

COMPLEX PROJECTS
REQUIRE RESOLVE
THRASHER'S GOT IT

CITY OF TORONTO JEFFERSON COUNTY, OHIO

MARA ROAD EXTENSION

ADDENDUM #2

JANUARY 6, 2023

THRASHER PROJECT #101-T30-11030



TO WHOM IT MAY CONCERN:

The following are clarifications and responses to questions posed by contractors for the above-referenced project. **No additional questions will be accepted.**

A. GENERAL

- 1. Attachment 1 the Index has been updated to include EXHIBIT I Geotechnical Report. The report was added in Addendum #1, but the Index was not updated at that time.
- 2. Attachment 2 the Bid Form (section 5.01, pages BID 3-6) has been revised. All items in red text have been updated. You must use the revised bid form when preparing your bid package for this project.

B. DRAWINGS

Attachment 3 - the following sheets have been revised and are attached to this addendum. Please be sure to utilize the revised sheets when bidding and constructing the project.

REPLACE Sheet 5 included in this addendum.

C. **QUESTIONS AND RESPONSES**

QUESTION

1. Is the excavation and drainage of the toe keys and bonding benches incidental to the 7171cy of excavation in item 20310000 as shown on the detail provided in the geotechnical at the various stations called out for them?

RESPONSE

Yes, the excavation and drainage of the toe keys and benches will be incidental to Item 203 - Excavation.

OUESTION

2. Are the boring logs available as part of the geotechnical report as well?

RESPONSE

Attachment 4 – The boring logs for the Geotech. Report have been attached to this addendum.

OUESTION

3. Can you please verify the quantity for the following bid item: Item 441 – Asphalt Concrete Surface Course, Type 1, (448), PG64-22

RESPONSE

Quantity has been revised to 351 CY on the plans and bid form.

OUESTION

4. Is the Geotech Report for "Information Only" or are we to install the benches, bench drains and bonding bench drains as recommended in the report?

RESPONSE

See response to question 1.

QUESTION

5. According to question #36 it appears we are to be removing all excavated material (7,171 CY) and importing off-site material for the proposed fills (9,974 CY), is this correct? If not, are we to assume 100% of onsite cut material will be usable for fill? How will we be paid for import material if unsuitable cut material is encountered?

RESPONSE

Per section 203.01 of the ODOT CMS, "Use removed or excavated materials in the Work when the material conforms to the specifications; if not, then recycle or dispose of the material according to 105.16 and 105.17." In addition, please review section 203.10 for the basis of payment for Item 203 – Roadway Excavation and Embankment.

QUESTION

6. The boring logs (figures 5 to 37 on table of contents) appear to be left out of the geotechnical report included in addendum #1, can these be provided?

RESPONSE

See response to question 2.

OUESTION

7. The geotechnical report mentions under-drains around the seep & springs, will this be taken care of via change order?

RESPONSE

If encountered during construction, this will be taken care of in the field.

QUESTION

8. Do the project's earthwork calculation account for stripping of the on-site area or are the calculation from existing grade to proposed without accounting for stripping?

RESPONSE

The earthwork was calculated using the average end area method. Cut and fill was measured using the cross-sectional areas between the existing and proposed grade lines in the cross sections.

OUESTION

9. *Will the owner provide water for testing of the waterline or dust control?*

RESPONSE

Owner will provide water for testing of the water line.

QUESTION

10. Due to the extent of the changes in Addendum #1 can the bid date be extended?

RESPONSE

The bid date will remain as advertised.

OUESTION

11. Since the watermain has been changed from ductile iron to PVC and all the force main is HDPE can the water services be changed from copper to HDPE with a trace wire?

RESPONSE

Services are to be bid as copper as shown in the plans.

QUESTION

12. *Is this project with Toronto city limits and are there any fees or permits we will be required to obtain for the project?*

RESPONSE

Yes, this project is located within the City limits. Contractor should plan for electrical permit for installation of power to the grinder pumps at each residence.

OUESTION

13. Please clarify the type of pipe for the 1.5" conduit, Type C, 707.34.

RESPONSE

Pipe shall be HDPE and follow pipe specification ASTM F714, joint specification ASTM F2620 or F1290, and installation specification ASTM D2321 or F1962.

QUESTION

14. Please clarify the Type 1 asphalt quantity.

RESPONSE

See response to question 3.

QUESTION

15. Should milling of butt joints be included in pricing or does the city prefers to rake the edges down instead at each end of those sections?

RESPONSE

Butt joints should be included.

If you have any questions or comments, please feel free to contact me by 10:00 am on January 6, 2023. As a reminder, bids will be received until 1:30 p.m. on Wednesday, January 11, 2023, at the Municipal Building located at 416 Clark Street, Toronto, OH 43964. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.

Brad Olinger, PE Project Manager

CITY OF TORONTO JEFFERSON COUNTY, OHIO FOR THE MARA ROAD EXTENSION

- I N D E X -

BIDDING DOCUMENTS

Advertisement for Bids	C-111
Engineer's Estimate	EST-1
Instructions to Bidders	C-200
Bid Opening Requirements	BOR 1-17
Bid Forms	BID 1-8
CONDITIONS OF WORK	
Notice of Award	C-510
Agreement	C-520
Certificate of Owner's Attorney	COA-1
Certificate of Funds	COF-1
Performance Bond	C-610
Payment Bond	C-615
Notice to Proceed	C-550
Contractor's Estimate Form (OWDA)	CEF-1
Contractor's Application for Payment (EJCDC)	C-620
Change Order Form (OWDA)	COF-1
Change Order (EJCDC)	C-941
Memorandum of Negotiation	MEM-1
Field Order	C-942
Work Change Directive	C-940
Certificate of Substantial Completion	C-625

Notice of Acceptability	C-626
General, Supplementary, & Additional Supplementary Conditions	C-700

EXHIBITS

Exhibit A – Abnormal Weather Days

Exhibit B – Listing of Duties, etc. of the Resident Project Representative

Exhibit C – Call Before You Dig

Exhibit D – Affidavit for Pay Estimates

Exhibit E – Consent of Surety to Final Payment

Exhibit F – Prevailing Wages

Exhibit G – Insurance Provisions

Exhibit H – Materials Testing

Exhibit I – Geotechnical Report

TECHNICAL SPECIFICATIONS

Summary	011000
Price and Payment Procedures	012000
Submittal Procedures	013300
Quality Requirements	014000
References	014200
Temporary Facilities and Controls	015000
Traffic Control	015700
Execution and Closeout Requirements	017000
Construction Waste Management and Disposal	017419
Operation and Maintenance Data	017823
Project Record Documents	017839

Video Recording	ADDENDUM #2 January 6, 2023 Attachment 1 - Page 3 of 4 024010
Cast-in-Place Concrete	033000
Crystalline Concrete Waterproofing	033050
Grouting	036000
Basic Electrical Materials and Methods	260500
Conductors and Cables	260519
Grounding and Bonding	260526
Supporting Devices	260529
Raceways and Boxes	260533
Panelboards	262416
Wiring Devices	262762
Fuses	262813
Enclosed Switches and Circuit Breakers	262816
Soils for Earthwork	310513
Aggregates for Earthwork	310516
Clearing, Grubbing, and Restoration	311100
Excavation	312316
Trenching	312316.13
Dewatering	312319
Erosion and Sedimentation Controls	312500
Rubble-Stone Riprap	313716.13
Concrete Resurfacing, Crushed Stone Resurfacing and Asphalt Paving	321216
Stone Surfacing Material	321217
*Concrete Paving	321313
Pavement Markings	321723
Landscaping	329119

Seeding and Mulching Table	ADDENDUM #2 January 6, 2023 Attachment 1 - Page 4 of 4 329119.01
Sewer and Manhole Testing	330130.13
Manholes and Structures	330513
Manhole Frames and Covers	330513.01
Precast Concrete Valve Vaults and Meter Boxes	330517
Utility Identification	330526
Water Distribution Piping	331113
Water Utility Distribution Equipment	331200
Water Service Connections	331213
Water Utility Distribution Valves	331216
Water Utility Distribution Fire Hydrants	331219
Disinfecting of Water Utility Distribution	331300
Small Package Sewer Grinder Pump	333101
Sanitary Utility Sewerage Force Mains	333400
Swing Check Valves	400565.23
Air/Vacuum Valves for Wastewater Service	400578.23

PLANS

CITY OF TORONTO JEFFERSON COUNTY, OHIO MARA ROAD EXTENSION

THRASHER PROJECT #101-T30-11030

BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

CITY OF TORONTO

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the

ADDENDUM #2 January 6, 2023 Attachment 2 - Page 2 of 8

cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

GENERAL

The Bidder shall take notice of and shall be responsible for any local or state taxes levied and applicable, and the cost for the same shall be included as part of the submitted Bid.

The total Bid cost stated includes a complete operating installation including furnishing and installation of any and all changes or additions in plans, piping, mechanical work, additional electrical work, accessories, controls, etc. necessary to accommodate alternative equipment systems or materials used in construction.

BID PROPOSAL

THE BIDDER AGREES TO PERFORM ALL REQUIRED WORK DESCRIBED IN THE DETAILED SPECIFICATIONS AND AS SHOWN ON THE PLANS FOR THE COMPLETE CONSTRUCTION AND PLACING IN SATISFACTORY OPERATION OF THE CONTRACT

The Project "Sequence of Construction" has been detailed in the Drawings and Specification Division 1, Project Summary, Section 1010, Part-2 Execution. The Bidder agrees to perform all the Work proposed for the total of the following Bid prices.

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

PROPOSED MARA ROAD EXTENSION JEFFERSON COUNTY, OHIO

BID SCHEDULE

	ODOT	Γ					
Item #	OD	OT#	DESCRIPTION	QTY.	UNIT	UNIT COST	COST
1	201	11000	Clearing & Grubbing	1	LS		
2	202	23000	Pavement Removed	176	SY		
3	202	53100	Mailbox Removed	3	EACH		
4	203	10000	Excavation	7,171	CY		
5	203	20000	Embankment	9,974	CY		
6	203	35110	Granular Material, Type B	362	CY		
7	204	10000	Subgrade Compaction	4,348	SY		
8	204	13000	Excavation of Subgrade	362	CY		
9	204	45000	Proof Rolling	2	HOUR		

	ODO	Γ				7 1155 1111 111	2 - Page 4 of 8
Item #	OD	OT #	DESCRIPTION	QTY.	UNIT	UNIT COST	COST
10	204	50000	Geotextile Fabric	1,087	SY		
11	608	52000	Curb Ramp	145	SF		
12	609	12000	Combination Curb & Gutter, Type 2	3,310	FT		
13	609	26000	Curb, Type 6	88	FT		
14	690	50100	Mailbox Support System, Single	3	EACH		
15	659	00300	Topsoil	1,394	CY		
16	659	00500	Seeding & Mulching, Class 1	12,553	SY		
17	659	14000	Repair Seeding & Mulching	628	SY		
18	659	15000	Inter-Seeding	628	SY		
19	659	20000	Commercial Fertilizer	1.7	TON		
20	659	31000	Lime	2.6	ACRE		
21	659	35000	Water	68	MGAL		
22	832	15000	Stormwater Pollution Prevention Plan	1	LS		
23	832	30000	Erosion Control	15,000	EACH		
24	895	10040	Manufactured Water Quality Structure, Type 4, in 96" Manhole	1	EACH		
25	601	32200	Rock Channel Protection, Type C with Filter	41	CY		
26	602	20000	Concrete Masonry	2	CY		
27	605	14000	6" Base Pipe Underdrains	3,103	FT		
28	611	00510	6" Conduit, Type F for Underdrain Outlets	80	FT		
29	611	01100	6" Conduit, Type C	14	FT		
30	611	04400	12" Conduit, Type B	879	FT		

