

A Division of GZA

GEOTECHNICAL ENVIRONMENTAL ECOLOGICAL WATER CONSTRUCTION MANAGEMENT

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### Sent Via Email: hendershotta@michigan.gov

File No. 16.0062335.52

June 29, 2018

Ms. Abigail Hendershott District Supervisor – Remediation and Redevelopment Division Michigan Department of Environmental Quality (MDEQ) 350 Ottawa Avenue NW #10 Grand Rapids, MI 49503

Re: Wolverine World Wide, Inc. – House Street CSM Progress Report

Dear Ms. Hendershott:

On behalf of Wolverine World Wide, Inc. (Wolverine), this letter is a supplemental response to your April 4, 2018 letter entitled *House Street Per- and Polyfluoroalkyl Substance (PFAS) Investigation – 1855 House Street, Rockford, Kent County, Michigan, Conceptual Site Model Update and Status Report.* As indicated in our May 4, 2018 letter entitled *Wolverine World Wide, Inc. – House Street CSM update and Status Report,* this submittal is a tri-annual progress report for the House Street remedial investigation.

This progress report (through June 22, 2018) includes information available since the submittal of the February 9, 2018 *House Street CSM Update and Status Report*.

#### **INVESTIGATION ACTIONS**

- Soil boring and vertical aquifer profiling (VAP) sampling were performed at locations PMW-14, PMW-17 and PMW-18. Based on the VAP results and field observation, monitoring wells MW-14S/M/D, MW-17S/M/D, and MW-18S/M/D were installed. The draft boring logs for these locations are enclosed. MW-14S/M/D and MW-17S/M/D have been surveyed. The updated locations are shown on enclosed Figure 1.
- Access efforts continued for PMW-12, PMW-13, PMW-16, PMW-20, PMW-22, PMW-23, and PMW-24. Numerous resident meetings and calls have been completed. R&W/GZA also met with MDEQ to review off site locations.
- In addition to the VAP sampling conducted during the installation of MW-14, MW-17, and MW-18 wells, MW-14 and MW-17 were also sampled after development and stabilization.

# ANALYTICAL DATA RECIEVED

The VAP samples collected from MW-14, MW-17, and MW-18 the monitoring well samples from MW-14 and MW-17 sampling data are summarized on the enclosed Table 1.





June 29, 2018 16.0062335.52 Wolverine – House Street CMS Progress Report Page | 2

The lab reports and geographic information system (GIS) data for these samples have been submitted to the MDEQ through the AECOM GIS maintenance updates.

# ANTICIPATED ACTIONS AND SCHEDULE FOR NEXT REPORTING PERIOD

During the next reporting period, July through November, R&W/GZA anticipates continuing to pursue access to the pending well installation locations. Assuming access is granted, drilling will likely resume late August or September.

A full round of static water levels will be completed late August or September.

MW-18 will be surveyed and sampled during this period as well.

## **REQUESTED DOCUMENTATION**

Additionally, your April 4, 2018 letter requested the following cross sections: a cross section along plume centerline; MW-11 nest – MW-10 nest – MW-9 nest transect; MW-21 nest – MW-15 nest – MW-19 nest transect; and revisions to transects A-A, B-B, and C-C as shown on Figure B of the February 9, 2019 CSM Update and Status Report. These and revised Figure B are enclosed.

If you have any questions, please feel free to contact us.

Very truly yours,

Rose & Westra, a Division of GZA GeoEnvironmental, Inc.

Mark A. Westra Associate Principal

maw/ljp

ta flomers

Loretta J. Powers Senior Project Manager/Consultant Reviewer

c: Mr. Dave Latchana – Wolverine Worldwide, Inc. via email David.Latchana@wwwinc.com Mr. John V. Byl – Warner Norcross & Judd LLP via email jbyl@wnj.com

Enclosures: Draft Boring Logs

Figure 1 Table 1 Figure A Cross Sections D-D, E-E, and F-F (Sheets D, E, and F-1/F-2) Revised Cross Sections A-A, B-B, and C-C (Sheets C1/C2/C3, D1/D2/D3, and E1/E2/E3) and Figure B

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	tractor:		-	illing Comp			Belmo	nt, Michigan		Check:
				urt	any		Auger/ Casing	Sampler		GROUNDWATER READINGS
Log	ged by:		Kevin	Hedinger			ollow Stem Auge	r Split Spoon	Date	Time Depth Casing Stab
				1-18 / 5-16				<u>2.0" / 1 3/8"</u> NA		
GS	Elev.: _		Dat	um:		Hammer Will: _	30"	NA		
			ple Inform				NA	NA	Surveyed	By: <u>NA</u> Survey Date:
Ę										양 · Equipment Installed
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Descripti	Sample on & Classific	cation	Stratum Desc.	Equipment Installed PROTECTIVE CASING
						See SB-18/MW-1	8D boring log fo	or sample		
1-						description and cla	assification.			
2-										
3-										
4-										
5-										Grout
6-										
7-										
8-										
9-										
10-										
11-										
12-										
										Top of Well
13-										
14-										
15-										
16-										
17-										Silica Sand
18-										2-Inch Dia.
19-										10-Foot PVC
20-										Slot)
21-										
22-										
23-										Bottom of Well
24-						Bottom of Boreho	e at 23.5 Feet			1
17 18 - 19 - 20 - 21 - 22 - 23 - 24 - 24 - 24 - 24 - 24 - 24	1. Monit	oring well	was install	ed in boreh	ole upon o	completion. Well scre	en set from 13.0	to 23.0 feet below	r ground surfac	ce.
E										
AR										
S										
Stratifi						/pes, transitions may be				and under Boring No.: MW-18S
conditi						other factors than those p				

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				d Scientists			t, Michigan					16.00623	
Forema	n:		Bert G	illing Comp Graham		Auger/	Sampler					EADINGS	
Logged	by:		Christop	oher Melby		Type:Hollow Stem Auger	Split Spoon	Date	Time			Casing	
				5-18 / 3-15			2.0" / 1 3/8"						
Boring I	Locat	ion:				_ Hammer Wt.: <u>NA</u>							
GS Elev	/.:		Date	um:		_ Hammer Fall: <u>NA</u> TOC Elev.: <u>NA</u>	<u> </u>	Surveyed	D. //	ΝΔ	<u> </u>	vev Deter	
		Sam	ple Inform	nation				Surveyeu	<b>Бу.</b>	1.07.1	Sur	vey Date.	
Depth	o.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classifica	ation	Stratum Desc.	Remarks		Equip	ment Insta PROT CASIN	ECTIV
	1	24/24	0-2	11-5		Black, TOPSOIL. Changing at 0.3	feet to:	SAND		$\swarrow$		0,101	
1-				9-10		Medium brown, fine SAND, trace,							
2												Backfi	ill/Cem
3-										$\langle \rangle \rangle$		Pad	
4-										$\otimes$			
5-													
6-													
7-													
8- 2	2	24/24	8-10	2-2		Loose, brown, fine to medium SAM	ND, trace						
9-				2-1		Silt.							
10-													
11													
12													
13-													
14-													
									1				
15-									'				
16-													
17-													
18 3	3	24/12	18-20	2-3 5-3		Loose, brown and gray, coarse SA	ND, trace						
19—				5-3		Gravel, wet.							
20-													
21-													
22													
23		04/40	oc c=			., <del>.</del>							
24	4	24/12	23-25	3-1 1-2		Very loose, brown and gray, fine to SAND, wet.	o coarse						
25-													
26-													
27 -													
28 ,	5	24/16	28-30	2-4 4-5		Loose, brown, fine to medium SAN Silt. Changing at 29.0 feet to: Brow SILT, little fine Sand, wet.		29' Clayey SANI					

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		Enę	gineers and	d Scientists		Belmont, Michigan			File No.:16	6.0062335.52
		Sam	nple Inform	nation					Check:	
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipmer	nt Installed
31-							Clayey SAND			
32-										
33-	c	24/20	33-35	2-2		Madium atiff. Clause Cll T. little to trace fine to				
34 –	6	24/20	33-35	2-2 5-5		Medium stiff, Clayey SILT, little to trace fine to medium Sand, wet.				
35-										
36-										
37 –										
38-	7	24/10	38-40	1-1 1-1		Loose, gray, fine SAND, little Clayey Silt, wet.	38' SAND			
39 –				1-1						
40-										
41- 42-										
+2 – 43 –										
44 —	8	24/16	43-45	4-4 5-7		Loose, gray, fine to medium SAND, little Silt, wet.				
45-										
46-										
47-										
48-	9	24/14	48-50	3-7 8-7		Medium dense, gray, fine to medium SAND,				
49-				8-7		little Silt, wet.				
50-										
51-										
52- 53-										Grout
54 –	10	24/24	53-55	2-3 3-5		Gray, fine to medium SAND, little Silt, wet. Changing at 53.5 feet to: Gray, Clayey SILT,	53.5' Clayey SILT			Grout
55-						some fine Sand, wet.				
56-										
57-										
58-	11	24/14	58-60	1-1 1-1		Soft, gray, Clayey SILT, little fine Sand, wet.				
59-				1-1						
50 —										
61 —										
62- 63-		0.15		0.45						
54 —	12	24/24	63-65	3-12 23-24		Hard, gray and brown, Clayey SILT, some fine to coarse Sand, wet.				
						,,,				
R E //										
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3										
tratific	cation line	s represent	approximate	boundarv bet	ween soil t	ypes, transitions may be gradual. Water level readings have be	on mode at times and	lunder		MW-14D

(			oEnvir onr			Wolverine World Wide, House Street	INC.	Page	ng No.:PMW-14D e:3 of4
			gineers and			Belmont, Michigan		File Che	No.: 16.0062335.5
Depth	No.	San Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.		Equipment Installed
66 — 67 — 68 — 69 — 70 —	13	24/24	68-70	5-13 17-18		Fine to medium SAND, trace Silt, wet. Changing at 69.2 feet to: Fine to coarse SAND, trace Gravel, trace Silt, wet.	68' SAND		
71— 72— 73— 74— 75—	14	24/20	73-75	31-19 24-30		Hard, gray and brown, Clayey SILT, some fine to medium Sand, wet. Changing at 74.5 feet to: Gray and brown, fine to medium SAND, little Silt, wet.	73' Clayey SILT 74.5' SAND		
76— 77— 78— 79— 80—	15	24/24	78-80	4-8 20-53		Medium dense, brown and gray, fine to medium SAND, trace Silt, wet.			
81— 82— 83— 84— 85—	16	24/18	83-85	2-4 8-26		Medium dense, brown and gray, fine to medium SAND, trace Silt, wet.			
86— 87— 88— 89— 90—	17	24/24	88-90	3-7 13-34		Medium dense, brown and gray, fine to coarse SAND, trace Silt, wet.			
91 — 92 — 93 — 94 — 95 — 96 —	18	24/24	93-95	4-10 18-25		Medium dense, fine to medium SAND, trace Silt, wet.			
97 — 98 — 99 —	19	24/24	98-100	4-6 10-12		Medium dense, brown, fine to medium SAND, trace Silt, wet.			
R = 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
						ypes, transitions may be gradual. Water level readings have be other factors than those present at the time measurements wer		under Bor	ing No.: PMW-14D

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		En	ginærs and	Scientists		Belmont, Michigan			File No.:	335.52
		San	nple Inform	nation		Beimont, Michigan			Check:	
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Insta	alled
01- 02- 03- 04-	20	24/24	103-105	19-12 19-25		Dense, fine to coarse SAND, little to trace Silt, wet.	SAND			
05— 06— 07— 08—		04/00		5.7					Top of Scree	n
09— 10— 11— 12—	21	24/20	108-110	5-7 25-30		Dense, brown and gray, medium to coarse SAND, trace Silt, wet.			Filter I 2-Inch 5-Foo Scree Slot) Bottor	Pack Dia. t PVC n (0.01
12— 13— 14—	22	4/6	113-113.3	12-75/3"		Hard brown and gray CLAY & SILT some	13' CLAY & SILT 14'		Scree	
 15—						\\wet.		2		
16-						Bottom of Borehole at 114.0 Feet				
10 17-										
 18—										
10 19-										
13 20-										
20 21-										
21 22-										
23-										
24 —										
25-										
26—										
27 —										
28-										
29—										
30 —										
31—										
32—										
33-										
34 —										
REVARKS	2. Monit	oring well	l was installe	ed in boreh	ble upon (	completion. Well screen set from approximately 107.0 to	112.0 feet belo	w grou	nd surface.	
						ypes, transitions may be gradual. Water level readings have been other factors than those present at the time measurements were m		d under	Boring No.: PMW-14	

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C	۶Z))			<b>nental, Inc</b> <i>Scientis</i> ts							Page:	<u>1</u> of 16.00623	3
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Cont	tractor:	c	Bert G	Iling Comp Fraham	any	_	Auger/ Casing	Sampler		CROUN	DWATER F		
Fore	eman: _		Christor	oher Melby		 Type:Hol	Lasing low Stem Auger	Split Spoon	Date	Time	DWATER F Depth		Stab
Date	Start/F	inish:	3-15	5-18 / 3-15·	-18			2.0" / 1 3/8"					
Bori	ng Loca	tion:				_ Hammer Wt.: _	NA	140lbs					
GS E	Elev.: _		Datu	um:		_ Hammer Fall: _		30.0"					
		Sam	ple Inforn	nation		TOC Elev.: _	NA	NA	Surveyed	Ву:	NA Su	rvey Date:	
÷			p.ee							S	Equir	oment Insta	
Depth	No.	Pen./ Rec.	Depth	Blows	Test		Sample		Stratum	Remarks			ECTIVE
	-	(in.)	(Ft.)	(/6")	Data	Descriptio	on & Ċlassifica	ition	Desc.	Ren		CASIN	
						See PMW-14D bor	ing log for detai	led soil					
1-						descriptions for the	first 48.0 feet						
2-													
3-													
4-													
5-													
6-													
7-													
8-													
9-													
10-													
11-													
12-													
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_		Sam	ple Inform	nation					Check:
neptu	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
1-									
2-									Grout
3-									
4-									
5-									
6–									
7-									
8- 0-									
9- 0-									
1-									
2-									
3-									
4-									
5-									
6-									
7-									
8-	1	24/12	48-50	2-2 3-2		Loose, brown and gray, fine to medium SAND,	SAND		
9 0						trace Silt, wet.			
1-	2	24/24	50-52	1-2 1-2		Very loose, brown and gray, fine to medium SAND, trace Silt, wet.			
2-	3	24/24	52-54	2-2		Medium stiff, gray and brown, Clayey SILT,	52.5'		
3-	3	24/24	52-54	2-2 3-5		some fine to medium Sand, wet.	Clayey SILT		
4-									
5-									
6-									
7-									
8-									
9- 0-									
1-									
2-									
3-									
4-									
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		Sam	ple Inform	nation				_	Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification		Remarks	Equipment Installed
66 —							Clayey SILT		
67 –								:	
68-	4	24/20	68-70	7-8		Medium dense, gray and brown, fine to coarse	68' Silty SAND		
69-	-		0070	7-8 10-12		SAND, some Silt, wet.			Screen Silica Sand
70-	5	24/24	70-72	2-2		Loose, gray and brown, fine to medium SAND,			Filter Pack
71-	5	24/24	10-12	2-2 6-15		little Silt, wet.			2-Inch Dia.
72-		04/40	70.74	0.10				:	Screen (0.0
73-	6	24/18	72-74	9-12 25-35		- One, wet. Onlanging at 70.0 root to. Drown and	73'		Slot) Bottom of V
74-						gray, Clayey SILT, some medium to coarse Sand, embedded in Clayey Silt, wet.	Clayey SILT 74'		Screen
75-						Bottom of Borehole at 74.0 Feet		1	
75 76-									
77 - 70									
78- 70									
79-									
80-									
81–									
82-									
83–									
84 –									
85-									
86 –									
87 –									
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90-									
91 –									
92-									
93-									
94 –									
95-									
96-									
97 –									
98 –									
99 –									
R E M A R K S	1. Monit	oring well	was install	ed in boreh	ble upon (	completion. Well screen set from approximately 68.0 to	73.0 feet below gro	bund	surface.
		- ronrocont	onnrovimete	haundan ( hat		ypes, transitions may be gradual. Water level readings have bee			

		GZ				V	Volverine W	/orld Wide, I	nc.			Boring No	o.:PMV	V-14S
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	tractor:		Bert C	illing Comp	any	_	Auger/	Sampler		000				
For	eman: _		Christo	pher Melby	,		Casing	Split Spoon	Date	Tim		Depth	EADINGS Casing	Stab
				5-18 / 3-15			8.0" / 4.25"		Dute			Doptii	Justing	
						_ Hammer Fall: _	NA	30.0"						
		Sam	ple Inforr	nation		TOC Elev.:	NA	NA	Surveyed	Ву: _	N	A Su	rvey Date:	
Ę											2	Equin	ment Insta	
Depth	No.	Pen./ Rec.	Depth (Ft.)	Blows (/6'')	Test Data		Sample on & Classifica	ation	Stratum Desc.	l a				ECTIVE
		(in.)	(,	,	Dutu				2000.	ő			CASIN	١G
1-						See PMW-14D bori descriptions.	ing log for detai	iled soil				8 🚿	\$	
											K	A KH	Sand	
2-												X 🕅	¢ X	
3-												// ///	2	
4-														
5-														-
6-														
7-													Grout	
8-														
9-														
10-													•	-
11-													•	
12-														
13-														Well
14-													Scree	
15-														-
16-													Silica	Sand
17-													Filter I	Pack
18-													2-Inch	
19-														ot PVC n (0.010"
20-													Slot)	
21-														
22-														
													D.#	o of \\/ - !!
23-						Bottom of Borehole	at 23.0 Feet			1	1		Bottor	n of Well n
3 24- -	1													
25-														-
<u> </u>														
27-														
28-														
29-														
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	1. Monit	oring well	was install	ed in boreh	ole upon c	completion. Well scree	n set from appro	ximately 13.0 to	23.0 feet belo	w grou	ind s	urface.		
		-						-		-				
Creep: A														
S														
						pes, transitions may be gra other factors than those pre				and uno	der	Boring No	<b>b.:</b> PMW-14	S
т <b></b>				,		1								

