



**BOARD OF COUNTY COMMISSIONERS**  
**WARREN COUNTY, OHIO**

406 Justice Drive, Lebanon, Ohio 45036

[www.co.warren.oh.us](http://www.co.warren.oh.us)

[commissioners@co.warren.oh.us](mailto:commissioners@co.warren.oh.us)

Telephone (513) 695-1250

Facsimile (513) 695-2054

**SHANNON JONES**  
**DAVID G. YOUNG**  
**TOM GROSSMANN**

24-0463

April 02, 2024

**ENTERING INTO CONTRACT WITH W.E. SMITH CONSTRUCTION FOR THE 2024 DRILLED PIER WALL PROJECT**

WHEREAS, pursuant to Resolution #24-0188 dated February 06, 2024, this Board approved a Notice of Intent to Award Bid for the 2024 Drilled Pier Wall Project to W.E. Smith Construction, for a total bid price of \$755,957.50; and

WHEREAS, all documentation, including performance bonds, insurance certificates, etc., has been submitted by the contractor.

NOW THEREFORE BE IT RESOLVED, to enter into contract with W.E. Smith Construction, 2030 Bauer Road, Blanchester, Ohio 45107, for a total bid price of \$755,957.50; as attached hereto and made a part hereof.

Mrs. Jones moved for adoption of the foregoing resolution being seconded by Mr. Grossmann. Upon call of the roll, the following vote resulted:

Mr. Young – yea

Mr. Grossmann – yea

Mrs. Jones – yea

Resolution adopted this 2<sup>nd</sup> day of April 2024.

BOARD OF COUNTY COMMISSIONERS

---

Krystal Powell, Clerk

JS/

cc: c/a— W.E. Smith Construction  
Engineer (file)  
OMB Bid file



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Telephone (513) 695-1250

Facsimile (513) 695-2054

**SHANNON JONES**  
**DAVID G. YOUNG**  
**TOM GROSSMANN**

24-0188

February 06, 2024

**APPROVING NOTICE OF INTENT TO AWARD BID TO W.E. SMITH CONSTRUCTION FOR THE  
2024 DRILLED PIER WALL PROJECT**

WHEREAS, bids were closed at 9:30 a.m., on January 24, 2024, and the bids received were opened and read aloud for the 2024 Drilled Pier Wall Project, and the results are on file in the Commissioners' Office; and

WHEREAS, upon review of such bids by Logan Smith, Project Engineer, W.E. Smith Construction has been determined to be the lowest and best bidder.

NOW THEREFORE BE IT RESOLVED, upon recommendation of the Warren County Engineer, that it is the intent of this Board to award the contract to W.E. Smith Construction, 2030 Bauer Road, Blanchester, Ohio, 45107 for a total bid price of \$755,957.50; and

BE IT FURTHER RESOLVED, that the Vice President of the Board is hereby authorized to execute a "Notice of Intent to Award."

Mrs. Jones moved for adoption of the foregoing resolution being seconded by Mr. Grossmann. Upon call of the roll, the following vote resulted:

Mr. Young – absent  
Mr. Grossmann – yea  
Mrs. Jones – yea

Resolution adopted this 6<sup>th</sup> day of February 2024.

**BOARD OF COUNTY COMMISSIONERS**

---

Krystal Powell, Clerk

cc: Engineer (file)  
OMB Bid file



**BOARD OF COUNTY COMMISSIONERS**  
**WARREN COUNTY, OHIO**

*406 Justice Drive, Lebanon, Ohio 45036*

*www.co.warren.oh.us*

*commissioners@co.warren.oh.us*

*Telephone (513) 695-1250*

*Facsimile (513) 695-2054*

***TOM GROSSMANN***  
***SHANNON JONES***  
***DAVID G. YOUNG***

**BID OPENING**

January 24, 2024

**BID OPENING –**

Bids were closed at 9:30 a.m. this 24<sup>th</sup> day of January and the following bids were received, opened, and read aloud for the 2024 Pier Wall Project for the Warren County Engineer.

Firehouse Construction LLC West Union, OH	\$861,545.94
Alan Stone Company Vincent, OH	\$779,771.75
Sunesis Construction West Chester, OH	\$976,688.11
W.E. Smith Construction Blanchester, OH	\$755,957.50
Queen City Mechanical Cincinnati, OH	\$960,721.08

Dominic Brigano, Engineer, will review bids for a recommendation at a later date.

cc: Bid File

OMB

E/O



January 2, 2024

**Re: Addendum No. 1 – 2024 Pier Wall Project**

Dear Prospective Bidder:

Listed below is Addendum No. 1 for the referenced project. Please note the following clarifications/modifications to be included in your bid price. The bid opening for this project will remain as scheduled Wednesday, January 24, 2024 at 9:30 am at the Warren County Commissioners, 406 Justice Drive, Lebanon, Ohio 45036.

**ADDENDUM NO. 1**

**1. Clarification/Modification: (Bid Document/Invitation to Bidders)**

There is a typographical error on the Invitation to Bidders that states the wrong bid date. The Invitation to Bidders within the Bid Document states June 24, 2024 @ 9:30am, which is incorrect. The bid date will remain January 24, 2024 @ 9:30am.

Addendum No. 1 shall be signed and included with the submission of the bid. Please sign below and enter the date you received this addendum. **Any bid submitted without the signed Addendum No. 1 shall be rejected.** If you have any questions please call me at 513-695-3318.

Sincerely,

Neil F. Tunison, P.E., P.S.  
WARREN COUNTY ENGINEER

Logan Smith  
Project Engineer

cc: file

\_\_\_\_\_  
Received by

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company

\_\_\_\_\_  
Date

**WARREN COUNTY ENGINEER'S OFFICE**

**ADMINISTRATION and ENGINEERING**  
210 W Main St. Lebanon, OH 45036  
Telephone (513) 695-3301 Fax (513) 695-7714

**HIGHWAY MAINTENANCE, PERMITS, and INSPECTION**  
105 Markey Rd. Lebanon, OH 45036  
Telephone (513) 695-3336 Fax (513) 695-3323

## **PLAN HOLDERS LIST**

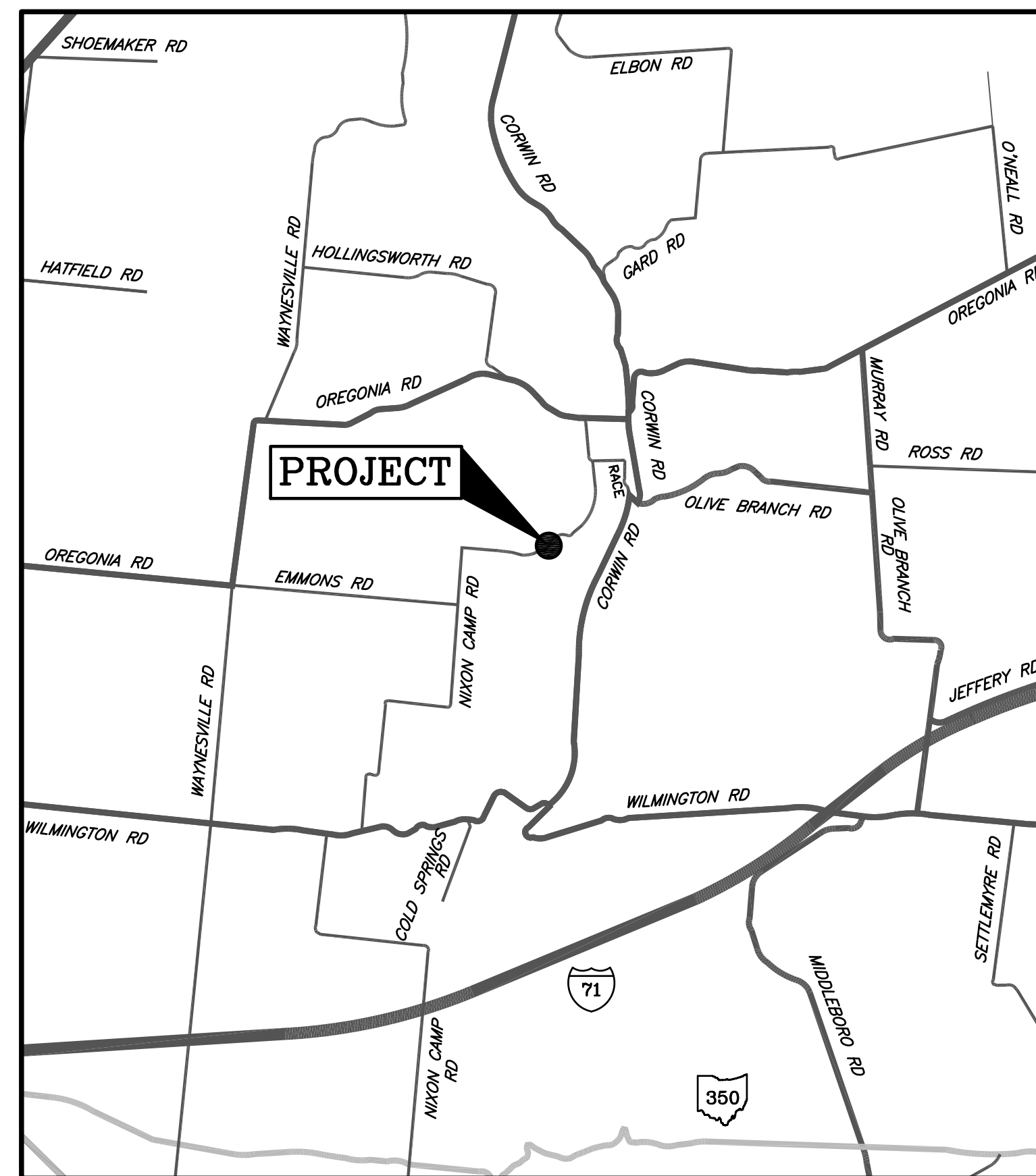
### **2024 Pier Wall Project**

**Individuals or companies can be added to the plan holders list by contacting Krystal Powell at [krystal.powell@co.warren.oh.us](mailto:krystal.powell@co.warren.oh.us)**

