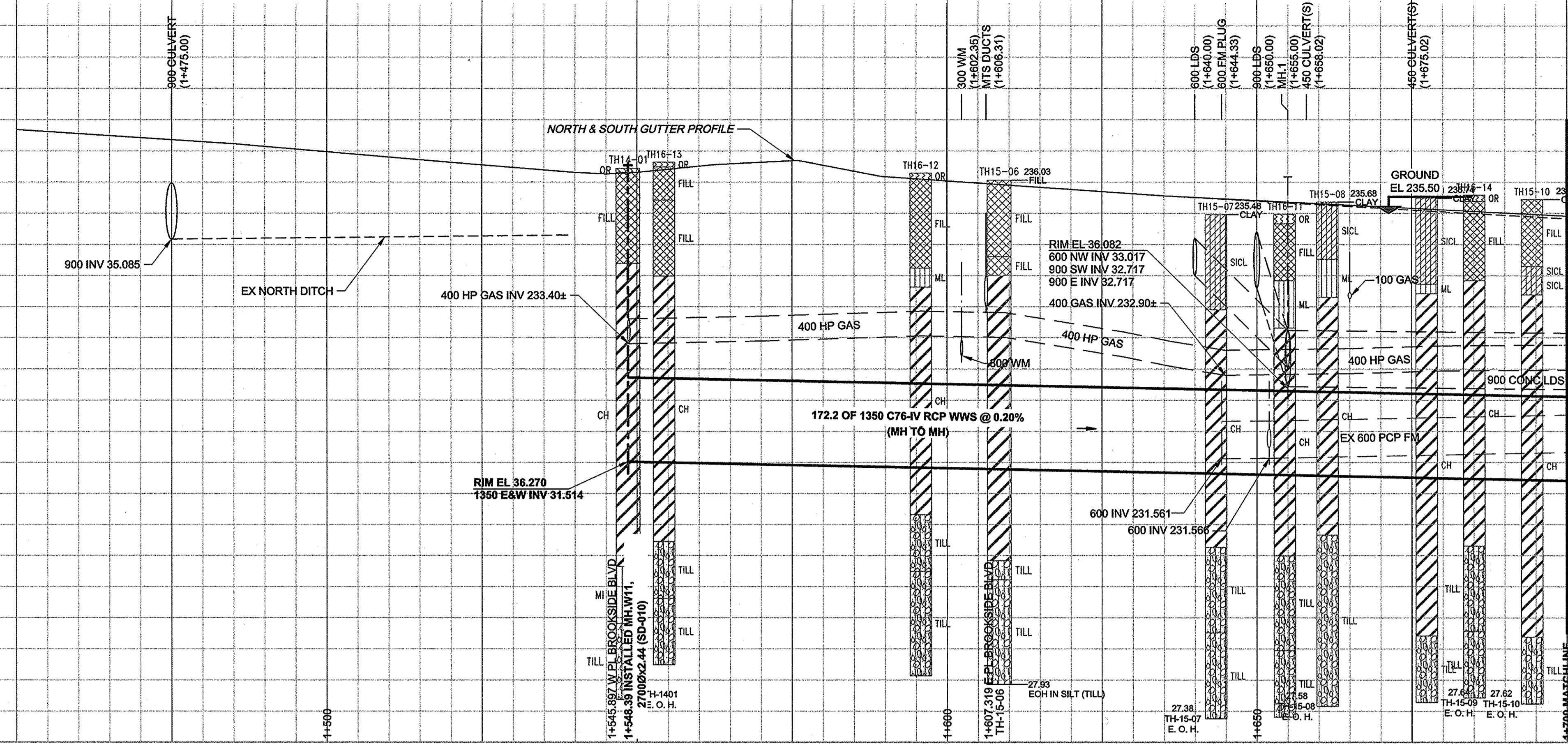


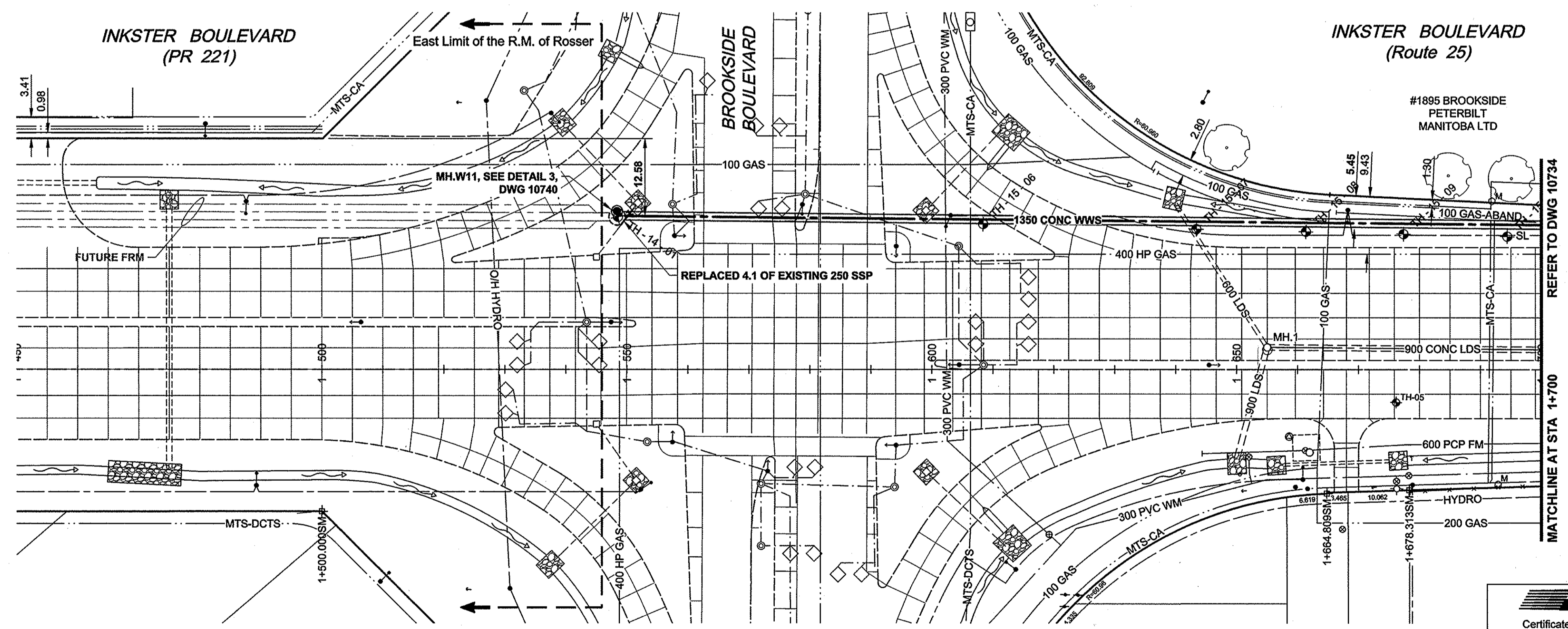
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 AECOM REVIEW DRG CHK

EXISTING FEATURES  
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CHAINAGE ALONG S MEDIAN



**MATERIAL LIST**

ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
1350 CONCRETE PIPE	LAFARGE CONSTRUCTION MATERIALS INC.	ASTM C768 CSA A257.2 (CLASSES AS NOTED)	STEEL REINFORCED
1350 PIPE GASKETS (LAFARGE)	HAMILTON KENT OF CANADA LIMITED	ASTM C361 ASTM C443 CSA A257.3	TYLOX "SUPERSEAL" SELF-LUBRICATING GASKET
250 MOULDED PVC FITTINGS (COUPLING)	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE" TEES, WYES & BENDS ONLY
MANHOLE & CATCHBASIN ADJUSTING RINGS	LAFARGE CONSTRUCTION MATERIALS INC.	ASTM C478	750 I.D. x (50 TO 125) PRECAST CONCRETE ADJUSTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS	HENRY COMPANY (LAFARGE CONST. MATERIALS LTD.)	ASTM C990	BUTYL RUBBER SEALANT
MANHOLE FRAMES & COVERS	TITAN FOUNDRY	MODEL "TRUB-R-NEK LTM" C1 - ASTM A-48 CLASS 30B CONFORMS TO AP-004 & AP-005 OR AP-006	FLEXIBLE ROPE TF-101-3, -5 OR -3 MH FRAME AND TF-101-3 SOLID OR GRATED COVER
CONCRETE	LAFARGE CANADA INC.		
CONTRACT INFORMATION			
CONTRACTOR: NELSON RIVER CONSTRUCTION			
CONSTRUCTION PERIOD: MARCH - MAY 2017			
FIELD BOOK NO.:			