Index of the series and Scientists         Belmont, Michigan         File No.: 16.00623         Contractor: Stearns Drilling Company         Foreman:       Jerry Huntoon         Logged by:       Christopher Melby / John Morehouse         Date Start/Finish:       Contractor:         Boring Location:       O.D. / I.D.:       8.0" / 4.25"       2.0"         Boring Location:       Date Start/Finish:       Datum:       NA       Surveyed By:       NA       Surveyed By:       NA         Sample Information       Sample       Stratum       Stratum       Stratum         View       Output       Sample Information         View       Stratum       Stratum       Stratum         View       Output       Colspan="2">Colspan="2">Colspan="2">Colspan= 200"         Date       Time Depth Casing         O.D. / I.D.:       8.0" / 4.25"       2.0"         Mammer Fall:       30.0"       NA       Survey Date: <th>Belmont, Michigan       File No.:       16.0062335.52         Auger/       Sampler       Check:      </th>	Belmont, Michigan       File No.:       16.0062335.52         Auger/       Sampler       Check:
Contractor:         Steams Drilling Company         Bellmont, Michigan         Phr N.         Constractor           Gorman:	Determionit, Mulcringan       Check:         Auger/ Casing       Sampler       GROUNDWATER READINGS         Ilow Stem Auger       Split Spoon       Date       Time       Depth       Casing       Stat         8.0" (4.25"       2.0"
Contractor:         Control Date of Control Market (Casing Sampler Casing Sem Auger Seit Space)         GROUNDWATER READINGS           Logged by:         Chitstopher Melby / John Morchouse         Type+talex Sem Auger Seit Space         Date Time Depth Casing           Boring Location:	Auger       Sampler       GROUNDWATER READINGS         Ilow Stem Auger       Split Spoon       Date       Time       Depth       Casing       State         140lbs       13/8"
Logged by:         Christopher Melty / John Morehouse         Type/tellow Stan Auger Selfi Spon         Date Time         Depth         Casing           Date Start/Finish:	Ilow Stem Auger       Split Spoon       Date       Time       Depth       Casing       State         8.0" / 4.25"       2.0"
Date Start/Finish:         O.D. / f.b.:         80 / 425°         2.0°           GS Elev:         Datum:         Hammer Vit:         130°         Na.         Surveyo By:         NA           Sample Information         TOC Elev:         NA         Surveyo By:         NA         Surveyo Date:           Sample Information         Tot Elev:         NA         Surveyo By:         NA         Surveyo Date:           Sample Information         Test         Description & Classification         Stratum         Verther         Equipment Instance           1         24/24         0-2         23         Dark brown, decaying LEAVES (FILL)         Stratum         Verther         CASIN             0.5 feet to Dark lown, well sorted, fine to medium grained SAND, trace Silt, trace         Silt sorte         Silt sorte         Silt sorte         Backfil           3-            Dark brown, vell sorted, fine to medium grained SAND, trace Silt, trace         Cravel, grading coarser, most (SP). Changing at 4.5 feet to Fellown, very vell sorted, fine to medium grained SAND, trace Silt, most         Cravel, grading coarser, most (SP).         Changing at 4.5 feet to Fellown, very vell sorted, fine to medium grained SAND, trace Silt, most         Cravel, grading at 4.5 feet to Fellown, very vell sorted, fine to medium grained SAND, trace Silt, most         Cravel, grading SAND, tr	8.0" / 4.25"       2.0"         140lbs       13/8"         30.0"       NA         NA       NA         NA       NA         Surveyed By:       NA         Surveyed By:       Survey Date:         Sample       Stratum         Desc.       Surveyed By:         PROTECTIVI         CASING         ing LEAVES (FILL).         et to: Very dark brown, well         d1SAND, some Silt, some         n, moist (SN). Changing at         ellowish brown, well sorted, fine to         AND, trace Silt, trace         arser, moist (SP).         wn, well sorted, fine to         AND, trace Silt, moist         SO feet to: Yellowish brown, very well         d5AND, trace Silt, moist         d5AND, trace Silt, moist <tr< td=""></tr<>
Boring Location:         Datum:         Hammer Wt:         1400s         138"           GS Elev:         Datum:         Hammer Wt:         1400s         NA         Surveyed By:         MA         Su	140lbs       1 3/8"         30.0"       NA         NA       NA         NA       NA         Surveyed By:       NA         Survey dark brown, well       Survey dark brown, well         Survey dark brown, very well       Surveyed By:         Surveyed By:       Surveyed By:         Surase Sitt, moist (ML). </td
GS Elev:       NA         Sample Information       NA         Sample Information       No.       NA         Sample Information       Survey Date:         No.       Part / Bowe (fer)       Bowe (fer)       Survey Date:         Information       Tock Elev:       NA       Survey Date:         Information       Sample Information       Survey Date:         Information       Survey Date:         Information       Survey Date:         Information       Dark torw, decaying LEAVES (FILL).         Charging at 0.3 feet to: Very dark brown, well sorted, fine to medium grained SAND, trace Silt, trace         Gravel, grading coarser, moist (SP).         Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, trace of medium grained SAND, trace Silt, moist (SP).         On medium grained SAND, trace Silt, moist (SP).         Correct grading coarser, moist (SP).         On medium graine	30.0"       NA         NA       NA         Surveyed By:       NA         Sample       Stratum         On & Classification       Stratum         Desc.       Equipment Installed         Sample       PROTECTIVI         CASING       PROTECTIVI         ing LEAVES (FILL).       Equipment Installed         to: Very dark brown, well       Stratum         JSAND, some Sit, some       Backfill/Ceme         and SAND, trace Sit, trace       Pad         arser, moist (SP).       Backfill/Ceme         wn, well sorted, fine to       AND, trace Sit, trace         arser, moist (SP).       Changing         brown, very well sorted, fine       Fine to         AND, trace Sit, moist       4.8 feet to: Yellowish brown, very         Its fine to       SAND, trace Sit, moist         4.8 feet to: Yellowish brown,       Fine desc         JS. AND, trace Sit, moist       4.8 feet to: Yellowish brown,         LT, little fine grained Sand,       Fine desc         con-plastic, moist (ML).       Fit to: Yellowish brown, very         et to: Yellowish brown, very       Fit to: Sol, moist (SP).         et to: Yellowish brown, very       Fit moist (SP).         et to: Yellowish brown, very
Sample information $\frac{1}{10}$ $\frac{1}$	Sample on & Classification     Stratum Desc.     Figure 2       Equipment Installed on & Classification     PROTECTIVI CASING       ing LEAVES (FILL). et to: Very dark brown, well d SAND, some Silt, some on, moist (SN). Changing at ellowish brown, well sorted, inned SAND, trace Silt, trace arser, moist (SP).     Backfill/Ceme Pad       wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP).     Backfill/Ceme Pad       wn, well sorted, fine to AND, trace Silt, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP).     Backfill/Ceme Pad       It to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML).     Backfill/Ceme Pad       1 SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ittl., little fine grained Sand, ion-plastic, moist (ML).     Backfill/Ceme Pad       2 SAND, trace Silt, moist 5.0 feet to: Yellowish brown, very well sorted, fine to AND, trace Silt, moist 5.0 feet to: Yellowish brown, very wittle fine grained Sand, ion-plastic, moist (ML).     Backfill/Ceme Pad       3 SAND, trace Silt, moist 5.0 feet to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP).     Backfill/Ceme Pad       brown, very well sorted, fine ce Silt, moist (SP).     Backfill/Ceme Pad       brown, very well sorted, fine to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP).     Backfill/Ceme Pad       brown, well sorted, fine to AND, trace Silt, moist (SP).     Backfill to to AND, trace Silt, moist (SP).       wn, well sorted, fine to AND, trace Silt, moist (SP).     Backfill to to AND, trace Silt, moist (SP).
560         No.         Pen/ Rec. (Pt)         Doph (Pt)         Blows (ref)         Test (ref)         Sample Description & Classification         Stratum Descr.         Stratum (Pt)           1         24/24         0-2         2-3 2-3         Dark brown, decaying LEAVES (FILL). Changing at 0.3 feet to: Vey dark brown, well sorted, fine grained SAND, some Silt, some decaying Vey dark brown, well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, moist (SP). Dark yellowish brown, vey well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, moist (SP). Dark yellowish brown, vey well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, moist (SP). Dark yellowish brown, vey well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, moist (SP). Changing at 4.6 feet to: Plate brown, very well sorted, fine grained SAND, trace Silt, trace Gravel, grading coarser, moist (SP). Changing at 4.6 feet to: Plate brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.6 feet to: Plate brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.6 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, moist (SP). Changing at 4.5 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown,	ing LEAVES (FILL). et to: Very dark brown, well d SAND, some Silt, some n, moist (SM). Changing at ellowish brown, well sorted, ined SAND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP). et to: Dark yellowish brown, wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
(n)(rt.)(rb.)UstaDescription & ClassificationDesc. $\tilde{g}$ 124/240-223Dark brown, decaying LEAVES (FILL). Changing at 0.3 feet to Very dark brown, well sorted, fine grained SAND, some Silt, some decaying Vegetation, motel S(N). Changing at 0.5 feet to. Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, motsl (SP). Changing at 4.5 feet to: Pale brown, very well sorted, fine to medium grained SAND, trace Silt, trace Gravel, grading coarser, motsl (SP). Changing at 4.5 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, trace Gravel, grading coarser, motsl (SP). Changing at 4.5 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, trace Gravel, grading coarser, motsl (SP). Changing at 4.5 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, trace Gravel, grading coarser, motsl (SP). Changing at 4.6 feet to: Yellowish brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 4.7 feet to Pale brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 4.7 feet to Pale brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 4.7 feet to Pale brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 4.7 feet to Pale brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 4.7 feet to Pale brown, very well sorted, fine grained SAND, trace Silt, mosit (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, mosit (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, mosit (SP). Changing at 5.0 fee	ing LEAVES (FILL). et to: Very dark brown, well d SAND, some Silt, some n, moist (SM). Changing at ellowish brown, well sorted, ined SAND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SP). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	ing LEAVES (FILL). et to: Very dark brown, well d SAND, some Silt, some n, moist (SM). Changing at ellowish brown, well sorted, ined SAND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist Changing brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP). et to: Dark yellowish brown, wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Pad I SAND, some Silt, some In, moist (SM). Changing at ellowish brown, well sorted, ined SAND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). tet to: Yellowish brown, very title fine grained Sand, ton-plastic, moist (ML). et to: Yellowish brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). et to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). et to: Yellowish brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). et to: Yellowish brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). well sorted, fine to AND, trace Silt, moist (SP). et to: Yellowish brown, very title fine grained Sand, ton-plastic, moist (ML). well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	a Grand Stand Stan
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	<pre>ined SAND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very title fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).</pre>
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ton-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (ML). et to: Yellowish brown, ILT, little fine grained Sand, ton-plastic, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ton-plastic, moist (ML). wn to pale brown, very ittle fine grained Sand, ton-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	arser, moist (SP). wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	wn, well sorted, fine to AND, trace Silt, trace arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
5-Medulm grained SAND, trace Sit, Trace Gravel, graving coarser, moist (SP). Changing at 4.5 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP).6-424/246-8 $^{3.5}_{8.9}$ Gravel, graving coarser, moist (SP). Changing at 4.6 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Sit, moist (AL). Changing at 4.7 feet to: Pale brown, very well silghtly cohesive, non-plastic, moist (ML). Changing at 4.8 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Sit, moist (SP). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (ML). Light yellowish brown, very well sorted, fine grained SAND, trace Sit, moist (ML). Light yellowish brown, very well sorted, fine to medum grained SAND, trace Sit, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medum grained SAND, trace Sit, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medum grained SAND, trace Sit, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medum grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medum grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medum grained SAND, trace Sit, moist (SP). Light yellowish brown, porty sorted, fine to SAND, trace Sit, moist (S	arser, moist (SP). Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
	brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$3$ $4$ $24/24$ $6\cdot8$ $3\cdot5$ $8\cdot9$ Changing at 4.6 feet to: Yellowish brown, very well sorted, SLT, little fine grained SAND, slightly cohesive, non-plastic, moist (ML). Changing at 4.7 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 4.8 feet to: Yellowish brown, very well sorted, SLT, little fine grained SAND, trace Sit, moist (ML). Changing at 4.8 feet to: Yellowish brown, very well sorted, SLT, little fine grained SAND, trace Sit, moist (ML). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Sit, moist (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Sit, moist (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Sit, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, SILT, little fine grained SAND, irace Sit, moist (ML). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Sit, moist (SP). Changing at 5.1 feet to: Data brown, poorty sorted, fine to medium grained SAND, trace Sit, moist (SP). Changing at 9.1 feet to: Data yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Changing at 9.1 feet to: Data yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Sit, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND,	et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
7-       8-9       well sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist (ML). Changing at 4.7 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.8 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.0 feet to: 'Palebrown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.0 feet to: 'Palebrown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.0 feet to: 'Palebrown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Sellowish brown, very well sorted, fine to carse grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 1.3 feet to: Pale brown, poorly sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 1.2 feet to: Pale brown, poorly sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 1.2 feet to: Pale brown, poorly sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 1.2 feet to: Pale brown, poorly s	ittle fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$7-$ 8- 9- $5$ $24/24$ $8\cdot10$ $5\cdot5$ slightly cohesive, non-plastic, moist (ML). Changing at 4.7 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 4.8 feet to: Vellowish brown, very well sorted, fine grained SAND, trace Silt, moist (ML). Changing at 4.9 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.0 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.0 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, poorly sorted, fine to care grained SAND, little Gravel, trace Silt, moist (ML). Light yellowish brown, well sorted, fine to care grained SAND, little Gravel, trace Silt, moist (SP). Changing at 5.1 feet to: Dela brown, poorly sorted, fine to care grained SAND, little Gravel, trace Silt, moist (SP). Changing at 5.1 feet to: Dela brown, poorly sorted, fine to care grained SAND, little Gravel, trace Silt, moist (SP). Changing at 9.1 feet to: Date yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Date wellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Date wellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 1.2 sfeet to: Pale brown, poorly sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium g	non-plastic, moist (ML). et to: Pale brown, very well d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	d SAND, trace Silt, moist 4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
0       5       24/24       8-10       5-5       (SP). Changing at 4.8 fette to: Yellowish brown, very well sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist (ML). Changing at 4.9 feet to: Yellowish brown, very well sorted, fine grained, SAND, trace Silt, moist         10-6       24/24       10-12       3-4       (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, fine grained, SAND, trace Silt, moist         11-       7       24/24       12-14       5-10       9-6         12-7       7       24/24       12-14       5-10       9-6         13-       9-6       9-6       Sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist (ML).         14-8       24/24       14-16       3-4       4-4         15-       16-9       24/24       16-18       3-3         16-9       24/24       16-18       3-3       4-4         17-       10       24/24       18-20       3-3         19-       10       24/24       18-20       3-3         19-       10       24/24       18-20       3-3         19-       10       24/24       18-20       3-3         19-       10       24/24       18-20       3-3         19-       10	4.8 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist (ML). et to: Pale brown, very well 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly rse grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
9- 10- 10-624/2410-12 $3.4$ 4.4Very weil softed, SLC1, little line grained Saftd, Changing at 4.9 feet to: Pale brown, very well sorted, fine grained, SAND, trace Silt, moist (SP). Changing at 5.0 feet to: Yellowish brown, very well sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist (ML). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Pale brown, very, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, poorly sorted, medium to coarse grained SAND, trace Silt, moist (SP). Light yellowish brown, poorly sorted, medium to coarse	Interplastic, moist (ML). et to: Pale brown, very well d, SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
10-624/2410-123-4 44Changing at 4.9 feet to: Pale brown, very well sorted, fine grained, SAND, trace Silt, moist (SP). Changing at 5.1 feet to: Pale brown, very well sorted, fine grained Sand, slightly cohesive, non-plastic, moist. Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist. Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, fine to slightly cohesive, non-plastic, moist (ML). Light yellowish brown, very well sorted, fine to coarse grained SAND, little Gravel, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little Gravel, trace Silt, moist (SW).	et to: Pale brown, very well d. SAND, trace Silt, moist 5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
10       6       24/24       10-12       3-4       4-4         11-       4-4       4-4       4-4       4-4       Sightly cohesive, non-plastic, moist. Changing         11-       7       24/24       12-14       5-10       Sightly cohesive, non-plastic, moist (SP).         12-       7       24/24       12-14       5-10       Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP).         13-       14-       8       24/24       14-16       3-4       Height well sorted, SILT, little fine grained SAND, ittle grained SAND, trace Silt, moist (SW).       Light yellowish brown, very well sorted, fine to medium grained SAND, trace Silt, moist (SP).         16-       9       24/24       16-18       3-3       4-4       Gravel, fine to coarse grained SAND, trace Silt, moist (SP).       Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).       Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).       Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).       Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).         17-       10       24/24       18-20       3-3       3-4       Changing at 12.3 feet to: Pale brown, poorly sorted, fine to medium grained SAND, trace Silt, moist (SP).       Changing at 12.3 feet to: Pale b	5.0 feet to: Yellowish brown, ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
6       24/24       10-12       3-4 44       (SP). Changing als 50 feet of relowing blowin, very well sorted, SILT little fine grained Sand, slightly cohesive, non-plastic, moist. Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained Sand, slightly cohesive, non-plastic, moist (ML). Light yellowish brown, very well sorted, fine to sorted, fine to coarse grained SAND, little IGravel, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little Gravel, trace Silt, moist (SW).	ILT, little fine grained Sand, ion-plastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly rse grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
11-       12-       7       24/24       12-14       5-10       slightly cohesive, non-plastic, moist. Changing at 5.1 feet to: Pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP).         13-       13-       12-14       5-10       Gravel, trace Silt, moist (SP).         13-       14-       8       24/24       14-16       3-4         15-       15-       16-       9       24/24       16-18       3-3         16-       9       24/24       16-18       3-3       4-4       Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).       Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).         17-       10       24/24       18-20       3-3       3-4         19-       10       24/24       18-20       3-3       Gravel, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3       Gravel, trace Silt, moist (SW).	Interplastic, moist. Changing brown, very well sorted, fine ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
12-       7       24/24       12-14       5-10 9-6       grained SAND, trace Silt, moist (SP). Changing at 5.2 feet to: Yellowish brown, very well sorted, SILT, little fine grained Sand, slightly colosisk, non-plastic, moist (ML). Light yellowish brown to pale brown, poorly sorted, fine to coarse grained SAND, little         14-       8       24/24       14-16       3-4 4-4         15-       -       -       -         16-       9       24/24       16-18       3-3 4-4         17-       -       -       -         18-       10       24/24       18-20       3-3 3-4         19-       -       -       -	ce Silt, moist (SP). et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
12       7       24/24       12-14       5-10 9-6         13       13       12-14       5-10 9-6       9       12-14       5-10 9-6         14       8       24/24       14-16       3-4 4-4       14-16       3-4 4-4       14-16       14-16         15       15       15       16       9       24/24       16-18       3-3 4-4       16-18       3-3 4-4       16-18 </td <td>et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).</td>	et to: Yellowish brown, very ittle fine grained Sand, ion-plastic, moist (ML). wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
13-       14-       8       24/24       14-16       3-4 4-4       Islightly cohesive, non-plastic, moist (ML). Light yellowish brown to pale brown, poorly sorted, fine to coarse grained SAND, little Gravel, trace Silt, moist (SW). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little Gravel, trace Silt, moist (SW).	Inon-plastic, moist (ML). with the pale brown, poorly resignated SAND, little moist (SW). with, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). with, well sorted, fine to AND, trace Silt, moist (SP).
14-       8       24/24       14-16       3-4 4-4       Light yellowish brown to pale brown, poorly sorted, fine to coarse grained SAND, little         15-       15-       16-       9       24/24       16-18       3-3 4-4         16-       9       24/24       16-18       3-3 4-4       4-4         17-       16-       9       24/24       16-18       3-3 4-4         17-       18-       10       24/24       18-20       3-3 3-4       3-3 3-4         19-       10       24/24       18-20       3-3 3-4       3-3 3-4       Image: Coarse grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3 3-4       3-4       Image: Coarse grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3 3-4       10       24/24       18-20	wn to pale brown, poorly se grained SAND, little moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
14       8       24/24       14-16       3-4 4-4       IGravel, trace Silt, moist (SW). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little Gravel, trace Silt, moist (SW).	moist (SW). wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
15-       16-       9       24/24       16-18       3-3 4-4       4-4       If edium grained SAND, trace Silt, moist (SP). Changing at 9.1 feet to: Dark yellowish brown, Well sorted, fine to medium grained SAND, trace Silt, moist (SP).         17-       16-       9       24/24       16-18       3-3 4-4         17-       16-       9       24/24       16-18       3-3 4-4         18-       10       24/24       18-20       3-3 3-4       3-3 3-4       If the to medium grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3 3-4       12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little         19-       10       24/24       18-20       3-3 3-4       12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little	wn, well sorted, fine to AND, trace Silt, moist (SP). et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
16-9       24/24       16-18       3-3 4-4       Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).         17-       10       24/24       18-20       3-3 3-4       3-3 3-4       Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).         19-       24/24       18-20       3-3 3-4       3-3 3-4       Changing at 9.1 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP).         19-       24/24       18-20       3-3 3-4       Gravel, trace Silt, moist (SV).	et to: Dark yellowish brown, medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
16-       9       24/24       16-18       3-3 4-4       well sorted, fine to medium grained SAND, trace Silt, moist (SP).         17-       10       24/24       18-20       3-3 3-4       3-3 3-4       uestion of the to medium grained SAND, trace Silt, moist (SP).         19-       24/24       18-20       3-3 3-4       3-3 3-4       uestion of the to medium grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3 3-4       uestion of the to medium grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       10 3-4       10         10       24/24       18-20       10 3-4       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10         10       24/24       18-20       10       10       10	medium grained SAND, P). wn, well sorted, fine to AND, trace Silt, moist (SP).
9       24/24       10-18       3-3 4-4       10-18       3-3 4-4         17-       10       24/24       18-20       3-3 3-4       10       24/24       18-20       3-3 3-4         19-       10       24/24       18-20       3-3 3-4       3-3 3-4       10       10       24/24       18-20       10         10       24/24       18-20       3-3 3-4       3-4       10	wn, well sorted, fine to AND, trace Silt, moist (SP).
17-       10       24/24       18-20       3-3       3-3       Imedium grained SAND, trace Silt, moist (SP).         18-       10       24/24       18-20       3-3       3-4       Imedium grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3       3-4       Imedium grained SAND, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3       Gravel, trace Silt, moist (SP).         19-       10       24/24       18-20       3-3       Gravel, trace Silt, moist (SP).	AND, trace Silt, moist (SP).
18     10     24/24     18-20     3-3 3-4     3-3 3-4     medium grained SAND, trace Silt, moist (SP). Changing at 12.3 feet to: Pale brown, poorly sorted, medium to coarse grained SAND, little Gravel, trace Silt, moist (SW).	wn, well sorted, fine to
18       10       24/24       18-20       3-3 3-4       3-3 sorted, medium to coarse grained SAND, little         19       19       19       10       10       10         19       10       10       10       10       10         19       10       10       10       10       10         19       10       10       10       10       10         19       10       10       10       10       10         19       10       10       10       10       10         10       10       10       10       10       10         10       10       10       10       10       10         10       10       10       10       10       10         10       10       10       10       10       10         10       10       10       10       10       10       10         10       10       10       10       10       10       10       10         10       10       10       10       10       10       10       10       10       10       10         10       10 <td< td=""><td></td></td<>	
19– Gravel, trace Silt, moist (SW).	eet to: Pale brown, poorly
medium grained SAND, trace Silt, trace	

Wolverine World Wide, Inc. Boring No.: \_\_\_\_PMW-17D GZA GeoEnvironmental, Inc. 10 Page: \_\_\_\_\_ of \_ House Street Engineers and Scientists File No.: \_\_\_\_\_\_\_16.0062335.52 Belmont, Michigan Check: Sample Information Depth Remarks Equipment Installed Pen./ Depth Blows Test Sample Stratum No. Rec. (Ft.) (/6") Data **Description & Classification** Desc. (in.) 11 24/24 20-22 3-3 4-5 Gravel, moist (SP). Light yellowish brown, very well sorted, fine to medium grained SAND, trace Silt, trace 21 Gravel, moist (SP). Light yellowish brown, very well sorted, fine to medium grained SAND, trace Silt, trace 22 24/24 3-6 8-8 12 22-24 Gravel, moist (SP). 23 Light yellowish brown, very well sorted, fine to medium grained SAND, trace Silt, trace Gravel, moist (SP). 24 13 24/24 24-26 6-10 Light yellowish brown, very well sorted, fine to 11-11 medium grained SAND, trace Silt, trace Gravel, moist (SP). Changing at 22.8 feet to: Brown, poorly sorted, GRAVEL, trace coarse 25

grained Sand, moist (GP). Changing at 22.9

(SP). Changing at 23.4 feet to: Brown, very poorly sorted, GRAVEL, trace coarse grained

Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, trace

Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, trace

Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, trace

Light yellowish brown, well sorted, fine to

Light yellowish brown to pale brown, very well sorted, fine to medium grained SAND, trace

Light yellowish brown to pale brown, very well

Light yellowish brown to pale brown, very well sorted, fine to medium grained SAND, trace

sorted, fine to medium grained SAND, trace

medium grained SAND, trace Silt, trace

Sand, moist (GP).

Gravel, moist (SP).

Gravel, moist (SP).

Gravel, moist (SP).

Gravel, moist (SP).

Silt, moist (SP).

Silt, moist (SP).

Silt, moist (SP).

feet to: Light yellowish brown, very well sorted,

fine to medium grained SAND, trace Silt, moist

BORING\_WELL 62355.52 HOUSE STREET COMPLETE.GPJ GZA\_CORP.GDT 6/26/18

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5-10 12-16

5-12 14-20

15-12 14-20

> 5-7 8-8

7-8 10-11

> 7-10 9-14

38- 39- 40- 241-	20	24/24 24/24	38-40 40-42	10-10 12-12 11-11 11-10	Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 39.5 feet to: Brown to yellowish brown, very well sorted, SILT, some fine grained Sand, slightly cohesive, moist (ML). Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).		
42-	22	24/24	42-44	6-6 7-9	Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).		
REMARKS						1	
					pes, transitions may be gradual. Water level readings have been other factors than those present at the time measurements were	Boring No	.: PMW-17D

		Ge	oEnvir onı	nental, I no	C.	Llauga Streat			Page: <u>3</u> of <u>10</u>
C	۶Z)			d Scientists		House Street			File No.: <u>16.0062335.52</u>
		Sam	ple Inforr	nation		Belmont, Michigan			Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
44— 45—	23	24/24	44-46	6-6 8-9		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
46— 47—	24	24/24	46-48	7-9 10-10		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
48- 49-	25	24/24	48-50	7-4 9-9		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
50- 51-	26	24/24	50-52	5-6 8-10		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
52— 53—	27	24/24	52-54	6-8 13-18		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
53 54 — 55 —	28	24/24	54-56	9-12 13-17		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
56 — 57 —	29	24/24	56-58	10-14 25-22		Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP). Changing at 57.6 feet to: Brown to yellowish			
58— 59—	30	24/24	58-60	17-21 31-32		brown, very well sorted, SILT, some fine grained Sand, slightly cohesive, non-plastic, moist to wet (ML). Pale to very pale brown, very well sorted, fine grained SAND, trace Silt, bedded, moist (SP).			
60 — 61 —	31	24/24	60-62	13-22 27-27		Changing at 59.0 feet to: Very dark grayish brown, well sorted, fine grained SAND, trace Silt, moist (SP). Changing at 59.1 feet to: Pale brown, very sell sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).			
62— 63—	32	24/24	62-64	12-21 25-33		Pale brown, very sell sorted, fine to medium _grained SAND, some Silt, bedded, moist (SM). Pale brown, very sell sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).			
64 —	33	24/24	64-66	2-6 9-13		Pale brown, very sell sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).			
65 — 66 —	34	24/24	66-68	3-10 11-18		Pale brown, very sell sorted, fine to medium			
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(	JZ )			m <b>ental, In</b> d <i>Scientis</i> ts		House Street			Page: <u>4</u> of <u>1</u> File No.: <u>16.0062335</u> .			
	/		ple Inforr			Belmont, Michigan			Check:			
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed			
67 –						grained SAND, some Silt, bedded, moist (SM).						
68-	35	24/24	68-70	7-17 21-23		Pale brown, very sell sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).						
69— 70—		0.1/04		5.0		Changing at 68.3 feet to: Dark yellowish brown, well sorted, fine to medium grained SAND, trace Silt, moist (SP). Changing at 68.4						
71-	36	24/24	70-72	5-14 22-28		feet to: Pale brown, very well sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).						
72–	37	24/24	72-74	8-20 22-35		Pale brown, very well sorted, fine to medium grained SAND, some Silt, bedded, moist (SM). Pale brown, very well sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).						
73–						J						
74 —	38	24/24	74-76	5-16 28-41		Pale brown, very well sorted, fine to medium grained SAND, some Silt, bedded, moist (SM).						
75-												
76— 77—	39	24/24	76-78	9-21 29-44		Pale brown, very well sorted, fine to medium grained SAND, some Silt, bedded, moist (SM). Changing at 76.8 feet to: Light yellowish						
78-	40	24/24	78-80	2-10 22-24		brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP). Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP).						
79— 80— 81—	41	24/24	80-82	2-8 14-24		Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP).						
82— 83—	42	24/24	82-84	1-3 6-12		Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP).						
84— 85—	43	24/24	84-86	1-1 3-8		Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP).						
86— 87—	44	24/24	86-88	1-2 5-12		Light yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP). Changing at 87.6 feet to: Brown, moderately						
88— 89—	45	24/24	88-90	1-2 9-14		sorted, coarse grained SAND, some Gravel, wet (SW). Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace Gravel, wet (SP).						
R E M A R K S	<u> </u>	<u> </u>	<u> </u>		<u> </u>							
									<u>г</u>			

Wolverine World Wide, Inc. Boring No.: \_\_\_\_PMW-17D GZA GeoEnvironmental, Inc. 10 Page: \_\_\_\_\_\_ of \_\_\_ House Street Engineers and Scientists File No.: \_\_\_\_\_\_\_16.0062335.52 Belmont, Michigan Check: Sample Information Depth Remarks Equipment Installed Pen./ Depth Blows Test Sample Stratum No. Rec. (Ft.) (/6") Data Description & Classification Desc. (in.) 46 24/24 90-92 1-2 3-5 Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace 91 Gravel, wet (SP). 92 24/24 47 92-94 1-2 4-11 Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace 93 Gravel, wet (SP). 94 48 24/24 94-96 1-3 Yellowish brown to brown, well sorted, fine to 5-9 medium grained SAND, trace Silt, trace 95 Gravel, wet (SP). 96 24/24 1-4 6-12 49 96-98 Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace 97 Gravel, wet (SP). 98 24/24 50 98-100 Yellowish brown to brown, well sorted, fine to 3-4 8-15 medium grained SAND, trace Silt, trace Gravel, wet (SP). 99 100 51 24/24 100-102 2-2 3-10 Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace 101 Gravel, wet (SP). 102 52 24/24 102-104 2-7 14-21 Yellowish brown to brown, well sorted, fine to medium grained SAND, trace Silt, trace 103 Gravel, wet (SP). Changing at 103.2 feet to: Brown to yellowish brown, very well sorted, SILT, some fine grained Sand, slightly 104 2-2 3-6 24/24 53 cohesive, wet (ML). Changing at 103.5 feet to: 104-106 Brown to yellowish brown, well sorted SILT, 105 some fine grained Sand, trace Clay, moderately cohesive, non to slightly plastic, bedded, moist to wet (ML). Changing at 103.6 106 54 24/24 106-108 1-1 3-5 feet to: Brown to yellowish brown, very well sorted, SILT, some fine grained Sand, slightly cohesive, wet (ML). 107 Bentonite/Grout Yellowish brown to brown, very well sorted, fine grained SAND, trace Silt, wet (SP). 108 55 24/24 108-110 3-4 8-12 Yellowish brown to brown, very well sorted, fine grained SAND, trace Silt, wet (SP). 109 Yellowish brown to brown, very well sorted, fine grained SAND, trace Silt, wet (SP). Changing at 108.9 feet to: Yellowish brown to 110 56 24/24 110-112 1-1 3-7 brown, well sorted, SILT, some fine grained Sand, wet (ML). Changing at 109.0 feet to: Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet 111 (SP). Changing at 109.5 feet to: Dark yellowish 112 24/24 1-3 5-8 57 112-114 brown, well sorted, fine to medium SAND. trace Silt, wet (SP). Changing at 109.7 feet to: 113 Yellowish brown to brown, very well sorted, R E M A R κ S Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under Boring No.: PMW-17D conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

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House Street

Boring No.: \_\_\_PMW-17D Page: \_\_\_6 \_\_\_of \_\_10 File No.: \_\_\_16.0062335.52 Check:

		En	gineers and	l Scientists		Belmont, Michigan			File No.: 16.0062335.52
		San	nple Inforn	nation					Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
114— 115—	58	24/24	114-116	1-4 12-18		fine to medium grained SAND, trace Silt, wet (SP). Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet (SP).			
16—  17—	59	24/24	116-118	1-5 12-22		Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet (SP). Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet			
18—  19—	60	24/24	118-120	1-1 1-4		(SP). Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet (SP). Changing at 116.2 feet to: Dark yellowish brown, well sorted, Silty CLAY, plastic,			
20-	61	24/24	120-122	7-10 14-20		cohesive, moist (CL). Changing at 116.3 feet: Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet (SP). Changing at 116.8 feet to: Dark yellowish brown, well sorted, Silty CLAY, plastic,			
22-	62	24/24	122-124	4-7 13-15		cohesive, moist (CL). Changing at 116.9 feet to: Yellowish brown to brown, very well sorted, fine to medium grained SAND, trace Silt, wet ((SP). Yellowish brown to brown, very well sorted,			
24— 25—	63	24/24	124-126	5-10 12-20		fine to medium grained SAND, trace Silt, wet (SP). Changing at 119.0 feet to: Dark yellowish brown, well sorted SILT, some fine grained Sand, slightly cohesive, wet (ML). Changing at 119.1 feet to: Yellowish brown to brown, very			
26— 27—	64	24/24	126-128	4-10 11-10		well sorted, fine to medium grained SAND, trace Silt, wet (SP). Yellowish brown, well sorted, fine to medium grained SAND, trace Silt, wet (SP). Changing at 121.3 feet to: Grayish brown to to light			
28– 29–	65	24/24	128-130	7-12 9-15		grayish brown, well sorted, SILT, some fine grained Sand, non-plastic, moderately cohesive, wet (ML). Grayish brown to to light grayish brown, well sorted, SILT, some fine grained Sand,			
30- 31-	66	24/24	130-132	2-4 7-9		non-plastic, moderately cohesive, wet (ML). Changing at 122.9 feet to: Brown, well sorted, fine grained SAND, some Silt, trace Clay, cohesive, slightly to moderately plastic, moist (SM).			
32— 33—	67	24/24	132-134	1-4 5-6		Brown, well sorted, fine grained SAND, some Silt, trace Clay, cohesive, slightly to moderately plastic, moist (SM). Gray to grayish brown, well sorted, fine grained SAND, some Silt, trace Clay, cohesive, slightly		1	
34— 35—	68	24/24	134-136	1-3 5-6		to moderately plastic, moist (SM). Changing at 126.6 feet to: Gray to grayish brown, well sorted, CLAY & SILT, little fine grained Sand, plastic, cohesive, moist (CL).			
36-	69	24/24	136-138	1-1 2-6		Gray to grayish brown, well sorted, fine grained SAND, some Silt, trace Clay, cohesive, slightly to moderately plastic, moist (SM). Gray to grayish brown, well sorted, fine grained			
R E M A R K S	1. Grour	ndwater w	vas encounte	ered at app	roximately	y 132.4 feet below ground surface.			
						ypes, transitions may be gradual. Water level readings have bee other factors than those present at the time measurements were		under	Boring No.: PMW-17D

	GZA GeoEnvir onmental, Inc.				C.	Wolverine World Wide, In		Boring No.: <u>PMW-17D</u> Page: <u>7</u> of <u>10</u>			
C			gineers and			House Street Belmont, Michigan			File No.: 01		
		San	nple Inforn	nation					Check:		
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed		
37 — 38 — 39 —	70	24/24	138-140	0-1 1-5		SAND, some Silt, trace Clay, cohesive, slightly to moderately plastic, moist (SM). Gray to grayish brown, well sorted, fine grained SAND, some Silt, trace Clay, cohesive, slightly to moderately plastic, moist (SM). Changing at 132.4 feet to: Grayish brown to brown, very well sorted, SILT, trace Clay, moderately					
40-	71	24/24	140-142	0-4 8-14		Varved, grayish brown, very well sorted, SILT, some Clay, some fine grained Sand, cohesive and slightly to moderately plstic, moist to wet					
42-	72	24/24	142-144	6-10 12-16		(ML). Brown, well sorted, SILT, little Clay, moderately plastic, cohesive, moist to wet (ML). Changing at 136.3 feet to: Gravish brown, very well					
43- 44-	73	24/24	144-146			sorted, SILT, trace Clay, cohesive, slightly plastic, moist to wet (ML). Changing at 136.4 feet to: Grayish brown, very well sorted, fine grained SAND, little Silt, slightly cohesive, wet (SM).					
45- 46-	74	24/24	146-148	3-6		Grayish brown, very well sorted, fine grained SAND, little Silt, slightly cohesive, wet (SM). Changing 138.9 feet to: Grayish brown, very well sorted, fine grained SAND, trace Silt, wet					
47-	(4	27/27	140	14-20		(SP). Changing at 139.0 feet to: Grayish brown, very well sorted, fine grained SAND, little Silt, slightly cohesive, wet (SM). Yellowish brown, very well sorted, fine grained					
48- 49-	75	24/24	148-150	1-2 5-15		SAND, little Silt, wet (SM). Yellowish brown, very well sorted, fine grained SAND, little Silt, wet (SM). Changing at 143.5 feet to: Grayish brown, very well sorted, SILT,					
50— 51—	76	24/24	150-152	6-12 25-33		trace fine grained Sand, moderately cohesive, wet (ML). Grayish brown, very well sorted, fine grained SAND, trace Silt, wet (SP). Grayish brown to brown, very well sorted, fine					
52— 53—	77	24/24	152-154	1-1 3-7		grained SAND, little Silt, wet (SM). Changing at 146.6 feet to: Yellowish brown, well sorted, fine grained SAND, trace Silt, wet (SP). Changing at 146.7 feet to: Grayish brown to brown, very well sorted, SILT, little fine grained					
54 — 55 —	78	24/24	154-156	1-4 14-18		SAND, wet (ML). Grayish brown to brown, very well sorted, SILT, little fine grained SAND, wet (ML). Grayish brown to brown, very well sorted, fine					
56— 57—	79	24/24	156-158	1-8 24-35		grained SAND, little Silt, slightly cohesive, wet (SM). Changing at 150.5 feet to: Grayish brown to brown, very well sorted, SILT, moderately cohesive, wet (ML). Changing at 151.9 feet to: Grayish brown to brown, very well sorted, SILT, moderately cohesive, wet					
58— 59—	80	24/24	158-160	4-8 9-22		(ML). Brown to yellowish brown, very well sorted, fine grained SAND, little Silt, wet (SM). Brown to yellowish brown, very well sorted, fine grained SAND, little Silt, wet (SM). Brown to yellowish brown, very well sorted,					

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C	<b>7</b>		<b>xoEnviron</b> r gineersand			House Street			Page:8 of10
			-			Belmont, Michigan			File No.: <u>16.0062335.5</u> Check:
_		San	nple Inforn	nation					Спеск:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
61—	81	17/17	160-161.4	17-31-87/5"		fine grained SAND, little Silt, wet (SM). Changing at 156.6 feet to: Dark grayish brown to dark brown, very well sorted, fine grained SAND, little Silt, wet (SM).			
62- 63-	82	24/0	162-164	4-8 15-10		Dark grayish brown to dark brown, very well sorted, fine grained SAND, little Silt, wet (SM). Very dense, light brown, fine SAND, little to trace Silt, wet (SM). NO RECOVERY. Bailer soil is fine Sand, little			
64 — 65 —	83	12/6	164-165	13-50\6"		to trace Silt. Very dense, brown, fine SAND, little to trace Silt, wet (SM).			
66 —	84	24/8	166-168	6-20 35-50		Very dense, brown, fine SAND, little to trace Silt wet (SM).			
67 — 68 —	85	17/10	168-169.4	5-23-50/5"		Very dense, brown, fine SAND, little to trace			
69 — 70 —						Silt, wet (SM).			
71-	86	16/0	170-171.3	6-23-50/4"		NO RECOVERY. Bailer soil is fine Sand, little to trace Silt.			
72— 73—	87	23/12	172-173.9	3-10 35-50/5"		Very dense, brown, fine SAND, little to trace Silt, wet (SM).			
74— 75—	88	17/0	174-175.4	6-31-50/5"		NO RECOVERY. Bailer soil is fine Sand, little to trace Silt.			
76— 77—	89	17/0	176-177.4	14-40-50/5"		NO RECOVERY. Bailer soil is fine Sand, little to trace Silt.			
77 — 78 — 79 —	90	12/0	178-179	15-67		NO RECOVERY. Bailer soils is fine Sand, little to trace Silt.			
80-	91	18/0	180-181.5	7-3-90/6"		NO RECOVERY. Bailer soil is fine Sand, little to trace Silt.			
32-	92	24/24	182-184	11-16 27-33		Dense, light brown, fine SAND, little to trace Silt, wet (SM).			
81- 82- 83- R E V A R K S		<u> </u>							
	ation line	s represent	t approximate	boundary bet	veen soil t	ypes, transitions may be gradual. Water level readings have beer	n made at times an	d under	Boring No.: PMW-17D

GZA GeoEnvironmental, Inc.					Wolverine World Wide, In		Boring No.: <u>PMW-17D</u> Page: <u>9</u> of <u>10</u>		
JL				-				File No.: <u>16.0062335.52</u>	
	San	nple Inforn	nation					Check:	
No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed	
93	24/8	184-186	9-18 30-52		Dense, light brown, fine SAND, little to trace Silt, wet (SM).				
94	24/6	186-188	16-23 48-55		Very dense, light brown, fine SAND, little to trace Silt, wet (SM).				
95	24/6	188-190	8-12 35-58		Dense, light brown, fine SAND, little to trace Silt, wet (SM).				
96	24/8	190-192	5-13 19-25		Dense, light brown, gray, fine SAND, little to trace Silt, wet (SM).				
97	24/10	192-194	13-26 35-41		Very dense, brown, fine to medium SAND, little to trace Silt, wet (SM).				
98	24/10	194-196	9-20 42-50		Very dense, light brown, fine to medium SAND, little to trace Silt, wet (SM).				
99	24/0	196-198	7-22-62/6"		NO RECOVERY. Bailer soil is light brown gray, fine to medium Sand, little to trace Silt, wet.				
100	24/1	198-200	10-12 32-44		Dense, gray to light brown, fine SAND, little to trace Silt, wet (SM).				
101	24/10	200-202	10-18 32-48		Very dense, gray to light brown, fine to medium SAND, little to trace Silt, wet (SM).				
102	24/6	202-204	5-9 20-28		Medium dense, gray to light brown, fine to medium SAND, little to trace Silt, wet (ML).				
103	24/16	204-206	7-14 20-33		Dense, gray to light brown, medium SAND, little to trace Silt, wet (SM).				
104	24/14	206-208	6-17 27-40		Very dense, gray, medium to coarse SAND,				
	<ul> <li>93</li> <li>94</li> <li>95</li> <li>96</li> <li>97</li> <li>98</li> <li>99</li> <li>100</li> <li>101</li> <li>102</li> <li>103</li> </ul>	Ge En         No.       Ren./ Rec. (in.)         93       24/8         94       24/6         95       24/6         96       24/8         97       24/10         98       24/10         99       24/10         91       24/10         92       24/10         93       24/10         94       24/10         95       24/10         96       24/10         97       24/10         98       24/10         100       24/10         101       24/10         102       24/6         103       24/16	GeoEnviron           Samuel Information           No.         Pen./ Rec. (in.)         Depth (Ft.)           93         24/8         184-186           94         24/6         186-188           95         24/6         188-190           96         24/70         190-192           97         24/10         192-194           98         24/10         192-194           98         24/10         192-194           99         24/10         192-194           91         24/10         192-194           92         24/10         192-194           93         24/10         192-194           94         24/10         192-194           95         24/10         192-194           98         24/10         192-194           99         24/10         193-196           100         24/10         196-198           101         24/10         200-202           102         24/6         202-204           103         24/16         204-206	GeoEnvironmental, Inc.         Samuers and Scientists         No.       Rec. (in.)       Depth (f.)       Blows (f.)         93       24/8       184-186 $9.18$ 30.52         94       24/6       186-188 $16-2348-55$ 95       24/6       188-190 $8.1235-58         96       24/8       190-192       5.1319.25         97       24/10       192-194       13.2635-41         98       24/10       194-196       9.2042.50         99       24/0       196-198       7-22-62/6^n         100       24/1       198-200       10.1232.44         101       24/10       200-202       10.1832.48         102       24/6       202-204       5.920.28         103       24/16       204-206       7.1420.33$	GeoEnvironmental, Inc. Engineers and Scientists         Sum       Sum         No.       Pen./ (n.)       Depth (Ft.)       Blows (6")       Test Data         93       24/8       184-186       9-18 30-52       -         94       24/6       186-188       16-23 48-55       -         95       24/6       188-190       8-12 35-58       -         96       24/8       190-192       5-13 19-25       -         97       24/10       192-194       13-26 35-41       -         98       24/10       194-196       9-20 42-50       -         99       24/10       194-196       9-20 42-50       -         100       24/10       198-200       10-12 32-44       -         101       24/10       200-202       10-18 32-48       -         102       24/6       202-204       5 <sup>5-9</sup> 20-28       -         103       24/16       204-206       7 <sup>5-14</sup> 20-33       -	Ecol Environmental, Inc. Ergineers and Scientists       House Street Belmont, Michigan         Sample Information         No.       Perther Rec. (n.)       Blows (6")       Test Data       Barbour Michingan         93       24/8       184-186       9-18 30-52       Lense, light brown, fine SAND, little to trace Silt, wet (SM).         94       24/6       188-190       8-12 35-58       Dense, light brown, fine SAND, little to trace Silt, wet (SM).         95       24/6       188-190       8-12 35-58       Dense, light brown, fine SAND, little to trace Silt, wet (SM).       SAND, little to trace Silt, wet (SM).         96       24/8       190-192       5-13 19-25       Dense, light brown, fine SAND, little to trace Silt, wet (SM).         97       24/10       192-194       13-26 35-41       Very dense, brown, fine to medium SAND, little to trace Silt, wet (SM).         98       24/10       194-196       9-20 42-50       Very dense, light brown, fine to medium SAND, little to trace Silt, wet (SM).         100       24/1       198-200       10-12 32-44       Dense, gray to light brown, fine to medium SAND, little to trace Silt, wet (SM).         101       24/16       202-204       5-9 20-28	Geodenvironmental, Inc. Engineers and Szientiss         House Street         Belmont, Michigan         No.       Pen/ (n.)       Depth (P)       Blows (P)       Test (P)       Sample Data       Sample Description & Classification       Stratum Desc.         93       24/8       184-186       9-18 30-52       Dense, light brown, fine SAND, little to trace       Stratum Desc.         94       24/6       186-188       16-23 48-55       Very dense, light brown, fine SAND, little to trace         95       24/8       198-190       3-53 48-55       Dense, light brown, fine SAND, little to trace         96       24/8       190-192       5-13 19-25       Dense, light brown, fine SAND, little to trace         97       24/10       192-194       13-26 35-41       Very dense, brown, fine to medium SAND, little to trace Silt, wet (SM).         98       24/10       194-196       4-260 4-250       Very dense, gray to light brown, fine to medium SAND, little to trace Silt, wet (SM).         99       24/0       196-198       7-22-62/e <sup>*</sup> NO RECOVERY. Bailer soil is light brown fine to medium SAND, little to trace Silt, wet (SM).         101       24/10       20-202       10-12 22-48       Very dense, gray to light brown, fine to medium SAND, little to trace Silt, wet (SM).         102 <td< td=""><td>Descent romental, Inc. Engineers and Stantists         House Street           No.         Pen/ Rec. (n)         Oppth (Ft)         Blows (%)         Fest Data         Description &amp; Classification         Stratum Desc.         Pen/ Pen/ Pen/ Description &amp; Classification           93         24/8         184-186         9-18 30-52         Dense, light brown, fine SAND, little to trace         Image: Pen/ Pen/ Pen/ Pen/ Pen/ Pen/ Pen/ Pen/</td></td<>	Descent romental, Inc. Engineers and Stantists         House Street           No.         Pen/ Rec. (n)         Oppth (Ft)         Blows (%)         Fest Data         Description & Classification         Stratum Desc.         Pen/ Pen/ Pen/ Description & Classification           93         24/8         184-186         9-18 30-52         Dense, light brown, fine SAND, little to trace         Image: Pen/ Pen/ Pen/ Pen/ Pen/ Pen/ Pen/ Pen/	

	GZA GeoEnvironmental, Inc.					Wolverine World Wide, I House Street		Boring No.: <u>PMW-17D</u> Page: <u>10</u> of <u>10</u>			
		En	gineers and	Scientists		Belmont, Michigan			File No.:1	6.0062335.52	
Depth	No.	San Pen./ Rec.	nple Inform Depth	Blows	Test	Sample	Stratum	Remarks	Check: Equipme	nt Installed	
	NO.	(in.)	(Ft.)	(/6'')	Data	Description & Classification	Desc.	Rem			
207 -						trace Silt, wet (SW).					
208 — 209 —	105	24/16	208-210	9-23 32-59		Very dense, gray, medium to coarse SAND, trace Silt, wet (SW). Changing at 208.8 feet to: Very dense, gray, fine SAND, little Silt, wet					
210-	106	24/6	210-212	9-11 14-17		(SM). Medium dense, gray and brown, fine SAND, little to trace Silt, wet (SM).					
211- 212-	107	24/0	212-214	4-7		NO RECOVERY. BAiler soil is fine to coarse					
213-	107	24/0	212-214	26-33		Sand, little to trace Silt, wet.					
214 — 215 —	108	24/12	214-216	4-7 26-33		Dense, gray, fine to coarse SAND, little Silt, wet (SM).					
16-	109	24/10	216-218	4-8 8-30		Medium dense, gray and brown, fine to medium SAND, little to trace Silt, wet (SM).					
17— 18—										- Top of Well Screen - Silica Sand	
19-	110	24/12	218-220	5-14 34-30		Dense, gray and brown, fine to medium SAND, little to trace Silt, wet (SM).				Filter Pack	
20— 21—	111	24/0	220-222	5-7 22-33		NO RECOVERY.				-2-Inch Dia. 5-Foot PVC Screen (0.0	
22– 23–	112	24/12	222-224	4-6 33-33		Dense, brown, fine SAND, little Silt, wet (SM). Changing at 223.7 feet to: GRAVEL (potential Bedrock).				-Bottom of V	
24 –	113	24/14	224-226	41-35 45-48		Gray, potential weathered BEDROCK. Changing at 13.2 feet to: Brown, Clayey SILT,				Screen	
25 — 26 —						trace fine to coarse Sand, wet (ML).					
27-						Bottom of Borehole at 226.0 Feet					
28-											
29-											
R			<u> </u>	<u> </u>							
N A R K S											
						ypes, transitions may be gradual. Water level readings have been other factors than those present at the time measurements were needed.		nd under	Boring No.: F	MW-17D	

		GZ	A			Wolverine World Wide, Inc. Boring No.: PMW-17M							
	G7ZN)			<b>nental, In</b> Scientists			Hous	se Street			Page: File No.: _	<u>1</u> of	8
		-		Illing Comp				nt, Michigan			Check:		
			Jerry H		any		Auger/ Casing	Sampler		GROUNE	WATER R		
Log	ged by:		Christop	oher Melby		Type:H⊴		Split Spoon	Date	Time	Depth		Stab
				2-18 / 3-5-2			8.0" / 4.25"	2.0"					
GS	Ing Loca	ation:	Date	um:		Hammer Wt.: _ Hammer Fall: _	30.0"	<u> </u>					
			ple Inform			TOC Elev.:	NA	NA	Surveyed	By:N	NA Survey Date:		
Ę		Pen./	-							ks	Eauip	ment Insta	lled
Depth	No.	Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Descripti	Sample on & Classific	ation	Stratum Desc.	Remarks			ECTIVE
						See PMW-17D/M soil descriptions.	W-1D boring loo	g for detailed	SAND			Backfi Pad	ll/Cement
												Pau	
2-													
3-													
4- 5-													
6-													
7-													
8-													
9-													
10-													-
11-	-												
12-													
13-													
14-													
- 													
5 16-													
ן 17 –													
3 19- 	1												
14 – 14 – 15 – 15 – 15 – 15 – 15 – 15 –													
Stratifi conditi						ypes, transitions may be gother factors than those p				and under	Boring No	.: PMW-17	M

C	GZA GeoEnvir onmental, Inc. Engineers and Scientists				<b>.</b>	Wolverine World Wic House Street Belmont, Michiga	_	Boring No.:         PMW-17M           Page:         2         of         8           File No.:         16.0062335.52         2			
_		Sam	ple Inforn	nation				_	Check:		
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed		
21-							SAND				
22-											
23-											
24-											
25-											
26 – 27 –											
28-											
29-											
30-											
31-											
32-											
3-											
84 — 85 —											
36-											
37 –											
88-											
39-											
40 —											
11-											
42- 43-											
R E M A R C S		<u> </u>		<u> </u>	<u>                                     </u>						
tratific	ation line:	s represent	approximate	boundary bet	ween soil type	es, transitions may be gradual. Water level readings have er factors than those present at the time measurements	e been made at times and	under	Boring No.: PMW-17M		

C	۶Z)	GZ Geo	oEnvir onr	nental, Ind Scientists	C.	Wolverine World Wid House Street		_	Boring No.:PMW-17M Page:3 of8
	/		ple Inforn			Belmont, Michig	an	_	File No.: <u>16.0062335.52</u> Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
44 —							SAND		
45 —									
46 —									
17-									
18-									
19-									
50-									
51-									
52-									
53-									
54 —									
55-									
56 -									
57-									
58-									
59-									
60-									
61-									
52-									
63-									
64 —									
65 —									
66 –									
R = /									
= /  A   R									
2 ( 									

C	<b>7</b>	GZ Geo	oEnvir onr	nental, Ind	<b>.</b>	Wolverine World Wig House Street			Boring No.:PMW-17M Page:4 of8
	/		ple Inforn	Scientists		Belmont, Michig	an		File No.: <u>16.0062335.52</u> Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
67 —							SAND		
58-									
59 —									
70-									
71-									
72-									
73-									
74-									
75-									
76-									
77-									
78-									
79-									
30-									Grout
31 -									
32-									
33-									
34 —									
35-									
36 -									
37 –									
88-									
89-									
R = /									
A									
र ८ ३									
			approximate						

		GZ	A	mental, I no		Wolverine World Wide, Inc Boring No.:PMW				
	JΖ\)	Ge End	oEnvironr aineersand	nental, Ind Scientists	C.	House Street		Page: <u>5</u> of <u>8</u> File No.: <u>16.0062335.52</u>		
			ple Inforn			Belmont, Michigan		File No.: <u>16.0062335.52</u> Check:		
Depth		Pen./	Depth	Blows	Test	Sample	Stratum	န္ Equipment Installed		
Ĕ	No.	Rec. (in.)	(Ft.)	(/6")	Data	Description & Classification	Desc.	Equipment Installed		
							SAND			
91-										
92-										
93-										
94—										
95—								-		
96-										
97 —										
98-										
99-										
100-								-		
101 —										
102-										
103-										
104 —										
105-								-		
106-										
8/107 —										
108- 001 0%										
BORING WEIT         E3255.52 HOUSE STREET COMPLETE GPJ 627 CORP 6D1 6/26/18           100         -         -         -         -         -         -         -         -         -         -         100         100         -										
42 70 70										
111-										
Т <u>а</u> 112-										
S BSNO E										
<b>A M</b>										
<b>K</b> K <b>K</b> S										
ອັ ປິ∠ Stratifi	cation line	s renrecent	annrovimate	boundary bet	ween soil ty	pes, transitions may be gradual. Water level readings have bee	en made at times and ur	nder <b>–</b>		
conditi	ons stated	. Fluctuatio	ons of ground	water may oc	cur due to o	ther factors than those present at the time measurements were	made.	Boring No.: PMW-17M		

~	GZA GeoEnvironmental, Inc.					Wolverine World Wide,	Boring No.:PMW-17M		
	۶Z\)	Ge Eng	o <b>Environ</b> r ginærsand	nental, ind Scientists		House Street		_ Page: <u>6</u> of <u>8</u> File No.: <u>16.0062335.52</u>	
	/		ple Inform			Belmont, Michigan		Check:	
Depth		Pen./				<b>-</b> ·		은 Equipment Installed	
De	No.	Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	ୁ Equipment Installed ଅନ୍ତି ଅନ୍ତି	
114 —							SAND		
115—									
116-									
117—									
118-									
119—									
120-									
121 —									
122-									
123-									
124 —									
125-									
126- 127-									
127									
120									
130-									
132-									
131 - 132 - 132 - 133 - 133 - 133 - 134 - 134 - 135 - 136 - 134 - 136 -									
134									
135-									
136-									
					· · · · · ·		·		
R									
S									
Stratific	cation lines	s represent . Fluctuatio	approximate	boundary bet water may oc	ween soil typ cur due to oth	es, transitions may be gradual. Water level readings have been her factors than those present at the time measurements were	en made at times and u made.	nder Boring No.: PMW-17M	

2		GZ	A	nental, I no		Wolverine World Wide,	Inc.		Boring No.:PMW-17M
	۶Z\)	Ge Eng	oEnvironr gineersand	nental, Ind Scientists	<b>).</b>	House Street			Page:7 of8 File No.:16.0062335.52
			ple Inforn			Belmont, Michigan			Check:
Depth		Pen./	Depth	Blows	Test	Sample	Stratum	Irks	Equipment Installed
ď	No.	Rec. (in.)	(Ft.)	(/6")	Data	Description & Classification	Desc.	Remarks	
137 —							SAND		
138-									
139-									
140-									-
141 —									
142-									
143-									
144 —									
145—									-
146—									
147 —									
148—									
149—									
150-									-
151— 152—									
152-									
200 100 155 —									-
0. 156 —									
80 20 2157 —									
154         -         -         -         -         -         -         156         -         -         -         156         -         -         -         157         156         -         -         -         -         -         157         157         157         157         157         157         157         - <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
B R			1	L	<u> </u>		<u> </u>	<u> </u>	y+ŋ Iy+ŋ
R E M									
A R K									
METT 8									
Stratific Condition						pes, transitions may be gradual. Water level readings have bee ther factors than those present at the time measurements were		under	Boring No.: PMW-17M

