

PROJECT TITLE

SAULT STE. MARIE, ONTARIO
NATURAL RESOURCES CANADA
THE GREAT LAKES FORESTRY CENTRE
1219 QUEEN ST. EAST
NRCAN-GLFC STORM SEWER SYSTEM REPLACEMENT

Addendum No.1, dated 2016-08-29

The plans and specifications are amended as follows:

SPECIFICATIONS

1. Section 00 01 11 - TABLE OF CONTENTS
 - .1 Section 33 31 13 - PUBLIC SANITARY UTILITY SEWERAGE PIPING has been added.
 - .2 Bidders are instructed to delete Section 00 01 11 - TABLE OF CONTENTS from original published package and replace with revised Section 00 01 11 - TABLE OF CONTENTS attached as part of this Addendum 1.
2. Section 01 14 00 - WORK RESTRICTIONS
 - .1 Article 1.5 SPECIAL REQUIREMENTS, paragraph 1.5.2, delete.
 - .2 Article 1.6 SECURITY, paragraph 1.6.2 and 1.6.3, delete.
3. Section 31 23 33.01 - EXCAVATION, TRENCHING AND BACKFILLING
 - .1 Article 1.2 MEASUREMENT PROCEDURES, paragraph 1.2.4, revise to read,

"Shoring, bracing, sheet piles, pumping, cofferdams, well points, underpinning, de-watering of excavation and sediment control at discharge point of dewatering system will be measured separately for payment."
 - .2 Article 2.1 MATERIALS, paragraph 2.1.2, revise to read,

"Type 2 fill: to OPSS.PROV 1010, for Granular B Type 2 aggregate. Maximum size 26.5 mm. Slag and/or RAP material shall not be permitted."
4. Section 33 05 16 - MAINTENANCE HOLES AND CATCH BASIN STRUCTURES
 - .1 Article 1.2 MEASUREMENT PROCEDURES, paragraph 1.2.1, revised to read,

"Measure supply and installation of maintenance holes and catch basins in units by size and type, including frames, gratings, adjustment units, excavation and backfilling."
5. Section 33 31 13 - PUBLIC SANITARY UTILITY SEWERAGE PIPING
 - .1 Bidders are instructed to add specification Section 33 31 13 to the Contract package.
6. Section 33 41 00 - STORM UTILITY DRAINAGE PIPING
 - .1 Article 2.2 CORRUGATED STEEL PIPE, delete.

7. Appendix 1 - Borehole Records
 1. Bidders are instructed to add borehole logs attached as part of this Addendum No.1 to Appendix 1 - Borehole Records of the Specifications.

DRAWINGS

1. Drawing C303 - DETAILS PLAN
 - .1 TABLE 2 - MAINTENANCE HOLE / CATCH BASIN TABLE - WEST OUTLET, maintenance hole sizes to be revised as follows:
 - MH7W - 1800 mm,
 - MH8W - 1800 mm,
 - MH9W - 2400 mm,
 - MH11W - 1500 mm,
 - MHCB5W - 1500 mm.