	ODOT	Γ				7 1130 11110 11	2 - Page 5 of 8
Item #	OD	OT #	DESCRIPTION	QTY.	UNIT	UNIT COST	COST
31	611	04600	12" Conduit, Type C	103	FT		
32	611	07400	18" Conduit, Type B	782	FT		
33	611	07600	18" Conduit, Type C	39	FT		
34	611	10600	24" Conduit, Type C	57	FT		
35	611	99574	Manhole, No. 3	2	EACH		
36	611	98150	Catch Basin, No. 3	16	EACH		
37	611	98470	Catch Basin, No. 2-2B	1	EACH		
38	301	46000	Asphalt Concrete Base, PG64-22	571	CY		
39	304	20000	Aggregate Base	411	CY		
40	407	20000	Non-Tracking Tack Coat	548	GAL		
41	441	50000	Asphalt Concrete Surface Course, Type 1, (448), PG64-22	351	CY		
42	441	50000	Asphalt Concrete Intermediate Course, Type 2, (448)	168	CY		
43	452	10050	6" Non-Reinforced Concrete Pavement, Class QC MS	22	SY		
44	452	13040	9" Non-Reinforced Concrete Pavement, Class QC MS	172	SY		
45	611	97910	Special – Sanitary Sewer Grinder Pumps	1	LS		
46	638	20736	1 1/2" Air Release Valve	5	EACH		
47	611	97400	Conduit Misc.: 1 1/2" Conduit, Type C, 707.34	7,490	FT		
48	202	62700	Septic Tank Removed – Cleaning & Demolishing	5	EACH		
49	638	01130	6" Water Main Polyvinyl Chloride Pipe and Fittings, AWWA C900, DR18	1,647	FT		
50	638	07800	6" Gate Valve & Valve Box	10	EACH		

	ODOT						t 2 - Page 6 of 8
Item #	OD	OT#	DESCRIPTION	QTY.	UNIT	UNIT COST	COST
51	638	10200	6" Fire Hydrant	4	EACH		
52	630	08510	Street Name Sign Support, No. 2 Post	15.25	FT		
53	630	08600	Sign Post Reflector	1	EACH		
54	630	80100	Sign, Flat Sheet	6.25	SF		
55	630	80500	Sign, Double Faced, Street Name	2	EACH		
56	644	00500	Stop Line	9	FT		
57	644	01200	Parking Lot Stall Marking	30	FT		
58	614	11000	Maintaining Traffic	1	LS		
59	623	10000	Construction Layout Stakes & Surveying	1	LS		
60	624	10000	Mobilization	1	LS		

TOTAL BID ACTIVITY	

NOTE: THE CONTRACTOR'S UNIT PRICES SHALL INCLUDE PURCHASE AND INSTALLATION, COMPLETE IN PLACE, PER BID ITEM IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS.

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

METHOD OF AWARD

If at the time this contract is to be awarded, the lowest total bid submitted by a qualified, responsible Bidder does not exceed the amount of funds then estimated by the Owner, as available to finance the contract, the construction contract will be awarded. If such bids exceed such amount, the Owner may reject all bids.

The owner may award the contract for each Activity separately or on the Total Bid submitted by a qualified responsible Bidder less the amount(s) of the Deductive Alternate(s) subtracted in numerical order, as listed in the contract to produce the lowest bid within the funds available for financing.

ADDENDUM #2 January 6, 2023 Attachment 2 - Page 7 of 8

- A. Unit prices have been computed in accordance with paragraph 13.03.A of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Bid Opening Requirements
 - B. American Iron and Steel Requirements
 - C. Disadvantaged Business Enterprises (DBE) Utilization
 - D. EPA Contract Requirements

BIDDER: [Indicate correct name of bidding entity]

ARTICLE 8 – DEFINED TERMS

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

By:	
[Signature]	
[Printed name]	
	oration, a limited liability company, a partnership, or a joint venture, attach ty to sign.)
Attest:	
[Signature]	
[Printed name]	
Title:	
Submittal Date:	

Address for giving notices	s:			
Telephone Number:				
Fax Number:				
Contact Name and e-mail	address:			
Bidder's License No.:				
	(where applica	able)		

NOTE TO USER: Use in those states or other jurisdictions where applicable or required.

CALCULA TE

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-	+ ¹³ -			- sandier, w/rock fragments (15.0 - 20.0 ft.)			10-9-11	-				1
-	├ -	X					(20)					1
L -	<u> </u>											1
							9-13-14	-				1
_	T -	X					(27)					ı
-	† -							-				ı
;├ -	 20 _			- COLLUVIUM -				-				1
<u> </u>	↓ -	X					8-10-12 (22)					1
	L _							-				1
-	[ı
-	† -											ı
	┼ -											ı
807.05	25			Brown SHALE , soft, weathered				_				1
806.25	<u> </u>	\bowtie	\geq	25.8			24-50/3"					1
				Bottom of Test Boring @ 25.8 ft.								1
-	† -											ı
-	 											ı
<u>-</u>	-											ı
	30											
Completion Date Bori				75.8 ft. Remarks: Boring was noted to be do 146/22	ry duri	ing dri	Iling operations	and at	borin	g com	pletio	n.
Date Bori				/16/22 /16/22								
Engineer/			С	EM								
Driller:			N	GE Depth to Water @ 24 hrs.:								

N	GF			Project Nam	e: Mar Tor	ra Roa onto,	id Extensi Ohio	ion				В	ORI	NG	NC).
Envi		al & Ge	otechnic	Project Num									Е	3- 3		
Lingin	licering.	Jointion		Location:	501.		Offset:									
1 +			၂ တ	Surface El.: 8	28 2 ft	C	/113Ct.							×	%	
Elevation, feet	set	Sample Type	Symbol / USCS	Surface El 0	20.2 IL.				. %/		Blow Count (N-Value)	%	ajt H	Plasticity Index	Silt and Clay %	%
ion,	h, fe	e T	۱ / n	Split Sp	oon		Shelby To	ube	ver)	RQD	, Co /alu	ture	d Lii	ity	[]	Sand %
evat	Depth, feet	amp	oqu	Rock Co	re [RI	Bag Sam	ple	Recovery	œ	%0 <u>%</u>	Moisture %	Liquid Limit	stic	t an	Sa
Ĭ		Š	Syr		ERIAL D			p. 0	ı ız			_		Pla	Sil	
				IVIATI	ERIAL D	ESCR	IFIION									
	L -	ĮΧ		Brown SILTY to							4-5-7 (12)					
	1		\bowtie	fragments, mois	i, medium	Still to s	Sun				, ,					
-	T -	<u> </u>	\bowtie													
ļ -		\mathbb{K}	\bowtie	- with brick fragn	nents (2.5	- 4.0 ft.)				6-7-4					
	L -	$\backslash\!\!\!\!/$	\bowtie	9	,		,				(11)					
	5		\bowtie													
-	T -		\bowtie								3-4-3					
-	├ -		\bowtie								(7)					
L _	<u> </u>		\bowtie													
	L _										2-2-5					
-		X	\bowtie		- FILL						(7)					
-	├ -															
818.21	10							10.0								
	L _	ĮΧ		Brown SILTY to			h rock				7-10-18 (28)					
		\vdash		fragments, mois	t, stiff to na	ard					()	-				
-	┌ -															
ļ -		\mathbb{K}		- w/gray mottling	(10.0 - 11	.5 ft.)					10-14-12					
	ļ -	$\backslash\!\!\!/$		0 , 0	`	,					(26)					
	15															
-	ſ				- COLLUV	/IUM -					8-9-15					
-	├ -										(24)					
L .	<u> </u>	-														
	L _	17									15-28-23					
_	1	X		- w/sandstone fr	agments (1	17.5 - 1	9.0 ft.)				(51)					
-																
8	_ 20 _	/		- wet, very sand	/ (20.0 - 21	1.5 ft.)					0.40.40	-				
0/10		ĮΧ			•	,					9-10-18 (28)					
GDT	L _															
- 																
	├ -	1														
GB.	<u> </u>	-														
ORU	_25_															
	1										13-12-16					
<u> </u>		$/\!\!\!\!/$						26.5	-		(28)					
- - -	-			Bottom	of Test Bo	ring @	26.5 ft.									
₩ - -	<u></u>	-														
	L _															
	30															
Completic Date Boril Engineer/ Driller:	n Dep			.6.5 ft.				d at a dept	h of 2	0.0 ft.	during drilling o _l	eratio	ns an	d 17.9	ft. at	
Date Bori				117/22	boring c	omplet	ion.									
Date Bori				5/17/22 CEM												
Driller:				NGE	Depth to	Water	@ 24 hrs.:									

	N	GF			Project Name: Mara Road Extension Toronto, Ohio				В	ORI	NG	NC).
	Envi		al & Ge	otechnic						E	3- 4	ı	
ŀ	Liigi	neering .	Jointion	13	Location: Offset:			<u> </u>					
	+			၂ တ	Surface El.: 805.1 ft.						×	%	
	fee	et	ype	SC	Surface El 603.1 IL.	% /		unt e)	%	mit	nde	ay 6	%
	ion,	h, fe	le T	۱ / ۱	Split Spoon Shelby Tube	ver	RQD	/ Co	ture	d Li	ity I	D P	Sand %
	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Core Bag Sample	Recovery	~	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa
	ⅲ	-	S	Sy	MATERIAL DESCRIPTION	-			_	_	Pl	Si	
		-		<i>\$7977</i> 22	WATERIAL DESCRIPTION								
		<u></u>	ļХI		Brown SILTY to SANDY CLAY with rock fragments, moist, stiff to hard			5-7-6 (13)					
		L			nagments, moist, sun to hard				1				
ı		T -							-				
ı		┼ -	1X					9-10-18 (28)					
ı		├ -	\longrightarrow					(=5)	$\frac{1}{2}$				
		_ 5 _							1				
		L _	X					13-20-28 (48)					
			\vdash					(40)	1				
ı		┼ -							1				
		┼ -	X					10-10-11 (21)					
		├ -	\longrightarrow					(21)	1				
		10			001111111111								
			X		- COLLUVIUM -			7-8-12					
ı		Ţ ⁻	\sim					(20)	-				
ŀ		┼ -											
		├ -						9-6-5					
		- -	\vdash					(11)	-				
	790.1	15			15.0				1				
		L			Brown SANDY CLAY with rock fragments,			4-4-4 (8)					
		1	\vdash		moist, stiff			(0)	-				
	787.6	_			17.5				1				
		┼ -	X		Brown SILTY SAND, damp, medium dense to			4-5-6 (11)					
		├ -			dense			(,	$\frac{1}{2}$				
2		_20_			- w/sandstone fragments (20.0 - 21.5 ft.)				1				
3/10/2	_	<u> </u>	X		and (30.0 - 31.5 ft.)			4-6-7 (13)					
3DT								(15)	1				
<u>Н</u>		T -											
NG		十 -											
S.GP		├ -											
PORT		25							-				
G RE		L _	X					5-6-7 (13)					
2			\vdash					(10)	$\frac{1}{2}$				
ÆTEI		†											
TRON		┼ -	1										
JENE.		∤ -	-										
NGE BASIC LOG - NO PENETROMETER LOG REPORTS GPJ NGE_1.GDT 6/10/22	Committee	30	+6:		CO# Demandra Parker was not all	الم	ne -!"	lling are such	mel =4	ha::!::		ml-t'	_
L0G-	Completion Date Bori				6.0 ft. Remarks: Boring was noted to be dr	y auri	ng drii	ning operations a	ına at	porin	y com	pietio	n.
4SIC	Date Bori	ng Cor	mplet	ed: 5	/17/22								
3E B/	Engineer/	Geolo	gist:		CEM Donth to Water @ 24 hrs :								
ź١	Driller:			I)	IGE Depth to Water @ 24 hrs.:								

NGE	Project Name: Mara Road Extension Toronto, Ohio				В	ORI	NG	NO.
Environmental & Geotechnical Engineering Solutions	Project Number: W22072					Е	3- 4	
	ocation: Offset:							
1 1 1 1	Surface El.: 805.1 ft.						×	%
Elevation, feet Depth, feet Sample Type Symbol / USCS		Recovery %		Blow Count (N-Value)	Moisture %	Liquid Limit	lude	Silt and Clay % Sand %
ation apth,	Split Spoon Shelby Tube	cove	RQD	2 × C	istu	uid I	ticity	and Clay Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Rock Core Bag Sample	Re		<u>8</u>	Ĭ	Lio	Plasticity Index	Silt
	MATERIAL DESCRIPTION							
	Brown CLAYEY SAND , damp, medium dense			13-15-17 (32)				
	to dense			(32)	_			
770.1 35	35.0 Gray and brown SHALE , soft to medium hard,	-		18-50/1"	-			
769.1	weathered 36.0	-			1			
	Bottom of Test Boring @ 36.0 ft.							
40								
 								