~		GZ	Ά.			Wolverine World Wide,	Inc.		Boring No.:PMW-17M
(	<b>57\</b> )	Ge En	oEnvironn ginærsano	n <b>ental, In</b> o Scientists	2.	House Street			Page: <u>8</u> of <u>8</u> File No.: <u>16.0062335.52</u>
	/		ple Inform			Belmont, Michigan			Check:
Depth		Pen./	-		_			ķs	Equipment Installed
De	No.	Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	
							SAND		
161 —									
162-									
163-									Top of Well
164 —									Screen Silica Sand Filter Pack
165-									
166-									2-Inch Dia. 5-Foot PVC
	1	24	166-168			Brown, fine SAND, little to trace Silt.		1	Screen (0.010"
167 —							168'		
168—						Bottom of Borehole at 168.0 Feet		2	Bottom of Well
169—									
170-									-
171 –									
172-									
173-									
174 —									
175-									-
176-									
177-									
178-									
179-									
180-									-
181 —									
182-									
183-									
	1. Soil de	escription	is based on	auger cutti	ngs.				
R E M	∠. Ivionito	ning well	was installe	eu in doreho	bie upon (	completion. Well screen set from approximately 163.0	U TOX.U TEEL DELO	w gro	una surrace.
A R									
K S									
Stratific	cation lines	represent	approximate	boundary bet	ween soil t	/pes, transitions may be gradual. Water level readings have be	en made at times an	d unde	<sup>r</sup> Boring No.: PMW-17M
conditio	ons stated.	Fluctuation	ons of ground	water may oc	cur due to	other factors than those present at the time measurements wer	e made.		<b>-</b>

		GZ	A				Wolverine V	Vorld Wide,	Inc.				PMV	
	GZ\)		oEnvironr gineersand				Hous	se Street					1 of _ 16.00623	
	, traatar	-	Stearns Dri					nt, Michigan					10.0002	
For	eman: _		Jerry H	luntoon	arry		Auger/ Casing	Sampler		GROI			ADINGS	
			Christop				llow Stem Auger	Split Spoon	Date	Tim	ne E	Depth	Casing	Stab
			2-27			O.D. / I.D.: _ Hammer Wt.: _	8.0" / 4.25" 140lbs	<u> </u>	-					
GS	Elev.: _		Date	um:		_ Hammer Fall: _	30.0"	NA						
		Sam	ple Inform	nation		TOC Elev.: _	NA	NA	Surveyed	By: _	NA	Surv	ey Date:	
Depth		Pen./	Depth	Blows	Test		Sample		Stratum	2		Equipm	nent Insta	lled
ď	No.	Rec. (in.)	(Ft.)	(/6")	Data	Descripti	on & Classific	ation	Desc.	0				ECTIVE IG
						See PMW-17D/M soil descriptions.	W-1D boring log	g for detailed	See PMW-17D/MW-		- 🔣			
1-	-								for Stratum Descriptions					
2-	_												Backfi	II
3-														
4-	-										¥//)			
5-	-													
6-														
7-	1													
8-	-													
9-	-													
10-														
11-	1													
12-	-													
13-	-													
14-	_													
15-														
3 16-	1													
17-	-													
18-	-													
19-														
14 – 15 – 16 – 17 – 18 – 18 – 18 – 18 – <b>REMARKS</b> Stratific														
	1	ı		1	11				1	1				
M A														
RK														
S														
Stratifi						/pes, transitions may be g				and un	der R	orina No ·	PMW-17	s
condit	ions stated	I. Fluctuatio	ons of ground	water may oc	cur due to c	other factors than those p	resent at the time n	neasurements were	made.				11	

		GZ	<u>A</u>	nental, I no		Wolverine World Wide,	Inc.	Boring No.:PMW-17S
	GZN)	Ge Enç	oEnvironr ginærsand	nental, Ind Scientists	<b>).</b>	House Street		Page: of File No.:16.0062335.52
			ple Inforn			Belmont, Michigan		Check:
Depth		Pen./			Test	<b>O</b> rmula	Structure St	Equipment Installed
D <sup>e</sup>	No.	Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum E Desc. E	
21-							See PMW-17D/MW-1D for Stratum	
22-							Descriptions	
23-	-							
24-	-							
25-								
26-	-							
27-	-							
28-	-							
29-	-							
30-	-							
31-	-							
32-	-							
33-	-							
34-								
35-	-							
36-								
8  37-								
9 38 - 19 19 19 19 19 19 19 19 19 19 19 19 19 1								
40-								
ی روبی 19:	-							
42-	-							
00 ⊒43−	_							
37								
A R K S								
Stratifi conditi						bes, transitions may be gradual. Water level readings have been her factors than those present at the time measurements were		er Boring No.: PMW-17S

		GZ	A	mental, I no		Wolverine World Wide, Ir	NC.	_	Boring No.:PMW-17S Page:3 of5
	GZN)	Enę	gineers and	l Scientists		House Street Belmont, Michigan		_	File No.:
_		Sam	ple Inforn	nation				_	Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
44-							See PMW-17D/MW-1D for Stratum		
45-	-						Descriptions		
46-	-								
47-	-								
48-	-								
49-	-								
50-									
51-									Bentonite/Grout
52-									
53-	-								
54-	-								
55-	-								
56-	-								
57-	-								
58-	-								
59-	-								
60-	-					·			
61-	-								
62-									
63-									
64-	-								
65-									
61									
R E M									
A R K									
K S									
Stratifi	cation lines	s represent	approximate	boundary bet	ween soil t	rpes, transitions may be gradual. Water level readings have been	made at times and u	under	Boring No.: PMW-17S
conditi	ions stated	. Fluctuatio	ons of ground	water may oc	cur due to	other factors than those present at the time measurements were n	nade.		<b>J</b>

		GZ	A	mental, I no		Wolverine World Wide,	Inc.	Boring No.:PMW-17S
	GZN)	Ge End	oEnvironr aineers and	nental, Ind Scientists		House Street		Page: <u>4</u> of <u>5</u> File No.: <u>16.0062335.52</u>
			ple Inforn			Belmont, Michigan		- Check:
Depth		Pen./						Equipment Installed
De De	No.	Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Equipment Installed
67-	-						See PMW-17D/MW-1D for Stratum	
68-	-						Descriptions	
69-	-							
70-	-							-
71-	-							
72-	-							
73-	-							
74-	-							
75-	-							
76-	-							
77-	-							
78-	-							
79-								
80-								
81-								
82-								
83− ≈ 04								
84 – 85 –								
05 07 07 07 07 07 07 07 07 07 07 07 07								
87-								
88 –								
-088 COMPLE	-							
84								
A R K S								
Stratifi	ication line	represent	approximate	boundary bet	ween soil two	es, transitions may be gradual. Water level readings have be	en made at times and un	
conditi						her factors than those present at the time measurements were		Boring No.: PMW-17S

	/	1	GZ	A.			Wolverine World Wide,	Inc.	_	Boring No.:PMW-17S
	G	Z\)	Ge  En	oEnvironn gineersand	n <b>ental, In</b> o Scientists		House Street			Page: <u>5</u> of <u>5</u> File No.: <u>16.0062335.52</u>
		/	San	ple Inform	nation		Belmont, Michigan		_	Check:
Depth	.		Pen./	Depth	Blows	Test	Sample	Stratum	ırks	Equipment Installed
Ď		No.	Rec. (in.)	(Ft.)	(/6")	Data	Description & Classification	Desc.	Remarks	
91	_							See PMW-17D/MW-1D for Stratum Descriptions	_	
92	-									
93	-									
94	_									
95	-									-
96	-									
97	·									
98	-								÷	
99	_									
100	_									- 국가 방법
101	-									
102	_									
103	-								· · ·	Top of Well
104 105		1	24/16	104-106	11-5 10-10		Medium dense, brown, fine to medium SAND, trace Silt, wet (SP).	104' SAND (SP)		Silica Sand Filter Pack
100										2-Inch Dia.
107							Bottom of Borehole at 106.0 Feet		1:	Screen (0.010" Slot)
108								108'		Bottom of Well
109										Screen
5 110	_									-
111	_									
112	_									
3 113	_									
	1.	Monito	oring well	was installe	ed in boreh	ble upon o	completion. Well screen set from approximately 103.0	to 108.0 feet below	grour	id surface.
Stra	tificat dition	tion lines s stated.	represent Fluctuation	approximate l	boundary bet water may oc	ween soil ty cur due to c	pes, transitions may be gradual. Water level readings have be ther factors than those present at the time measurements wer	en made at times and e made.	under	Boring No.: PMW-17S

	GZ   Geo		nental, I n	C.		Nolverine W					ing No	<u>: SB-18/1</u> <u>1</u> of	<u>0100-18</u> 6
GLY			d Scientists				e Street			File	90 No.:	16.00623	335.52
Contractor:	S	Stearns Dri	illina Com	anv		Belmon Auger/	t, Michigan						
Foreman:		_	urt		_	Casing	Sampler		GROU	NDWA	TER R	EADINGS	
Logged by:		Kevin	Hedinger		Type:Hol	low Stem Auger	Split Spoon	Date	Tim		epth	Casing	Sta
Date Start/Fi	nish:	5-14	<u>I-18 / 5-16</u>	-18	O.D. / I.D.:	8.0" / 4.25"							
Boring Loca	tion:				Hammer Wt.:	140lbs	NA						
GS Elev.:		Date	um:		Hammer Fall:	NA						Poto:	
	Sam	ple Inform	nation					Surveyed	г Бу	10/1	_ Sur	vey Date.	
No.	Pen./ Rec.	Depth	Blows	Test		Sample		Stratum	Remarks		Equip	ment Insta	
	(in.)	(Ft.)	(/6")	Data		on & Classifica		Desc.	Rem				
1	24/19	0-2	1-1 2-2		Loose, light brown, (SM). Changing at	0.7 feet to: Loo	se, tan, fine	SAND					
1-					SAND, moist (SP). Loose, light brown,	Changing at 1.	2 feet to:						
2-					(SM).		,						
3-													
4-													
5-													
6-													
7-												Grout	
8-							*						
9-2	24/18	9-11	4-4		Tan, fine SAND, tra	ace Gravel, moi	st (SP).						
10-			6-6		Changing at 10.5 f trace Gravel, wet (	eet to: Brown, fi	ine SAND,						
11-									1				
12-													
13-													
14-3	24/18	14-16	4-7		Loose, tan, very fin	e to fine SAND	trace Silt		2		$\sim$		
15-	2 1/ 10	14-10	3-3		wet (SP).								
16-													
17-													
18-													
10_	04/04	40.01											
20-4	24/24	19-21	2-3 5-4		Loose, tan, very fin (SM).	e to fine Silty S	AND, wet						
21-													
-'													
R 1. Ground 2. Ground M A R K S	dwater er dwater sa	ncountered ample colle	at approxir cted from te	nately 10. mporary '	5 feet below ground su well with a well screen	Irface. set from 14.0 to	19.0 feet below	ground surfac	æ.				
					ypes, transitions may be g other factors than those pro				s and und	er Bo	ring No	.: SB-18/M	W-18D

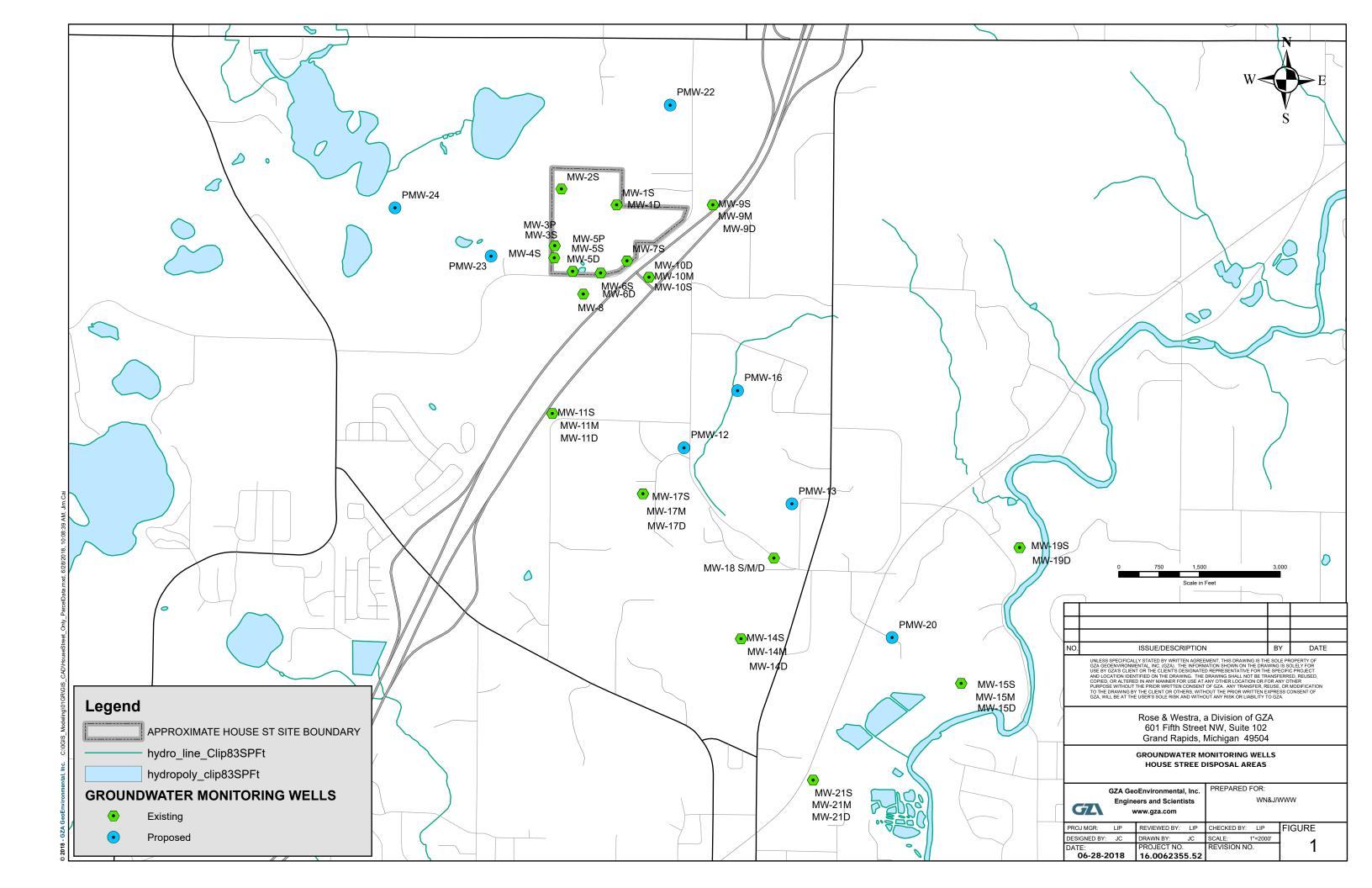
	GAN		oEnvir onr	mental, Inc		Wolverine World Wide House Street	, INC.		Pag	ing No.: <u>SB-18/MW-1</u> je: of6
			-	d Scientists		Belmont, Michigan			File	No.: <u>16.0062335.52</u>
ے		Sam	ple Inform	nation	[	· · · · ·			Che	eck:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classification	Stratum Desc.	Remarks		Equipment Installed
23-	_						SAND		X	
24-	5	24/18	24-26	0-0		Very loose, tan, fine SAND, wet (SP).		2	×	
25-		24/10	24-20	1-1		Very loose, tall, line SAIND, wet (SF).		5		
26-										
27-										
 28-										
29-	6	24/19	29-31	0-3 5-7		Loose, brown, fine SAND, some Clay, wet (SC). Changing at 30.0 feet to: Stiff, brown,	30'			
30-						CLAY, some Sand, wet (CL).	CLAY			
31-									×.	
32-	1									
33-	1									
34 -	7	24/20	34-36	4-6 11-12		Stiff, gray, Silty CLAY, wet (CL). Changing at 34.2 feet to: Medium dense, gray, fine SAND,	34.2' SAND	4		
35-	-					wet (SP). Changing at 35.8 feet to: Stiff, gray, Silty CLAY, wet (CL).	35.8'			
36-	-						CLAY			
37 -	8	24/12	37-39	1-2 3-4		Loose, gray, fine SAND, wet (SP).	37' SAND	-		
38-	-									
39-	9	24/12	39-41	1-2 5-9		Loose, gray, fine SAND, wet (SP).				
40-	-			5-9		~				
41-	-									
42-	-									
43-	-									
44 -	10	24/12	44-46	2-2		Loose, gray, very fine to fine SAND, wet (SP).		5		
45-			1 T TU	6-8					×	
46-	4								×	
47-	-									
2	4. Groui	ndwater sa	ample colle	cted from te	mporary	l well with a well screen set from 24.0 to 29.0 feet below well with a well screen set from 34.0 to 39.0 feet below	v ground surface.		<u>V</u> A_	
	5. Grou	ndwater sa	ample colle	cted from te	mporary	well with a well screen set from 44.0 to 49.0 feet below	v ground surface.			
	fication line	e renrecent	annrovimato	boundary bot	ween soil t	ypes, transitions may be gradual. Water level readings have b	een made at times on	d under		ring No.: SB-18/MW-18E

(	GZ\)	Ge		m <mark>ental, In</mark> o d <i>Scientis</i> ts		Wolverine World Wide, House Street			Pag	ring No.: <u>SB-18/MW-1</u> ge: <u>3</u> of <u>6</u> e No.: <u>16.0062335.5</u>
		Sam	ple Inform	nation		Belmont, Michigan				eck:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6'')	Test Data	Sample Description & Classification	Stratum Desc.	Remarks		Equipment Installed
18-							SAND	1		
19-	11	24/15	49-51	2-3		Medium dense, brown, fine SAND, wet (SP).				
50-				8-14						
51—										
52—										
3-										
54 —										
55-	12	24/24	54-56	2-2 5-14		Loose, brownish gray, fine to medium SAND, wet (SP). Changing at 55.9 feet to: Brown,		6		
,5 56 —						SILT, trace Pebbles, wet (ML).	55.9'			
							SILT			
57—										
58-							59'			
9-	13	24/15	59-61	3-3 11-15		Medium dense, brown, fine to medium SAND, wet (SP). Changing at 60.3 feet to: Medium	SAND			
60-						dense, brown, medium to coarse SAND, trace Gravel, wet (SW).				
61 —										
62-										
63-						$\sim$				
64 —	14	24/16	64-66	2-4 8-14		Medium dense, brownish gray, medium SAND,		7		
65-				0-14		wet (SP). Changing at 65.3 feet to: Medium dense, brown, fine to medium SAND, wet				
6-						(SP). Changing at 65.6 feet to: Medium dense, brown, medium to coarse SAND, some Pebbles, trace Gravel, wet (SW).				
67 —										
8-										
<u>9</u> -	15	24/24	69-71	4-4		Medium dense, brownish gray, medium SAND,				
70-				11-12		some Pebbles, trace gravel, wet (SP).				
′1 —										
′2–										
73-										
	6. Groui 7. Groui	ndwater sa	ample colle ample colle	cted from te	mporary mporary	well with a well screen set from 54.0 to 59.0 feet below well with a well screen set from 64.0 to 69.0 feet below	/ ground surface. / ground surface.	_ (		

(	C7		oEnvir onr	mental, I no		Wolverine World Wide, House Street		Boring No.: <u>SB-18/MW-1</u> Page:4 of6
			•	d Scientists		Belmont, Michigan		File No.: 16.0062335.5
Ę		Sam	ple Inforn	nation				Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Equipment Installed
74- 75-	16	24/22	74-76	3-6 12-16		Medium dense, brown, fine to medium SAND, some Pebbles, some Gravel, wet (SP). Changing at 75.3 feet to: Medium dense, brown, medium SAND, some Pebbles, some	SAND	8 Bentonite
76-	-					Gravel, wet (SP).		
77- 78-								
79- 30-	17	24/20	79-81	7-18 27-34		Dense, brown, medium SAND and GRAVEL, wet (SP-GP).	79' SAND and GRAVEL	
31- 32-	-							
33 - 34 -	18	24/17	84-86	15-16 24-41		Dense, brown, medium Sandy GRAVEL, wet (GP). Changing at 85.7 feet to: Dense, brown,	84' Sandy GRAVEL	9
85- 86- 87-	-					fine to medium SAND, wet (SP).		
88- 89- 90- 91-	- 19 -	24/13	89-91	7-12 35->50		Dense, brown, fine Sandy GRAVEL, wet (GP).		
92- 93- 94-		24/15	94-96	3-8		Dense, brown, fine to medium SAND, little	94' SAND	
95- 96-				38->50		Gravel, wet (SP).		
97- 98-	-							
2 = 1 + 2 < 5	9. Grou	ndwater sa	ample colle	cted from te	mporary	well with a well screen set from 74.0 to 79.0 feet below well with a well screen set from 84.0 to 89.0 feet below / well with a well screen set from 94.0 to 99.0 feet belo	v ground surface.	

		GZ Ge	'.A oEnvironn	nental, Inc		Wolverine World Wide, House Street	IIIC.		Boring No.: <u>SB-18/MW-18</u> Page:5 of6
	JLY		gineers and			Belmont, Michigan			File No.: <u>16.0062335.52</u>
		San	ple Inforn	nation					Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
-00	21	24/6	99-101	2-5 13-31		Medium dense, brown, fine SAND, little Gravel, wet (SP).	SAND		
)1—									
)2—									
)3-									
)4— )5—	22	24/5	104-106	4-30->50		Very dense, brown, fine SAND, trace Pebbles, wet (SP).		11	
06-									
)7 —									
)8— )9—	23	24/0	109-111	3-9		Very dense, brown, fine SAND, wet (SP).		10	
10-	23	24/0	109-111	30->50		Very dense, brown, nine SAND, wet (SP).			
11—									
12— 13—									
14-	24	24/12	114-116	9-29->50		Very dense, brown, fine SAND, wet (SP).		13	
15-									
6—  7—									
18-									
19—	25	24/12	119-121	2-5 17-35		Medium dense, brown, fine SAND, wet (SP).			
20— 21—									
22-									
23-									
24-	26	24/16	124-126	2-28 12-10		Dense, brown, fine SAND, wet (SP). Changing	124.2' SILT	14	
R   E	<ol> <li>12. Sam</li> <li>13. Grou</li> </ol>	ple baileo Indwater	d from auge sample colle	rs. ected from t	emporar	y well with a well screen set from 104.0 to 109.0 feet be y well with a well screen set from 114.0 to 119.0 feet be y well with a well screen set from 124.0 to 129.0 feet be	low around surfa	ice.	
						ypes, transitions may be gradual. Water level readings have ber other factors than those present at the time measurements were		nd unde	er Boring No.: SB-18/MW-18D

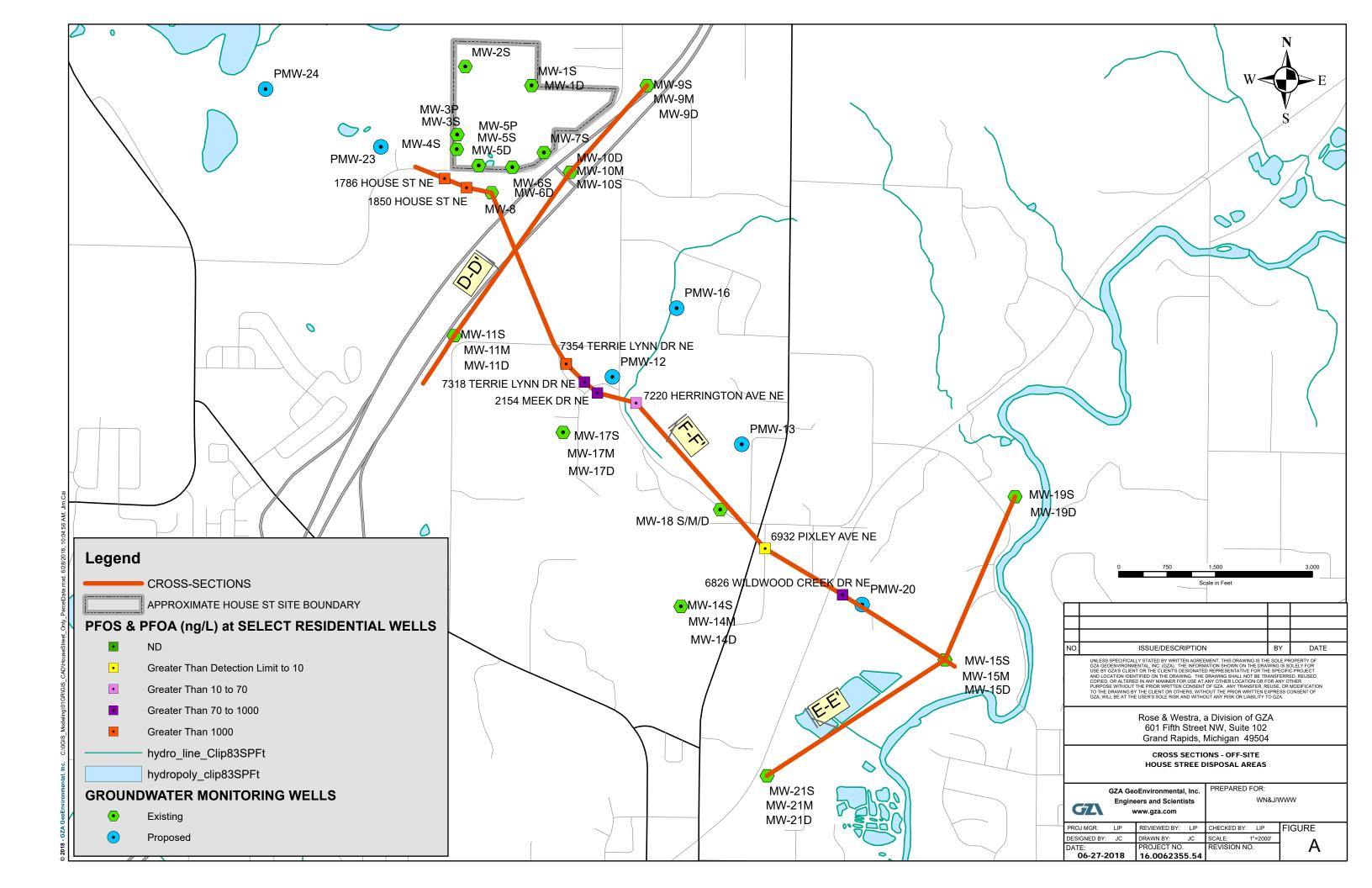
			oEnvir onn			Wolverine World Wide, House Street	INC.		Boring No.: <u>SB-18/MW-18</u> Page: <u>6</u> of <u>6</u>
		En	gineers and	l Scientists		Belmont, Michigan			File No.:
£		San	nple Inforn	nation					Check:
Depth	No.	Pen./ Rec. (in.)	Depth (Ft.)	Blows (/6")	Test Data	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
25-	-					at 124.2 feet to: Dense, brown, medium SAND, some Pebbles, wet (SP). Changing at	SILT	1	
26-	-					125.2 feet to: Gray, SILT, trace fine Sand, wet (ML).			
27 –	-								
28-	-								
29—	27	24/10	129-131	7-40->50		Very dense, brownish gray, medium to coarse	129' SAND and	_	
30-	21	24/10	129-131			SAND and GRAVEL, little fine Sand, wet (SW-GP).	GRAVEL		
31—	-								
32-	-								
33-									
34 —							134'		
35-	28	24/16	134-136	15-32 52->50		Very dense, grayish brown, fine to medium Sandy GRAVEL, wet (GP).	Sandy GRAVEL	15	
36 -	1								
37-									
38-							139'		Top of Well Screen
39—	29	24/10	139-141	3-12 40-50		Very dense, grayish brown, medium SAND, little Gravel, wet (SP).	SAND		Silica Sand
40-									2-Inch Dia.
41-	-								5-Foot PVC Screen (0.0
42—	-								Slot)
43-	-								Bottom of W
44 —	30	24/20	144-146	16-44 43->50		Gray, Silty CLAY, moist (CL).	144' Silty CLAY	-	
45—	-								
46-						Bottom of Borehole at 146.0 Feet	146'	3	
47—									
48-	-								
49—	-								
50-	-								
RE MA RK	15. Grou 3. Monit	undwater oring well	sample colle was installe	ected from t ed in boreho	emporary ble upon	y well with a well screen set from 134.0 to 139.0 feet b completion. Well screen set from approximately 138.0	elow ground surfa to 143.0 feet belo	ce. w gro	ound surface.
R K S	cation line	s represent	approximate	boundary bet	ween soil t	ypes, transitions may be gradual. Water level readings have be other factors than those present at the time measurements wer	een made at times an	d unde	er Boring No.: SB-18/MW-

