	(1-3)	(1-3)	(1.5-3)	(5-7)	(1-3)	(1-3)	(5-7)	(1-3)	(7-9)	(1-3)	(9-11)	(1-3)	(5-7)
Date Collected:			6/24/2014	6/24/2014	6/23/2014	6/23/2014	7/7/2014	7/7/2014	8/19/2014	6/17/2014	6/17/2014	6/27/2014	6/27/2014	6/17/2014	6/17/2014	7/7/2014	7/7/2014
m/p-Xylenes	179601-23-1	µg/kg															
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000												
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000												
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000												
Xylene-Total		µg/kg	500,000	1,000,000	19,500												
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10												
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10												
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10												
Aldrin	309-00-2	µg/kg	20	340	6												
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66												
Dieldrin	60-57-1	µg/kg	38	360	7												
Endrin	72-20-8	µg/kg	20,000	610,000	70												
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70												
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70												
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40												
Heptachlor	76-44-8	µg/kg	140	1,300	13												
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20												
Toxaphene	8001-35-2	µg/kg	560	5,200	600												
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC												
4,4'-DDD	72-54-8	µg/l			1.5												
4,4'-DDE	72-55-9	µg/l			1												
4,4'-DDT	50-29-3	µg/l			1												
Aldrin	309-00-2	µg/l			0.3												
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3												
Dieldrin	60-57-1	µg/l			0.02												
Endrin	72-20-8	µg/l			20												
Endrin Aldehyde	7421-93-4	µg/l			21												
Endrin ketone	53494-70-5	µg/l			21												
gamma-BHC (Lindane)	58-89-9	µg/l			2												
Heptachlor	76-44-8	µg/l			4												
Heptachlor Epoxide	1024-57-3	µg/l			2												
Toxaphene	8001-35-2	µg/l			30												
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
SOIL-Herb-8151A-SPLP																	
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500												
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
PCB-1016	12674-11-2	µg/kg															
PCB-1221	11104-28-2	µg/kg															
PCB-1232	11141-16-5	µg/kg															
PCB-1242	53469-21-9	µg/kg															
PCB-1248	12672-29-6	µg/kg															
PCB-1254	11097-69-1	µg/kg															
PCB-1260	11096-82-5	µg/kg															
PCB-1262	37324-23-5	µg/kg															
PCB-1268	11100-14-4	µg/kg															
PCBs-Total		µg/kg	1,000	10,000													
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
solids (percent)	solids	%															

Legend
1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
 () Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis
 GWPC = Groundwater Protection Criteria
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria
 SPLP = Synthetic Precipitation Leaching Procedure
 Res DEC = Residential Direct Exposure Criteria
 ETPH = Extractable Total Petroleum Hydrocarbons
 RSR = Remediation Standard Regulations
 PCBs = Polychlorinated Biphenyls
 mg/l = milligrams per liter
 µg/l = micrograms per liter
 mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram
 I/C DEC = Industrial/Commercial Direct Exposure Criteria
 CT DEEP = Connecticut Department of Energy and Environmental Protection
 For Total Chromium, the DEC for Hexavalent Chromium was applied.
 (ft.) = feet

TABLE 1B
Soil Sample Analytical Results (Retaining Wall Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG71240	GBG71240	GBG73923	GBG76038	GBG76038	GBG76038	GBG76038	GBG76038	GBG76038	GBG77525	GBG77525	GBG80314	GBG80314	GBG80314	
Lab Sample No.:			BG71245SITE	BG71246SITE	BG73924SITE	BG76039SITE	BG76040SITE	BG76041SITE	BG76042SITE	BG76043SITE	BG76043SITE	BG77526SITE	BG77527SITE	BG80317SITE	BG80315SITE	BG80316SITE	
Sample ID:			RW-101-1	RW-101-1	RW-101-2	RW-102-1	RW-102-2	RW-102-2	RW-102-3	RW102-3	RW-102-4	RW-102-4	RW-102-4	RW-102-4	RW-102-5	RW-102-5	
Sample Depth (ft.):			(1-3)	(5-7)	(1-3)	(1-3)	(1-3)	(7-9)	(1-3)	(7-11)	(1-3)	(5-9)	(13-15)	(2-4)	(5-7)		
Date Collected:			7/8/2014	7/8/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/16/2014	7/16/2014	7/16/2014	7/21/2014	7/21/2014	7/21/2014	
SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC													
Arsenic	7440-38-2	mg/kg	10	10	1.5	2.2	1.7	1.5	1.9	1.2	2.9	1.4	3.9	1.2	1.4	1.3	<0.7
Barium	7440-39-3	mg/kg	4,700	140,000	51.7	56.0	100	151	50.3	73.1	57.3	109	44.2	121	333	80.4	73.4
Cadmium	7440-43-9	mg/kg	34	1,000	<0.31	0.43	<0.35	<0.39	<0.32	<0.35	<0.33	<0.37	<0.38	<0.36	<0.37	<0.37	<0.37
Chromium, Total	7440-47-3	mg/kg	100	100	18.2	26.1	34.2	30.3	20.8	20.3	14.5	19.7	20.5	22.2	57.2	22.6	12.0
Lead	7439-92-1	mg/kg	400	1,000	17.7	28.8	5.66	4.15	7.31	3.60	5.44	4.38	7.09	6.14	7.06	27.4	6.16
Mercury	7439-97-6	mg/kg	20	610	<0.06	<0.06	<0.07	<0.07	<0.07	<0.08	<0.07	<0.09	<0.08	<0.07	<0.08	<0.06	<0.08
Selenium	7782-49-2	mg/kg	340	10,000	<1.2	<1.3	<1.4	<1.6	<1.3	<1.4	<1.3	<1.5	<1.5	<1.4	<1.5	<1.5	<1.5
Silver	7440-22-4	mg/kg	340	10,000	<0.31	<0.32	<0.35	<0.39	<0.32	<0.35	<0.33	<0.37	<0.38	<0.36	<0.37	<0.37	<0.37
SOIL-Metals-SPLP				2008 - 2013 CT DEEP RSR - GB PMC													
Arsenic	7440-38-2	mg/l		0.5	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	<0.004	<0.004	<0.004	<0.004
Barium	7440-39-3	mg/l		10.0	<0.010	0.038	0.020	0.023	0.030	0.058	0.019	0.035	0.037	0.052	0.094	0.017	0.097
Cadmium	7440-43-9	mg/l		0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Total	7440-47-3	mg/l		0.5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.013
Lead	7439-92-1	mg/l		0.15	<0.010	0.054	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury	7439-97-6	mg/l		0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Selenium	7782-49-2	mg/l		0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Silver	7440-22-4	mg/l		0.36	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<480	<240	<250	<260	<250	<270	<250	<260	<480	<270	<490	<260
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	<680	<350	<350	<370	<350	<390	<360	<370	<680	<360	<380	<370
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<2000	<1000	<1000	<1100	<1000	<1100	<1000	<1100	<2000	<1100	<1100	<2000
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<2000	<1000	<1000	<1100	<1000	<1100	<1000	<1100	<2000	<1100	<1100	<2000
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Benzidine	92-87-5	µg/kg	200	200	1,000	<820	<420	<420	<450	<420	<460	<430	<440	<820	<440	<460	<450
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<680	<350	<350	<370	<350	<390	<360	<370	<680	<360	<380	<370
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<1000	<520	<530	<560	<530	<580	<540	<550	<1000	<550	<570	<560
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000	<680	<350	<350	<370	<350	<390	<360	<370	<680	<360	<380	<370
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200	<480	<240	<250	<260	<250	<270	<250	<260	<480	<250	<270	<260
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000	<680	<350	<350	<370	<350							

TABLE 1B
Soil Sample Analytical Results (Retaining Wall Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG71240	GBG71240	GBG73923	GBG76038	GBG76038	GBG76038	GBG76038	GBG76038	GBG76038	GBG76038	GBG77525	GBG77525	GBG80314	GBG80314	GBG80314
Lab Sample No.:			BG71245SITE	BG71246SITE	BG73924SITE	BG76039SITE	BG76040SITE	BG76041SITE	BG76042SITE	BG76043SITE	BG76044SITE	BG76045SITE	BG77526SITE	BG77527SITE	BG80317SITE	BG80318SITE	BG80319SITE
Sample ID:			RW-101-1	RW-101-1	RW-101-2	RW-102-1	RW-102-2	RW-102-2	RW-102-3	RW-102-3	RW-102-3	RW-102-3	RW-102-4	RW-102-4	RW-102-4	RW-102-5	RW-102-5
Sample Depth (ft.):			(1-3)	(5-7)	(1-3)	(1-3)	(1-3)	(7-9)	(1-3)	(7-11)	(1-3)	(5-9)	(13-15)	(2-4)	(5-7)		
Date Collected:			7/8/2014	7/8/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/16/2014	7/16/2014	7/16/2014	7/21/2014	7/21/2014	7/21/2014
m/p-Xylenes	179601-23-1	µg/kg															
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000	<8.3	<5.6	<7.0	<5.1	<3.7	<4.5	<6.2	<4.0	<3.9	<5.8	<5.8	<4.8
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<8.3	<5.6	<7.0	<5.1	<3.7	<4.5	<6.2	<4.0	<3.9	<5.8	<5.8	<4.8
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000	<8.3	<5.6	<7.0	<5.1	<3.7	<4.5	<6.2	<4.0	<3.9	<5.8	<5.8	<4.8
Xylene-Total		µg/kg	500,000	1,000,000	19,500	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	7.2
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	<6.6
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	<6.6
Aldrin	309-00-2	µg/kg	20	340	6	<1.0	NA	<1.0	<1.1	<1.0	NA	<1.1	NA	<1.0	NA	NA	<1.0
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66	<10	NA	<10	<11	<10	NA	<11	NA	<10	NA	NA	<10
Dieldrin	60-57-1	µg/kg	38	360	7	<1.0	NA	<1.0	<1.1	<1.0	NA	<1.1	NA	<1.0	NA	NA	<1.2
Endrin	72-20-8	µg/kg	20,000	610,000	70	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	<6.6
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	<6.6
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70	<6.7	NA	<6.7	<7.2	<6.7	NA	<6.8	NA	<6.6	NA	NA	<6.6
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40	<1.0	NA	<1.0	<1.1	<1.0	NA	<1.1	NA	<1.0	NA	NA	<1.0
Heptachlor	76-44-8	µg/kg	140	1,300	13	<2.1	NA	<2.1	<2.2	<2.1	NA	<2.1	NA	<2.0	NA	NA	<2.1
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20	<3.3	NA	<3.4	<3.6	<3.4	NA	<3.4	NA	<3.3	NA	NA	<3.3
Toxaphene	8001-35-2	µg/kg	560	5,200	600	<170	NA	<180	<190	<170	NA	<180	NA	<170	NA	NA	<170
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC												
4,4'-DDD	72-54-8	µg/l			1.5	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
4,4'-DDE	72-55-9	µg/l			1	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
4,4'-DDT	50-29-3	µg/l			1	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
Aldrin	309-00-2	µg/l			0.3	<0.003	NA	<0.003	<0.003	<0.003	NA	<0.003	NA	<0.003	NA	NA	<0.003
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3	<0.3	NA	<0.3	<0.3	<0.3	NA	<0.3	NA	<0.3	NA	NA	<0.3
Dieldrin	60-57-1	µg/l			0.02	<0.002	NA	<0.002	<0.002	<0.002	NA	<0.002	NA	<0.002	NA	NA	<0.002
Endrin	72-20-8	µg/l			20	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
Endrin Aldehyde	7421-93-4	µg/l			21	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
Endrin ketone	53494-70-5	µg/l			21	<0.1	NA	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA	<0.1
gamma-BHC (Lindane)	58-89-9	µg/l			2	<0.05	NA	<0.05	<0.05	<0.05	NA	<0.05	NA	<0.05	NA	NA	<0.05
Heptachlor	76-44-8	µg/l			4	<0.05	NA	<0.05	<0.05	<0.05	NA	<0.05	NA	<0.05	NA	NA	<0.05
Heptachlor Epoxide	1024-57-3	µg/l			2	<0.05	NA	<0.05	<0.05	<0.05	NA	<0.05	NA	<0.05	NA	NA	<0.05
Toxaphene	8001-35-2	µg/l			30	<1.0	NA	<1.0	<1.0	<1.0	NA	<1.0	NA	<1.0	NA	NA	<1.0
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC	ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	NA	ND
SOIL-Herb-8151A-SPLP						ND	NA	ND	ND	ND	NA	ND	NA	ND	NA	NA	ND
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500	130	100	<54	<56	<260	<57	<270	<56	440	<55	<59	1500
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
PCB-1016	12674-11-2	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1221	11104-28-2	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1232	11141-16-5	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1242	53469-21-9	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1248	12672-29-6	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1254	11097-69-1	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1260	11096-82-5	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1262	37324-23-5	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCB-1268	11100-14-4	µg/kg				<350	<350	<350	<380	<350	<390	<360	<370	<340	<370	<390	<340
PCBs-Total		µg/kg	1,000	10,000		<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
solids (percent)	solids	%				95	94	92	88	94	86	91	89	95	89	85	94

Legend
1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
() Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis Res DEC = Residential Direct Exposure Criteria mg/l = milligrams per liter CT DEEP = Connecticut Department of Energy and Environmental Protection
 GWPC = Groundwater Protection Criteria ETPH = Extractable Total Petroleum Hydrocarbons µg/l = micrograms per liter
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria RSR = Remediation Standard Regulations mg/kg = milligrams per kilogram
 SPLP = Synthetic Precipitation Leaching Procedure PCBs = Polychlorinated Biphenyls µg/kg = micrograms per kilogram
 I/C DEC = Industrial/Commercial Direct Exposure Criteria (ft.) = feet For Total Chromium, the DEC for Hexavalent Chromium was applied.

TABLE 1B
Soil Sample Analytical Results (Retaining Wall Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG80314	GBG80314	GBG81889	GBG81889	GBG68430	GBG68430	GBG68430	GBG68430	GBG63064	GBG63064	GBG63064	GBG64924	GBG64924		
Lab Sample No.:			BG80318SITE	BG80319SITE	BG81890SITE	BG81891SITE	BG68430SITE	BG68431SITE	BG68433SITE	BG68434SITE	BG63066SITE	BG63067SITE	BG63068SITE	BG64931SITE	BG64930SITE		
Sample ID:			RW-102-6	RW-102-6	RW-102-7	RW-102-7	RW-103-1	RW-103-1	RW-103-2	RW-103-2	RW-104-1	RW-104-2	RW-104-2	RW-105-1	RW-105-2		
Sample Depth (ft.):			(1-3)	(5-8)	(2-3)	(5-7)	(1-3)	(5-9)	(1-3)	(5-9)	(1-3)	(1-3)	(5-7)	(1-3)	(1-3)		
Date Collected:			7/22/2014	7/22/2014	7/25/2014	7/25/2014	6/30/2014	6/30/2014	7/1/2014	7/1/2014	6/17/2014	6/17/2014	6/17/2014	6/24/2014	6/24/2014		
SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC													
Arsenic	7440-38-2	mg/kg	10	10	2.4	2.5	1.3	2.5	1.7	<0.8	1.2	1.7	2.5	1.0	2.4	1.9	
Barium	7440-39-3	mg/kg	4,700	140,000	83.1	95.6	87.1	111	65.3	55.6	97.5	93.2	136	129	60.3	72.0	55.4
Cadmium	7440-43-9	mg/kg	34	1,000	<0.36	<0.35	<0.33	<0.34	<0.35	<0.39	<0.32	<0.39	<0.39	<0.38	<0.33	<0.35	<0.37
Chromium, Total	7440-47-3	mg/kg	100	100	23.7	21.6	25.3	27.5	31.8	17.5	25.8	17.7	64.7	28.4	15.1	20.9	18.7
Lead	7439-92-1	mg/kg	400	1,000	19.0	17.6	19.9	34.3	5.82	6.14	33.9	21.6	28.3	45.8	3.59	44.7	37.2
Mercury	7439-97-6	mg/kg	20	610	0.34	<0.06	<0.07	<0.08	<0.07	<0.07	<0.06	<0.08	<0.08	0.09	<0.08	<0.07	<0.07
Selenium	7782-49-2	mg/kg	340	10,000	<1.4	<1.4	<1.3	<1.3	<1.4	<1.5	<1.3	<1.6	<1.6	<1.5	<1.3	<1.4	<1.5
Silver	7440-22-4	mg/kg	340	10,000	<0.36	<0.35	<0.33	<0.34	<0.35	<0.39	<0.32	<0.39	<0.39	<0.38	<0.33	<0.35	<0.37
SOIL-Metals-SPLP					2008 - 2013 CT DEEP RSR - GB PMC												
Arsenic	7440-38-2	mg/l			0.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Barium	7440-39-3	mg/l			10.0	0.055	0.092	0.036	0.014	<0.010	0.012	0.014	0.101	<0.010	<0.010	<0.010	0.055
Cadmium	7440-43-9	mg/l			0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Total	7440-47-3	mg/l			0.5	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead	7439-92-1	mg/l			0.15	<0.010	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	0.037	<0.010	<0.010	<0.010	0.048
Mercury	7439-97-6	mg/l			0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Selenium	7782-49-2	mg/l			0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Silver	7440-22-4	mg/l			0.36	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC												
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	<3600	<390	<3400	<350	<370	<350	<700	<380	<1800	<1800	<340	<700
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<11000	<1100	<10000	<1000	<1000	<1100	<2000	<1100	<5300	<5300	<970	<2000
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<11000	<1100	<10000	<1000	<1000	<1100	<2000	<1100	<5300	<5300	<970	<2000
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Benidine	92-87-5	µg/kg	200	200	1,000	<4400	<460	<4100	<430	<420	<440	<840	<460	<2200	<2200	<400	<850
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	<1000	<270	<1000	<250	<240	<260	<490	<270	<1000	<1000	<230	<490
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	<1000	<270	<1000	<250	<240	<260	570	280	<1000	<1000	<230	520
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	<1000	<270	<1000	<250	<240	<260	660	380	<1000	<1000	<230	640
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	<1000	<270	<1000	<250	<240	<260	<490	<270	<1000	<1000	<230	<490
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<3600	<390	<3400	<350	<350	<370	<700	<380	<1800	<1800	<340	<700
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<1000	<270	<1000	<250	<240	<260	<490	<270	<1000	<1000	<230	<490
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<5500	<580	<5200	<530	<520	<550	<1000	<570	<2800	<2700	<500	<1100
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	<2500	<270	<2400	<250	<240	<260	630	340	<1300	<1300	<230	<490
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	<2500	<270	<2400	<250	<240	<260	1300	510	<1300	<1300	<230	780
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000	<3600	<390	<3400	<350	<350	<370	<700	<380	<1800	<1800	<340	<700
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200	<2500	<270	<2400	<250	<240	<260	<490	<270	<1300	<1300	<230	<490
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000	<3600	<390	<3400	<350								

