F.E.S.

OFFSHORE GEOTECHNICAL DRILLING WORK PERFORMED BY ATLANTIC TEST BORING COMPANY, INC. AT CLINTON HARBOR, CONNECTICUT UNDER CONTRACT NO. DACW 33-81-C-0217

Prepared for:

Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

March 1982

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1.00 PREFACE

This report presents the results of test drilling performed by Atlantic Test Boring Company, Inc., at Clinton Harbor, Connecticut. The work was performed for the United States Corps of Engineers under the following provisions:

Project Program: Long Island Sound Dredge Containment Study

Authorization: FY81 Apppropriation Public Law - 96 - 367, October 1, 1980.

Contract No.: DACW 33-81-C-0127

Contract Date: September 30, 1981

Contracting Officer: Lt. Col. Arthur Rappaport

2.00 SCOPE OF INVESTIGATION

The Clinton Harbor site is located in shallow tidal water approximately 1100 yards west of Hammock Point and approximately 1700 yards south of the mouth of the Indian River at Clinton, Connecticut. Eleven machine probings (Nos. 1-11, Figure No. 1) and three drive sample borings (A, B, and C, Figure No. 1) were performed.

Boring and probing locations and elevations were surveyed by R. W. Waldo and Associates. Field classification of subsurface materials was performed by Geotechnical Consultants of Massachusetts, Inc. personnel.

3.00 QUALITY CONTROL

3.10 GENERAL STATEMENT OF ASSURANCE

Work performed under this contract was conducted under the provisions and specifications as outlined in the Specifications for Offshore Geotechnical Drilling Work at Clinton and Groton, Connecticut, Invitation No. DACW 33-81-B-0056. Drilling procedures were observed on a full-time basis by a representative of Geotechical

Consultants of Massachusetts. Variations from the project specifications were as noted in this report.

3.20 RECORDS KEPT

3.21 Exploration Locations and Elevations

Exploration locations and elevations relative to mean sea level (MSL) were surveyed by R. W. Waldo and Associates of Guilford, Connecticut. Exploration locations are presented as Figure No. 1. Elevations of top of boring or probing relative to MSL are presented as Appendix A.

3.22 Machine Probe Logs

Copies of both field probe logs, prepared by Geotechnical Consultants, and typed logs prepared by the Atlantic Test Drilling Company are presented in Appendix B.

These logs indicate the depth of water, the method and resistance to driving, and the depth at which the exploration was terminated.

3.23 Drive Sample Boring Logs

Copies of both field test boring logs prepared by Geotechnical Consultants, and typed logs prepared by the Atlantic Test Drilling Company are presented in Appendix C. The typed logs were prepared by transferring the data found on the field logs.

These logs indicate the depth of water, the method used to advance the exploration, a record of the resistance encountered, a description of the material recovered, and the depth at which the boring was terminated.

3.24 Chain-of-Custody Logs

A letter from Atlantic Test Boring Company, Inc. dated December 2, 1981, confirming receipt of samples and chain-of-custody logs by Mr. Michael Carroll of the U.S. Corps of Engineers is presented as Appendix D.

2.25 Weekly Safety Reports

Safety reports indicating total weekly exposure hours sustained by the drilling crew and geotechnical inspector are presented as Appendix E.

3.30 EQUIPMENT USED

3.31 Drilling Platform and Hoisting Equipment

A derrick and gas-powered Briggs and Stratton skid rig were mounted aboard a raft. Exploration advancement was performed by winch assisted hoisting and release of 140 and 300 pound hammers over a stack of "A" rods.

3.32 Sampling Equipment

A 24 inch length, 1-3/8 inch I.D. split-spoon sampler was driven over selected depth intervals. Recovered samples were retained in 1-1/2 pint glass jars with screw tops.

3.40 PROCEDURES

3.41 Exploration Locations and Elevations

R. W. Waldo and Associates surveyed the proposed exploration locations and directed the placement of buoys at positions as indicated on Figure No. 1.

3.42 Drilling Operations

The raft was positioned at the surveyed buoy positions and anchored. Water depth was sounded with a weighted chain makred in intervals of one-foot, and recorded on the logs.

Machine probings were advanced under impact delivered by a 140-pound hammer falling 30 inches to the specified "end of probing" depth of 20 feet. One probe, No. 8, encountered refusal at a depth of 16 feet, elevation -27.4 feet.

Drive sample borings were advanced according to the SPT method, ASTM D-1586. Two-inch casing was advanced to desired sampling depths under the impact of a 300-pound hammer. A split-spoon sampler mounted at the end of stacked "A" rods was subsequently advanced 24 inches at each sampling interval. Impact was delivered by a 140 pound hammer falling through 30 inches and blow counts counted for each 6 inch increment were recorded on the logs.

Penetration of overburden materials at boring locations A and C was advanced to depths of 44 feet and 42 feet, respectively. Drive sample boring B was advanced to refusal at a penetration depth of 26 feet, elevation -32.9 feet MSL, employing sampling techniques described above. A redrive probing, 10 feet to the west of this location, encountered refusal at 23.5 feet, elevation

-30.4 feet. A second redrive 12.0 feet to the south encountered refusal at a depth of 23 feet, elevation -29.9 feet.

Subsequent communication by the contractor with Edward Swift of the Corps of Engineers, Geotechnical Branch, on November 25, 1981, relieved the contractor from performance of coring as described in the specfifcations.

Refusals encountered at probe location 8 on leg C-B' and boring location B on leg A'-B' were verified by observing no further penetration under impact delivered by the 300 pound hammer.

Water depth was monitored intermittently during the drive sample borings performance and recorded on the boring logs at the time of measurement.

3.42 Sample Recovery and Classification

Recovered overburden materials were observed and classified by Geotechnical Consultants of Massachusetts, Inc. personnel employing USCS symbols as specified in the contract specifications and as indicated in ASTM provisions D-2487 and D-2488. Portions of recovered samples were retained in covered and labelled glass jars for subsequent analysis of particle size distribution and water content.

The contractor maintained custody of the samples for subsequent delivery to the Corps of Engineers.

4.00 SUBSURFACE MATERIALS

The following provides a general description of the subsurface materials encountered. This description is based on a limited number of explorations and therefore conditions may exist on-site which are not described in this report. Refer to the exploration logs in Appendices B and C for a more detailed description of the subsurface conditions encountered.

From sea bottom to depths varying between 8 feet and 18 feet were strata of loose, occasionally compact, soils. Based on the limited number of samples recovered, it appears these layers are predominantly interbedded soils consisting of medium to fine sands and silts (ML, SP, SW, SM). Boring B encountered a 5-foot layer of clayey silt in the sand. The probes showed a low penetration resistance to depths as great as 17 feet below the mud line. This roughly agrees with the borings and may indicate the same type of materials. Standard penetration test

values in these materials ranged from zero (push) to 9 and averaged about 7 blows per foot.

A dense layer of sand and gravel was encountered in boring C underying the loose sands and silts. This stratum extended to a depth of 26.5 feet below the mud line and had penetration resistances up to 43 blows per foot.

All the borings penetrated a generally thick stratum of silty clay (CL) and clayey silt (ML). This material is soft to very soft and extended to the bottom of the boreholes. Standard penetration test values in this layer ranged from zero (push) to 3 blows per foot.

This clayey unit is believed to be directly underlain by bedrock. At boring B, refusal was encoutered at a depth of 26 feet -- subsequent movements of the borehole produced refusal at 23 feet and 26 feet. Probe No. 8 encountered refusal at a depth of 16 feet.

