

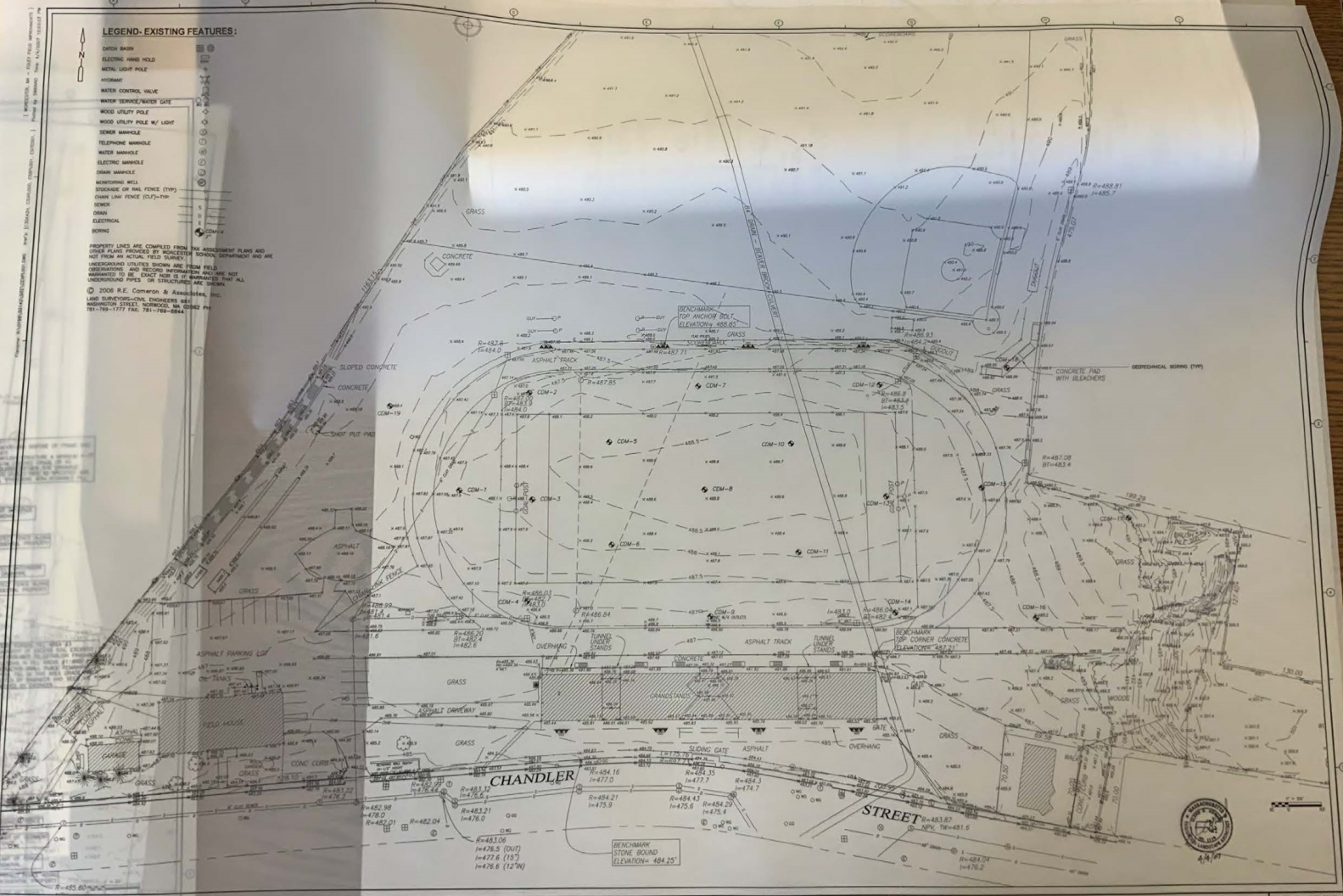
Attachment D – Locations and Logs of Previous Borings and Probes

LEGEND-EXISTING FEATURES:

- CEILING SIGN
- ELECTRIC WIRE HOLD
- METAL HOOP POLE
- HIGHWAY
- WATER CONTROL VALVE
- WATER SERVICE/WATER GATE
- WOOD UTILITY POLE
- WOOD UTILITY POLE W/ LIGHT
- SEWER MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- ELECTRIC MANHOLE
- SEWER MANHOLE
- MONITORING WELL
- EDGEWIRE OR WIRE FENCE (TYPE)
- CHAIN LINK FENCE (CUF)-TYPE
- CONCRETE
- GRASS
- ELECTRICAL
- ROADWAY

PROPERTY LINES ARE COMPARED FROM TAX ASSESSMENT PLANS AND OTHER PLANS PROVIDED BY SUBSCRIBER. FIELD SURVEYING AND MEASUREMENTS ARE NOT PERMITTED AS ACTUAL FIELD SURVEYING. BOUNDARY INFORMATION AND UNDERGROUND UTILITIES SHOWN ARE FROM FIELD SURVEYING AND RECORD INFORMATION AND ARE NOT GUARANTEED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN.

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Boring Number: CDM-1

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Oriller: New Hampshire Boring, Inc / Paul

Ground Water:

Pre-Drill Method:

Depth (ft) Date

Drilling Method/Casing: Geoprobe / 5' Macro Sleeve

NE

Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.