TABLE 1B
Soil Sample Analytical Results (Retaining Wall Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG80314	GBG80314	GBG81889	GBG81889	GBG68430	GBG68430	GBG68430	GBG68430	GBG63064	GBG63064	GBG63064	GBG64924	GBG64924				
Lab Sample No.:			BG80318SITE	BG80319SITE	BG81890SITE	BG81891SITE	BG68430SITE	BG68431SITE	BG68433SITE	BG68434SITE	BG63066SITE	BG63067SITE	BG63068SITE	BG64931SITE	BG64930SITE				
Sample ID:			RW-102-6	RW-102-6	RW-102-7	RW-102-7	RW-103-1	RW-103-1	RW-103-2	RW-103-2	RW-104-1	RW-104-2	RW-104-2	RW-105-1	RW-105-2				
Sample Depth (ft.):			(1-3)	(5-8)	(2-3)	(5-7)	(1-3)	(5-9)	(1-3)	(5-9)	(1-3)	(1-3)	(5-7)	(1-3)	(1-3)				
Date Collected:			7/22/2014	7/22/2014	7/25/2014	7/25/2014	6/30/2014	6/30/2014	7/1/2014	7/1/2014	6/17/2014	6/17/2014	6/17/2014	6/24/2014	6/24/2014				
m/p-Xylenes	179601-23-1	µg/kg					<7.8	<4.7	<6.5	<5.4	<7.6	<6.8	<5.5	<5.6	<8.0	<8.2	<8.1	<9.3	<8.2
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000		<7.8	<4.7	<6.5	<5.4	<7.6	<6.8	<5.5	<5.6	<8.0	<8.2	<8.1	<9.3	<8.2
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000		<270	<4.7	<260	<5.4	<7.6	<6.8	<5.5	<5.6	<290	<8.2	<8.1	<9.3	<8.2
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000		<7.8	<4.7	<6.5	<5.4	<7.6	<6.8	<5.5	<5.6	<8.0	<8.2	<8.1	<9.3	<8.2
Xylene-Total		µg/kg	500,000	1,000,000	19,500		<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC														
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10		<11	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10		<7.0	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10		<7.0	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
Aldrin	309-00-2	µg/kg	20	340	6		<1.1	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.1	<1.1	NA	<1.0	<1.0
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66		<11	NA	<10	NA	<10	NA	<10	NA	<11	<11	NA	<10	<10
Dieldrin	60-57-1	µg/kg	38	360	7		<1.1	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.1	<1.1	NA	<1.0	<1.0
Endrin	72-20-8	µg/kg	20,000	610,000	70		<7.0	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70		<7.0	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70		<7.0	NA	<6.6	NA	<6.6	NA	<6.6	NA	<7.2	<7.0	NA	<6.8	<6.7
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40		<1.1	NA	<1.4	NA	<1.0	NA	<1.0	NA	<1.1	<1.1	NA	<1.0	<1.0
Heptachlor	76-44-8	µg/kg	140	1,300	13		<2.2	NA	<2.0	NA	<2.1	NA	<2.1	NA	<2.2	<2.2	NA	<2.1	<2.1
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20		<3.5	NA	<3.3	NA	<3.3	NA	<3.3	NA	<3.6	<3.5	NA	<3.4	<3.3
Toxaphene	8001-35-2	µg/kg	560	5,200	600		<180	NA	<170	NA	<170	NA	<170	NA	<190	<180	NA	<180	<170
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC														
4,4'-DDD	72-54-8	µg/l			1.5		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
4,4'-DDE	72-55-9	µg/l			1		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
4,4'-DDT	50-29-3	µg/l			1		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
Aldrin	309-00-2	µg/l			0.3		<0.003	NA	<0.003	NA	<0.003	NA	<0.003	NA	<0.003	<0.003	NA	<0.003	<0.003
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3		<0.3	NA	<0.3	NA	<0.3	NA	<0.3	NA	<0.3	<0.3	NA	<0.3	<0.3
Dieldrin	60-57-1	µg/l			0.02		<0.002	NA	<0.002	NA	<0.002	NA	<0.002	NA	<0.002	<0.002	NA	<0.002	<0.002
Endrin	72-20-8	µg/l			20		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
Endrin Aldehyde	7421-93-4	µg/l			21		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
Endrin ketone	53494-70-5	µg/l			21		<0.1	NA	<0.1	NA	<0.1	NA	<0.1	NA	<0.1	<0.1	NA	<0.1	<0.1
gamma-BHC (Lindane)	58-89-9	µg/l			2		<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.05	NA	<0.05	<0.05
Heptachlor	76-44-8	µg/l			4		<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.05	NA	<0.05	<0.05
Heptachlor Epoxide	1024-57-3	µg/l			2		<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.05	NA	<0.05	<0.05
Toxaphene	8001-35-2	µg/l			30		<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC		ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND
SOIL-Herb-8151A-SPLP							ND	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC														
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500		<270	<57	2700	<270	<52	<55	<53	<57	<350	<270	<62	150	110
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC														
PCB-1016	12674-11-2	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1221	11104-28-2	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1232	11141-16-5	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1242	53469-21-9	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1248	12672-29-6	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1254	11097-69-1	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1260	11096-82-5	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1262	37324-23-5	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCB-1268	11100-14-4	µg/kg					<370	<380	<340	<350	<340	<360	<350	<380	<380	<360	<340	<350	<350
PCBs-Total		µg/kg	1,000	10,000			<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC														
solids (percent)	solids	%					90	86	95	93	96	90	94	86	88	90	97	94	93

Legend
1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
() Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis
 Res DEC = Residential Direct Exposure Criteria
 mg/l = milligrams per liter
 GWPC = Groundwater Protection Criteria
 ETPH = Extractable Total Petroleum Hydrocarbons
 µg/l = micrograms per liter
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria
 RSR = Remediation Standard Regulations
 mg/kg = milligrams per kilo
 SPLP = Synthetic Precipitation Leaching Procedure
 PCBs = Polychlorinated Biphenyls
 µg/kg = micrograms per kilo
 I/C DEC = Industrial/Commercial Direct Exposure Criteria
 (ft.) = feet
 For Total Chromium, the D

TABLE 1B
Soil Sample Analytical Results (Retaining Wall Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG66152	GBG66152	GBG66152	GBG66152	GBG66665	GBG66665			
Lab Sample No.:			BG66157SITE	BG66158SITE	BG66159SITE	BG66160SITE	BG66666SITE	BG66667SITE			
Sample ID:			RW-106-1	RW-106-1	RW-106-2	RW-106-2	RW-106-3	RW-106-3			
Sample Depth (ft.):			(1.5-3)	(5-7)	(1-3)	(4-6)	(2-4)	(5-9)			
Date Collected:			6/25/2014	6/25/2014	6/25/2014	6/25/2014	6/27/2014	6/27/2014			
SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC							
Arsenic	7440-38-2	mg/kg	10	10	2.1	0.8	1.6	1.6	2.7	0.8	
Barium	7440-39-3	mg/kg	4,700	140,000	72.9	43.5	73.5	111	83.8	101	
Cadmium	7440-43-9	mg/kg	34	1,000	<0.36	<0.33	<0.38	<0.33	<0.46	<0.40	
Chromium, Total	7440-47-3	mg/kg	100	100	22.9	10.7	29.2	19.6	25.0	11.9	
Lead	7439-92-1	mg/kg	400	1,000	19.9	2.82	20.9	6.87	155	20.4	
Mercury	7439-97-6	mg/kg	20	610	<0.08	<0.07	<0.06	<0.07	0.17	<0.08	
Selenium	7782-49-2	mg/kg	340	10,000	<1.5	<1.3	<1.5	<1.3	<1.8	<1.6	
Silver	7440-22-4	mg/kg	340	10,000	<0.36	<0.33	<0.38	<0.33	<0.46	<0.40	
SOIL-Metals-SPLP					2008 - 2013 CT DEEP RSR - GB PMC						
Arsenic	7440-38-2	mg/l			0.5	<0.004	<0.004	<0.004	<0.004	<0.004	
Barium	7440-39-3	mg/l			10.0	0.030	<0.010	0.017	0.014	<0.010	
Cadmium	7440-43-9	mg/l			0.05	<0.005	<0.005	<0.005	<0.005	<0.005	
Chromium, Total	7440-47-3	mg/l			0.5	<0.010	<0.010	<0.010	<0.010	<0.010	
Lead	7439-92-1	mg/l			0.15	<0.010	<0.010	<0.010	<0.010	<0.010	
Mercury	7439-97-6	mg/l			0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Selenium	7782-49-2	mg/l			0.5	<0.020	<0.020	<0.020	<0.020	<0.020	
Silver	7440-22-4	mg/l			0.36	<0.010	<0.010	<0.010	<0.010	<0.010	
SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<260	<250	<510	<250	<290	<280
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	<370	<360	<720	<360	<420	<400
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<260	<250	<510	<250	<290	<280
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	<260	<250	<510	<250	<290	<280
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	<260	<250	<510	<250	<290	<280
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<1100	<1000	<2100	<1100	<1200	<1200
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<260	<250	<510	<250	<290	<280
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	<260	<250	<330	<250	<290	<280
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<260	<250	<510	<250	<290	<280
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<260	<250	<510	<250	<290	<280
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<260	<250	<510	<250	<290	<280
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<1100	<1000	<2100	<1100	<1200	<1200
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<260	<250	<510	<250	<290	<280
Benidine	92-87-5	µg/kg	200	200	1,000	<450	<430	<870	<440	<500	<490
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	<260	<250	<510	<250	<290	<280
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	<260	<250	<510	<250	<290	<280
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	270	<250	650	270	660	<280
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	<260	<250	<510	<250	<290	<280
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	<260	<250	<510	<250	<290	<280
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<370	<360	<720	<360	<420	<400
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<260	<250	<510	<250	<290	<280
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<560	<530	<1000	<550	<630	<610
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	<260	<250	<510	<250	<290	<280
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<260	<250	<510	<250	<290	<280
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<260	<250	<510	<250	<290	<280
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	<260	<250	<510	<250	<290	<280
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<260	<250	<510	<250	<290	<280
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<260	<250	<510	<250	<290	<280
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<260	<250	<510	<250	<290	<280
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600	<260	<250	<510	<250	<290	<280
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000	<260	<250	<510	<250	<290	<280
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000	<260	<250	<510	<250	<290	<280
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<260	<250	<510	<250	<290	<280
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000	<370	<360	<720	<360	<420	<400
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200	<260	<250	<510	<250	<290	<280
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000	<370	<360	<720	<360	<420	<400
Phenanthrene	85-01-8	µg/kg	1,000,000	2,500,000	40,000	<260	<250	<510	<250	<290	<280
Pyrene	129-00-0	µg/kg	1,000,000	2,500,000	40,000	<260	<250	<510	<250	440	<280
SOIL-8260B			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	9	800	600	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/kg	7	67	100	<5.6	<5.5	<3.9	<6.0	<7	<6.0
Acetone	67-64-1	µg/kg	500,000	1,000,000	140,000	<33	<33	<75	<36	<47	<36
Benzene	71-43-2	µg/kg	21,000	200,000	200	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
Carbon disulfide	75-15-0	µg/kg	500,000	1,000,000	30,000	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
m-,p-,o-Xylene	1330-20-7	µg/kg	500,000	1,000,000	19,500	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0

TABLE 1B
 Soil Sample Analytical Results (Retaining Wall Borings)
 DOT-MNRR Bridge Over Atlantic Street
 Stamford, CT
 HRP# CTD3035.21

			Lab Report No.:	GBG66152	GBG66152	GBG66152	GBG66152	GBG66665	GBG66665		
			Lab Sample No.:	BG66157SITE	BG66158SITE	BG66159SITE	BG66160SITE	BG66666SITE	BG66667SITE		
			Sample ID:	RW-106-1	RW-106-1	RW-106-2	RW106-2	RW-106-3	RW-106-3		
			Sample Depth (ft.):	(1.5-3)	(5-7)	(1-3)	(4-6)	(2-4)	(5-9)		
			Date Collected:	6/25/2014	6/25/2014	6/25/2014	6/25/2014	6/27/2014	6/27/2014		
m/p-Xylenes	179601-23-1	µg/kg									
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000	<5.6	<5.5	<3.9	<6.0	<7.8	<6.0
Xylene-Total		µg/kg	500,000	1,000,000	19,500	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10	<7.1	NA	<7.0	NA	<8.2	NA
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10	<7.1	NA	<7.0	NA	<8.2	NA
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10	<7.1	NA	<7.0	NA	<8.2	NA
Aldrin	309-00-2	µg/kg	20	340	6	<1.1	NA	<1.1	NA	<1.3	NA
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66	<11	NA	<11	NA	<13	NA
Dieldrin	60-57-1	µg/kg	38	360	7	<1.1	NA	<1.1	NA	<1.3	NA
Endrin	72-20-8	µg/kg	20,000	610,000	70	<7.1	NA	<7.0	NA	<8.2	NA
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70	<7.1	NA	<7.0	NA	<8.2	NA
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70	<7.1	NA	<7.0	NA	<8.2	NA
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40	<1.1	NA	<1.1	NA	<1.3	NA
Heptachlor	76-44-8	µg/kg	140	1,300	13	<2.2	NA	<2.2	NA	<2.6	NA
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20	<3.6	NA	<3.5	NA	<4.1	NA
Toxaphene	8001-35-2	µg/kg	560	5,200	600	<180	NA	<180	NA	<210	NA
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC						
4,4'-DDD	72-54-8	µg/l			1.5	<0.1	NA	<0.1	NA	<0.1	NA
4,4'-DDE	72-55-9	µg/l			1	<0.1	NA	<0.1	NA	<0.1	NA
4,4'-DDT	50-29-3	µg/l			1	<0.1	NA	<0.1	NA	<0.1	NA
Aldrin	309-00-2	µg/l			0.3	<0.05	NA	<0.05	NA	<0.05	NA
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3	<0.3	NA	<0.3	NA	<0.3	NA
Dieldrin	60-57-1	µg/l			0.02	(<0.1)	NA	(<0.1)	NA	(<0.1)	NA
Endrin	72-20-8	µg/l			20	<0.1	NA	<0.1	NA	<0.1	NA
Endrin Aldehyde	7421-93-4	µg/l			21	<0.1	NA	<0.1	NA	<0.1	NA
Endrin ketone	53494-70-5	µg/l			21	NA	NA	NA	NA	NA	NA
gamma-BHC (Lindane)	58-89-9	µg/l			2	<0.05	NA	<0.05	NA	<0.05	NA
Heptachlor	76-44-8	µg/l			4	<0.05	NA	<0.05	NA	<0.05	NA
Heptachlor Epoxide	1024-57-3	µg/l			2	<0.05	NA	<0.05	NA	<0.05	NA
Toxaphene	8001-35-2	µg/l			30	<1.0	NA	<1.0	NA	<1.0	NA
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC	ND	NA	ND	NA	ND	NA
SOIL-Herb-8151A-SPLP						ND	NA	ND	NA	ND	NA
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500	<56	<53	57	<54	<63	<60
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
PCB-1016	12674-11-2	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1221	11104-28-2	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1232	11141-16-5	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1242	53469-21-9	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1248	12672-29-6	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1254	11097-69-1	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1260	11096-82-5	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1262	37324-23-5	µg/kg				<370	<360	<360	<360	<420	<410
PCB-1268	11100-14-4	µg/kg				<370	<360	<360	<360	<420	<410
PCBs-Total		µg/kg	1,000	10,000		<BRL	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC						
solids (percent)	solids	%				88	93	90	91	78	81

Legend
 1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
 () Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis Res DEC = Residential Direct Exposure Criteria mg/l = milligrams per liter
 GWPC = Groundwater Protection Criteria ETPH = Extractable Total Petroleum Hydrocarbons µg/l = micrograms per liter
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria RSR = Remediation Standard Regulations mg/kg = milligrams per kilo
 SPLP = Synthetic Precipitation Leaching Procedure PCBs = Polychlorinated Biphenyls µg/kg = micrograms per kil
 I/C DEC = Industrial/Commercial Direct Exposure Criteria (ft.) = feet For Total Chromium, the D

TABLE 1C
Soil Sample Analytical Results (Structure Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

			Lab Report No.:	GBG68430	GBG68430	GBG63576	GBG63576	GBH12148	GBH20556	GBH12148	GBH12961	GBG66152	GBG66152	GBG98032	GBG98032	GBG66152
			Lab Sample No.:	BG68435SITE	BG68436SITE	BG63576SITE	BG63577SITE	BH12150SITE	BH20557SITE	BH12149SITE	BH12962SITE	BG66153SITE	BG66155SITE	BG98033SITE	BG98036SITE	BG66154SITE
			Sample ID:	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5	SB-6	SB-6	SB-7
			Sample Depth (ft.):	(1-3)	(5-8)	(1-3)	(5-7)	(1-3)	(6-10)	(1-3)	(8-15)	(1-3)	(6-8)	(1.5-3.5)	(5-8)	(1-3)
			Date Collected:	7/1/2014	7/1/2014	6/20/2014	6/20/2014	9/9/2014	9/27/2014	9/9/2014	9/11/2014	6/25/2014	6/25/2014	8/19/2014	8/20/2014	6/25/2014
SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC												
Arsenic	7440-38-2	mg/kg	10	10												
Barium	7440-39-3	mg/kg	4700	140,000												
Cadmium	7440-43-9	mg/kg	34	1,000												
Chromium, Total	7440-47-3	mg/kg	100	100												
Lead	7439-92-1	mg/kg	400	1,000												
Mercury	7439-97-6	mg/kg	20	610												
Selenium	7782-49-2	mg/kg	340	10,000												
Silver	7440-22-4	mg/kg	340	10,000												
SOIL-Metals-SPLP			2008 - 2013 CT DEEP RSR - GB PMC													
Arsenic	7440-38-2	mg/l		0.5												
Barium	7440-39-3	mg/l		10.0												
Cadmium	7440-43-9	mg/l		0.05												
Chromium, Total	7440-47-3	mg/l		0.5												
Lead	7439-92-1	mg/l		0.15												
Mercury	7439-97-6	mg/l		0.02												
Selenium	7782-49-2	mg/l		0.5												
Silver	7440-22-4	mg/l		0.36												
SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400											
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000											
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200											
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000											
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000											
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400											
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500											
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460											
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000											
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000											
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000											
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600											
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000											
Benzidine	92-87-5	µg/kg	200	200	1,000											
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000											
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000											
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000											
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600											
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000											
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400											
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000											
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600											
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400											
Dibenz(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000											
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000											
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000											
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000											
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000											
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000											
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600											
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000											
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000											
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000											
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000											
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200											
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000											
Phenanthrene	85-01-8	µg/kg	1,000,000	2,500,000	40,000											
Pyrene	129-00-0	µg/kg	1,000,000	2,500,000	40,000											
SOIL-8260B			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	9	800	600											
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/kg	7	67	100											
Acetone	67-64-1	µg/kg	500,000	1,000,000	140,000											
Benzene	71-43-2	µg/kg	21,000	200,000	200											
Carbon disulfide	75-15-0	µg/kg	500,000	1,000,000	30,000											
m-,p-,o-Xylene	1330-20-7	µg/kg	500,000	1,000,000	19,500											