 								
 								
 								
45								
Completion Depth: 36.0	0 ft. Remarks: Boring was noted to be di	rv duri	na dril	ling operations	and at	borin	g com	oletion.
Date Boring Started: 5/17	7/22	.,	will	5 - PO. 40.0113	ut		,	
Date Boring Completed: 5/17 Engineer/Geologist: CEI	7/22 M							
Driller: NG								

	N	GE			Project Nam	e: Mara Toro		nd Extensi Ohio	on				В	ORI	NG	NC).
1	Envi		al & Ge	otechnic	Project Num									Е	3- 5		
ŀ	Liigii	licering .	Jointio	15	Location:	JC1. VV2 2		Offset:				<u>_</u>	Т				
1	#			ဟ	Surface El.: 8	16 5 ft		moct.							×	%	
	fee	eet	ype)SC						· %		unt re)	%	mit	nde	lay (%
1	tion,	Depth, feet	le T) / [c	Split Spo	on		Shelby Tu	ıbe	over	RQD	ν Co Valu	sture	id Li	ity	o p	Sand %
1	Elevation, feet	Dep	Sample Type	Symbol / USCS	Rock Co	re 📙	3	Bag Sam	ple	Recovery 6	"	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	S
				0)	MATE	RIAL DE	SCR	IPTION							ш	٥	
F					Brown and gray	SII TY to SA	NDY	CI AY moist				3-3-4					
ŀ					Brown and gray medium stiff to h	ard		,,,,,,,,,,,	,			(7)	-				
		├ -															
L		<u> </u>	\mathbb{X}									5-13-17 (30)					
1		-	\vdash									(30)	-				
	_	_ 5 _			- gray (5.0 - 10.0	ft \							-				
ı	-	ॄ -	ļХ		- gray (5.0 - 10.0	11.)						5-6-7 (13)					
ŀ		Ĺ.															
+		1			- very moist, very	plastic (7.5	5 - 12.	5 ft.)				4-4-4	-				
ŀ	-	- T]X					,				(8)					
ŀ		- 10															
L		10										2-9-10	1				
L		<u></u>										(19)					
		<u> </u>															
Ī	-	1 -				COLLUVIL	JM -					9-14-17					
t		Ĺ -										(31)					
H		15_															
╁			\bigvee									11-12-9					
╁		┞ -										(21)	4				
ŀ		├ -			/4-	5 40 0 ft \											
L		<u> </u>	łX		- no recovery (17	.5 - 19.0 ft.)						5-7-9 (16)					
1		-										(10)	-				
Γ	_	20_											-				
ı		ॄ -	ļХ									6-8-13 (21)					
0/22	-	L _															
T 6/1		1															
1.GD	-	-															
Ä E	. 701 46	ا ا							25.0								
GPJ I	791.46	25	X						25.0	1		28-50/2"	1				
RTS.	. =	-		\geqslant	Brown SANDY S	HALE, soft,	weath	nered					1				
ZEPO			-	\leq													
1907	-	<u> </u>	\geq	\leq								50/4"	7				
ER.		Ĺ -		\lesssim													
OME	. 786.36	30		\lesssim	- sandstone @ 3).0 ft.			30.1								
Ä					Bottom	of Test Borin	na @	30 1 ft				50/1"	4				
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22		- T			Bottom	103. DOIII	.y W	OU. 1 IL.									
9G-N	Completio				0.1 ft.	Remarks:	Bori	ing was note	d to be dr	y duri	ng dri	lling operations a	nd at	boring	g com	pletio	n.
) JOI JOI JOI JOI JOI JOI JOI JOI JOI JOI	Date Bori				/17/22 /17/22												
BAS	Engineer/				EM												
NGE	Driller:				GE	Depth to V	Vater	@ 24 hrs.:									

NGF	Project Name: Mara Road Extension Toronto, Ohio	В	ORI	NG	NC).
Environmental & Geotechnical Engineering Solutions	Project Number: W22072	-	E	3- 6		
	Location: Offset:	1				
	Curfo o			×	%	
feet leet le	tunide El 612.0 It.	%	mit	nde	lay	%
tion tion the first that the first t	Split Spoon Shelby Tube 등 요 경투	sture	id Li	iţ.	o pi	Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Surface El.: 812.0 ft. Split Spoon Shelby Tube Rock Core Bag Sample	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	တိ
	MATERIAL DESCRIPTION		-	₫	Si	
	544					
	Brown SILTY to SANDY CLAY with rock fragments, moist, stiff to hard					l
						l
	4-3-6	\dashv				
	(9)					l
	- COLLUVIUM -					
F 5 F	0.00.00	_				
	9-22-23 (45)					
	- gray and brown from 7.5 ft.	\dashv				
	- gray and brown from 7.5 ft. 7-6-7 (13)					
	- gray and more plastic (7.5 - 9.0 ft.)	_				
<u>+</u> 10 + 10						
	4-6-10 - brown (10.0 - 11.5 ft.)					
	- brown (10.0 - 11.5 ft.)	_				
	- wet @ 12.5 ft.	_				
	- wet @ 12.5 it. 6-7-7 (14)					
		\dashv				
15	10.40.44	\dashv				
	12-10-11 (21)					
	12-12-9	_				
	(21)					
20	7-10-7	_				
	(17)					
25						
	- very sandy @ 25.0 ft. 12-16-18	_				
	(34)					
781.98 30	30.0					
Completion Depth: 34.0	0 ft. Remarks: Water was noted at a depth of 12.5 ft. during drilling	operatio	ns an	d 28.4	ft. at	
Date Boring Started: 5/1	7/22 boring completion.					
Date Boring Completed: 5/1 Engineer/Geologist: CE	7/22 M					
Driller: NG						

1	N	GE			Project Nam	ne: Mara Ro Toronto	oad Extensio . Ohio	n				В	ORI	NG	NC).
_	Enviro		al & Ge	otechnical	Project Num	nber: W2207							E	3- 6		
	Liigiii	eering 3	Jointion	15	Location:		Offset:			1		1				
	_			S	Surface El.: 8		Oliset.							~	%	
	lee	æ	ype	SC	Surface El C	12.0 11.			% /		unt (e)	%	i i	nde	ay 6	· %
	tion,	Ŧ,	le T	١/ ١	Split Sp	oon	Shelby Tub	ре	ver	RQD	\ Co	ture	d Li	ity	Q Q	Sand %
	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	ore 📙	Bag Samp	le	Recovery %	12	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	S
				8	MAT	ERIAL DESCI	RIPTION							Д.	0)	
			\sim	/ / \	Brown SANDST	ONE medium ha	ard				50/2"	_				
	+				Brown CANDO!	ONE, mediam ne	aru									
F	+															
F	4		\simeq	/ _ \							50/3"	\Box				
_ 77	7.98			/ / \	- auger refusal (② 34.0 ft.		34.0								
-	4	_35 _			Bottom	of Test Boring @	② 34.0 ft.									
F	+															
-	+															
-	+															
-	4															
-	1	_40 _														
L	4															
-	4															
-	+															
F	+															
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	man lett:	60	th:		0.64	Domestic: 144	-tou woo w -t- 1	a4 a al1	h af f	2.5.4	dunings dellis	one==4'	nc	400	E4 -4	
	mpletior te Borin				l.0 ft. 17/22	boring comple	ater was noted a etion.	ai a dept	11 Of 1	∠.၁ π.	uuring ariiing	operatio	การ an	u ∠ŏ.4	ıı. at	
	te Borin				17/22	- 1										
	gineer/C			CI	ΞM											
	ller:			N	GE	Depth to Wate	er @ 24 hrs.:									

N	Project Name: Mara Road Extra Toronto, Ohio Project Number: W22072 Location: Offset:										В	ORI	NG	NC).
Envi	ronmenta	l & Ge	otechnical Is	Project Num							-	E	3- 7		
¥ 2.18.1					10011 11220						1				
					20046	Oliset.								\o	l
eet	#	je je	90 L	Surface El.: 8	306.1 ft.			%		ı t	%	ı≝	dex	× ×	
, É	Depth, feet	Į,	ñ	Split Sp	oon	Shelby	Tube	Recovery	ا ۾	Blow Count (N-Value)	Moisture %	Liquid Limit	Ē	S	Sand %
atic	l fd	힏	o			_		8	RQD		listr	Pin	licit	and	San
Elevation, feet	å	Sample Type	Symbol / USCS	Rock Co	ore <u>⊟</u>	Bag Sa	ample	Re		≝€	∣ĕ	Lig	Plasticity Index	Silt and Clay %	
"			ν _	MAT	ERIAL DESC	CRIPTION							_	0)	
805.93	+ +		<i>XXX</i> \	TOPSOIL			/\0.2/			0.4.0	+				
		XI								2-1-3 (4)					l
	k	\longrightarrow		Brown SILTY to fragments, mois		with rock				. ,	_				l
-	t t			nagmonto, moto	it, soit to hard										l
L _	L 1	$\setminus A$		/	0 504)					9-7-9					l
		\triangle		- w/ organics (0.	.0 - 5.0 II.)					(16)					l
F -	十 十										7				l
ļ -	<u></u> 5 ↓										_				l
		X								13-16-15					l
-	$\lceil \ \ \rceil$	\triangle								(31)	_				l
-	├ ┤														l
				- dark gray (7.5	- 9.0 ft.)					7-5-7	7				l
_	1	X								(12)					l
-	十十	$\stackrel{\prime}{\longrightarrow}$									-				l
L _	_ 10 _										_				l
Γ -] [\bigvee								9-9-10					l
-	十一十	$/ \setminus$								(19)					l
L _	<u></u>														l
				- very moist, ver	ry plastic (12.5 -	· 17 5 ft)					\dashv				l
-	t 1	X		vory moiot, vor	y piaotio (12.0	17.01,				4-4-12 (16)					l
L .	<u></u>	\triangle								(10)	_				l
	15														l
-	\uparrow \uparrow			- wet @ 15.0 ft.						7-7-6					l
-	├ ┤	X								(13)					l
											7				l
-	$\lceil \ \rceil$										_				l
-	+ 1	\bigvee								6-10-12					l
		\triangle								(22)					l
Γ -	20														l
	┼╩┼				- COLLUVIUM	-				9-10-16	1				l
	<u></u>	XI								(26)					l
5		$\stackrel{\prime}{\longrightarrow}$, ,	-				l
<u>-</u>	t 1														l
	├ ┤														l
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-	$\lceil \rceil$														l
	25										-				l
	L	X								14-16-21 (37)					l
-] k	\longrightarrow								(0.7)	_				l
<u>-</u>	╁╶┤														
_	Ļ ↓														
<u>-</u>	╁┤														
	30			Ff	Denis	Vatar	-4d -4 - 1 ·	 	<u> </u>	di india a sistem			4001		
Completic Date Bori				5.5 ft. 17/22	Remarks: Woring comp	vater was no letion.	oted at a dept	ın ot 1	5.U ft. (during drilling o	peratio	ns an	a 28.0	π. at	
Date Bori				17/22 17/22	1 3 3 3 3 3 3 3 3 3 3 3										
Engineer/				EM	1										
Driller:	3			<u> </u>	Depth to Wat	ter @ 24 hrs	S.:								

NGE			Project Nam	ne: Mara Ro Toronto	oad Extension o. Ohio	1				В	ORI	NG	NC).
Environmer	tal & G	eotechnica	Project Num	ber: W2207							E	3- 7		
▼ Engineering	Solutio		Location:		Offset:					1				
↓		l o	Surface El.: 8		Oliset.							×	%	
fee eet	ype	lsc					% >		unt ie)	%	mit.	nde	lay ⁶	%
ion,	l e		Split Sp	oon	Shelby Tube	Э	ver	RQD	/ Co	ture	d Li	ity	d C	Sand %
Elevation, feet	Sample Type	Symbol / USCS	Rock Co	ore 🗒	Bag Sample	;	Recovery	Œ	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Se
		σ -	MAT	ERIAL DESC	RIPTION							₾.	0)	
775.40			Brown and gray stiff to hard	SILTY to SAND	Y CLAY, moist,	24.0			40 40 50/0"					
775.13				CANDY CLAY	ith rook	31.0			10-13-50/6"					
 		\bigotimes	Brown SILTY to fragments, mois	t, soft to hard	VILIN FOCK				FO/0!!					
-	$\uparrow \sim$	\leq							50/6"	1				
<u> </u>	-	\leq												
770.63		\lesssim				35.5			50/6"					
770.63						33.3			50/6	-				
			Bottom	of Test Boring (2) 35.5 ft.									
†														
+	1													
	-													
↓	-													
	-													
<u> </u>	-													
<u> </u>	_													
45	_													
† †														
+ +														
50	1													
	+													
1.60 1.60	-													
NGE	-													
GBJ														
<u>55</u>														
A PER	1													
	1													
	1													
ON SEE BORING CODI DELEGATION OF COMPLETER LOG REPORTS: 0.00	-													
	-													
9 60														
Completion De Date Boring St			5.5 ft. 17/22	Remarks: Washing complete.	ater was noted at etion.	a depth	n of 1	5.0 ft.	during drilling op	eratio	ns an	d 28.0	ft. at	
Date Boring St			17/22 17/22	g 50pi										
Engineer/Geold		С	EM	.	0.044									
일 Driller:		N	GE	⊔epth to Wate	er @ 24 hrs.:									