REFER TO DWG 10734  
 MATCHLINE AT STA 1+700

**AECOM**  
 Certificate of Authorization  
 AECOM Canada Ltd.  
 No. 4671 Date: Nov 17, 2016

CONSTRUCTION COMPLETION DATE:  
 JUNE 2017

**RECORD DRAWING**

BID OPPORTUNITY NO. 481-2014

EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PROFILE	NEW
150 WM	WATERMAIN	150 WM	150 WM	WATERMAIN	150 WM	150 WM	WATERMAIN	150 WM
Hydrant	HYDRANT	Valve	VALVE	Hydrant	HYDRANT	Valve	VALVE	Hydrant
300 LDS	LAND DRAINAGE SEWER	300 LDS	300 LDS	LAND DRAINAGE SEWER	300 LDS	300 LDS	LAND DRAINAGE SEWER	300 LDS
250 WWS	WASTE WATER SEWER	250 WWS	250 WWS	WASTE WATER SEWER	250 WWS	250 WWS	WASTE WATER SEWER	250 WWS
Manhole	MANHOLE	Catch Basin	CATCH BASIN	Manhole	MANHOLE	Catch Basin	CATCH BASIN	Manhole
Curb Inlet	CURB INLET	Culvert	CULVERT	Curb Inlet	CURB INLET	Culvert	CULVERT	Curb Inlet
Pipe Abandonments	PIPE ABANDONMENTS	Survey Bar	SURVEY BAR	Pipe Abandonments	PIPE ABANDONMENTS	Survey Bar	SURVEY BAR	Pipe Abandonments
Existing	LEGEND - PLAN	New	EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PROFILE	NEW

**LOCATION APPROVED UNDERGROUND STRUCTURES**

NO.	REVISIONS	DATE	BY
4	ISSUED FOR RECORD	17/01/16	ES
3	ADDED RECORD INFO FOR MH.W11	17/10/16	WJd
2	REVISED MH.W9 & MH.W10 LOCATIONS	16/11/17	WJd
1	ADDITIONAL TESTHOLE INFO ADDED	16/01/14	WJd
0	ISSUED FOR TENDER	14/06/25	WJd
		17/11/2016	BY

**NOTE:**  
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

BM 16-003 S.W. Cor. Inkster Blvd. & Ramsey St., brass plug in ELEV 235.794m 7.8 m Conc. pile, 9.3 m N. of S.L. Inkster Blvd., 20 m W. of E.L. of Ramsey St.

**AECOM**

DESIGNED BY	FMI	CHECKED BY	[Signature]
DRAWN BY	KMB	APPROVED BY	[Signature]
HOR. SCALE	1:500	RELEASED FOR CONSTRUCTION	
VERT. SCALE	1:50		
DATE		DATE	June 25/14