Abandonment Method: Backfill with cuttings and sand

Surface Elevation (ft.): 487

Logged By: Laurel Gionet

Total Depth (ft.): 5

Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
	S-1	60	60					Fill	2" angular GRAVEL 10": Dry, brown, fine SAND and SILT, some gravel 36": Moist, light brown, fine to coarse SAND, some gravel, trace silt	
482.0 5										
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30 and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-1



Boring Number: CDM-2

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0									24" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	42				Fill	10": Dry, black, coal ASH 6": BRICK 10": Dry, black to gray, GRAVEL and coal ASH 6": BRICK	
482.0 5		S-2	60	60						
								Silt	Moist, brown to blue-gray, clayey SILT, little gravel	
477.0 10		S-3	60	60				Sand	Wet, brown, fine to coarse SAND and GRAVEL, trace silt	
472.0 15										
467.0										BOE at 15 feet.

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification	
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color

Reviewed by:

Date:

Boring Number: CDM-2



Boring Number: CDM-3

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
	S-1	60	60	60				FILL	Dry, light brown, fine to coarse SAND and GRAVEL, trace silt	
482.0 5									BOE at 5.5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification														
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> </tr> <tr> <td></td> <td>Hard: >30</td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):	Very Loose: 0-4	Very Soft: 2	Loose: 4-10	Soft: 2-4	Medium Dense: 10-30	Medium Stiff: 4-8	Dense: 30-50	Stiff: 8-15	Very Dense: >50	Very Stiff: 15-30		Hard: >30
Granular (Sand):	Fine Grained (Clay):																
Very Loose: 0-4	Very Soft: 2																
Loose: 4-10	Soft: 2-4																
Medium Dense: 10-30	Medium Stiff: 4-8																
Dense: 30-50	Stiff: 8-15																
Very Dense: >50	Very Stiff: 15-30																
	Hard: >30																
			and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color														

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-3



Boring Number: CDM-4

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	38				Topsoil Fill	8" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots 6": Dry, black, coal ASH Bottom 24": Moist, brown, SILT, little gravel, little fine to coarse sand, little coal ash.	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification														
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> </tr> <tr> <td></td> <td>Hard: >30</td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):	Very Loose: 0-4	Very Soft: 2	Loose: 4-10	Soft: 2-4	Medium Dense: 10-30	Medium Stiff: 4-8	Dense: 30-50	Stiff: 8-15	Very Dense: >50	Very Stiff: 15-30		Hard: >30
Granular (Sand):	Fine Grained (Clay):																
Very Loose: 0-4	Very Soft: 2																
Loose: 4-10	Soft: 2-4																
Medium Dense: 10-30	Medium Stiff: 4-8																
Dense: 30-50	Stiff: 8-15																
Very Dense: >50	Very Stiff: 15-30																
	Hard: >30																
			and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color														

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-4



**Boring Number:
CDM-5**

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil Fill	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Moist, dark brown, clayey SILT, little coal ash, little gravel, trace fine to coarse sand, trace brick	
482.0 5	S-1	60	46						BOE @ 5.5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification																					
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td>and some little trace</td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td>35-50%</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> <td>20-35%</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> <td>10-20%</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> <td><10%</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> <td>moisture, density, color</td> </tr> <tr> <td></td> <td>Hard: >30</td> <td></td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):	and some little trace	Very Loose: 0-4	Very Soft: 2	35-50%	Loose: 4-10	Soft: 2-4	20-35%	Medium Dense: 10-30	Medium Stiff: 4-8	10-20%	Dense: 30-50	Stiff: 8-15	<10%	Very Dense: >50	Very Stiff: 15-30	moisture, density, color		Hard: >30	
Granular (Sand):	Fine Grained (Clay):	and some little trace																						
Very Loose: 0-4	Very Soft: 2	35-50%																						
Loose: 4-10	Soft: 2-4	20-35%																						
Medium Dense: 10-30	Medium Stiff: 4-8	10-20%																						
Dense: 30-50	Stiff: 8-15	<10%																						
Very Dense: >50	Very Stiff: 15-30	moisture, density, color																						
	Hard: >30																							

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-5



**Boring Number:
CDM-6**

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 10

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	15" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
	S-1	60	52					Fill	Dry, black to brown, coal ASH, some fine sand, little silt, little gravel	
482.0 5								Fill	Dry, black to brown, coal ASH, some fine sand, little silt, little gravel	
	S-2	60	60					Silt	Moist, blue-gray, clayey SILT, little gravel, 3" layer of brown, fine to coarse SAND, trace silt, trace gravel	
477.0 10									BOE at 10 feet	
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC Reverse Circulation SSA Solid Stem Augers CT Cable Tool HA Hand Augers JET Jetting AR Air Rotary D Driving DTR Dual Tube DTC Drill Through Casing FR Foam Rotary MR Mud Rotary	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-6