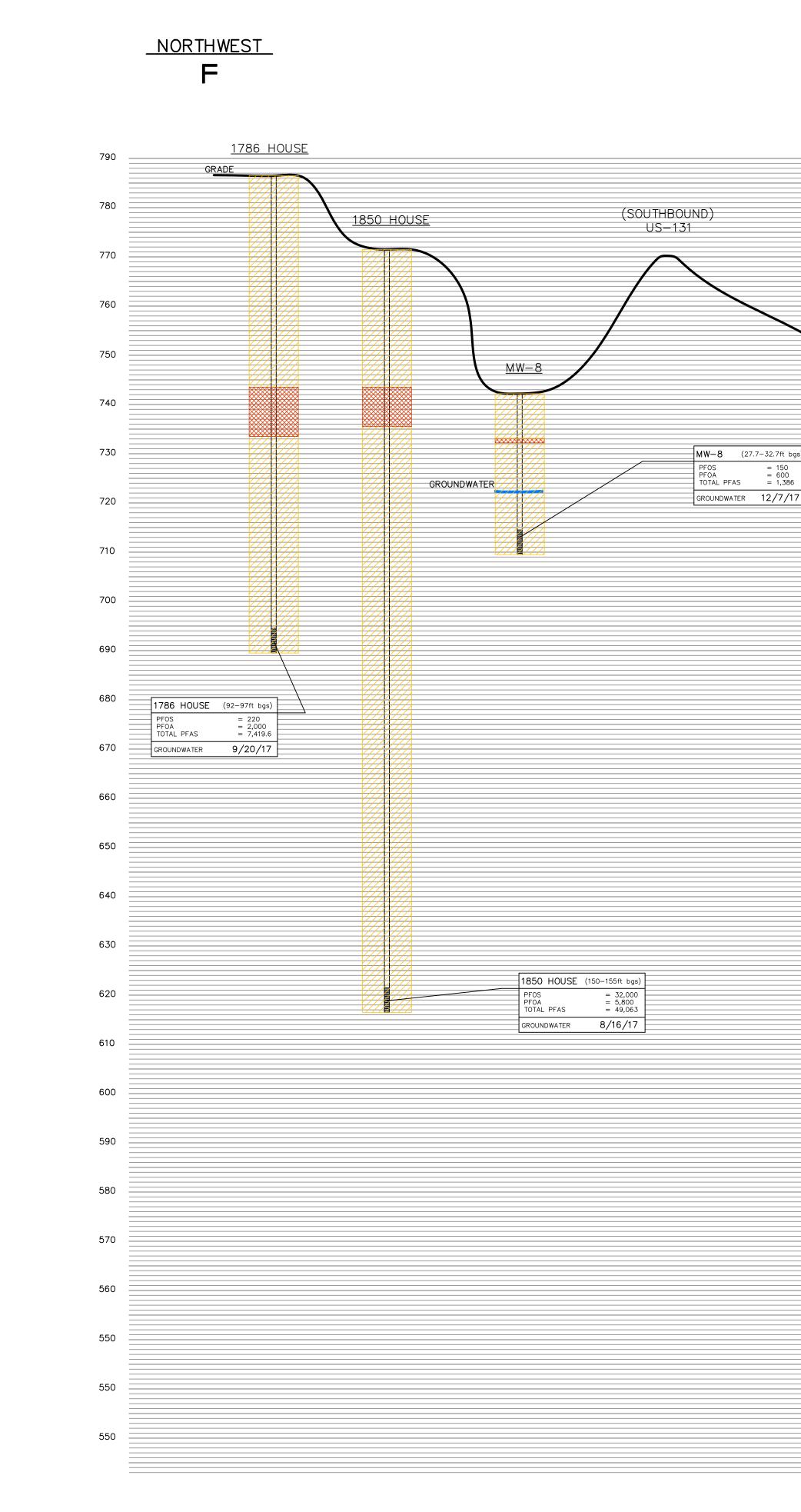


## Table 1: MW-14, MW-17, and MW-18 Data House Street Investigation

Well Information	Sample Date	Sample ID	PFOS+PFOA (ppt)	Total PFAS (ppt)	PFOA (ppt)	PFOS (ppt)
MW-14D	4/10/2018	TD12015-001	ND	ND	<3.6	<3.6
MW-14M	4/10/2018	TD12015-003	ND	ND	<3.6	<3.6
MW-14S	4/10/2018	TD12015-005	ND	ND	<3.7	<3.7
MW-17D	4/17/2018	K1803589-002	1,372	4,323	1,300	72
MW-17M	4/17/2018	K1803589-003	ND	ND	<1.8	<4.5
MW-17S	4/17/2018	K1803589-001	ND	ND	<2	<4.9
PMW-14 (18-23)	3/8/2018	K1802201-001	2	2	2	<4.8
PMW-14 (38-43)	3/8/2018	K1802201-002	ND	ND	<2	<5
PMW-14 (48-53)	3/8/2018	K1802201-003	ND	ND	<1.9	<4.8
PMW-14 (63-68)	3/9/2018	K1802247-001	ND	ND	<1.9	<4.8
PMW-14 (73-78)	3/9/2018	K1802247-002	ND	ND	<2	<5
PMW-14 (83-88)	3/9/2018	K1802247-005	ND	ND	<1.9	<4.8
PMW-14 (93-98)	3/9/2018	K1802247-006	ND	ND	<2.1	<5.2
PMW-14 (103-108)	3/12/2018	K1802302-001	ND	ND	<1.9	<4.6
PMW-17 (83-88)	1/30/2018	K1801045-003	ND	ND	<1.7	<4.2
PMW-17 (93-98)	1/30/2018	K1801045-004	ND	ND	<1.7	<4.2
PMW-17 (103-108)	1/31/2018	K1801045-007	10.7	16.4	4.4	6.3
PMW-17 (113-118)	1/31/2018	K1801045-008	12.2	24.6	7.7	4.5
PMW-17 (153-158)	2/2/2018	K1801045-011	ND	ND	<1.7	<4.2
PMW-17 (163-168)	2/16/2018	K1801593-002	3.8	3.8	3.8	<4.7
PMW-17 (173-178)	2/16/2018	K1801593-004	2.3	2.3	2.3	<4.7
PMW-17 (183-188)	2/19/2018	K1801660-001	ND	ND	<1.9	<4.6
PMW-17 (193-198)	2/20/2018	K1801660-004	5	99.8	5	<4.6
PMW-17 (203-208)	2/20/2018	K1801660-007	200	907	200	<4.8
PMW-17 (213-218)	2/22/2018	K1801740-001	759	2,925	720	39
PMW-18-14-19	5/14/2018	TE17021-002	ND	5.1	<1.7	<3.5
PMW-18-24-29	5/15/2018	TE17021-004	ND	19.4	<1.7	<3.5
PMW-18-34-39	5/15/2018	TE17021-005	ND	ND	<1.7	<3.5
PMW-18-44-49	5/15/2018	TE17021-006	ND	ND	<1.8	<3.6
PMW-18-54-59	5/15/2018	TE17021-007	ND	ND	<1.7	<3.5
PMW-18-64-69	5/15/2018	TE17021-008	2.2	7.8	2.2	<3.6
PMW-18-74-79	5/15/2018	TE17021-011	11	47.1	11	<3.5
PMW-18-84-89	5/15/2018	TE17021-012	37	105.3	26	11
PMW-18-94-99	5/16/2018	TE17020-001	126	351.7	83	43
PMW-18-104-109	5/16/2018	TE17020-004	428	1,331	330	98
PMW-18-114-119	5/16/2018	TE17020-005	414	1,307	330	84
PMW-18-124-129	5/16/2018	TE17020-006	184.5	944.5	180	4.5
PMW-18-134-139	5/16/2018	TE17020-007	100	738	100	<3.6

16.0062335.52 CSM Update June 29, 2018 Page 1 of 1





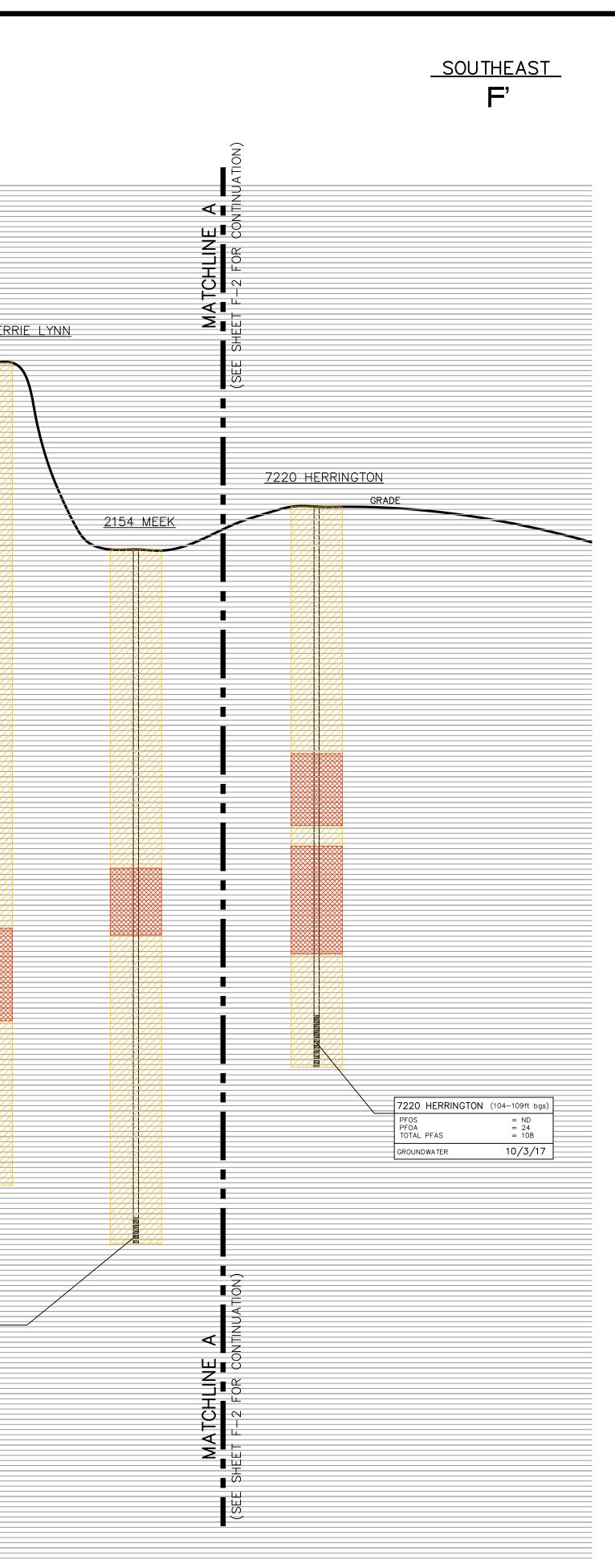
<u>7354 TERRIE LYNN</u>

				<u>7318 TE</u>
(NORTHBOUND)				
(NORTHBOUND) US-131				
GRADE				
7				
		//		
	7354 TERRIE LYNN (179-184ft bgs)			
	PFOS         = 1,200           PFOA         = 460           TOTAL PFAS         = 2,474			
	GROUNDWATER 11/14/17			
	7318 TERRIE LYNN (155–160ft b	is)		
	PFOS         = 19           PFOA         = 150           TOTAL PFAS         = 493.6			
	GROUNDWATER 9/27/1	7		
		21	54 ME	EEK (130-135ft bgs)
		PI PI	FOS FOA DTAL PF	= ND = 200 AS = 622
			OUNDWA	

NORTHWEST-SOUTHEAST GEOLOGIC CROSS-SECTION F-F' (Northwest Half) W/ PFOS and PFOA DATA HORIZONTAL SCALE: 1" = 225' VERTICAL SCALE: 1" = 15'

<u>GEOLOGY LEGEND</u> (SIMPLIFIED) = SAND AND/OR SAND/GRAVEL (MORE PERVIOUS MATERIALS)

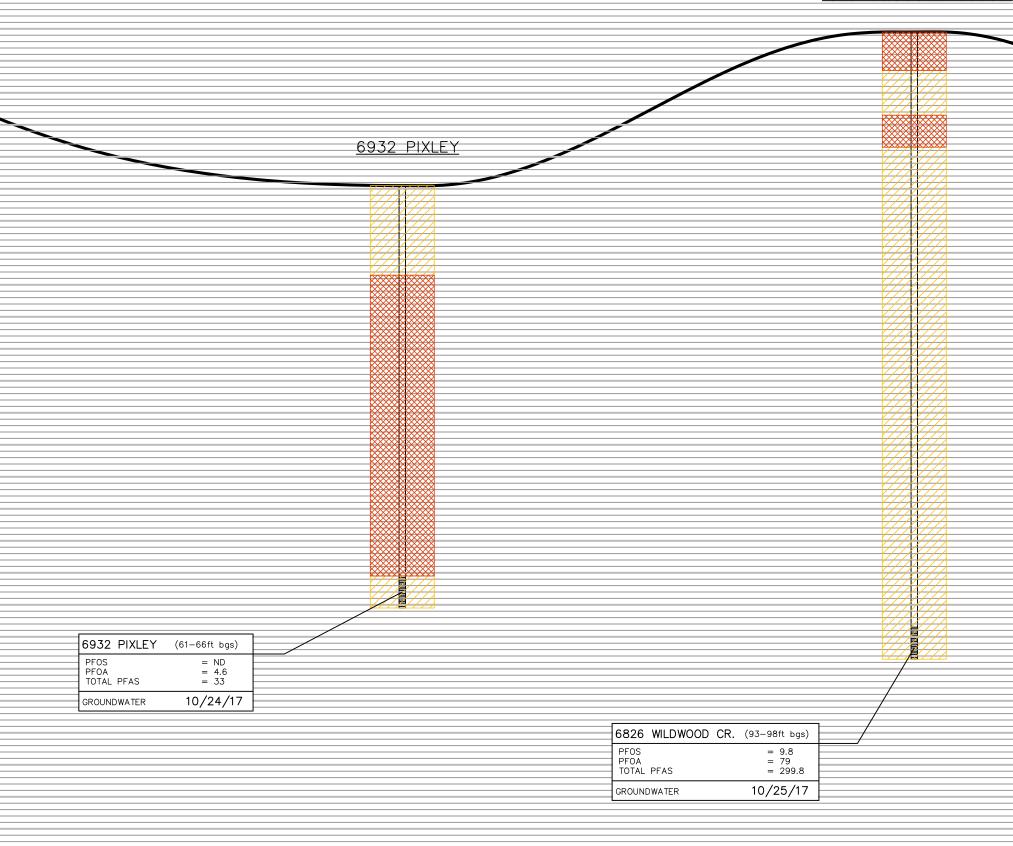
> CLAY, SILT, SILTY CLAY AND/OR SANDY CLAY (LESS PERVIOUS MATERIALS)



NO.       NO.       BY       DATE       DATE <th< th=""><th>NOLE       % WESTRA       No.       RE VISION S       NE VISIO</th><th>NOLE &amp; WESTRA       No.       Revisions       BY       Date       Date</th><th></th><th>~</th><th>BΥ</th><th>7</th><th>j</th><th><u>ا</u>ھ</th></th<>	NOLE       % WESTRA       No.       RE VISION S       NE VISIO	NOLE & WESTRA       No.       Revisions       BY       Date		~	BΥ	7	j	<u>ا</u> ھ
NO.       REVISIONS       BY       DATE         JU/WWW       HOUSE STREET SITE       HOUSE SITE </th <th>NOSE &amp; WESTRA       No.       Revisions       BY       Date         A DIVISION OF GZA       Former House street street       Image: Conceptual street</th> <th>Motion       No.       <t< th=""><th>DRAWN</th><th>≝ ¥</th><th>DESIGN</th><th>MAJ</th><th>DATE</th><th>6/28,</th></t<></th>	NOSE & WESTRA       No.       Revisions       BY       Date         A DIVISION OF GZA       Former House street street       Image: Conceptual street	Motion       No.       No. <t< th=""><th>DRAWN</th><th>≝ ¥</th><th>DESIGN</th><th>MAJ</th><th>DATE</th><th>6/28,</th></t<>	DRAWN	≝ ¥	DESIGN	MAJ	DATE	6/28,
NOL STREET STREE	NOLF & WESTRA     NO.     No.     Revisions     BY       A DIVISION OF GZA     Stand Rapids, Michigan     Monte Street street     Monte Str	Not       No.       No.       No.       Revisions       No.         No.       No.       No.       No.       Revisions       No.         No.       No.       No.       No.       Revisions       No.       No.         No.       No.       No.       No.       No.       Revisions       No.       No.         No.		. NO.	: 6:	2335	.52_0	CSM
AJ/WWW HOUSE STREET SITE HOUSE STREET SITE UAL SITE MODEL	ROSE & WESTRA       NU/VWW       NU         A DIVISION OF GZA       COMMENTAL STREET S	Image: Mode of the state o						) R D S
AJ/WWW HOUSE STREET SITE HOUSE STREET SITE UAL SITE MODEL	ROSE & WESTRA       NU/VWW       NO       NO         A DIVISION OF GZA       COMMENTAL STREET SITE       Image: Commental site of the second site of the secon	NOT       N	Ξ					RECC
NU/WWW HOUSE STREET SITE UAL SITE MODEL	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan Logical-WATER-CONSTRUCTION MANAGEMENT	Image: Non-the conduction of CST & WESTRA       NNU/WW         A DIVISION OF GZA       WNU/WWW         Grand Rapids, Michigan       FORMER HOUSE STREET SITE         Geotechnical-environmental-ecological-water-construction management       ECONCEPTUAL SITE MODEL	R E V I S I O N S					A N I
JU/WWW HOUSE STREE	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan Logical-WATER-CONSTRUCTION MANAGEMENT	CONCENTION OF GZA GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT CONCEPTUAL STREE	NO.					REV
		GEOTECHNICAL-ECOL			7 7			

(SEE SHEET F-1 FOR CONTINUATION)		SEE SHEET F-1 FOR CONTINUATION)	
		7220 HERRINGT	
	7220 HERRING PFOS PFOA TOTAL PFAS GROUNDWATER		<u>'HWEST</u>
	$\frac{\text{TON} (104-109\text{ft bgs})}{= \text{ND}} = \frac{24}{= 108} = \frac{108}{10/3/17}$		