<b>Name</b>	<b>Company</b>	<b>Phone Number</b>	<b>E-mail Address</b>
Jen Foley	Sunesis Construction Co.	513-326-6000	<a href="mailto:jfoley@sunesiscc.com">jfoley@sunesiscc.com</a>
Sam Pschesang	SP Drilling & Contracting	513-383-6355	<a href="mailto:spcontracting@cinci.rr.com">spcontracting@cinci.rr.com</a>
Kendra Corsmeier	W. E. Smith Construction	513-507-1433	<a href="mailto:kendracorsmeier.wesmith@yahoo.com">kendracorsmeier.wesmith@yahoo.com</a>
Jeff Fisher	Allied Construction LLC	740-701-6680	<a href="mailto:Jeff.fisher24@icloud.com">Jeff.fisher24@icloud.com</a>
Jeff Fisher	Firehouse Construction, LLC	740-701-6680	<a href="mailto:Jeff.fisher24@icloud.com">Jeff.fisher24@icloud.com</a>
Jeff Fisher	ANT Management Inc.	740-701-6680	<a href="mailto:Jeff.fisher24@icloud.com">Jeff.fisher24@icloud.com</a>
Jeremy White	Alan Stone Company	304-580-6011	<a href="mailto:jeremyw@alanstonecompany.com">jeremyw@alanstonecompany.com</a>
Tim Martin	National Gunitite	317-749-6007	<a href="mailto:tim@nationalgunitite.com">tim@nationalgunitite.com</a>
Rob Dierig	Queen City Mechanical	513-353-1430 Ext. 114	<a href="mailto:Rob.dierig@queencithmech.com">Rob.dierig@queencithmech.com</a>

# DRILLED PIER WALL PROJECT EMMONS ROAD

TURTLECREEK TOWNSHIP  
WARREN COUNTY, OHIO



VICINITY MAP  
NOT TO SCALE

## SHEET NUMBER

TITLE SHEET  
PIER WALL PLAN & PROFILE SHEET  
DETAIL & NOTES SHEET  
BORING LOGS SHEET  
DETOUR SHEET

1  
2  
3  
4

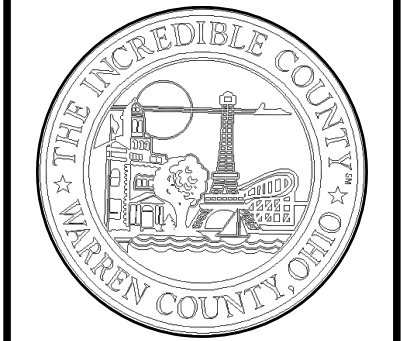
UNDERGROUND UTILITIES  
2 WORKING DAYS  
BEFORE YOU DIG  
CALL TOLL FREE 800-362-2764  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS MUST BE  
CALLED DIRECTLY

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY ENGINEER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER



**Warren  
County  
Engineer's  
Office**

Neil F. Finison, P.E., P.S.  
Warren County Engineer  
210 W Main Street  
Lebanon, Ohio 45036  
513 695 3301 Phone  
513 695 7714 Fax

TITLE SHEET  
EMMONS ROAD  
DRILLED PIER WALL PROJECT  
TURTLECREEK TOWNSHIP

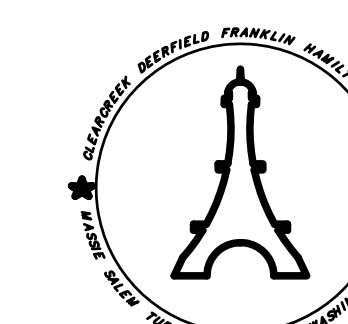
NO.	DATE	DESCRIPTION

SCALE: NONE DATE: 01/27/25

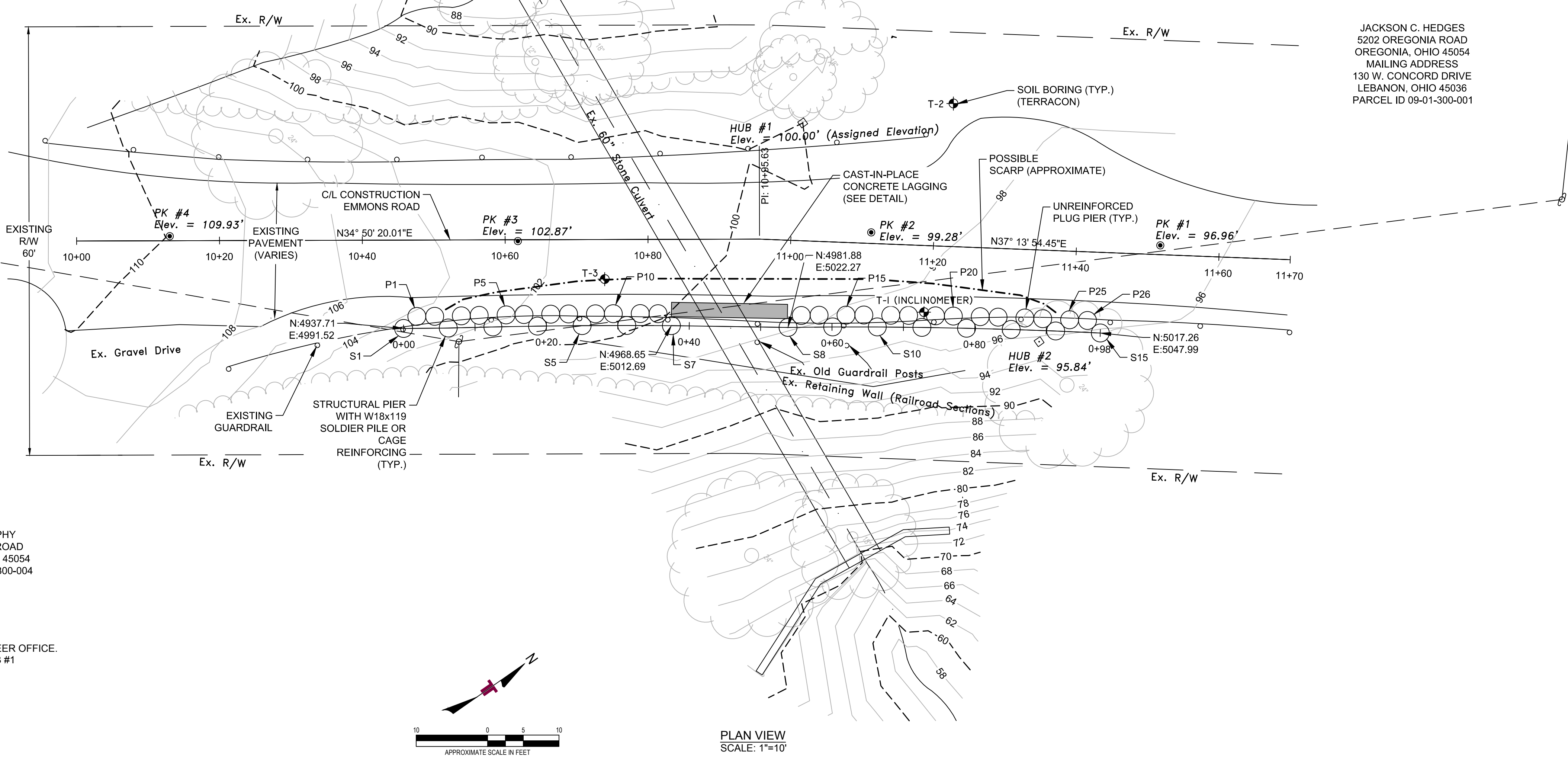
DRAWN BY: JEL CHECKED BY: DWB

PROJECT NO.: 1825-2023 FILE: 1825

DRAWING NO.: Pier Wall - 2025



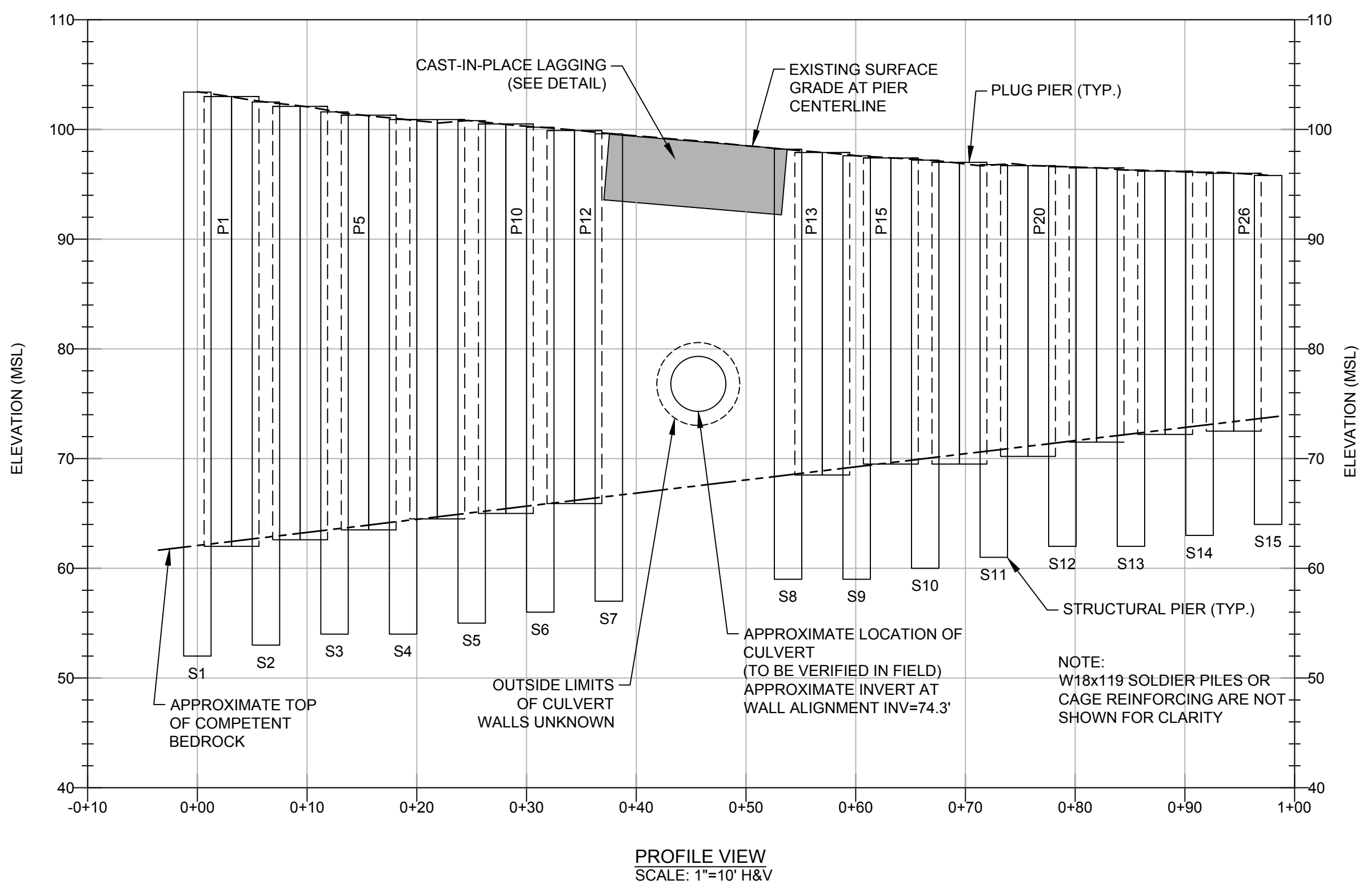
PLANS PREPARED BY:  
THE WARREN COUNTY ENGINEERING DEPARTMENT  
210 W MAIN STREET  
LEBANON, OHIO 45036



KEVIN L. MURPHY  
5103 EMMONS ROAD  
OREGONIA, OHIO 45054  
PARCEL ID 09-01-300-004

JACKSON C. HEDGES  
5202 OREGONIA ROAD  
OREGONIA, OHIO 45054  
MAILING ADDRESS  
130 W. CONCORD DRIVE  
LEBANON, OHIO 45036  
PARCEL ID 09-01-300-001

NOTE:  
BASEMAP PROVIDED BY WARREN COUNTY ENGINEER OFFICE.  
ALL ELEVATION CONTOURS ARE RELATIVE TO HUB #1  
ASSIGNED ELEVATION = 100.0 FEET.