PROFESSIONAL'S SEAL  
 PROVINCE OF MANITOBA  
 Nov 17, 2016  
 A. NAGY  
 REGISTERED PROFESSIONAL ENGINEER

**THE CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT

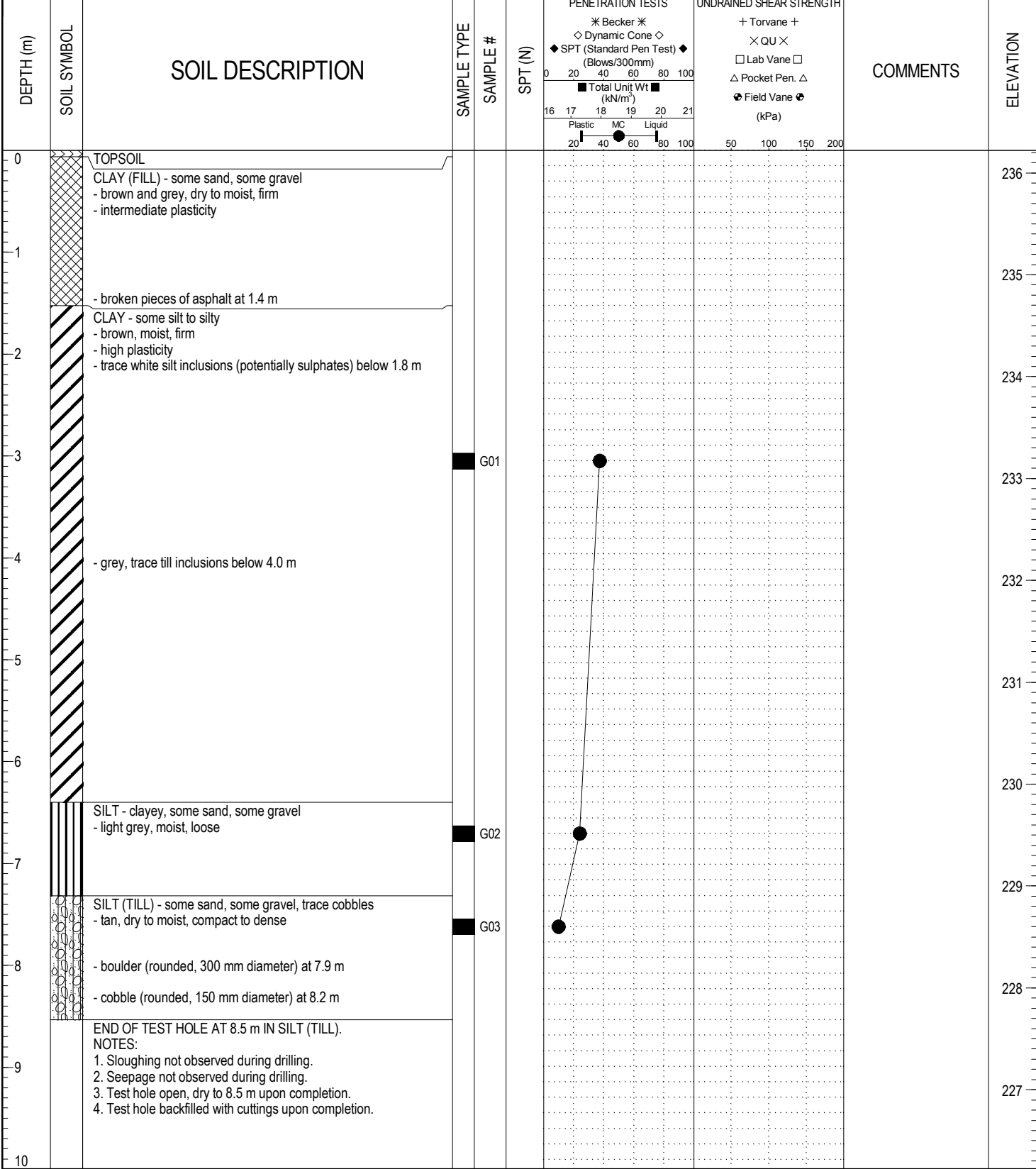
**NORTH-WEST INTERCEPTOR SEWER**

**INKSTER BOULEVARD**  
 446m E OF ROY ROCHE DRIVE  
 TO 306m W OF INKSBROOK DRIVE

SHEET 2 OF 9  
 CITY DRAWING NUMBER  
**10733**  
 REV 4

PROJECT: North-west Interceptor Sewer      CLIENT: Manitoba Infrastructure and Technology      TESTPIT NO: TH14-01  
 LOCATION: MH W11 (5534144 m N, 626992 m E)      PROJECT NO.: 60223051  
 CONTRACTOR: Subterranean (Manitoba) Ltd.      METHOD: Soil Mec STM-20, 720 mm diam. auger      ELEVATION (m): 236.221

SAMPLE TYPE     GRAB     SHELBY TUBE     SPLIT SPOON     BULK     NO RECOVERY     CORE



LOG OF TEST PIT NW INTERCEPTOR INKSTER TH LOGS.GPJ UMA WINN.GDT 1/14/16



LOGGED BY: Aaron Kaluzniak      COMPLETION DEPTH: 8.53 m  
 REVIEWED BY: Faris Khalil      COMPLETION DATE: 7/22/14  
 PROJECT ENGINEER: Marv McDonald      Page 1 of 1

PROJECT: North-west Interceptor Sewer	CLIENT: Manitoba Infrastructure and Technology	TESTPIT NO: TH14-02
LOCATION: MH W8 (5534135 m N, 627384 m E)		PROJECT NO.: 60223051
CONTRACTOR: Subterranean (Manitoba) Ltd.	METHOD: Soil Mec STM-20, 720 mm diam. auger	ELEVATION (m): 235.908
SAMPLE TYPE	<input checked="" type="checkbox"/> GRAB <input type="checkbox"/> SHELBY TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> BULK <input checked="" type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE	