FIGURES

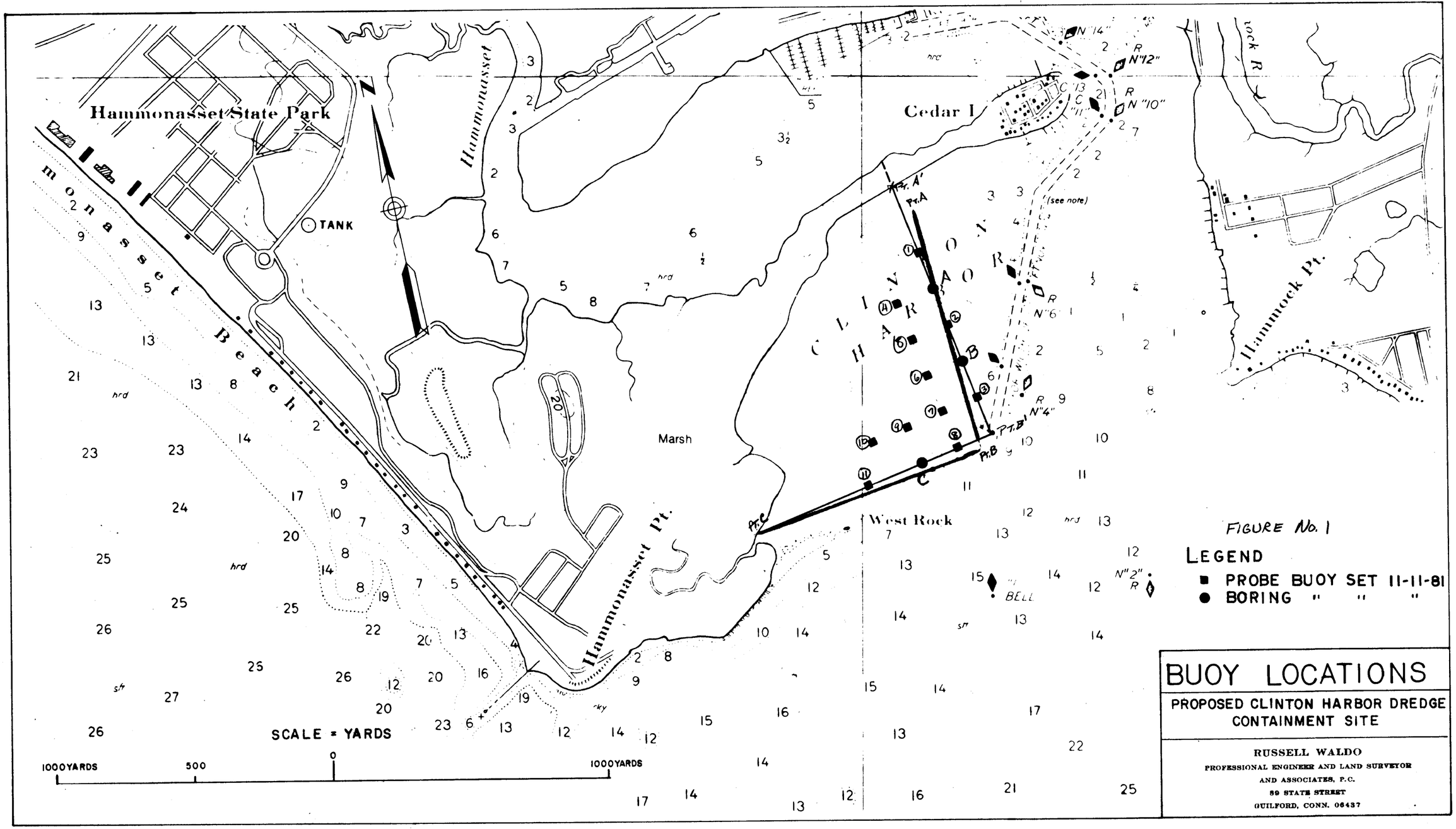

Hammonasset State Park
TANK
Hammonasset
Cedar I
Hammonasset Beach
Marsh
Hammonasset Pt.
West Rock
Hammock Pt.
CLINTON HARBOR
(see note)
BELL
SCALE = YARDS
1000 YARDS
500
0
1000 YARDS
LEGEND
PROBE BUOY SET 11-11-81
BORING " " "
BUOY LOCATIONS
PROPOSED CLINTON HARBOR DREDGE CONTAINMENT SITE
RUSSELL WALDO
PROFESSIONAL ENGINEER AND LAND SURVEYOR
AND ASSOCIATES, P.C.
89 STATE STREET
GUILFORD, CONN. 06437

FIGURE No. 1

APPENDIX A

ELEVATIONS

App A

on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the Coast Guard Light List.

CLINTON HARBOR CHANNEL

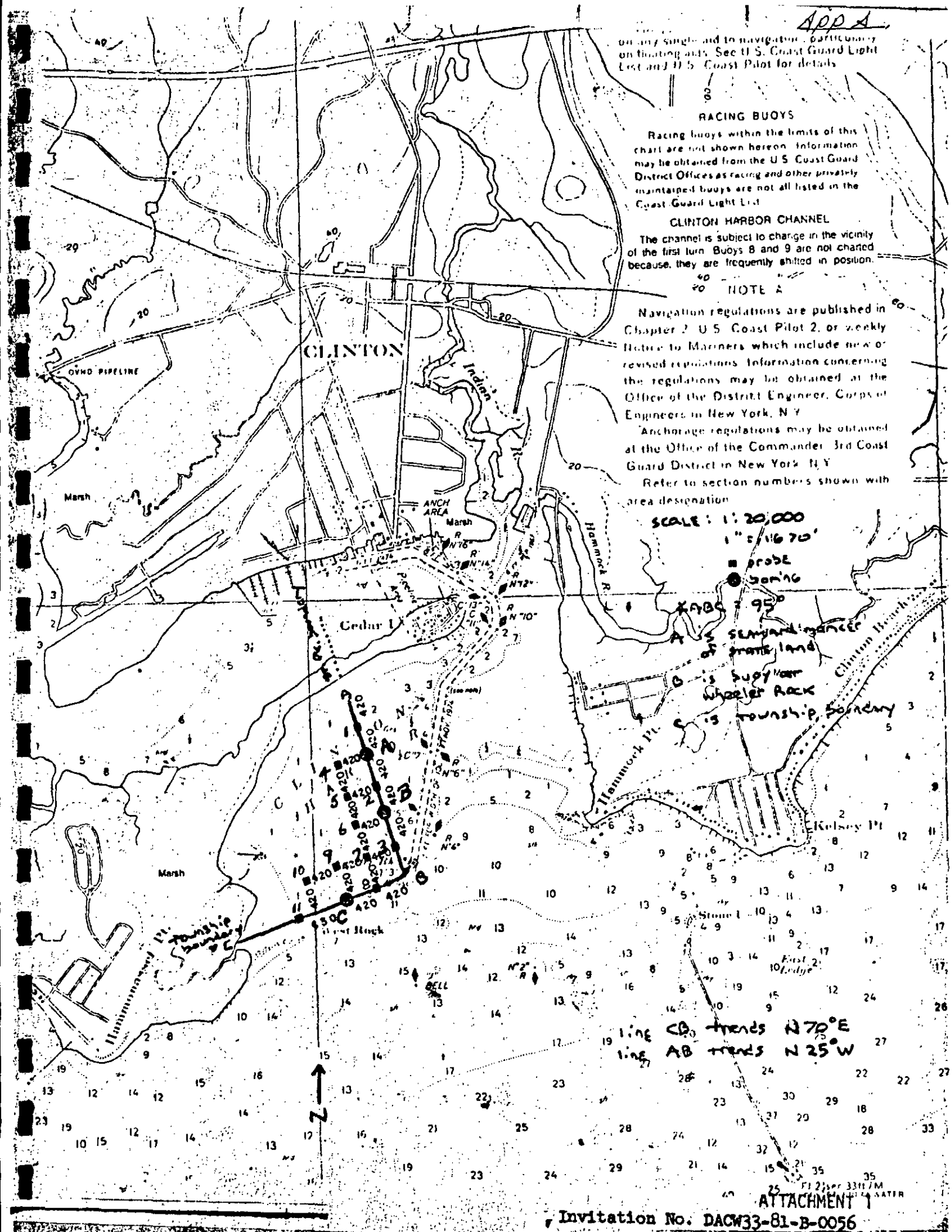
The channel is subject to change in the vicinity of the first turn. Buoys 8 and 9 are not charted because they are frequently shifted in position.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 2, or weekly Notice to Mariners which include new or revised regulations. Information concerning the regulations may be obtained at the Office of the District Engineer, Corps of Engineers in New York, N.Y.