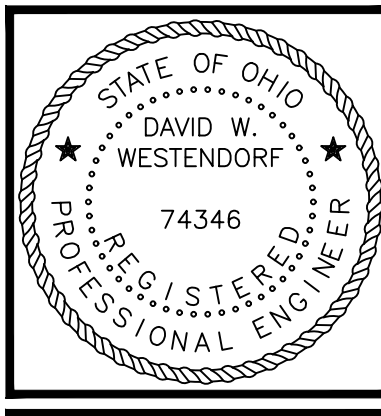


NOTE:  
TOP AND BOTTOM OF CIP  
LAGGING PANEL TO FOLLOW  
THE SLOPE OF THE  
ROADWAY PROFILE

REV.	DATE	BY	DESCRIPTION

**PLAN AND PROFILE**  
EMMONS ROAD LANDSLIDE - WARREN COUNTY  
**TURTLECREEK TOWNSHIP**  
5103 EMMONS ROAD  
OREGONIA, WARREN COUNTY, OHIO

**Terracon**  
Consulting Engineers and Scientists  
611 LUNKEN PARK DRIVE  
PH. (513) 321-5816  
CINCINNATI, OHIO 45226  
FAX. (513) 321-4540



**SHEET 1**

DESIGNED BY:	SK/DWW
DRAWN BY:	KM
APPVD. BY:	DWW
SCALE:	AS SHOWN
DATE:	02/26/2019
JOB NO.:	NT185488
ACAD NO.:	RW.DWG
SHEET NO.:	1

Date: 4/12/2019 6:05 AM File Path: N:\HCON PROJECTS\AUTOCAD\2018\1181185488\RW.DWG







BORING LOG NO. T-1									
PROJECT: Emmons Road Landslide-Warren County					CLIENT: Turtle Creek Township Lebanon, OH				
SITE: 5103 Emmons Raod Oregonia, OH					Page 1 of 2				
GRAPHIC LOG	LOCATION See SHEET-1 Latitude: 39.447267 Longitude: -84.103052	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	LABORATORY HP (HP)	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS	
	Surface Elev: 774 (FL) ELEVATION (FL)								
	20.0	20.0							
	17.5	17.5							
	15.0	15.0							
	12.5	12.5							
	10.0	10.0							
	7.5	7.5							
	5.0	5.0							
	2.5	2.5							
	0.0	0.0							
Stratification lines are approximate. In-situ, the transition may be gradual.									
Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger									
Abandonment Method: Indrometer installed to 35 feet.									
Notes:									
WATER LEVEL OBSERVATIONS									
Not encountered during drilling									
Not observed immediately following completion									
Terracon		Boring Started: 09-06-2017		Boring Completed: 09-06-2017					
611 Lunken Park Dr Cincinnati, OH		Drill Rig: Track		Driller: R. Mann		Project No.: N1175147			

BORING LOG NO. T-1									
PROJECT: Emmons Road Landslide-Warren County					CLIENT: Turtle Creek Township Lebanon, OH				
SITE: 5103 Emmons Raod Oregonia, OH					Page 2 of 2				
GRAPHIC LOG	LOCATION See SHEET-1 Latitude: 39.447267 Longitude: -84.103052	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	LABORATORY HP (HP)	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS	
	Surface Elev: 774 (FL) ELEVATION (FL)								
	24.0	24.0							
	21.0	21.0							
	18.0	18.0							
	15.0	15.0							
	12.0	12.0							
	9.0	9.0							
	6.0	6.0							
	3.0	3.0							
	0.0	0.0							
Stratification lines are approximate. In-situ, the transition may be gradual.									
Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger									
Abandonment Method: Indrometer installed to 35 feet.									
Notes:									
WATER LEVEL OBSERVATIONS									
Not encountered during drilling									
Not observed immediately following completion									
Terracon		Boring Started: 09-06-2017		Boring Completed: 09-06-2017					
611 Lunken Park Dr Cincinnati, OH		Drill Rig: Track		Driller: R. Mann		Project No.: N1175147			

BORING LOG NO. T-2									
PROJECT: Emmons Road Landslide-Warren County					CLIENT: Turtle Creek Township Lebanon, OH				
SITE: 5103 Emmons Raod Oregonia, OH					Page 1 of 1				
GRAPHIC LOG	LOCATION See SHEET-1 Latitude: 39.447298 Longitude: -84.10314	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	LABORATORY HP (HP)	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS	
	Surface Elev: 775 (FL) ELEVATION (FL)								
	20.5	20.5							
	17.5	17.5							
	14.5	14.5							
	11.5	11.5							
	8.5	8.5							
	5.5	5.5							
	2.5	2.5							
	0.0	0.0							
Stratification lines are approximate. In-situ, the transition may be gradual.									
Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger									
Abandonment Method: Boring backfilled with auger cuttings upon completion.									
Notes:									
WATER LEVEL OBSERVATIONS									
Not encountered during drilling									
Not observed immediately following completion									
Terracon		Boring Started: 09-06-2017		Boring Completed: 09-06-2017					
611 Lunken Park Dr Cincinnati, OH		Drill Rig: Track		Driller: R. Mann		Project No.: N1175147			

BORING LOG NO. T-3									
PROJECT: Emmons Road Landslide-Warren County					CLIENT: Turtle Creek Township Lebanon, OH				
SITE: 5103 Emmons Raod Oregonia, OH					Page 1 of 2				
GRAPHIC LOG	LOCATION See SHEET-1 Latitude: 39.447137 Longitude: -84.103182	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	LABORATORY HP (HP)	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS	
	Surface Elev: 776 (FL) ELEVATION (FL)								
	1.3	1.3							
	0.0	0.0							
	3.5	3.5							
	5.0	5.0							
	7.5	7.5							
	10.0	10.0							
	12.0	12.0							
	14.5	14.5							
	17.5	17.5							
	20.0	20.0							
	22.5	22.5							
	25.0	25.0							
Stratification lines are approximate. In-situ, the transition may be gradual.									
Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger									
Abandonment Method: Boring backfilled with Auger Cuttings Surface capped with asphalt.									
Notes:									
WATER LEVEL OBSERVATIONS									
Not encountered during drilling									
Not observed immediately following completion									
Terracon		Boring Started: 09-06-2017		Boring Completed: 09-06-2017					
611 Lunken Park Dr Cincinnati, OH		Drill Rig: Track		Driller: R. Mann		Project No.: N1175147			

BORING LOG NO. T-3									
PROJECT: Emmons Road Landslide-Warren County					CLIENT: Turtle Creek Township Lebanon, OH				
SITE: 5103 Emmons Raod Oregonia, OH					Page 2 of 2				
GRAPHIC LOG	LOCATION See SHEET-1 Latitude: 39.447137 Longitude: -84.103182	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	LABORATORY HP (HP)	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS	
	Surface Elev: 776 (FL) ELEVATION (FL)								
	24.0	24.0							
	21.0	21.0							
	18.0	18.0							
	15.0	15.0							
	12.0	12.0							
	9.0	9.0							
	6.0	6.0							
	3.0	3.0							
	0.0	0.0							
Stratification lines are approximate. In-situ, the transition may be gradual.									
Hammer Type: Automatic									
Advancement Method: Hollow Stem Auger									
Abandonment Method: Boring backfilled with Auger Cuttings Surface capped with asphalt.									
Notes:									
WATER LEVEL OBSERVATIONS									
Not encountered during drilling									
Not observed immediately following completion									
Terracon		Boring Started: 09-06-2017		Boring Completed: 09-06-2017					
611 Lunken Park Dr Cincinnati, OH		Drill Rig: Track		Driller: R. Mann		Project No.: N1175147			

BORING LOGS  
 EMMONS ROAD LANDSLIDE - WARREN COUNTY  
 TURTLE CREEK TOWNSHIP  
 5103 EMMONS ROAD  
 OREGONIA, WARREN COUNTY, OHIO

REV. DATE BY DESCRIPTION

DESIGNED BY: SK/DWW  
 DRAWN BY: KM  
 APP'D BY: DWH  
 SCALE: AS SHOWN  
 DATE: 02/26/2019  
 JOB NO. N1185468  
 ACAD NO. RW/DWG  
 SHEET NO. 3

Terracon  
 Consulting Engineers and Scientists  
 611 LUNKEN PARK DRIVE  
 PH. (513) 321-5816  
 FAX. (513) 321-4540  
 CINCINNATI, OHIO 45226

STATE OF OHIO  
 DAVID W. WESTENDORF  
 REGISTERED PROFESSIONAL ENGINEER  
 74346

Date: 4/9/2019 7:49 AM File Path: N:\HCN PROJECTS\AUTOCAD\2018\1181181\185468\RW.DWG



