

ADDENDUM NO. 1

Project No. 11-13

Nettleton Avenue Neighborhood Storm Drain Improvements Phase 1
Borough of Naugatuck, CT

April 18, 2011

Department of Public Works
246 Rubber Ave.
Naugatuck, CT 06770

Receipt of this addendum must be acknowledged on in Section B Proposal. Please recognize the following changes and Clarifications regarding the above contract bid:

- A1.1 Change all references to 54" High Density Polyethylene Pipe or 54" HDPE drainage pipe within the Project Manual and Bid Documents to read 54" Class IV Reinforced Concrete Pipe (RCP) or 54" 14 Gauge Aluminized Steel Corrugated Metal Pipe.
- A1.2 Replace Section B dated 3/21/11 with the attached Section B dated April 18, 2011 (revised). Note that this new bid proposal form provides for alternate bidding to construct either 54" Reinforced Concrete or 54" Corrugated Aluminized Steel Pipe where 54" HDPE had previously been required. All contractors are to provide pricing for both types of pipe so that the Owner can choose to use either.
- A1.3 Add technical section 02611 Reinforced Concrete Pipe
- A1.4 Add technical section 02620 Aluminized Corrugated Steel Pipe
- A1.5 Replace Detail 3 Typical Drainage Ditch Detail on plan sheet C-601 with attached Detail 3 Typical Drainage Ditch Detail dated 4/18/11.
- A1.6 A Soil Management Decision Tree is provided as additional information for bidder.
- A1.7 Replace the words "Non-Contaminated" with the word "Contaminated" in the first sentence of Method of Measurement in Item 19 in Section 01270 Measurement and Payment.
- A1.8 Change all references to 33% Bid Bond or Bid Security throughout the Project Manual and Bid Documents to read 5% Bid Bond or Bid Security.
- A1.9 Change all references to Contract Time and Liquidated Damages throughout the Project Manual and Bid Documents to agree with the following:
 - Ninety (90) Consecutive calendar days (from the Notice to proceed) will be allowed for the substantial completion of the project and liquidated damages charge to apply will be Five Hundred Dollars (\$500.00) per calendar day. An additional fourteen (14) consecutive calendar days will be allowed for completion of all work.
- A1.10 The Soil Boring logs from the site are provided as additional information for bidder.

James R. Stewart, P.E.
Borough Engineer

SECTION B

PROPOSAL

SECTION B

PROPOSAL

Borough of Naugatuck

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I

The undersigned, as Bidder, declares that no person or persons, other than those named herein, are interested in this Proposal; that this Proposal is made without collusion with any person, firm or corporation; that he has carefully examined the location of the proposed work, the proposed Form of Contract, and the Contract Drawings therein referred to; that no person or persons acting in any official capacity for the Owner is directly or indirectly interested therein or in any portion of the profit thereof; and that he proposes and agrees, if this Proposal is accepted, to execute the Form of Contract with the Owner; to provide all necessary equipment, tools, and other means of construction, and to do all work and furnish all materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Borough of Naugatuck as therein set forth, and that he will take in full payment therefore, the following unit prices and lump sums, to wit:

The Bidder acknowledges receipt of the following addenda:

Addendum No. _____	Dated: _____
Addendum No. _____	Dated: _____
Addendum No. _____	Dated: _____
Addendum No. _____	Dated: _____
Addendum No. _____	Dated: _____
Addendum No. _____	Dated: _____

The undersigned agrees that he shall execute the Contract within the ten (10) days after the date of award, and shall commence work within the ten (10) days after date of the Notice to Proceed and shall progress therewith to its entire completion within the time stipulated in the Contract.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) days after the scheduled closing time for receiving bids.

If this Proposal shall be accepted by the Owner and the undersigned shall fail to contract as aforesaid, and to give bonds in a sum equal to one hundred percent (100%) of the Contract price, as determined by the canvass of bids, and with surety or sureties satisfactory to the Owner within ten (10) days from the date of the award, then the Owner may, at its option, determine that

the Bidder has abandoned the Contract: thereupon, the Proposal and acceptance shall be null and void, and the bid security, for not less than five percent (5%) of the amount of the bid, accompanying this Proposal, shall become the property of the said Owner as liquidated damages for the delay and additional expense to the Owner caused thereby if said Proposal shall be rejected, or if said Proposal shall be accepted and the Bidder shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Proposal) and shall furnish a Bond for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Proposal, the accompanying bid security shall be returned to the undersigned making bid.

Seal
(if bid is by a Corporation)

Firm or Corporation _____

By: _____
(Duly Authorized)

Street Address _____

City _____ State _____ Zip _____

Telephone _____

Fax _____

Date

Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it –

(a) is, is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) is, is not a women-owned business. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) is, is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

Black Americans

Asian Pacific Americans

Hispanic Americans

Asian Indian Americans

Native Americans

Hasidic Jewish Americans

RESPECTFULLY SUBMITTED:

BY: _____
(type or print name and title)

(authorized signature of bidder)

List below, the business location, the mailing address, the telephone number and the name of the person of whom any inquiries are to be made.

If bid is submitted by a corporation, its seal must appear.

PROPOSAL FORMS

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I

PROPOSAL FORM

The undersigned hereby agrees to furnish the Borough of Naugatuck with the Nettleton Avenue Neighborhood Storm Drain Improvements, meeting the specifications and conditions of the Borough of Naugatuck, as stated in the bid documents.

The undersigned is aware that the Borough of Naugatuck may reject any and all bids in whole or in part; that the Borough may waive technical defects, irregularities and omissions; that the award will be based on the combination of items that will best serve the interest of the Borough; that the bid price does not include any taxes for which the Borough is not liable; and that acceptance of the bid will establish no exclusive contract by which the Borough of Naugatuck will be required to purchase from the undersigned.

The undersigned claims without reservation that his/her bid is made without collusion with any other person, individual or corporation.

Bid Item quantities for unit price bid items are not guaranteed. Final payment will be based on actual installed quantities. Items not specifically identified for payment in the Bid Form shall be assumed to be included in the work effort of other bid items and shall not be paid or requested for payment separately.