Anchorage regulations may be obtained at the Office of the Commander, 3rd Coast Guard District in New York, N.Y.

Refer to section numbers shown with area designation.



ATTACHMENT 1

Invitation No. DACW33-81-B-0056

11-13-81

R.W. Waldo Assoc
BK 321/55

Atlantic Test Boring - Clinton Harbor
Elevs @ Bouys

Elevs are M.S.L.

Bouy #	Elev
1	-2.9
A	-3.4
2	-5.2
B	-6.4
3	-10.2
8	-11.4
7	-9.1
6	-6.8
5	-4.1
4	-3.5
10	-6.9
11	-7.0
C	-9.1
9	-7.5

APPENDIX B

PROBE LOGS

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

U S ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 1 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -2.9 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -22.9 M.S.L.
Total Depth of Boring 27 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/13 @ 10:55
Boring Completed 11:10

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5						WATER	-2.9' MSL
10				PUSH		Very soft soil	
15							-11.9'
20				11 6 4 3 3 3 3		Stiff soil SOFT	
25				12 14 13		MED. STIFF	-18.9'
30					END OF PROBE, -22.9' MSL.		-22.9'

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

U S ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 2 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -5.2 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -25.2 M.S.L.
Total Depth of Boring 27 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/11 @ 10:00
Boring Completed 11:25

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
						WATER	
5							
10				PUSH		Very soft soil	-5.2' MSL
						(STIFF SOIL)	-7.2'
15				7 7 8 8 7 6 7 7 7 7		SOFT	
20							-17.2' MSL
25				14 13 13 12 17 20 17 13		MED. STIFF	
30					END OF PROBE		-25.2' MSL

GENERAL REMARKS:

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NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 3 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -10.2 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -30.2 M.S.L.
Total Depth of Boring 30 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/12 @ 14:06
Boring Completed 14:45

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5, 10						WATER	-10.2 MSL
15				PUSH		Very soft soil	-17.2'
20, 25, 30				11, 45, 57, 57, 44, 47, 29, 29, 27, 19, 18, 23, 24		STIFF SOIL TO VERY STIFF; STIFF	-26.2'; -30.2'
					END OF PROBE		

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

U S ARMY
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NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 4 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -3.5 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -23.5 M.S.L.
Total Depth of Boring 25 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/12 @ 13:20
Boring Completed 13:30

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. OR CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5						WATER	
							-3.5 MSL
10				PUSH		Very soft soil	
							-9.5'
15				6 6 4 3 3 3 3 3		(STIFF SOIL) V. SOFT	
							-16.5'
20				8 7 7 6 5 10 8		SOFT TO MED. STIFF	
25							-23.5'
30					END OF PROBE		

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

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FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 5 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring [redacted] -4.1 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -24.1 M.S.L.
Total Depth of Boring 27.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/12 @ 12:30
Boring Completed 12:45

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5						WATER	
							-4.1 MSL
10				2 1 2 4 3 3 4		(STIFF SOIL) V. SOFT TO	
15				2 3 4 6 5			
20				12 9 5 8 7			-16.1' MSL
						SOFT	
25				17 18 17			-21.1' MSL
						MED. STIFF	-24.1' MSL
30					END OF PROBE		

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

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FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 6 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring ~~[illegible]~~ -6.8 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -26.8 M.S.L.
Total Depth of Boring 24.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb Boring Started 11/11 @ 15:40
Hammer Drop 30 in. Boring Completed 16:10
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
						WATER	-6.8 MSL
0				PUSH		Very soft soil	
5.0				1, 9, 6, 7, 6, 2, 4, 7		(STIFF SOIL) SOFT	-10.8
10							-17.8 MSL
15				22, 13, 11, 13, 11, 22, 26, 35, 25		MED. STIFF TO STIFF	
20					END OF PROBE		-26.8' MSL
25							

GENERAL REMARKS:

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FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 7 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -9.1 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -29.1 M.S.L.
Total Depth of Boring 28.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb Boring Started 11/11 @ 14:05
Hammer Drop 30 in. Boring Completed 14:30
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5						WATER	
							-9.1 MSL
10				1 2 2 2 1 1		SOFT SOIL	
15				0		Very soft soil	
							-17.1 MSL
				22 20		STIFF SOIL	-19.1 MSL
20				9 5 7 3 5		SOFT	
							-24.1 MSL
25				19 15 11 10 8		MED. STIFF	
							-29.1 MSL
30					END OF PROBE		

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC

U S ARMY
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NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 8 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -11.4 M.S.L.
Total Overburden Drilled 16 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.4 M.S.L.
Total Depth of Boring 26.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb Boring Started 11/12 @ 3:15
Hammer Drop 30 in. Boring Completed 3:30
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5, 10						WATER	-11.4 MSL
15				PUSH		Very soft soil	-16.4'
20, 25				14, 25, 29, 27, 23, 12, 24, 30, 39, 47, 110		STIFF SOIL REFUSAL	-27.4' MSL
30					NO PENETRATION END OF PROBE		

GENERAL REMARKS: REFUSAL @ -27.4' MSL
55 BLOWS 140 lb. @ 30"-1" PENETRATION
11 BLOWS 300 lb. @ 30"-NO PENETRATION

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

U S ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 9 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -7.5 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.5 M.S.L.
Total Depth of Boring 25.5 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb Boring Started 11/12 @ 3:50
Hammer Drop 30 in. Boring Completed 4:05
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE RECVY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
						WATER	
5							-7.5' MSL
				PUSH		Very soft soil	-9.0'
10				1 2 1 1 1		(STIFF SOIL) SOFT	
							-14.0'
15				15 11 5 3 2 3 8 6 6 7 6		MED. STIFF	-16.0'
20						VERY SOFT TO SOFT	
							-25.0'
25				18 12 6/6"		MED. STIFF	-27.5'
					END OF PROBE		
30							

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

U S ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 10 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -6.9 M.S.L.
Total Overburden Drilled 20.5 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.4 M.S.L.
Total Depth of Boring 30.5 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb Boring Started 11/13 @ 13:00
Hammer Drop 30 in. Boring Completed 13:15
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1"=10'	CORE/SAMPLE No.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
5, 10						WATER	-6.9 MSL
				PUSH		Very soft soil	-10.4'
15				8 8 12 10		(STIFF SOIL) MED. STIFF	-14.4'
20, 25				6 3 1 3 1 2 4 5 5 5 5 5		V. SOFT TO SOFT	
30				11 7		M. STIFF TO SOFT	-25.4'
					END OF PROBE		-27.4'

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

U S ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 1 Pages

Probe No. 11 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring ~~+4.0~~ -7.0 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.0 M.S.L.
Total Depth of Boring 31.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb
Hammer Drop 30 in.
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

Boring Started 11/13 @ 12:15
Boring Completed 12:35

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS	
						WATER	
5							
10							-7.0 MSL
				PUSH		Very soft soil	-8.0'
15				8 5 7 10 14		(STIFF SOIL) M. STIFF	
							-14.0'
20				3 3 3 3		V. SOFT	
							-19.0'
25				4 9 9 9 9		SOFT	
							-24.0'
30				13 21 24 33		STIFF	
					END OF PROBE		-27.0' MSL

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 1 of 11 Pages

Probe No. 1 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -2.9 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -22.9 M.S.L.
Total Depth of Boring 27 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140Lb Boring Started 11/13 10:55
Hammer Drop 30 inches Boring Completed 11:10
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH (1" = 10')	CORE/SAMPLE NO	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10				PUSH		VERY SOFT SOIL
15						
20						STIFF SOIL
25						
					BOTTOM OF PROBE	

-2.9 msl

GENERAL REMARKS.