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH		COMMENTS	ELEVATION
						* Becker * ◇ Dynamic Cone ◇ ◆ SPT (Standard Pen Test) ◆ (Blows/300mm) 0 20 40 60 80 100 ■ Total Unit Wt ■ (kN/m <sup>3</sup> ) 16 17 18 19 20 21 Plastic MC Liquid 20 40 60 80 100	+ Torvane + × QU × <input type="checkbox"/> Lab Vane <input type="checkbox"/> △ Pocket Pen. △ ⊕ Field Vane ⊕ (kPa) 50 100 150 200				
0		FILL - road gravel and topsoil - black, silty topsoil on south side of hole - yellowish white, processed crushed limestone on north side of hole									235
1		CLAY (FILL) - some sand, some gravel - dark grey, moist, firm - intermediate plasticity									234
2		CLAY - silty, trace sand - brown, moist, firm - high plasticity  - mottled brown and grey below 2.4 m									233
3											232
4		- some till inclusions below 4.0 m  - trace gravel (subrounded, diameter < 50 mm) below 4.6 m									231
5				G04							230
6		SILT - clayey, trace sand, trace gravel - grey, moist, loose									229
7		SILT (TILL) - some clay, some sand, some gravel, trace cobbles - tan, dry to moist, compact to dense  - grey, no clay below 7.2 m - cobble (rounded, 200 mm diameter) at 7.3 m		G05							228
8				G06							227
9		END OF TEST HOLE AT 8.8 m IN SILT (TILL). NOTES: 1. Sloughing observed in fill layer from 0.0 to 1.3 m below ground surface. 2. Seepage not observed during drilling. 3. Test hole open, dry to 8.8 m upon completion. 4. Test hole backfilled with cuttings upon completion.									226

LOG OF TEST PIT NW INTERCEPTOR INKSTER TH LOGS.GPJ UMA WINN.GDT 1/14/16



LOGGED BY: Aaron Kaluzniak	COMPLETION DEPTH: 8.84 m
REVIEWED BY: Faris Khalil	COMPLETION DATE: 7/22/14
PROJECT ENGINEER: Marv McDonald	Page 1 of 1

PROJECT: North-west Interceptor Sewer      CLIENT: Manitoba Infrastructure and Technology      TESTHOLE NO: TH15-06  
 LOCATION: Station 1+608, CL (5534144 m N, 627052 m E)      PROJECT NO.: 60223051  
 CONTRACTOR: Paddock Drilling Ltd.      METHOD: Acker MP8, 125 mm SSA      ELEVATION (m): 236.03

SAMPLE TYPE     GRAB     SHELBY TUBE     SPLIT SPOON     BULK     NO RECOVERY     CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH		COMMENTS	ELEVATION
						* Becker * ◇ Dynamic Cone ◇ ◆ SPT (Standard Pen Test) ◆ (Blows/300mm) ■ Total Unit Wt (kN/m <sup>3</sup> )	+ Torvane + × QU/2 × □ Lab Vane □ △ Pocket Pen. △ ⊕ Field Vane ⊕	(kPa)			
0		FILL - topsoil and road gravel - yellowish white, processed crushed limestone									
1		CLAY (FILL) - silty, trace to some gravel, trace sand - dark grey, dry to moist, firm - intermediate plasticity		G29							235
2		CLAY - silty, trace sand - brown, moist, firm - high plasticity - trace silt inclusions									234
3		- grey below 3.1 m		G30							233
4											232
5		- silt till pocket at 4.6 m		G31	6	◆	●			SPT Blows: 3 / 3 / 3	231
6		- trace gravel below 5.3 m - trace silt till pockets below 5.3 m - soft to very soft below 5.3 m - wet below 5.8 m		G33			●				230
7		SILT (TILL) - clayey, trace to some gravel, trace sand - tan, moist to wet, firm SILT (TILL) - some gravel, trace sand, trace clay - tan, dry to moist, compact		G34	17	◆				SPT Blows: 11 / 7 / 10	229
8				S35	28	◆	●			SPT Blows: 10 / 8 / 20 , Tube Recovery: 50%	228
9		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. Sloughing not observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with auger cuttings and bentonite to ground surface.									227

LOG OF TEST HOLE INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 12/23/15



LOGGED BY: Ryan Harras      COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Omer Eissa      COMPLETION DATE: 12/9/15  
 PROJECT ENGINEER: Marv McDonald      Page 1 of 1