Boring Number: CDM-7

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	24				Topsoil Fill	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots 2" gray, angular GRAVEL 10": Moist, gray to black, coal ASH, some fine to coarse sand, little gravel, trace brick	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification													
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td rowspan="6"> and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color </td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30 Hard: >30</td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color	Very Loose: 0-4	Very Soft: 2	Loose: 4-10	Soft: 2-4	Medium Dense: 10-30	Medium Stiff: 4-8	Dense: 30-50	Stiff: 8-15	Very Dense: >50	Very Stiff: 15-30 Hard: >30
Granular (Sand):	Fine Grained (Clay):	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color														
Very Loose: 0-4	Very Soft: 2															
Loose: 4-10	Soft: 2-4															
Medium Dense: 10-30	Medium Stiff: 4-8															
Dense: 30-50	Stiff: 8-15															
Very Dense: >50	Very Stiff: 15-30 Hard: >30															

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-7



Boring Number: CDM-8

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	45				Topsoil Fill	6" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Top 24": Moist, brown, clayey SILT, little fine to coarse sand, trace gravel Bottom 15": Moist, black to gray, coal ASH, trace brick	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2006

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Oual Tube FR Foam Rotary MR Mud Rotary RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular(Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some little trace moisture, density, color 35-50% 20-35% 10-20% <10%

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-8



Boring Number: CDM-9

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	14" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	32				Fill	Moist, gray, SILT, some fine sand, little coal ash, trace gravel (iron stained)	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-9



**Boring Number:
CDM-10**

Client: City of Worcester

Project Name: Foley Field

Project Location: Worcester, Massachusetts

Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul

Ground Water:

Pre-Drill Method:

Depth (ft) Date

Drilling Method/Casing: Geoprobe / 5' Macro Sleeve

NE

Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.

Abandonment Method: Backfill with cuttings

Surface Elevation (ft.): 487

Logged By: Laurel Gionet

Total Depth (ft.): 5

Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	60				Fill	24": Moist, blue-gray, silty CLAY, trace fine sand, trace ash 18": Moist, black, coal ASH, little gravel, little fine to coarse sand, trace silt, trace brick, trace glass	
482.0									BOE at 5 feet	
5										
477.0										
10										
472.0										
15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2006

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50	Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30

Reviewed by:

Date:

Boring Number: CDM-10



Boring Number: CDM-11

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 10

Ground Water:
Depth (ft) Date
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots 12" Moist, blue-gray, silty CLAY, trace gravel, trace roots 12" Moist, brown, fine SAND and SILT, little gravel, trace ash 14" Moist, brown to black, coal ASH, little fine to coarse sand	
482.0 5		S-1	60	50				Fill	Moist, brown to black, coal ASH, some silt, little gravel, 3" layer of brown coarse sand	
477.0 10		S-2	60	24				Sand	Top 6": Moist, brown to black, ASH, some silt, little gravel Wet, light gray, fine to coarse SAND, trace silt	
472.0 15		S-3	60	60				Silt	Wet, light gray, SILT, trace fine sand.	
467.0									BOE at 15 feet.	

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification																												
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td>and</td> <td>35-50%</td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td>some</td> <td>20-35%</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> <td>little</td> <td>10-20%</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> <td>trace</td> <td><10%</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> <td></td> <td></td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Hard: >30</td> <td></td> <td>moisture, density, color</td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):	and	35-50%	Very Loose: 0-4	Very Soft: 2	some	20-35%	Loose: 4-10	Soft: 2-4	little	10-20%	Medium Dense: 10-30	Medium Stiff: 4-8	trace	<10%	Dense: 30-50	Stiff: 8-15			Very Dense: >50	Very Stiff: 15-30				Hard: >30		moisture, density, color
Granular (Sand):	Fine Grained (Clay):	and	35-50%																												
Very Loose: 0-4	Very Soft: 2	some	20-35%																												
Loose: 4-10	Soft: 2-4	little	10-20%																												
Medium Dense: 10-30	Medium Stiff: 4-8	trace	<10%																												
Dense: 30-50	Stiff: 8-15																														
Very Dense: >50	Very Stiff: 15-30																														
	Hard: >30		moisture, density, color																												

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-11



Boring Number: CDM-12

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	36				Topsoil Fill	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Coal ASH	
482.0 5									BOE at 5 feet.	
477.0 10										
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification	
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotarty D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by:

Date:

Boring Number: CDM-12



Boring Number: CDM-13

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 10

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	30				Topsoil	8" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots 6" Moist, blue gray, clayey SILT, trace ash, trace gravel Moist, brown to black, coal ASH, little gravel, little sand	
482.0 5		S-2	60	15				Fill	Moist, black to dark gray, coal ASH, little silt, trace brick, trace glass	
477.0 10									BOE at 10 feet	
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-13



**Boring Number:
CDM-14**

Client: City of Worcester

Project Name: Foley Field

Project Location: Worcester, Massachusetts

Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul

Ground Water:

Pre-Drill Method:

Depth (ft) Date

Drilling Method/Casing: Geoprobe / 5' Macro Sleeve

NE

Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.

Abandonment Method: Backfill with cuttings

Surface Elevation (ft.): 487

Logged By: Laurel Gionet

Total Depth (ft.): 5

Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	40				Topsoil Fill	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Moist, black to gray, coal ASH, little silt, little gravel	
482.0 5									BOE at 5 feet.	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30 and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by:

Date:

Boring Number: CDM-14



**Boring Number:
CDM-15**

Client: City of Worcester

Project Name: Foley Field

Project Location: Worcester, Massachusetts

Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul

Ground Water:

Pre-Drill Method:

Depth (ft) Date

Drilling Method/Casing: Geoprobe / 5' Macro Sleeve

11 1-30

Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.