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
[illegible] King St., Boston, Mass. 02127
Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 2 of 11 Pages

Probe No. 2 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -5.2 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -25.2 M.S.L.
Total Depth of Boring 27 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/11 @ 10:00
Hammer Drop 30 inches Boring Completed 11:25
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.,INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10				push		Very SOFT SOIL
15, 20, 25						STIFF SOIL
					BOTTOM OF PROBE	

-5.2m.s.l.

GENERAL REMARKS.

Data not entered

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 3 of 11 Pages

Probe No. 3 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -10.2 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -30.2 M.S.L.
Total Depth of Boring 30 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/12 @ 14:06
Hammer Drop 30 inches Boring Completed 14:45
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.,INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
10'						
5						WATER
10				PUSH		VERY SOFT SOIL
15						
20						STIFF SOIL
25						
30					BOTTOM OF PROBE	

-10.2msl

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone 436-9428, 436-9429

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 4 of 11 Pages

Probe No. 4 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -3.5 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -23.5 M.S.L.
Total Depth of Boring 25 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB
Hammer Drop 30 inches
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO. INC.
Mfg. Des. Drill BRIGGS AND STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

Boring Started 11/12 @ 13:20
Boring Completed 13:30

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
10'						WATER -3.5msl
5				PUSH		VERY SOFT SOIL
10						
15						STIFF SOIL
20						
25					BOTTOM OF PROBE	

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
[illegible] King St., Boston, Mass. 02122
Tel. Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 5 of 11 Pages

Probe No. 5 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -4.1 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -24.1 M.S.L.
Total Depth of Boring 27 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/12 @ 12:30
Hammer Drop 30 inches Boring Completed 12:45
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH 1" = 10'	CORE/SAMPLE NO	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10, 15, 20, 25						STIFF SOIL
					BOTTOM OF PROBE	

-4.1msl

GENERAL REMARKS:

Invitation No. DACW53-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 6 of 11 Pages

Probe No. 6 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -6.8 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -26.8 M.S.L.
Total Depth of Boring 24 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB
Hammer Drop 30 inches
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.,INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

Boring Started 11/11 @ 15:40
Boring Completed 16:10

DEPTH 1"=10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
						WATER -6.8msl
5				push		VERY SOFT SOIL
10, 15, 20						STIFF SOIL
25					BOTTOM OF PROBE	

GENERAL REMARKS:

Figure 3

Invitation No. DACW33-81-B-0056

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St. Boston, Mass. 02122
Phone 435-8428, 435-8429

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 7 of 11 Pages

Probe No. 7 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -9.1 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -29.1 M.S.L.
Total Depth of Boring 28 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/11 @ 14:05
Hammer Drop 30 inches Boring Completed 14:30
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
0 – 10'						
5						WATER
10						SOFT SOIL
15						VERY SOFT SOIL
20 – 25						STIFF SOIL
					BOTTOM OF PROBE	

-9.1m.s.l

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone 436-8429, 436-8429

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 8 of 11 Pages

Probe No. 8 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -11.4 M.S.L.
Total Overburden Drilled 16 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.4 M.S.L.
Total Depth of Boring 26 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/12 @ 3:15
Hammer Drop 30 inches Boring Completed 3:30
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC
Mfg. Des. Drill BIRGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH 1" 10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10				push		VERY SOFT SOIL
15						
20						STIFF SOIL
25						
					(NO PENETRATION) BOTTOM OF PROBE	

-11.4msl

GENERAL REMARKS: REFUSAL AT 27.4' M.S.L.

55 BLOWS-140LB. @ 30"-1" PENETRATION
11 BLOWS-300LB. @ 30" NO PENETRATION

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone 436-8928, 436-8929

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 9 of 11 Pages

Probe No. 9 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -7.5 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.5 M.S.L.
Total Depth of Boring 25.5 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/12 @ 3:50
Hammer Drop 30 inches Boring Completed 4:05
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH 1" = 10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
						WATER
5				push		VERY SOFT SOIL
10						
15						STIFF
20						
25						SOIL
					BOTTOM OF PROBE	

-7.5msl

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone [illegible]

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 10 of 11 Pages

Probe No. 10 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -6.9 M.S.L.
Total Overburden Drilled 20.5 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.4 M.S.L.
Total Depth of Boring 30.5 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/13 @ 13:00
Hammer Drop 30 inches Boring Completed 13:15
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10				push		VERY SOFT SOIL
15, 20, 25						STIFF SOIL
30					BOTTOM OF PROBE	

-6.9msl

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02122
Phone 436-8428, 436-8429

FIELD LOG OF TEST PROBE

Site CLINTON HARBOR Page 11 of 11 Pages

Probe No. 11 Desig. _____ Diam. (Casing) _____

Co-ordinates: N _____ E _____

Elevation Top of Boring -7.0 M.S.L.
Total Overburden Drilled 20 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -27.0 M.S.L.
Total Depth of Boring 31.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140LB Boring Started 11/13 @ 12:15
Hammer Drop 30 inches Boring Completed 12:35
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC.
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH 1" = 10'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5						WATER
10				push		very soft soil
15						
20						STIFF
25						SOIL
30						
					BOTTOM OF PROBE	

-7.0msl

GENERAL REMARKS:

Invitation No. DACW33-81-B-0056

Figure 3

BORING REPORT

ATLANTIC TEST BORING CO. INC.

34 KING STREET
BOSTON, MASS. 02122

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
To WALTHAM, MASSACHUSETTS 02254 Date NOVEMBER 30, 1981 Job No. B-0056 DACW33-81

Location of Borings PROP. CLINTON HARBOR DREDGE CONTAINMENT SITE, CLINTON, CONNECTICUT

All borings are plotted to a scale of 1" = 5 ft. using M.S.L. as a fixed datum

No. _____ No. _____

PROBINGS DATES: 11/11/81 THRU 11/13/81

PROBE NO.	ELEVATION		BLOWS
1	-2.9	7.0' WATER	
		0.0'-9.0' PUSHED	
		9.0'-10.0'	11
		10.0' TO 15.0'	6-4-8-8-8
		15.0' TO 20.0'	8-12-14-13-11
2	-5.2	9.0' WATER	
		0.0'-2.0' PUSHED	
		2.0'-7.0'	38 BLOWS FOR 5.0'
		7.0' TO 12.0'	35 BLOWS FOR 5.0'
		12.0' TO 17.0'	7-7-6-7-8-5-5-7-6-11 (6" Blow Counts)
3	-10.2	10.0' WATER	
		0.0'-7.0' PUSHED	
		7.0'-10.0'	11-45-57
		10.0' TO 15.0'	57-49-47-29-29
		15.0' TO 20.0'	27-19-18-23-24
4	-3.5	5.0' WATER	
		0.0'-6.0' PUSHED	
		6.0'-10.0'	8-6-4-3
		10.0'-15.0'	3-3-3-8-7
		15.0'-20.0'	7-6-5-10-8
5	-4.1	7.0' WATER	
		0.0'-5.0' PUSHED	
		5.0'-10.0'	2-1-2-4-3
		10.0'-15.0'	3-4-2-3-4
		15.0'-20.0'	6-5-12-9-5
6	-6.8	4.0' WATER	8-7-17-18-17
		0.0'-3.0' PUSHED	
		3.0'-4.0'	1
		4.0'-10.0'	6-3-3-3-5-2-4-2-1-1-2-2
		10.0'-15.0'	2-5-12-10-8-5-6-15-7-6
		15.0'-20.0'	4-7-13-9-10-16-19-16-15-10

Used " of " Casting

Used " of " Casting

Figures in right hand column indicate number of blows required to drive sampling pipe 6 inches for a total of 18 inches, using 140-lb. weight falling 30 inches.