END OF ADDENDUM NO.1

<u>Section</u>	<u>Title</u>	
<u>Pages</u>		
<u>Division 00 - Procurement and Contracting Requirements</u>		
00 00 00	SPECIFICATION TITLE SHEET	1
00 01 07	PROFESSIONAL SEALS PAGE	1
00 01 11	TABLE OF CONTENTS	2
<u>Division 01 - General Requirements</u>		
01 11 00	SUMMARY OF WORK	3
01 14 00	WORK RESTRICTIONS	3
01 29 83	PAYMENT PROCEDURES FOR TESTING LABORATORY SERVICES	2
01 31 19	PROJECT MEETINGS	3
01 32 16	CONSTRUCTION PROGRESS SCHEDULE - BAR (GANTT) CHART	3
01 33 00	SUBMITTAL PROCEDURES	6
01 35 29	HEALTH AND SAFETY REQUIREMENTS	5
01 35 43	ENVIRONMENTAL PROCEDURES	6
01 41 00	REGULATORY REQUIREMENTS	2
01 42 13	ABBREVIATIONS AND ACRONYMS	11
01 45 00	QUALITY CONTROL	4
01 51 00	TEMPORARY UTILITIES	3
01 52 00	CONSTRUCTION FACILITIES	6
01 56 00	TEMPORARY BARRIERS AND ENCLOSURES	3
01 61 00	COMMON PRODUCT REQUIREMENTS	6
01 71 00	EXAMINATION AND PREPARATION	3
01 73 00	EXECUTION	3
01 74 11	CLEANING	3
01 74 20	CONSTRUCTION/DEMOLITION WASTE MANAGEMENT AND DISPOSAL	2
01 77 00	CLOSEOUT PROCEDURES	2
01 78 00	CLOSEOUT SUBMITTALS	5
<u>Division 02 - Existing Conditions</u>		
02 41 13	SELECTIVE SITE DEMOLITION	8
<u>Division 03 - Concrete</u>		
03 10 00	CONCRETE FORMING AND ACCESSORIES	4
03 20 00	CONCRETE REINFORCING	5
03 30 00	CAST-IN-PLACE CONCRETE	8
<u>Division 31 - Earthwork</u>		
31 23 33.01	EXCAVATING, TRENCHING AND BACKFILLING	11
31 32 19.01	GEOTEXTILES	4
31 37 10	RIP-RAP	2
<u>Division 32 - Exterior Improvements</u>		
32 12 16	ASPHALT PAVING	8
32 14 13	PRECAST CONCRETE UNIT PAVING	6

32 15 60	ROADWAY DUST CONTROL	3
32 16 15	CONCRETE WALKS, CURBS AND GUTTERS	4
32 17 23	PAVEMENT MARKINGS	4
32 31 13	CHAIN LINK FENCES AND GATES	5

Division 33 - Utilities

33 05 16	MAINTENANCE HOLES AND CATCH BASIN STRUCTURES	8
33 31 13	PUBLIC SANITARY UTILITY SEWERAGE PIPING	2
33 41 00	STORM UTILITY DRAINAGE PIPING	9

Appendices

APPENDIX 1	BOREHOLE LOGS	
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Drawing List

C000	TITLE PAGE
C001	LEGEND
C002	REPRESENTATION OF LEGAL BOUNDARY PLAN
C003	STORMWATER MANAGEMENT PLAN
C100	DEMOLITION PLAN - AREA 1
C101	DEMOLITION PLAN - AREA 2
C102	DEMOLITION PLAN - AREA 3
C103	DEMOLITION PLAN - AREA 4
C200	MUNICIPAL SERVICES PLAN - AREA 1
C201	MUNICIPAL SERVICES PLAN - AREA 2
C202	MUNICIPAL SERVICES PLAN - AREA 3
C203	MUNICIPAL SERVICES PLAN - AREA 4
C300	DETAILS PLAN
C301	DETAILS PLAN
C302	DETAILS PLAN
C303	DETAILS PLAN

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- .1 Requirements for flushing, cleaning and CCTV inspection of identified existing sanitary sewers.

1.2 MEASUREMENT PROCEDURES

- .1 Measure flushing, cleaning and CCTV inspection of identified existing sanitary sewers in linear meters.
- .2 Cleaning to include removal of construction debris and any other obstructions found within the sanitary sewers in order to restore full flow capacity of the sanitary sewer system.

1.3 SCHEDULING

- .1 Schedule Work to minimize interruptions to existing services and maintain existing sewage flows during construction.
- .2 Submit schedule of expected interruptions for approval and adhere to approved schedule.
- .3 Notify Departmental Representative and building manager 24 hours minimum in advance of any interruption in service.