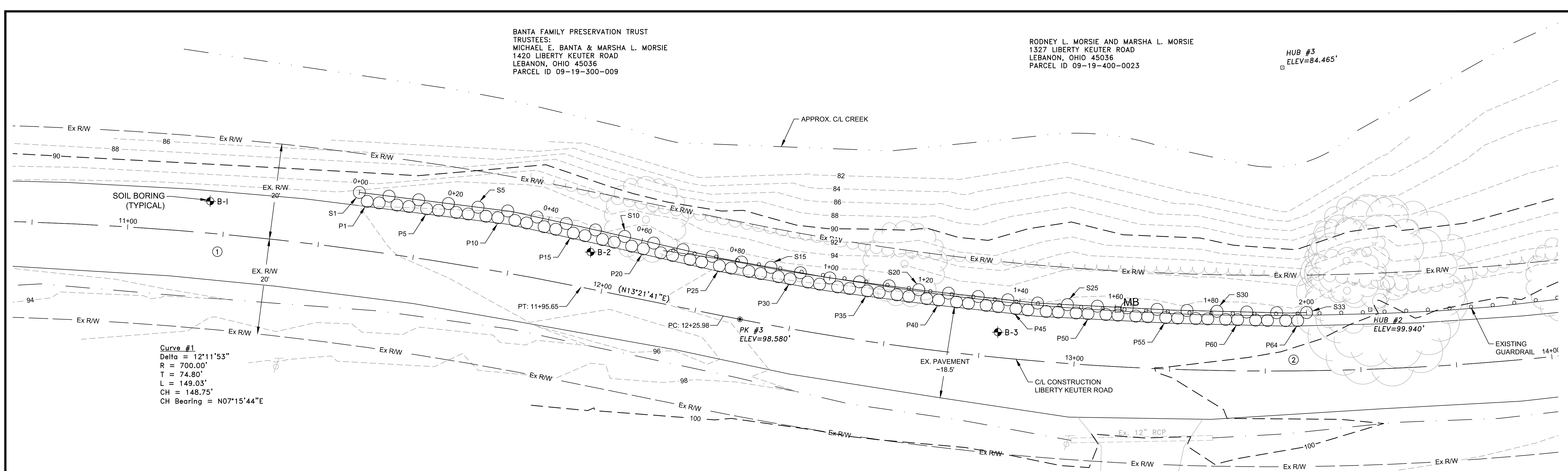




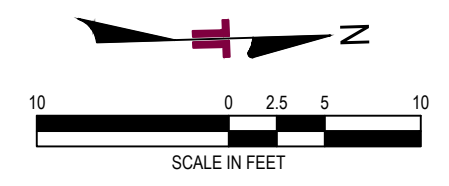
BANTA FAMILY PRESERVATION TRUST  
 TRUSTEES:  
 MICHAEL E. BANTA & MARSHA L. MORSIE  
 1420 LIBERTY KEUTER ROAD  
 LEBANON, OHIO 45036  
 PARCEL ID 09-19-300-009

RODNEY L. MORSIE AND MARSHA L. MORSIE  
 1327 LIBERTY KEUTER ROAD  
 LEBANON, OHIO 45036  
 PARCEL ID 09-19-400-0023

HUB #3  
 ELEV=84.465'



Curve #1  
 Delta = 12°11'53"  
 R = 700.00'  
 T = 74.80'  
 L = 149.03'  
 CH = 148.75'  
 CH Bearing = N07°15'44"E

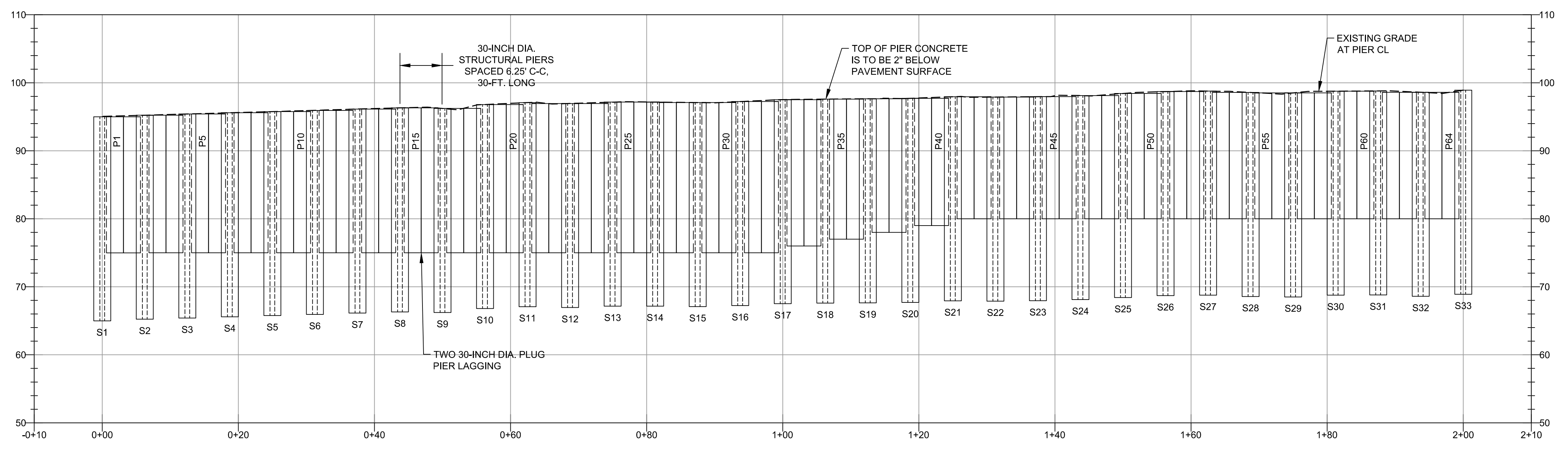


NOTE:  
 BASE PLAN PROVIDED BY WARREN COUNTY ENGINEER'S OFFICE.

PLAN VIEW  
 SCALE: 1"=10'

Curve #2  
 Delta = 22°57'28"  
 R = 575.00'  
 T = 116.77'  
 L = 230.40'  
 CH = 228.86'  
 CH Bearing = N01°52'57"E

NOTE:  
 BEGIN PIER WALL AT STATION 11+45 AND END PIER WALL AT STATION 13+45. ALONG C/L OF NORTH LIBERTY KEUTER ROAD. CENTER OF STRUCTURAL PIERS SHOULD BE OFFSET APPROXIMATELY 3-FT. FROM THE EXISTING EDGE OF PAVEMENT.

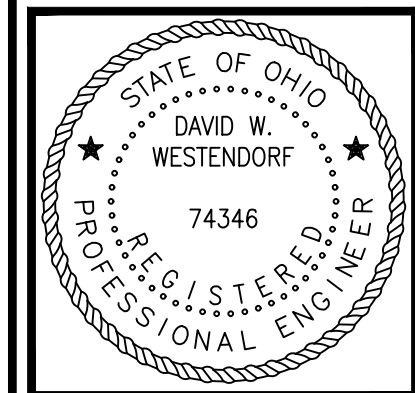


ELEVATION VIEW  
 SCALE: 1"=10' H&V

REV	DATE	BY	DESCRIPTION

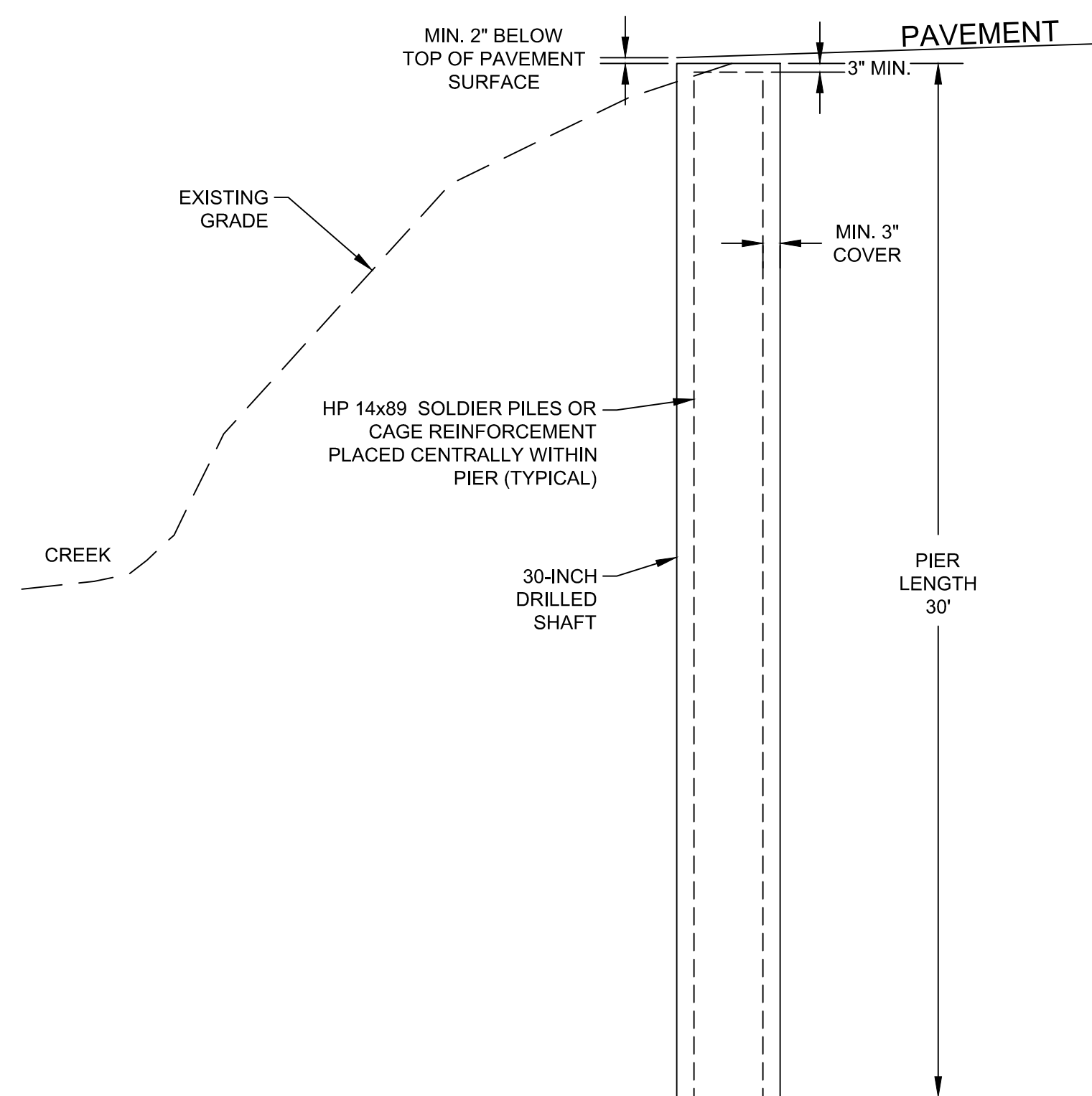
**PLAN AND ELEVATION**  
 NORTH LIBERTY-KEUTER DRILLED PIER RETAINING WALL  
 TURTLE CREEK TOWNSHIP  
 TURTLE CREEK TOWNSHIP, WARREN COUNTY, OHIO