Total Footage 117.0'
Foreman K.M.
Classification by K.M.
Sheet ___ of ___

BORING REPORT

ATLANTIC TEST BORING CO. INC.

34 KING STREET
BOSTON, MASS. 02122

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
To WALTHAM, MASSACHUSETTS 02254

DACW33-81
Date NOVEMBER 30, 19 81 Job No. B-0056
Location of Borings PROP. CLINTON HARBOR DREDGE CONTAINMENT SITE, CLINTON, CONNECTICUT

All borings are plotted to a scale of 1"= 5 ft. using M.S.L. as a fixed datum.

No.

PROBINGS CONTINUED DATES 11/11/81 THRU 11/13/81

No.

PROBE NO.	ELEVATION		
7	-9.1	8.0' WATER	BLOWS
		0.0'-5.5'	1/12-2-1-1-1-1-1/12-1
		5.5'-8.5'	PUSHED
		8.5'-10.0'	22-13-7
		10.0'-15.0'	3-6-3-2-4-3-2-1-3-2
		15.0'-20.0'	12-7-7-6-6-5-5-5-4-4
8	-11.4	9.5' WATER	
		0.0'-5.0' PUSHED	
		5.0'-10.0'	14-25-29-27-23
		10.0'-15.0'	12-24-30-39-47
		15.0'-16.0' (REFUSAL)	110-100/0" (300lb. Hammer Wt
9	-7.5	5.5' WATER	
		0.0'-1.5' PUSHED	
		1.5'-6.5'	1-2-1-1-1
		6.5'-11.5'	15-11-3-3-2
		11.5'-16.5'	3-8-6-6-7
		16.5'-20.0'	6-18-12-6/6"
10	-6.9	10.0' WATER	
		0.0'-3.5' PUSHED	
		3.5'-5.5'	8-8
		5.5'-10.5'	12-10-6-3-1
		10.5'-15.5'	3-1-2-4-5
		15.5'-20.5'	5-5-5-11-7
11	-7.0	11.0' WATER	
		0.0'-1.0' PUSHED	
		1.0'-5.0'	8-5-7-10
		5.0'-10.0'	14-9-3-3-3
		10.0'-15.0'	3-4-9-9-9
		15.0'-20.0'	9-13-21-24-33

Used ' of " Casting

Used ' of " Casting

Figures in right hand column indicate number of blows required to drive sampling pipe 6 inches for a total of 18 inches, using 140-lb. weight falling 30 inches.

Total Footage 96.5'
Foreman K.M.
Classification by K.M.
Sheet ___ of ___

APPENDIX C

TEST BORING LOGS

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site CLINTON HARBOR Page 1 of 2 Pages

Boring No. A Desig. _____ Diam. (Casing) 2"

Co-ordinates: N _____ E _____

Elevation Top of Boring * -3.4 M.S.L.
Total Overburden Drilled 42 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -45.4 M.S.L.
Total Depth of Boring 42.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples 2 In. Diam. 7 No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb. Boring Started 11/19 3-4:30
Hammer Drop 30 in. Boring Completed 11/20 9:45-11:30
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B& S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5	1		0-2	5	SPT METHOD 11/19 ASTM D 1586 3:00-3:20 (3,1,4,5): Blows per 6"-Typical	Loose grey SILT, and fine sand (SM-ML)
	2		5-7	9	(6,4,5,)	
10	3		11-13	1	11/20 9:45-9:55 (0,1,1/12")	Very soft Grey SILT, little fine sand (ML)
15	4		16-18		11/20 10:00-10:15 (1/12", 1/12")	Very soft grey SILT, trace fine sand; trace organic material (ML-OL)
20					11/20 10:30-10:45	Very soft grey clayey SILT; (ML-CL)
25						

GENERAL REMARKS: WATER LEVEL (TIDAL) 9:45 + 3' ; DEEP
11:15 + 1' ; DEEP

*ELEVATION OF GROUND SURFACE

DUE TO CHANGE IN TIDE AND VERY LOOSE MATERIAL, SEVERAL SAMPLES WERE TAKEN LOWER THAN WAS PLANNED. MATERIAL WAS VERY CONSISTENT THROUGHOUT.

INVITATION NO. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

Site	Boring No.	Page 2 of 2
CLINTON HARBOR	A	

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RUN	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
5'	5		26-27	1	(1, 1/18")	SEE PAGE 1
30					11/20 10:50-11:05	Very soft grey SILT, and clay: trace shell (ML-CL)
35	6		33-35	1	(1/12", 1/12")	
40	7		38-40	PUSH	11/20 11:15-11:30	Very soft grey clayey SILT (ML-CL)
	8		42-44		(1/24") 11/20 11:30-11:35	
45					END OF BOREHOLE	
50						

INVITATION NO. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS, INC.

U.S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site CLINTON HARBOR Page 1 of 2 Pages

Boring No. B Desig. _____ Diam. (Casing) 2"

Co-ordinates: N _____ E _____

Elevation Top of Boring * -6.9 M.S.L.
Total Overburden Drilled 26.0 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -32.9 M.S.L.
Total Depth of Boring 26.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft: _____ Diam. _____ In.
Soil Samples _____ In. Diam. _____ No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb. Boring Started 11/20 2:45-2:50
Hammer Drop 30 in. Boring Completed 11/24 12:20-3:20
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH 1" = 5'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1		0-2	6	SPT METHOD ASTM D 1586 (3, 3, 3, 5) 11/20 2:45/4/ BLOWS PER 6" TYP.	Loose grey medium to fine SAND, and silt (SM)
5	2		5-7	PUSH	11/24 12:00-12:30 7' of water	Very soft grey clayey SILT, little fine snad (ML-CL)
10					11/24 12:45-1:10 NO RECOVERY, WASH SAMPLE 6.8' of water	NO RECOVERY Very loose grey medium to fine SAND, some silt (SM)
15	3		13-15	1	(1, 1/12")	
20	4		19-21	PUSH	11/24 1:20-1:35 6.5' of water NO RECOVERY	NO RECOVERY 17'-18' (WASH) Clayey SILT and medium to fine sand (SM-ML)
25	5		23-25	2	11/24 1:45-1:55 6.3' of water (1, 1, 1, 0)	Very soft grey clayey SILT, trace fine sand; (stone chip@25') (ML-CL)

GENERAL REMARKS: WATER LEVEL (TIDAL) see above
* ELEVATION AT GROUND SURFACE
B. REFUSAL 26 MOVE TO NEW HOLE (10'W) 2nd. HOLE REFUSAL @ 23.5' MOVE TO 3rd HOLE (12'S) REFUSAL @ 23.0' (300lb)
Mr. W.E. Swift agreed not to core on 11/25/81