NGE	Project Name: Mara Road Extension Toronto, Ohio				В	DRI	NG	NC).
Environmental & Geotechnical	Project Number: W22072					F	3-8		
Engineering Solutions	ocation: Offset:							1	
	Surface El.: 814.9 ft.						~	%	
feel feel SCC	Surface Ει.: δ14.9 π.	% /		unt e)	%	лit	(apc	ay 9	%
ion, fe	Split Spoon Shelby Tube	ver	RQD	/ Co /alu	ture	d Lii	iţ	D P	Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Rock Core Bag Sample	Recovery		Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa
	MATERIAL DESCRIPTION						а.	0)	
814.68	TOPSOIL \(\square\) 0.2/			4-3-2					
	Brown SILTY to SANDY CLAY with rock			(5)					
	fragments, moist, medium stiff to hard								
				4-4-3	1				
	- w/gray mottling from 2.5 ft.			(7)					
	- more plastic (2.5 - 4.0 ft.)				1				
F + 5 + 5					+				
				7-5-4 (9)					
				. ,	1				
					-				
				6-5-5 (10)					
				(- /	1				
10									
				6-5-4 (9)					
				(5)	-				
				9-12-17					
				(29)					
15									
	- COLLUVIUM -			7-7-8					
				(15)					
				4-3-3					
				(6)					
20									
				3-3-4					
				(7)					
영 - 789.88 _ 25	25.0								
ME SOURCE TO THE SECOND				6-8-7					
	Brown SILTY SAND , damp, medium dense to dense			(15)					
30									
Completion Depth: 33.5		y duri	ng dril	ling operations a	nd at	boring	j com	pletio	n.
Date Boring Started: 5/18	8/22								
Date Boring Completed: 5/18 Engineer/Geologist: CEI	8/22 M								
Driller: NG									

N	GF			Project Name: Mara Road Extension Toronto, Ohio							BORING NO.				
Envi	ronment neering	al & Ge	otechnic	Project Num								E	3- 8		
Engl	neering	Solution	is	Location:	Del. VVZZ	Offset:						_			
			(0		440#	Oliset.							V	9	
feet	je	уре	SCS	Surface El.: 8	14.9 π.			%		e) rut	%	nit.	(apı	ay %	\ 0
on,	h, fe	e T) U	Split Spe	oon	Shelb	y Tube	very	RQD	Cor	ture	i	ty Ir	Ö	Sand %
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	vra 🗆	∏ Ban 9	Sample	Recovery	Ř	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sal
l ≝		S	Syr	T TOOK O				ď		<u> </u>	2		Pla	Silt	
				MATI	ERIAL DES	SCRIPTIO	N								
L.				Brown SILTY SA	ND , with san	dstone fragi	ments,			12-13-16					
				damp, medium o	lense to dens	se	·			(29)					
782.38	† -						32.5								
_ 781.38	┞ -		/ / \	Brown SANDST - auger refusal (ONE, hard		_33.5			50/1"					
- 701.30	<u> </u>		/ /												
	35			Bottom	of Test Borin	ıg @ 33.5 ft.									
-	┼ -														
-	╄ -														
L .	L.														
	† -														
F .	 40														
<u> </u>	↓ -														
	† -														
F -	┼ -														
-	45_														
<u> </u>	L .														
L															
	_														
<u> </u>	† -														
F -	┼ -														
	50_														
110/2	Ţ														
9 10	[
9.1	T -														
NGE BASIC LOG - NO PENETROMETER LOG REPORTS. CPJ NGE 1.GDT 6/10/22 Completic Date Bori Date Bori Engineer, Driller:	† -														
	┼ -														
ORT!	55_														
REP	_														
ГОС	Γ -														
ER -	† -														
ROM	┼ -														
	↓ _														
일 일 -	60														
Completion	on Dep		3	3.5 ft.	Remarks:	Boring was	noted to be dr	y duri	ng dri	ling operations	and at	borin	g com	pletio	n.
☐ Date Bori				/18/22											
Date Bori				/18/22 EM											
Driller:	ingineer/Geologist: CEM Oriller: NGE				Depth to W	/ater @ 24 h	ırs.:								

N	GF			Project Name: Mara Road Extension Toronto, Ohio		BORING NO.							
Envi	ronment ineering	al & Ge	otechnic			B- 9							
V Eligi	ineering :	Solution	15	Location: Offset:			1						
l			, l									vo.	
feet	i i	/be	SCS	Surface El.: 807.8 ft.		%		e ja	%	ij	yaey	ay %	٧٥
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Split Spoon Shelby Tube	Э	Recovery	RØD	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sand %
vati	ebtl	l du	 oqu	Rock Core B Bag Sample		900	ਲੱ	<u> </u>	oist	quic	stici	anc	Sar
⊟		Sa	Syn	■ Nock Core	;	ď			≥	=	Plas	Silt	
				MATERIAL DESCRIPTION									
		\bigvee	7.7	TOPSOIL				3-4-6					
806.29	<u> </u>		KXXX		1.5			(10)					
	F -			Brown SILTY to SANDY CLAY with rock									
	† -	lΧ		fragments, moist, stiff to very stiff				6-5-6 (11)					
F -	┼ -	$\overline{}$						(11)					
F -	 5 _												
-	╁ -	lХ						4-6-8 (14)					
ļ	┺ -												
L.								F 7.0					
L		lΧ						5-7-9 (16)					
	1,0							, ,					
ļ .	10_	/		- brown and gray from 10.0 ft.				7-8-12					
F .	╄ -	X						(20)					
F -	╁ -												
-	╁ .			- gray (12.5 - 17.5 ft.)			5-6-10						
L .	Ł.	$\backslash \backslash$					(16)						
L .	15												
				- COLLUVIUM -				6-7-9					
	} -							(16)					
ļ .	╀ -												
F .	╄ -	\mathbb{N}		- w/numerous sandstone fragments				5-10-14					
-	╄ -			(17.5 - 19.0 ft.)				(24)					
<u> </u>	20				20.0								
<u> </u>	╄ -	lΧ		Brown SILTY to SANDY CLAY, moist, very stiff				7-11-16 (27)					
<u> </u>	Ł.							(=-)					
L.	_												
. J													
6/10/	<u>-</u> -												
ÄL .	25_	/		- w/residual shale from 25.0 ft.				10-12-16					
 -	╄ -	X						(28)					
Ö – -	╁ -												
G	 												
- 18 - -	Ł.												
일 - 777.79 -	30				30.0								
ි _ 776.79 -				Brown SILTY SAND with sandstone fragments,	31.0			15-28-50/6"					
775.70				damp Brown SANDSTONE , soft to medium hard,				13-20-30/0					
뿌 <u>- 775.79 -</u> 쀻	-			eg weathered	32.0								
- III	╄ -			- auger refusal @ 32.0 ft.	J								
Completic Date Bori Date Bori Driller:	┼ -	-		Bottom of Test Boring @ 32.0 ft.									
OZ	35	th:		20 6 Domontos Barton con reste da	o bo d	۰. ما، ۰۰۰	na dell	lling operations	nd ct	ber!-		nloti :	<u> </u>
Completion				Remarks: Boring was noted to 2/18/22	o be ar	y auri	ng ari	mig operations a	nu at	norin	y com	hietio	711.
Date Bori				5/18/22									
Engineer			(CEM									
ଅ Driller:			N	Depth to Water @ 24 hrs.:									

NGE		Project Name: Mara Road Extension Toronto, Ohio								BORING NO.					
Environmental & Engineering Solut		Project Number: W2							В	-10					
V Liigineering Solut		Location:	Offset:				L				1				
_		Surface El.: 800.9 ft.	Oliset.							Ų	_%				
feet	로 SS	Surface Ει.: 800.9 π.			%		ant (e	%	nit	qe	ay %	\ 0			
on, le	. O	Split Spoon	Shelby Tube		/ery	RQD	Cor	inre	ı Li	t r	Ö	Sand %			
Elevation, feet Depth, feet	Symbol / USCS		 Bag Sample		Recovery	ĕ	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sar			
	Syl Syl	Nock Cole	D bay Sample		~		B)	Σ	ij	Pa	Silt				
		MATERIAL DE	SCRIPTION												
	77.7	TOPSOIL					3-3-2								
799.44	1/ 7/			1.5			(5)								
├ † †		Brown SILTY to SANDY CL	AY with rock												
+ $+$		fragments, moist, medium s	tiff to hard				4-5-7								
+ + +							(12)								
5															
							7-9-12								
							(21)	-							
								-							
 							7-7-12								
+ + /							(19)								
								_							
							8-12-15 (27)								
							(21)								
		w/numerous conditions fro	amanta												
 		 w/numerous sandstone fra (12.5 - 17.5 ft.) 	igments				11-14-17 (31)								
+ + +		,		ŀ	(01)										
		- COLLUVI	LIM					_							
		- COLLOVI	Olvi -				10-12-15 (27)								
							(=: /								
783.44				17.5			44.40.0								
		Brown SILTY to SANDY CL	AY with residual				11-13-9 (22)								
t + +	Y ////	shale, moist, very stiff						1							
	-						10 12 10								
+ $+$ $+$							10-12-10 (22)								
	Y ////						. , ,	-							
55															
775 04				25.0											
775.94 _ 25				25.0			19-18-21	-							
÷ + +/		Brown SILTY SAND with sal damp, dense	ndstone fragments,				(39)								
		damp, dense													
ਰੂ <u> 772.94</u>	7111			28.0			23-50/4"	-							
STAT T	1///	Brown SANDSTONE , mediu	ım hard, weathered					1							
30			nara, maameraa												
							50/2"								
# 768.34 +	/ / \			32.6											
N				02.0			50/1"								
		Bottom of Test Bor	ing @ 32.6 ft.												
35															
Completion Depth:			Boring was noted to	be dry	durir	ng dril	ling operations a	nd at	boring	com	pletio	n.			
Date Boring Started	d: 5/	18/22													
Date Boring Completing Engineer/Geologist		18/22 EM													
775.94 25 775.94 25 775.94 30 772.94 768.34 768.34 768.34 768.34 768.34 Date Boring Started Date Boring Completion Depth: Date Boring Completion Driller:			Water @ 24 hrs.:												