**Terracon**  
 Consulting Engineers and Scientists  
 611 LUNKEN PARK DRIVE  
 CINCINNATI, OHIO 45226  
 PH: (513) 321-5816 FAX: (513) 321-4540



**SHEET 1**

DESIGNED BY:	ASK
DRAWN BY:	KM
APPVD BY:	DWW
SCALE:	AS SHOWN
DATE:	10/08/2016
JOB NO.	N1185161
ACAD NO.	RW.DWG
SHEET NO.:	1



STRUCTURAL PIER SECTION (TYPICAL)  
SCALE: 1"=4'

STRUCTURAL PIER SCHEDULE					
Pier No:	Station	Approximate Top of Pier Reference Elevation (ft.)	Diameter (inches)	Approximate Bottom of Pier Reference Elevation (ft.)	Length of Pier (ft.)
S1	0+00	94.8	30	64.8	30
S2	0+6.25	95.0	30	65.0	30
S3	0+12.5	95.2	30	65.2	30
S4	0+18.75	95.4	30	65.4	30
S5	0+25	95.6	30	65.6	30
S6	0+31.25	95.7	30	65.7	30
S7	0+37.5	95.9	30	65.9	30
S8	0+43.75	96.1	30	66.1	30
S9	0+50	96.0	30	66.0	30
S10	0+56.25	96.6	30	66.6	30
S11	0+62.5	96.9	30	66.9	30
S12	0+68.75	96.8	30	66.8	30
S13	0+75	97.0	30	67.0	30
S14	0+81.25	97.0	30	67.0	30
S15	0+87.5	96.9	30	66.9	30
S16	0+93.75	97.0	30	67.0	30
S17	1+00	97.3	30	67.3	30
S18	1+6.25	97.4	30	67.4	30
S19	1+12.5	97.4	30	67.4	30
S20	1+18.75	97.5	30	67.5	30
S21	1+25	97.7	30	67.7	30
S22	1+31.25	97.7	30	67.7	30
S23	1+37.5	97.7	30	67.7	30
S24	1+43.75	97.9	30	67.9	30
S25	1+50	98.2	30	68.2	30
S26	1+56.25	98.5	30	68.5	30
S27	1+62.5	98.6	30	68.6	30
S28	1+68.75	98.4	30	68.4	30
S29	1+75	98.3	30	68.3	30
S30	1+81.25	98.6	30	68.6	30
S31	1+87.5	98.6	30	68.6	30
S32	1+93.75	98.4	30	68.4	30
S33	2+00	98.7	30	68.7	30

PLUG PIER SCHEDULE				
Pier No:	Approximate Top of Pier Reference Elevation (ft.)	Diameter (inches)	Approximate Bottom of Pier Reference Elevation (ft.)	Length of Pier (ft.)
P1	94.8	30	75.0	19.8
P2	95.0	30	75.0	20.0
P3	95.0	30	75.0	20.0
P4	95.2	30	75.0	20.2
P5	95.2	30	75.0	20.2
P6	95.4	30	75.0	20.4
P7	95.4	30	75.0	20.4
P8	95.6	30	75.0	20.6
P9	95.6	30	75.0	20.6
P10	95.7	30	75.0	20.7
P11	95.7	30	75.0	20.7
P12	95.9	30	75.0	20.9
P13	95.9	30	75.0	20.9
P14	96.1	30	75.0	21.1
P15	96.1	30	75.0	21.1
P16	96.0	30	75.0	21.0
P17	96.0	30	75.0	21.0
P18	96.6	30	75.0	21.6
P19	96.6	30	75.0	21.6
P20	96.9	30	75.0	21.9
P21	96.9	30	75.0	21.9
P22	96.8	30	75.0	21.8
P23	96.8	30	75.0	21.8
P24	97.0	30	75.0	22.0
P25	97.0	30	75.0	22.0
P26	97.0	30	75.0	22.0
P27	97.0	30	75.0	22.0
P28	96.9	30	75.0	21.9
P29	96.9	30	75.0	21.9
P30	97.0	30	75.0	22.0
P31	97.0	30	75.0	22.0
P32	97.3	30	75.0	22.3
P33	97.3	30	76.0	21.3
P34	97.4	30	76.0	21.4
P35	97.4	30	77.0	20.4
P36	97.4	30	77.0	20.4
P37	97.4	30	78.0	19.4
P38	97.5	30	78.0	19.5
P39	97.5	30	79.0	18.5
P40	97.7	30	79.0	18.7
P41	97.7	30	80.0	17.7
P42	97.7	30	80.0	17.7
P43	97.7	30	80.0	17.7
P44	97.7	30	80.0	17.7
P45	97.7	30	80.0	17.7
P46	97.9	30	80.0	17.9
P47	97.9	30	80.0	17.9
P48	98.2	30	80.0	18.2
P49	98.2	30	80.0	18.2
P50	98.5	30	80.0	18.5
P51	98.5	30	80.0	18.5
P52	98.6	30	80.0	18.6
P53	98.6	30	80.0	18.6
P54	98.4	30	80.0	18.4
P55	98.4	30	80.0	18.4
P56	98.3	30	80.0	18.3
P57	98.3	30	80.0	18.3
P58	98.6	30	80.0	18.6
P59	98.6	30	80.0	18.6
P60	98.6	30	80.0	18.6
P61	98.6	30	80.0	18.6
P62	98.4	30	80.0	18.4
P63	98.4	30	80.0	18.4
P64	98.7	30	80.0	18.7

DRILLED PIER CONSTRUCTION NOTES

DRILLED PIER INSTALLATION

- CONSTRUCT THE 30-INCH DIAMETER DRILLED STRUCTURAL PIER WITH PLUG PIER LAGGING RETAINING WALL USING EITHER ROLLED STEEL SECTIONS OR CAGE REINFORCEMENT AS SHOWN AND DESCRIBED ON PLANS. THE PURPOSE OF THIS WORK IS TO CONTROL LATERAL CREEP-TYPE MOVEMENT ON THE DOWNSLOPE (WEST) SIDE OF LIBERTY-KEUTER ROAD. CONTRACTOR IS RESPONSIBLE FOR CLEARING OVERHEAD AND UNDERGROUND UTILITIES AND PROVIDING ACCESS FOR EQUIPMENT. THE PIER EXCAVATION SHALL BE UNCLASSIFIED. TURTLE CREEK TOWNSHIP WILL CLOSE THIS SECTION OF LIBERTY-KEUTER ROAD TO TRAFFIC DURING PIER WALL CONSTRUCTION.
- THE REINFORCED DRILLED PIER RETAINING WALL WILL CONSIST OF DRILLED PIERS SPACED APPROXIMATELY ON 6 FEET -3 INCH (6'-3") ON CENTER, AS SHOWN ON THE SITE PLAN DRAWING. APPROXIMATE BOTTOM OF DRILLED PIERS HAS BEEN SHOWN ON PIER SCHEDULE TABLE ON THIS SHEET. HOWEVER, ACTUAL LENGTHS WILL BE BASED ON ACTUAL FIELD CONDITIONS AS DETERMINED BY THE GEOTECHNICAL CONSULTANT.
- THE PIERS SHALL BE LOCATED AS SHOWN ON PLAN WITHIN 6" OF PLAN LOCATION. THE PIERS SHALL MAINTAIN A PLUMBNESS DEVIATION OF A MAXIMUM OF 1" IN 12 FT. VERTICAL HEIGHT. A MINIMUM 3" CONCRETE COVER BETWEEN THE REINFORCING STEEL AND THE EXTERIOR (SIDES AND TOP) OF THE DRILLED PIER SHALL BE PROVIDED.
- TWO ALTERNATIVES FOR REINFORCEMENT OF STRUCTURAL PIERS HAVE BEEN PROVIDED. REINFORCEMENT FOR THE STRUCTURAL PIERS SHALL CONSIST EITHER OF ROLLED STEEL SECTIONS HAVING A YIELD STRENGTH OF 50 KSI OR CAGE REINFORCING STEEL HAVING A YIELD STRENGTH OF 60 KSI. ROLLED STEEL SECTIONS SHOULD CONSIST OF HP 14X89 BEAMS FOR ALTERNATIVE 1 AS NOTED ON THESE PLANS. THE CONFIGURATION OF THE REINFORCING CAGE FOR ALTERNATIVE 2 HAS BEEN SHOWN ON SHEET 2 AND CONSISTS OF A 14"x19" RECTANGULAR CAGE WITH A LAYER OF (6) #8 BARS.
- THE PRE-DRILLED SHAFT WILL BE BACKFILLED WITH CONCRETE TO THE TOP OF CONCRETE ELEVATION, USING FREE FALL METHODS, UNLESS WATER CANNOT BE REMOVED FROM THE PIER HOLE. IF THERE IS MORE THAN 2-INCHES OF WATER IN THE PIER AT THE TIME OF CONCRETE PLACEMENT, PLEASE SEE ITEM 8 BELOW. THE TOP OF PIER CONCRETE ELEVATION SHALL BE ABOUT 2 INCHES BELOW THE TOP OF PAVEMENT ELEVATION, TO AVOID CONTACT BY SNOW PLOWS. STRUCTURAL PIER CONCRETE SHALL BE CONCRETE (F'c = 4000 PSI, MAXIMUM SLUMP = 4 INCHES, A/E = 64 : 2%) PLACED USING FREE FALL METHOD OF PLACEMENT. CONCRETE SHALL BE PLACED INTO EACH PIER EXCAVATION ON THE SAME DAY THAT THE DRILLING IS COMPLETED.
- TEMPORARY STEEL CASING SHOULD BE ON-SITE AND USED WHEREVER REQUIRED TO STABILIZE LOOSE OR CAVING MATERIALS, OR TO SEAL OFF WATER BEARING ZONES ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN A RECORD OF EACH PIER DRILLED, WHICH WILL INCLUDE AS A MINIMUM: PIER NUMBER; GROUND ELEVATION; DEPTH OR ELEVATION WHERE GROUNDWATER WAS ENCOUNTERED; PIER TOP ELEVATION; ELEVATION OF BOTTOM OF PIER OR PIER LENGTH; ELEVATION OF THE TOP OF THE PIER CONCRETE; DATE DRILLED; DATE COMPLETED; AND WEATHER CONDITIONS.
- IT IS ANTICIPATED THAT WATER MAY ENTER SOME OF THE PIER EXCAVATIONS. THE DEPTH OF PONDED WATER AT THE BOTTOM OF THE PIER EXCAVATIONS SHOULD NOT EXCEED 2 INCHES, PRIOR TO PLACING CONCRETE. IF THE WATER CANNOT BE PUMPED DOWN, TREMIE PLACEMENT METHODS WILL BE REQUIRED.
- THE DRILLED PIER EXCAVATIONS SHOULD BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO CONFIRM THAT THE DRILLED PIERS HAVE BEEN EXTENDED TO THE DESIGN PIER LENGTH, AND THAT THE DRILLED PIERS HAVE BEEN CONSTRUCTED PER SPECIFICATIONS.
- PIER SPOILS SHALL BE TRUCKED FROM THE SITE (NOT WASTED ON THE HILLSIDE). NO FILL PLACEMENT SHOULD BE ALLOWED DOWNSLOPE OF THE WALL.