Abandonment Method: Backfill with cuttings

Surface Elevation (ft.): 487

Logged By: Laurel Gionet

Total Depth (ft.): 15

Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	60				Topsoil	8" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Moist, brown, SILT, some gravel, trace fine to coarse sand.	
482.0 5		S-2	60	8				Fill	Dry, black to gray, coal ASH	
477.0 10		S-3	60	34				Sand	Wet, brown, coal ASH and fine to coarse SAND Wet, gray, fine to coarse SAND, little gravel, trace silt	
472.0 15									BOE at 15 feet	
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification																					
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td></td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td>and 35-50%</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> <td>some 20-35%</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> <td>little 10-20%</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> <td>trace <10%</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> <td>moisture, density, color</td> </tr> <tr> <td></td> <td>Hard: >30</td> <td></td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):		Very Loose: 0-4	Very Soft: 2	and 35-50%	Loose: 4-10	Soft: 2-4	some 20-35%	Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%	Dense: 30-50	Stiff: 8-15	trace <10%	Very Dense: >50	Very Stiff: 15-30	moisture, density, color		Hard: >30	
Granular (Sand):	Fine Grained (Clay):																							
Very Loose: 0-4	Very Soft: 2	and 35-50%																						
Loose: 4-10	Soft: 2-4	some 20-35%																						
Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%																						
Dense: 30-50	Stiff: 8-15	trace <10%																						
Very Dense: >50	Very Stiff: 15-30	moisture, density, color																						
	Hard: >30																							

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-15



Boring Number: CDM-16

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil Fill	10" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Moist, black, SILT and SAND, some ash, trace gravel	
482.0 5	S-1	60	31						BOE at 5 feet.	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30 and some moisture, little trace density, color

Reviewed by:

Date:

Boring Number: CDM-16



Boring Number: CDM-17

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul

Ground Water:

Pre-Drill Method:

Depth (ft) Date

Drilling Method/Casing: Geoprobe / 5' Macro Sleeve

NE

Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.

Abandonment Method: Backfill with cuttings

Surface Elevation (ft.): 487

Logged By: Laurel Gionet

Total Depth (ft.): 5

Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	36				Fill	6" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, black to gray, coal ASH, little silt, trace brick, trace gravel, trace sand	
482.0 5									BOE at 5 feet.	
477.0 10										
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS, GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Bumister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-17



Boring Number: CDM-18

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date:
10 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	60				Topsoil	6" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Moist, brown, clayey SILT, some gravel, little sand	
482.0 5		S-2	60	24				Fill	Dry, black and gray, coal ASH, trace brick	
477.0 10		S-3	60	45				Organic Silt	Wet, brown and black, organic SILT and PEAT	
472.0 15								Gravel	Wet, gray, GRAVEL and fine to coarse SAND, little silt	
467.0									BOE at 15 feet.	

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification														
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td></td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td rowspan="5">and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30 Hard: >30</td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):		Very Loose: 0-4	Very Soft: 2	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color	Loose: 4-10	Soft: 2-4	Medium Dense: 10-30	Medium Stiff: 4-8	Dense: 30-50	Stiff: 8-15	Very Dense: >50	Very Stiff: 15-30 Hard: >30
Granular (Sand):	Fine Grained (Clay):																
Very Loose: 0-4	Very Soft: 2	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color															
Loose: 4-10	Soft: 2-4																
Medium Dense: 10-30	Medium Stiff: 4-8																
Dense: 30-50	Stiff: 8-15																
Very Dense: >50	Very Stiff: 15-30 Hard: >30																

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-18



**Boring Number:
CDM-19**

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date
11 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	10" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots 15": Moist, brown, SILT, some gravel, little fine sand 5": coal ASH	
482.0 5	S-1	60	30					Fill	Moist, black to gray, coal ASH	
477.0 10	S-2	60	15					Gravel Organic Silt	Moist, black to gray, coal ASH Wet, black, organic SILT	
472.0 15	S-3	60	60					Gravel Organic Silt	Wet, brown, GRAVEL and fine to coarse SAND, trace silt BOE at 15 feet	
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30 and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by:

Date:

Boring Number: CDM-19



Boring Number: CDM-20

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date
11 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
	S-1	60	38					Fill	Moist, brown, clayey SILT, with frequent layers of coal ash and brick	
482.0 5								Fill	Moist, black and gray, coal ASH	
	S-2	60	34					Fill	Moist, black and gray, coal ASH	
477.0 10								Organic Silt	Wet, black, organic SILT	
	S-3	60	60					Organic Silt	Wet, black, organic SILT	
472.0 15								Gravel	Wet, brown, GRAVEL and fine to coarse SAND, little silt	
									BOE at 15 feet.	
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC Reverse Circulation SSA Solid Stem Augers CT Cable Tool HA Hand Augers JET Jetting AR Air Rotary D Driving DTR Dual Tube DTC Drill Through Casing FR Foam Rotary MR Mud Rotary	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-20