TABLE 1C
Soil Sample Analytical Results (Structure Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG68430	GBG68430	GBG63576	GBG63576	GBH12148	GBH20556	GBH12148	GBH12961	GBG66152	GBG66152	GBG98032	GBG98032	GBG66152	
Lab Sample No.:			BG68435SITE	BG68436SITE	BG63576SITE	BG63577SITE	BH12150SITE	BH20557SITE	BH12149SITE	BH12962SITE	BG66153SITE	BG66155SITE	BG98033SITE	BG98036SITE	BG66154SITE	
Sample ID:			SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5	SB-6	SB-6	SB-7	
Sample Depth (ft.):			(1-3)	(5-8)	(1-3)	(5-7)	(1-3)	(6-10)	(1-3)	(8-15)	(1-3)	(6-8)	(1.5-3.5)	(5-8)	(1-3)	
Date Collected:			7/1/2014	7/1/2014	6/20/2014	6/20/2014	9/9/2014	9/27/2014	9/9/2014	9/11/2014	6/25/2014	6/25/2014	8/19/2014	8/20/2014	6/25/2014	
m/p-Xylenes	179601-23-1	µg/kg														
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000											
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000											
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000											
Xylene-Total		µg/kg	500,000	1,000,000	19,500											
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10	<6.6	NA	<7.0	NA	<7.3	<7.4	<7.1	NA	<7.0	NA	<6.8
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10	<6.6	NA	<7.0	NA	<7.3	<7.4	<7.1	NA	<7.0	NA	<6.8
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10	<6.6	NA	<7.0	NA	<7.3	<7.4	<7.1	NA	<7.0	NA	<6.8
Aldrin	309-00-2	µg/kg	20	340	6	<1.0	NA	<1.1	NA	<1.1	<1.2	<1.1	NA	<1.1	NA	<1.1
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66	<10	NA	<11	NA	<38	<39	<37	NA	<11	NA	<11
Dieldrin	60-57-1	µg/kg	38	360	7	<1.0	NA	<1.1	NA	<4.5	<1.2	(<12)	NA	<1.1	NA	<1.1
Endrin	72-20-8	µg/kg	20,000	610,000	70	<6.6	NA	<7.0	NA	<7.3	<7.4	<8.0	NA	<7.0	NA	<6.8
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70	<6.6	NA	<7.0	NA	<7.3	<7.4	<7.1	NA	<7.0	NA	<6.8
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70	<6.6	NA	<7.0	NA	<7.3	<7.4	<7.1	NA	<7.0	NA	<6.8
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40	<1.0	NA	2.2	NA	<1.1	<1.2	<1.1	NA	<1.1	NA	<1.1
Heptachlor	76-44-8	µg/kg	140	1,300	13	<2.1	NA	<2.2	NA	<2.3	<2.3	<2.2	NA	<2.2	NA	<2.1
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20	<3.3	NA	<3.5	NA	<3.7	<3.7	<3.6	NA	<3.5	NA	<3.4
Toxaphene	8001-35-2	µg/kg	560	5,200	600	<170	NA	<180	NA	<190	<190	<180	NA	<180	NA	<180
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC											
4,4'-DDD	72-54-8	µg/l			1.5	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
4,4'-DDE	72-55-9	µg/l			1	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
4,4'-DDT	50-29-3	µg/l			1	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
Aldrin	309-00-2	µg/l			0.3	<0.003	NA	<0.003	NA	<0.003	<0.003	<0.003	NA	<0.05	NA	<0.05
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3	<0.3	NA	<0.3	NA	<0.30	<0.30	<0.30	NA	<0.3	NA	<0.3
Dieldrin	60-57-1	µg/l			0.02	<0.002	NA	<0.002	NA	<0.002	<0.002	<0.006	NA	(<0.1)	NA	<0.002
Endrin	72-20-8	µg/l			20	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
Endrin Aldehyde	7421-93-4	µg/l			21	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
Endrin ketone	53494-70-5	µg/l			21	<0.1	NA	<0.1	NA	<0.10	<0.10	<0.10	NA	<0.1	NA	<0.1
gamma-BHC (Lindane)	58-89-9	µg/l			2	<0.05	NA	<0.05	NA	<0.050	<0.050	<0.050	NA	<0.05	NA	<0.05
Heptachlor	76-44-8	µg/l			4	<0.05	NA	<0.05	NA	<0.050	<0.050	<0.050	NA	<0.05	NA	<0.05
Heptachlor Epoxide	1024-57-3	µg/l			2	<0.05	NA	<0.05	NA	<0.050	<0.050	<0.050	NA	<0.05	NA	<0.05
Toxaphene	8001-35-2	µg/l			30	<1.0	NA	<1.0	NA	<1.0	<1.0	<1.0	NA	<1.0	NA	<1.0
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC	ND	NA		ND	ND	ND	NA	ND	NA	ND	NA
SOIL-Herb-8151A-SPLP						ND	NA		ND	ND	ND	NA	ND	NA	ND	NA
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500	260	<56	<280	1000	150	<59	160	<62	<54	<59	<53
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
PCB-1016	12674-11-2	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1221	11104-28-2	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1232	11141-16-5	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1242	53469-21-9	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1248	12672-29-6	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1254	11097-69-1	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1260	11096-82-5	µg/kg				<340	<370	<370	<390	<380	<390	470	<420	<360	<390	<350
PCB-1262	37324-23-5	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCB-1268	11100-14-4	µg/kg				<340	<370	<370	<390	<380	<390	<370	<420	<360	<390	<350
PCBs-Total		µg/kg	1,000	10,000		<BRL	<BRL	<BRL	<BRL	<BRL	470	<BRL	<BRL	<BRL	<BRL	<BRL
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC											
solids (percent)	solids	%				94	89	89	85	86	85	89	79	90	83	93

Legend

1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
() Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:

NA = Not Submitted for Analysis
GWPC = Groundwater Protection Criteria
GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria
SPLP = Synthetic Precipitation Leaching Procedure
Res DEC = Residential Direct Exposure Criteria
ETPH = Extractable Total Petroleum Hydrocarbons
RSR = Remediation Standard Regulations
PCBs = Polychlorinated Biphenyls
mg/l = milligrams per liter
µg/l = micrograms per liter
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
I/C DEC = Industrial/Commercial Direct Exposure Criteria
CT DEEP = Connecticut Department of Energy and Environmental Protection
For Total Chromium, the DEC for Hexavalent Chromium was applied.
(ft.) = feet

TABLE 1C
Soil Sample Analytical Results (Structure Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:	GBG66152	GBH20556	GBH09491	GBH09491	GBG86874	GBG84298	GBG84298	GBH24751	GBH24751
Lab Sample No.:	BG66156SITE	BH20558SITE	BH09491SITE	BH09492SITE	BG86875SITE	BG84299SITE	BG84300SITE	BH24752SITE	BH24753SITE
Sample ID:	SB-7	SB-8	SB-9	SB-9	SB-10	SB-11	SB-11	SB-12	SB-12
Sample Depth (ft.):	(5-7)	(1-3)	(1-3)	(8-12)	(0.5-2.5)	(1-3)	(5-8)	(1-3)	(5-8)
Date Collected:	6/25/2014	9/27/2014	9/3/2014	9/3/2014	7/30/2014	7/28/2014	7/28/2014	10/7/2014	10/7/2014

SOIL-Metals			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC									
Arsenic	7440-38-2	mg/kg	10	10	1.3	10.5	2.1	1.3	9.2	4.0	2.1	2.8	1.9
Barium	7440-39-3	mg/kg	4,700	140,000	104	41.6	20.6	21.2	47.7	20.5	11.0	15.0	14.7
Cadmium	7440-43-9	mg/kg	34	1,000	<0.40	2.04	<0.37	<0.35	1.04	<0.37	<0.39	<0.32	<0.37
Chromium, Total	7440-47-3	mg/kg	100	100	22.1	34.9	9.08	9.36	18.9	11.3	11.2	9.78	10.2
Lead	7439-92-1	mg/kg	400	1,000	42.8	1230	78.5	4.19	312	92.7	5.19	49.7	5.74
Mercury	7439-97-6	mg/kg	20	610	0.54	0.10	0.10	<0.07	0.18	<0.06	<0.08	<0.07	<0.07
Selenium	7782-49-2	mg/kg	340	10,000	<1.6	<1.4	<1.5	<1.4	<1.8	<1.5	<1.6	<1.3	<1.5
Silver	7440-22-4	mg/kg	340	10,000	<0.40	<0.34	<0.37	<0.35	<0.46	<0.37	<0.39	<0.32	<0.37

SOIL-Metals-SPLP			2008 - 2013 CT DEEP RSR - GB PMC										
Arsenic	7440-38-2	mg/l		0.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Barium	7440-39-3	mg/l		10.0	<0.010	<0.010	0.024	<0.010	<0.010	0.033	<0.010	<0.010	0.060
Cadmium	7440-43-9	mg/l		0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Total	7440-47-3	mg/l		0.5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead	7439-92-1	mg/l		0.15	<0.010	0.418	0.053	<0.010	0.031	<0.010	<0.010	<0.010	<0.010
Mercury	7439-97-6	mg/l		0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Selenium	7782-49-2	mg/l		0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Silver	7440-22-4	mg/l		0.36	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

SOIL-8270C			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC								
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<540	<270	<260	<260	<660	<250	<270	<240
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	<770	<390	<370	<370	<940	<360	<380	<340
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<540	<270	<260	<260	<660	<250	<270	<240
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	<540	<270	<260	<260	<660	<250	<270	<240
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	<540	<270	<260	<260	<660	<250	<270	<240
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<2200	<1100	<1100	<1100	<2700	<1000	<1100	<1000
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<540	500	<260	<260	<660	<250	<270	<240
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	<330	<270	<260	<260	<660	<250	<270	<240
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<540	<270	<260	<260	<660	<250	<270	<240
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<540	<270	<260	<260	<660	<250	<270	<240
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<540	2800	1100	<260	<660	<250	<270	<240
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<2200	<1100	<1100	<1100	<2700	<1000	<1100	<1000
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<540	2700	790	<260	<660	<250	<270	<240
Benidine	92-87-5	µg/kg	200	200	1,000	<920	<460	<450	<440	<1100	<430	<460	<410
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	1900	3200	2000	<260	<660	<250	<270	<240
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	2000	3500	2000	<260	<660	<250	<270	<240
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	2600	5900	4000	<260	1100	<250	<270	310
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	1000	2600	1100	<260	<660	<250	<270	<240
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	970	2000	1400	<260	<660	<250	<270	<240
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<770	<390	<370	<370	<940	<360	<380	<340
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<540	<270	<260	<260	<660	<250	<270	<240
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<1000	1100	650	<550	<1400	<540	<570	<520
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	1800	3800	2900	<260	<660	<250	<270	<240
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<540	<270	330	<260	<660	<250	<270	<240
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<540	320	<260	<260	<660	<250	<270	<240
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	2200	5400	4300	<260	790	<250	<270	<240
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<540	<270	<260	<260	<660	<250	<270	<240
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<540	<270	<260	<260	<660	<250	<270	<240
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<540	<270	<260	<260	<660	<250	<270	<240
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600	<540	<270	<260	<260	<660	<250	<270	<240
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000	<540	<270	<260	<260	<660	<250	<270	<240
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000	970	2200	1100	<260	<660	<250	<270	<240
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<540	460	<260	<260	<660	<250	<270	<240
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000	<770	<390	<370	<370	<940	<360	<380	<340
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200	<540	<270	<260	<260	<660	<250	<270	<240
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000	<770	<390	<370	<370	<940	<360	<380	<340
Phenanthrene	85-01-8	µg/kg	1,000,000	2,500,000	40,000	620	1300	1000	<260	<660	<250	<270	<240
Pyrene	129-00-0	µg/kg	1,000,000	2,500,000	40,000	2200	5000	4400	<260	<660	<250	<270	<240

SOIL-8260B			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC								
1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	9	800	600	<7.9	<290	<8.1	<6.8	<370	<6.0	<7.0	<5.8
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/kg	7	67	100	<7	<5.1	<7.0	<6.8	<5.2	<6.0	<7.0	<5.8
Acetone	67-64-1	µg/kg	500,000	1,000,000	140,000	<48	<31	<49	<41	<31	<36	<42	<35
Benzene	71-43-2	µg/kg	21,000	200,000	200	<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8
Carbon disulfide	75-15-0	µg/kg	500,000	1,000,000	30,000	<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8
m-,p-,o-Xylene	1330-20-7	µg/kg	500,000	1,000,000	19,500	<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8

TABLE 1C
Soil Sample Analytical Results (Structure Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:	GBG66152	GBH20556	GBH09491	GBH09491	GBG86874	GBG84298	GBG84298	GBH24751	GBH24751
Lab Sample No.:	BG66156SITE	BH20558SITE	BH09491SITE	BH09492SITE	BG86875SITE	BG84299SITE	BG84300SITE	BH24752SITE	BH24753SITE
Sample ID:	SB-7	SB-8	SB-9	SB-9	SB-10	SB-11	SB-11	SB-12	SB-12
Sample Depth (ft.):	(5-7)	(1-3)	(1-3)	(8-12)	(0.5-2.5)	(1-3)	(5-8)	(1-3)	(5-8)
Date Collected:	6/25/2014	9/27/2014	9/3/2014	9/3/2014	7/30/2014	7/28/2014	7/28/2014	10/7/2014	10/7/2014

m/p-Xylenes	179601-23-1	µg/kg				<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8	<3.8
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000	<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8	<3.8
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<7.9	<290	<8.1	<6.8	<370	<6.0	<7.0	<5.8	<3.8
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000	<7.9	<5.1	<8.1	<6.8	<5.2	<6.0	<7.0	<5.8	<3.8
Xylene-Total		µg/kg	500,000	1,000,000	19,500	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL	<BRL

			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC									
SOIL-Pest-8081A														
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10	NA	(<72)	<7.1	NA	(<110)	<7.0	NA	<6.6	NA
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10	NA	(<72)	<7.1	NA	(<92)	<7.0	NA	(<25)	NA
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10	NA	(<72)	<7.1	NA	(<92)	<7.0	NA	<6.6	NA
Aldrin	309-00-2	µg/kg	20	340	6	NA	(<11)	<1.1	NA	(<14)	<1.1	NA	<1.0	NA
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66	NA	(<380)	<37	NA	(<140)	<11	NA	<34	NA
Dieldrin	60-57-1	µg/kg	38	360	7	NA	150	<1.1	NA	(<290)	<2.0	NA	(<10)	NA
Endrin	72-20-8	µg/kg	20,000	610,000	70	NA	(<72)	<7.1	NA	(<92)	<7.0	NA	<10	NA
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70	NA	(<100)	<7.1	NA	(<92)	<7.0	NA	<6.6	NA
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70	NA	(<200)	<7.1	NA	(<500)	<7.0	NA	<6.6	NA
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40	NA	<11	<1.1	NA	<14	<1.4	NA	<1.0	NA
Heptachlor	76-44-8	µg/kg	140	1,300	13	NA	(<38)	<2.2	NA	(<29)	<2.2	NA	<2.1	NA
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20	NA	(<38)	<3.6	NA	(<46)	<3.5	NA	<3.3	NA
Toxaphene	8001-35-2	µg/kg	560	5,200	600	NA	(<1900)	<190	NA	(<1900)	<180	NA	<170	NA

					2008 - 2013 CT DEEP RSR - 10X GWPC									
SOIL-Pest-8081A-SPLP														
4,4'-DDD	72-54-8	µg/l			1.5	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
4,4'-DDE	72-55-9	µg/l			1	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
4,4'-DDT	50-29-3	µg/l			1	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
Aldrin	309-00-2	µg/l			0.3	NA	<0.003	<0.003	NA	<0.003	<0.003	NA	<0.003	NA
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3	NA	<0.30	<0.30	NA	<0.30	<0.30	NA	<0.24	NA
Dieldrin	60-57-1	µg/l			0.02	NA	<0.005	<0.002	NA	(<0.040)	<0.002	NA	<0.002	NA
Endrin	72-20-8	µg/l			20	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
Endrin Aldehyde	7421-93-4	µg/l			21	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
Endrin ketone	53494-70-5	µg/l			21	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	NA
gamma-BHC (Lindane)	58-89-9	µg/l			2	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.052	NA
Heptachlor	76-44-8	µg/l			4	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.052	NA
Heptachlor Epoxide	1024-57-3	µg/l			2	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.052	NA
Toxaphene	8001-35-2	µg/l			30	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	NA

SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC	NA	ND	ND	NA	ND	ND	NA	ND	NA
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SOIL-Herb-8151A-SPLP						NA	ND	ND	NA	ND	ND	NA	ND	NA
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			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC									
SOIL-CTETPH														
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500	<58	1100	230	<56	300	<54	<57	<53	<51

			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC									
SOIL-PCBs-8082														
PCB-1016	12674-11-2	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1221	11104-28-2	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1232	11141-16-5	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1242	53469-21-9	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1248	12672-29-6	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1254	11097-69-1	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	1500	<340
PCB-1260	11096-82-5	µg/kg				<390	6800	<370	<370	17000	<360	<370	<340	<340
PCB-1262	37324-23-5	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCB-1268	11100-14-4	µg/kg				<390	<1900	<370	<370	<2400	<360	<370	<340	<340
PCBs-Total		µg/kg	1,000	10,000		<BRL	6800	<BRL	<BRL	17000	<BRL	<BRL	1500	<BRL

			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC									
SOIL-Misc														
solids (percent)	solids	%				85	86	89	89	69	91	87	95	96