PLUG PIER INSTALLATION

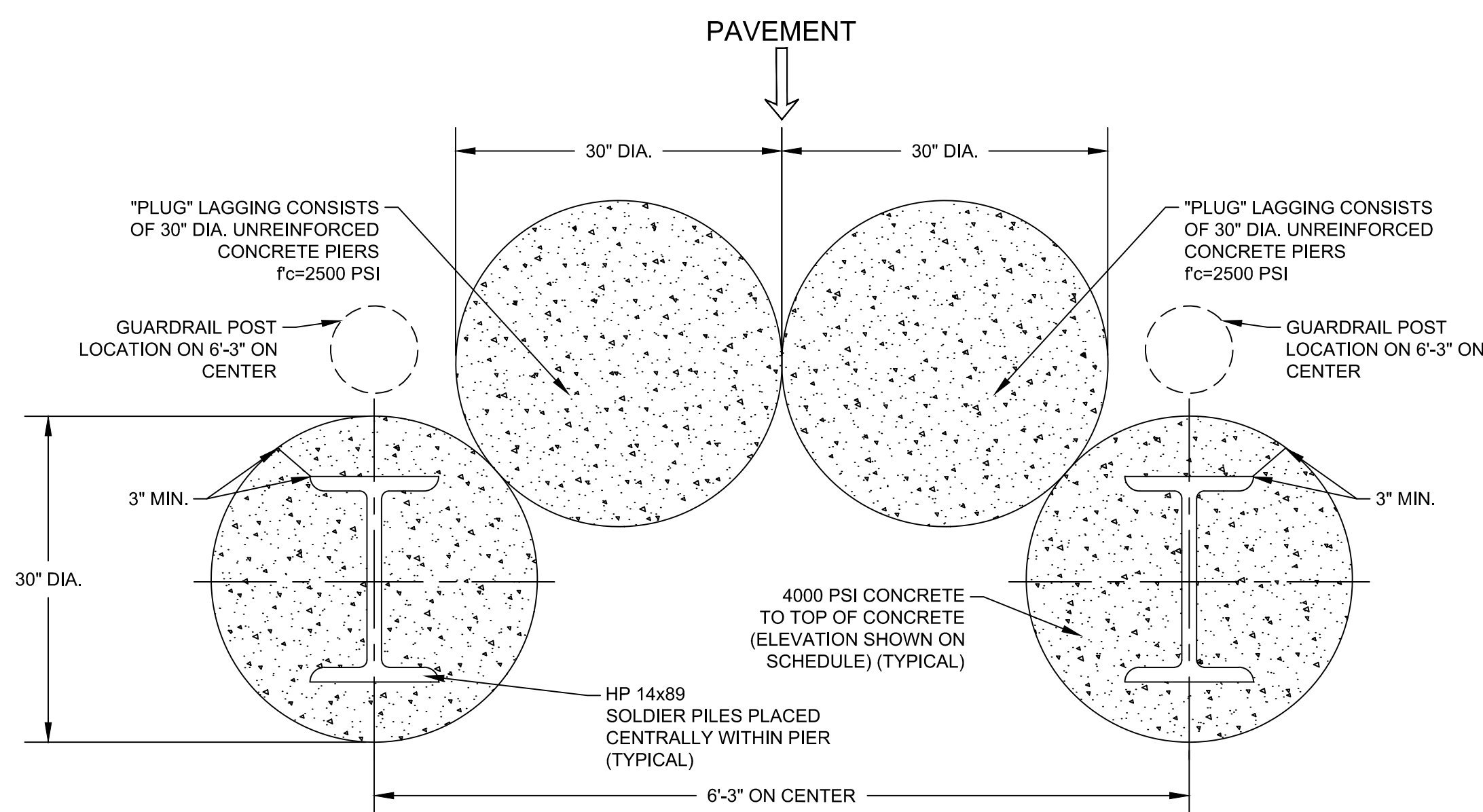
- TWO 30-INCH DIAMETER PLUG PIERS CONSISTING OF UNREINFORCED CONCRETE (F'c = 2500 PSI, MAXIMUM SLUMP = 4 INCHES), AS NOTED ON THE CROSS-SECTION DETAILS. THE PLUG PIERS WILL ACT AS LAGGING FOR THE PIER WALL.
- PLUG PIER INSTALLATION SHALL BEGIN AFTER THE STRUCTURAL PIER ELEMENTS HAVE GAINED STRENGTH (AT LEAST 24 HOURS AFTER PLACEMENT OF STRUCTURAL PIER CONCRETE).
- THE TOP OF THE PLUG PIER CONCRETE SHALL BE ABOUT 2 INCHES BELOW THE PAVEMENT.
- THE BOTTOM OF ALL THE PLUG PIERS INSTALLED SHOULD EXTEND TO THE ELEVATIONS DETAILED IN THE DRILLED PIER SCHEDULE.
- PLUG PIER SPOILS SHALL BE TRUCKED FROM THE SITE (NOT WASTED ON THE HILLSIDE).

DRAINAGE AND OTHER CONSTRUCTION CONSIDERATIONS

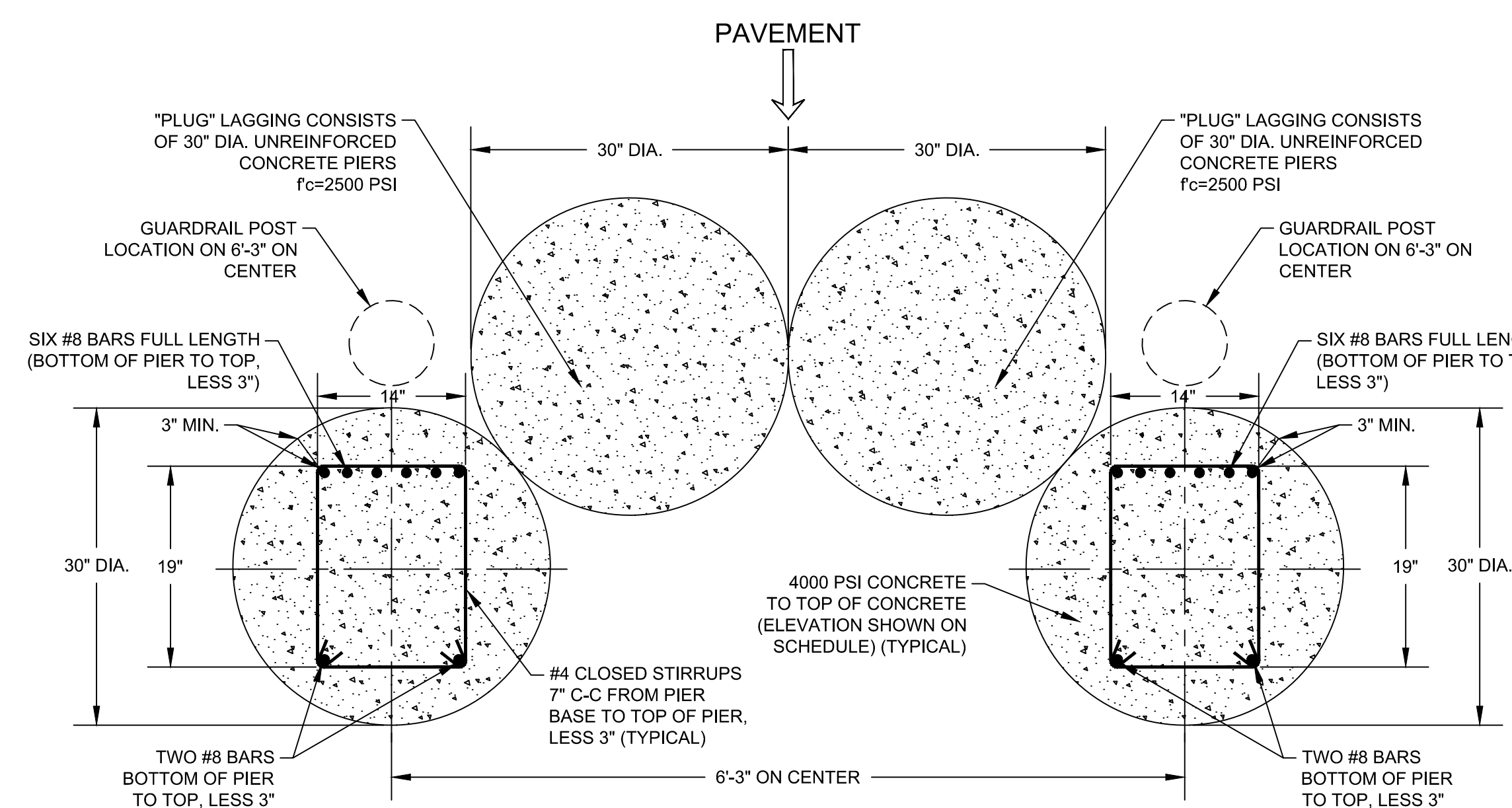
- NEW STRUCTURAL FILL MAY BE PLACED ON UPSLOPE SIDE OF PIERS TO RETAIN GRADE NEXT TO THE EDGE OF PAVEMENT. SONOTUBES OR EQUIVALENT WILL BE REQUIRED IN SOME AREAS, DUE TO THE STEEPLY SLOPING HILLSIDE BELOW THE WALL. FILL SHOULD BE PLACED AND COMPACTED PER ODOT SPECIFICATIONS (ITEM 203). ONLY HAND-OPERATED EQUIPMENT SHOULD BE USED WITHIN 5 FEET OF THE FRONT OF THE PIERS.
- EXISTING GUARDRAIL WILL BE REMOVED AND REPLACED IN THIS PROJECT.