This bid was determined on the basis of the following unit prices:

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I For Proposed Schedule						
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
1	Mobilization	LS			1	
2	Test Pits	EA			N/A	

**Nettleton Avenue Neighborhood Storm Drain Improvements Phase I
For Proposed Schedule**

ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
3.1	Pavement Subbase - Processed Aggregate	CY			325	
3.2	Pavement Subbase - Gravel	CY			165	
4	Rock Excavation	CY			20	
5.1	Hot Mix Asphalt – Top Course	Ton			270	
5.2	Hot Mix Asphalt – Binder Course	Ton			170	
6	Concrete Sidewalk	SY			830	
7	Remove & Reset Granite Curb	LF			N/A	
8	Painted Traffic Lines	LF			300	
9.1	Manhole – 4' Diameter	VF			25	
9.2	Manhole – 8' Diameter	VF			35	
9.3	Manhole – 10' Diameter	VF			65	
10.1	Catch Basin – Single Grate	VF			90	
10.2	Type C Catch Basin – Type I	VF			20	
10.3	Type C Catch Basin – Type II	VF			45	

**Nettleton Avenue Neighborhood Storm Drain Improvements Phase I
For Proposed Schedule**

ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
10.4	Type C Catch Basin - Type I Curb Top	EA			6	
10.5	Type C Catch Basin - Type II Curb Top	EA			3	
11.1	HDPE Pipe – 12" Diameter	LF			20	
11.2	HDPE Pipe – 15" Diameter	LF			45	
11.3	HDPE Pipe – 18" Diameter	LF			225	
11.4	HDPE Pipe – 24" Diameter	LF			150	
11.5A	CL IV Reinforced Concrete Pipe - 54" Diameter	LF			610	
11.5B	14 Gauge Aluminized Steel Corrugated Metal Pipe – 54" Diameter	LF			610	
12	Cold Reclaimed Asphalt Pavement	SY			1800	
13.1	Curb - Granite	LF			N/A	
13.2	Curb – Precast Concrete	LF			850	
13.3	Curb – Bituminous Concrete	LF			750	
14	Flow Fill	CY			10	

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I For Proposed Schedule						
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
15	Concrete Collar	EA			6	
16	QA/QC Testing	Allow	N/A	Five thousand dollars	N/A	\$5,000.00
17	Police Detail	Allow	N/A	Ten thousand dollars	N/A	\$10,000.00
18	Removal of Non-Contaminated Stockpiled Soils	CY			2500	
19	Removal of Contaminated Stockpiled Soils	Tons			850	

TOTAL FOR NETTLETON AVENUE NEIGHBORHOOD STORM DRAIN IMPROVEMENTS USING ALL ITEMS EXCEPT 11.5B.

IN FIGURES \$ _____
IN WORDS _____

TOTAL FOR NETTLETON AVENUE NEIGHBORHOOD STORM DRAIN IMPROVEMENTS USING ALL ITEMS EXCEPT 11.5A.

IN FIGURES \$ _____
IN WORDS _____

SECTION 02611 REINFORCED CONCRETE PIPE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the installation of reinforced concrete piping systems.
- B. All piping, fittings, and appurtenances shall be new, clean and in accordance with material specifications. In no instance shall second-hand or damaged materials be acceptable.

1.2 REFERENCES

- A. "State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction."
- B. "American Concrete Pipe Association."
- C. American Society of Testing and Materials (ASTM).

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog cuts, specifications and installation instructions.

1.4 QUALITY ASSURANCE

- A. Product Markings: Plainly and permanently mark each pipe length with the following information:
 - 1. Pipe class diameter and specification designation
 - 2. Date of manufacture
 - 3. Name or trademark of manufacturer
 - 4. Identification of plant
- B. Basis of Acceptance: Conform to ASTM C76 for basis of acceptance of pipe supplied under this section. Submit certification that the testing machine has been calibrated in accordance with ASTM E4 at a minimum of once per year.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage:
 - 1. Deliver to and store pipe, fittings, specials, appurtenances and accessories within the work limits shown on the Drawings.
 - 2. Exercise special care during delivery and storage to avoid damage to the products.
 - 3. Store products in locations where unnecessary handling is avoided and where they will not interfere with the Owner's operations, construction operations or public travel.
- B. Handling:

1. Handle pipe, fittings, specials appurtenances and accessories carefully with approved handling devices in strict conformance with the manufacturer's recommendations.
 2. Do not drop products off trucks, or otherwise drag, roll or skid products.
- C. Products cracked, gouged, chipped, dented or otherwise damaged will not be approved and shall be removed from the site and replaced at the Contractor's expense, unless the product can be repaired in a manner acceptable to the manufacturer and Engineer. All repairs shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Pipe and Fittings:

1. Provide only new reinforced concrete pipe and fittings. In no case will secondhand or damaged material be acceptable.
2. Conform to the requirements of ASTM C76, Class IV, Wall B.

B. Joints:

1. Provide bell and spigot joints, sealed with an elastomeric gasket conforming to the requirements of ASTM C443. The bell and spigot shall be designed to enclose the gasket on all surfaces when the joint is in its final position.
2. Joints shall be designed so as to permit effective jointing to reduce leakage and infiltration and to permit placement without appreciable irregularities in the flow line.

C. Flared End Sections:

1. Use standard design flared end sections manufactured of the same material as specified for pipe, by the same manufacturer.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect all pipe and fittings prior to laying in the trench. Remove defective pipe and fittings from the site.
- B. Do not backfill until inspection by the Engineer, unless otherwise approved by the Engineer.

3.2 INSTALLATION

- A. Trenching, backfilling and compaction shall conform to Section 02221 "Trenching, Backfilling, and Compaction."
- B. Pipe installation shall conform to Section 02610 "Buried Pipe Installation."

END OF SECTION 02611

SECTION 02620 ALUMINIZED CORRUGATED STEEL PIPE

PART 1 - GENERAL

1.1 SUMMARY

- A. The Contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, the installation of aluminized corrugated steel piping systems as shown on the Drawings and specified herein.
- B. All piping, fittings, and appurtenances shall be new, clean and in accordance with material specifications. In no instance shall second-hand or damaged materials be acceptable.

1.2 REFERENCES

- A. "State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction."
- B. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)"
- C. American Society of Testing and Materials (ASTM).

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog cuts, specifications and installation instructions for both pipe and coupling system.
 - 2. Submit fabrication and assembly details for all fittings and fabrications.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage:
 - 1. Deliver to and store pipe, fittings, specials, appurtenances and accessories within the work limits shown on the Drawings.
 - 2. Exercise special care during delivery and storage to avoid damage to the products.
 - 3. Store products in locations where unnecessary handling is avoided and where they will not interfere with the Owner's operations, construction operations or public travel.
- B. Handling:
 - 1. Handle pipe, fittings, specials appurtenances and accessories carefully with approved handling devices in strict conformance with the manufacturer's recommendations.
 - 2. Do not drop products off trucks, or otherwise drag, roll or skid products.
- C. Products cracked, gouged, chipped, dented or otherwise damaged will not be approved and shall be removed from the site and replaced at the Contractor's expense, unless the product can be repaired in a manner acceptable to the manufacturer and Engineer. All repairs shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Pipe:

1. Pipe shall be helically corrugated aluminized steel pipe (ACSP) having a continuous spiral lock seam, conforming to the requirements of AASHTO M-36.
2. All piping shall be annularly rolled at the ends.
3. Pipe shall be formed from sheet conforming to the requirements of AASHTO M-274.
4. Pipe shall be 14 gauge aluminized steel, type 2.