INVITATION NO. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC

Site CLINTON HARBOR	Boring No. B	Page 2 of 2

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1" = 5'					SEE PAGE 1	
					END OF BOREHOLE	
					REFUSAL	
30						
35						
40						
45						
50						

INVITATION NO. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

U. S. ARMY
CORPS OF ENGINEERS
NEW ENGLAND DIVISION

FIELD LOG OF TEST BORING

Site CLINTON HARBOR Page 1 of 2 Pages

Boring No. C Desig. _____ Diam. (Casing) 2"

Co-ordinates: N _____ E _____

Elevation Top of Boring * -9.1 M.S.L.
Total Overburden Drilled 42.0 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring ~~-5.1~~ -51.1 M.S.L.
Total Depth of Boring 42.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft. _____ Diam. _____ In.
Soil Samples 2 In. Diam. 7 No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140 lb. Boring Started 11/25 10:00
Hammer Drop 30 in. Boring Completed 3:05
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO.
Mfg. Des. Drill PORTABLE TYPE B & S
Inspected By: J. LATOURRETTE
Classification By: J. LATOURRETTE
Classification By: _____

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
1" = 5'						
	1		0-2	8	SPT METHOD ASTM D 1586 11/25 10-10:05 12' WATER	Loose grey medium to fine SAND, some silt (SM)
5	2		6-8	5	(6, 5, 3, 1) 11/25 10:15-10:30 12' WATER (0, 0, 5, 8)	Loose to compact grey medium to fine SAND, trace silt; trace shells (SW) (SP)
10	3		11-13	43?	10:45-11:00 (17, 19, 24, 33)	Dense-very dense coarse to fine grey-brown SAND, trace gravel (MAX. ½") (SP) (SW)
15					11.5' WATER 11:55 Running Sand	16-17' (WASH) coarse to fine SAND, and fine gravel (SW)
20					(NO RECOVERY) 1:05 - 9.5' WATER	
25						

GENERAL REMARKS: +12'-8" WATER (TIDAL)
* ELEVATION AT GROUND SURFACE

INVITATION NO. DACW33-81-B-0056

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC

Site: CLINTON HARBOR | Boring No. C | Page 2 of 2

DEPTH (1" = 5')	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	4		25-26.5	12	(1, 7, 5, 3) 11/24-1:30 1:35	Compact grey coarse to medium SAND, & fine gravel (SW)
30	5		30.5 32.5	3	(1, 1, 2, 2) 11/24 1:50-2:00 9' WATER	Soft silty CLAY; sand lenses (CL-ML) trace organic
35	6		36-38	3	(1, 1, 2, 3) 11/24 2:00-2:30 9' WATER	Very soft grey SILT and CLAY, trace shell (CL-ML)
40	7		40-42	2	(0, 2, 1/12") 11/24 2:40-3:05 9' of water	Very soft silty CLAY; trace shells (CL-ML)
45					END OF BOREHOLE	
50						

INVITATION NO. DACW33-81-B-0056

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St. Boston, Mass. 02122
Phone [illegible]

FIELD LOG OF TEST BORING

Site CLINTON HARBOR Page 1 of 2 Pages

Boring No. A Desig. _____ Diam. (Casing) 2"

Co-ordinates: N _____ E _____

Elevation Top of Boring -3.4 M.S.L.
Total Overburden Drilled 42 Feet
Elevation Top of Rock _____ M.S.L.
Total Rock Drilled _____ Feet
Elevation Bottom of Boring -45.4 M.S.L.
Total Depth of Boring 42.0 Feet
Core Recovered _____ % No. Boxes _____
Core Recovered _____ Ft : _____ Diam. _____ In.
Soil Samples 2 In. Diam. 7 No.
Soil Samples _____ In. Diam. _____ No.

Hammer Wt. 140lb. Boring Started 11/19
Hammer Drop 30in. Boring Completed 11/20
Casing Left _____
Subsurface Water Data _____ Page _____
Obs. Well _____
Drilled By ATLANTIC TEST BORING CO., INC
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: _____

DEPTH 1" = 5'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1		0-2		SPT METHOD 11/19 ASTM D 1586 3:00-3:320	Loose, fine to coarse dark brown SAND trace of fine gravel little silt (wet)
				5	3-1-4-5 Blows Per 6" Typical	
5	2		5-7	9	6-4-5-5	
10	3		11-13	1	11/20 9:45-9:55 0-1-1/12"	Very loose grey silt trace of fine SAND trace of shells and peat fibers (damp)
15	4		15-17		11/20 10:00-10:15 1/12-1/12"	
20	5		20-22		11/20 10:30-10:45 1/12-12"	
25						Loose fine to medium

GENERAL REMARKS: WATER LEVEL (TIDAL)
9:45 ± 3.0' DEEP
11:15 ± 1.0' DEEP

continued on next page

Boring No. A

Figure 1

Invitation No. DACW33-81-B-0056

Site: CLINTON HARBOR

Boring No. A

DEPTH (ft. 5')	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
30					no recovery	grey SAND trace of silt (wet) running sand
35	6		33-35	1	11/20 10:50-11:05 1/12", 1/12"	Very loose grey SILT trace of fine sand trace of shells and peat fibers (damp)
40	7		38-40		PUSHED	
42.0					BOTTOM OF EXPLORATION AT 42.0'	

Boring No. A

Figure 2

Invitation No. DACW33-81-B-0056

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Dedham, Mass. 02026

FIELD LOG OF TEST BORING

Site CLINTON HARBOR Page 1 of 2 Pages

Boring No. B Desig. _____ Diam. (Casing) 2"

Co-ordinates: N _____ E _____

Elevation Top of Boring -6.9 M.S.L. Hammer Wt. 140lb Boring Started 11/20

Total Overburden Drilled 26.0 Feet Hammer Drop 30inc. Boring Completed 11/24

Elevation Top of Rock _____ M.S.L. Casing Left _____

Total Rock Drilled _____ Feet Subsurface Water Data _____ Page _____

Elevation Bottom of Boring -32.9 M.S.L. Obs. Well _____

Total Depth of Boring 26.0 Feet Drilled By ATLANTIC TEST BORING CO.,INC.

Core Recovered _____ % No. Boxes _____ Mfg. Des. Drill BRIGGS & STRATTON SKID RIG

Core Recovered _____ Ft. _____ Diam. _____ in. Inspected By: J. LATOURETTE

Soil Samples 2 in. Diam. 5 No. Classification By: KEVIN MALONEY

Soil Samples _____ in. Diam. _____ No. Classification By: _____

DEPTH 1" = 5'	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE RECV'Y	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1		0-2	6	SPT Method 11/20 ASTM D 1586 3-3-3-5 Blows Per 6" Typical	Loose, fine to medium grey silty SAND (moist)
5	2		5-7	PUSHED	11/24 12:00-12:30 PUSHED 7.0' Of Water	Very loose. grey clayey SILT trace of fine to medium SAND (moist)
10	3		13-15	1	11/24 12:45-1:10 6.8' Of Water 1-1/18" No Recovery Wash Sample	Very loose fine to medium grey SAND some silt (moist)
15 20	4		19-21	PUSHED	11/24 1:20-1:35 6.5' Of Water No Recovery	
25	5		23-25	2	11/24 1:45-1:55 6.3' Of Water 1/12"-1-1	Very loose grey clayey SILT trace of fine SAND

GENERAL REMARKS: Water Level (tidal,see above)
REFUSAL AT 26.0', Moved 10.0' West for 2ND Boring
REFUSAL AT 23.5', Moved 12.0' South for 3RD Boring, REFUSAL AT 23.0', USED 300lb. Hammer
Mr. Edward Swift of the Army Corps of Eng. agreed not to core on 11/25/81

continued on next page

Boring No. B

Figure 1

Invitation No. DACW33-81-B-0056

Site	Boring No.	Page 2 of 2
CLINTON HARBOR	B	

DEPTH	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
26.0						(moist)
					BOTTOM OF EXPLORATION AT 26.0' (REFUSAL)	