FIELD QUALITY CONTROL

- A. OWNER WILL COORDINATE FIELD CONSTRUCTION INSPECTION AND REPORTING THROUGH IN-HOUSE PERSONNEL OR TERRACON. DOCUMENTATION SHALL INCLUDE THE FOLLOWING AT EACH PIER:
- GROUND ELEVATION
  - AS-BUILT PIER DIAMETER AND TOP AND BOTTOM PIER ELEVATIONS.
  - AS-BUILT PIER LENGTH.
  - DESCRIPTION OF ENCOUNTERED SOIL MATERIALS.
  - DESCRIPTION, LOCATION, AND DIMENSIONS OF OBSTRUCTIONS.
  - FINAL TOP CENTERLINE LOCATION AND DEVIATIONS FROM REQUIREMENTS.
  - VARIATION OF SHAFT FROM PLUMB.
  - DRILLED SHAFT EXCAVATING METHOD.
  - LEVELNESS OF PIER BOTTOM AND ADEQUACY OF CLEANOUT.
  - GROUND-WATER CONDITIONS AND WATER-INFILTRATION RATE, DEPTH, AND PUMPING.
  - DESCRIPTION, DIAMETER, AND TOP AND BOTTOM ELEVATIONS OF TEMPORARY OR
  - DESCRIPTION OF SOIL OR WATER MOVEMENT, SIDEWALL STABILITY, LOSS OF GROUND, AND MEANS OF CONTROL.
  - DATE AND TIME OF STARTING AND COMPLETING DRILLED PIER EXCAVATION.
  - POSITION OF REINFORCING STEEL.
  - CONCRETE PLACEMENT METHOD, INCLUDING DELAYS.
  - ELEVATION OF CONCRETE DURING REMOVAL OF CASINGS.
  - LOCATIONS OF CONSTRUCTION JOINTS, IF ANY.
  - REMARKS, UNUSUAL CONDITIONS ENCOUNTERED, AND DEVIATIONS FROM REQUIREMENTS.



ALTERNATE 1: STRUCTURAL PIER WITH HP REINFORCEMENT DETAIL AND "PLUG" PIER LAGGING  
SCALE: 1"=1'



ALTERNATE 2: STRUCTURAL PIER WITH CAGE REINFORCEMENT DETAIL AND "PLUG" PIER LAGGING  
SCALE: 1"=1'

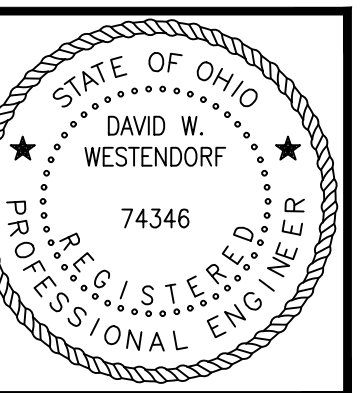
REV. DATE BY DESCRIPTION

DETAILS, PIER SCHEDULES, AND CONSTRUCTION NOTES

NORTH LIBERTY-KEUTER DRILLED PIER RETAINING WALL  
TURTLE CREEK TOWNSHIP  
TURTLE CREEK TOWNSHIP, WARREN COUNTY, OHIO

Terracon  
Consulting Engineers and Scientists

611 LUNKEN PARK DRIVE  
CINCINNATI, OHIO 45226  
PH: (513) 321-5816  
FAX: (513) 321-4540



SHEET 2

DESIGNED BY:	ASK
DRAWN BY:	KM
APPVD BY:	DWW
SCALE:	AS SHOWN
DATE:	10/08/2018
JOB NO.:	N1185161
ACAD NO.:	RW.DWG
SHEET NO.:	2

BORING LOG NO. B-1										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 1 of 2					
LOCATION See Exploration Plan Latitude: 39.4484° Longitude: -84.1518° Reference Surface Elev: 95 (FL) +/- Approximate Surface Elev: 807 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
0.0	806.5+/-	ASPHALT (8 INCHES)								
1.0	806.5+/-	FILL - SILTY SAND (ML)	7-16-8 N=24		5					
3.5	803.5+/-	SILT WITH SAND (ML)	4-4-6 N=10		13					
6.0	801+/-	SILT WITH SAND (ML)	4-4-5 N=9		15					
8.5	798.5+/-	LEAN CLAY (CL)	3-4-8 N=12	3.75 (HP)	12					
11.0	796+/-	LEAN CLAY (CL)	4-7-7 N=14	4.0 (HP)	15	28-15-13				
13.5	793.5+/-	LEAN CLAY (CL)	3-3-7 N=10	4.0 (HP)						
16.0	791+/-	LEAN CLAY (CL)	2-3-5 N=8	2.75 (HP)						
20.0			3-3-20 N=23	2.75 (HP)						
25.0			20-27-28 N=55	3.0 (HP)						
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

BORING LOG NO. B-1										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 2 of 2					
LOCATION See Exploration Plan Latitude: 39.4484° Longitude: -84.1518° Reference Surface Elev: 95 (FL) +/- Approximate Surface Elev: 807 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
28.5	778.5+/-	LEAN CLAY (CL)		4-4-12 N=16	2.75 (HP)					
33.0	773.5+/-	LEAN CLAY (CL)								
33.5	773.5+/-	POORLY GRADED SAND WITH GRAVEL (SP)	23-50/3"							
38.5	768.5+/-	SILT (ML)	14-14-18 N=30							
43.5	763.5+/-	POORLY GRADED SAND (SP)	7-9-11 N=20							
45.0	762+/-	Boring Terminated at 45 Feet								
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

BORING LOG NO. B-2										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 1 of 2					
LOCATION See Exploration Plan Latitude: 39.4488° Longitude: -84.1517° Reference Surface Elev: 96 (FL) +/- Approximate Surface Elev: 808 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
0.0	807+/-	ASPHALT (12 INCHES)								
1.0	807+/-	FILL - LEAN CLAY WITH SILT (CL)	6-4-5 N=9		8					
3.5	804.5+/-	LEAN CLAY WITH SILT (CL)	4-3-5 N=8	3.0 (HP)	18					
6.0	802+/-	LEAN CLAY WITH SILT (CL)	3-4-4 N=8	3.75 (HP)	15					
8.5	799.5+/-	LEAN CLAY WITH SILT (CL)	2-5-6 N=11	3.5 (HP)	15					
11.0	797+/-	LEAN CLAY WITH SILT (CL)	2-4-7 N=11	2.5 (HP)	25-14-11					
15.0			3-3-5 N=8	3.0 (HP)						
20.0			4-4-7 N=11	3.5 (HP)						
25.0			3-4-7 N=11	3.0 (HP)	24-15-9					
25.0			13-17-19 N=36	3.0 (HP)						
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

BORING LOG NO. B-2										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 2 of 2					
LOCATION See Exploration Plan Latitude: 39.4488° Longitude: -84.1517° Reference Surface Elev: 96 (FL) +/- Approximate Surface Elev: 808 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
33.5	774.5+/-	LEAN CLAY WITH SILT (CL)								
35.0	773+/-	POORLY GRADED SAND (SP)	7-12-40 N=52							
35.0	773+/-	Boring Terminated at 35 Feet								
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

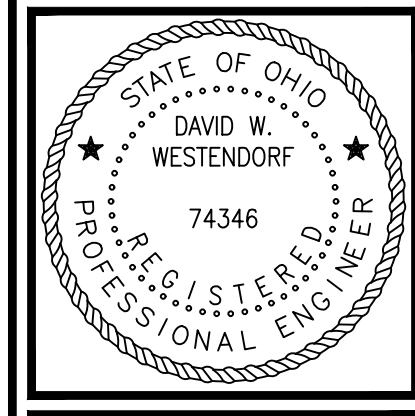
BORING LOG NO. B-3										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 1 of 2					
LOCATION See Exploration Plan Latitude: 39.4488° Longitude: -84.1516° Reference Surface Elev: 101 (FL) +/- Approximate Surface Elev: 813 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
1.0	812+/-	ASPHALT (12 INCHES)								
3.5	809.5+/-	LEAN CLAY WITH SILT (CL)	2-1-1 N=2	2.5 (HP)	24					
6.0	807+/-	POORLY GRADED SAND WITH CLAY (SP)	1-2-1 N=3		13					
8.5	804.5+/-	POORLY GRADED SAND WITH CLAY (SP)	3-4-6 N=10		13					
11.0			2-5-7 N=12	3.0 (HP)	12	17-14-3				
15.0			10-9-9 N=17	2.75 (HP)						
20.0			4-5-8 N=13	3.5 (HP)						
25.0			6-5-9 N=14	3.5 (HP)	24-13-11					
25.0			3-5-8 N=13	3.5 (HP)						
25.0			4-5-9 N=14	3.5 (HP)						
25.0			3-6-7 N=13	3.5 (HP)						
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

BORING LOG NO. B-3										
PROJECT: N. Liberty-Keuter Rd Landslide					CLIENT: Turtlecreek Township Lebanon, OH					
SITE: 1323 N. Liberty Keuter Rd. Turtlecreek Township, OH					Page 2 of 2					
LOCATION See Exploration Plan Latitude: 39.4488° Longitude: -84.1516° Reference Surface Elev: 101 (FL) +/- Approximate Surface Elev: 813 (FL) +/-										
DEPTH (FEET)	ELEVATION (FEET)	DESCRIPTION	FIELD TEST RESULTS	LABORATORY TEST RESULTS	WATER CONTENT (%)	LL-PL-PI	ATTERBERG LIMITS			
33.5	778.5+/-	LEAN CLAY WITH SILT (CL)								
35.0	778.5+/-	POORLY GRADED SAND (SP-SM)								
38.5	774.5+/-	POORLY GRADED SAND (SP)								
40.0	773+/-	Boring Terminated at 40 Feet								
Stratification lines are approximate. In-situ, the transition may be gradual.										
Hammer Type: Automatic										
Advancement Method: Hollow Stem Auger Abandonment Method: Boring backfilled with auger cuttings upon completion. Notes: See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations. Boring Started: 05-31-2018 Boring Completed: 05-31-2018 Drill Rig: Truck-mounted Driller: KMHM Project No.: N1185161										
<b>Terracon</b> Consulting Engineers and Scientists 611 Lunken Park Dr Cincinnati, OH										