B. Couplings:

1. Field joints shall be made with steel band couplers of the same alloy as that used for the pipe.
2. Band couplers shall be one gauge lighter than that of the pipe, with the exception of 18 gauge pipe which shall have 18 gauge couplers.
3. Band couplers shall have corrugations that match the pipe corrugations. One piece or two piece band couplers are acceptable for use in making filed joints. Band couplers shall be of the hugger type.
4. Band width shall have the following minimum widths:
 - a. Band Width Pipe Diameter: 7" for 12" through 30" pipe
12" for 30" through 72" pipe
5. Half inch diameter galvanized steel bolts and nuts shall be used on coupling bands for pipe diameters 12" and greater. 3/8" diameter is acceptable for diameters less than 12".
6. Any aluminum in contact with concrete shall be thoroughly coated with zinc chromate primer, which shall be permitted to dry prior to concrete placement.

PART 3 - EXECUTION

3.1 INSPECTION

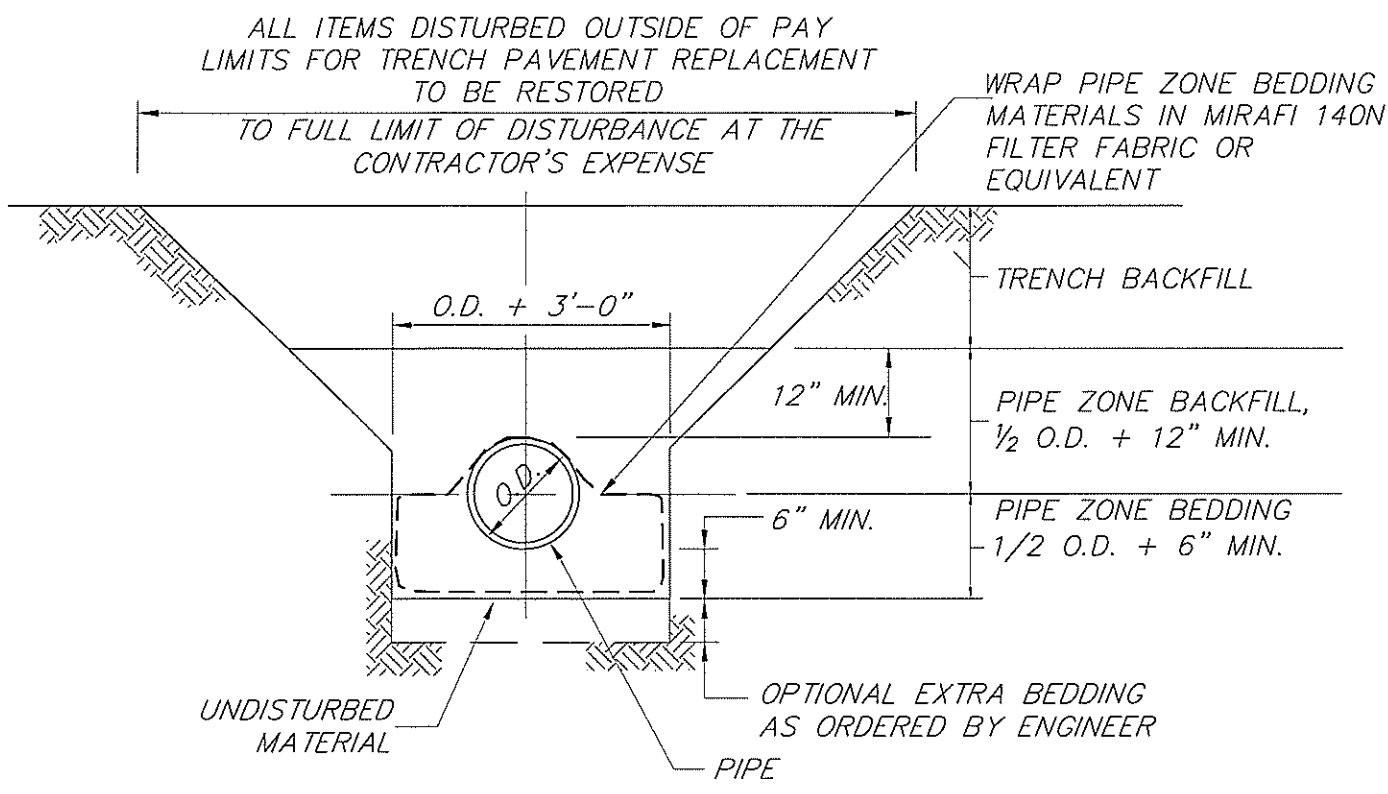
- A. Inspect all pipe and fittings prior to laying in the trench. Remove defective pipe and fittings from the site.
- B. Do not backfill until inspection by the Engineer, unless otherwise approved by the Engineer.

3.2 INSTALLATION

- A. Trenching, backfilling and compaction shall conform to Section 02221 "Trenching, Backfilling, and Compaction."
- B. Pipe installation shall conform to Section 02610 "Buried Pipe Installation."

END OF SECTION 02611

4/18/11 10:22:08 AM User: Taylor, Matthew Date: 4/18/11 10:22:08 AM PLOTTED: 4/18/2011 10:22:08 AM



NOTES:

1. BACKFILL FOR ALL PIPE TRENCHES SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 6 INCHES IN THICKNESS, PRIOR TO COMPACTION.
2. BACKFILL FOR ALL PIPE TRENCHES SHALL BE COMPACTED TO A MINIMUM DRY DENSITY OF 95% OF AASHTO T-99 STANDARD.

3

TYPICAL DRAINAGE TRENCH DETAIL

SECTION

SCALE: N.T.S.