Boring No. B

Figure 2

Invitation No. DACW33-81-B-0056

ATLANTIC TEST BORING CO., INC.
Complete Soil Investigation Service
34 King St., Boston, Mass. 02222
[illegible]

FIELD LOG OF TEST BORING

Site CLINTON HARBOR — Page 1 of 2 Pages

Boring No. C — Desig. ____ — Diam. (Casing) 2"

Co-ordinates: N ____ E ____

Elevation Top of Boring -9.1 M.S.L.
Total Overburden Drilled 42.0 Feet
Elevation Top of Rock ____ M.S.L.
Total Rock Drilled ____ Feet
Elevation Bottom of Boring 51.1 M.S.L.
Total Depth of Boring 42.0 Feet
Core Recovered ____ % No. Boxes ____
Core Recovered ____ Ft. ____ Diam. ____ In.
Soil Samples 2 In. Diam. 7 No.
Soil Samples ____ In. Diam. ____ No.

Hammer Wt. 140lb. Boring Started 11/25
Hammer Drop 30in. Boring Completed ____
Casing Left ____
Subsurface Water Data ____ Page ____
Obs. Well ____
Drilled By ATLANTIC TEST BORING CO., INC
Mfg. Des. Drill BRIGGS & STRATTON SKID RIG
Inspected By: J. LATOURRETTE
Classification By: KEVIN MALONEY
Classification By: ____

DEPTH (1" = 5')	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
	1		0-2	8	SPT METHOD 11/25 10:16:05 6-5-3-1 12.0' WATER	loose fine to med grey SAND some silt, wet
5	2 2A		6-8	5	12.0' WATER PUSHED 1.0' 7.0'-8.0' (5-8)	Very loose grey fine to medium SAND trace of silt and shells (moist)
10					12.0' WATER	Medium compact fine to medium SAND trace of silt, (moist)
15	3		11-13	43	17-19-24-33 11.5' WATER 11:55	Compact fine to coarse grey SAND trace of fine gravel (running sand)
20					RUNNING SAND 16.0' TO 17.0' WASH SAMPLE 9.5' WATER 1:05	
25						continued on next page

GENERAL REMARKS: WATER LEVEL (TIDAL) 12.0'-8"

Boring No. C

Figure 1

Invitation No. DACW33-81-B-0056

Site CLINTON HARBOR

Boring No. C

DEPTH (in. 5')	CORE/SAMPLE NO.	SIZE	DEPTH RANGE	BLOWS PER FT. / CORE REC'VY	SAMPLING AND CORING OPERATIONS	CLASSIFICATION OF MATERIALS
25	4		25-26	5-12	11/24 1:30-1:35 17-5-3	Loose medium to coarse grey SAND and fine gravel (running sand)
30	5		30-32	3	11/24 1:50-2:00 1-1-2-2 9.0' WATER	Very loose grey clayey SILT trace of peat fibers and shells (moist)
35	6		36-38	3	11/24 2:00-2:30 1-1-2-3 9.0' WATER	
40	7		40-42	2	11/24 2:40-3:05 1/12"-2-1 9.0' WATER	
42					BOTTOM OF EXPLORATION AT 42.0'	

Boring No. C

Figure 2

Invitation No. DACW33-81-B-0056

BORING REPORT

ATLANTIC TEST BORING CO. INC.

34 KING STREET
BOSTON, MASS. 02122

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS. OF ENGINEERS
424 TRAPELO ROAD
To WALTHAM, MASSACHUSETTS 02254

DACW33-81

Date NOVEMBER 30, 19 81 Job No. B-0056

Location of Borings PROP. CLINTON HARBOR DREDGE CONTAINMENT SITE, CLINTON, CONNECTICUT

All borings are plotted to a scale of 1" = 5 ft. using M.S.L. as a fixed datum

No. BORING A

0.0' GROUND SURFACE ELV. -3.4

	Loose fine to coarse dark brown SAND trace of fine gravel little silt (wet)	3 1 4 5 6 4 5 5
8.0'	Very loose grey silt trace of fine sand trace of shells and peat fibers (damp)	0 1 1/12 1/12 1/12 1/12 1/12
23.0'	Loose fine to medium grey SAND trace of silt (wet) running sand	no recovery
33.0'	Very loose	1/12 1/12

Used " of " Casting

No. BORING A (Advanced)

40.0'	grey SILT trace of fine sand tr. of shells and peat fibers (damp)	push

BOTTOM OF EXPLORATION AT 40.0'

DATE: 11-19-81

PLEASE NOTE:
Made Probe 10.0' West of Boring Location, Bottom of Probe at 50.0'

Used " of " Casting

Figures in right hand column indicate number of blows required to drive sampling pipe 6 inches for a total of 18 inches, using 140-lb. weight falling 30 inches.

Total Footage 50.0' PROBING 40.0'

Foreman K.M.

Classification by K.M.

Sheet of

BORING REPORT

ATLANTIC TEST BORING CO. INC.

34 KING STREET
BOSTON, MASS. 02122

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
To WALTHAM, MASSACHUSETTS 02254 Date NOVEMBER 30, 19 81 Job No. B-0056 DACW33-81
Location of Borings PROP. CLINTON HARBOR DREDGE CONTAINMENT SITE, CLINTON, CONNECTICUT

All borings are plotted to a scale of 1"= 5 ft. using M.S.L. as a fixed datum.

No. BORING B

No.

0.0'	GROUND SURFACE ELV.-6.9	
	Loose fine to med grey silty SAND (moist)	3 3 3 5
3.0'		
	Very loose, grey clayey SILT trace of fine to medium sand (moist)	p u s h e d
8.0'		
	Very loose fine to medium grey SAND some silt (moist) no recovery	1 1/18 p u s h e d
21.0'		
	Very loose grey clayey SILT trace of fine sand (moist)	1/12 1 1
26.0'		

REFUSAL AT 26.0'- 100/0" Pen.
DATE: 11-24-81

PLEASE NOTE TWO (2) PROBES MADE
PROBE B-1 Moved 10.0' East for Probe B-1, Refusal at 23.5'
PROBE B-2 Moved 12.0' South from Probe B-1 for Probe B-2 Refusal at 23.0'

Used " of " Casting

Used " of " Casting

Figures in right hand column indicate number of blows required to drive sampling pipe 6 inches for a total of 18 inches, using 140-lb. weight falling 30 inches.

Total Footage 72.5'
Foreman K.M.
Classification by K.M.
Sheet of

BORING REPORT

ATLANTIC TEST BORING CO. INC.

34 KING STREET
BOSTON, MASS. 02122

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
To WALTHAM, MASSACHUSETTS 02254 Date NOVEMBER 30, 19 81 Job No. B-0056 DACW33-81

Location of Borings PROP. CLINTON HARBOR DREDGE CONTAINMENT SITE, CLINTON, CONNECTICUT

All borings are plotted to a scale of 1"= 5 ft. using M.S.L. as a fixed datum.