Legend
1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
 () Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis
 GWPC = Groundwater Protection Criteria
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria
 SPLP = Synthetic Precipitation Leaching Procedure
 Res DEC = Residential Direct Exposure Criteria
 ETPH = Extractable Total Petroleum Hydrocarbons
 RSR = Remediation Standard Regulations
 PCBs = Polychlorinated Biphenyls
 mg/l = milligrams per liter
 µg/l = micrograms per liter
 mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram

TABLE 1D
Soil Sample Analytical Results (Test Pits and Utility Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

			Lab Report No.:	GBG88725	GBG64924	GBG98032	GBG98032	GBG63064	GBG63064		
			Lab Sample No.:	BG88726SITE	BG64927SITE	BG98035SITE	BG98037SITE	BG63064SITE	BG63065SITE		
			Sample ID:	TP-3	U-1	U-2	U-2	U-3	U-3		
			Sample Depth (ft.):	(1-2.5)	(1-3)	(1-3)	(6-10)	(1-3)	(5-7)		
			Date Collected:	8/4/2014	6/23/2014	8/20/2014	8/21/2014	6/17/2014	6/17/2014		
SOIL-Metals				2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC						
Arsenic	7440-38-2	mg/kg	10	10		6.3	1.9	7.4	1.4	1.5	2.0
Barium	7440-39-3	mg/kg	4,700	140,000		149	68.6	33.6	47.4	48.6	70.3
Cadmium	7440-43-9	mg/kg	34	1,000		<0.35	<0.34	1.41	<0.43	<0.35	<0.37
Chromium, Total	7440-47-3	mg/kg	100	100		32.8	21.2	25.7	15.2	24.4	26.0
Lead	7439-92-1	mg/kg	400	1,000		8.16	32.0	217	3.81	16.3	451
Mercury	7439-97-6	mg/kg	20	610		<0.08	<0.07	0.23	<0.07	<0.07	<0.08
Selenium	7782-49-2	mg/kg	340	10,000		<1.4	<1.4	<1.5	<1.7	<1.4	<1.5
Silver	7440-22-4	mg/kg	340	10,000		<0.35	<0.34	<0.38	<0.43	<0.35	<0.37
SOIL-Metals-SPLP					2008 - 2013 CT DEEP RSR - GB PMC						
Arsenic	7440-38-2	mg/l			0.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Barium	7440-39-3	mg/l			10.0	0.054	<0.010	0.013	0.012	<0.010	<0.010
Cadmium	7440-43-9	mg/l			0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Total	7440-47-3	mg/l			0.5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead	7439-92-1	mg/l			0.15	<0.010	<0.010	0.072	<0.010	<0.010	<0.010
Mercury	7439-97-6	mg/l			0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Selenium	7782-49-2	mg/l			0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Silver	7440-22-4	mg/l			0.36	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
SOIL-8270C				2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC					
1,2,4-Trichlorobenzene	120-82-1	µg/kg	116,200	1,000,000	2,400	<270	<250	<250	<270	<260	<260
1,2-Diphenylhydrazine	122-66-7	µg/kg	200	7,200	2,000	(<380)	(<360)	(<360)	(<390)	(<370)	(<370)
2,4,6-Trichlorophenol	88-06-2	µg/kg	900	81,800	6,200	<270	<250	<250	<270	<260	<260
2,4-Dinitrotoluene	121-14-2	µg/kg	200	8,400	25,000	(<270)	(<250)	(<250)	(<270)	(<260)	(<260)
2,6-Dinitrotoluene	606-20-2	µg/kg	200	8,400	25,000	(<270)	(<250)	(<250)	(<270)	(<260)	(<260)
2-Methyl-4,6-dinitrophenol	534-52-1	µg/kg	27,100	817,600	1,400	<1100	<1100	<1100	<1100	<1100	<1100
2-Methylnaphthalene	91-57-6	µg/kg	271,000	1,000,000	5,500	<270	<250	330	<270	<260	<260
3,3-Dichlorobenzidine	91-94-1	µg/kg	200	13,000	460	(<270)	(<250)	(<250)	(<270)	(<260)	(<260)
4-Chloroaniline	106-47-8	µg/kg	27,100	817,600	2,000	<270	<250	<250	<270	<260	<260
Acenaphthene	83-32-9	µg/kg	1,000,000	2,500,000	30,000	<270	<250	<250	<270	<260	<260
Acenaphthylene	208-96-8	µg/kg	1,000,000	2,500,000	84,000	<270	<250	2900	<270	<260	<260
Aniline	62-53-3	µg/kg	73,400	1,004,100	2,600	<1100	<1100	<1100	<1100	<1100	<1100
Anthracene	120-12-7	µg/kg	1,000,000	2,500,000	400,000	<270	<250	1600	<270	<260	<260
Benzidine	92-87-5	µg/kg	200	200	1,000	(<460)	(<440)	(<430)	(<470)	(<440)	(<450)
Benzo(a)anthracene	56-55-3	µg/kg	1,000	7,800	1,000	<270	<250	5800	<270	<260	<260
Benzo(a)pyrene	50-32-8	µg/kg	1,000	1,000	1,000	<270	<250	4900	<270	<260	<260
Benzo(b)fluoranthene	205-99-2	µg/kg	1,000	7,800	1,000	<270	<250	11000	<270	<260	<260
Benzo(ghi)perylene	191-24-2	µg/kg	1,000,000	2,500,000	29,600	<270	<250	2000	<270	<260	<260
Benzo(k)fluoranthene	207-08-9	µg/kg	8,400	78,000	1,000	<270	<250	2200	<270	<260	<260
Bis(2-Chloroethyl)Ether	111-44-4	µg/kg	1,000	5,200	2,400	<380	<360	<360	<390	<370	<370
Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	44,000	410,000	11,000	<270	<250	<250	670	<260	<260
Carbazole	86-74-8	µg/kg	3,300	286,200	10,600	<580	<540	1500	<580	<550	<560
Chrysene	218-01-9	µg/kg	84,000	780,000	9,400	<270	<250	7400	<270	<260	<260
Dibenzo(a,h)anthracene	53-70-3	µg/kg	1,000	1,000	1,000	<270	<250	<250	<270	<260	<260
Dibenzofuran	132-64-9	µg/kg	270,000	2,500,000	8,000	<270	<250	300	<270	<260	<260
Fluoranthene	206-44-0	µg/kg	1,000,000	2,500,000	56,000	<270	<250	12000	<270	<260	370
Fluorene	86-73-7	µg/kg	1,000,000	2,500,000	56,000	<270	<250	300	<270	<260	<260
Hexachlorobenzene	118-74-1	µg/kg	1,000	3,600	1,000	<270	<250	<250	<270	<260	<260
Hexachlorobutadiene	87-68-3	µg/kg	800	73,400	299,000	<270	<250	<250	<270	<260	<260
Hexachlorocyclopentadiene	77-47-4	µg/kg	406,500	1,000,000	600	<270	<250	<250	<270	<260	<260
Hexachloroethane	67-72-1	µg/kg	44,000	410,000	1,000	<270	<250	<250	<270	<260	<260
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1,000	7,800	3,000	<270	<250	2000	<270	<260	<260
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000	<270	<250	530	<270	<260	<260
N-Nitrosodimethylamine	62-75-9	µg/kg	200	400	156,000	(<380)	(<360)	(<360)	(<390)	(<370)	(<370)
N-Nitrosodi-n-propylamine	621-64-7	µg/kg	200	800	8,200	(<270)	(<250)	(<250)	(<270)	(<260)	(<260)
Pentachlorophenol	87-86-5	µg/kg	5,100	48,000	1,000	<380	<360	<360	<390	<370	<370
Phenanthrene	85-01-8	µg/kg	1,000,000	2,500,000	40,000	<270	<250	3500	<270	<260	<260
Pyrene	129-00-0	µg/kg	1,000,000	2,500,000	40,000	<270	<250	10000	<270	<260	340
SOIL-8260B				2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC					
1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	9	800	600	<6.4	<7.7	(<280)	<5.8	<8.7	(<17)
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/kg	7	67	100	<6.4	<7	<5.7	<5.8	(<8.7)	(<17)
Acetone	67-64-1	µg/kg	500,000	1,000,000	140,000	<38	72	<34	<35	<52	<99
Benzene	71-43-2	µg/kg	21,000	200,000	200	<6.4	30	<5.7	<5.8	<8.7	<17
Carbon disulfide	75-15-0	µg/kg	500,000	1,000,000	30,000	<6.4	<7.7	<5.7	<5.8	<8.7	<17
m-,p-,o-Xylene	1330-20-7	µg/kg	500,000	1,000,000	19,500	<6.4	12	<5.7	<5.8	<8.7	<17

TABLE 1D
Soil Sample Analytical Results (Test Pits and Utility Borings)
DOT-MNRR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.:			GBG88725	GBG64924	GBG98032	GBG98032	GBG63064	GBG63064
Lab Sample No.:			BG88726SITE	BG64927SITE	BG98035SITE	BG98037SITE	BG63064SITE	BG63065SITE
Sample ID:			TP-3	U-1	U-2	U-2	U-3	U-3
Sample Depth (ft.):			(1-2.5)	(1-3)	(1-3)	(6-10)	(1-3)	(5-7)
Date Collected:			8/4/2014	6/23/2014	8/20/2014	8/21/2014	6/17/2014	6/17/2014
m/p-Xylenes	179601-23-1	µg/kg						
Methylene chloride (Dichloromethane)	75-09-2	µg/kg	82,000	760,000	1,000			
Naphthalene	91-20-3	µg/kg	1,000,000	2,500,000	56,000			
Toluene	108-88-3	µg/kg	500,000	1,000,000	67,000			
Xylene-Total		µg/kg	500,000	1,000,000	19,500			
SOIL-Pest-8081A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC			
4,4'-DDD	72-54-8	µg/kg	1,700	23,800	10	<7.5	<6.9	<6.9
4,4'-DDE	72-55-9	µg/kg	1,200	16,800	10	<7.5	<6.9	<6.9
4,4'-DDT	50-29-3	µg/kg	1,200	16,800	10	<7.5	<6.9	<80
Aldrin	309-00-2	µg/kg	20	340	6	<1.2	<1.1	<1.3
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/kg	490	2,200	66	<12	<11	<11
Dieldrin	60-57-1	µg/kg	38	360	7	<1.2	<1.1	<30
Endrin	72-20-8	µg/kg	20,000	610,000	70	<7.5	<6.9	<40
Endrin Aldehyde	7421-93-4	µg/kg	20,300	613,200	70	<7.5	<6.9	<30
Endrin ketone	53494-70-5	µg/kg	20,300	613,200	70	<7.5	<6.9	<55
gamma-BHC (Lindane)	58-89-9	µg/kg	20,000	610,000	40	<1.2	<1.1	<1.1
Heptachlor	76-44-8	µg/kg	140	1,300	13	<2.3	<2.2	<2.2
Heptachlor Epoxide	1024-57-3	µg/kg	67	630	20	<3.7	<3.5	<3.5
Toxaphene	8001-35-2	µg/kg	560	5,200	600	<190	<180	<180
SOIL-Pest-8081A-SPLP					2008 - 2013 CT DEEP RSR - 10X GWPC			
4,4'-DDD	72-54-8	µg/l			1.5	<0.10	<0.1	<0.10
4,4'-DDE	72-55-9	µg/l			1	<0.10	<0.1	<0.10
4,4'-DDT	50-29-3	µg/l			1	<0.10	<0.1	<0.10
Aldrin	309-00-2	µg/l			0.3	<0.003	<0.003	<0.003
CHLORDANE, TECHNICAL (ALPHA/GAMMA MIX)	57-74-9	µg/l			3	<0.30	<0.3	<0.30
Dieldrin	60-57-1	µg/l			0.02	<0.002	<0.002	<0.002
Endrin	72-20-8	µg/l			20	<0.10	<0.1	<0.10
Endrin Aldehyde	7421-93-4	µg/l			21	<0.10	<0.1	<0.10
Endrin ketone	53494-70-5	µg/l			21	<0.10	<0.1	<0.10
gamma-BHC (Lindane)	58-89-9	µg/l			2	<0.050	<0.05	<0.050
Heptachlor	76-44-8	µg/l			4	<0.050	<0.05	<0.050
Heptachlor Epoxide	1024-57-3	µg/l			2	<0.050	<0.05	<0.050
Toxaphene	8001-35-2	µg/l			30	<1.0	<1.0	<1.0
SOIL-Herb-8151A			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC	ND	ND	ND
SOIL-Herb-8151A-SPLP						ND	ND	ND
SOIL-CTETPH			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC			
TPH DRO	TPH DRO	mg/kg	500	2,500	2,500	<58	<54	960
SOIL-PCBs-8082			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC			
PCB-1016	12674-11-2	µg/kg				<390	<360	<360
PCB-1221	11104-28-2	µg/kg				<390	<360	<360
PCB-1232	11141-16-5	µg/kg				<390	<360	<360
PCB-1242	53469-21-9	µg/kg				<390	<360	<360
PCB-1248	12672-29-6	µg/kg				<390	<360	<360
PCB-1254	11097-69-1	µg/kg				<390	<360	<360
PCB-1260	11096-82-5	µg/kg				<390	<360	2300
PCB-1262	37324-23-5	µg/kg				<390	<360	<390
PCB-1268	11100-14-4	µg/kg				<390	<360	<360
PCBs-Total		µg/kg	1,000	10,000		<BRL	<BRL	2300
SOIL-Misc			2008 - 2013 CT DEEP RSR - Res DEC	2008 - 2013 CT DEEP RSR - I/C DEC	2008 - 2013 CT DEEP RSR - GB PMC			
Solids (percent)	Solids	%				85	91	90

Legend
1 Parameter reported at a concentration greater than applicable regulatory standard/criterion
 () Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria

Notes:
 NA = Not Submitted for Analysis Res DEC = Residential Direct Exposure Criteria mg/l = milligrams per liter CT DEEP = Connecticut Department of Energy and Environmental Protection
 GWPC = Groundwater Protection Criteria ETPH = Extractable Total Petroleum Hydrocarbons µg/l = micrograms per liter
 GB PMC = Groundwater Class 'GB' Pollutant Mobility Criteria RSR = Remediation Standard Regulations mg/kg = milligrams per kilogram
 SPLP = Synthetic Precipitation Leaching Procedure PCBs = Polychlorinated Biphenyls µg/kg = micrograms per kilogram
 I/C DEC = Industrial/Commercial Direct Exposure Criteria (ft.) = feet For Total Chromium, the DEC for Hexavalent Chromium was applied.

Table 2. Groundwater Sample Analytical Results
MNR Bridge Over Atlantic Street
Stamford, CT
HRP# CTD3035.21

Lab Report No.: GBG64933
Lab Sample No.: BG64933SITE
Sample ID: R-3-GW
Sample Depth (ft.): 12.5
Date Collected: 6/23/2014

WATER-Metals			2008 - 2013 CT DEEP RSR - Res GWVC	2008 - 2013 CT DEEP RSR - I/C GWVC	2008 - 2013 CT DEEP RSR - GWPC	2008 - 2013 CT DEEP RSR - SWPC	
Arsenic	7440-38-2	mg/l			0.05	0.004	<0.004
Barium	7440-39-3	mg/l			1	2.2	0.736
Cadmium	7440-43-9	mg/l			0.005	0.006	<0.001
Chromium, Total	7440-47-3	mg/l			0.05	0.11	0.004
Lead	7439-92-1	mg/l			0.015	0.013	0.003
Mercury	7439-97-6	mg/l			0.002	0.0004	<0.0002
Selenium	7782-49-2	mg/l			0.05	0.05	0.012
Silver	7440-22-4	mg/l			0.036	0.012	<0.001
WATER-8270C							
2,4-Dinitrotoluene	121-14-2	µg/l			0.05	125	<5.0
2,6-Dinitrotoluene	606-20-2	µg/l			0.05	125	<5.0
2-Methyl-4,6-dinitrophenol	534-52-1	µg/l			10	7	<10
3,3-Dichlorobenzidine	91-94-1	µg/l			5	2.3	<5.0
Benidine	92-87-5	µg/l			5	5	<5.0
Hexachlorocyclopentadiene	77-47-4	µg/l			42	3	<5.0
N-Nitrosodimethylamine	62-75-9	µg/l			0.05	780	<5.0
N-Nitrosodi-n-propylamine	621-64-7	µg/l			0.05	41	<5.0
Bis(2-ethylhexyl)phthalate	117-81-7	µg/l			2	59	16
WATER-8270SIM							
1,2,4,5-Tetrachlorobenzene	95-94-3	µg/l			5	20	<0.50
Acenaphthene	83-32-9	µg/l	33,383	50,000	420	150	<0.05
Acenaphthylene	208-96-8	µg/l	48,935	50,000	420	0.3	<0.05
Benzo(a)anthracene	56-55-3	µg/l			0.06	0.3	<0.05
Benzo(a)pyrene	50-32-8	µg/l			0.2	0.3	<0.02
Benzo(b)fluoranthene	205-99-2	µg/l			0.08	0.3	<0.02
Benzo(ghi)perylene	191-24-2	µg/l			0.48	148	<0.50
Benzo(k)fluoranthene	207-08-9	µg/l			0.5	0.3	<0.02
Bis(2-ethylhexyl)phthalate	117-81-7	µg/l			2	59	NA
Chrysene	218-01-9	µg/l			1.1	47	<0.03
Dibenzo(a,h)anthracene	53-70-3	µg/l			0.2	1.3	<0.01
Hexachlorobenzene	118-74-1	µg/l			1	0.077	<0.04
Hexachlorobutadiene	87-68-3	µg/l			0.45	1,494	<0.50
Hexachloroethane	67-72-1	µg/l			3	89	<0.50
Indeno(1,2,3-cd)pyrene	193-39-5	µg/l			0.2	14.8	<0.02
Nitrobenzene	98-95-3	µg/l	1,668	18,229	5	2,210	<0.10
Pentachloronitrobenzene	82-68-8	µg/l			7	25	<0.10
Pentachlorophenol	87-86-5	µg/l			1	150	<0.80
Phenanthrene	85-01-8	µg/l	50,000	50,000	200	0.077	<0.05
Pyridine	110-86-1	µg/l	2,116	23,020	5	260	<0.50
Anthracene	120-12-7	µg/l	50,000	50,000	2,000	1,100,000	NA
Fluoranthene	206-44-0	µg/l			280	3,700	NA
Pyrene	129-00-0	µg/l			200	110,000	NA
WATER-8260B							
1,2-Dibromo-3-chloropropane	96-12-8	µg/l			0.2	3.1	<1.0
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/l	4	16	0.05	64	<1.0
Acrylonitrile	107-13-1	µg/l	2.4	93.6	0.5	20	<5.0
Bromomethane	74-83-9	µg/l	32	389	3.5	0.5	<1.0
Tetrachloroethylene	127-18-4	µg/l	1,500	3,820	5	88	8.5
WATER-CTETPH							
TPH DRO	TPH DRO	mg/l			0.25		<0.070
WATER-PCBs-8082							
PCB-1016	12674-11-2	µg/l					<0.50
PCB-1221	11104-28-2	µg/l					<0.50
PCB-1232	11141-16-5	µg/l					<0.50
PCB-1242	53469-21-9	µg/l					<0.50
PCB-1248	12672-29-6	µg/l					<0.50
PCB-1254	11097-69-1	µg/l					<0.50
PCB-1260	11096-82-5	µg/l					<0.50
PCB-1262	37324-23-5	µg/l					<0.50
PCB-1268	11100-14-4	µg/l					<0.50
PCBs-Total		µg/l	0.5	3.6	0.5	0.5	<BRL