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DETAIL 3 SHEET C-601

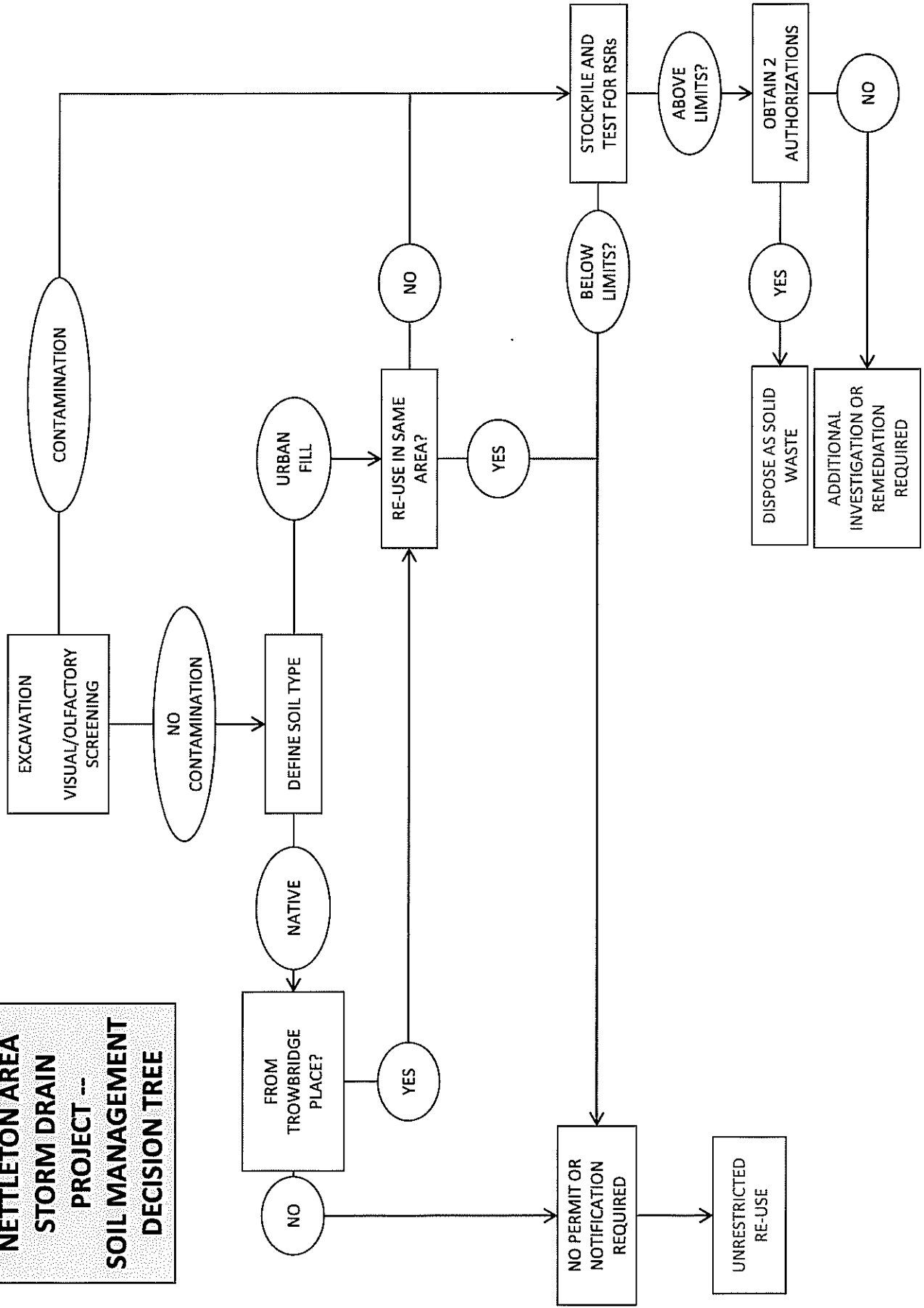
STORM DRAIN IMPROVEMENTS
 NAUGATUCK, CT.

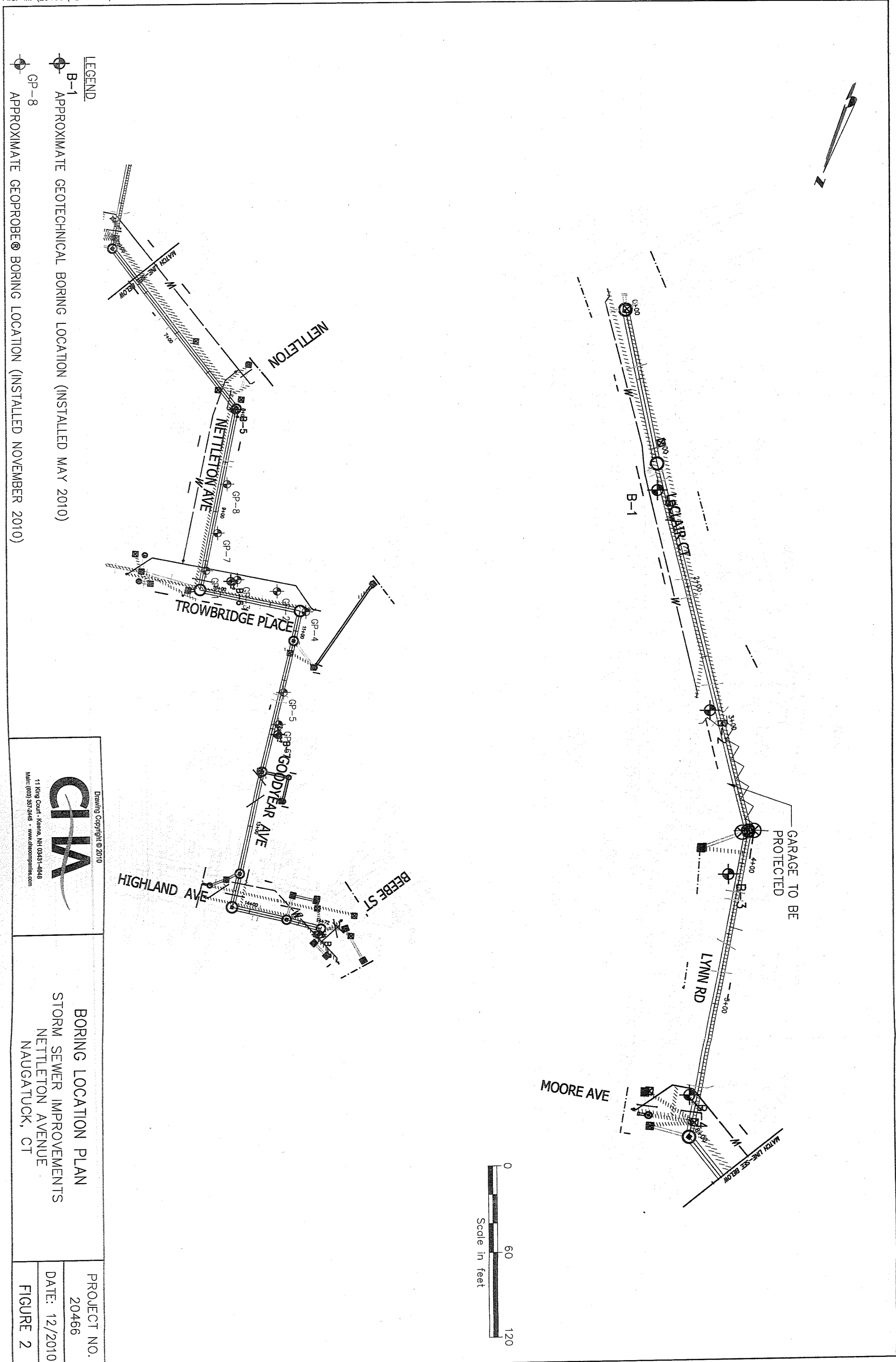
PROJECT NO.
 20466

DATE: 4/18/11

FIGURE 3

**NETTLETON AREA
STORM DRAIN
PROJECT --
SOIL MANAGEMENT
DECISION TREE**






LEGEND

B-1 APPROXIMATE GEOTECHNICAL BORING LOCATION (INSTALLED MAY 2010)

GP-8

APPROXIMATE GEOPROBE BORING LOCATION (INSTALLED NOVEMBER 2010)

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 Mail: (603) 357-2445 • www.ctmcompilers.com