PROJECT: North-west Interceptor Sewer CLIENT: Manitoba Infrastructure and Technology TESTHOLE NO: TH15-07  
 LOCATION: Station 1+643, 0.52 m right of CL (5534144 m N, 627087 m E) PROJECT NO.: 60223051  
 CONTRACTOR: Paddock Drilling Ltd. METHOD: Acker MP8, 125 mm SSA ELEVATION (m): 235.48

SAMPLE TYPE  GRAB  SHELBY TUBE  SPLIT SPOON  BULK  NO RECOVERY  CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						Blows/300mm	Total Unit Wt (kN/m <sup>3</sup> )			
0		CLAY - silty, trace gravel, trace organics - brownish dark grey, moist, firm - intermediate plasticity								235
1										
2		CLAY - silty, trace sand - brown, moist, firm - high plasticity - trace silt inclusions		G36						234
3				G37						233
4		- trace gravel below 4.0 m - trace silt till pockets below 4.0 m								232
5		- soft below 4.6 m		G38	4				SPT Blows: 2 / 2 / 2	231
6		SILT (TILL) - some clay to clayey, some gravel, trace sand - greyish-tan, wet, firm		G40	9				SPT Blows: 4 / 4 / 5	230
7		SILT (TILL) - some gravel, trace to some clay, trace sand - greyish-tan, dry to moist, compact								229
8				G42	29				SPT Blows: 8 / 13 / 16	228
8.08		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. Sloughing not observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with auger cuttings and bentonite to ground surface.								227
9										226
10										226

LOG OF TEST HOLE INKSTER BL VD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 12/23/15



LOGGED BY: Ryan Harras COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Omer Eissa COMPLETION DATE: 12/9/15  
 PROJECT ENGINEER: Marv McDonald Page 1 of 1

PROJECT: North-west Interceptor Sewer      CLIENT: Manitoba Infrastructure and Technology      TESTHOLE NO: TH15-08  
 LOCATION: Station 1+661, 0.48 m right of CL (5534144 m N, 627105 m E)      PROJECT NO.: 60223051  
 CONTRACTOR: Paddock Drilling Ltd.      METHOD: Acker MP8, 125 mm SSA      ELEVATION (m): 235.68

SAMPLE TYPE     GRAB     SHELBY TUBE     SPLIT SPOON     BULK     NO RECOVERY     CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						* Becker * ◇ Dynamic Cone ◇ ◆ SPT (Standard Pen Test) ◆ (Blows/300mm) ■ Total Unit Wt (kN/m³)	+ Torvane + × QU/2 × □ Lab Vane □ △ Pocket Pen. △ ⊕ Field Vane ⊕ (kPa)			
0		CLAY - silty, trace sand - dark grey, moist, firm - intermediate plasticity								235
1		SILT - trace to some clay - light brown, moist to wet, soft - low plasticity								
2		CLAY - silty, trace sand - brown, moist, firm - high plasticity - trace silt inclusions		G43						234
3				G44						233
4				G45						232
5		- trace gravel below 4.6 m - trace silt till pockets below 4.6 m - grey below 4.6 m			5	◆			SPT Blows: 2 / 2 / 3	231
6		SILT (TILL) - some clay to clayey, trace to some gravel, trace sand - tan, moist to wet, soft to firm		G47						230
7					4	◆			SPT Blows: 2 / 2 / 2	229
8		- stiff below 7.6 m		G49						228
8.08		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. Sloughing not observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with auger cuttings and bentonite to ground surface.			21	◆			SPT Blows: 8 / 9 / 12	227
9										226
10										226

LOG OF TEST HOLE INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 12/23/15



LOGGED BY: Ryan Harras      COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Omer Eissa      COMPLETION DATE: 12/9/15  
 PROJECT ENGINEER: Marv McDonald      Page 1 of 1

PROJECT: North-west Interceptor Sewer      CLIENT: Manitoba Infrastructure and Technology      TESTHOLE NO: TH16-11  
 LOCATION: UTM 14 U - 5534145 m N, 627098 m E      PROJECT NO.: 60223051  
 CONTRACTOR: Maple Leaf Drilling      METHOD: Track-mounted B37X, 125 mm SSA      ELEVATION (m): 235.48