Legend

1	Parameter reported at a concentration greater than applicable regulatory standard/criterion
()	Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria
BRL	Parameter consists of multiple isomers and were not detected above the laboratory reporting limit

Notes:

RSR = Remediation Standard Regulations
I/C GWVC = Industrial/Commercial Volatilization Criteria for Groundwater
Res GWVC = Residential Volatilization Criteria for Groundwater
ETPH = Extractable Total Petroleum Hydrocarbons
NA = Not Submitted for Analysis
PCBs = Polychlorinated Biphenyls
CT DEEP = Connecticut Department of Energy and Environmental Protection

mg/l = milligrams per liter
µg/l = micrograms per liter
(ft.) = feet
SWPC = Surface Water Protection Criteria
GWPC = Groundwater Protection Criteria
SIM = Selective Ion Monitoring

Table 3. QA/QC Analytical Results
 MNRR Bridge Over Atlantic Street
 Stamford, CT
 HRP# CTD3035.21

Lab Report No.: GBG63063 GBG84302
 Lab Sample No.: BG63063SITE BG84302SITE
 Sample ID: EB061914 EB072914
 Date Collected: 6/19/2014 7/29/2014

			2008 - 2013 CT DEEP RSR - Res GWVC	2008 - 2013 CT DEEP RSR - I/C GWVC	2008 - 2013 CT DEEP RSR - GWPC	2008 - 2013 CT DEEP RSR - SWPC		
WATER-Metals								
Arsenic	7440-38-2	mg/l			0.05	0.004	<0.004	<0.004
Barium	7440-39-3	mg/l			1	2.2	0.002	0.004
Cadmium	7440-43-9	mg/l			0.005	0.006	<0.001	<0.001
Chromium, Total	7440-47-3	mg/l			0.05	0.11	<0.001	<0.001
Lead	7439-92-1	mg/l			0.015	0.013	<0.002	<0.002
Mercury	7439-97-6	mg/l			0.002	0.0004	<0.0002	<0.0002
Selenium	7782-49-2	mg/l			0.05	0.05	<0.010	<0.010
Silver	7440-22-4	mg/l			0.036	0.012	<0.001	<0.001
WATER-8270C								
2,4-Dinitrotoluene	121-14-2	µg/l			0.05	125	<5.0	<5.0
2,6-Dinitrotoluene	606-20-2	µg/l			0.05	125	<5.0	<5.0
2-Methyl-4,6-dinitrophenol	534-52-1	µg/l			10	7	<1.0	<1.0
3,3-Dichlorobenzidine	91-94-1	µg/l			5	2.3	<5.0	<5.0
Benzidine	92-87-5	µg/l			5	5	<5.0	<5.0
Hexachlorocyclopentadiene	77-47-4	µg/l			42	3	<5.0	<5.0
N-Nitrosodimethylamine	62-75-9	µg/l			0.05	780	<5.0	<5.0
N-Nitrosodi-n-propylamine	621-64-7	µg/l			0.05	41	<5.0	<5.0
Bis(2-ethylhexyl)phthalate	117-81-7	µg/l			2	59	NA	NA
WATER-8270SIM								
1,2,4,5-Tetrachlorobenzene	95-94-3	µg/l			5	20	<0.50	<0.50
Acenaphthene	83-32-9	µg/l	33,383	50,000	420	150	<0.05	<0.05
Acenaphthylene	208-96-8	µg/l	48,935	50,000	420	0.3	<0.05	<0.05
Benzo(a)anthracene	56-55-3	µg/l			0.06	0.3	<0.02	<0.05
Benzo(a)pyrene	50-32-8	µg/l			0.2	0.3	<0.02	<0.02
Benzo(b)fluoranthene	205-99-2	µg/l			0.08	0.3	<0.02	<0.02
Benzo(ghi)perylene	191-24-2	µg/l			0.48	148	<0.50	<0.50
Benzo(k)fluoranthene	207-08-9	µg/l			0.5	0.3	<0.02	<0.02
Bis(2-ethylhexyl)phthalate	117-81-7	µg/l			2	59	<0.50	<0.50
Chrysene	218-01-9	µg/l			1.1	47	<0.02	<0.05
Dibenzo(a,h)anthracene	53-70-3	µg/l			0.2	1.3	<0.01	<0.01
Hexachlorobenzene	118-74-1	µg/l			1	0.077	<0.04	<0.04
Hexachlorobutadiene	87-68-3	µg/l			0.45	1,494	<0.50	<0.50
Hexachloroethane	67-72-1	µg/l			3	89	<0.50	<0.50
Indeno(1,2,3-cd)pyrene	193-39-5	µg/l			0.2	14.8	<0.02	<0.02
Nitrobenzene	98-95-3	µg/l	1,668	18,229	5	2,210	<0.10	<0.10
Pentachloronitrobenzene	82-68-8	µg/l			7	25	<0.10	<0.10
Pentachlorophenol	87-86-5	µg/l			1	150	<0.80	<0.80
Phenanthrene	85-01-8	µg/l	50,000	50,000	200	0.077	<0.05	<0.05
Pyridine	110-86-1	µg/l	2,116	23,020	5	260	<0.50	<0.50
Anthracene	120-12-7	µg/l	50,000	50,000	2,000	1,100,000	NA	<0.02
Fluoranthene	206-44-0	µg/l			280	3,700	NA	<0.04
Pyrene	129-00-0	µg/l			200	110,000	NA	<0.02
WATER-8260B								
1,2-Dibromo-3-chloropropane	96-12-8	µg/l			0.2	3.1	<1.0	<1.0
1,2-Dibromoethane (EDB) (ethylene dibromide)	106-93-4	µg/l	4	16	0.05	64	<1.0	<1.0
Acrylonitrile	107-13-1	µg/l	2.4	93.6	0.5	20	<5.0	<5.0
Bromomethane	74-83-9	µg/l	32	389	3.5	0.5	<1.0	<1.0
Tetrachloroethylene	127-18-4	µg/l	1,500	3,820	5	88	<1.0	<1.0
WATER-Pest-8081A								
beta-BHC	319-85-7	µg/l			0.025	1.4	<0.015	<0.038
Dieldrin	60-57-1	µg/l			0.002	0.1	<0.002	<0.005
WATER-Herb-8151A								
							ND	ND
WATER-CTETPH								
TPH DRO	TPH DRO	mg/l			0.25		<0.072	<0.070
WATER-PCBs-8082								
PCB-1016	12674-11-2	µg/l					<0.10	<0.10
PCB-1221	11104-28-2	µg/l					<0.10	<0.10
PCB-1232	11141-16-5	µg/l					<0.10	<0.10
PCB-1242	53469-21-9	µg/l					<0.10	<0.10
PCB-1248	12672-29-6	µg/l					<0.10	<0.10
PCB-1254	11097-69-1	µg/l					<0.10	<0.10
PCB-1260	11096-82-5	µg/l					<0.10	<0.10
PCB-1262	37324-23-5	µg/l					<0.10	<0.10
PCB-1268	11100-14-4	µg/l					<0.10	<0.10
PCBs-Total		µg/l	0.5	3.6	0.5	0.5	<BRL	<BRL

Legend

1	Parameter reported at a concentration greater than applicable regulatory standard/criterion
()	Indicates the laboratory reporting limit is greater than one or more applicable comparison criteria
BRL	Parameter consists of multiple isomers and were not detected above the laboratory reporting limit

Notes:

RSR = Remediation Standard Regulations
 I/C GWVC = Industrial/Commercial Volatilization Criteria for Groundwater
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APPENDIX A
LABORATORY ANALYTICAL REPORTS
(ON DISK)

APPENDIX B
TEST PIT LOGS

Project: Metro North Railroad Bridge Atlantic Street	HRP ASSOCIATES, INC.	Test Boring/Monitor Well ID: RW-104-2	
Location: Stamford, CT	DRILLING/SOIL LOG	Sheet No. 1 of 1	
HRP# CTD3035.21	Rig Type:	Driller:	
Date: 6/18/14	Hammer (weight [lb] / fall [inches])	Casing	
HRP Rep. Billy Elder		Sampler	
Ground Elevation:	PROPORTIONS	Core Barrel	
Total Boring Depth: 20'	trace: 0 to 10% some: 20 to 35%	Type	
Depth to Bedrock:	little: 10 to 20% and: 35 to 50%	O.D. (inch)	
		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
1 to 3		12"	Dry		(1-3)	13" Asphalt / Process stone Brown F-C sand some gravel and Brick, trace silts	Depth 1-3	Reading 0	Interval 1-3	ID RW-104-2 (1-3) 10-58
3 to 5		7"	Dry		(3-5)	Brown Med-C sand and Gravel little Brick	3-5	0		
5 to 7		14"	Dry		(5-7)	Casing hammered down 5' F-C sand and cobble Casing down to 7' roller bit with water to 7'	5-7	0	5-7	RW-104-2 (5-7) 11-11
7 to 9		6.5"	Dry		(7-9)	Brown M-C sand and weathered Rock Casing down to 9' Roller bit w/ water to 9'	7-9	0.2		
9 to 11		12"			9-11	Brown/Gray F-C sand little cobble Casing down 11' Roller bit with water down 11'	9-11	0		
11 to 13		0				Refusal - Casing down 15' Roller bit with water to 15' Continuous sample end @ (11-13)	-	-		
15 to 17		3"				Gray C sand and weathered Rock Casing down 20' Roller bit to 17'	15-17	0		
17 to 20		4"				Gray gravel and M-C sand	17-20	0		

Monitoring Well Details									
from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size
-	-	-	-	-	-	-	-	-	-

SOIL TYPE	ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
	from	to	Material	Cohesionless Density		Cohesive Consistence	
CH (Fat Clay)				# Blows/ft		# Blows/ft	
CL (Lean Clay)				0-4	very loose	0-2	very soft
GC (Clayey Gravel)				5-9	loose	3-4	soft
GM (Silty Gravel)				10-29	medium dens	5-8	medium stiff
GP (Poorly Graded Gravel)				30-49	dense	15-Sep	stiff
GW (Well-Graded Gravel)				50+	very dense	16-30	very stiff
MH (Elastic Silt)						31+	hard
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-8	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Mount Soil Rig		Driller: Trent New England Boring	
Date: 6/19/14		Hammer (weight [lb] / fall [inches])			
HRP Rep. Billy Elder				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 20'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
						11" Asphalt				
1	3	6"	Dry		1-3'	Grey/Brown F-M Sand some silt trace cobble	1-3	0	1-3	R-8 (1-3') 1:30
3	5	12"	Dry		3-5'	Grey F-M sand little silt and Cobble	3-5'	0		
5	7					Concrete Auger thru 6x6-8x8 wood on bottom				
9	11	10"	Sl. Moist		9-11'	Gray F sand little gravel trace silt wood on 9 section	9-11	0.1	9-11	R-8 (9-11) 2:17
11	13	0	-		-	-				
13	15	6"	Wet		13-15	Rock some F sand	13-15	0		
15	17	4"	Wet		15-17	Gray F sand some M sand	15-17	0		
17	20	2"	Wet		17-20	Rock	17-20			

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS			Penetration Resistance-140 lb/30" on 2" O.D. sampler									
CH (Fat Clay)	CL (Lean Clay)	GC (Clayey Gravel)	GM (Silty Gravel)	GP (Poorly Graded Gravel)	GW (Well-Graded Gravel)	MH (Elastic Silt)	ML (Silt)	OH (Organic Clay / Silt of High Plasticity)	OL (Organic Clay / Silt of Low Plasticity)	PT (Highly Organic Soil / Peat)	SC (Clayey Sand)	SM (Silty Sand)	SP (Poorly Graded Sand)	SW (Well-Graded Sand)
		from	to	Material	# Blows/ft		Cohesive Consistence							
					0-4	very loose	0-2	very soft						
					5-9	loose	3-4	soft						
					10-29	medium dense	5-8	medium stiff						
					30-49	dense	15-30	stiff						
					50+	very dense	16-30	very stiff						
							31+	hard						

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-3	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck mounted Rig		Driller: Trent N.E. Boring	
Date: 6/23/14		Hammer (weight [lb] / fall [inches])			
HRP Rep. Billy Elder					
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 21		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
Depth to Bedrock:		little: 10 to 20% and: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1	3'	17"	Dry		1-3	10-12" Asphalt / Process Stone	1-3	1.6	1-3	R-3(1-3) 9:50
3	5'	12"	Dry		3-5	Grey F-M Sand, some cobble little silt	3-5	0.3		
5	7'	13"	Dry		5-7	Grey F-M Sand, some cobble little silt	5-7	0.1		
7	9'	17"	moist		7-9	Tan F-C sand, trace silt and cobble	7-9	0		
9	11'	16"	wet		9-11	Tan F-C sand, some weather Rock	9-11	0		
11	13'	7"	wet		11-13	F-C Sand, little weathered Rock	11-13	0		
13	15'					NO sample perspec				
15	17'	19"	wet		15-17	M-C sand some cobble	15-17	0		
19	21'					Missed sample prepping to prepare for GW sampler				
						5' green 1" PVC with 10' riser placed in bore hole				
						R-3-GW sample collected using peristaltic pump.				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size
		4"	--	--					

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		from	to	Material	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)				Cohesionless Density
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				Cohesive Consistence
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				# Blows/ft
GM (Silty Gravel)	SC (Clayey Sand)				
GP (Poorly Graded Gravel)	SM (Silty Sand)				
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: U-1	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. <u>1</u> of <u>1</u>	
HRP# CTD3035.21		Rig Type: <u>Truck mount Rig</u>		Driller: <u>Trent New England Boring</u>	
Date: <u>6/23/14 - 6/24/14</u>		Hammer (weight [lb] / fall [inches])			
HRP Rep. <u>BE</u>				Casing	
Ground Elevation:		PROPORTIONS		Sampler	
Total Boring Depth: <u>25'</u>		trace: 0 to 10% some: 20 to 35%		Core Barrel	
Depth to Bedrock: <u>15'</u>		fines: 10 to 20% and: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	3	8"	Dry		(1-3')	Brown F-M sand some small gravel and silt Little weathered Rock -	1-3	0.1	(1-3)	U-1 (1-3") @ 2:20
3	5	13"	Dry		(3-5')	Brown F-M sand some weathered Rock Little gravel trace silt	3-5	0		
5	7	16"	-		(5-7')	Grey F-C sand some weathered Rock Little gravel trace silts	5-7	0		
7	9	13"	-		(7-9')	Grey F-C sand some weathered Rock Little gravel trace silts	7-9	0		
9	11	15"	-			Grey F-C sand some weathered Rock Little gravel trace silt	9-11	0.2		
11	13	15"	-		11-12	Grey coarse sand and weathered Rock	11-13	0		
13	15				12-13	Grey F.M sand and weathered Rock				
15	17					6/24/14 Not recorded second Rig on site and set upon R-1. Moved to R-1. Geodesign will Call with any suspect soils Coring 15-25'				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler					
		Cohesionless Density		Cohesive Consistency			
	from	to	Material	# Blows/ft	# Blows/ft		
CH (Fat Clay)				0-4	very loose	0-2	very soft
CL (Lean Clay)				5-9	loose	3-4	soft
GC (Clayey Gravel)				10-29	medium dense	5-8	medium stiff
GM (Silty Gravel)				30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)				50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)						31+	hard
MH (Elastic Silt)							
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-1	
Location: Stamford, CT		DRILLING/SOIL LOG			
HRP# CTD3035.21		Rig Type: Truck Mount Rig		Sheet No. 1 of 1	
Date: 6/24/14		Hammer (weight [lb] / fall [inches])		Driller: Tim Sable New England Boring	
HRP Rep. B.E.				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 17'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
from 1 to 3		17"	Dry		(1-3')	2-9" Asphalt Tan F-M sand some silt and gravel	Depth 1-3 Reading 0.2 Interval (1-3)	R-1 (1-3) @ 10:02
3 to 5		15"	Dry		(3-5)	Brown F-M sand and silt, some gravel, little weathered rock	(3-5) 0	
5 to 7		14"	Sil. Moist		(5-7)	Brown F-C sand some sm-med gravel little silt trace rock	5-7 0 (6-8)	R-1 (6-8) @ 11:13
7 to 9		20"	moist		(7-9)	Red Brown M-C sand some gravel trace silt	7-9 0	
9 to 11		8"	Moist		9-11	Brown M-C sand and cobble rock in tip	9-11 0	
11 to 13		13"	Moist		11-13	Brown F-C sand and weathered rock	11-13 0	
13 to 15		3"	moist		15-17	Grey Coarse Sand and weathered rock	15-17 0	

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb./30" on 2" O.D. sampler				
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	from	to	Material	Cohesionless Density		Cohesive Consistency	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				# Blows/ft		# Blows/ft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				0-4	very loose	0-2	very soft
GM (Silty Gravel)	SC (Clayey Sand)				5-9	loose	3-4	soft
GP (Poorly Graded Gravel)	SM (Silty Sand)				10-29	medium dens	5-8	medium stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				30-49	dense	15-30	stiff
MH (Elastic Silt)	SW (Well-Graded Sand)				50+	very dense	16-30	very stiff
ML (Silt)							31+	hard

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-105-1	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Rig		Driller: Tim S New England Boring	
Date: 6/24/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. BE				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 7'		trace: 0 to 10%		Type	
Depth to Bedrock: 7'		some: 20 to 35%		O.D. (inch)	
		little: 10 to 20%		I.D. (inch)	
		end: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per g'	Recov. (ft)	Molsturo	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	3	9"	Dry		1-3	9-10" Asphalt				
3	5	10"	Dry		3-5	Brown F-C sand some gravel little silt trace Brick	1-3	0.3	1-3	RW-105-1 (1-3)E
						Brown F-m sand some gravel little silt	3-5	0		
						Offset hole 3' east due to Boulders slammed casing to 5' roller bit down				
5	7					Tan F-C sand and gravel stopped @ 7' most likely at Bedrock				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler				
		from	to	Material	Cohesionless Density	Cohesive Consistence
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)				# Blows/ft	# Blows/ft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				0-4	0-2
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				5-9	3-4
GM (Silty Gravel)	SC (Clayey Sand)				10-29	5-8
GP (Poorly Graded Gravel)	SM (Silty Sand)				30-49	15-Sep
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				50+	very stiff
MH (Elastic Silt)	SW (Well-Graded Sand)					31+
ML (Silt)						hard