	N	GF			Project Name: Mara Road Extension Toronto, Ohio								BORING NO.					
	Envi		al & Ge	otechnic	Project Num							B-11						
ŀ	LIIBI	ilicering .	Jointion		Location:		Offset:			Π		Π						
1	+:			တ	Surface El.: 8		Oliset.							×	%			
	fee	eet	ype	SC					· %		unt re)	%	mit	nde	lay ⁶	%		
	tion,	th, f	e) / L	Split Sp	oon	Shelby Tub	е	ver	RQD	/ Co	ture	d Li	iŧy	O P	Sand %		
	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	ore 🖺	Bag Sample	е	Recovery	"	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	S		
	⊞		00	Sy		ERIAL DESC			"		_		_	ä	Si			
F			/	<i>*************************************</i>							6-4-4							
ŀ		 	łX		Brown SILTY to fragments, mois						(8)							
ļ		Ļ -			3 ,	,												
											0.0.40	-						
		† -	1X		- w/gray mottling	from 2.5 ft.					6-8-12 (20)							
ŀ		┼ -	$\overline{}$									1						
ŀ		 5 -										-						
L		↓ _	lХ								32-10-7 (17)							
											(,	-						
ľ		† -	<u> </u>									1						
ŀ		+ -	\mathbb{K}								7-8-9							
ŀ		├ -	\vdash								(17)	-						
L		10_																
						- COLLUVIUM	•				9-10-13							
ľ		† -									(23)	1						
ŀ		+ -	1															
╁		- -									6-6-8							
		L.									(14)							
		15																
İ		† '°-									8-11-14	1						
ŀ		┼ -	$/\!\!\!\!/$								(25)							
╁		- -																
		L.	$ \downarrow $								6-8-12	1						
			X								(20)							
Ī		†						00.0										
/22	786.97	20	/	6(X%)				20.0			5.5.0	-						
6/10		-	łХ		Brown SILTY SA	ND , damp, med	lium dense				5-5-6 (11)							
GDT		Ĺ _										1						
Ж Т																		
ž		† -	1															
IS.GF		┼ -	1															
POR	781.97	25	\sim					25.0			50/2"							
G RE		↓ -			Brown SANDST	ONE, medium h	ard, weathered				00/2	1						
N LO				\`\\														
ÆTE		Τ -		/ / \	- auger refusal (9 20 2 ft					50/3"	-						
TRO F	- 778.77 -	 			- auger reiusar (<i>y</i> 20.2 II.		28.2	_		30/3	1						
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22		┼ -	-		Bottom	of Test Boring (28.2 ft.											
<u>N</u>	30							40 50 -	٠. الم	mar -1:1	lling or sucti - :-	mel -1	he"		ml-t'	_		
90	Date Bori				8.2 ft. 5/19/22	Remarks: Bo	oring was noted	to be dr	y auri	ng drii	iling operations a	ına at	porin	y com	pietio	n.		
SICI	Date Bori	ng Cor	mplet	ed: 5	/19/22													
3E B/		Engineer/Geologist: CEM					@ 04 b											
일	Driller:																	

NGE	Project Name: Mara Road Extension Toronto, Ohio		BORING NO.							
Environmental & Geotechnical Engineering Solutions	Project Number: W22072				B-12					
	Location: Offset:									
	Surface El.: 801.1 ft.						_	%		
feer Jack Ja	buriace El 601.111.	%		e)	%	nit)de	ay ⁹	%	
on,	Split Spoon Shelby Tube	very	RØD	Jan Co	ture	<u> </u>	<u>₹</u>	Ö	Sand %	
Elevation, feet Depth, feet Sample Type Symbol / USCS	Rock Core B Bag Sample	Recovery	ı č	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay	Sal	
		_ œ		_ <u>_</u> _	2		Pa	Sil		
	MATERIAL DESCRIPTION							1		
800.77	TOPSOIL			6-7-9						
	Brown SILTY to SANDY CLAY, moist, stiff to			(16)	_			1		
	hard							1		
	- w/gray mottling (2.5 - 4.0 ft.)			12-13-18 (31)				1		
F + + + + + + + + + + + + + + + + + + +				(01)	-			1		
- 5 - 5				0.0.0	-			1		
				6-3-9 (12)				1		
					1			1		
				8-13-19	-			1		
				(32)				.		
								.		
				6-7-12				1		
				(19)	_			1		
								1		
				5-7-9 (16)				.		
F + _ + _ + +				(10)	-			.		
15	- w/sandstone fragments from 15.0 ft.			7-12-9	-			.		
	C			(21)				1		
								.		
				6-6-9	1			.		
				(15)	_			.		
20	001111111111							.		
	- COLLUVIUM -			8-6-11 (17)				.		
				(,	-			1		
								1		
								1		
25								.		
				5-6-11				.		
				(17)				.		
								.		
								.		
								1		
771.07 30	30.0			50/0"	_			1		
	Brown SANDSTONE , medium hard to hard,			50/2"	1					
	weathered							.		
768.47	32.6	-		50/1"	7					
	Bottom of Test Boring @ 32.6 ft.				1					
35										
Completion Depth: 32.6	6 ft. Remarks: Boring was noted to be di	ry duri	ing dril	lling operations a	and at	borine	g com	pletio	n.	
Date Boring Started: 5/19	9/22									
Date Boring Completed: 5/19 Engineer/Geologist: CEI	9/22 M									
Driller: NG										

N	GF			Project Nam	Project Name: Mara Road Extension Toronto, Ohio								BORING NO.					
Envi		tal & Ge	otechnic	Project Num							B-13							
V Eligi	ineering .	Solutio	15	Location:	DGI. WZZO	Offset:												
1 _			ا _س ا	Surface El.: 7	02 6 #	Oliset.							Ų	%				
fee) je	ype	SC	Surface El 1	93.6 IL.			%		e) nut	%	ii.	(apt	ay º	9			
jon,	h, fe	l –) / I	Split Spo	oon	Shelby T	ube	ver)	RQD	alu O Co	ture	<u> </u>	ty II	d CI	Sand %			
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	re 🖺	Bag Sam	nnle	Recovery	<u> </u>	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa			
ı		Š	Syr				ipio	~			=	_	Pla	Sii				
					ERIAL DESC	RIPTION												
	Ł.		1 7 1 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	TOPSOIL						4-5-7 (12)								
792.12	-	\vdash	6 <i>5</i> 27 <i>5</i> 2				1.5			(12)								
L.		<u></u>		Brown SILTY to														
	-	\forall		fragments, mois	i, stiff to very st	ШΤ				8-12-13 (25)								
	} -	\vdash								(23)	-							
-	_ 5 _										_							
-	┨ .	$\mathbb{I}X$								7-8-11 (19)								
ļ .	-									(13)	-							
L .	_										4							
	-	$1\times$								5-9-9 (18)								
	} -	\vdash								(10)	-							
-	10_										_							
-	┨.]X								6-7-11 (18)								
-	-								(10)	-								
L .		<u></u>																
	-	$1 \times$						5-7-10 (17)										
	- -	\vdash								(17)	-							
-	_ 15 _				- COLLUVIUM						_							
F -	┨.	X			- COLLOVION	-				5-6-11 (17)								
-										(17)	-							
ļ .	_	\vdash									-							
L.	」 -	1X								12-7-8 (15)								
	-	\leftarrow								(12)	-							
773.62	20						20.0				-							
F -	╣ -	ļХ		Brown SILTY to		with residual				5-7-7 (14)								
	Ł.			shale, moist, stif	f					()	1							
	_																	
[5] 		1																
	-	1																
^Z	25	\searrow					25.0			50/3"	-							
- 1S.G	┧ -			Brown SANDSTO	ONE , medium h	ard to hard,				00/0	1							
	Ł.		[\`,]	weathered														
		><	/							50/2"	-							
의 ~L -		1								00/2	1							
道 世 里	-	1	$\left[\begin{array}{c} \\ \\ \end{array}\right]$															
ੈ <u>763.52</u>	_ 30 _			- auger refusal @	y 30.1 ft.		30.1											
768.62 - 768	Bottom of Test Boring @ 30.1 ft.																	
O		44.		0.4.6	Daniel -		a al 4 - 1 - 1			 		h'		m1-4"				
Completic				0.1 ft. /19/22	Remarks: B	oring was not	ea to be dr	y auri	ng dril	lling operations a	and at	poring	g com	pietio	n.			
Date Bori	ng Co	mplet	ed: 5	/19/22														
Engineer/	/Geolo	gist:	C	EM	5	0.044												
의 Driller:			<u> </u>	IGE	Depth to Wat	er @ 24 hrs.:												

1	N	GE			Project Name: Mara Road Extension Toronto, Ohio							BORING NO.					
	Envir		al & Ge	otechnic	Project Num							B-14					
╌	Engil	neering S	Solution	ns 	Location:	Del. VVZZUI	Offset:						_				
-				, n		00.6.4	Oliset.							>	9		
-	feet	et	/be	SCS	Surface El.: 7	98.6 π.			%		nr (e	%	ij	yaey	ay %	۰,0	
-	on,), fe	e T		Split Spo	oon	Shelby Tube	е	/ery	RQD	Cor	nre	 - -	ty Ir	Ö	Sand %	
	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co		Bag Sample		Recovery	~	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sar	
	ă		Ϊ́	Syr					ď		ш	_		Pla	Si		
ŀ				1111111	MAII	ERIAL DESC	RIPTION										
	798.36 _		$1 \times$		TOPSOIL			_/\0.2/			4-4-8 (12)						
╌	-		\vdash		Brown SILTY to very stiff	SANDY CLAY,	moist, stiff to				(12)	1					
		-	<u> </u>		very sun							1					
			\mathbb{K}		- brown and gray	, moist to very	moist				7-6-7						
	-	├ -	\backslash		(0.0 - 5.0 ft.)	·					(13)	-					
H	_	_ 5 _															
H	-	<u> </u>									4-5-7						
F		Γ -	\sim								(12)	1					
L		-										_					
-			\mathbb{X}								8-10-11						
Г											(21)	-					
H	- 10 10																
H	-		$\backslash\!\!\!\backslash$								7-8-10						
\perp		Γ -	\sim			- COLLUVIUM	-				(18)						
L	. <u> </u>	-										_					
			\mathbb{K}								5-6-9						
ı	-	├ -	$\backslash\!\!\!/$								(15)	-					
\perp	-	_ 15 _															
\perp	-		\bigvee								7-8-11						
L	_	_									(19)	1					
L	=	<u> </u>															
\perp	780.56		\mathbb{N}	(/XX)				18.0			6-5-5						
	-	├ -	$\backslash\!\!\!/$		Brown CLAYEY fragments, damp						(10)	-					
╁	-	_20 _			iraginents, dam	, medium dens	C										
\vdash	-		$\backslash\!\!\!\backslash$								6-7-8						
22	_										(15)						
(10/		<u> </u>	1														
3DT			-														
<u>"</u>	-	├ -	-														
J NG	-	_25_										1					
S.GP	-	L	$] \times$		- wet @ 25.0 ft.						9-10-50/5"						
ORT		Γ -	\vdash									-					
A.	771.06						27.5			50/0"							
LOG				/·	Brown SANDST	ONE, medium h				50/2"	1						
H	_		-		weathered												
SOME	768.46	_ 30 _						30.1			50/4"	1					
EI-	-	L _			Bottom	of Test Boring (@ 30.1 ft.				50/1"	1					
NGE BASIC LOG- NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22																	
g-N	Completio				0.1 ft.		ater was noted at	t a dept	h of 2	5.0 ft.	during drilling op	eratio	ns an	d 28.1	ft. at		
O LO	Date Bori				/19/22	boring compl	etion.										
BASI	Date Borin Engineer/				/19/22 EM												
NGE	Driller:		J. J.		IGE	Depth to Wate	er @ 24 hrs.:										

N	GF			Project Name: Mara Road Extension Toronto, Ohio							BORING NO.					
Env	ronment ineering	al & Ge	otechnic	Project Num	ber: W2207						B-15					
V LIIB	lineering .	Jointion	13	Location:		Offset:										
			ဖ တ	Surface El.: 7		Oliset.							×	%		
fee	eet	ype	SC					% /		unt ie)	%	mit	nde	lay ⁶	%	
ion,	₹	le T	١/١	Split Spo	oon	Shelby Tube		veri	RQD	/ Co /alu	ture	d Li	ity I	l) p	Sand %	
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	ore 🖂	Bag Sample		Recovery	~	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	S	
		S	Sy		ERIAL DESC			ш		_	_		Pi	Si		
		/								4-5-5						
-	† -			Brown SANDY C stiff	LAY with rock fi	ragments, wet,				(10)						
790.37	<u> </u>			_	- FILL -		2.5									
-	┼ -	\mathbb{X}		Brown SANDY C	LAY with rock for	ragments				7-7-8						
-	┼ -	\vdash		moist, stiff to ver	y stiff	g,				(15)	-					
ļ .	5 _										_					
ļ	↓ .	lΧ								9-12-11 (23)						
L .	L.			- thin, gray, high	ly plastic layer (2) 6.0 π.				(=3)	-					
										44.044	-					
		1X								11-9-11 (20)						
	T										1					
-	10_	/			- COLLUVIUM	-				5-7-9	1					
-	┼ -									(16)						
-	┼ -															
-	╄ -			- with numerous	sandstone rock				17-11-9	1						
<u> </u>	↓ .			(12.5 - 14.0 ft.)						(20)						
<u> </u>	15															
		\bigvee								4-6-7						
										(13)	-					
	T -										1					
<u> </u>	† -	\mathbb{X}								5-4-6 (10)						
-	┼ -	\vdash								(10)	-					
-	20_										-					
	╄ -	ļΧ								4-7-9 (16)						
0/22	L.									(- /	1					
1 6/1																
1.GD																
HD 707.07		1					05.0									
Z _ 767.87 .	25	×	<i>(***</i> *********************************				25.0			50/2"						
RTS.(┼ -	1	[`	Brown SANDST weathered	ONE, medium ha	ard to hard,										
- FPO	╄ -	-	<u> </u>													
90 -	↓ -	\geq								50/3"						
ER .	L.															
OMET	30 _															
요 762.57		\sim	/				30.3			50/3"	7					
762.57 762.57] -	1		Bottom	of Test Boring (② 30.3 ft.										
Completi				0.3 ft.	Remarks: Bo	oring was noted to	be dr	y duri	ng dril	lling operations a	and at	boring	g com	pletio	n.	
Date Bor				/23/22												
Date Bori				//23/22 ILS												
Driller:	55010	g.ot.	N	IGE	Depth to Wate	er @ 24 hrs.:										