BORING LOCATION PLAN
 STORM SEWER IMPROVEMENTS
 NETTLETON AVENUE
 NAUGATUCK, CT

PROJECT NO.
 20466

DATE: 12/2010

FIGURE 2



**Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-1**

Page 1 of 1

PROJECT NUMBER: 20486.2040.1510		DRILL FLUID: None		DRILLING METHOD: 3" SSA/3.25" HSA	
LOCATION: Naugatuck, Connecticut		DATE: 4-26-10		TIME: 9:45 AM	
CLIENT: Borough of Naugatuck		WATER LEVEL OBSERVATIONS			
CONTRACTOR: New England Boring Contractors		DURING DRILLING		8	
DRILLER: J. Leavitt		INSPECTOR: K. Adnams		N/A	
START DATE and TIME: 4/26/2010 9:30:00 AM		WATER CASING		HOLE	
FINISH DATE and TIME: 4/26/2010 10:15:00 AM		DEPTH		BOTTOM	
SURFACE ELEV: 274.00 (ft. Estimated)		TYPE		DATA	
CHECKED BY: C. Symmes					

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	0.7	8-11-15-18	26			f.m.c. SAND Some f. Gravel, trace silt, brown, medium compact, moist (FILL)	270		
S-2	2	0.6	16-12-10-10	22			f.m.c. SAND And f.c. Gravel, trace silt, brown, medium compact, moist (FILL)	270		
S-3	2	1	4-3-5-8	8			f.m.c. SAND little f. gravel, trace silt, brown, loose, moist (FILL)	270		
S-4	2	0.5	7-6-13-10	19			f.c. GRAVEL, little f.m.c. sand, trace silt, brown, medium compact, wet (FILL)	265	Drilling method changed to 3.25" HSA at a depth of 7'. Color change in auger cuttings at a depth of about 7'. Possible wash.	
S-5	1.5	0.7	4-3-7	10			f.m.c. SAND Some f.c. Gravel, trace silt, brown, loose, wet (FILL)	265	Spoon bouncing at a depth of 10.5'. Boring terminated upon an unknown obstruction.	
							End of Boring at 10.5 ft	245		



**Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-2**

PROJECT NUMBER: 20466.2040.1510
 LOCATION: Naugatuck, Connecticut
 CLIENT: Borough of Naugatuck
 CONTRACTOR: New England Boring Contractors
 DRILLER: J. Leavitt
 INSPECTOR: K. Adams
 START DATE and TIME: 4/26/2010 10:30:00 AM
 FINISH DATE and TIME: 4/26/2010 10:40:00 AM
 SURFACE ELEV: 279.00 (ft. Estimated)
 CHECKED BY: C. Symmes

DRILL FLUID: None		DRILLING METHOD: 3.25" HSA	
DATE	TIME	READING TYPE	WATER CASING DEPTH (ft)
4-26-10	10:40 AM	During Drilling	N/A
WATER LEVEL OBSERVATIONS			HOLE BOTTOM (ft)
			2.7

SAMP./CORE NUMBER	SAMP. ADV. (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	N _v Value or RQD%	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	1.7	0.7	5-10-5-49/2"	15	275	[Hatched Box]	ASPHALT f.m.c. SAND Some f.c. Gravel, trace silt, brown, medium compact, moist (FILL) DEBRIS (FILL) End of Boring at 2.7 ft	275	Debris in sample S-1 consisted of cinders, glass, nails, etc. Auger and spoon refusal at a depth of 2.67'. Boring offset 3' south to location B-2A.	
					25			250		
					20			255		
					15			260		
					10			265		
					5			270		



PROJECT NUMBER: 20466.2040.1510

LOCATION: Naugatuck, Connecticut

CLIENT: Borough of Naugatuck

CONTRACTOR: New England Boring Contractors

DRILLER: J. Leavitt

INSPECTOR: K. Adhams

START DATE and TIME: 4/26/2010 10:40:00 AM

FINISH DATE and TIME: 4/26/2010 1:15:00 PM

SURFACE ELEV.: 279.00 (ft. Estimated) CHECKED BY: C. Symmes

Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
SOLE NUMBER B-2A

DRILL FLUID: None		DRILLING METHOD: 3.25" HSA	
DATE	TIME	READING TYPE	WATER CASING HOLE DEPTH (ft)
4-26-10	12:00 PM	During Drilling	15
			15
			17

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	Value of RQD %	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-2	2	0.7	3-1-0-1	1	5		DEBRIS (FILL) f.m.c. SAND And Silt, gray, very loose, moist (FILL)	275	Debris in sample S-2 consisted of cinders, glass, nails, etc.	
S-3	1.7	0.6	14-7-14-54/3"	21	5		f.m.c. SAND Some f.c. Gravel, brown, medium compact, moist (FILL) SILT, little f.m.c. sand, black, medium compact, moist (FILL)	270	S-3 sampled for environmental testing.	
S-4	2	1.5	11-23-21-10	44	5		f. SAND And silty Clay gray, compact, moist (SC-TILL)	270	Silt layers in sample S-4 are slightly mottled.	
S-5	2	0	4-8-6-8	14	10		Similar Soil (SC-TILL) f.m.c. SAND And f.c. Gravel, little silt, brownish gray, compact, moist (SP-TILL)	265		
S-6	2	1.2	12-22-14-32	36	15		f.m.c. SAND And silty Clay, little f.c. gravel, gray, compact, moist (SC-TILL)	265		
S-7	2	1.5	23-36-41-54	77	15		f.m.c. SAND Some Silt, Some f.c. Gravel, brown, very compact, wet (SM-TILL)	260	Augers grinding at a depth of 17'.	
S-8	2	2	11-19-59-37	78	20		f.m.c. SAND Some f.c. Gravel, trace silt, brown, very compact, wet (SP-TILL)	260		
S-9	0.5	0.5	90/6"	R	25		f.m.c. SAND trace silt, brown, very compact, wet (SP-TILL) f.m.c. SAND And f.c. Gravel, little silt, brown, very compact, wet (SM-TILL)	255	Very hard drilling at a depth of 28'. Auger refusal at a depth of 29'. Inferred as the top of bedrock.	
End of Boring at 29 ft								250		



PROJECT NUMBER: 20466.2040.1510

LOCATION: Naugatuck, Connecticut

CLIENT: Borough of Naugatuck

CONTRACTOR: New England Boring Contractors

DRILLER: J. Leavitt

INSPECTOR: K. Adhams

START DATE and TIME: 4/27/2010 8:15:00 AM

FINISH DATE and TIME: 4/27/2010 10:00:00 AM

SURFACE ELEV: 284.00 (ft. Estimated)

CHECKED BY: C. Symmes

Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
SOLE NUMBER B-3

Page 1 of 1

DRILL FLUID: None

DRILLING METHOD: 3.25" HSA

DATE	TIME	READING TYPE	WATER CASING DEPTH (ft)	WATER BOTTOM (ft)	HOLE BOTTOM (ft)
4-27-10	9:15 AM	During Drilling	15	15	17