No. BORING C

0.0' GROUND SURFACE ELV. -9.1

1.5'	Loose f-med grey SAND some silt wet	6 5
7.0'	Very loose grey fine to medium SAND trace of silt and shells (moist)	3 1 p u s h e d
11.0'	Medium compact fine to medium SAND trace of silt (moist)	5 8
24.0'	Compact fine to coarse grey SAND trace of fine gravel wet, running sand Wash Sample from 16.0'-17.0'	17 19 24 33
29.0'	Loose medium to cr. grey SAND and fine gravel wet, running sand	17 5 3
	Very loose grey clayey SILT trace of peat	1 1 2 2

Used ' of " Casting

No. BORING C (advanced)

42.0'	fibers and shells moist	1 1 2 3 1/12 2 1

BOTTOM OF EXPLORATION AT 42.0'

DATE: 11-25-81

Used ' of " Casting

Figures in right hand column indicate number of blows required to drive sampling pipe 6 inches for a total of 18 inches, using 140-lb. weight falling 30 inches.

Total Footage 42.0'
Foreman K.M.
Classification by K.M.
Sheet ___ of ___

APPENDIX D

CHAIN-OF-CUSTODY LOGS

ne: 436-8428
436-8429

• FOUNDATION TEST BORINGS
• UNDISTURBED SAMPLES
• ROCK CORE DRILLING

ATLANTIC TEST BORING CO., INC.

Complete Soil Investigation Service
Anywhere In New England

34 KING STREET • BOSTON, MASS. 02122

DECEMBER 2, 1981

MR. MIKE CARROLL
DEPT OF THE ARMY-CORPS OF ENGINEERS
MATERIAL AND WATER QUALITY LABORATORY
424 TRAPELO ROAD, BLDG. #142
WALTHAM, MASSACHUSETTS 02254

RE: JOB NO. DACW-33-81-B0056, CHAIN OF CUSTODY
REPORTS AND SAMPLES FOR: DREDGE CONTAINMENT SITE, CLINTON HARBOR
CLINTON, CONNECTICUT

DEAR MR. CARROLL:

THE REPORTS AND SAMPLES PERTAINING TO THE ABOVE, WERE HAND DELIVERED TO THIS OFFICE BY MR. PHILIP J. MALONEY, PRESIDENT. THE SECRETARY, MS. HENNESSEY, TYPED THE REPORTS AND LABELED THE SAMPLES WHILE THEY WERE AT THIS OFFICE.

MR. TONY PANEK OF THIS OFFICE, DELIVERED THREE (3) BOXES OF SAMPLES AND COPIES OF THE ORIGINAL LOGS PLUS ALL THE ORIGINAL LOGS DONE BY THE CREW ON THE SITE. HE ALSO HAND DELIVERED TO MR. ROGER POISSON OF THE DEPT. OF THE ARMY, THE ORIGINAL TYPEWRITTEN COPY OF THE LOGS PLUS (2) TWO COPIES OF THESE REPORTS.

UPON DELIVERY, MR. TONY PANEK OF THIS COMPANY WILL AFFIX HIS SIGNATURE, WOULD YOU PLEASE SIGN ALSO CONFIRMING DELIVERY.

SINCERELY,
ATLANTIC TEST BORING COMPANY, INC.

Diane Hennessey
DIANE HENNESSEY, SECRETARY

FOR THE: ATLANTIC TEST BORING CO., INC.

Tony Panek
MR. TONY PANEK

DEPT. OF THE ARMY

Michael Carroll
MR. MIKE CARROLL

APPENDIX E

SAFETY REPORTS

WEEKLY SAFETY MEETING

NEDSO

Date held DECEMBER 15, 1980

TO: Safety Office, NEW [illegible]

Time 8:00

THRU: Area Engineer, [illegible] Area

1. Weekly safety meeting was held this date for the following personnel:

Contract No. [illegible]

Contractor ATLANTIC TEST BORING CO., INC.

Conducted By: [illegible]

Personnel present (Contr) P.J. MALONEY, KEVIN MALONEY, ROBERT HUNT
(Sub) [illegible] BRIDGE AND DOCK
(Govt)

Subjects discussed (Note, delete, or add):

Individual Protective Equipment -

Prevention of Falls -

Safe Lifting Techniques -

Emergency Communications -

Fire Prevention - LOCATED ON BARGE

Sanitation, First Aid -

Tripping Hazards - trash, hose, nails in lumber - MOVING AROUND RIG WITH THE MOVEMENT OF THE BARGE AND BOARDING SAME.

Staging, Ladders, Concrete Forms - STEEL STAGING COVERED WITH 2" PLANK

Hand Tools, Portable Power Tools, Woodworking Machinery -

Equipment Maintenance (Zero defects) -

Hoisting Equipment - BRIGGS & STRATTON WINCH UNIT, WITH 16.0' DERRICK, USING 1" MANILA ROPE

Ropes, Hooks, Chains, and Slings - 1" MANILA ROPE

Electrical Grounding, Temporary Wiring -

Lockouts for safe clearance procedures - electrical, pressure, moving parts,

Welding - WELDING WINCH UNIT TO PLATFORM

Excavations -

Loose Rock and Steep Slopes -

Explosives -

Water Safety - LIFE VESTS WERE WORN OR READILY AVAILABLE.

Other - EXPOSURE HRS. WEEK OF DEC14-18,1
P.J. MALONEY AND KEVIN MALONEY-13 HOURS
ROBERT HUNT-13 HOURS
K. SIMPSON-13 HOURS
J. SIMPSON-12 HOURS
K. NORDSTROM-13 HOURS

Prepared by P.J. MALONEY Title PRESIDENT
ATLANTIC TEST BORING CO INC

2. Forwarded.

Copy furnished

Signature P.J. Maloney
Resident Engineer

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

TO: Dept. of the Army; NED
Corps of Engineers

Attention: W.E. Swift
Bldg. 1175

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

Contract No. DACW 33-81-~~B-0056~~ C-0127 Date Held 11/19/81

Conducted By J. La Tourrette Time Held 9:30 a.m.

The following personnel were present: P.J. Maloney
K.Maloney
B.Hunt
R.Bukoski
J.La Tourrette

1. The following subjects were discussed:

- Individual Protective Equipment
- Prevention of Falls
- Tripping Hazards
- Portable Hand Tools
- Equipment Maintenance
- Hoisting Equipment
- Water Safety

Prepared by: J. La Tourrette

2. Exposure: 52 Man Hours

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

TO: Dept. of the Army, NED
Corps of Engineers

Attention: W.F. Swift
Bldg. 1175

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

Contract No. DACW 33-81-B-0056 Date Held 11/24/81

Conducted By J. LaTourrette Time Held 10 a.m.

The following personnel were present: P.J. MALONEY
K. MALONEY
B. HUNT
R. BUKOSKI
J. LATOURRETTE

1. The following subjects were discussed:

- ✓ Individual Protective Equipment
- ✓ Prevention of Falls
- ✓ Tripping Hazards
- ✓ Portable Hand Tools
- ✓ Equipment Maintenance
- ✓ Hoisting Equipment
- ✓ Water Safety

Presented by: J. LaTourrette

2. Manhours: 70 hrs

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

TO: Dept. of The Army, NED
Corps of Engineers

ATT'N: W.E. Swift .BLDG. 1175

GEOTECHNICAL CONSULTANTS OF MASSACHUSETTS INC.

WEEKLY SAFETY MEETING

CONTRACT NO. DACW33-81-~~B-0056~~ C 0127 DATE HELD 11/10/81

CONDUCTED BY J.LATOURRETTE TIME HELD 10:00 am.

PERSONNEL PRESENT : K. MALONEY
P.J. MALONEY
B. HUNT
R. BUKOSKI
J. LATOURRETTE

1. THE FOLLOWING SUBJECTS WERE DISCUSSED:

Individual Protective Equipment
Prevention of Falls
Tripping Hazards
Portable Hand Tools
Equipment Maintenance
Hoisting Equipment
Water Safety

PREPARED BY: J. LATOURRETTE, GEOTECHNICAL INSPECTOR

2. EXPOSURE: 142 MAN HOURS