Boring Number: CDM-21

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date
10 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	13" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, brown, SILT, little gravel, little fine sand	
	S-1	60	42					Topsoil	Dry, black, coal ASH	
482.0 5								Fill	Dry, black to gray, coal ASH, trace brick	
	S-2	60	36					Fill		
477.0 10								Organic Silty Gravel	Wet, brown orange, GRAVEL, little fine to coarse sand, trace silt Wet, dark gray to black, organic SILT	
	S-3	60	60					Organic Silty Gravel		
								Sand	Wet, gray, fine to coarse SAND and GRAVEL, trace silt	
472.0 15								Sand		
467.0										

MASTER A - GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-21



Boring Number: CDM-20

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date:
11 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 End: 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	38					Moist, brown, clayey SILT, with frequent layers of coal ash and brick	
482.0 5		S-2	60	34				Fill	Moist, black and gray, coal ASH	
477.0 10									Moist, black and gray, coal ASH	
		S-3	80	60				Organic Silt	Wet, black, organic SILT	
472.0 15								Gravel	Wet, brown, GRAVEL and fine to coarse SAND, little silt	
467.0									BOE at 15 feet.	

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification																					
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td></td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td>and 35-50%</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> <td>some 20-35%</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> <td>little 10-20%</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> <td>trace <10%</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> <td>moisture, density, color</td> </tr> <tr> <td></td> <td>Hard: >30</td> <td></td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):		Very Loose: 0-4	Very Soft: 2	and 35-50%	Loose: 4-10	Soft: 2-4	some 20-35%	Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%	Dense: 30-50	Stiff: 8-15	trace <10%	Very Dense: >50	Very Stiff: 15-30	moisture, density, color		Hard: >30	
Granular (Sand):	Fine Grained (Clay):																							
Very Loose: 0-4	Very Soft: 2	and 35-50%																						
Loose: 4-10	Soft: 2-4	some 20-35%																						
Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%																						
Dense: 30-50	Stiff: 8-15	trace <10%																						
Very Dense: >50	Very Stiff: 15-30	moisture, density, color																						
	Hard: >30																							

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-20



Boring Number: CDM-21

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date
10 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	13" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, brown, SILT, little gravel, little fine sand	
	S-1	60	42							
482.0 5								Fill	Dry, black, coal ASH Dry, black to gray, coal ASH, trace brick	
	S-2	60	36							
477.0 10								Organic Silt/clay	Wet, brown orange, GRAVEL, little fine to coarse sand, trace silt Wet, dark gray to black, organic SILT	
	S-3	60	60							
472.0 15								Sand	Wet, gray, fine to coarse SAND and GRAVEL, trace silt	
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50	Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-21



Boring Number: CDM-22

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date
10.4 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
482.0 5	S-1	60	60					Fill	Moist, brown, clayey SILT, some gravel, trace ash, trace brick Moist, black, coal ASH, little brick, little silt, little sand	
477.0 10	S-2	60	27					Sand and Gravel	Moist, black, coal ASH, little brick, little silt, little sand Wet, brown, fine to coarse SAND and GRAVEL, trace silt	
472.0 15	S-3	60	60					Sand and Gravel		
467.0									BOE at 15 feet.	

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-22



Boring Number: CDM-23

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date:
10.8 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	23				Topsoil	11" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, black, coal ASH, trace brick	
482.0 5		S-2	60	30				Fill	Dry, black, coal ASH, trace brick	
477.0 10		S-3	60	32				Sand	Dry, black, coal ASH, trace brick Wet, brown, fine to coarse SAND, little silt, little gravel	
472.0 15									BOE at 15 feet.	
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30
			and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-23



Boring Number: CDM-24

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 15

Ground Water:
Depth (ft) Date:
12.5 1-31
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
	S-1	60	43						Moist, gray to black, coal ASH, little sand, little gravel, trace brick	
482.0 5								Fill	Moist, brown red to black, coal ASH, some fine to coarse sand, little gravel	
	S-2	60	15							
477.0 10									Moist, brown red to black, coal ASH, some fine to coarse sand, little gravel	
	S-3	60	60							
472.0 15								Gravel	Wet, brown, GRAVEL and fine to coarse SAND, trace silt	
467.0									BOE at 15 feet.	

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	

Reviewed by:

Date:

Boring Number: CDM-24



**Boring Number:
CDM-25**

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 10

Ground Water:
Depth (ft) Date:
NR
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	18" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	32				Fill	Dry, black to gray, coal ASH, little silt, little sand, trace brick	
482.0 5								Organic Silt	Dry, black to gray, coal ASH, little silt, little sand, trace brick Wet, dark gray to black, organic SILT and PEAT	
		S-2	60	38				Silty Clay	Wet, gray and brown yellow, mottled, silty CLAY, trace sand, trace gravel	
477.0 10									BOE at 10.5 feet	
472.0 15										
467.0										

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	and 35-50% some 20-35% little 10-20% trace <10% moisture, density, color
		Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	

Reviewed by:

Date:

Boring Number: CDM-25



Boring Number: CDM-26

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0								Topsoil	14" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots	
		S-1	60	40				Fill	Dry, black to gray, coal ASH, some gravel, trace fine to coarse sand, trace brick	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burrmeter Classification	
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some little trace 35-50% 20-35% 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-26