PART 2 - EXECUTION

2.1 FLUSHING, CLEANING AND CCTV INSPECTION OF EXISTING SANITARY SEWERS

- .1 When directed by Departmental Representative, draw tapered wooden plug with diameter of 50 mm less than nominal pipe diameter through sewer to ensure that pipe is free of obstruction.
- .2 Remove foreign material from sewers and related appurtenances by flushing with water.
- .3 Where flushing does not adequately remove foreign materials, construction debris, or other obstruction Contractor to ensure removal of these items by other means of cleaning which are to be approved by the Departmental Representative.

- .4 Television and photographic inspections:
 - .1 Carry out inspection of identified existing sewers by video camera, digital camera or by other related means.
 - .2 Provide means of access to permit Departmental Representative to do inspections.
 - .3 Payment for inspection services in accordance with Measurement and Payment in PART 1.

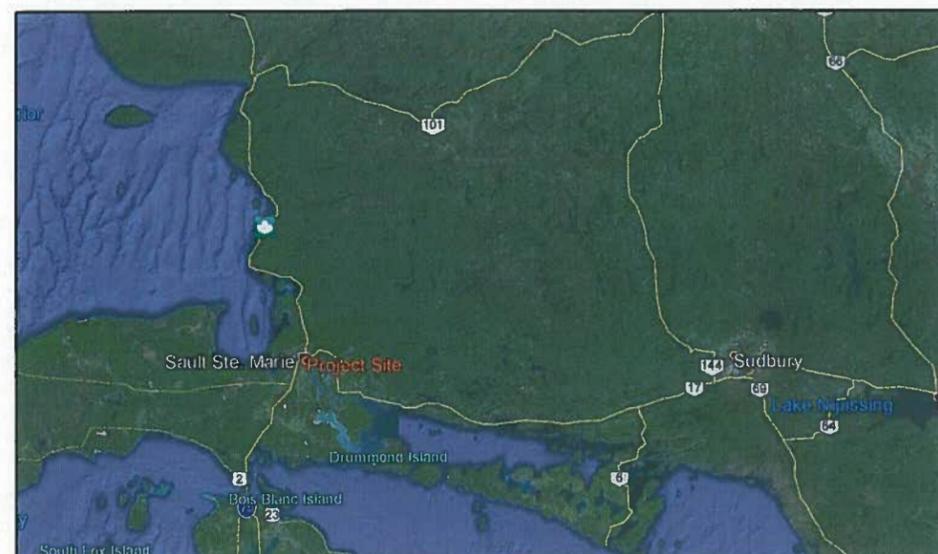
2.2 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 20.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