Project: Metro North RailRoad Brigde Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-105-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck mounted Rig		Driller: Trent New England Boring	
Date: 6/22/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. BE				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 20'		Type			
Depth to Bedrock: 10'		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
		little: 10 to 20% and: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsturo	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PIID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1	3	17"	Dry		(1-3')	Brown F.M sandy some gravel, little silt, trace Rubber/Tar like material	1-3	0.9	(1-3')	RW-105-2 (1-3')
3	5		Dry		3-5	Brown F.M sand some gravel trace silt	(35)	0		
5	7	14"	-		5-7	Brown F.M sand some gravel little weathered rock trace silt	5-7	0.2		
7	9	9"	-		7-9	Brown F-M sand some gravel little weather rock				
						Refusal at 10'				
						Coring 10-15, 15-20'				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		Cohesionless Density		Cohesive Consistence	
	from to Material	# Blows/ft		# Blows/ft	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)	5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)	10-29	medium dens	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)	30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)	SM (Silty Sand)	50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)			31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street	HRP ASSOCIATES, INC.	Test Boring/Monitor Well ID: SB-7
Location: Stamford, CT	DRILLING/SOIL LOG	
HRP# CTD3035.21	Rig Type: Truck mount R/S	Sheet No. 1 of 1
Date: 6/25/14 - 6/26/14	Hammer (weight [lb] / fall [inches])	Driller: Trent New England Boring
HRP Rep. BE		Casing
Ground Elevation:	PROPORTIONS	Sampler
Total Boring Depth: 18.5	trace: 0 to 10%	Core Barrel
Depth to Bedrock: 8.5	some: 20 to 35%	
	little: 10 to 20%	
	and: 35 to 50%	

Sampler Depth interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
1-3		13"	Dry		(1-3)	Brown F-M sand some gravel little silt	1-3 0	SB-7 (1-3)
3-5		6"	Dry		(3-5)	Tan F-M sand some gravel trace silt	3-5 0	
5-7		6"	-		5-7	Tan F-C sand and gravel Bouldered @ 6.5' unable to get casing pass Boulder. Abandon hole. start new 6/26/14	5-7 0	SB-7 (5-7)
7.5-8.5		12"	-		7.5-8.5	Tan/Grey F-M sand some gravel coring starting 8.5-13.5 13.5-18.5	7.5-8.5 0	

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
	from	to	Material	Cohesionless Density		Cohesive Consistence	
CH (Fat Clay)				# Blows/ft		# Blows/ft	
CL (Lean Clay)				0-4	very loose	0-2	very soft
GC (Clayey Gravel)				5-9	loose	3-4	soft
GM (Silty Gravel)				10-29	medium dens	5-8	medium stiff
GP (Poorly Graded Gravel)				30-49	dense	15-30	stiff
GW (Well-Graded Gravel)				50+	very dense	15-30	very stiff
MH (Elastic Silt)						31+	hard
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-106-1	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Rig		Driller: Trent New England Boring	
Date: 6/26/14 - 6/27/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. BE				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 17'1"		Type			
Depth to Bedrock:		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
		little: 10 to 20% and: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1.5	3		DRY		(1.5-3)	1-1.5 asphalt Brown F-M sand some silt little gravel	(1.5-3)	0.3	(1.5-3)	RW-106-1 (1.5-3)
3	5		Dry			Brown F-M sand some gravel little silt	3-5	0		
5	7	16"	-		5-7	Brown M-C sand and gravel	(5-7)	0	(5-7)	RW-106-1 (5-7)
7	9	2"			7-9	Rock trace F sand	7-9	0		
9	11	8"			9-11	Tan F-C sand some weather rock trace silt and gravel	9-11	0		
11	13	0"			11-13	minimal gravel from roller bit	11-13	0		
13	15					6/27/14 - Roller bit Refusal @ 16'0" Split Spoon Refusal after 100 blows @ 17.1. I was on RW 106-3 during 13-16'				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler				
		from	to	Material	Cohesionless Density	Cohesive Consistence
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)				# Blows/ft	# Blows/ft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				0-4	0-2
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				5-9	3-4
GM (Silty Gravel)	SC (Clayey Sand)				10-29	5-8
GP (Poorly Graded Gravel)	SM (Silty Sand)				30-49	15-30
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				50+	16-30
MH (Elastic Silt)	SW (Well-Graded Sand)					31+
ML (Silt)						

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-7		
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1		
HRP# CTD3035.21				Rig Type: trail Rig		
Date: 6/27/14		Hammer (weight [lb] / fall [inches])		Driller: Tim NEBC		
HRP Rep. Billy Elder				Casing	Sampler	Core Barrel
Ground Elevation:		PROPORTIONS		Type		
Total Boring Depth:		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)		
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)		

Sampler Depth Interval (ft)	Sampler Blows per ft	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	3				1-3	10" Asphalt Brown F-M sand some silt little cobb = minimal soil	1-3	03	1-3	R-7 (1-3) 11:11
3	5					Miss-a - at other Rig				
5	7	1'			5-7	Rock	5-7	—		
7	9	13'			7-9	Tan F-C sand some cobble trace silt	7-9	0	(7-9)	R-7 (7-9) 11:37
9	11				9-11	Tan/Grey F-M sand and weathered Rock some Gravel	9-11	0		
11	13	10'			11-13	Tan/Grey F-M sand some weathered Rock	11-13	0		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	Cohesionless Density		Cohesive Consistence		
			# Blows/ft		# Blows/ft		
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)		0-4	very loose	0-2	very soft	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)		5-9	loose	3-4	soft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)		10-28	medium den.	5-8	medium stiff	
GM (Silty Gravel)	SC (Clayey Sand)		30-48	dense	15-30	stiff	
GP (Poorly Graded Gravel)	SM (Silty Sand)		50+	very dense	16-30	very stiff	
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				31+	hard	
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-106-1	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Mounted		Date: 6/26/14 - 6/27/14	
HRP Rep: Billy Elder		Hammer (weight [lb] / fall [inches])		Driller: Trent NEBC	
Ground Elevation:		PROPORTIONS		Casing	
Total Boring Depth: 17'1"		Trace: 0 to 10% some: 20 to 35%		Sampler	
Depth to Bedrock:		Little: 10 to 20% and: 35 to 50%		Core Barrel	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
from 1.5 to 3'			Dry		1.5-3.0'	1.5' Asphalt Brown F.M sand, some silt, little gravel	Depth 1.5-3.0 Reading 0.2 Interval 1.5-3	ID RW-106-1 (1.5-3.0) 1:20
3 to 5'			Dry		3-5'	Tan F.M sand some gravel trace silt	3-5 0.1	
5 to 7'		16"			5-7'	Brown F.M sand and cobble	5-7 0.0 (EFT)	RW-106-1 (5-7) 2:26
7 to 9'		2"			7-9'	Gravel trace F Sand	7-9 0	
9 to 11'		8"			9-11'	Tan F-C sand some weathered Rock	9-11 0	
11 to 13'					11-13'	gravel	11-13 0	
						16'10" roller bit Refusal		
						16'10"-17-1" split spoon Refusal		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		Cohesionless Density		Cohesive Consistence	
	from to Material	# Blows/ft		# Blows/ft	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)	5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)	10-29	medium dense	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)	30-49	dense	15-Sep	stiff
GP (Poorly Graded Gravel)	SM (Silly Sand)	50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)			31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-106-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck mounted		Driller: Trent New England Boring	
Date: 6/26/11		Hammer (weight [lb] / fall [inches])			
HRP Rep. BE				Casing	
Ground Elevation:		PROPORTIONS		Sampler	
Total Boring Depth:		trace: 0 to 10% some: 20 to 35%		Core Barrel	
Depth to Bedrock:		little: 10 to 20% and: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per ft	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PIID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1	3	12"	Dry		(1-3)	Brown F-M sand some silt and gravel	(1-3)	0	(1-3)	RW-106-2 (1-3)
3	5	15"	Dry		(3-5)	Brown F-M sand and gravel	(3-5)	0.1	(4-6)	RW-106-2 (4-6)
5	7	19"	-		(5-7)	Tan F-M sand some weathered rock little gravel	5-7	0		
7	9	14"	-		(7-9)	Tan F-C sand some weathered Rock little gravel	7-9	0		
9	11	14"	-		9-11	Brown F-M sand some weathered Rock	9-11	0		

Monitoring Well Details									
from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	Cohesionless Density		Cohesive Consistence		
			# Blows/ft		# Blows/ft		
CH (Fat Clay)		OH (Organic Clay / Silt of High Plasticity)	0-4	very loose	0-2	very soft	
CL (Lean Clay)		OL (Organic Clay / Silt of Low Plasticity)	5-9	loose	3-4	soft	
GC (Clayey Gravel)		PT (Highly Organic Soil / Peat)	10-29	medium dense	5-8	medium stiff	
GM (Silty Gravel)		SC (Clayey Sand)	30-49	dense	15-30	stiff	
GP (Poorly Graded Gravel)		SM (Silty Sand)	50+	very dense	18-30	very stiff	
GW (Well-Graded Gravel)		SP (Poorly Graded Sand)			31+	hard	
MH (Elastic Silt)		SW (Well-Graded Sand)					
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-103-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Rig		Driller: Trent NEBC	
Date: 7/11/14		Hammer (weight [lb] / fall [inches])			
HRP Rep. Billy Eden				Casing	
Ground Elevation:		PROPORTIONS		Sampler	
Total Boring Depth: 10.5'		trace: 0 to 10% some: 20 to 35%		Core Barrel	
Depth to Bedrock:		little: 10 to 20% and: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1	3	11"	Dry		(1-3)	11" Asphalt	(1-3)	0.4	(1-3)	RW-103-2 (1-3') 10:40
3	5	14"			(3-5)	Brown F-M sand some s-gravel little silt	(3-5)	0.1	3-5	
5	7	12"			5-7	Brown F-M sand some shell and silt trace brick, Ash	(5-7)	0.5	(5-9)	RW-103-2 (5-9') 11:05
7	9	16"			7-9	Brown F-M sand some silt, little gravel trace shell, brick ash	7-9	0.3		
9	11	7"			9-11	Brown F-C sand some s-m gravel trace silt	9-11	0		
						Rollerbit Refusal 10.5'				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		Cohesionless Density		Cohesive Consistence	
	from to Material	# Blows/ft		# Blows/ft	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)	5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)	10-29	medium dens	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)	30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)	SM (Silly Sand)	50+	very dense	18-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)			31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-1	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21				Rig Type:	
Date: 7/1/14		Hammer (weight [lb] / fall [Inches])		Driller: Trent NEBC	
HRP Rep. Bill Elder				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 9'9"		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 60%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsturo	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
from 1 to 3		20"		DM	1-3'	~10" Asphalt Gray F-M sand little gravel and Brick trace silt	Depth (1-3) 0.3	Interval (1-3) ID SB-1 (1-3') 12:58
3 to 5		6"			3-5	Gray/Brown F-M sand little s. gravel and yellow brick trace silt	3-5 0	
5 to 7		7"			5-7	Gray F-M sand some gravel little yellow brick	(5-7) 0.4	SB-1 (5-8) 2:05
7 to 9		17"			7-9	Gray/Brown F-M sand some weather Rock little gravel trace silt	7-9 0.3	
9 to 11		3'			9-11	Gray Brown M-C sand and Rock		
						Roller bit Refusal @ 9'9"		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		from	to	Material	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)				
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				
GM (Silty Gravel)	SC (Clayey Sand)				
GP (Poorly Graded Gravel)	SM (Silly Sand)				
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-9	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21				Rig Type:	
Date: 7/7/14		Hammer (weight [lb] / fall [inches])		Driller: Trent NEBC	
HRP Rep. Billy Alder				Casing	
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 20'				O.D. (inch)	
Depth to Bedrock:		trace: 0 to 10%		some: 20 to 35%	
		little: 10 to 20%		and: 35 to 50%	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	3	16"	Dry		(1-3')	2" Asphalt 8" concrete Black/Brown F.M Sand, some silt, little s-m gravel trace concrete	(1-3)	0.2	(1-3)	R-9 (1-3) 9:55
3	5	8"	Dry		(3-5)	Brown F-M sand some silt little s. gravel and weathered Rock	(3-5)	0.4		
5	7		moist		(5-7)	Brown F-m sand some silt trace gravel WATER @ 6.9'	5-7	0.2	57	R-9 (5-7) 10:47
7	9		wet		(7-9)	Brown F.M sand and silt some organic with cobble	7-9	0.1		
9	11		wet		9-11	Brown Black silt and Fine Sand Some organics (peat)	9-11	0.3		
11	13		wet		11-13	Brown/Black silt and F.M Sand Some organic little s. gravel	(1-13)	0.1		
13	15		wet		13-15	Brown/Black silt and F.M sand some organics little s. gra	13-15	0		
15	17		wet		15-17	Brown Clay (silt and F.M sand)	17-20	0.2		
17	20		sl moist		(17-20)	F.M sand trace silt				

Monitoring Well Details									
from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS			Penetration Resistance-140 lb/30" on 2" O.D. sampler			
	from	to	Material	Cohesionless Density		Cohesive Consistence	
CH (Fat Clay)				# Blows/ft		# Blows/ft	
CL (Lean Clay)				0-4	very loose	0-2	very soft
GC (Clayey Gravel)				5-9	loose	3-4	soft
GM (Silty Gravel)				10-29	medium dens	5-8	medium stiff
GP (Poorly Graded Gravel)				30-49	dense	15-30	stiff
GW (Well-Graded Gravel)				50+	very dense	18-30	very stiff
MH (Elastic Silt)						31+	hard
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-4	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: <i>Track Rig</i>		Driller: <i>Trent NEBC</i>	
Date: 7/7/14		Hammer (weight [lb] / fall [inches]) 30"		Casing	
HRP Rep. <i>Billy Fisher</i>				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 7'		Type			
Depth to Bedrock:		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
		little: 10 to 20% end: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Molsture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1.5	3		Dry		(1.5-3)	5" Asphalt / 6" concrete	1.5-3	0.2	(1.5-3)	R-4(1.5-3) 1.01
3	5		Dry		(3-5)	Brown F-M sand and weathered gran Rock trace gravel	3-5	0.1		
5	7		Dry		5-7	Brown/gray F-M sand and weathered Rock trace gravel	5-7	0.0	(5-7)	R-4(5-7) 1.42
						7' Auger Refusal				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	from	to	Material	Cohesionless Density		Cohesive Consistence	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				# Blows/ft		# Blows/ft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				0-4	very loose	0-2	very soft
GM (Silty Gravel)	SC (Clayey Sand)				5-9	loose	3-4	soft
GP (Poorly Graded Gravel)	SM (Silty Sand)				10-29	medium dens	5-8	medium stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				30-49	dense	15-30	stiff
MH (Elastic Silt)	SW (Well-Graded Sand)				50+	very dense	16-30	very stiff
ML (Silt)							31+	hard

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-101-1		
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1		
HRP# CTD3035.21				Rig Type: Truck Bdr		
Date: 7/8/14 to 7/11/14		Hammer (weight [lb] / fall [inches])		Driller: Trent NEBC		
HRP Rep. Billy Elder				Casing	Sampler	Core Barrel
Ground Elevation:		PROPORTIONS		Type		
Total Boring Depth: 29.3'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)		
Depth to Bedrock: 27'		little: 10 to 20%	and: 35 to 50%	I.D. (inch)		

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	3	5"	Dry		(1-3)	5" Asphalt	1-3	0.4	(1-3)	RW-101-1 (1-3) 10:10
3	5	3"			(3-5)	Brown F-m sand some cobble little silt	3-5	0.2		
5	7	10"			(5-7)	Brown F-m sand little silt trace gravel	5-7	0.0	(5-7)	RW-101-1 5-7 10:55
7	9	8"			(7-9)	Tan F-C sand and s-m gravel	7-9	0.1		
9	11	9"			(9-11)	Tan F-C sand and s-m gravel	9-11	0		
11	13	8"			(11-13)	Tan M-C sand and s-m gravel	11-13	0		
13	15	14"			(13-15)	Tan M-C sand and Rock	13-15	0		
15	17	8"			(15-17)	Tan M-C sand and Rock	(15-17)	0		
17	19	7"			(17-19)	Tan F-C sand some s-m gravel little silt	17-19	0.1		
19	21	7"			(19-21)	Brown F-C sand some gravel little silt trace organ in	19-21	0.3		
						Continue to 27 on Rock				
						7/11/14 coring to start but encountering Metal & concrete in roller bit wash water Stopped at 29'3"				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	Cohesionless Density		Cohesive Consistence		
			# Blows/ft		# Blows/ft		
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)		0-4	very loose	0-2	very soft	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)		5-9	loose	3-4	soft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)		10-29	medium dens	5-8	medium stiff	
GM (Silty Gravel)	SC (Clayey Sand)		30-49	dense	15-Sep	stiff	
GP (Poorly Graded Gravel)	SM (Silty Sand)		50+	very dense	10-30	very stiff	
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				31+	hard	
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-101-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck Rig		Driller: Trent NEBC	
Date: 7/11/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. Billy Eder				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 47		trace: 0 to 10%		Type	
Depth to Bedrock: 37		some: 20 to 35%		O.D. (inch)	
		little: 10 to 20%		I.D. (inch)	
		and: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
1	3'	15"	DRY	1	1-3'	6" Asphalt Brown F-M sand some silt and gravel trace brick	1-3	0.5	(1-3)	RW-101-2 (1-3') 11:11
3	5	3"	-		3-5'	Brown F-M sand some silt gravel little silt	3-5	0.1		
5	7	18"	-		5-7'	Tan F-M sand some silt little gravel	5-7	0	(5-9')	RW-101-2 (5-9')
7	9	10"	-		7-9	Tan F-M sand and weathered Rock Some silt gravel trace silt	7-9	0		
9	11				9-11	Tan F-M sand and weathered Rock Some silt gravel trace silt	9-11	0.1		
11	13'				11-13'	Tan/grey weathered Rock some F-M sand	11-13'	0.0		
13	15	12"			13-15'	Tan/grey weathered Rock some F-M sand	13-15'	0		
15	17				15-17'	Grey/Tan F-M sand and weathered Rock Some F-M sand	15-17'	0.1		
17	19				17-19	Grey/Tan F-M sand and weathered Rock trace silt gravel	17-19	0		
21	23				21-23'	Tan F-M sand some weathered Rock	21-23'	0		
25	27				25-27	Tan F-M sand some brick and weathered Rock	25-27	0		
35	37	12"			35-37	Roller bit refusal 33.5 Tan/grey F-M sand and weathered Rock Coring started at 37' 10"				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	Cohesionless Density	Cohesive Consistence			
			# Blows/ft	# Blows/ft			
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)		0-4	very loose	0-2	very soft	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)		5-9	loose	3-4	soft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)		10-29	medium dens	5-8	medium stiff	
GM (Silty Gravel)	SC (Clayey Sand)		30-49	dense	15-Sep	stiff	
GP (Poorly Graded Gravel)	SM (Silty Sand)		50+	very dense	16-30	very stiff	
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				31+	hard	
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-102-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type:		Driller: trent NEBC	
Date: 7/15-16/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. Billy Elder				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 43'3"		trace: 0 to 10%		Type	
Depth to Bedrock: 53'3"		some: 20 to 35%		O.D. (inch)	
		little: 10 to 20%		I.D. (inch)	
		and: 35 to 50%			