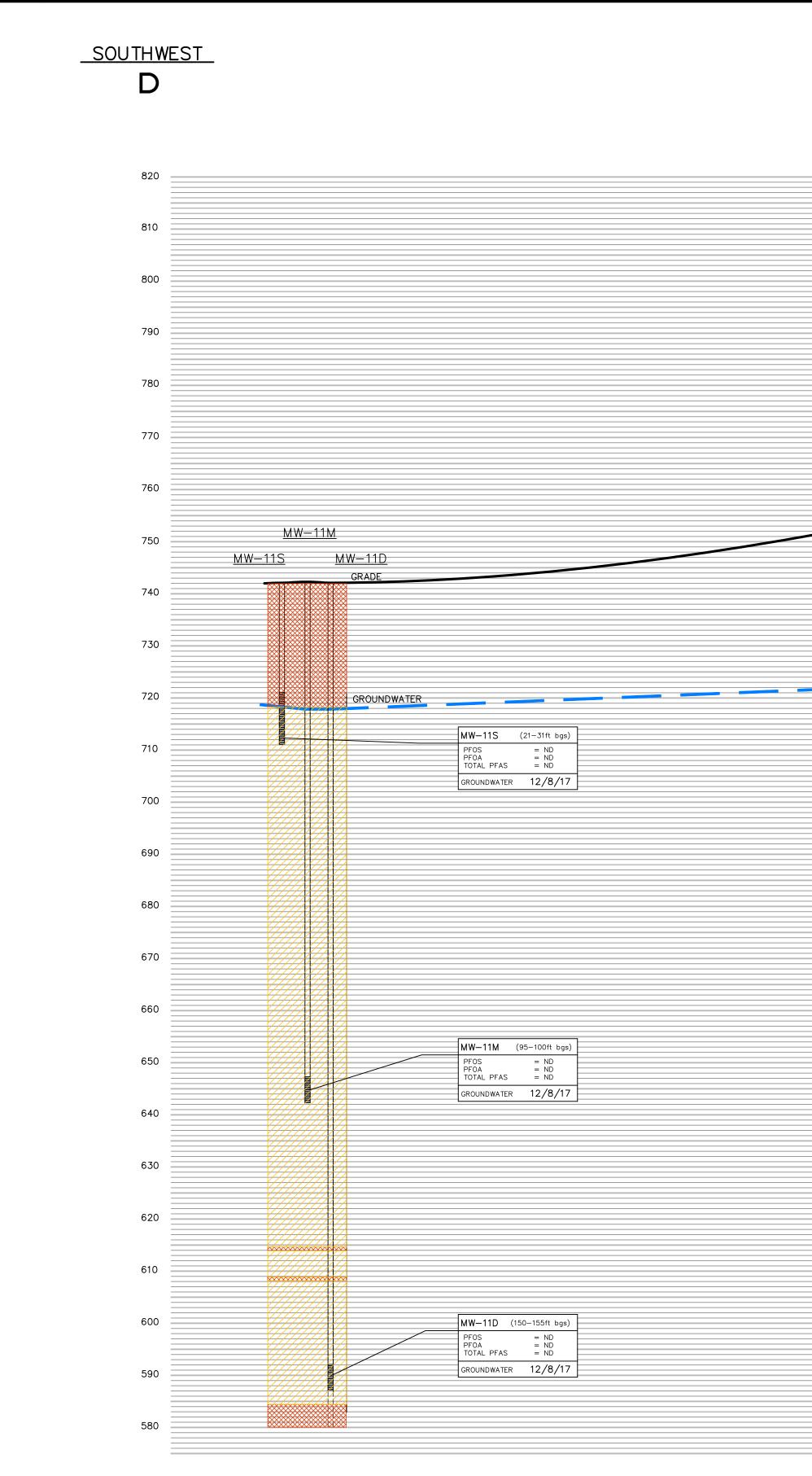
6826 WILDWOOD CREEK





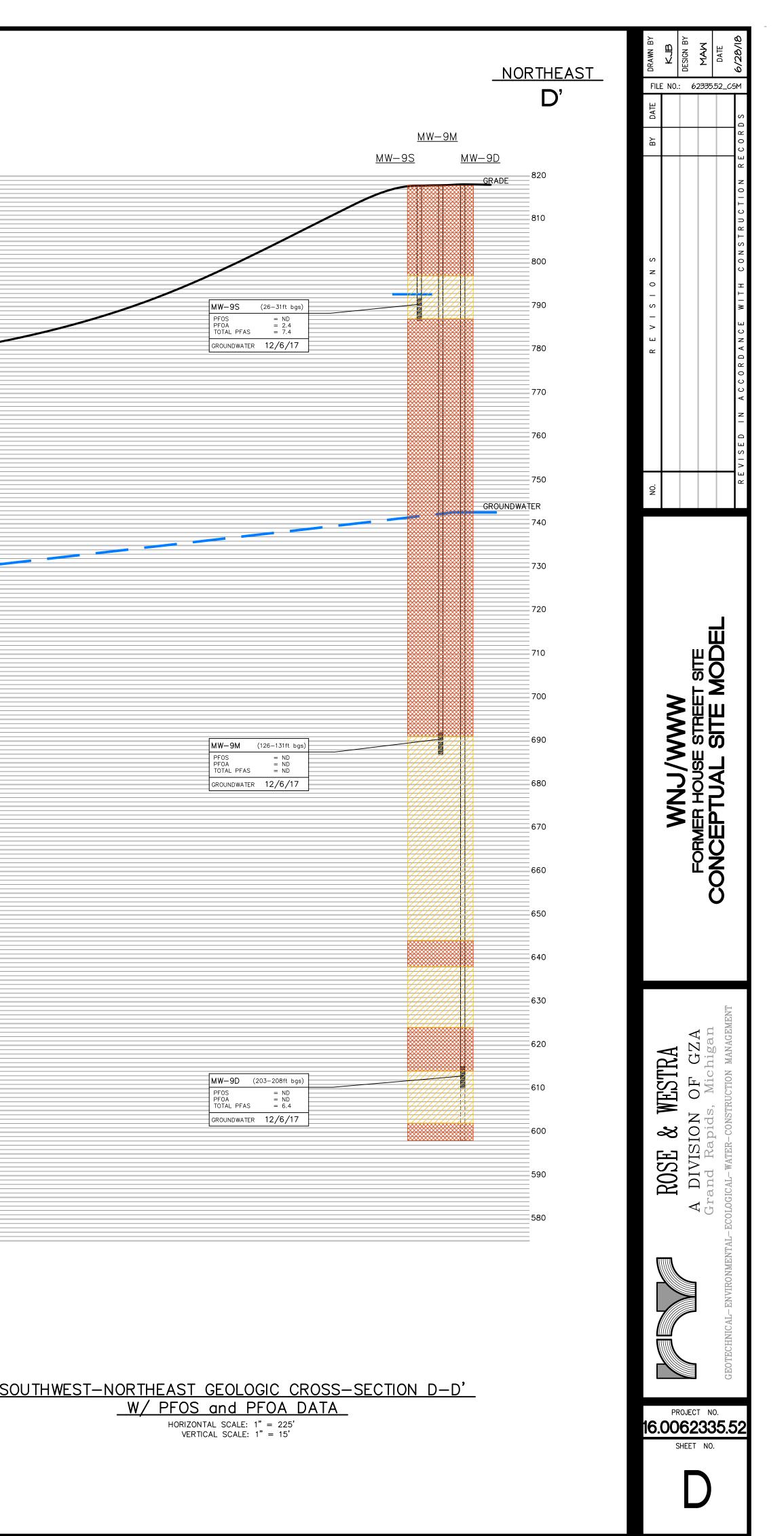
NORTHWEST-SOU

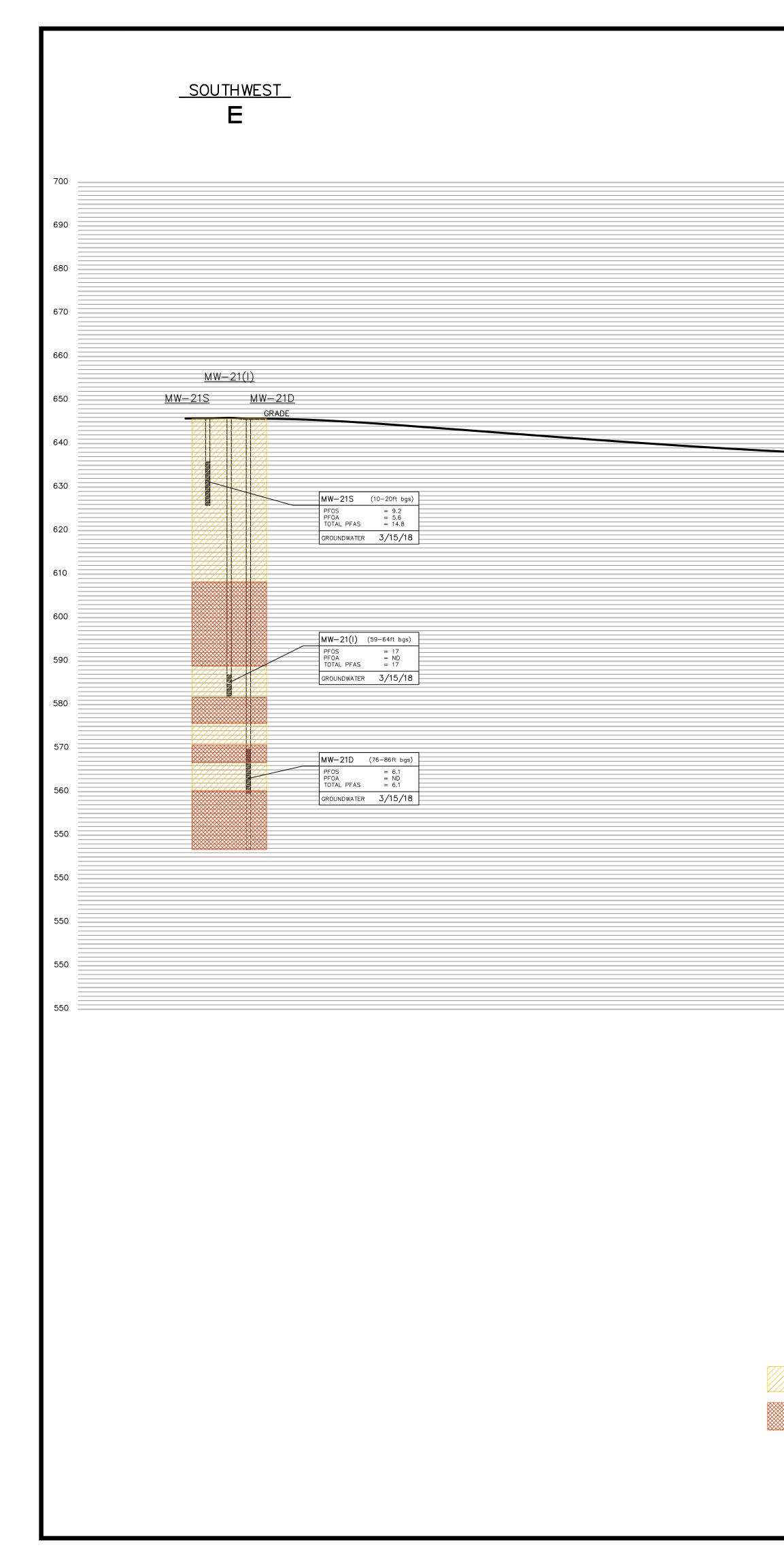
	SOUTHEAST	-		<b>АНЕ</b> ВУДСКА 1916 1916 1916 1916 1916 1916 1916 191
	F'	780	BY DATE	R E C O R D S
		770 760		STRUCTION
		750	S S S	WITH CON
		730	ж П	ACCORDANCE
		720		E VISED IN
		700 690	О	<u>«</u>
		680 670		.,
	<u>MW-15(I)</u>	660	N ET SITE	Ϋ́Υ
MV	WW-15(1) V-15S MW-15D GRADE	650 640	WNU/WWW	JAL SITE N
GROUNDWATER MW-15S (7-17ft bgs) PFOS = ND PFOA = ND TOTAL PFAS = 8.6 GROUNDWATER 3/15/18		630 620		ONCEPTUAL
		610	Ľ	Ö
MW-15(I)       (45-50ft bgs)         PFOS       = ND         PFOA       = ND         TOTAL PFAS       = ND         GROUNDWATER       3/15/18		590 580		ENT
		570	& WESTRA Ion of gza	Michigan Jortion MANAGEM
		560	VIST	Grand Rapids, Michigan -Ecological-warer-construction MANAGEMENT
MW-15D       (108-118ft bgs)         PFOS       = ND         PFOA       = ND         TOTAL PFAS       = ND		550	A D	
GROUNDWATER 3/15/18		550		GEOTECHNICAL-ENVIRONMENTAI
JTHEAST GEOLOGIC CROSS—SECTION F—F'( 	<u>(Southeast Half)</u>			
W/ PFOS and PFOA DATA HORIZONTAL SCALE: 1" = 225' VERTICAL SCALE: 1" = 15'			PROJECT	<b>335.52</b> NO.
			F-	·Z

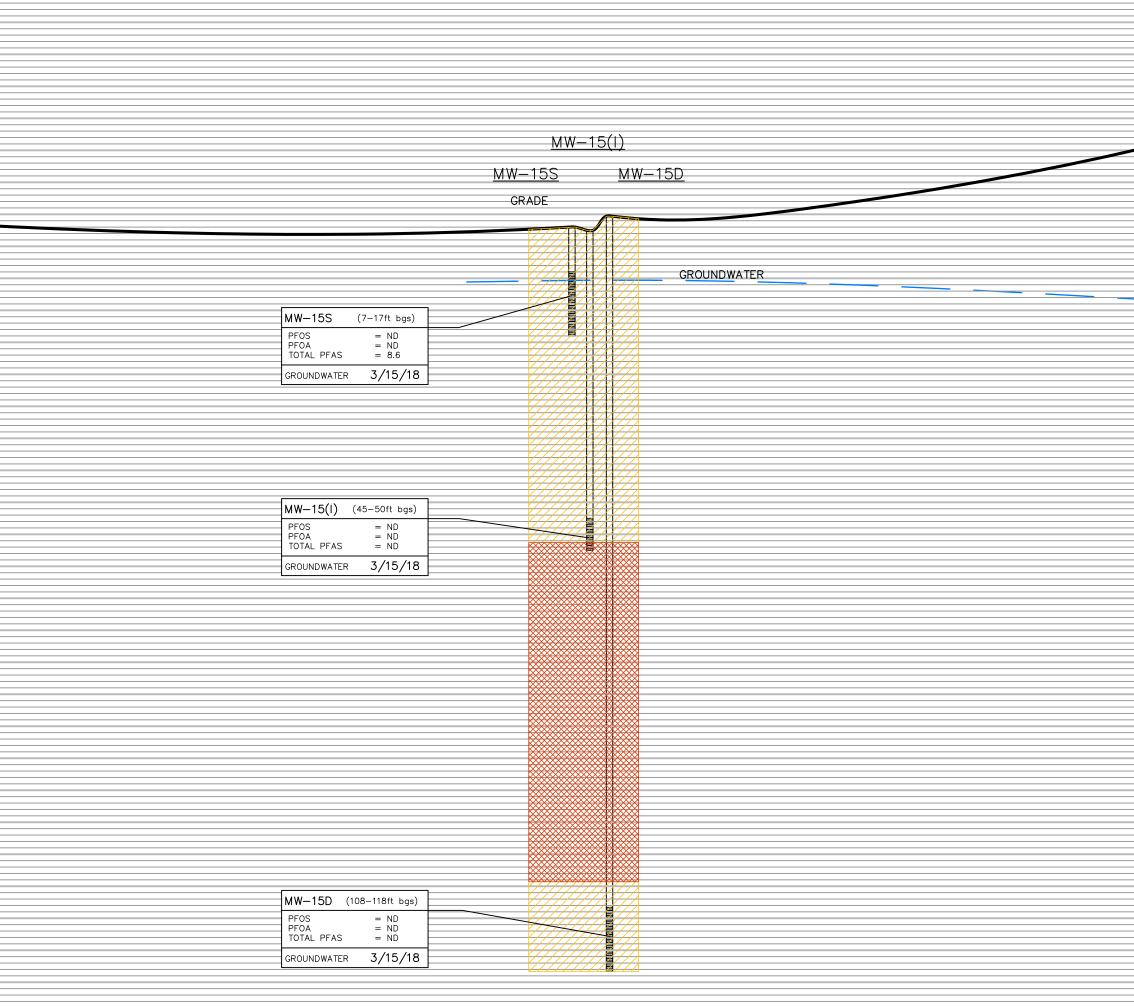


	V-10S SRADE	<u>MW-10D</u>
CROUNDWAT MW-105 (49-59ft bgs) Pr05 = 37 Pr0A = 10 Pr05 = 68.5	GRADE	
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
MW-10S         (49-59ft bgs)           PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5	TER	
PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
PFOS         = 37           PFOA         = 15           TOTAL PFAS         = 68.5		
GROUNDWATER 1/22/10		
MW-10M         (125-130ft bgs)           PFOS         = 12		
$\begin{array}{c} PFOS &= 12\\ PFOA &= 9.3\\ TOTAL \ PFAS &= 34.2 \end{array}$		
GROUNDWATER 1/22/18		
MW-10D (180-190ft bgs)	///////	
PFOS = ND PFOA = ND TOTAL PFAS = ND		
GROUNDWATER 1/22/18		

<u>GEOLOGY LEGEND</u> (SIMPLIFIED)	<u>_S(</u>
= SAND AND/OR SAND/GRAVEL (MORE PERVIOUS MATERIALS)	
= CLAY, SILT, SILTY CLAY AND/OR SANDY CLAY (LESS PERVIOUS MATERIALS)	







## GEOLOGY LEGEND (SIMPLIFIED)



= SAND AND/OR SAND/GRAVEL (MORE PERVIOUS MATERIALS)

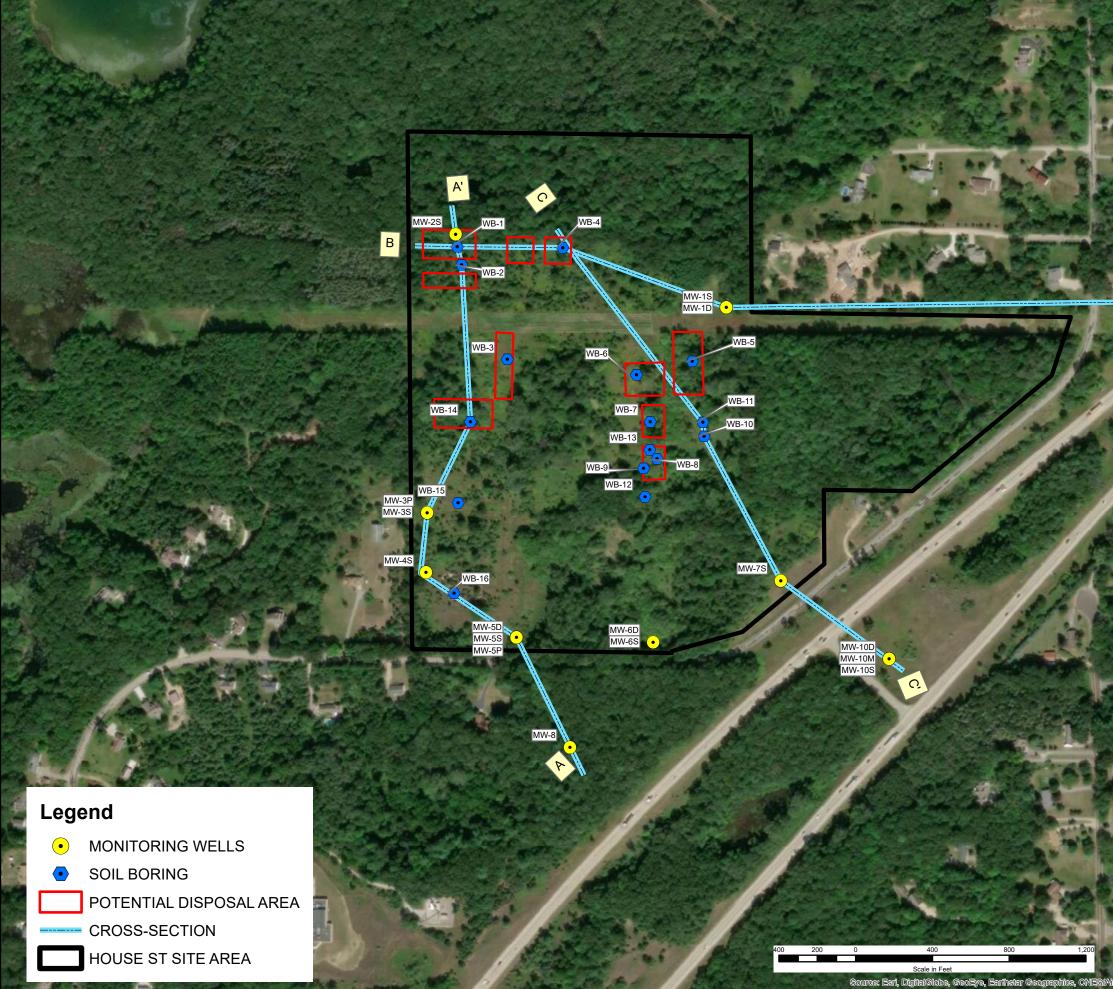
CLAY, SILT, SILTY CLAY AND/OR SANDY CLAY (LESS PERVIOUS MATERIALS)

SOUTHWEST-NORTHEAST GEOLOGIC CROSS-SECTION E-E' W/ PFOS and PFOA DATA HORIZONTAL SCALE: 1" = 225' VERTICAL SCALE: 1" = 15'

	<u>п</u> У	DESIGN BY	MYW 2335	DATE	و/20/IB
DATE	- NO.:	. 0.	2555	.52_	
ВΥ					CORD
REVISIONS					IN ACCORDANCE WITH CONSTRUCTION RECORDS
					REVISED IN
NO.					R
	N. I/WWV			PIUAL SIIE MODE	
	Ň		Ηī	CCNCH	
	KUSE & WESTRA			CCNCH	-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
	KUSE & WESTRA			CCNCH	GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
			Cand Rapids. Michigan	Solution of the second se	GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT 25
			Z Grand Rapids. Michigan	Solution of the second se	GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT 25
			Cand Rapids. Michigan	Solution of the second se	GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT 26

NORTHEAST	_
E'	

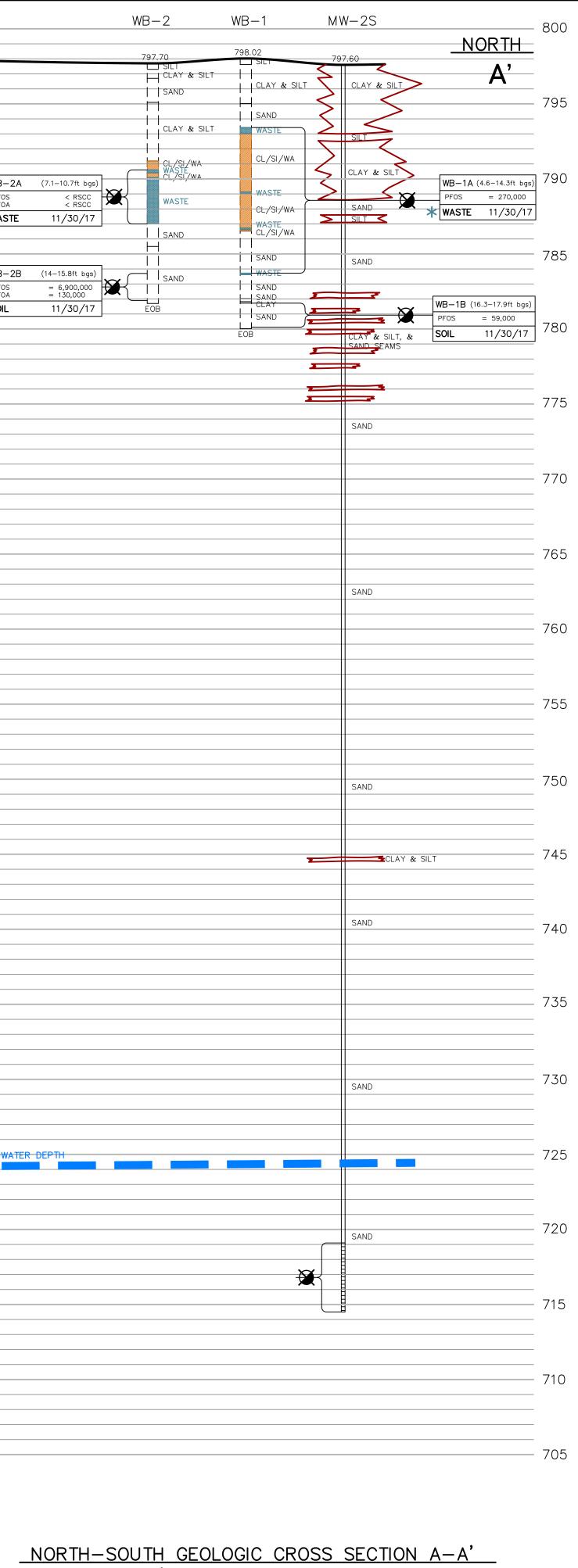
	<u>MW-19S</u>	<u>MW-19D</u>	
		GRADE	
 GROUNDWA	TER		
MW-19S (58-61ft bgs)			
PFOS = ND PFOA = ND TOTAL PFAS = ND			
GROUNDWATER 3/16/18			
MW-19D (85-95ft bgs)			
PFOS         = 7.5           PFOA         = ND           TOTAL PFAS         = 7.5			
GROUNDWATER 3/16/18			



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MW-9D MW-9M		12		1.1.1
MW-9S		. 2.00	(Classific	Antho
		11.1	- 2	
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1	and the second	- Fort	1 Sector	
	A TANK	3447		
	and the second second	9-1-1		12
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1	1	10.00		
			- 10	and the
APP No.	and the state			
	NO.	ISSUE/DESCRIPTION	. В	Y DATE
20	UNLESS SPECIFICAL GZA GEOENVIRONM USE BY GZA'S CLIEN	LLY STATED BY WRITTEN AGREE IENTAL, INC. (GZA). THE INFORM IT OR THE CLIENT'S DESIGNATE	EMENT, THIS DRAWING IS THE SO IATION SHOWN ON THE DRAWING D REPRESENTATIVE FOR THE SP DRAWING SHALL NOT BE TRANSI	LE PROPERTY OF S IS SOLELY FOR ECIFIC PROJECT
A.	PURPOSE WITHOUT	THE PRIOR WRITTEN CONSENT	ANY OTHER LOCATION OR FOR A OF GZA. ANY TRANSFER, REUSE OUT THE PRIOR WRITTEN EXPRI OUT ANY RISK OR LIABILITY TO G2	OR MODIFICATION
AN I		601 Fifth Stree	a Division of GZA et NW, Suite 102 Michigan 49504	
			ITE SOIL BORING	
CAN I	C7 Engine	oEnvironmental, Inc. eers and Scientists www.gza.com	PREPARED FOR: WN&J /	www
1200	PROJ MGR: LJP DESIGNED BY: JC	REVIEWED BY: LJP DRAWN BY: JC	CHECKED BY: JTH SCALE: AS SHOWN	
NIS DS, USDA, U	DATE: 06-27-18	PROJECT NO. 16.0062335.52	REVISION NO.	В