Boring Number: CDM-27

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 End: 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	30				Topsoil Fill	12" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, black to gray, coal ASH, trace brick	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification																					
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers SSA Solid Stem Augers HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	RC Reverse Circulation CT Cable Tool JET Jetting D Driving DTC Drill Through Casing	<table border="0"> <tr> <td>Granular (Sand):</td> <td>Fine Grained (Clay):</td> <td></td> </tr> <tr> <td>Very Loose: 0-4</td> <td>Very Soft: 2</td> <td>and 35-50%</td> </tr> <tr> <td>Loose: 4-10</td> <td>Soft: 2-4</td> <td>some 20-35%</td> </tr> <tr> <td>Medium Dense: 10-30</td> <td>Medium Stiff: 4-8</td> <td>little 10-20%</td> </tr> <tr> <td>Dense: 30-50</td> <td>Stiff: 8-15</td> <td>trace <10%</td> </tr> <tr> <td>Very Dense: >50</td> <td>Very Stiff: 15-30</td> <td>moisture, density, color</td> </tr> <tr> <td></td> <td>Hard: >30</td> <td></td> </tr> </table>	Granular (Sand):	Fine Grained (Clay):		Very Loose: 0-4	Very Soft: 2	and 35-50%	Loose: 4-10	Soft: 2-4	some 20-35%	Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%	Dense: 30-50	Stiff: 8-15	trace <10%	Very Dense: >50	Very Stiff: 15-30	moisture, density, color		Hard: >30	
Granular (Sand):	Fine Grained (Clay):																							
Very Loose: 0-4	Very Soft: 2	and 35-50%																						
Loose: 4-10	Soft: 2-4	some 20-35%																						
Medium Dense: 10-30	Medium Stiff: 4-8	little 10-20%																						
Dense: 30-50	Stiff: 8-15	trace <10%																						
Very Dense: >50	Very Stiff: 15-30	moisture, density, color																						
	Hard: >30																							

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-27



Boring Number: CDM-28

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 5

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/30/2006 **End:** 1/30/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	36				Topsoil Fill	8" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, brown, fine to coarse SAND, some gravel, some silt 2" layer of asphalt pavement	
482.0 5									BOE at 5 feet	
477.0 10										
472.0 15										
467.0										

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification	
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers JET AR Air Rotary D DTR Dual Tube DTC FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool Jetting Driving Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30	and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by: _____ **Date:** _____ **Boring Number:** CDM-28

MASTER A. GEOPROBE LOGS.GPJ - 2/2/06



Boring Number: CDM-29

Client: City of Worcester
Project Location: Worcester, Massachusetts

Project Name: Foley Field
Project Number:

Drilling Contractor/Driller: New Hampshire Boring, Inc / Paul
Pre-Drill Method:
Drilling Method/Casing: Geoprobe / 5' Macro Sleeve
Hammer Weight/Drop Height/ Spoon Size: lb / in / in O.D.
Surface Elevation (ft.): 487
Total Depth (ft.): 10

Ground Water:
Depth (ft) Date:
NE
Abandonment Method: Backfill with cuttings
Logged By: Laurel Gionet
Drilling Date: Start: 1/31/2006 **End:** 1/31/2006

Elev. Depth (ft)	Sample Type	Sample Number	Sample Length (in)	Sample Recovery (in)	Blows per 6 inches	In-Situ Testing (tsf)	Graphic Log	Strata	Material Description	Remarks
487.0 0		S-1	60	40				Topsoil	8" Topsoil: Frozen to moist, dark brown, SILT, little fine sand, trace gravel, trace roots Dry, light brown, fine to coarse SAND and GRAVEL, trace silt	
482.0 5		S-2	60	60				Sand and Gravel	Moist to wet, brown, fine to coarse SAND and GRAVEL, trace silt	
477.0 10									BOE at 10 feet	
472.0 15										
467.0										

MASTER A GEOPROBE LOGS.GPJ - 2/2/06

Sample Types	Drilling Method	Consistency vs Blowcount/Foot	Modified Burmister Classification
AS Auger/Grab Sample CS California Sampler BX 1.5" Rock Core NX 2.1" Rock Core GP Geoprobe HP Hydro Punch SS Split Spoon ST Shelby Tube WS Wash Sample	HSA Hollow Stem Augers RC SSA Solid Stem Augers CT HA Hand Augers AR Air Rotary DTR Dual Tube FR Foam Rotary MR Mud Rotary	Reverse Circulation Cable Tool JET Jetting D Driving DTC Drill Through Casing	Granular (Sand): Very Loose: 0-4 Loose: 4-10 Medium Dense: 10-30 Dense: 30-50 Very Dense: >50 Fine Grained (Clay): Very Soft: 2 Soft: 2-4 Medium Stiff: 4-8 Stiff: 8-15 Very Stiff: 15-30 Hard: >30 and some 35-50% little 20-35% trace 10-20% <10% moisture, density, color

Reviewed by:

Date:

Boring Number: CDM-29

J.A. SINNOTT CO
 32 DAWSON RD.
 WORCESTER, MASS.