SAMPLE TYPE     GRAB     SHELBY TUBE     SPLIT SPOON     BULK     NO RECOVERY     CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						* Becker * ◇ Dynamic Cone ◇ ◆ SPT (Standard Pen Test) ◆ (Blows/300mm) ■ Total Unit Wt (kN/m <sup>3</sup> )	+ Torvane + × QU × □ Lab Vane □ △ Pocket Pen. △ ⊕ Field Vane ⊕ (kPa)			
0		TOPSOIL - black, dry								235
0-1		CLAY (FILL) - silty, trace sand - dark grey, firm, moist - intermediate plasticity								
1-2		SILT - some clay, some sand - light brown, very soft to soft, wet - low plasticity		G22						234
2-3		CLAY - silty, trace sand - brownish grey, firm, moist - high plasticity		G23						233
3-5		- trace gravel, soft to firm below 4.3 m - trace silt till inclusions below 4.6 m								231
5				S24	6	◆			SPT Blows: 3 / 3 / 3, Tube Recovery: 100%	230
5-6		SILT (TILL) - clayey, some sand, trace gravel - tannish-grey, soft, moist to wet								229
6-8		SILT (TILL) - some sand, some gravel, some clay - tan, loose, moist - compact, dry below 7.6 m								228
8				S25	19	◆			SPT Blows: 10 / 8 / 11, Tube Recovery: 33%	227
8.08		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. Hole open to 5.5 m upon removal of auger. 2. Seepage not observed during drilling. 3. Test hole backfilled with bentonite and auger cuttings to original ground surface.								226
9										225
10										224

LOG OF TEST HOLE DRAFT, 2016 (2) - INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 11/4/16

**DRAFT**



LOGGED BY: Ryan Harras      COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Alex Hill      COMPLETION DATE: 11/3/16  
 PROJECT ENGINEER: Marv McDonald      Page 1 of 1

PROJECT: North-west Interceptor Sewer      CLIENT: Manitoba Infrastructure and Technology      TESTHOLE NO: TH16-12  
 LOCATION: UTM 14 U - 5534146 m N, 627039 m E      PROJECT NO.: 60223051  
 CONTRACTOR: Maple Leaf Drilling      METHOD: Track-mounted B37X, 125 mm SSA      ELEVATION (m): 236.14

SAMPLE TYPE    GRAB    SHELBY TUBE    SPLIT SPOON    BULK    NO RECOVERY    CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						Becker	Dynamic Cone			
0		TOPSOIL - black, dry								236
0 - 1.5		CLAY (FILL) - silty, some sand, trace gravel - dark greyish brown, firm, moist - low to intermediate plasticity								235
1.5 - 2.0		SILT - some clay, some sand - light brown, soft, moist - low plasticity		G27						234
2.0 - 3.0		CLAY - silty, trace sand - brownish grey, firm, moist - high plasticity								233
3.0 - 4.0				G28						232
4.0 - 5.0		- trace gravel from 4.0 m to 4.6 m - trace silt till inclusions from 4.3 m to 4.6 m  - trace to some gravel below 4.6 m - trace to some silt till inclusions below 4.6 m								231
5.0 - 6.0		SILT (TILL) - clayey, some sand, trace gravel - tannish-grey, soft, moist to wet			7	◆			SPT Blows: 2 / 3 / 4 , Tube Recovery: 67%	230
6.0 - 7.0		SILT (TILL) - some sand, some gravel, some clay - tan, loose, moist			14	◆			SPT Blows: 4 / 5 / 9 , Tube Recovery: 33%	229
7.0 - 8.0		- dry, compact below 7.0 m			28	◆			SPT Blows: 10 / 12 / 16 , Tube Recovery: 33%	228
8.0		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. No sloughing observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with bentonite and auger cuttings to original ground surface.		S31						227

LOG OF TEST HOLE DRAFT - 2016 (2) - INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 11/4/16

**DRAFT**



LOGGED BY: Ryan Harras      COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Alex Hill      COMPLETION DATE: 11/3/16  
 PROJECT ENGINEER: Marv McDonald      Page 1 of 1



PROJECT: North-west Interceptor Sewer CLIENT: Manitoba Infrastructure and Technology TESTHOLE NO: TH16-13  
 LOCATION: UTM 14 U - 5534143 m N, 626998 m E PROJECT NO.: 60223051  
 CONTRACTOR: Maple Leaf Drilling METHOD: Track-mounted B37X, 125 mm SSA ELEVATION (m): 236.32