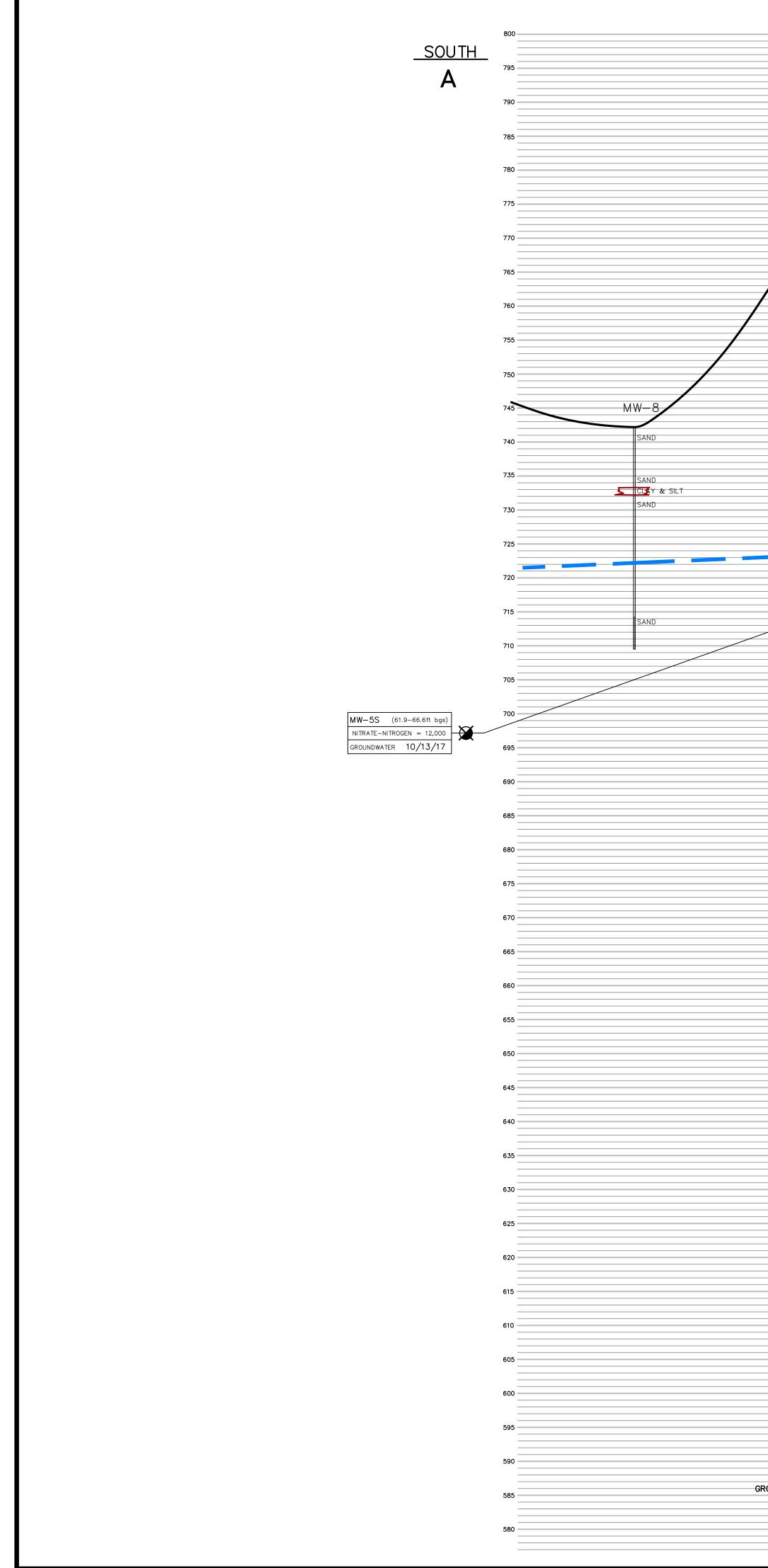


	WB—1											
		CLAY & S	SAND								GRADE	
		AND										
		LAY & S	SILT									
3S		XL/SI/WA		WB-	14A (7	7.3–10.6ft bg	s)					
		CL/SI/WA		PFOS	TE	= 18,000,00 11/30/17	0					WB-
AY		CL/SI/WA	4									PFOS PFOA
	1 1	SAND SAND		WB	14B	(15–16ft bg:	5)					
AND			$\rightarrow$	PFOS SOIL	5	= 100,000 11/30/1						WB- PFOS PFOA
												SOIL
AND												
AND AY <b>K</b>												
AND												
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											APPROX. GR	
		_										
AND												
MW-3S         (69.7-74.6tt bgs)           PF0A         = 380           GROUNDWATER         10/13/17												
				N D								
		= OTH SAN = WAS	ID) MIXE	ED WITH V	, SILI, WASTE							
	*	то	THE MD	DEQ PART	201 GE	ENERIC SO	HE WASTE SAM IL CLEANUP CR	ITERIA. HOWE	IVER IT			
		IS II APP PHY	MPORTA PLICABIL (SICAL	ANT TO NO LITY OF TH AND CHEN	OTE THE HE CRIT VICAL P	E COMPARI ERIA TO T PROPERTIES	ISON DOES NO <sup>-</sup> THE WASTE SAM S OF THE WAST	NECESSARII PLES BECAU E SAMPLES	LY IMPLY SE THE ARE			
		USE	D TO D	DERIVE TH	E GENE	RIC SOIL C	HE DEFAULT VA CLEANUP CRITE ISE ACTIVITY RI	RIA IN THE C	LEANUP			
							NOGRAM PER K NOGRAM PER L				TE	
	∟ < RSCC	= DEN	OTES L	ESS THAN	N MDEQ	PROPOSEI	) 201 RESIDEN ROUNDWATER F	TAL SOIL CLI OR DRINKING	EANUP CRIT	ERIA – ES		
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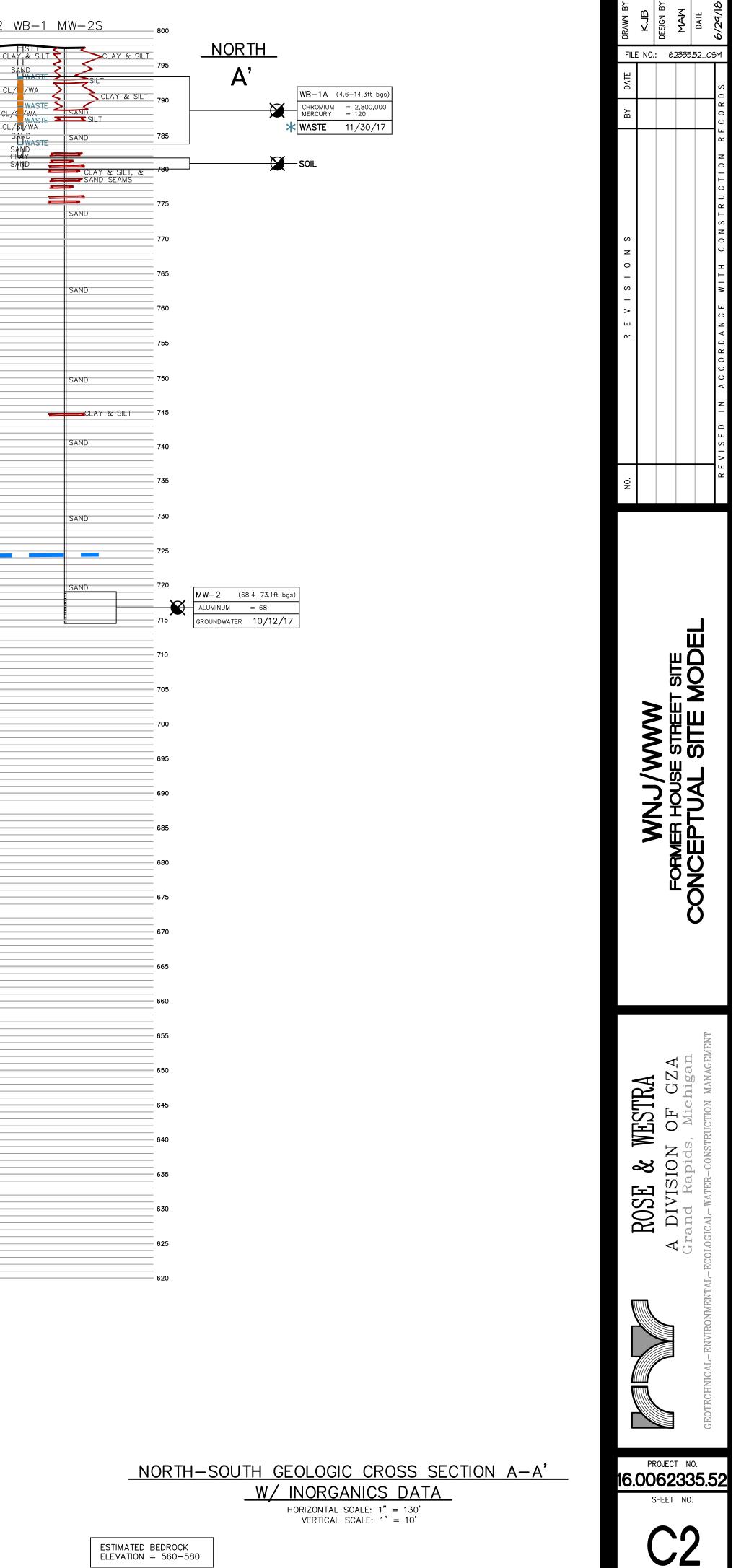


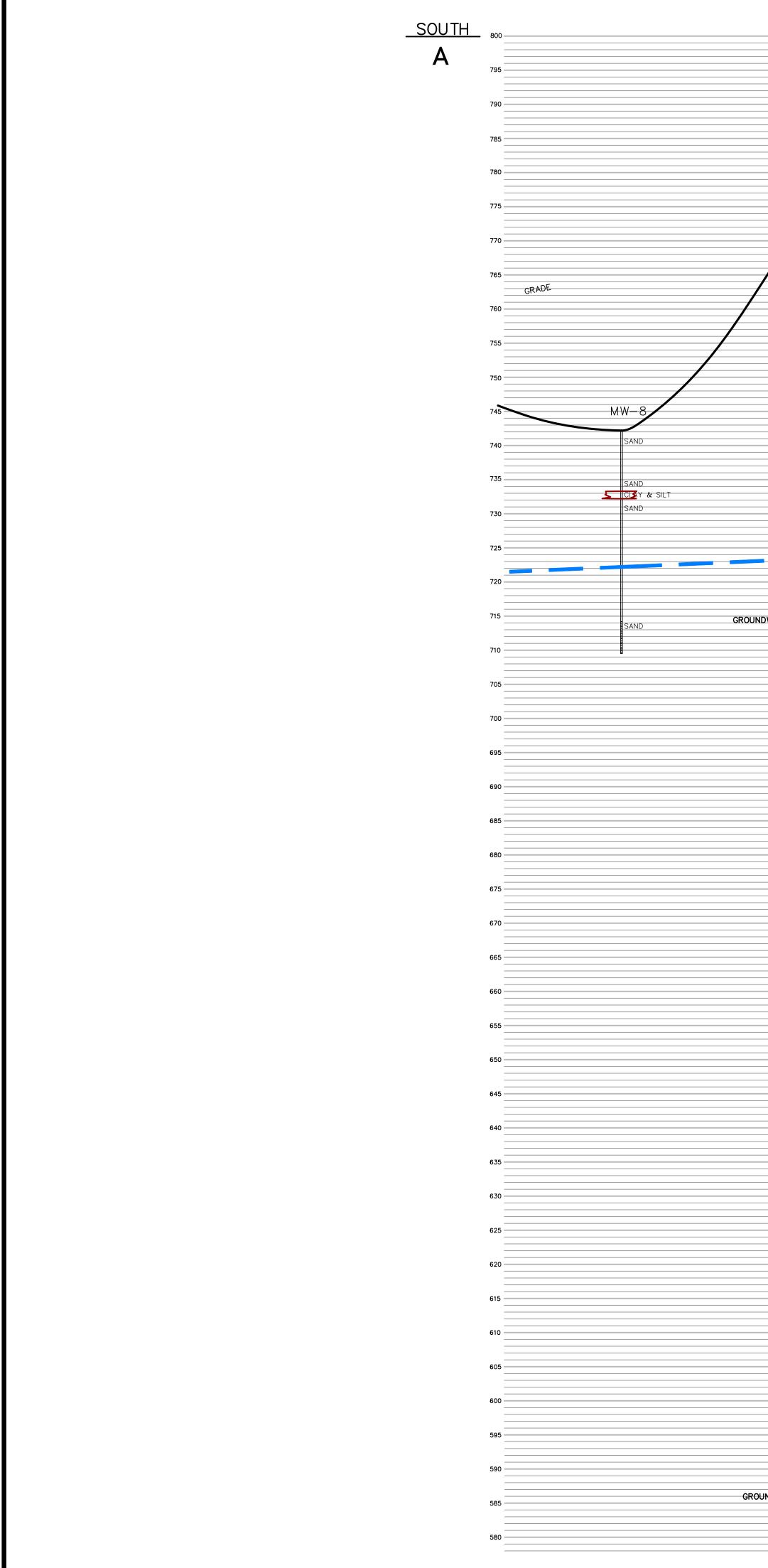
NORTH-SOUTH GEOLOGIC CROSS SECTION A-A' <u>W/ PFOS and PFOA DATA</u> HORIZONTAL SCALE: 1" = 65' VERTICAL SCALE: 1" = 5'

FILE NO .: 62335.52\_CSN N N NUDE, ET SITE MODEL SITE STREE LVERINE WOR FORMER HOUSE & CONCEPTUAL 5 MOL WESTRA N OF GZA ROSE & W DIVISION PROJECT NO. 16.0062335.52 SHEET NO. C1



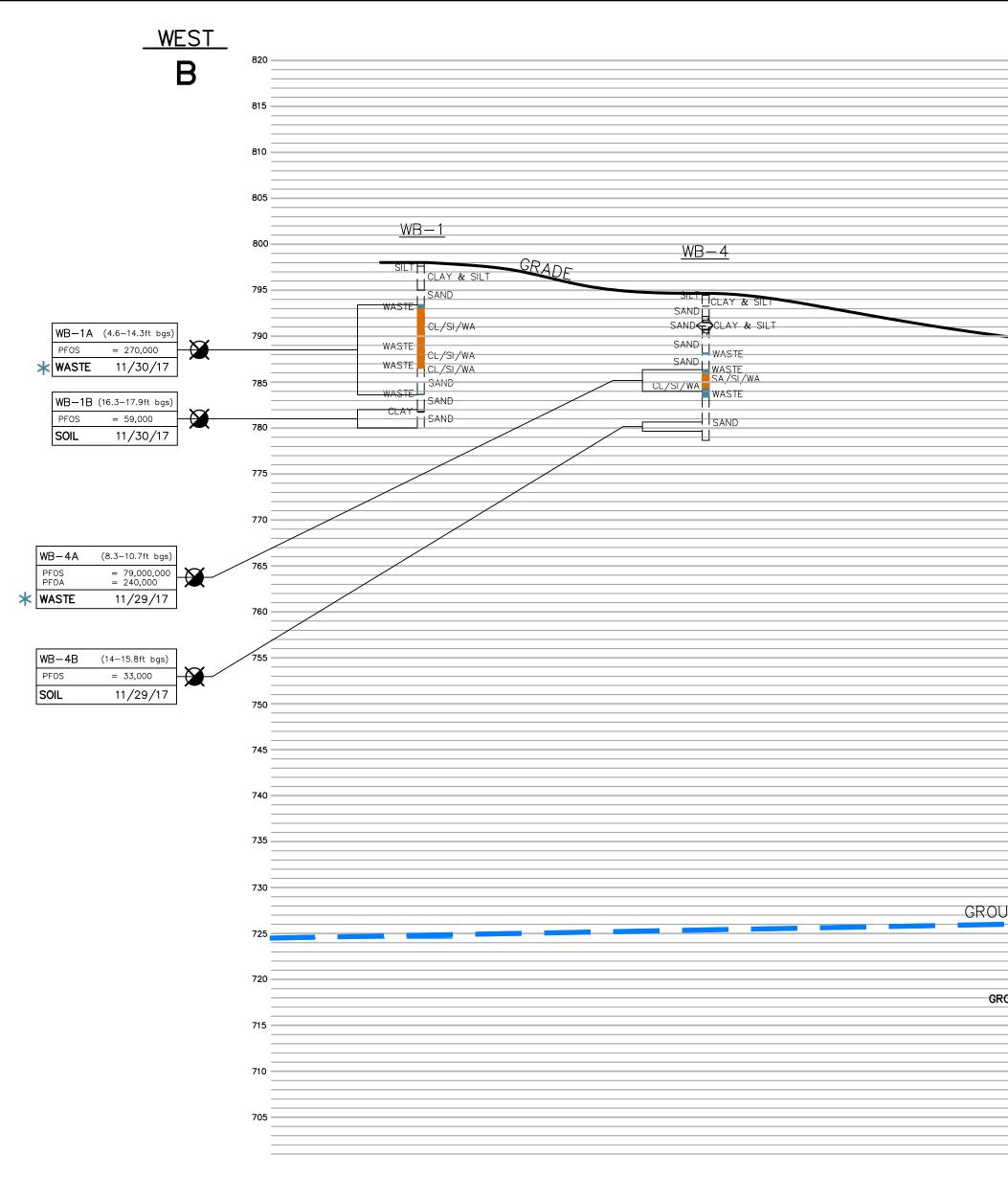
							-14				G	RADE	WB-2
					SAND		AY & SAND	· · · · · ·	WB-14A			CLAY & SII SAN	лDП
			MW	-35	WASTE		AY & SILT - /SI/WA	X	CHROMIUM COPPER LEAD MERCURY ZINC	= 38,000.000 = 160,000 = 59,000 = 820 = 360,000		CLAY & SIL	
					WASTE	CL	/SI/WA		VASTE	12/1/17		CL/SI/WA WAS CL/SI/WA WAS	
		MW.			CL/SI		ND	<b>X</b>					
MW-5S	M١	W-5D GRADE		SAND				<b>) (</b>		/	/ SOIL-	SAP	
	S	SAND						7.1–10.7f					
/ 3			SAND	SAND			HROMIUM OPPER EAD ERCURY NC	= 26,000 = 57,000 = 28,000 = 1,400 = 150,00	,000	×			
		and Sand			*			= 150,00 11/30					
			SAND	SAND SAND									
		GRAVEL	SAND Z										
	s	SAND		SAND									
2													
<u> </u>		<u> </u>	SAND										
	S	AND		SAND									
			SAND										
	S	SAND		SAND									
			0.015										
			SAND										
	S	SAND		SAND									
			SAND			_	APPROX.	GROUN	DWATER	DEPTH			
	s	SAND		SAND									
			SAND		GROUNDWATER								
	l s	AND	GRO	UNDWAT	ER								
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		AND											
		AND											
		AND			<u> </u>								
			615		= OTHER SOILS (CLAY, SILT,								
			64.0		SAND) MIXED WITH WASTE = WASTE								
	s	AND	610			ONS	OF THE W	VASTE S	SAMPLES	WERE COMPAR	ED		
			605		CONSTITUENT CONCENTRATION TO THE MDEQ PART 201 GE IS IMPORTANT TO NOTE THE APPLICABILITY OF THE CRITE	E CC	MPARISON	I DOES	NOT NE	CESSARILY IMPL	.Y		
			600		PHYSICAL AND CHEMICAL PF EXPECTED TO BE DIFFERENT	ROP	ERTIES OF IAN THE D	THE W	ASTE SA	AMPLES ARE S OR ASSUMPTI	ONS		
		AND			USED TO DERIVE THE GENER CRITERIA REQUIREMENTS FOR	R R	SUIL CLÉA ESPONSE /	ACTIVIT	Y RULES	(R299.1–299.5	50)		
			595		<ul> <li>CONSTITUENT CONCENTRATIO</li> <li>CONSTITUENT CONCENTRATIO</li> </ul>								
		SAND	590	< R'	SCC = DENOTES LESS THAN MDEQ	PRO	POSED 20	01 RESI	DENTIAL	SOIL CLEANUP	CRITERIA –		
			585		DIRECT CONTACT & PROTECT	TIVE	OF GROU	NDWATE	ER FOR	DRINKING WATE	R USES		
				2	= SAMPLE COLLECTED AT THIS RSCC ARE SHOWN. ALL OTH	THER	ANALYTES	S WERE	BELOW	RSCC IN THESE	SAMPLES.		
			580										

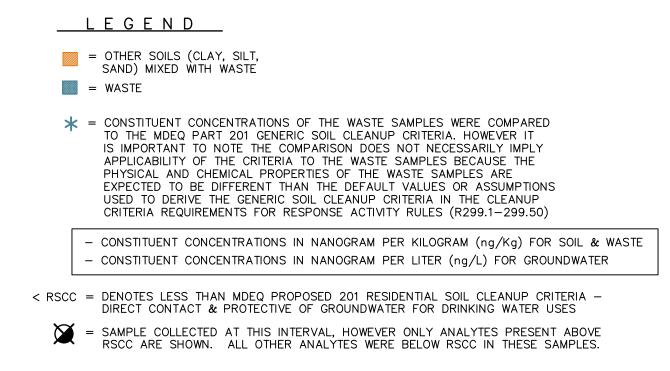




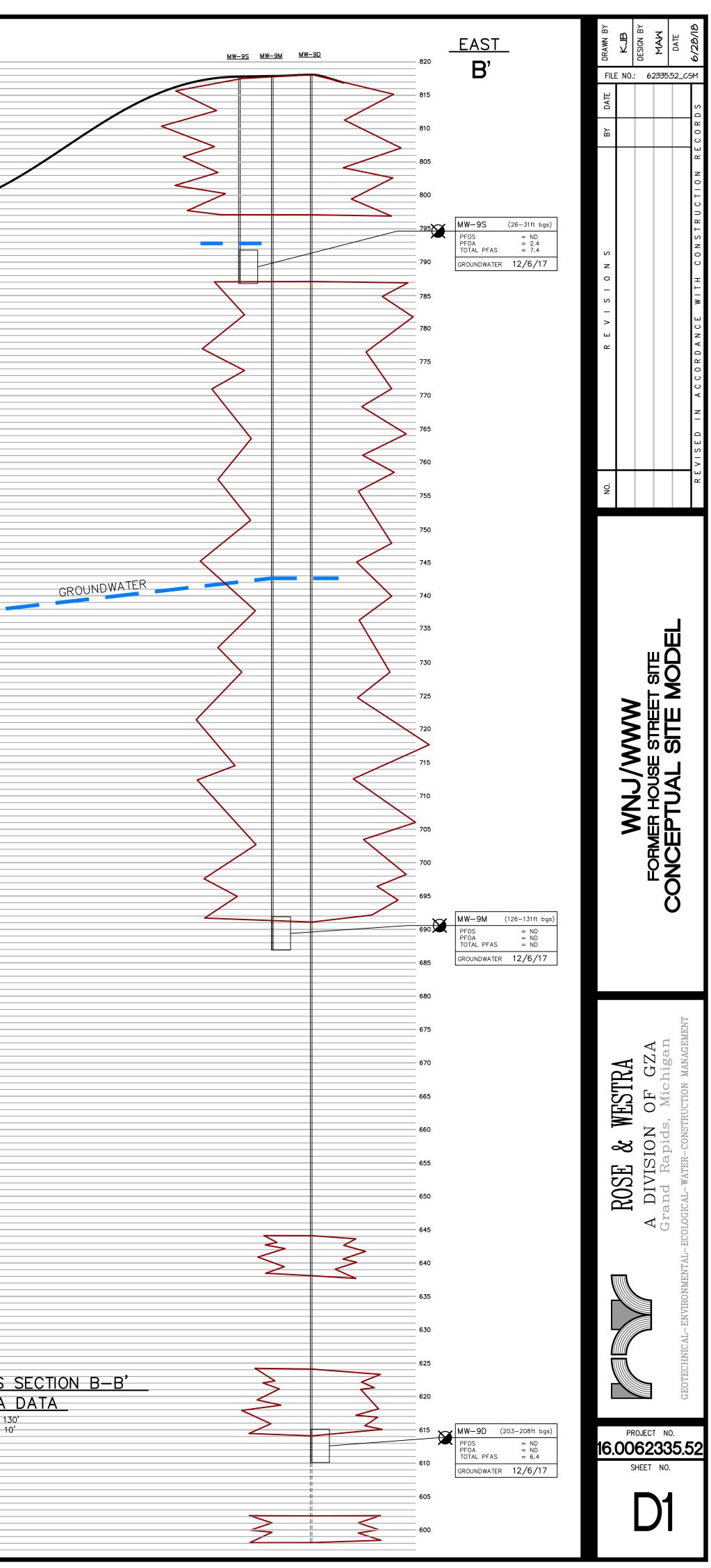
						WB-14			W	/B-2
						SAND TICLAY & SAND	WB-14A (7	.3–10.6ft bgs)	CLAY & SILL SAND	
			MW	-3S		VLAY & SILT	n-BUTYLBENZENE sec-BUTYLBENZENE		CLAY & SILT	L CI
		N 4 \ \ \ /		CLA		WASTE CL/SI/WA	WASTE	12/1/17	CL/SI/WA WASTE	
MW-5S	MW-5D	MW -	4S	SAND			SOIL		SOIL SAND	1
	SAND					WB-2A (7.1-1	0.7ft bgs)			
[ξ	CLAY	5	SAND	SAND		1,1-DICHLOROETHANE TOLUENE 1,1,1-TRICHLOROETHANE TRICHLOROETHENE				
/ -	SAND	~			>		= 160 /30/17			
	SAND		SAND							
/		GRAVEL	SAND Z	CLAY						
	SAND	~		SAND						
Ę	SILTY CLAY	2	SAND							
	SAND			SAND						
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	SAND									
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						AFPROX. GROONE				
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		6	15	_	LEGEN	<u>D</u>				
			10		= OTHER SOILS SAND) MIXED	(CLAY, SILT, WITH WASTE				
	SAND	6'	10		= WASTE					
		6	05	*	IS IMPORTANT	CONCENTRATIONS OF PART 201 GENERIC S TO NOTE THE COMPA	ARISON DOES NOT	NECESSARILY IMPL	Y.	
	I SAND	6	00		APPLICABILITY PHYSICAL ANI EXPECTED TO	OF THE CRITERIA TO CHEMICAL PROPERTI BE DIFFERENT THAN	THE WASTE SAMP ES OF THE WASTE THE DEFAULT VALU	LES BECAUSE THE SAMPLES ARE JES OR ASSUMPTIO	DNS	
		5	95	F	CRITERIA REQ	IVE THE GENERIC SOIL UIREMENTS FOR RESPO	ONSE ACTIVITY RUL	ES (R299.1-299.5	60)	-
		5	90			CONCENTRATIONS IN M CONCENTRATIONS IN M				
	SAND			< RSCC	C = DENOTES LESS DIRECT CONTA	S THAN MDEQ PROPOS ACT & PROTECTIVE OF	ED 201 RESIDENTIA	AL SOIL CLEANUP	CRITERIA – R USES	_
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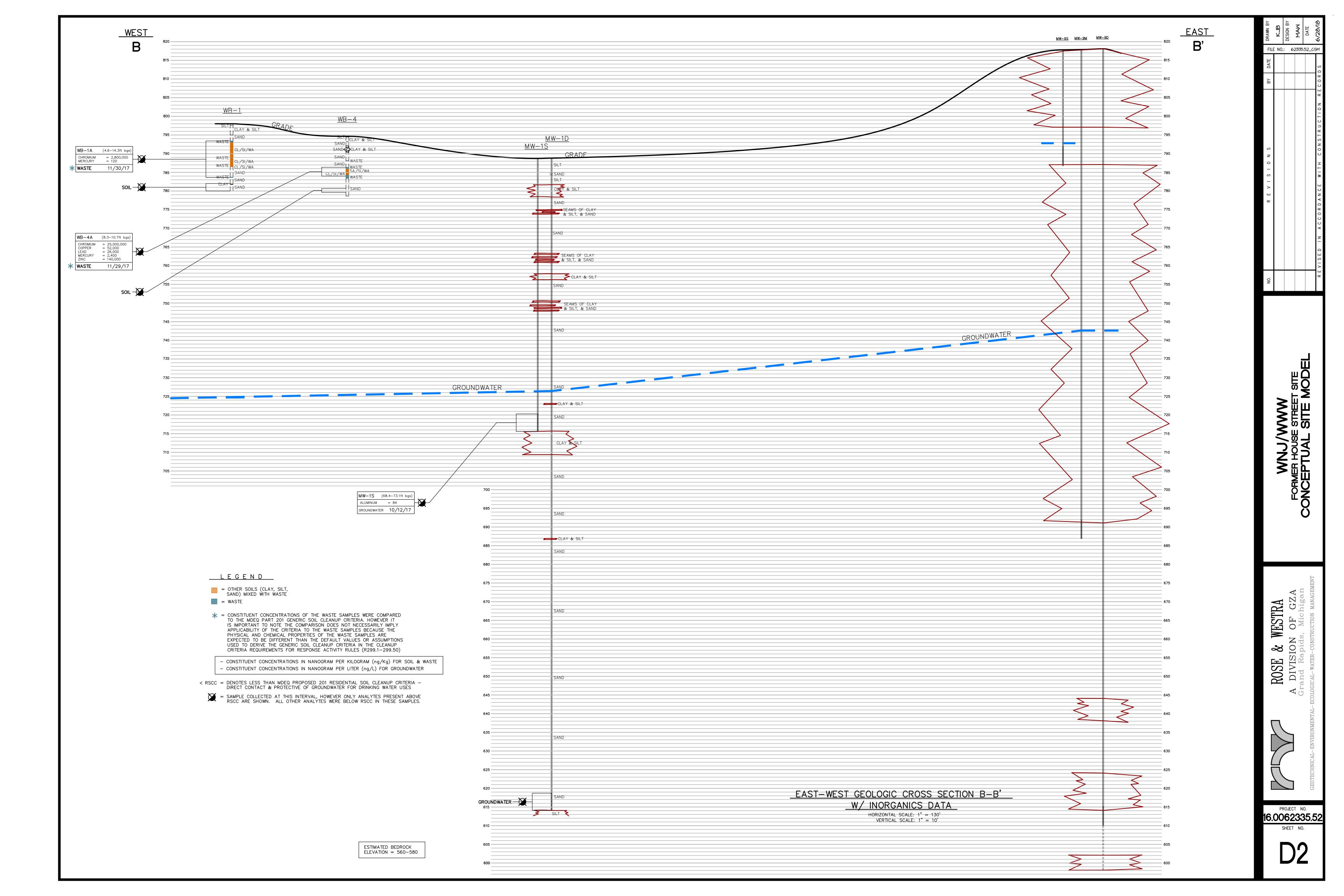
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		625				<b>−</b>	Grand	
		620					LAL-EC	
	<u>NORT</u>			<u>ss section a-a'</u>			GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT	
		W/	VOCs & SVOCs HORIZONTAL SCALE: 1" = VERTICAL SCALE: 1" =			PROJEC 062 SHEET	335.5	52
				ESTIMATED BEDROCK ELEVATION = 560-580		С	3	