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	N Value or RQD %	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1.4	8-13-7-6	20		20		f.m.c. SAND little silt, little f.c. gravel trace brick, brown, medium compact, moist (FILL)	280		
S-2	2	0.7	3-7-13-7	20		5		Similar Soil (FILL)	280	S-3:PID=0	
S-3	2	1.2	7-4-3-2	7		5		f.m.c. SAND Some Silt, little f.c. gravel, trace clinders, brown, loose, moist (FILL)	275		
S-4	2	1	5-4-4-29	8		5		Similar Soil (FILL)	275		
S-5	2	1.2	13-8-13-14	21		10		f.m.c. SAND Some clayey Silt, little f.c. gravel, tan, medium compact, moist (SM-TILL)	275		
S-6	2	1.1	10-6-3-21-18	84		10		f.m.c. SAND Some Silt, Some f.c. Gravel, brownish gray, very compact, moist (SM-TILL)	270		
S-7	2	1.1	51-52-31-20	83		15		becomes wet (SM-TILL)	270		
S-8	1.2	0.7	17-80-100/2"	R		20		Similar Soil (SM-TILL)	265		
End of Boring at 23.5 ft									260	Auger refusal at a depth of 23.5'. Inferred as the top of bedrock.	
									255		



Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-4

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PROJECT NUMBER: 20466.2040.1510	DRILL FLUID: None	DRILLING METHOD: 3.25" HSA
LOCATION: Naugatuck, Connecticut	CLIENT: Borough of Naugatuck	
CONTRACTOR: New England Boring Contractors	DRILLER: J. Leavitt	INSPECTOR: K. Adhams
START DATE and TIME: 4/26/2010 1:45:00 PM	FINISH DATE and TIME: 4/26/2010 2:20:00 PM	
SURFACE ELEV.: 288.00 (ft. Estimated)	CHECKED BY: C. Symmes	

DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
4-26-10	2:20 PM	During Drilling	None	10	14

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1.3	8-10-9-8	19			ASPHALT	285		
S-2	2	0.2	9-10-8-7	18			f.m.c. SAND little f. gravel, trace silt, brown, medium compact, moist (FILL) Similar Soil (FILL)	285		
S-3	2	0.7	6-5-5-6	10			f.m.c. SAND Some f.c. Gravel, little silt, brown, loose, moist (SM-TILL)	280		
S-4	2	1.3	4-6-6-11	12			f.m.c. SAND Some clayey Silt, gray, medium compact, moist (SM-TILL)	280		
S-5	2	0.9	5-5-19-25	24			f.m.c. SAND Some Silt, Some f.c. Gravel, brownish gray, medium compact, moist (SM-TILL)	275		
S-6	2	2	21-22-19-30	41			f.m.c. SAND Some f.c. Gravel, trace silt, brown, compact, moist (SP-TILL) f.m.c. SAND Some Silt, Some f.c. Gravel, brownish gray, medium compact, moist (SM-TILL) End of Boring at 14 ft	275		



**Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-5**

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PROJECT NUMBER: 20466.2040.1510	DRILL FLUID: None	DRILLING METHOD: 3.25" HSA
LOCATION: Naugatuck, Connecticut	DATE: 4-26-10	TIME: 3:00 PM
CLIENT: Borough of Naugatuck	WATER LEVEL OBSERVATIONS	READING TYPE: During Drilling
CONTRACTOR: New England Boring Contractors	DRILLER: J. Leavitt	INSPECTOR: K. Adriams
START DATE and TIME: 4/26/2010 2:40:00 PM	FINISH DATE and TIME: 4/26/2010 3:00:00 PM	WATER DEPTH (ft): none
SURFACE ELEV: 297.00 (ft, Estimated)	CHECKED BY: C. Symmes	CASING DEPTH (ft): 5
		HOLE BOTTOM (ft): 6.3

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	N ₆₀ Value or ROD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	2	7-8-8-6	16		5		ASPHALT	295	S-1 sampled for environmental testing.	
S-2	2	0.5	9-18-14-14	32		5		f. SAND Some Silt, trace c. sand, tan, compact, moist (SM-TILL)	290	Auger refusal at a depth of 6.3'. Inferred as top of bedrock.	
S-3	1	1.2	12-15-50'3"	R		5		f.m.c. SAND Some Silt, Some f.c. Gravel, brown, very compact, moist (SM-TILL) End of Boring at 6.3 ft	270		



Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-6

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PROJECT NUMBER: 20466.2040.1510

LOCATION: Naugatuck, Connecticut

CLIENT: Borough of Naugatuck

CONTRACTOR: New England Boring Contractors

DRILLER: J. Leavitt

INSPECTOR: K. Adnams

START DATE and TIME: 4/27/2010 10:30:00 AM

FINISH DATE and TIME: 4/27/2010 11:15:00 AM

SURFACE ELEV.: 306.00 (ft. Estimated) CHECKED BY: C. Symmes

DRILL FLUID: None

DRILLING METHOD: 3.25" HSA

DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
4-27-10	11:00 AM	During Drilling	12	10	13.7

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	N ₆₀ Value or RQD%	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1.4	16-6-6-4	12	305		ASPHALT	305	S-1: PID=1.3	
S-2	2	0.7	3-4-9-8	13	300		f.m.c. SAND little silt, little f.c. gravel, brown/black, medium compact, moist (FILL) Similar Soil (FILL)	300	S-2: PID=4.5 S-2 sampled for environmental testing.	
S-3	2	1.5	2-6-15-19	21	295		f.m.c. SAND And Silt, black, medium compact, moist (FILL) f.m.c. SAND Some Silt, Some f. Gravel, tan, medium compact, moist (SM-TILL) becomes compact (SM-TILL)	295	S-3: PID=2.4	
S-4	2	1.7	15-19-17-15	36	290		No Recovery	290	S-4: PID=21.1	
S-5	2	0	5-10-12-15	22	285		No Recovery	285		
S-6	2	1.5	19-18-32-100/2'	50	280		f.m.c. SAND Some Silt, Some f.c. Gravel, brown, compact, moist (SM-TILL) End of Boring at 13.7 ft	280		∇



PROJECT NUMBER: 20466, 2040, 1510
 LOCATION: Naugatuck, Connecticut

Borough of Naugatuck
Nettleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-7

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CLIENT: Borough of Naugatuck
 CONTRACTOR: New England Boring Contractors
 DRILLER: J. Leavitt
 INSPECTOR: K. Adnams
 START DATE and TIME: 4/26/2010 3:20:00 PM
 FINISH DATE and TIME: 4/26/2010 4:00:00 PM
 SURFACE ELEV.: 314.00 (ft. Estimated)
 CHECKED BY: C. Symmes

DRILL FLUID: None		DRILLING METHOD: 3.25" HSA	
DATE	TIME	READING TYPE	WATER DEPTH (ft)