N	GF			Project Nam	e: !	Mara R Foront	Road E o. Oh	Extensi io	ion				В	ORI	NG	NC).
Envir		al & Ge	eotechnic	Project Num										Е	3-16	6	
Liigii	licering .	Jointion		Location:	DCI.	***	Offs	ot:									
1 .			ا ₍₀	Surface El.: 7	0E 0 4	£4	Olis	Gi.							Ų	%	1
fee	et	ype	SC	Surface El 1	05.0 1	ι.				%		e) nut	%	ıit.) de	ay º	Q.
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Split Sp	on	X	Sh	elby T	ube	Recovery	RQD	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sand %
evati	ept	m	loqu	Rock Co	rο	□ □] Ra	g Sam	nle	900	Ř	wo 7- N-N,	lois	quic	stici	and	Sal
		တိ	Syr						Pic	ď		<u> </u>	2		Pla	Silt	
			14 1/2 /1		RIAL	_ DESC	CRIPT	ION									
784.72	 	$1 \times$		TOPSOIL						1		3-3-4					l
		\sim		Brown SANDY C	LAY w	ih rock f	fragme	nts,				(7)	-				
-	† -			moist, medium s	tiit to s	SUIT											
-	├ -	\mathbb{N}		- brown and gray	(0.0 -	1.5 ft)						4-6-5					
-	Ļ −	\bigvee		3 .	(- /						(11)					1
	_ 5 _																
		\bigvee			- COL	LUVIUM	1 -					5-6-10					1
† -	† -											(16)					1
-	├ -	-															
777.02									8.0			9-7-7					
				Brown SILTY CL	AY, m	oist, ver	y stiff to	o hard				(14)					
	10						-										
† -	†											12-11-16	1				
	├ -	$/\!\!\!\!/$										(27)					
-	┡ -																
	L.											16-11-17	1				
		X										(28)					
-	- ا												1				1
-	15_	/										20-21-19	1				1
-	├ -	łХ										(40)					1
	L .																
												12-9-9					
	Γ	1X										(18)					
-	┼ -												1				
-	_20_											10.11.11	-				
-	Ļ -	ĮХ										10-11-14 (25)					
0/22	L _												1				
6/1																	
- Ide	† -	1															
- H		1															
760.02	25	<u>~</u>							25.0			50/2"	1				
S.G	L.			Brown SANDST	ONE, n	nedium l	hard to	hard,				30/2	1				
1908 180				weathered													
	† -											50/0"					
<u> </u>	┼ -		/ < \									50/2"	1				
H – –	- -	-															1
₩ 0 _ 754.92 _	30 _								30.1			50/48					
뿐 	L _			Bottom	of Test	t Boring	@ 30. ⁻	1 ft.				50/1"	1				
760.02 760.02																	
Completio				0.1 ft.	Rem	arks: E	3 oring	was note	ed to be dr	y duri	ng dri	lling operations a	and at	borin	g com	pletic	n.
Date Borir				5/23/22 5/23/22													
Engineer/				NLS													
Driller:			N	IGE	Dept	h to Wa	ter @ 2	24 hrs.:					_				

N	GF			Project Nam	ne: Mara Ro Toronto	oad Extension. Ohio	on				B	ORI	NG	NC).
Envi		al & Ge	otechnic	Project Num	nber: W2207	•						Е	B-17	,	
Liigi	ileering .	Jointion	15	Location:		Offset:								1	
			w	Surface El.: 7		Oliset.							¥	%	
fee	et	ype	SC	Surface El I	02.4 IL.			%		e) nut	%	nit.	юρι	ay º	vo.
ion,	h, fe	le T	١/ ١	Split Sp	oon	Shelby Tu	ıbe	ver)	RQD	aln C	ture	<u> </u>	ty II	d Cl	Sand %
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	ore 🖂	Bag Samp	nle	Recovery	<u>~</u>	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa
ı	"	Š	Syr				310	22			_	_	Pla	Sil	
					ERIAL DESC										
-	<u> </u>	X		Brown SANDY (fragments, med	CLAY with nume ium stiff, moist	rous rock				2-2-3 (5)					
- _ 779.86 -	ॄ -				- FILL -		2.5			(0)					
- 770.00 -	- 1						2.0			3-3-5	1				
	<u></u> -	\swarrow		Brown SANDY (moist, stiff to ha	CLAY wih rock frond front fron	agments,				(8)					
	_ 5 _			moiot, our to na							_				
	1 -	ļХI								4-7-10 (17)					
	┇ -										1				
<u> </u>	ॄ -									8-9-9					
<u> </u>	<u> </u>									(18)					
F -	_ 10 _														
F -	Ĺ -	X			- COLLUVIUM	-				7-9-12 (21)					
-	Ĺ -									(21)	1				
<u> </u>	Ĺ .									3-5-6					
<u> </u>	Ĺ _	\triangle		- silty (12.5 - 14.	0 ft.)					(11)					
	15_														
<u> </u>	Ĺ.									7-8-13 (21)					
<u> </u>	Ĺ.									(21)					
-	Ĺ.									8-12-9					
-	Ĺ.	X								(21)					
F -	20														
F -	Ĺ _	\sum								7-10-11					
-	Ĺ _	\vdash								(21)	1				
F -															
-	ſ ⁻														
	25														
- 10/2	-									8-12-13					
<u>-</u>	┼ -									(25)					
<u>754.86</u> _	-						27.5				-				
- NG	┼ -	X		Brown SILTY SA		al sandstone,				16-19-32 (51)					
752.36	30			damp, very dens	se		30.0								
STR	+		/ / \	D CANDOT	ONE		00.0			50/1"					
- ARE	┼ -		/ _ \	Brown SANDST weathered	ONE, medium na	ard to nard,									
9 -	├ -	_								50/2"					
띮 -	├ -	1								50/2	1				
- 747 00 -	_		/ _ \				25.4								
747.26	 33 						35.1			50/1"					
754.86	├ -			Bottom	of Test Boring (@ 35.1 ft.									
Completion	on Dep	th:	3	5.1 ft.	Remarks: Bo	oring was note	d to be dr	y duri	ng dri	│ ling operations a	nd at	boring	g com	pletio	n.
Date Bori	ng Sta	rted:	5	/23/22						•		•			
Date Bori				/23/22											
Engineer	Geolo	yısı:		ILS IGE	Depth to Wate	er @ 24 hrs.:									

N	GF			Project Nam	e: Mara Ro Toronto	oad Extensio . Ohio	n				В	ORI	NG	NC).
Envi		al & Ge	otechnic	Project Num	ber: W2207							Е	3-18	}	
V LIIBI	licering .	Jointion		Location:		Offset:						1			
			၂ တ	Surface El.: 7		Oliset.							×	%	
Elevation, feet	et	Sample Type	Symbol / USCS	Surface El 1	79.0 IL.			%		Blow Count (N-Value)	%	nit.	Plasticity Index	Silt and Clay %	9
on,	Depth, feet	e T) 	Split Spe	oon	Shelby Tul	ре	Recovery	RQD	alu Co	Moisture %	Liquid Limit	ty Ir	C	Sand %
vati	ept	d L	oqu	Rock Co		Bag Samp	ما	000	ش		lois	quic	stici	ano	Sal
l H		Š	Syn	TOCK O		Day Gamp		ď		<u> </u>	≥		Pla	Silt	
			XXXXX	MATI	ERIAL DESC	RIPTION									
		X		Brown SANDY C	LAY with rock fr	ragments,				2-3-6					
	Γ	\sim		moist, stiff to ver	y stiff					(9)	1				
-	╁ -														
<u> </u>	-									8-10-11					
		$/ \setminus$								(21)					
	Γ, ¯														
-	5 -	/								5-8-12	1				
ļ -	┡ -	ĮХ								(20)					
										, ,	1				
	Γ -	<u></u>									-				
-	┼ -	\mathbb{X}			- COLLUVIUM -	-				7-9-11					
L -	Ļ −	\swarrow								(20)					
	10														
	T -			- brown and gray	mottling (10.0 -	· 11.5 ft.)				8-8-10	1				
-	┼ -	$/\!\!\!\!/$								(18)					
L .	L _										1				
											1				
_	† -	1X		- with few rock fr	agments (12.5 -	20.0 ft.)				4-6-6 (12)					
-	┼ -	$\overline{}$,	1				
<u> </u>	_ 15 _										_				
		X								5-7-9					
	Γ -									(16)	-				
-	┼ -	1													
L -	Ļ −									8-5-6	1				
		$ \wedge $								(11)					
	\prod_{n}														
	_ 20 _	/								7.7.40	1				
0/10	Ļ −	ĮΧ								7-7-13 (20)					
TOS											1				
0 N -	 	1													
	↓ -	-													
DRTE	25														
<u>753.51</u>		\boxtimes					25.5			21-50/1"					
၅ <u>–</u> –	+ -	1	K~\	Brown SANDST	ONE , medium ha	ard to hard									
# - -	┡ -	-													
T 750 74		><	[`	- auger refusal @	28.3 ft.		00.0			50/2"	1				
[<u>750.71</u>		1					28.3								
Completic Date Bori Engineer/ Driller:	† -	1		Bottom	of Test Boring (@ 28.3 ft									
Completic	30 n Den	th:		8.3 ft.	Remarks: Pa	ring was noted	to be de	v duri	na drii	ling operations a	nd at	horin	n com	nletic	n .
Date Bori				6/24/22	Nomans. DC	mig was noted	to be ul	y uuri	. ıy urlı	mig operations a	u at	DOI III	9 00111	hielio	
Date Bori	ng Cor	mplet	ed: 5	124/22											
Engineer/	Geolo	gist:		ILS	D	0.644									
일 Driller:			<u> </u>	IGE	Depth to Wate	er @ 24 hrs.: 🕒	-								

NGE	Project Name: Mara Road Extension Toronto, Ohio				В	DRI	NG	NC).
Environmental & Geotechnical						В	-19		
Engineering Solutions	Project Number: W22072						,- 13	1	
	Location: Offset:								
et et SSCS	Surface El.: 748.6 ft.	%		înt	%	ij	dex	% 	. 0
on, 1 e 1, fe V.	Split Spoon Shelby Tube	ery	RQD	Cou	an	Lin	y In	ဗိ	% p
Elevation, feet Depth, feet Sample Type Symbol / USCS		Recovery	X	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sand %
Be Sa Sym	Rock Core Bag Sample	ď		m)	Σ	Ë	Plas	Silt	
	MATERIAL DESCRIPTION								
748.3	TOPSOIL Brown SANDY CLAY with rock fragments,			WOH-2-2					
	moist, soft			(4)					
746.1	- POSSIBLE FILL - 2.5								
				3-4-4					
	Brown SANDY CLAY with numerous rock fragments, moist, stiff to very stiff			(8)					
5	·								
				4-5-8					
				(13)					
				04.40.40					
	- with numerous rock fragments (7.5 - 9.0 ft.)			21-19-13 (32)					
				. ,					
10	- COLLUVIUM -								
	- COLLOVIOW -			7-9-11 (20)					
				(20)					
	14 1 14 (40 5 47 5 %)			50/01					
	- sandstone boulders (12.5 - 17.5 ft.)			50/3"	1				
15									
				50/2"	1				
731.1	17.5								
	Brown SILTY SAND , damp, loose to dense			8-5-3					
	Siemi Cieri Grand, damp, losse te dones			(8)					
20									
	- very silty (20.0 - 26.5 ft.)			4-8-6					
				(14)					
25									
				6-7-7					
				(14)					
2 7 30 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	5 ft. Remarks: Boring was noted to be do	ry duri	ng dril	ling operations a	nd at I	boring	com	pletio	n.
Date Boring Started: 5/24	4/22	,	J	U [1				,	
Date Boring Completed: 5/24	4/22								
Completion Depth: 41.8 Date Boring Started: 5/24 Engineer/Geologist: NLS Driller: NG									