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
						8" Asphalt				
1	3'	14'	Dry		(1-3')	Tan F-M sand some cobble little silt	1-3'	0.2	1-3	RW-102-2 (1-3') 9:45
3	5'				(3-5')	Tan F-M sand some cobble little silt	3-5	0		
5	7'	5'			(5-7')	Tan F-M sand some gravel trace silt	5-7	0		
7	9'				(7-9')	tan F-M sand little gravel trace silt	7-9	0	7-9	RW-102-2 (7-9') 10:30
9	11'	3'			(9-11')	Rock trace F-M sand	9-11'			
11	13'	1'			(11-13')	Gravel	11-13	0		
13	15'				(13-15')	Brown F-M sand little gravel	13-15	0		
15	17'	0'			(15-17')	NO Recovery	15-17	0		
17	19'	9'			(17-19')	Grey/Brown F-M sand little gravel trace silt	17-19	0		
40	42'	12'			40-42	7/15. hole ended at 35' Brown F-C sand trace silt Rollerbit Refusal 43'3" Corrug 43'3" - 53'3"	40-42	0		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material		Cohesionless Density		Cohesive Consistency	
				# Blows/ft		# Blows/ft	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)			0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)			5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)			10-20	medium dens	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)			30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)	SM (Silty Sand)			50+	very dense	10-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)					31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW 102-4	
Location: Stamford, CT		DRILLING/SOIL LOG			
HRP# CTD3035.21		Rig Type: truck mounted		Sheet No. 1 of 1	
Date: 7/16, 18, 21, 22/14		Hammer (weight [lb] / fall [inches])		Driller: Trent NEBC	
HRP Rep. Billy Elder				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 44'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock: 44'		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per g'	Recov. (ft)	Molsture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	
1	3	12"	Dry		1-3'	15' Asphalt Tan F-M sand some sm gravel trace silt	1-3	112	1-3	RW-102-4 (1-3') 2:00 7/16/14
3	5	13"			3-5'	Tan F-C sand some sm gravel trace silt	3-5	0		
5	7	8"			5-7	Tan F-M sand some sm-med gravel little silt	5-7	0	(5-9)	RW-102-4 (5-9) 2:39 7/16/14
7	9	9"			7-9	tan F-M sand some SM gravel little silt	7-9	0.1		
9	11	7"			9-11	tan F-M sand some s/m gravel little silt	9-11	0		
11	13	7"			11-13	tan F-C sand some s/m gravel trace silt Refusal @ 14.5' - boulder offset hole 3' East Augered down 7/18 Auger refusal @ 21.5' encountered asphalt and concrete offset. Encountered same issue on 3rd hole offset 10' from orgi-chnl.	11-13	0		
13	15	9"			13-15	Tan F-C sand and weathered Rock	13-15	0	13-15	RW-102-4 (13-15') 1:50 7/21/14
15	17	12"			15-17	tan F-C sand and weather Rock				
20	22	12"			20-22	Brown F-c sand some s/m gravel trace silts	20-22	0		
25	27				25-27	Brown F-c sand some s/m gravel little silt trace Brick	25-27	0.2		
27	29				27-29	Brown F-c sand some s/m gravel trace silt and Brick Rock @ 44'	27-29	0		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	from	to	Material	Cohesionless Density		Cohesive Consistence	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				# Blows/ft		# Blows/ft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				0-4	very loose	0-2	very soft
GM (Silty Gravel)	SC (Clayey Sand)				5-9	loose	3-4	soft
GP (Poorly Graded Gravel)	SM (Silty Sand)				10-29	medium den.	5-8	medium stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				30-49	dense	15-Sep	stiff
MH (Elastic Silt)	SW (Well-Graded Sand)				50+	very dense	16-30	very stiff
ML (Silt)							31+	hard

Project: Metro North Railroad Bridge Atlantic Street	HRP ASSOCIATES, INC.	Test Boring/Monitor Well ID: RW-102-3	
Location: Stamford, CT	DRILLING/SOIL LOG	Sheet No. 1 of 1	
HRP# CTD3035.21	Rig Type: truck mounted	Driller: NEBC	
Date: 7/15, 17, 18/14	Hammer (weight [lb] / fall [inches])	Casing	
HRP Rep.		Sampler	
Ground Elevation:	PROPORTIONS	Core Barrel	
Total Boring Depth:	trace: 0 to 10% some: 20 to 35%	Type	
Depth to Bedrock: 48'	little: 10 to 20% and: 35 to 50%	O.D. (inch)	
		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
from 1 to 3'					(1-3')	Brown F-M sand some s/m gravel little silt	Depth 1-3 Reading 0.2 Interval (1-3')	ID RW-102-3 (1-3') 1:15
3 to 5		0			(3-5)	NO Recovery		
5 to 7		14"			(5-7')	Brown F-C sand little gravel trace silt	5-7' 0	
7 to 9		12"			(7-9)	Brown F-C sand little gravel trace silt	7-9 0.2	RW-102-3 (7-11) 2:06
9 to 11		8"			(9-11)	Brown F-C sand little gravel trace silt	9-11 0.1	
11 to 13		7"			(11-13)	Brown F-C sand little gravel trace silt		
						working on another hole during remainder of Boring		
						Rock @ 48'		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	Cohesionless Density	Cohesive Consistence			
			# Blows/ft	# Blows/ft			
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)		0-4	very loose	0-2	very soft	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)		5-9	loose	3-4	soft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)		10-29	medium dense	5-8	medium stiff	
GM (Silty Gravel)	SC (Clayey Sand)		30-49	dense	15-30	stiff	
GP (Poorly Graded Gravel)	SM (Silty Sand)		50+	very dense	16-30	very stiff	
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				31+	hard	
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-102-5	
Location: Stamford, CT		DRILLING/SOIL LOG			
HRP# CTD3035.21		Rig Type: truck mounted		Sheet No. 1 of 1	
Date: 7/21-22/14		Hammer (weight [lb] / fall [inches])		Driller: Mark D NEBC	
HRP Rep. Billy Elder				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth:		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
from 1 to 3'		16"	dry		1-3'	Asphalt Base looking weathering Black gravel with F-M sand	Depth 1-3' Reading 0.6	RW-102-5 (2-4') (11:29)
3 to 5'					3-5'	Black gravel and F-M sand trace silt	3-5' 0.7 (2-4')	
5 to 7'		0			5-7'	NO Recovery nit boulder 9. - 9.5" offset S/EAST Augered down to 5' took 5-7 from split spoon of 2nd hole		
7 to 9'		0						
5 to 7'		8"			5-7'	Brown F-M sand some gravel little silt Augered down to	5-7' 0.2	RW-102-5 (5-7) 12:28
10 to 12'					10-12'	Brown F-M sand some gravel trace silts	10-12' 0	
12 to 14'					12-14'	Brown F-M sand some gravel trace silts	12-14' 0	
14 to 16'					14-16'	Tan F-C sand some gravel trace silts	14-16' 0	
16 to 18'					16-18'	Tan F-C sand some gravel trace silts	16-18' 0.1	
20 to 22'					20-22'	Brown F-C sand little gravel trace silts	20-22' 0.0	
22 to 24'					22-24'	Brown F-C sand some gravel little Asphalt concrete.	22-24' 0.3	
25 to 27'					25-27'	roller bit thru Asphalt 25'-25'	25-27' 0.2	
30 to 32'		8"			30-32'	Black clayey silt some F-M sand little gravel	30-32' 0	
32 to 34'		12"			32-34'	gravel little silt trace F-M sand	32-34' 0	
35 to 37'		12"			35-37'	F-C sand trace silt	35-37' 0	
40 to 42'		16"			40-42'	F-M sand trace silt	40-42' 0	
45 to 47'					45-47'	gray fine sand	45-47' 0	
50 to 52'					50-52'	Brown gravel and weathered Rock	50-52' 0	

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	from	to	Material	Cohesionless Density		Cohesive Consistence	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				# Blows/ft		# Blows/ft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				0-4	very loose	0-2	very soft
GM (Silty Gravel)	SC (Clayey Sand)				5-9	loose	3-4	soft
GP (Poorly Graded Gravel)	SM (Silty Sand)				10-29	medium dens	5-8	medium stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				30-49	dense	15-30	stiff
MH (Elastic Silt)	SW (Well-Graded Sand)				50+	very dense	18-30	very stiff
ML (Silt)							31+	hard

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-102-6	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Truck/Mount		Driller: NE Boring Pete	
Date: 7/22-25/14		Hammer (weight [lb] / fall [inches])			
HRP Rep. BE				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 52'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per ft	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details
1-3		12"	DRY		1-3	Gray F.M. sand some gravel little silt NO Recovery Encountered concrete in roller bit water offset 5' EAST	0.3	RW-102-6 (1-3) 10:59
3-5		0'			3-5	Gray/Brown F.C. sand some gravel little silt	0.2	
5-7					5-7	Gray/Brown F.C. sand some gravel little silt	0	RW-102-6 (5-8) 12:45
7-9					7-9	Gray/Brown F.M. sand some gravel little silt	0	
9-11		13"			9-11	Brown F.M. sand some silt little gravel	0	
11-13		13"			11-13	Brown F.M. sand some gravel little silt	0	
13-15					13-15	AT OTHER boring during 17-25' Boulder at 25' cracked casing Placed 3" casing inside 4" hole to continue 7/23/14		
15-17					15-17	Brown F.M. sand some gravel little silt	0	
17-19					17-19	Gray F.C. sand trace gravel	0	
19-21					19-21	Gray F.C. sand some gravel trace silt	0	
21-23					21-23	Gray/Brown F.C. sand some silt trace gravel	0	
23-25					23-25	7/24/14 ISSUE with casing pulled casing and offset to 3rd hole 10' from original		
25-27					25-27	7/25/14		
27-29					27-29	Gray Bra F.C. sand some gravel trace silt		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
	from	to	Material	Cohesionless Density	Cohesive Consistency	
CH (Fat Clay)				# Blows/ft	# Blows/ft	
CL (Lean Clay)				0-4	very loose	0-2
GC (Clayey Gravel)				5-9	loose	3-4
GM (Silty Gravel)				10-29	medium dens	5-8
GP (Poorly Graded Gravel)				30-49	dense	15-Sep
GW (Well-Graded Gravel)				50+	very dense	16-30
MH (Elastic Silt)						31+
ML (Silt)						hard

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: RW-102-7	
Location: Stamford, CT		DRILLING/SOIL LOG			
HRP# CTD3035.21		Rig Type: truck Rig		Sheet No. 1 of 1	
Date: 7/23-24/14		Hammer (weight [lb] / fall [inches])		Driller: Mark NE Birns	
HRP Rep. BE				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth: 67'		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per g'	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	Depth	Reading	Interval	ID
2-3		1	Dry		(2-3')	2" Asphalt	2-3	0.5	(2-3)	RW-102-7 (2-3')
3-5					(3-5')	Brown F.M sand little gravel trace brick and silt	3-5	0		
5-7					(5-7)	Brown F.M sand some gravel trace silt brick/concrete trace silt	5-7	0	(5-7)	RW-102-7 (5-7)
7-9					(7-9)	Brown F.M sand little silt and gravel	7-9	0		
9-11					(9-11)	Brown F.M sand little gravel trace silt	9-11	0		
11-13					(11-13)	Tan F.M sand some gravel trace silt	11-13	0		
15-17		0			(15-17)	NO Recovery Rock in tip	15-17	0		
17-19		12"			(17-19)	Brown F.M sand some Asphalt little gravel trace silt	17-19	0		
20-22		12"			(20-22)	Brown F.M sand little gravel trace silt	20-22	0		
25-27		20"			(25-27)	Brown F.M sand some gravel trace silt	25-27	0		
30-32		13"			(30-32)	Gray Gravel some F.C sand	30-32	0		
40-42		0			(40-42)	NO Recovery				
42-44		0			(42-44)	NO Recovery				
45-47		12"			(45-47)	Tan F.C gravel little F.M sand	45-47	0		
50-52		13"			(50-52)	Tan F.C gravel little F.M sand	50-52	0		
55-57		12"			(55-57)	Tan F.C gravel little F.M sand	55-57	0		
60-62					(60-62)	Tan F.C sand some gravel	60-62	0		
						Bottom at 67'				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler			
from	to	Material	# Blows/ft	Cohesionless Density	# Blows/ft	Cohesive Consistence	
			0-4	very loose	0-2	very soft	
			5-9	loose	3-4	soft	
			10-29	medium dens	5-8	medium stiff	
			30-49	dense	15-30	stiff	
			50+	very dense	18-30	very stiff	
					31+	hard	

- CH (Fat Clay)
- CL (Lean Clay)
- GC (Clayey Gravel)
- GM (Silty Gravel)
- GP (Poorly Graded Gravel)
- GW (Well-Graded Gravel)
- MH (Elastic Silt)
- ML (Silt)
- OH (Organic Clay / Silt of High Plasticity)
- OL (Organic Clay / Silt of Low Plasticity)
- PT (Highly Organic Soil / Peat)
- SC (Clayey Sand)
- SM (Silty Sand)
- SP (Poorly Graded Sand)
- SW (Well-Graded Sand)

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-11	
Location: Stamford, CT		DRILLING/SOIL LOG			
HRP# CTD3035.21		Rig Type: Train Rig		Sheet No. 1 of 1	
Date: 7/28/14 - 7/29/14		Hammer (weight [lb] / fall [inches])		Driller: Tims New England Boring	
HRP Rep. BE				Casing	Sampler
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth: 40'		trace: 0 to 10%	some: 20 to 35%	Type	
Depth to Bedrock: 50'		little: 10 to 20%	and: 35 to 50%	O.D. (inch)	
				I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
0	4		Dry		0-2'	Soil hand dug with post hole digger Black F-M sand some gravel trace Silt and slag	0-2	0	1-3	SB-11 (1-3) 12:42
					2-4'	Tan F-C sand some gravel trace silt	2-4	0		
4	6	18"	Dry		4-6	Tan F-M sand trace gravel and silt	4-6	0.2	5-8	SB-11 (5-8) 1:24
4	8	6"			6-8	Tan F-m sand trace gravel and silt	6-8	0.1		
8	10	12"			8-10	Brown F-M sand little C. sand trace silt	8-10	0		
10	12	7"			10-12	Brown F-C sand some gravel trace silt	10-12	0		
12	14	10"			12-14	Brown F-M sand little gravel	12-14	0.1		
15	17	8"			15-17	Brown F-M sand little gravel	15-17	0.1		
17	19	9"			17-19	Brown/Tan F-M sand some gravel little silt	17-19	0.2		
20	22	13"			20-22	Brown F-M sand and gravel trace silt	20-22	0		
25	27	12"			25-27	Brown F-C sand some gravel trace silt	25-27	0		
30	32	14"			30-32	Brown F-C sand some gravel trace silt	30-32	0		
35	37	12"			35-37	Grey Fine sand some silt and M sand	35-37	0		
40	42	0				Casing down at 38' Roller bit to 40' Coring 40-45 45-50				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.D. sampler				
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	from	to	Material	Cohesionless Density		Cohesive Consistence	
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				# Blows/ft		# Blows/ft	
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				0-4	very loose	0-2	very soft
GM (Silty Gravel)	SC (Clayey Sand)				5-9	loose	3-4	soft
GP (Poorly Graded Gravel)	SM (Silty Sand)				10-29	medium dens	5-8	medium stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				30-49	dense	15-30	stiff
MH (Elastic Silt)	SW (Well-Graded Sand)				50+	very dense	16-30	very stiff
ML (Silt)							31+	hard

Project: Metro North Railroad Brigde Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-10	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 2	
HRP# CTD3035.21		Rig Type: Train Rig		Driller: Tim S	
Date: 7/30-31, 8/1, 5		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. BE				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth:		trace: 0 to 10% some: 20 to 35%		Type	
Depth to Bedrock:		little: 10 to 20% and: 35 to 50%		O.D. (Inch)	
				I.D. (Inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
0	1.5	-	Dry		0-1.5	2" Ballast stone Hand clecks to 4"	6.75	0.6	(0.5-2.5)	SB-10 (0.5-2.5)
1.5	4	-	Dry		1.5-4	Black F-M sand some gravel and slag little silt Tan F-C sand some F-M gravel	1.5-4	0.2		
4	6	⊖			4-6	100-140 lb hammer blows Refusal				
6	8	3"			6-8	Refusal - Rock tip				
8	10	1"			8-10	Rock				
10	12	0			10-12	—				
12	14	0			12-14	8/1/14 offset hole 5' west - 0-4' same material				
4	6	0			4-6	—				
6	8	0			6-8	—				
8	10	0			8-10	—				
						Cored down 10-15' in cobble Rollerbit down to 15', unable to get 4' casing down. Placed 3'				
15	17	0			15-17	Rock				
20	22	12"			20-22	Brom F-C sand little gravel trace silt	20-22	0		
25	27	1"			25-27	Rock 8/5 - casing hit overnight by Emergency Response train morning spent removing casing				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS		Penetration Resistance-140 lb/30" on 2" O.O. sampler				
	from	to	Material	Cohesionless Density		Cohesive Consistence	
CH (Fat Clay)				# Blows/ft	# Blows/ft		
CL (Lean Clay)				0-4	very loose	0-2	very soft
GC (Clayey Gravel)				5-9	loose	3-4	soft
GM (Silty Gravel)				10-29	medium dens	5-8	medium stiff
GP (Poorly Graded Gravel)				30-49	dense	15-30	stiff
GW (Well-Graded Gravel)				50+	very dense	18-30	very stiff
MH (Elastic Silt)						31+	hard
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: R-5	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21				Rig Type: M ₁	
Date: 8/19, 20/14		Hammer (weight [lb] / fall [inches])		Driller: Munk NE Boring	
HRP Rep. BE				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth:		trace: 0 to 10%	some: 20 to 35%	O.D. (Inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (Inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
1	4		Dry		8/19/14	Air Knife / Vac'd down to 4' 12" Asphalt Base	1-3	0		R-5 (1-3') (11:11)
					1-3	(1-3') Gray F-m sand some gravel trace silt				
						worked 8/19 overnight shift did not stay for remaining; note				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS		Penetration Resistance-140 lb./30" on 2" O.D. sampler			
from	to	Material		# Blows/ft	Cohesionless Density	# Blows/ft	Cohesive Consistence
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)			0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)			5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)			10-29	medium dens	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)			30-49	dense	15-Sep	stiff
GP (Poorly Graded Gravel)	SM (Silty Sand)			50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)					31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)						
ML (Silt)							