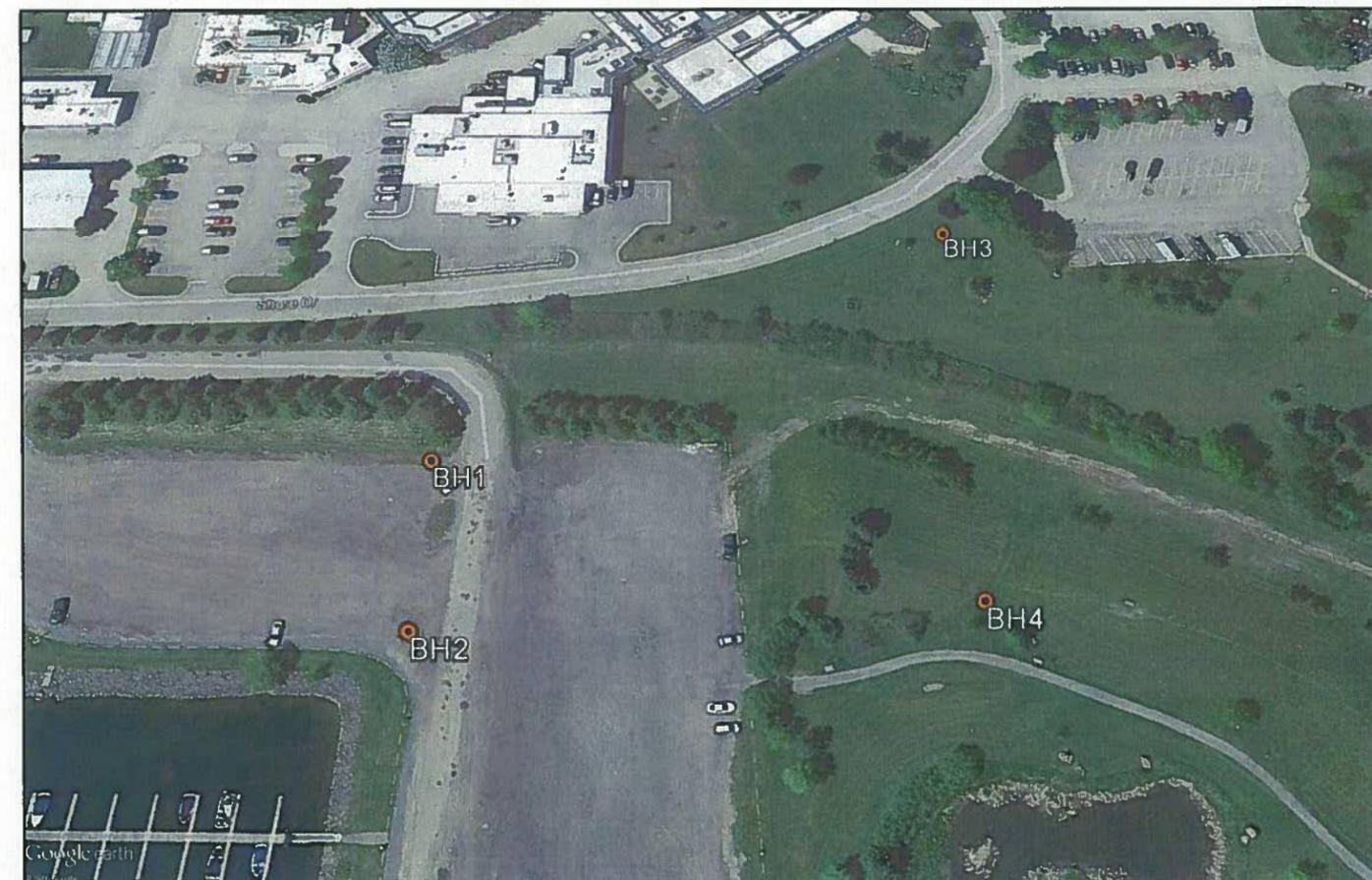
END OF SECTION



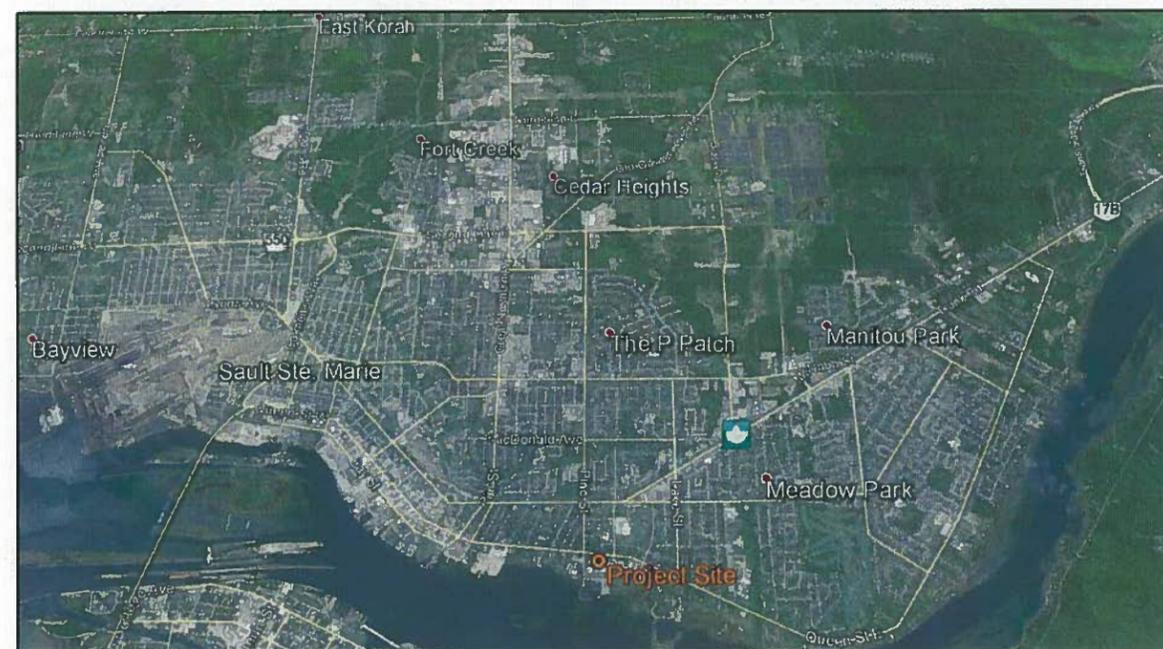
NORTH



KEY PLAN



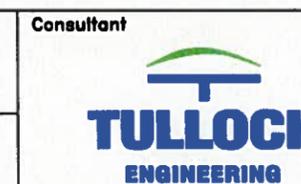
ENLARGED SITE PLAN SHOWING BOREHOLE LOCATIONS



SITE PLAN

"IMAGERY IS COURTESY OF GOOGLE EARTH"

Project	GEOTECHNICAL INVESTIGATION FOR GREAT LAKE FORESTRY STORM OUTLET REPLACEMENT
Title	KEY PLAN & SITE PLAN SHOWING BOREHOLE LOCATIONS



Scale As Noted	
Dr. D.A.Mousseau	Ch. J.Black
Date Aug. 10, 2016	
CAD File 15-1148-2016 Site Plan.dwg	Dwg. No. 1

Project No: 15-1148

Project: Great Lakes Forestry Storm Outlet Replacement

Site Location: 1219 Queen Street East, Sault Ste. Marie, Ontario

Client: CIMA Canada Inc.

Logged By: A.Byers

Compiled By: D.A.Mousseau

Reviewed By: J.Black

SUBSURFACE PROFILE				SAMPLE				Undrained Shear Strength (Cu, kPa)		Standard Penetration Resistance (Blows / 0.3m)		Water Content Data (%)		Remarks															
Well	Strata Plot (m)	Depth (m)	DESCRIPTION	Elevation (m)	Sample Number	Sample Type	Recovery (%)	Blows / 0.3m	25	50	75	100	125	150	175	200	10	20	30	40	50	60	70	80	90	Gr	Sa	Si	Cl
		0	Geodetic Ground Elevation	0.00																									
			Sand, Coarse Grained, With Gravel, Trace Clay, Trace Silt, Compact, Moist (Fill)	-0.76	1	SS	50	18																					
		1	Sand, Fine Grained, Some Clay, Trace Gravel, Loose, Moist (Fill)	-1.52	2	SS	50	7																					
		2	Clayey Sand, Some silt, Trace Gravel, Very Soft, Brown, Moist	-2.29	3	SS	17	2																					
		3	Sandy Silt, Trace Red Sandstone, Firm, Dark Brown, Wet	-3.05	4	SS	25	5																					
		4	Sand, Trace Silt, Fine Grained, Loose, Dark Brown, Wet		5	SS	-	6																					
					6	SS	-	7																					
			End of Borehole	-4.57																									
		5																											