SAMPLE TYPE  GRAB  SHELBY TUBE  SPLIT SPOON  BULK  NO RECOVERY  CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						Becker	Dynamic Cone			
0		TOPSOIL - black, dry								236
0.5		FILL - road gravel - yellowish white, processed crushed limestone								
1		CLAY (FILL) - silty, some sand, trace gravel - dark grey, firm, moist - intermediate plasticity - brownish grey below 1.2 m		G32						235
2		CLAY - silty, trace sand - brownish grey, firm, moist - high plasticity		G33						234
3										233
4		- trace gravel below 3.7 m - trace silt till inclusions from 3.7 m to 4.9 m								232
5		- trace to some silt till inclusions below 4.9 m		S34	6	◆			SPT Blows: 3 / 3 / 3, Tube Recovery: 100%	231
6										230
7		SILT (TILL) - clayey, some sand, trace gravel - tannish-grey, firm, moist - soft below 6.4 m		S35	6	◆			SPT Blows: 2 / 2 / 4, Tube Recovery: 100%	229
8		SILT (TILL) - some sand, some gravel, some clay - tan, loose, moist - dry to moist, compact below 7.6 m		S36	16	◆			SPT Blows: 7 / 9 / 7, Tube Recovery: 22%	228
9		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. No sloughing observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with bentonite and auger cuttings to original ground surface.								227
10										226
11										225
12										

LOG OF TEST HOLE DRAFT, 2016 (2) - INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 11/4/16

**DRAFT**



LOGGED BY: Ryan Harras COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Alex Hill COMPLETION DATE: 11/3/16  
 PROJECT ENGINEER: Marv McDonald Page 1 of 1

PROJECT: North-west Interceptor Sewer CLIENT: Manitoba Infrastructure and Technology TESTHOLE NO: TH16-14  
 LOCATION: UTM 14 U - 5534145 m N, 627128 m E PROJECT NO.: 60223051  
 CONTRACTOR: Maple Leaf Drilling METHOD: Track-mounted B37X, 125 mm SSA ELEVATION (m): 235.79

SAMPLE TYPE  GRAB  SHELBY TUBE  SPLIT SPOON  BULK  NO RECOVERY  CORE

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	PENETRATION TESTS		UNDRAINED SHEAR STRENGTH	COMMENTS	ELEVATION
						* Becker * ◇ Dynamic Cone ◇ ◆ SPT (Standard Pen Test) ◆ (Blows/300mm) ■ Total Unit Wt (kN/m <sup>3</sup> )	+ Torvane + × QU × □ Lab Vane □ △ Pocket Pen. △ ⊕ Field Vane ⊕ (kPa)			
0		TOPSOIL - black, dry								235
0-1		CLAY (FILL) - silty, some sand, trace gravel - dark greyish brown, firm, moist - intermediate plasticity								
1-2		CLAY - silty, trace sand - brownish grey, firm, moist - high plasticity		G37						234
2-3				G38						233
3-4										232
4-5		- soft to firm from 4.3 m to 5.2 m - trace gravel below 4.6 m - trace to some silt till inclusions below 4.6 m								231
5-6		- soft below 5.2 m		S39	6	◆			SPT Blows: 2 / 3 / 3, Tube Recovery: 100%	231
6-7		SILT (TILL) - clayey, some sand, trace gravel - tannish-grey, firm, moist - stone in tip of spoon at 6.1 m								230
7-8		SILT (TILL) - some sand, some gravel, some clay - tan, loose, moist - compact, dry to moist below 7.6 m								229
8-9				S40	9	◆			SPT Blows: 12 / 5 / 4, Tube Recovery: 100%	229
9-10										228
10-11				S41	16	◆			SPT Blows: 7 / 7 / 9, Tube Recovery: 33%	228
11-12		END OF TEST HOLE AT 8.08 m IN SILT (TILL). NOTES: 1. No sloughing observed during drilling. 2. Seepage not observed during drilling. 3. Test hole backfilled with bentonite and auger cuttings to original ground surface.								227

LOG OF TEST HOLE DRAFT - 2016 (2) - INKSTER BLVD ADDITIONAL INVESTIGATION TH LOGS.GPJ UMA WINN.GDT 11/4/16

**DRAFT**



LOGGED BY: Ryan Harras COMPLETION DEPTH: 8.08 m  
 REVIEWED BY: Alex Hill COMPLETION DATE: 11/3/16  
 PROJECT ENGINEER: Marv McDonald Page 1 of 1