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: U-2	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Train Rig D25		Driller: Roger, Pete NE Boring	
Date: 8/19-22, 25-29/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. BE		PROPORTIONS		Sampler	
Ground Elevation: 36'		Type		Core Barrel	
Total Boring Depth:		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
Depth to Bedrock:		little: 10 to 20% and: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
0	0.5		dry		0-0.5'	Hand clear to 4" (1) Ballast trace sand				
0.5	2.5		dry		0.5-2.5'	Ballast some F-M sand	0.5-2.5	0.2		U-2 (1-3)
2.5	4		dry		2.5-4'	Tan F-M sand little gravel trace silt	2.5-4	0		255 AM
4	6	8"	dry		4-6'	Tan Br F-M sand some gravel trace silt	4-6	0		
6	8	5"	-		6-8'	Tan F-M sand little gravel trace silt	6-8	0	6-10	U-2 (6-10)
8	10	3"	-		8-10'	Tan F-M sand little gravel trace silt	8-10	0		3:15
10	12	4"			10-12	Tan F sand and weathered rock	10-12	0		
12	14	5"			12-14	Tan F sand and weathered rock boulder at 13.5-15.5	12-14	0		
16	18				16-18	Brown Black F-M sand and silt trace organ	16-18	0		
18	20	5"			18-20	(clay) Tan silt some F sand trace gravel	18-20	0		
20	22	15"			20-22	Tan Fine Sand trace gravel boulder 24.5'				
						Coring 26-36				

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb./30" on 2" O.D. sampler			
		from	to	Material	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)				
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)				
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)				
GM (Silty Gravel)	SC (Clayey Sand)				
GP (Poorly Graded Gravel)	SM (Silty Sand)				
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)				
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-4	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: Train Rig B-25		Driller: Roger / Peter No Boring	
Date: 9/9/11/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. Billy Elder				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth:		trace: 0 to 10% some: 20 to 35%		Type	
Depth to Bedrock:		fines: 10 to 20% and: 35 to 50%		O.D. (inch)	
				I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
0	0.5'		Dry		0-0.5'	Hand cleared to 4'				
0.5	1.5'		Moist		0.5-2.5'	Ballast trace F-M sand	0.5-2.5'	0	(1-3)	SB-4 (1-3)
2.5	4'		Moist		2.5-4'	Brown/Black F-M sand and ballast trace silt	2.5-4'	0		
4	6'	18"	Dry		4-6'	Tan F-M sand some cobble trace silt	4-6'	0.1		
6	8'	3"	-		6-8'	Tan F-M sand little cobble trace silt	6-8'	0.2		
8	10'	4"	-		8-10'	Tan F-C sand trace cobble and silt	8-10'	0		
10	12'	2"	-		10-12'	Tan F-C sand trace cobble and silt	10-12'	0	(8-15)	SB-4 (8-15)
12	14'	3"	-		12-14'	Tan F-M sand trace cobble and silt	12-14'	0		
14	16'	12"	-		14-16'	Fine Silt Clay and Fine Sand trace cobble	14-16'	0		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE		ANNULAR FILL MATERIALS			Penetration Resistance-140 lb/30" on 2" O.D. sampler				
CH (Fat Clay)	CL (Lean Clay)	OH (Organic Clay / Silt of High Plasticity)	OL (Organic Clay / Silt of Low Plasticity)	PT (Highly Organic Soil / Peat)	SC (Clayey Sand)	SM (Silty Sand)	SP (Poorly Graded Sand)	MH (Elastic Silt)	ML (Silt)
		from	to	Material	# Blows/ft		Cohesive Consistence		
					0-4	very loose	0-2	very soft	
					5-9	loose	3-4	soft	
					10-29	medium den.	5-8	medium stiff	
					30-49	dense	15-30	stiff	
					50+	very dense	16-30	very stiff	
							31+	hard	

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-3	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21				Rig Type: Train Rig D-25	
Date: 9/9, 27/14		Hammer (weight [lb] / fall [inches])		Driller: Roger / Peter NE Boring	
HRP Rep.				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth:		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)	Soil Sample Details		
from	to						Depth	Reading	Interval	ID
0	0.75	-	Dry		0-0.75	Hand cleared to 4'				SB-3
0.75	4'		Sl. Moist		0.75-3'	Ballast free F-M sand	0.75	0.5	(1-3)	(1-3)
4	6	10"	Dry		4-6	Brown F-M sand and Ballast some silt little cobble	0.75-4	0.0		2:45am
6	8	8"	-		6-8	Tan F-M sand little cobble trace silt	4-6	0.0		
8	10	8"	-		8-10	Tan F-M sand little cobble trace silt	6-8	0.0		SB-3
10	12	14"	-		10-12	Gray weathered rock some F-M sand	8-10	0		(6-10')
15	17	8"	-		15-17	Tan F-C sand some cobble trace weathered rock	10-12	0		
							15-17	0		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb/30" on 2" O.D. sampler			
		Cohesionless Density		Cohesive Consistency	
	from to Material	# Blows/ft		# Blows/ft	
CH (Fat Clay)	OH (Organic Clay / Silt of High Plasticity)	0-4	very loose	0-2	very soft
CL (Lean Clay)	OL (Organic Clay / Silt of Low Plasticity)	5-9	loose	3-4	soft
GC (Clayey Gravel)	PT (Highly Organic Soil / Peat)	10-29	medium dense	5-8	medium stiff
GM (Silty Gravel)	SC (Clayey Sand)	30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)	SM (Silty Sand)	50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)	SP (Poorly Graded Sand)			31+	hard
MH (Elastic Silt)	SW (Well-Graded Sand)				
ML (Silt)					

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-8	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21		Rig Type: DZS Train Roc		Driller: Peizer/Patt	
Date: 9/27/14		Hammer (weight [lb] / fall [inches])		Casing	
HRP Rep. HRP BE				Sampler	
Ground Elevation:		PROPORTIONS		Core Barrel	
Total Boring Depth:		Type			
Depth to Bedrock:		trace: 0 to 10% some: 20 to 35%		O.D. (inch)	
		little: 10 to 20% and: 35 to 50%		I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 5"	Recov. (ft)	Molature	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
0	0.5'				0-0.5	Hand clear to 3"				
0.5	0.75		sl. moist		0.5-0.75	Ballast trace F-M sand	0.5-0.75	0.3	(1-3)	SB-8 (1-3')
0.75	3'		sl. moist		0.75-3	Black F-M sand some silt and Ballast Ballast and Black F-M sand some silt trace cobbles	0.75-3	0.2		1:59pm

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS	Penetration Resistance-140 lb./30" on 2" O.D. sampler				
		Cohesionless Density		Cohesive Consistence		
	from	to	# Blows/ft	# Blows/ft		
CH (Fat Clay)			0-4	very loose	0-2	very soft
CL (Lean Clay)			5-9	loose	3-4	soft
GC (Clayey Gravel)			10-29	medium dens	5-8	medium stiff
GM (Silty Gravel)			30-49	dense	15-Sep	stiff
GP (Poorly Graded Gravel)			50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)					31+	hard
MH (Elastic Silt)						
ML (Silt)						

Project: Metro North Railroad Bridge Atlantic Street		HRP ASSOCIATES, INC.		Test Boring/Monitor Well ID: SB-12	
Location: Stamford, CT		DRILLING/SOIL LOG		Sheet No. 1 of 1	
HRP# CTD3035.21				Rig Type: D25 truck mount	
Date: 10/7/14		Hammer (weight [lb] / fall [inches])		Driller: Roger / Pete NE Boring	
HRP Rep. BE				Casing	Sampler
Ground Elevation:		PROPORTIONS		Type	
Total Boring Depth:		trace: 0 to 10%	some: 20 to 35%	O.D. (inch)	
Depth to Bedrock:		little: 10 to 20%	and: 35 to 50%	I.D. (inch)	

Sampler Depth Interval (ft)	Sampler Blows per 6"	Recov. (ft)	Moisture	Soil Type	Contact Interval (ft)	Soil Description (proportions, grain size, etc.)	PID (ppm)		Soil Sample Details	
from	to						Depth	Reading	Interval	ID
0	0.50	-	Dry	-	(0-.50)	0-4' Hand Cleared Ballast and Black F.M sand little silt	0-5	0		SB-12 11-3
1.50	2.0	-	Dry		(.5-2.0)	Black F.M sand some ballast trace silt	1.5-2	0		8:05
2	4		Dry		(2-4)	Tan F.M sand some gravel trace silt	2-4	0		
4	6	18"	Dry		(4-6)	Tan F.M sand trace silt	4-6	0		
6	8	1"	-		(6-8)	Tan F.M sand trace silt and gravel	6-8	U		SB-12 (5-8)
8	10	4"	-		(8-10)	Brown F.M sand little gravel trace silt	8-9	0.2		8:70
10	12	5"	-		(10-12)	Brown F.M sand trace silt	10-12	0.0		
14	16		-		(12-14)	Brown F.M sand trace silt	12-14	0.2		
15	17	4"			15-17	Brown F.M sand trace silt	15-17	0.		
17	19	5"			17-19	Tan F.M sand some rock	17-19	0.3		
20	22	0'			20-22	-	20-22	0.2		
22	24				22-24	Tan silt some F.M sand and gravel	22-24	0.2		

from	to	Borehole Diam. (in.)	Casing Diam. (in.)	Casing Material	Riser Diam. (in.)	Riser Material	Screen Diam. (in.)	Screen Material	Screen Slot Size

SOIL TYPE	ANNULAR FILL MATERIALS			Penetration Resistance-140 lb/30" on 2" O.D. sampler			
	from	to	Material	Cohesionless Density		Cohesive Consistence	
				# Blows/ft		# Blows/ft	
CH (Fat Clay)				0-4	very loose	0-2	very soft
CL (Lean Clay)				5-9	loose	3-4	soft
GC (Clayey Gravel)				10-29	medium dense	5-8	medium stiff
GM (Silty Gravel)				30-49	dense	15-30	stiff
GP (Poorly Graded Gravel)				50+	very dense	16-30	very stiff
GW (Well-Graded Gravel)						31+	hard
MH (Elastic Silt)							
ML (Silt)							

TEST PIT LOG

TP-1

HRP Associates, Inc.
 197 SCOTT SWAMP RD
 FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
 Location: Atlantic st Bridge Stamford, CT
 Job No.: CTD3035.FW
 Date: 8/5/14
 Photos Taken: —
 Excavator Type: Airknife / backhoe
 Contractor: N.E. Borings Rate
 Ground Water Level: —
 No. Samples Taken:
 PID: 0
 Sample Storage: —
 Geologist/Technician: BE

TEST PIT LOCATION SKETCH MAP
 SEE map for location
 Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
TP-1	0	3	—	—	DRY	Air knife / vac'd out 2' x 2' x 3' test pit ~ 6" Asphalt Well on layered Rock protruding north Dip cut 2.75'. and silt. F. M. sand some succobble

SAMPLE TYPE
 Bucket = Excavator Bucket
 G = Grab
 HA = Hand Auger
 Comp = Composite Sample
 GW = Ground Water

MOISTURE
 D = Dry
 VM = Very Moist
 SM = Slightly Moist
 W = Wet (saturated)

PROPORTIONS USED
 0 - 10% Trace
 10 - 20% Little
 20 - 35% Some
 35 - 50% And

TEST PIT LOG

TP 2

HRP Associates, Inc.
197 SCOTT SWAMP RD
FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
Location: Atlantic st Bridge Stamford, CT
Job No.: CTD9035.FW
Date: 8/5/14
Photos Taken:
Excavator Type: Airknife/Wreck
Contractor: NE Boring etc
Ground Water Level: —
No. Samples Taken: —
PID: 0
Sample Storage: —
Geologist/Technician: BC

TEST PIT LOCATION SKETCH MAP
See Map
Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
19-2	0	1.5		—	Dry	Asphalt
	1.5	3'				Brown F- sand and M-L Cobble streaked.

SAMPLE TYPE
 Bucket = Excavator Bucket
 G = Grab
 HA = Hand Auger
 Comp = Composite Sample
 GW = Ground Water

MOISTURE
 D = Dry
 VM = Very Moist
 SM = Slightly Moist
 W = Wet (saturated)

PROPORTIONS USED
 0 - 10% Trace
 10 - 20% Little
 20 - 35% Some
 35 - 50% And

TEST PIT LOG

TP-3

HRP Associates, Inc.
 197 SCOTT SWAMP RD
 FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
 Location: Atlantic st Bridge Stamford, CT
 Job No.: CTD3035.FW
 Date: 8/4/14
 Photos Taken:
 Excavator Type: Art Kniff / Vert truck
 Contractor: NEBORING P&L
 Ground Water Level:
 No. Samples Taken: (1-2.5')
 PID: 0
 Sample Storage: ICE D
 Geologist/Technician: BE

TEST PIT LOCATION SKETCH MAP
See Map

Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
TP-3	0	1		-	-	Asphalt
TP-3	1	2.5'	(1-2.5')	Comp	Dry	Brown F-M sand Som 5-L cobble stacked little silt
						Footing at 2'
						TP-3 (1-2.5') 10:50 AM

SAMPLE TYPE

Bucket = Excavator Bucket
 G = Grab
 HA = Hand Auger

Comp = Composite Sample
 GW = Ground Water

MOISTURE

D = Dry
 VM = Very Moist
 SM = Slightly Moist
 W = Wet (saturated)

PROPORTIONS USED

0 - 10% Trace
 10 - 20% Little
 20 - 35% Some
 35 - 50% And

TEST PIT LOG

TP-4

HRP Associates, Inc.
 197 SCOTT SWAMP RD
 FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
 Location: Atlantic St Bridge Stamford, CT
 Job No.: CTD3035.FW
 Date: 8/4/14
 Photos Taken: _____
 Excavator Type: Air Knife Jackhammer
 Contractor: NE Boring etc
 Ground Water Level: _____
 No. Samples Taken: _____
 PID: _____
 Sample Storage: _____
 Geologist/Technician: _____

TEST PIT LOCATION SKETCH MAP

See Map

Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
TP-4	0	0.25	---	---	---	Asphalt
	0.25	1				Concrete
	1	2			Dry	Brown F.M.sand and M-L cobble stacked
	2	4.5			Dry	Flat cobble stacked with little F.M.sand 4' x 2' x 4.5'

<p>SAMPLE TYPE</p> <p>Bucket = Excavator Bucket G = Grab HA = Hand Auger</p> <p>Comp = Composite Sample GW = Ground Water</p>	<p>MOISTURE</p> <p>D = Dry VM = Very Moist</p> <p>SM = Slightly Moist W = Wet (saturated)</p>
<p>PROPORTIONS USED</p> <p>0 - 10% Trace 10 - 20% Little</p>	<p>PROPORTIONS USED</p> <p>20 - 35% Some 35 - 50% And</p>

TEST PIT LOG

TP-5

HRP Associates, Inc.
 197 SCOTT SWAMP RD
 FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
 Location: Atlantic St Bridge Stamford, CT
 Job No.: CTD3035.FW
 Date: 8/6/14
 Photos Taken: —
 Excavator Type: Air Knife / Vacuum
 Contractor: N.E. Brown
 Ground Water Level: —
 No. Samples Taken: —
 PID: 0
 Sample Storage: —
 Geologist/Technician: —

TEST PIT LOCATION SKETCH MAP

 Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
TP-5	0	1				Asphalt Concrete
	1	2.5			DM	BF-M sand some s-l cobble little silt - Foundation wall below 1.5'
	2.5	4			DM	Brown F-M sand on m-l flat cobble stacked.

SAMPLE TYPE

Bucket = Excavator Bucket
 G = Grab
 HA = Hand Auger

MOISTURE

Comp = Composite Sample
 GW = Ground Water

D = Dry
 VM = Very Moist

PROPORTIONS USED

SM = Slightly Moist
 W = Wet (saturated)

0 - 10% Trace
 10 - 20% Little
 20 - 35% Some
 35 - 50% And

TEST PIT LOG

TP-6

HRP Associates, Inc.
 197 SCOTT SWAMP RD
 FARMINGTON, CONNECTICUT 06032

Project/Client: CT DOT
 Location: Atlantic st Bridge Stamford, CT
 Job No.: CTD3035:FW
 Date: 8/6/14
 Photos Taken: -
 Excavator Type: Airknife / backhoe
 Contractor: N.E. Barron
 Ground Water Level: -
 No. Samples Taken: -
 PID: 0
 Sample Storage: -
 Geologist/Technician: BE

TEST PIT LOCATION SKETCH MAP

See Map

Test Pit Location Description:

Sample Number	Depth From Surface (feet)		Sample Location Within Test Pit	Sample Type	Moisture	Remarks (color, structure, grain size, staining, odor, PID)
	From	To				
TR-6	0	1				3" Asphalt 9" concrete
	1	2			Dry	Brown F-M sand some M-L ^{Flat} cobbles and silt NO Foundation
						to wall stacked Flat cobbles underneath wall
	2	4.5			Dry	Brown F-M sand and ^{Flat} cobbles little silt bottom of wall 3' below grade

Bucket = Excavator Bucket G = Grab HA = Hand Auger	SAMPLE TYPE Comp = Composite Sample GW = Ground Water	MOISTURE D = Dry VM = Very Moist SM = Slightly Moist W = Wet (saturated)	PROPORTIONS USED 0 - 10% Trace 10 - 20% Little 20 - 35% Some 35 - 50% And
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