	N	GF			Project Nam	e: Mara Ro Toronto	oad Exten	sion				В	ORI	NG	NC).
	Envi	ronment neering S	al & Ge	otechnic	Project Num								Е	3-19)	
ŀ	V Engi	neering 3	Solution	is .	Location:	Dei. WZZUI	Offset:					T			1	
	.			တ	Surface El.: 7	18 6 ft	Oliset.							×	%	
	fee	eet	ype	SC					% /		unt ie)	%	шit	nde	lay ⁶	%
	ion,	.f.	e	7/	Split Sp	oon	Shelby	Tube	veri	RQD	/ Co /alu	ture	d Li	ity I	D p	Sand %
	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	re 🖂	Bag Sa	mple	Recovery	~	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa
	ш		S	Sy		ERIAL DESC		'	Ľ			_		Pla	S	
ŀ											27.40.42	+				
İ		† -	ļΧļ		Brown SILTY SA	ND, damp, loos	se to dense				27-19-13 (32)					
ŀ		┧ _														
ŀ		-			- with few rock fr	agments from 3	30.0 ft.									
						3										
		<u> </u>														
İ		_35_														
ł		┨ _	IXI								5-7-6 (13)					
ŀ		4	\vdash								(10)					
		<u> </u>														
Ī		1 -														
ŀ		40_														
ŀ		-	\mathbb{N}								6-9-5					
ļ	707.1							41.5			(14)					
	_				Bottom	of Test Boring (@ 41.5 ft.									
		} -														
ŀ		┞ -														
ŀ		45_														
-		-														
		<u> </u>	1													
Ī		† -														
ŀ		┧ _														
ŀ		50														
0/22																
T 6/1		-														
1.GD		} -														
NGE.		ऻ -														
GP.		Ĺ _														
RTS		55														
Ä																
90																
띪		1 -														
) ME		┧ _														
ETR		4														
FEN		ļ														
J-R	Completion	│ <u>60</u> on Dep	ıl oth:	4	1.5 ft.	Remarks: B	oring was n	oted to be dr	y duri	ng dril	ling operations	and at	borine	g com	pletio	n.
Ĭ,	Date Bori	ng Sta	rted:	5	/24/22		-	 ,			- • • • • • • • • • • • • • • • • • • •		•	-		
3ASIC	Date Bori				/24/22											
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22	Engineer/ Driller:	Geolo	yısı:	N N	ILS IGE	Depth to Wat	er @ 24 hrs.	:								

NGE	Project Name: Mara Road Extension Toronto, Ohio	В	ORI	NG	NC).
Environmental & Geotechnical Engineering Solutions	Project Number: W22072		В	3-21		
	Location: Offset:	1				
	Curfo o o Cl. 740 7 ft			Ų	9	
feer Jype SC\$	Surface El 740.7 IL.	%	mit	nde)	ay 🤅	%
ion, fe	Split Spoon Shelby Tube	ture	d Li	ity Ir	D D	Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Split Spoon Shelby Tube Shelby Tube Rock Core B Bag Sample Shelby Tube	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sa
		_		띪	Si	
	MATERIAL DESCRIPTION					
748.53	TOPSOIL					
	Brown SANDY CLAY with rock fragments, (5)					
	moist, medium stiff to very stiff					
	4-4-4					
	(8)					
5						
	- with few rock fragments (0.0 - 7.5 ft.)					
	(8)					
	8-9-12 (21)					
10						
	7-10-15 (25)					
	(20)					
	6-8-12					
	(20)					
- 15						
	- COLLUVIUM - 7-10-11					
	(21)					
	8-9-5					
	(14)					
20	6-4-7					
	(11)					
ž						
F 723.73 - 25	25.0	_				
	Brown SILTY SAND with few rock fragments, damp, medium dense to dense (12)					
	damp, medium dense to dense					
9 30					_	
Completion Depth: 41.	5 ft. Remarks: Boring was noted to be dry during drilling operations	and at	borin	g com	pletio	n.
Date Boring Started: 5/29 Date Boring Completed: 5/29	5/22 5/22					
Engineer/Geologist: NLS						
Driller: NG						

NGF	Project Name: Mara Road Extension Toronto, Ohio	В	ORI	NG	NC).
Environmental & Geotechnical Engineering Solutions	Project Number: W22072		В	3-21		
	Location: Offset:	1		1		
	Curfo oo El . 749 7 #			×	%	
fee leet leet lest lest lest lest lest le	trace cl 740.7 IC.	%	mit	nde	lay ⁶	%
lion,	Split Spoon Shelby Tube	ture	d Li	iŧy	РС	Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Split Spoon Shelby Tube Rock Core B Bag Sample	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	S
	MATERIAL DESCRIPTION	-	_	Ä	S	
+ + + X	Brown SILTY SAND with few rock fragments, damp, medium dense to dense					
	damp, modulin dense to dense					
- 35						
F 4 1XM	11-9-11 (20)					
	(20)					
- 40						
	6-8-7					
707.23	41.5					
	Bottom of Test Boring @ 41.5 ft.					
† † † 						
- -						
45						
F +						
<u> </u>						
50						
9						
집						
Si						
所						
O Completion Depth: 41.	5 ft. Remarks: Boring was noted to be dry during drilling operations	and at	boring	g com	pletio	n.
Date Boring Started: 5/2	5/22					
Date Boring Completed: 5/2	5/22					
Engineer/Geologist: NLS Driller: NG						

	N	GE			Project Nam	ne: Mara Tor o	a Road	d Extension Ohio	n				В	ORI	NG	NC).
1	/ Envir		al & Ge	otechnic	Project Num									Е	3-22	2	
ŀ	Engir	neering	Solution	ns		ibei. VVZ		ffoot:					1			· 	
				, n	Location:	745 O 64	U	ffset:							_	9	
	feet	et	/be	SCS	Surface El.: 7	45.3 π.				%		e)	%	nit	yapı	ay %	νο.
	on,), fe	e))	Split Sp	oon		Shelby Tub	е	/ery	RQD	Cor	nre	l Li	ty Ir	Ö	Sand %
1	Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Co	·		Bag Sampl		Recovery	Ä	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sar
	Ш		"	(S)	MAT	ERIAL DE	SCRI	PTION		1					П	S	
F	744.98 -	-	7	XXXXXX	TOPSOIL				<u></u>			2-3-6					
		ļ -	ĮХ		Drawn CANDY	DI AV mille me	l. 					(9)					
	_				Brown SANDY (moist, stiff to ve	ry stiff	оск тад	ments,					1				
╌		- T	\longrightarrow										-				
┈┞		├ -	1×1									3-6-8					
			\swarrow									(14)	-				
	_	5															
╁		- T										5-7-9					
┡												(16)					
- 1																	
		L _										9-9-12	1				
H			X			- COLLUVI	UM -					(21)					
⊦		-															
L	_	_ 10 _											-				
- 1		L _	ĮΧ									11-13-12 (25)					
t		1	\vdash									(23)	-				
F	- 732.78 –								12.5				_				
L			\mathbb{N}		Brown SANDY \$	SILT with roo	ck fragn	nents, moist,				9-6-5					
- 1		L -	\angle		medium stiff to	stiff	3	, ,				(11)	_				
ı	_	15															
H		-										5-5-6					
╌												(11)					
- 1																	
		L _										5-3-4	1				
╁	_	-	X									(7)					
ŀ		-															
22	725.28	20							20.0								
6/10/		L -	ĮΧ		Brown SILTY SA	AND with roo	ck fragn	nents, damp,				4-4-5 (9)					
TÖ	_	1			medium dense							(1)	-				
1		-															
NG			1														
3.GP.			-														
ORTS		_ 25 _															
REP		1										7-7-8					
- 100		-			- with rock fragn	nents from 2	26.0 ft.					(15)					
TER		├ -	1														
OME		L -															
ĒTA		1															
		- 20	1														
-S-N	Completio	30 on Dep	th:	<u>101016</u> 3	88.1 ft.	Remarks:	Borir	ng was noted	to be dr	y duri	ng dril	lling operations	and at	borine	g com	pletio	n.
) 	Date Borir	ng Sta	rted:	5	5/24/22]					-	- *		•			
3ASIC	Date Borin		_		5/24/22 NLS												
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22	Engineer/ Driller:	GE010	yısı:		NGE	Depth to \	Water (@ 24 hrs.:	-								

	GE			Project Name: Mara Road Extension Toronto, Ohio				В	ORI	NG	NC).
En	vironment gineering	al & Ge	otechnic						Е	3-22)	
V C11	gineering	Solution	15	Location: Offset:					_		· 	
			S	Surface El: 745 3 ft						×	%	
fee	eet	ype	SC		%		unt ie)	%	mit	nde	lay 6	%
tion,	₹	le T	١/ ١	Split Spoon Shelby Tube	Ver	RQD	/ Co Valu	ture	d Li	ity I	D P	Sand %
Elevation, feet	Depth, feet	Sample Type	Symbol / USCS	Rock Core Bag Sample	Recovery 6	Œ	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Se
			o -	MATERIAL DESCRIPTION						ш	0,	
-				Brown SILTY SAND with rock fragments, damp,			9-12-13					
-	+ -			medium dense			(25)	-				
-	f -			- dark gray @ 31.0 ft.								
F	+ -	1										
F 740 00	+	1		25.0								
710.28 -	35	-	/	35.0			50/1"					
_	<u></u> -	1	/ ` \	Brown and gray SANDSTONE , hard								
		-	/									
707.18	<u> </u>		/ _ \	- auger refusal @ 38.1 ft. 38.1			50/1"	7				
	1 -			Bottom of Test Boring @ 38.1 ft.								
	40_											
	1.											
-	1											
F	-											
F	+ -	1										
-	45	1										
-	- 45	1										
L	+ -	1										
L	<u></u> -											
	<u></u> -	-										
8	_50_											
5/10/2	1.											
T05	1 .											
# 	-											
Z _	-											
TTS.G	+	1										
EPOF	55_											
-06	<u></u> -	1										
TER	<u></u> -	-										
SOME		-										
T E	1 -											
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE 1.GDT 6/10/22 Complete	60											
Complete Bo				8.1 ft. Remarks: Boring was noted to be dry d	during	g dril	ling operations a	nd at	borin	g com	pletio	n.
Date Bo Date Bo				/24/22 /24/22								
Enginee			N	ILS								
일 Driller:			N	IGE Depth to Water @ 24 hrs.:								