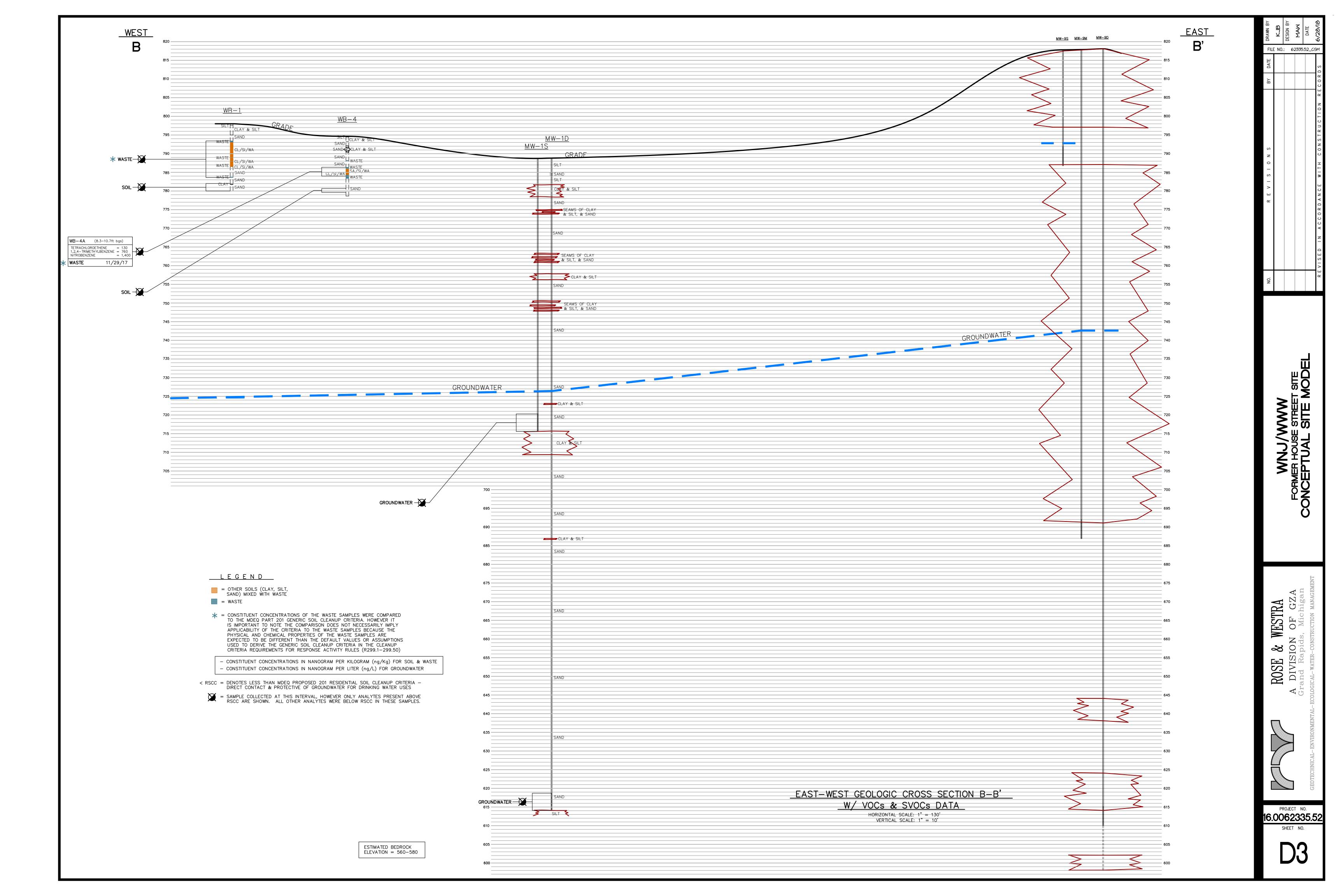


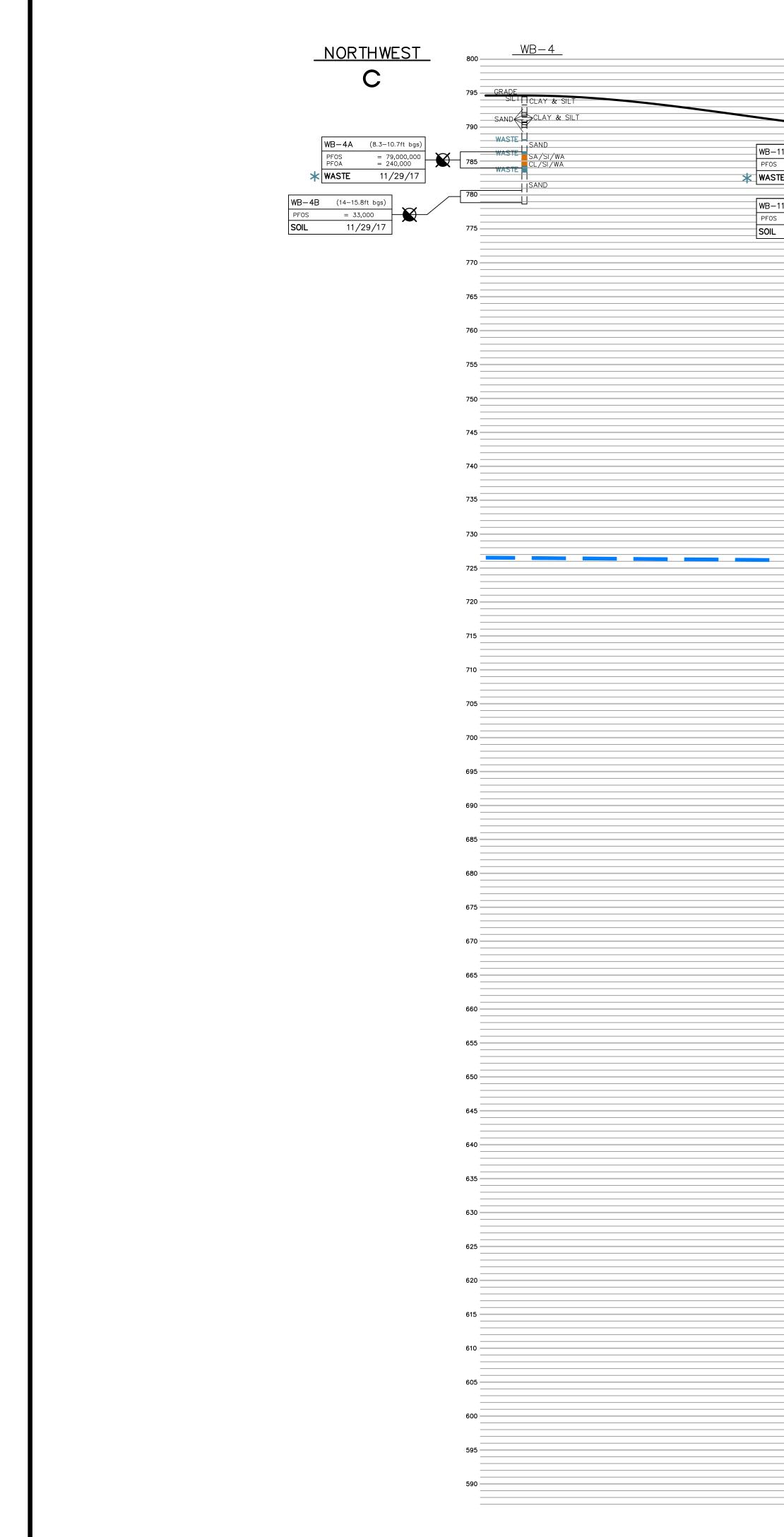


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620			EAST-WEST GEOLOGIC CROSS 
GROUNDWATER 615	<b>X</b>		
615	~	2	HORIZONTAL SCALE: 1" = 13 VERTICAL SCALE: 1" = 10 SILT
610			
605			





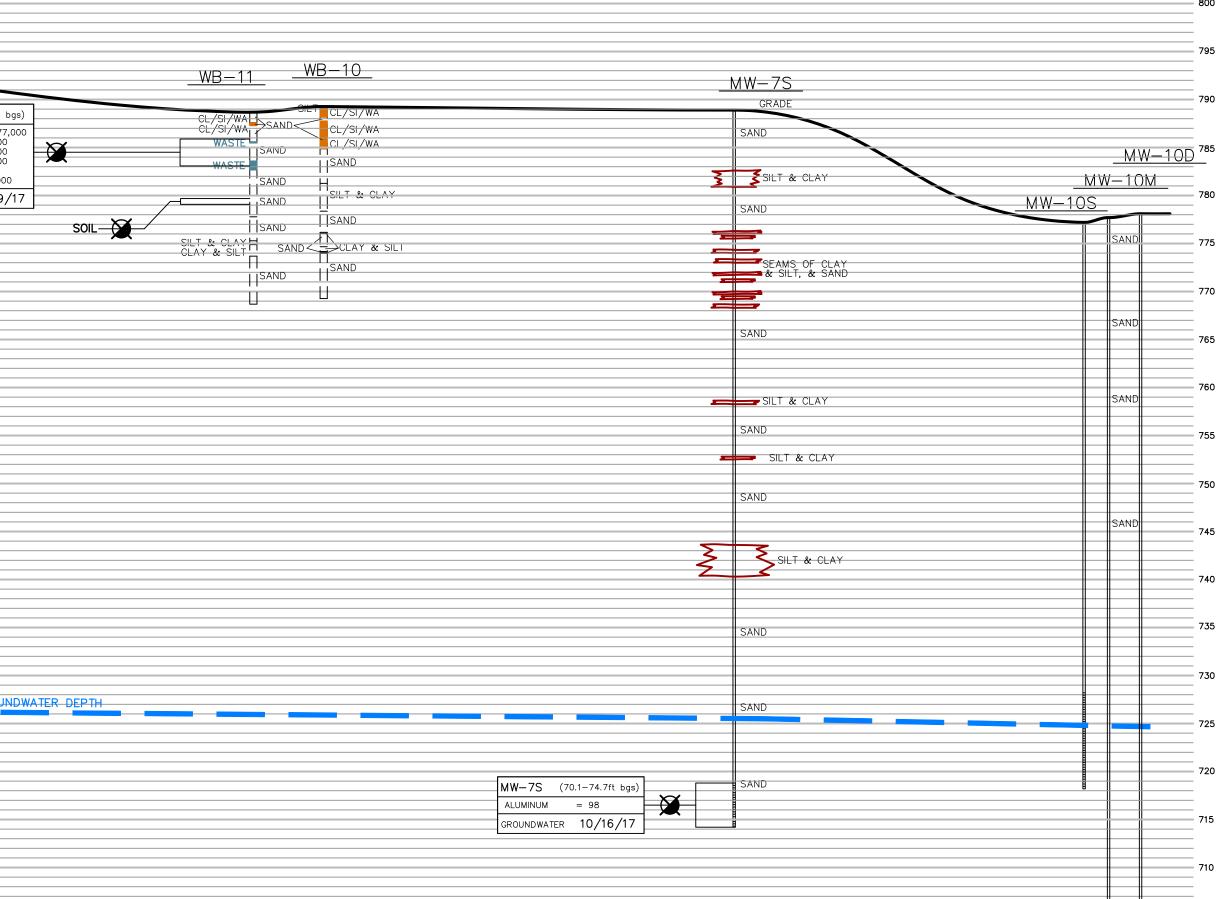




			SOUTHEAST	DRAWN BY KJB DESIGN BY MAM 6/29/18
		800	<u>SOUTHEAST</u> C'	FILE NO.: 62335.52_CSM
	MW-7S_	795	$\sim$	
CL/SI/WALL SILL CL/SI/WA	GRADE	790		
WASTE         CL /SL/WA           IS         = 2,200,000	SAND	W-10D <sup>785</sup>		z o -
SAND H SAND LISILT & CLAY	SILT & CLAY <u>MW-10</u>			
		775		
CLAY & SILT SAND SAND SAND	SEAMS OF CLAY & SILT, & SAND			
	SAND	770		
	SAND SAND	765		
	SAND	760		
	SAND	755		
2 2	SAND SILT & CLAY	750		
	SAND	745		
Ę	SILT & CLAY	740		
				NO.
	SAND	735		
APPROX. GROUNDWATER DEPTH	SAND	730		
	SAND	725		
	SAND	720		
GROUNDWATER - X		715		Ш Ш
		710		
		705		
		700		
		695		
		690		× E E E E E E E E E E E E E E E E E E E
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		660		TUENT
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		650	<u>    LEGEND     </u>	F G ichi
		645	= OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE = WASTE	WESTRA WESTRA STRUCTION MAN
		640		ION LON
		635	CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1-299.50)	ROSE DIVIS and Re
		630	EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)	RO DI Cand GICAL-
			<ul> <li>CONSTITUENT CONCENTRATIONS IN NANOGRAM PER KILOGRAM (ng/Kg) FOR SOIL &amp; WASTE</li> <li>CONSTITUENT CONCENTRATIONS IN NANOGRAM PER LITER (ng/L) FOR GROUNDWATER</li> </ul>	A G <sub>1</sub> Ecolo
		625	<pre>&lt; RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA - DIRECT CONTACT &amp; PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES</pre>	
		620	DIRECT CONTACT & PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES = SAMPLE COLLECTED AT THIS INTERVAL, HOWEVER ONLY ANALYTES PRESENT ABOVE RSCC ARE SHOWN. ALL OTHER ANALYTES WERE BELOW RSCC IN THESE SAMPLES.	RONME
		615		ENVI
		610		HNICAL
		605		GEOTECH
		600		5
		595	<u>NORTHWEST-SOUTHEAST GEOLOGIC CROSS SECTION C-C'</u> <u>W/ PFOS and PFOA DATA</u>	PROJECT NO.
		590	HORIZONTAL SCALE: 1" = 130' VERTICAL SCALE: 1" = 10'	SHEET NO.
				⊏1
			ESTIMATED BEDROCK	

ELEVATION = 560 - 580

C	800	
· · · · · · · · · · · · · · · · · · ·	795	
$\frac{WB-4A}{COPPER} = \frac{25,000,000}{52,000}$	790 SAND CLAY & SILT	
CHROMIUM = 25,000,000 COPPER = 52,000 LEAD = 26,000 MERCURY = 2,400 ZINC = 140,000	WASTE SAND	WB-11A         (2.8-5.6ft bgs           CHROMIUM (3)         = 25,977,00
<b>X WASTE</b> 11/29/17	785 WASTE SA/SI/WA WASTE CL/SI/WA	CHROMIUM (3)         = 25,977,00           CHROMIUM (6)         = 23,000           COPPER         = 45,000           LEAD         = 28,000           MERCURY         = 430           ZINC         = 120,000
		MERCURY = 430 ZINC = 120,000
SOIL - X	/80	<b>WASTE</b> 11/29/17
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<u>SOUTHEAST</u> C'	BICAL     DATE     DRAWN BY       TAD     TAD     TAD       TAD     TAD     TAD
	R E V I S I O N S IN ACCORDANCE WITH CONSTRUCTION
	NO. R E V I S E D
	WNJ/WWW FORMER HOUSE STREET SITE CONCEPTUAL SITE MODEL
LEGEND      Substrain the solution of the waste samples were compared to the mode of the solution of the waste samples were compared to the mode part 201 centre solution cleanup centrent. However it is important to note the comparison does not necessarily imply applicability of the criteria to the waste samples because the physical and chemical properties of the waste samples are expected to derive the constructions in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent concentrations in microgram per kilogram (ug/kg) for soil & waste  centre - constituent / the microgram per kilogram (ug/kg) for soil & wast	CEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
NORTHWEST-SOUTHEAST GEOLOGIC CROSS SECTION C-C' W/ INORGANICS DATA HORIZONTAL SCALE: 1" = 130' VERTICAL SCALE: 1" = 10'	PROJECT NO. 16.0062335.52 SHEET NO.
ESTIMATED BEDROCK ELEVATION = 560-580	E2

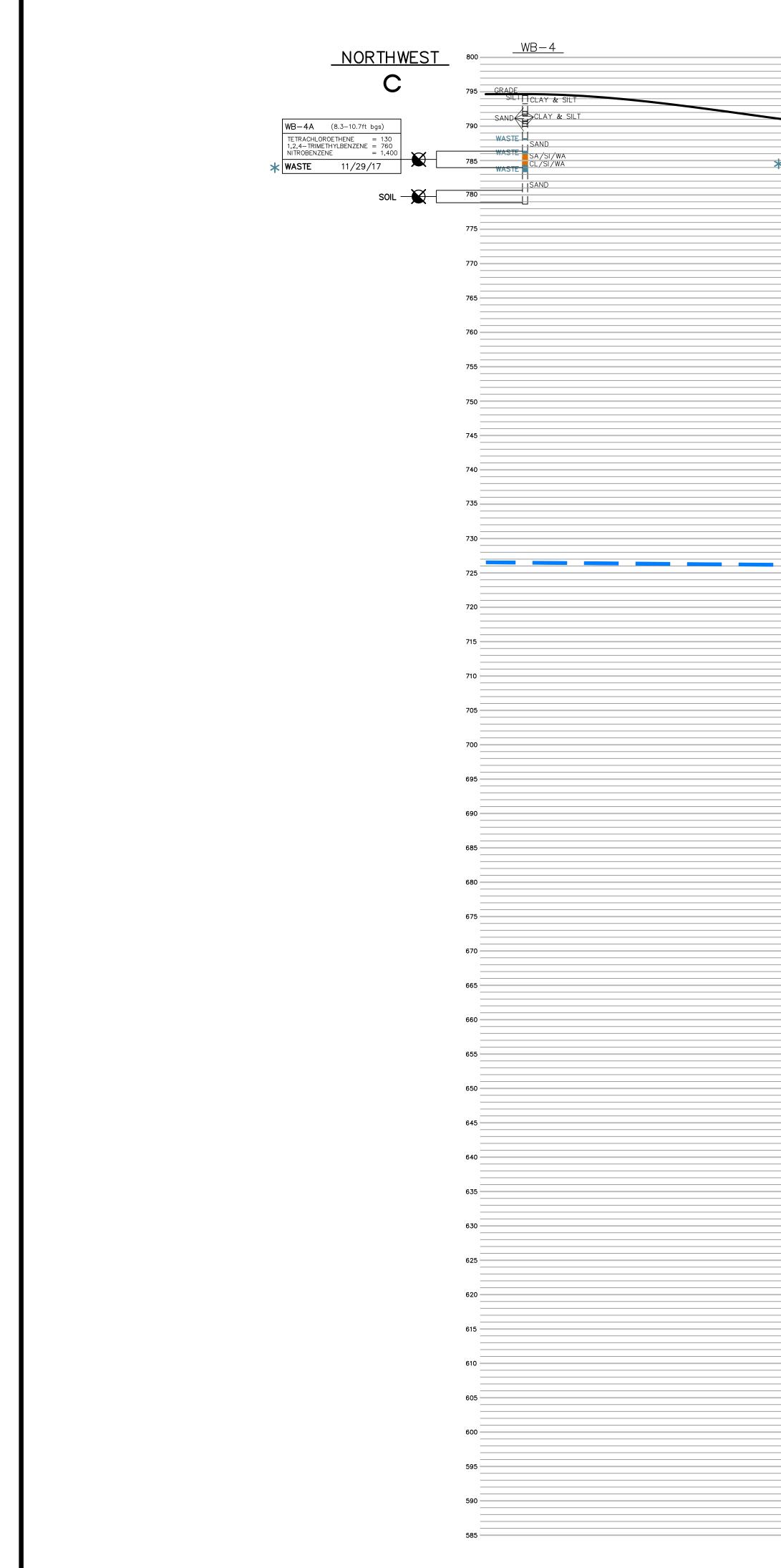
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680 \_\_\_\_\_ \_\_\_\_\_ 675 \_\_\_\_\_ 670 \_\_\_\_\_ \_\_\_\_\_ 665 \_\_\_\_\_ \_\_\_\_\_ 660 \_\_\_\_\_ \_\_\_\_\_ 655 \_\_\_\_\_ \_\_\_\_\_ ------ 650 \_\_\_\_\_ \_\_\_\_\_ 645 \_\_\_\_\_ 640 \_\_\_\_\_ \_\_\_\_\_ 635 \_\_\_\_\_ \_\_\_\_\_ 630 \_\_\_\_\_ \_\_\_\_\_ 625 \_\_\_\_\_ \_\_\_\_\_ 620 \_\_\_\_\_ \_\_\_\_\_ 615 \_\_\_\_\_ \_\_\_\_\_ 610 \_\_\_\_\_ \_\_\_\_\_ 605 \_\_\_\_\_ \_\_\_\_\_ 600 \_\_\_\_\_ \_\_\_\_\_ ------ 595 \_\_\_\_\_ \_\_\_\_\_ ------ 590



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		drawn by Kje Design by MAM Date 6/29/18
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675 670 665 660 655	<u>LEGEND</u>	WESTRA WESTRA of GZA s, Michigan TRUCTION MANAGEMENT
675 670 665 660 655 650	= OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE	& WESTRA ION OF GZA vpids, Michigan -construction MANAGEMENT
675 670 665 660 655 650 645 640	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> </ul>	& WESTRA ION OF GZA vpids, Michigan -construction MANAGEMENT
675 670 665 660 655 650 645	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT</li> </ul>	SE & WESTRA IVISION OF GZA d Rapids, Michigan -water-construction MANAGEMENT
675 670 665 660 655 650 645 640	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE</li> </ul>	SE & WESTRA IVISION OF GZA d Rapids, Michigan -water-construction MANAGEMENT
675 670 665 660 655 650 645 640 645 640 635	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE</li> </ul>	ROSE & WESTRA DIVISION OF GZA rand Rapids, Michigan GICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 660 655 650 645 640 635 630	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan L-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 660 655 650 645 640 645 640 635 630	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER LITER (ug/L) FOR GROUNDWATER</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan L-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 660 655 650 645 640 645 640 635 630 630 625	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER LITER (ug/L) FOR GROUNDWATER</li> <li>RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA – DIRECT CONTACT &amp; PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 655 650 645 640 645 640 635 630 625 620 620 615	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE - CONSTITUENT CONCENTRATIONS IN MICROGRAM PER LITER (ug/L) FOR GROUNDWATER</li> <li>RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA –</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 660 655 650 645 640 645 640 635 630 625 620	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER LITER (ug/L) FOR GROUNDWATER</li> <li>RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA – DIRECT CONTACT &amp; PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
675 670 665 660 655 650 645 640 645 640 635 630 625 620 620 615	<ul> <li>OTHER SOILS (CLAY, SILT, SAND) MIXED WITH WASTE</li> <li>WASTE</li> <li>WASTE</li> <li>CONSTITUENT CONCENTRATIONS OF THE WASTE SAMPLES WERE COMPARED TO THE MDEQ PART 201 GENERIC SOIL CLEANUP CRITERIA. HOWEVER IT IS IMPORTANT TO NOTE THE COMPARISON DOES NOT NECESSARILY IMPLY APPLICABILITY OF THE CRITERIA TO THE WASTE SAMPLES BECAUSE THE PHYSICAL AND CHEMICAL PROPERTIES OF THE WASTE SAMPLES ARE EXPECTED TO BE DIFFERENT THAN THE DEFAULT VALUES OR ASSUMPTIONS USED TO DERIVE THE GENERIC SOIL CLEANUP CRITERIA IN THE CLEANUP CRITERIA REQUIREMENTS FOR RESPONSE ACTIVITY RULES (R299.1–299.50)</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER KILOGRAM (ug/Kg) FOR SOIL &amp; WASTE</li> <li>CONSTITUENT CONCENTRATIONS IN MICROGRAM PER LITER (ug/L) FOR GROUNDWATER</li> <li>RSCC = DENOTES LESS THAN MDEQ PROPOSED 201 RESIDENTIAL SOIL CLEANUP CRITERIA – DIRECT CONTACT &amp; PROTECTIVE OF GROUNDWATER FOR DRINKING WATER USES</li> </ul>	ROSE & WESTRA A DIVISION OF GZA Grand Rapids, Michigan L-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
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675 670 665 660 655 650 645 640 635 630 635 630 625 620 615 610 610 605 600	<text><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></text>	CONCINCTION OF GZA GEOTECHNICAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT CONCINCAL-ENVIRONMENTAL-ECOLOGICAL-WATER-CONSTRUCTION MANAGEMENT
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