Water @ 1.68m Measured In Piezometer On Aug9/16

Sample Has Strong Organics Or Chemical Odour

Drilled By: NorthDrilling

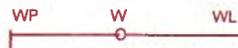
Drill Method: Hollow Stem Auger

Drill Date: July 25,2016

Sample Type

- AS - Auger Sample
- SS - Spill Spoon
- TWS - Thin Walled Shelby Tube
- BS - Block Sample
- NQ - Rock Core
- W - Water Content
- WL - Liquid Limit
- WP - Plastic Content
- +s Field Vane, S - Sensitivity
- Lab Vane

- w - Wash
- - SPT (Standard Penetration Test)
- - DCPT (Dynamic Cone Penetration)
- WH - Weight Of Hammer



△ Field Vane

Datum:

Location: UTM 16T
706781 E
5153404 N

Sheet: 1 of 1



Borehole Log: 2016 BH2

Project No: 15-1148

Project: Great Lakes Forestry Storm Outlet Replacement
 Site Location: 1219 Queen Street East, Sault Ste. Marie, Ontario
 Client: CIMA Canada Inc.

Logged By: A.Byers
 Compiled By: D.A.Mousseau
 Reviewed By: J.Black

SUBSURFACE PROFILE				SAMPLE				Undrained Shear Strength (Cu, kPa) 25 50 75 100 125 150 175 200	Standard Penetration Resistance Blows / 0.3m 10 20 30 40 50 60 70 80 90	Water Content Data (%) 1020304050607080	Remarks
Well	Strata Plot (m)	Depth (m)	DESCRIPTION	Elevation (m)	Sample Number	Sample Type	Recovery (%)				Blows / 0.3m
		0	Geodetic Ground Elevation	0.00							
			Sand, Coarse Grained, With Gravel, Trace Sandstone, Very Dense, Dry (Fill)	-0.76	1	SS	75	105			
		1	Clayey Sand, Some Silt, Trace Gravel, Compact, Reddish Brown, Moist (Fill)	-1.52	2	SS	17	22			
			Silty Sand, Trace Gravel, Dense, Brown, Moist	-1.67	3	SS	21	38+			
		2	End of Borehole								Refusal @ 1.67m On Boulders / Fill Material
		3									Borehole Was Moved 0.91m West Refusal Was Encounter @ 1.07m
		4									
		5									

Drilled By: NorthDrilling

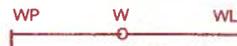
Drill Method: Hollow Stem Auger

Drill Date: July 25, 2016

Sample Type

- AS - Auger Sample
- SS - Split Spoon
- TWS - Thin Walled Shelby Tube
- BS - Block Sample
- NQ - Rock Core
- W - Water Content
- WL - Liquid Limit
- WP - Plastic Content
- +s Field Vane, S - Sensitivity
- Lab Vane

- w - Wash
- - SPT (Standard Penetration Test)
- - DCPT (Dynamic Cone Penetration)
- WH - Weight Of Hammer



△ Field Vane

Datum:

Location: UTM 16T
 706782 E
 5153366 N

Sheet: 1 of 1

Project No: 15-1148

Project: Great Lakes Forestry Storm Outlet Replacement
 Site Location: 1219 Queen Street East, Sault Ste. Marie, Ontario
 Client: CIMA Canada Inc.

Logged By: A.Byers

Compiled By: D.A.Mousseau

Reviewed By: J.Black

SUBSURFACE PROFILE				SAMPLE				Undrained Shear Strength (Cu, kPa) 25 50 75 100 125 150 175 200	Standard Penetration Resistance Blows / 0.3m 10 20 30 40 50 60 70 80 90	Water Content Data (%) 10 20 30 40 50 60 70 80	Remarks			
Well	Strata Plot (m)	Depth (m)	DESCRIPTION	Elevation (m)	Sample Number	Sample Type	Recovery (%)				Blows / 0.3m	Grain Size (%) Gr Sa Si Cl		
		0	Geodetic Ground Elevation	0.00										
			50mm Topsoil		1	SS	58	16						
		1	Sand, Fine Grained, Trace Gravel, Trace Brick, Compact, Light Brown, Dry	-1.52	2	SS	42	16						
		2	Sand, Coarse Grained, With Gravel, Compact, Dark Brown, Dry	-2.29	3	SS	33	16						
		3	Sandy Silt, Trace Clay, Trace Gravel, Very Stiff, Red / Brown, Moist		4	SS	83	20						
		4			5	SS	13	18						
		5	Silty Clay, Trace Sand, Very Soft, Reddish Brown, Moist	-4.57	6	SS	100	WH						
			End of Borehole	-5.18										