SAMP./CORE NUMBER	SAMP. ADV. LEN. CORE	RECOVERY	Blows Per 6" on Split Spoon Sampler	N ₆₀ Value or ROD%	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	1.5	0.7	4-4-9	13			ASPHALT		S-1: PID=0 Sample S-1 has a slight petroleum odor.	
S-2	2	0.7	32-23-44-24	67			becomes very compact (FILL)	310	S-2/S-3 sampled for environmental testing.	
S-3	2	0.7	6-12-27-29	39			becomes compact (FILL)			
S-4	2	1.5	16-12-20-21	32			f.m.c. SAND Some Silt, little f.c. gravel, brown, compact, moist (SM-TILL)	305		
S-5	2	1	28-35-51-56	86			becomes very compact (SM-TILL)			
S-6	2	1.2	47-52-75-76	R			Similar Soil (SM-TILL)			
							End of Boring at 14 ft	300		
								285		



Borough of Naugatuck
Netleton Ave Storm Sewer
SUBSURFACE LOG
HOLE NUMBER B-8

PROJECT NUMBER: 20466.2040.1510
 LOCATION: Naugatuck, Connecticut
 CLIENT: Borough of Naugatuck
 CONTRACTOR: New England Boring Contractors
 DRILLER: J. Leavitt
 INSPECTOR: K. Achams
 START DATE and TIME: 4/27/2010 11:30:00 AM
 FINISH DATE and TIME: 4/27/2010 12:30:00 PM
 SURFACE ELEV.: 322.00 (ft. Estimated)
 CHECKED BY: C. Symmes

DRILL FLUID: None		DRILLING METHOD: 3.25" HSA	
DATE	TIME	READING TYPE	WATER CASING DEPTH BOTTOM (ft)
4-27-10	11:30 AM	During Drilling	1
WATER LEVEL OBSERVATIONS			N/A
			3

SAMP./CORE NUMBER	SAMP. ADV. (ft)	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	Value of RQD %	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1	5-8-4-6	12	320	ASPHALT	f.g. GRAVEL and c. SAND (little silt, dark brown, medium compact, moist) (FILL)			∇
S-2	2	0.1	17-13-13-14	26	315		Similar Soil (FILL)		Occasional c. sand seams in glacial till.	
S-3	2	1.5	7-9-8-10	17	310		f.m. c. SAND Some clayey Silt, little f.c. gravel, brown, medium compact, wet (SM-TILL)			
S-4	2	1.4	10-5-9-30	14	305		Similar Soil (SM-TILL)			
S-5	2	1.6	5-15-4-3-27	58	300		becomes very compact (SM-TILL)			
S-5	2	1.6	5-15-4-3-27	58	300		Similar Soil (SM-TILL)			
S-6	2	1.2	15-41-35-38	76	295		End of Boring at 14 ft			



CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 20466

12/15/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-1

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LOCATION: Borough of Naugatuck, Connecticut
 CLIENT: Borough of Naugatuck
 CONTRACTOR: Aquifer Drilling and Testing
 DRILLER: R. Buley
 INSPECTOR: S. Rosecrans
 START DATE and TIME: 11/18/2010
 FINISH DATE and TIME: 11/18/2010
 SURFACE ELEV.:
 CHECKED BY: S. Newell

DRILL FLUID:		DRILLING METHOD: Geoprobe			
DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	WATER LEVELS AND/OR WELL DATA	
WATER LEVEL OBSERVATIONS DURING DRILLING					

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	2.8	0.0			2		grades to little silt, trace f.c. gravel			
			0.0					ASPHALT (FILL)			
			0.0					f.m.c. SAND , little f.c. gravel, trace silt, brown, moist (FILL)			
			0.0					f.m.c. SAND , little f.c. gravel, trace silt, brown, moist (FILL)			
			0.0					f.m. SAND , some Silt, trace organics, black/brown, moist (SM)		Soil sample collected from 4' to 4.6' at 09:50	
S-2	4	3.2	0.0			6		f.m.c. SAND , some Silt, little f.c. gravel, tan/brown, moist (SM)			
			0.0					grades to brown			
S-3	2.3	2.3				10		End of Boring at 10.3 ft		Refusal at 10.25'	



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Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
SOLE NUMBER GP-2

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PROJECT NUMBER: 20466

LOCATION: Borough of Naugatuck, Connecticut

CLIENT: Borough of Naugatuck

CONTRACTOR: Aquifer Drilling and Testing

DRILLER: R. Buley

INSPECTOR: S. Rosecrans

START DATE and TIME: 11/18/2010

FINISH DATE and TIME: 11/18/2010

DRILL FLUID:		DRILLING METHOD: Geoprobe		
DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	SOLE BOTTOM (ft)

WATER LEVEL OBSERVATIONS DURING DRILLING

CHECKED BY: S. Newell

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (%)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	2.5	0.0	0.0		2		ASPHALT (FILL) f.m.c. SAND, little f.c. gravel, brown/black, moist (FILL) c. GRAVEL , little f.m.c sand, gray, moist (FILL) f.m.c. SAND , some Fill (clinders/ash), black/white, moist (FILL) f.m.c. SAND , little silt, trace f.c. gravel, brown, moist (FILL)		Soil sample collected from 4' to 4.6' at 10:35	
S-2	4	2.6	0.0	0.0		4		c. GRAVEL , little f.m.c sand, brown, moist (FILL) f.m. SAND , some Silt, trace organics, black/brown, moist (SM) f.m.c. SAND , some Silt, little f.c. gravel, tan/brown, moist (SM)			
S-3	4	4	0.0	0.0		8					
S-4	1.6	1.6	0.0	0.0		12				1" temporary PVC groundwater monitoring well installed to 13.6'. Groundwater sample collected at 15:45. Refusal at 13.6'	
End of Boring at 13.6 ft											



CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 20466

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Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
SOLE NUMBER GP-3

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LOCATION: Borough of Naugatuck, Connecticut		DRILL FLUID:		DRILLING METHOD: Geoprobe	
CLIENT: Borough of Naugatuck	CONTRACTOR: Aquifer Drilling and Testing	DRILLER: R. Buley	INSPECTOR: S. Rosecrans	DATE	TIME
START DATE and TIME: 11/18/2010	FINISH DATE and TIME: 11/18/2010	WATER LEVEL OBSERVATIONS DURING DRILLING		WATER DEPTH (ft)	CASING BOTTOM (ft)
SURFACE ELEV: _____		CHECKED BY: S. Newell		HOLE BOTTOM (ft)	

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	3	0.0			2		ASPHALT (FILL)			
			0.0			4		f.m.c. SAND, little f.c. gravel, brown/black, moist (FILL)		Soil sample collected from 2' to 2.6' at 11:30	
			0.0			4		c. GRAVEL, trace f.m. sand, gray, moist (FILL)		Soil sample collected from 2' to 3' at 11:40 for TCLP analysis from a second soil boring installed immediately adjacent to GP-3 in order to obtain additional sample volume.	
			0.0			6		f.m.c. SAND, some silt, trace organics, black/brown, moist (SM)			
S-2	4	3.3	0.0			6		f.m.c. SAND, some silt, little f.c. gravel, brown, moist (SM)			
			0.0			8		End of Boring at 10.5 ft		Refusal at 10.5'	
S-3	2.5	2.5	0.0			10					