N	GF			Project Nam	e: Mar Tord	a Roa onto, (d Extension	on				В	ORI	NG	NC).
Envir		al & Ge	eotechnie	Project Num									Е	3-23	}	
Liigii	leering .	l		Location:	DC1. 112		ffset:				<u>l</u>					
↓			၂	Surface El.: 7	27 2 ft	O	11361.							×	%	
Elevation, feet	et	Sample Type	Symbol / USCS	Surface El 1	37.2 IL.				%		Blow Count (N-Value)	%	nit	Plasticity Index	Silt and Clay %	0
on,	Depth, feet	e T) _	Split Spe	oon		Shelby Tu	ıbe	Recovery	RQD	alu Co	Moisture %	Liquid Limit	ty II	Ö	Sand %
vati	ept	dm	lbo	Rock Co	ro [Bag Sam	ماد	900	Ř		lois	quic	stici	ano	Sal
E E		S	Syn	I NOCK CC	, C		Day Sairi	JIC	Ř		_ <u>_</u>	2		Pla	Silt	
				MATI	RIAL DE	ESCR	IPTION									
736.89				TOPSOIL							2-3-5					
-	├ -			Brown SANDY C	I AV with r	ock fra	nments				(8)					
-		L		moist, stiff to ver	y stiff	ουκ πας	gillonia,									
ļ -		\mathbb{N}									6-8-9					
L -		\swarrow									(17)					
L .	_ 5 _															
	L -	lХ									11-12-16 (28)					
	L _				- COLLUV	IUM -					(20)					
- 729.69 -								7.5			7-5-9					
-	-	1X		Brown SANDY S	ILT, moist,	stiff to	very stiff				(14)					
-	10	ľ														
-	- ¹⁰ -	/									8-8-11					
ļ -		X									(19)					
L -																
L _	<u> </u>										6-5-5					
	L .										(10)					
722.19	15							15.0								
-				Drown Cli TV CA	ND down	madiu	m danaa ta				4-9-12					
-	† -			Brown SILTY SA dense			m dense to				(21)					
-	├ -			- with rock fragm	ents from	16.0 ft.										
-	├ -	łX									5-6-4					
ļ -		\vdash									(10)					
L -	_20_															
	ļ -	ļХ									3-6-7 (13)					
	L -										(- /					
	L.															
_	1															
	25	1														
											5-9-9					
<u>}</u>	-										(18)					
<u>6</u> -		1														
ш <mark></mark>		1														
z ⊼L _	ļ -	-														
S. G.	_ 30 _															
706.19		$] \times$						31.0			12-35-50/4"					
			\geq	Gray SHALE , so	ft to modiu	m hard	weathered									
S	T -		\leq	Olay SHALL, SO	it to media	III IIaiu	, weathered				50/5"					
띮	-		$ \ge $								30/3	1				
<u>₩</u>	<u></u>	1	\leq													
Ĕ <u> </u>	_ 35 _	\sim	\geq					35.3			50/3"	1				
⊒ □ – –	├ -	-		Bottom	of Test Bor	rina @ :	35.3 ft.				20.0	1				
Q	<u> </u>	41-	<u> </u>					-14-1 .	<u> </u>		<u> </u>					
Completic Date Borin Engineer/ Driller:				35.3 ft. 5/24/22	Remarks	: Bori	ng was note	a to be dr	y duri	ng dri	lling operations a	nd at	poring	g com	pletio	'n.
Date Bori				5/24/22												
Engineer/		_		NLS												
의 Driller:			1	NGE	Depth to	Water	@ 24 hrs.:									

NGE	Project Name: Mara Road Extension Toronto, Ohio	В	ORI	NG	NO.
Environmental & Geotechnic Engineering Solutions			В	-24	
Engineering solutions	Location: Offset:				
	Confere El . 7047 #			×	%
feer feer ype	Surface El 734.7 IL.	%	nit l	nde)	ay %
ion,	Split Spoon Shelby Tube	ture	d Li	iţ	and Clay Sand %
Elevation, feet Depth, feet Sample Type Symbol / USCS	Surface El.: 734.7 ft. Split Spoon Rock Core Bag Sample **Congression of the congression Moisture %	Liquid Limit	Plasticity Index	Silt and Clay % Sand %	
	MATERIAL DESCRIPTION			₫.	σ
	TOPSOIL 6-7-9				
733.18	1.5 (16)				
	Brown SILTY SAND, damp, loose to medium				
	dense 3-4-4				
	(8)				
- 5 S					
	- with rock fragments (5.0 - 6.5 ft.)				
	(11)				
	6-9-5				
	(14)				
- 10					
	5-6-6				
	(12)				
	6-4-5 with rock fragments from 13.5 ft (9)				
	- with rock fragments from 13.5 ft.				
15					
F 4 JX M	7-7-6 (13)				
	7-7-9 (16)				
	(10)				
	8-10-10				
	(20)				
25					
	10-6-5				
	(11)				
704 69					
2 704.68 30 Sompletion Depth: 3	5.6 ft. Remarks: Boring was noted to be dry during drilling operatio	ns and at	boring	g com	oletion.
Date Boring Started: 5	/25/22				
	1/25/22 II S				
	ILS IGE Depth to Water @ 24 hrs.:				

N	GF			Project Nan	ne: Mara l Toron	Road Extension Ito, Ohio	า				В	ORI	NG	NC).
Envi		al & Ge	eotechnic	Project Nun								Е	3-24		
V Eligi	neering 3	Solutio		Location:	IDGI. VVZZ	Offset:			1						
			၂ ၂	Surface El.:	24 7 ft	Oliset.							×	%	
Elevation, feet	eet	Sample Type	Symbol / USCS					% /		Blow Count (N-Value)	%	mit	Plasticity Index	Silt and Clay %	%
ion,	.f.	le T	۱ / ۱	Split Sp	oon	Shelby Tub	е	ver	RQD	/ Co /alu	ture	d Li	ity I	IJр	Sand %
evat	Depth, feet	amp	oqu	Rock C	ore 🏗	Bag Sample	е	Recovery	~	Mow (-N)	Moisture %	Liquid Limit	stic	t an	Sa
	-	S	Sy			CRIPTION					_		Pla	Sil	
<u> </u>	├ -	X	\leq	Gray SHALE , s	oft to medium	hard, weathered				18-22-50/6"					
-	╁ -		\leq												
	-	\geq	\leq							50/3"	1				
L .	Γ -		\leqslant												
	h -		\geq												
699.18	35_		\leq				35.5			50/6"	-				
-				Rottom	of Tost Boring	@ 35 5 foot					1				
-	Ł			MOIJOG	of Test Boring	w 55.5 leet									
ļ															
	-														
	} -														
<u> </u>	40_														
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	50														
10/22	Γ -														
/9 ТС	-														
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파 도	-														
É L	[1													
NGE BASIC LOG - NO PENETROMETER LOG REPORTS: GPJ NGE 1.GDT 6/10/22 Completic Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Date Bori Driller:	60 on Dep	th:	3	5.6 ft.	Remarks:	Boring was noted	to be dr	y duri	ng dri	Iling operations a	and at	boring	g com	pletio	n.
Date Bori	ng Sta	rted:	5	/25/22		_			-	= *		,			
Date Bori				/25/22 ILS											
Engineer	Geolo	yısı.		IGE	Depth to W	ater @ 24 hrs.:									

	N	GF			Project Name: Mara Road Extension Toronto, Ohio					BORING NO.					
Environmental & Geotechnical Engineering Solutions					Project Num	Project Number: W22072					B-25				
			15	Location:		ffset:							1		
	.			S			niset.						×	%	
	fee	Depth, feet	Sample Type	Symbol / USCS	Surface El 1	Surface El.: 738.7 ft.		Recovery %	RQD	Blow Count (N-Value)	Moisture %	Liquid Limit	Plasticity Index	Silt and Clay %	Sand %
	Elevation, feet		le T		Split Spo	oon	Shelby Tube								
	evati	ept	du	oqu	Rock Co	vre 🖂	Bag Sample	900	Ř	MO Z	lois	quic	stici	and	Sal
	₩		S	Syr	T NOOK OC		Bag Gampic	ď			2		Pla	Silt	
						ERIAL DESCR	IPTION								
Ī	738.37				TOPSOIL					4-6-6					
		- -			Brown SANDY C	LAY with rock frag	gments,			(12)					
İ					moist, stiff										
ŀ		<u> </u>								5-5-4					
ŀ		L _								(9)					l
ļ		5													
	_					- COLLUVIUM -			9-7-6	7					
										(13)					
		├ -								4-5-7					
		L -													
		_			- very sandy from 10.0 ft.					7-12-6 (18) 4-5-5					
		10													
	_	- '									1				
	_	<u> </u>													
ı	-														
ŀ		L _									_				
ŀ										(10)					
	- 723.67 -	15					15.0	15.0							
	723.07	13		XX40/0						21-14-13					
ĺ	_	-			Brown SILTY SA	Brown SILTY SAND , damp, medium dense				(27)					
ı	_														
ŀ	_	<u> </u>								5-7-7					
ŀ			X							(14)					
		20													
		-20-								6-8-9					
	_	-								(17)					
10/22	_	├ -													
)T 6/		L _													
1.GE	_														
NGE	– 713.67 <i>–</i>	25				25.0									
GPJ	1 13.01		$\overline{}$	\mathbb{M}				1		31-50/4"	1				
RTS.		Brown and gray SANDY SHALE , very soft					\dashv								
EPO	 711.17			27.5			50/1"								
96 F		1.11						1	1						
띪				/ _ \	Gray SANDSTO	NE, medium hard to hard									
MET		30		/ < \	30.2 Bottom of Test Boring @ 30.2 ft.					50/2"					
TRO	708.47	_ 00 _	\sim	/				-			1				
PEN	_	-													
NGE BASIC LOG - NO PENETROMETER LOG REPORTS.GPJ NGE_1.GDT 6/10/22	Completio	n Den	th:	2	0.2 ft.	Remarke: Rori	ng was noted to be d	ny duri	na drii	ling operations a	nd at	horine	n com	nletic	n
FOG	Date Borir				/24/22	Romano. Don	was noted to be u	. y uuri	y uili	g operations a	a aı	~~!!!!	9 00111	Picuo	•••
4SIC	Date Borir	ng Cor	mplet	ed: 5	/24/22										
ЭΈΒ⁄		Engineer/Geologist: NL			ILS ICE	Donth to 14/-4	@ 24 brs :								
ž	Driller:			- 1	IGE	Depth to Water	@ 24 NrS.:								

N	GF			Project Name: Mara Road Extension Toronto, Ohio	BORING NO.				
Environmental & Geotechnical Engineering Solutions				· ·	B-26				
			15	Location: Offset:	 	_			
			,				Plasticity Index	Silt and Clay %	Sand %
feet	et	be /	Symbol / USCS	Surface El.: 733.2 ft.	%	 			
Elevation, feet	Depth, feet	Sample Type		Surface El.: 733.2 π. Split Spoon Shelby Tube Rock Core Bag Sample	Moisture %	Liquid Limit			
vatic	l tde	<u>d</u>	lod		oist	 pink	ticit	and	San
H è	ă	Sal	ym	■ Rock Core B Bag Sample ਲੂੱ	Ž	<u> </u>	Plas	Sit	
				MATERIAL DESCRIPTION			_		
732.86									
-				Brown SANDY CLAY with rock fragments, (10)					
L -	ļ -			moist, stiff					
		X		0.7.7	-				
-				- COLLUVIUM - 8-7-7 (14)					
-					\dashv				
728.16	728.16 5			5.0	_				
		X		Brown SANDY SILT , moist, stiff to very stiff					
-				(20)	_				
-				- very sandy from 7.5 ft.					
	L -			5-7-4					
				(11)					
-									
-	_ 10 _			- with rock fragments (10.0 - 11.5 ft.)	-				
	L J X I I I I I I I I I I I I I I I I I I			9-8-6 (14)					
		\vdash			-				
-	-								
ļ -		\mathbb{N}		4-3-7					
	L _			(10)					
718.16	15			15.0					
- 10.10	13	/		500	\dashv				
L -		X		Brown SILTY SAND , damp, medium dense					
	L _				\dashv				
-	1				_				
-		\mathbb{X}		- with rock fragments from 18.5 ft. 5-8-8 (16)					
L -		$\overline{}$		(10)	_				
713.16	20			20.0					
10/22			//\	Gray to brown SANDSTONE , medium hard to	_				
<u> </u>	├ -	1	KY.	hard					
<u>6</u> -	├ -	-							
핑	L _			50/1"					
∠	1 -		 						
Θ – –			/ < \						
<u></u>	_ 25 _	<u>~</u>		25.2	4				
REI	Bottom of Test Boring @ 25.2 ft.			_					
Ğ - -			201.011 01 1001 2011ing (@ 20.2 It.						
뛰	├ -	1							
SOM -	<u></u> -								
는 무									
<u> </u>	_]							
Completic Date Borin Date Borin Engineer/ Driller:	30 n Dep	th:	2	25.2 ft. Remarks: Boring was noted to be dry during drilling operations	and at	borin	q com	pletio	n.
Date Borin				7/24/22		,;	J	,	
Date Bori				5/24/22					
Engineer/	Geolo	gist:		ICE Donth to Water @ 24 hrs :					
ତ୍ରି Driller:			ľ	IGE Depth to Water @ 24 hrs.:					