Spoon Refusal @ 2.29m
Moved 1.5m SW

Water In Open Borehole @
5.18m Upon completion
Of Drilling

Drilled By: NorthDrilling
Drill Method: Hollow Stem Auger
Drill Date: July 25, 2016

Sample Type
 AS - Auger Sample
 SS - Split Spoon
 TWS - Thin Walled Shelby Tube
 BS - Block Sample
 NQ - Rock Core
 W - Water Content
 WL - Liquid Limit
 WP - Plastic Content
 +s - Field Vane, S - Sensitivity
 - Lab Vane

w - Wash
 ○ - SPT (Standard Penetration Test)
 ○ - DCPT (Dynamic Cone Penetration)
 WH - Weight Of Hammer

WP W WL
 |-----○-----|
 △ Field Vane

Datum:
Location: UTM 16T
 706893 E
 5153469 N
Sheet: 1 of 1

Project No: 15-1148

Project: Great Lakes Forestry Storm Outlet Replacement
 Site Location: 1219 Queen Street East, Sault Ste. Marie, Ontario
 Client: CIMA Canada Inc.

Logged By: A.Byers
 Compiled By: D.A.Mousseau
 Reviewed By: J.Black

SUBSURFACE PROFILE				SAMPLE				Undrained Shear Strength (Cu, kPa)	Standard Penetration Resistance Blows / 0.3m	Water Content Data (%)	Remarks			
Well	Strata Plot (m)	Depth (m)	DESCRIPTION	Elevation (m)	Sample Number	Sample Type	Recovery (%)				Blows / 0.3m	Gr	Sa	Si
		0	Geodetic Ground Elevation	0.00										
		-0.76	Sand, Fine Grained, Trace Gravel, Compact, Light Brown, Dry		1	SS	21	18						
		-1.77	Clayey Silt, Trace Gravel, Stiff, Grey / Brown, Moist		2	SS	83	11						
		-2.29	Sand, Trace Gravel, Trace Concrete, Red / Brown, Compact, Moist (Fill)		3	SS	75	18						
		-3.05	Sandy Silt, Trace Gravel, (Brick), Grey / Brown, Loose, Moist (Fill)		4	SS	83	8						
		-4.57	Silty Sand, Trace Gravel, (Mortar / Brick) Compact, Grey / Brown, Moist (Fill)		5	SS	33	13						
		-4.77	Concrete Fill											
		-5.18	Silty Clay, Hard, Brown / Red, Moist		6	SS	-	31						
			End of Borehole											

Water @ 2.89m Measured
 in Piezometer On Aug 9/16

Drilled By: NorthDrilling
Drill Method: Hollow Stem Auger
Drill Date: July 25, 2016

Sample Type
 AS - Auger Sample
 SS - Spill Spoon
 TWS - Thin Walled Shelby Tube
 BS - Block Sample
 NQ - Rock Core
 W - Water Content
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 +s - Field Vane, S - Sensitivity
 - Lab Vane

w - Wash
 ○ - SPT (Standard Penetration Test)
 ○ - DCPT (Dynamic Cone Penetration)
 WH - Weight Of Hammer

WP W WL
 |-----|-----|
 ○
 △ Field Vane

Datum:
Location: UTM 16T
 706895 E
 5153376 N
Sheet: 1 of 1