BORING - 1
 ELEV. 486.30'

60	FROST
138	LOAM
35	
14	
7	DRY
4	SOFT
8	
7	FILL
16	
21	LEVEL
25	FIRM
36	DAMP
53	SAND
39	FIRM
42	DAMP
38	SAND
35	DAMP
64	SILT
70	WET
69	COMPACT
50	SAND &
47	GRAVEL
83	WET
76	COMPACT
	GRAVEL

WATER

NO REFUSAL

BORING - 2
 ELEV. 486.40'

450	FROST
150	LOAM
25	
16	DRY
5	SOFT
2	FILL
1	

METAL OBJECT
 DISCONTINUED
 NOT OFFSET

BORING - 3
 ELEV. 486.60'

155	FROST
227	LOAM
94	
25	
12	DRY
5	LOOSE
4	FILL
2	
2	
8	
24	WET
43	FIRM
36	SAND
22	GRAVEL
20	WET
10	SOFT
20	SILT
65	WET
62	FIRM
64	SAND
29	GRAVEL
36	WET
30	FIRM
38	SANDS
67	GRAVEL
43	
33	WET
32	FIRM
37	SAND
45	

WATER

NO REFUSAL

BORING - 4
 ELEV. 486.90'

235	FROST
800	LOAM
1185	
71	
24	DRY
18	LOOSE
215	FILL
16	
111	
102	LEVEL
87	WET
50	FIRM
49	SANDS
65	GRAVEL
43	
23	WET
18	SILT
19	
95	
75	DAMP
71	COMPACT
53	GRAVEL
49	
75	
71	
79	

WATER

NO REFUSAL

TEST BORING DATA

NOTT CO
SON RD
TER, MASS.

FEB. 2, 1963 TO
FEB. 26, 1963

STANDARD PENETRATION TEST
WEIGHT OF HAMMER 140 LB.
HAMMER FALL 30"
SAMPLER O.D. 2"

BORING - 5
ELEV. 487.00'

210	FROST
325	LOAM
170	
14	DRY FIRM SAND
5	17
19	
62	DRY COMPACT GRAVEL
55	
38	
10	51
69	
114	WET V. COMP. GRAVEL
124	
135	
15	155

NO REFUSAL

BORING - 6
ELEV. 487.00'

235	FROST
165	FILL OR TOPSOIL
187	
107	
5	187
75	DRY COMPACT GRAVEL
67	
56	
61	
10	89
97	
75	DAMP V. COMP.
114	
129	
15	147
132	

NO REFUSAL

BORING - 7
ELEV. 487.20'

172	FROST
215	V. COM.
155	
32	
5	33
25	DRY FIRM SAND GRAVEL
62	
330	
87	
10	54
45	
37	
24	
27	
15	61
35	WET FIRM SANDS GRAVEL
26	
30	
45	
20	50
90	
30	
76	
129	

NO REFUSAL

BORING - 8
ELEV. 486.10'

176	FROST
212	LOAM
25	
7	
5	6
6	DRY LOOSE FILL
10	
25	
40	DAMP FIRM SAND GRAVEL
10	56
54	
49	
41	
36	
15	29
43	WET LOOSE GRAVEL
33	
28	

NO REFUSAL

BORING - 9
ELEV. 486.20'

219	FROST
135	LOAM
38	
59	
5	69
90	DRY COMPACT SAND GRAVEL
70	
144	
41	
10	22
17	WET LOOSE GRAVEL
16	
25	
24	
15	25
28	WET FIRM GRAVEL
31	
35	
35	
20	68