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PROJECT NUMBER: 20466
12/15/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-4
Page 1 of 1

LOCATION: Borough of Naugatuck, Connecticut	DRILL FLUID:		
CLIENT: Borough of Naugatuck	DATE	TIME	DRILLING METHOD: Geoprobe
CONTRACTOR: Aquifer Drilling and Testing	WATER LEVEL OBSERVATIONS DURING DRILLING		
DRILLER: R. Buley	INSPECTOR: S. Rosecrans		
START DATE and TIME: 11/18/2010			
FINISH DATE and TIME: 11/18/2010			
SURFACE ELEV:	CHECKED BY: S. Newell		

SAMP./CORE NUMBER	SAMP. ADV. (ft)	LEN. CORE (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	2.5	0.0	0.0		2		grades to little silt, trace f.c. gravel, brown			
S-2	4	2.9	0.0	0.0		4		f.m.c. SAND, little f.c. gravel, brown/black, moist (FILL)			
			0.0	0.0		4		f.m. SAND, some Silt, trace organics, brown, moist (FILL)			
			0.0	0.0		4		f.m.c. SAND, little silt, trace f.c. gravel, brown, moist (FILL)			
			0.0	0.0		4		f.c. GRAVEL, trace f.m. sand, white, moist (FILL)			
			0.0	0.0		4		f.m.c. SAND, some Silt, little f.c. gravel, brown, moist (SM)			
			2.1	2.1		8		slight asphalt/petroleum odor		Soil sample collected from 8' to 9.2' at 12:35	
S-3	2.5	2.5	0.0	0.0		10		f.m.c. SAND, some Silt, little f.c. gravel, brown, moist (SM)		Refusal at 10.5'	
						10		End of Boring at 10.5 ft			



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PROJECT NUMBER: 20466

12/18/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-5

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LOCATION: Borough of Naugatuck, Connecticut		DRILL FLUID:		DRILLING METHOD: Geoprobe	
CLIENT: Borough of Naugatuck		DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)
CONTRACTOR: Aquifer Drilling and Testing		WATER LEVEL OBSERVATIONS DURING DRILLING		BOTTOM (ft)	HOLE BOTTOM (ft)
DRILLER: R. Buley					
INSPECTOR: S. Rosecrans					
START DATE and TIME: 11/18/2010					
FINISH DATE and TIME: 11/18/2010					
SURFACE ELEV:					
CHECKED BY: S. Newell					

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
			0.0					ASPHALT (FILL)			
			0.0		f.c. GRAVEL, trace f.m. sand, gray, moist (FILL)						
					FILL (ash), some f.m.c. Sand, little f.c. gravel, brown, moist (FILL)						
S-1	3	1.7	0.0		f.m.c. SAND, little f.c. gravel, trace silt, brown, moist (FILL)					Soil sample collected from 1' to 1.5' at 13:40. Sample depth based on less than 50% recovery. Actual sample depth may vary.	
					End of Boring at 3 ft					Refusal at 3'	



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PROJECT NUMBER: 20466

12/18/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-6

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LOCATION: Borough of Naugatuck, Connecticut
 CLIENT: Borough of Naugatuck
 CONTRACTOR: Aquifer Drilling and Testing
 DRILLER: R. Buley
 INSPECTOR: S. Rosecrans
 START DATE and TIME: 11/18/2010
 FINISH DATE and TIME: 11/18/2010
 SURFACE ELEV.:
 CHECKED BY: S. Newell

DRILL FLUID:		DRILLING METHOD: Geoprobe		
DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (%)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	1.8	0.0		2		ASPHALT (FILL)			
			0.0		4		FILL (ash), some f.m. Sand, little f.c. gravel, black, moist (FILL) f.m.g. SAND , little f.c. gravel, trace silt, brown, moist (FILL)		Soil lithology from 0' to 4' based on less than 50% recovery. Actual lithology may vary.	
			0.0		4		f.m.g. SAND , little f.c. gravel, trace silt, brown, moist (FILL)		Soil sample collected from 4' to 5' at 13:55	
					6		No Recovery (5' to 7')			
S-2	3	1			8		End of Boring at 7 ft		Refusal at 7'	
					10					



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PROJECT NUMBER: 20466

12/16/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-7

Page 1 of 1

LOCATION: Borough of Naugatuck, Connecticut		DRILL FLUID:	
CLIENT: Borough of Naugatuck		DATE	
CONTRACTOR: Aquifer Drilling and Testing		TIME	
DRILLER: R. Buley	INSPECTOR: S. Rosecrans	WATER LEVEL OBSERVATIONS DURING DRILLING	
START DATE and TIME: 11/18/2010		DRILLING METHOD: Geoprobe	
FINISH DATE and TIME: 11/18/2010		WATER DEPTH (ft)	CASING BOTTOM (ft)
SURFACE ELEV:		HOLE BOTTOM (ft)	

SAMP./CORE NUMBER	SAMP. ADV. (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	1.3	0.0			2		TOPSOIL (FILL) f.m.c. SAND, little f.c. gravel, brown, moist (FILL)		Soil lithology from 0' to 4' based on less than 50% recovery. Actual lithology may vary.	
S-2	4	2.5	0.0			4		f.m.c. SAND, little f.c. gravel, brown, moist (FILL) f.c. GRAVEL, trace f.m. sand, gray, moist (FILL)		Soil sample collected from 4' to 4.7' at 14:30	
S-3	2	2	0.0			8		f.m.c. SAND, some Silt, little f.c. gravel, tan/brown, moist (SM)			
						10		grades to little silt grades to some Silt			
						10		End of Boring at 10 ft		Refusal at 10'	



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PROJECT NUMBER: 20466

12/15/2010

Nettleton Area Storm Drain Improvement Project
SUBSURFACE LOG
HOLE NUMBER GP-8

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LOCATION: Borough of Naugatuck, Connecticut

CLIENT: Borough of Naugatuck

CONTRACTOR: Aquifer Drilling and Testing

DRILLER: R. Buley INSPECTOR: S. Rosecrans

START DATE and TIME: 11/18/2010

FINISH DATE and TIME: 11/18/2010

SURFACE ELEV.: CHECKED BY: S. Newell

DRILL FLUID:

DRILLING METHOD: Geoprobe

WATER LEVEL OBSERVATIONS DURING DRILLING

DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)

SAMP./CORE NUMBER	SAMP. ADV. (ft)	LEN. CORE (ft)	RECOVERY (%)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	4	1.3		0.0			2		TOPSOIL (FILL) f.m.c. SAND, little f.c. gravel, brown, moist (FILL)		Soil sample collected from 1' to 2' at 15:10	
S-2	4	2.5		0.0			6		f.m.c. SAND, little f.c. gravel, trace silt, brown, moist (SP) grades to little silt, trace f.c. gravel (SM)			
S-3	2.5	2.5		0.0			10		End of Boring at 10.5 ft		Refusal at 10.5'	