NO REFUSAL

H

G

F

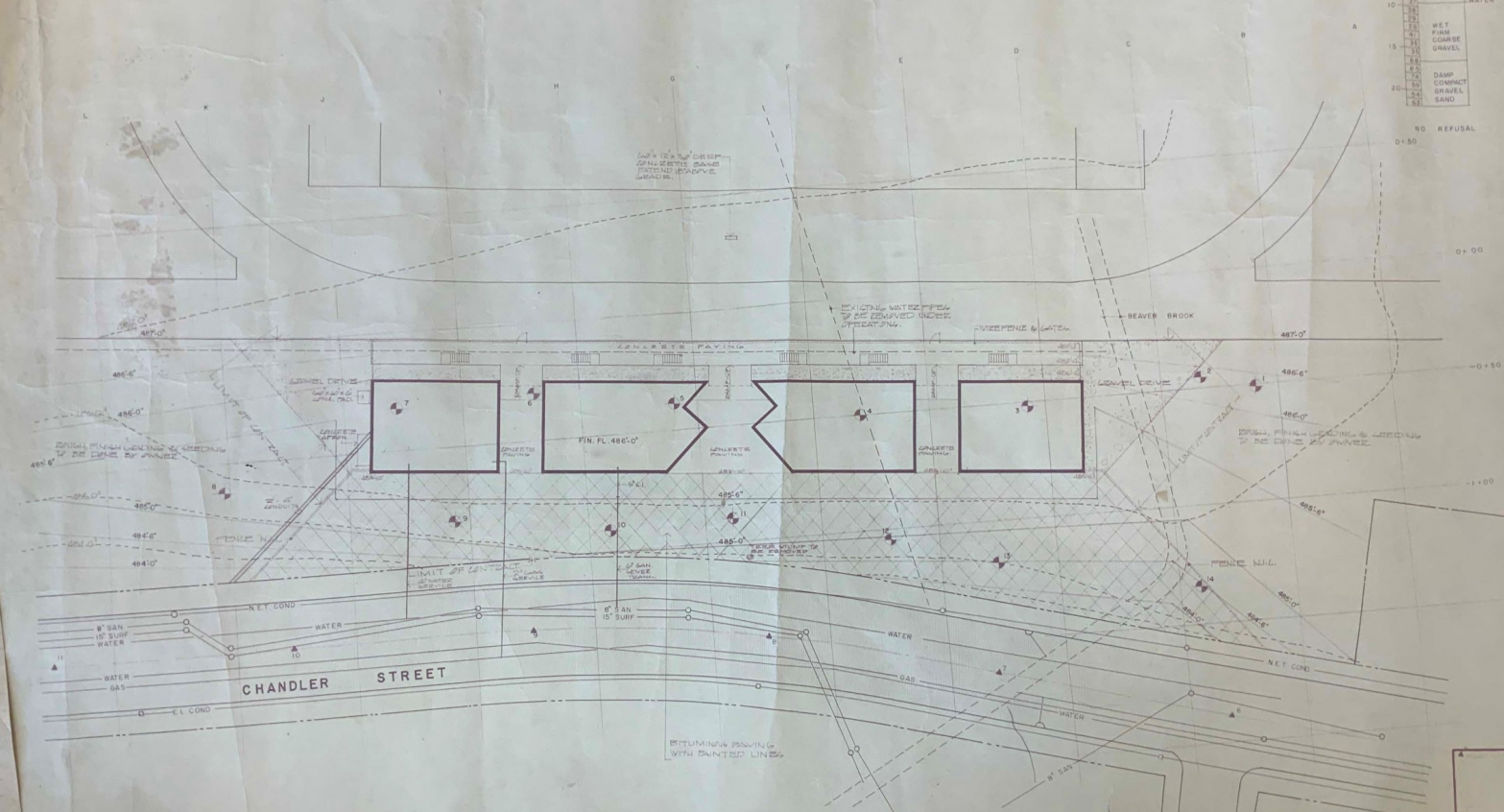
E

D

C

B

10	NO REFUSAL	10	NO REFUSAL	10	NO REFUSAL	10	NO REFUSAL	10	NO REFUSAL
11	WET SAND & GRAVEL	11	WET SAND & GRAVEL	11	WET SAND & GRAVEL	11	WET SAND & GRAVEL	11	WET SAND & GRAVEL
12	WET SAND	12	WET SAND	12	WET SAND	12	WET SAND	12	WET SAND
13	WET SAND	13	WET SAND	13	WET SAND	13	WET SAND	13	WET SAND
14	WET SAND	14	WET SAND	14	WET SAND	14	WET SAND	14	WET SAND
15	WET SAND	15	WET SAND	15	WET SAND	15	WET SAND	15	WET SAND
16	WET SAND	16	WET SAND	16	WET SAND	16	WET SAND	16	WET SAND
17	WET SAND	17	WET SAND	17	WET SAND	17	WET SAND	17	WET SAND
18	WET SAND	18	WET SAND	18	WET SAND	18	WET SAND	18	WET SAND
19	WET SAND	19	WET SAND	19	WET SAND	19	WET SAND	19	WET SAND
20	WET SAND	20	WET SAND	20	WET SAND	20	WET SAND	20	WET SAND
21	WET SAND	21	WET SAND	21	WET SAND	21	WET SAND	21	WET SAND
22	WET SAND	22	WET SAND	22	WET SAND	22	WET SAND	22	WET SAND
23	WET SAND	23	WET SAND	23	WET SAND	23	WET SAND	23	WET SAND
24	WET SAND	24	WET SAND	24	WET SAND	24	WET SAND	24	WET SAND
25	WET SAND	25	WET SAND	25	WET SAND	25	WET SAND	25	WET SAND
26	WET SAND	26	WET SAND	26	WET SAND	26	WET SAND	26	WET SAND
27	WET SAND	27	WET SAND	27	WET SAND	27	WET SAND	27	WET SAND
28	WET SAND	28	WET SAND	28	WET SAND	28	WET SAND	28	WET SAND
29	WET SAND	29	WET SAND	29	WET SAND	29	WET SAND	29	WET SAND
30	WET SAND	30	WET SAND	30	WET SAND	30	WET SAND	30	WET SAND



BORING #14

1	FRONT
2	LOAM
3	DOY
4	LOOSE
5	FILL
6	GRAVEL
7	GRAVEL
8	GRAVEL
9	GRAVEL
10	GRAVEL
11	GRAVEL
12	GRAVEL
13	GRAVEL
14	GRAVEL
15	GRAVEL
16	GRAVEL
17	GRAVEL
18	GRAVEL
19	GRAVEL
20	GRAVEL
21	GRAVEL
22	GRAVEL
23	GRAVEL
24	GRAVEL
25	GRAVEL
26	GRAVEL
27	GRAVEL
28	GRAVEL
29	GRAVEL
30	GRAVEL