REV	DATE	BY	DESCRIPTION

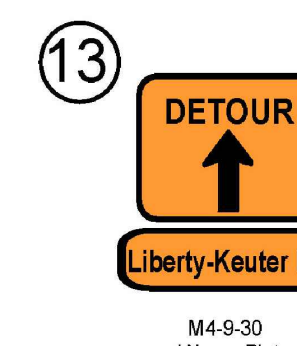
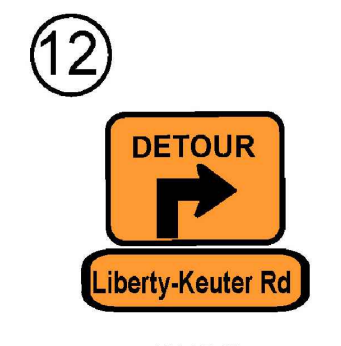
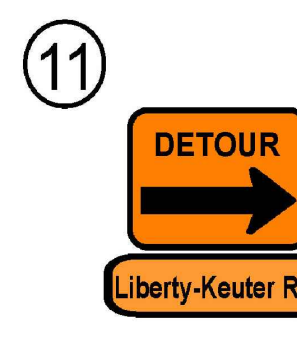
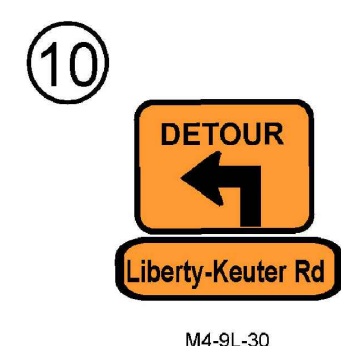
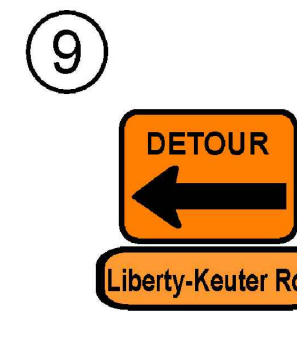
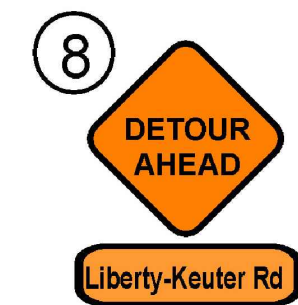
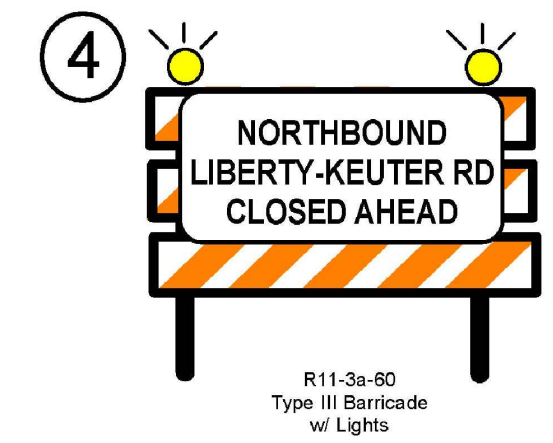
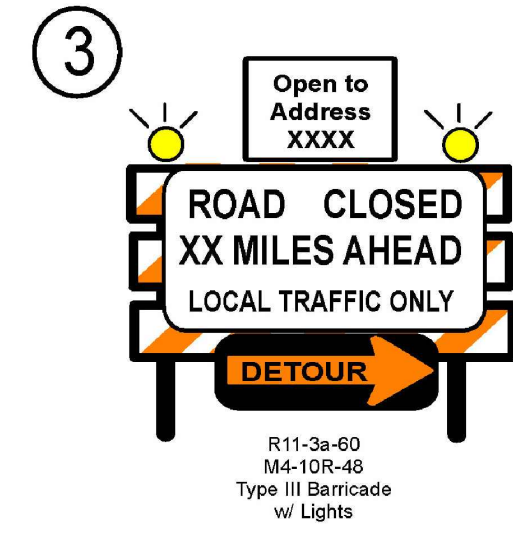
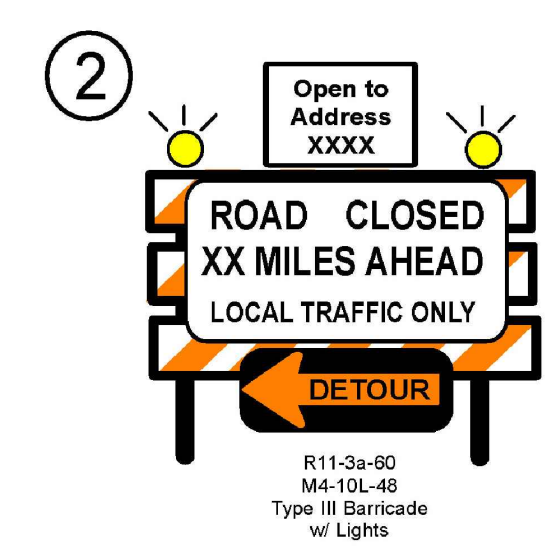
BORING LOG SHEETS  
 NORTH LIBERTY-KEUTER DRILLED PIER RETAINING WALL  
 TURTLE CREEK TOWNSHIP  
 TURTLE CREEK TOWNSHIP, WARREN COUNTY, OHIO

**Terracon**  
 Consulting Engineers and Scientists  
 611 LUNKEN PARK DRIVE  
 PH. (513) 321-5816  
 CINCINNATI, OHIO 45226  
 FAX: (513) 321-4540

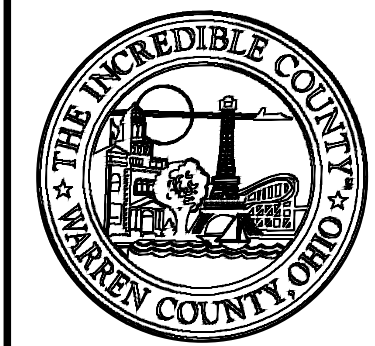
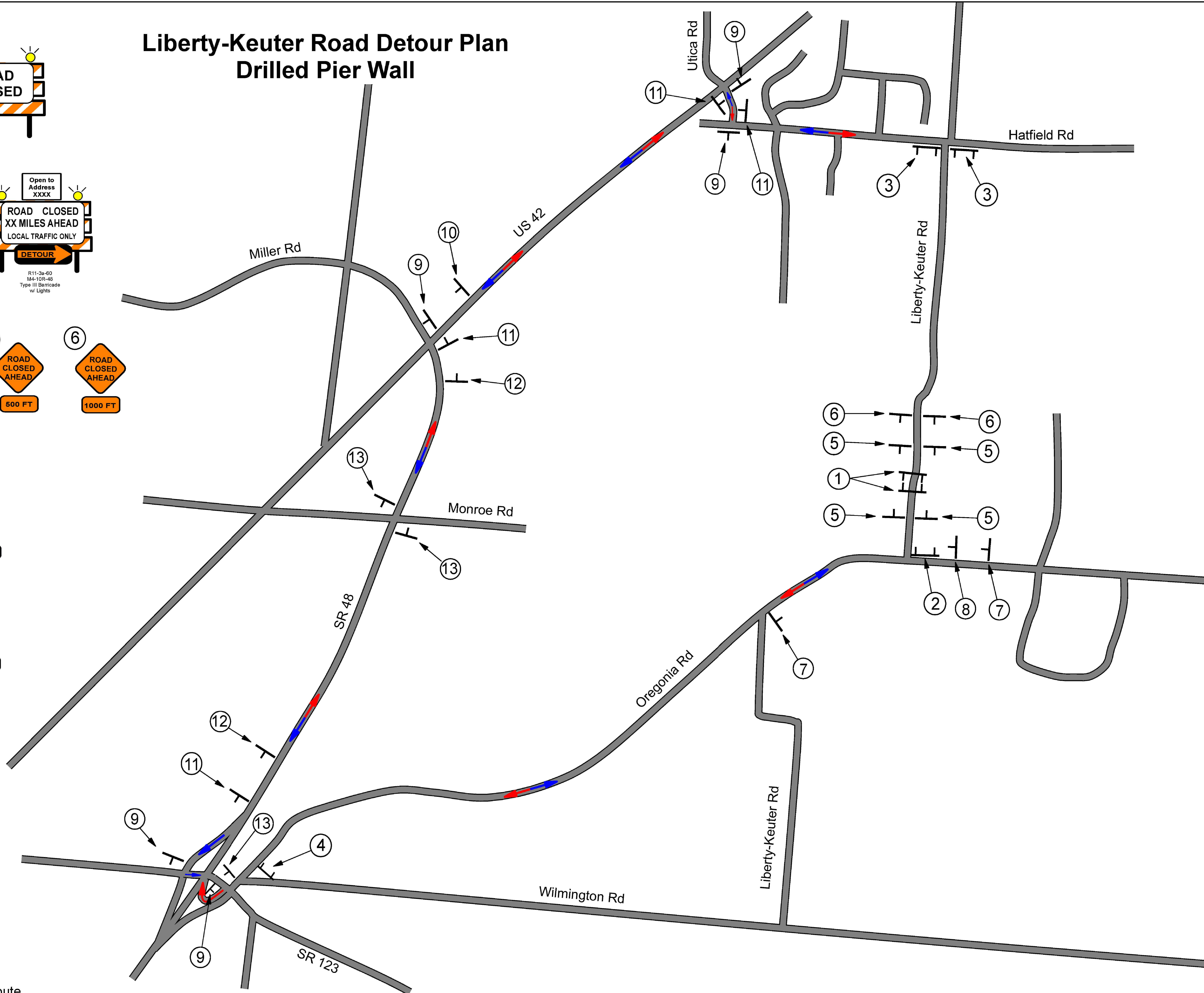


SHEET 3	
DESIGNED BY:	ASK
DRAWN BY:	KM
APP'D BY:	DWW
SCALE:	AS SHOWN
DATE:	10/08/2018
JOB NO.:	N1185161
ACAD NO.:	RW.DWG
SHEET NO.:	3

# Liberty-Keuter Road Detour Plan Drilled Pier Wall



Southbound Detour Route  
 Northbound Detour Route



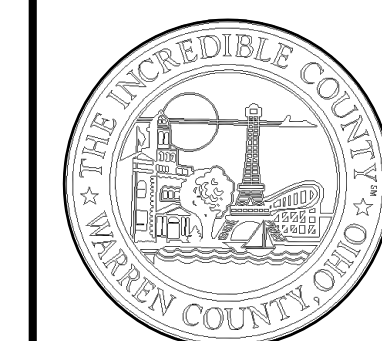
**Warren County Engineer's Office**

Neil F. Junison, P.E., P.S.  
Warren County Engineer  
210 W Main Street  
Lebanon, Ohio 45036  
513 695 3301 Phone  
513 695 7714 Fax

DETOUR SHEET  
 LIBERTY KEUTER ROAD  
 DRILLED PIER WALL PROJECT  
 TURTLECREEK TOWNSHIP

REVISIONS		SCALE	DATE
NO.	DESCRIPTION		
		NONE	01/27/25
		DRAWN BY	CHECKED BY
		JSL	DWB
		PROJECT NO.	FILE
		18-95-2025	18-95
		DRAWING NO.	Pier Wall - 2025
		SHEET 4 OF 4	

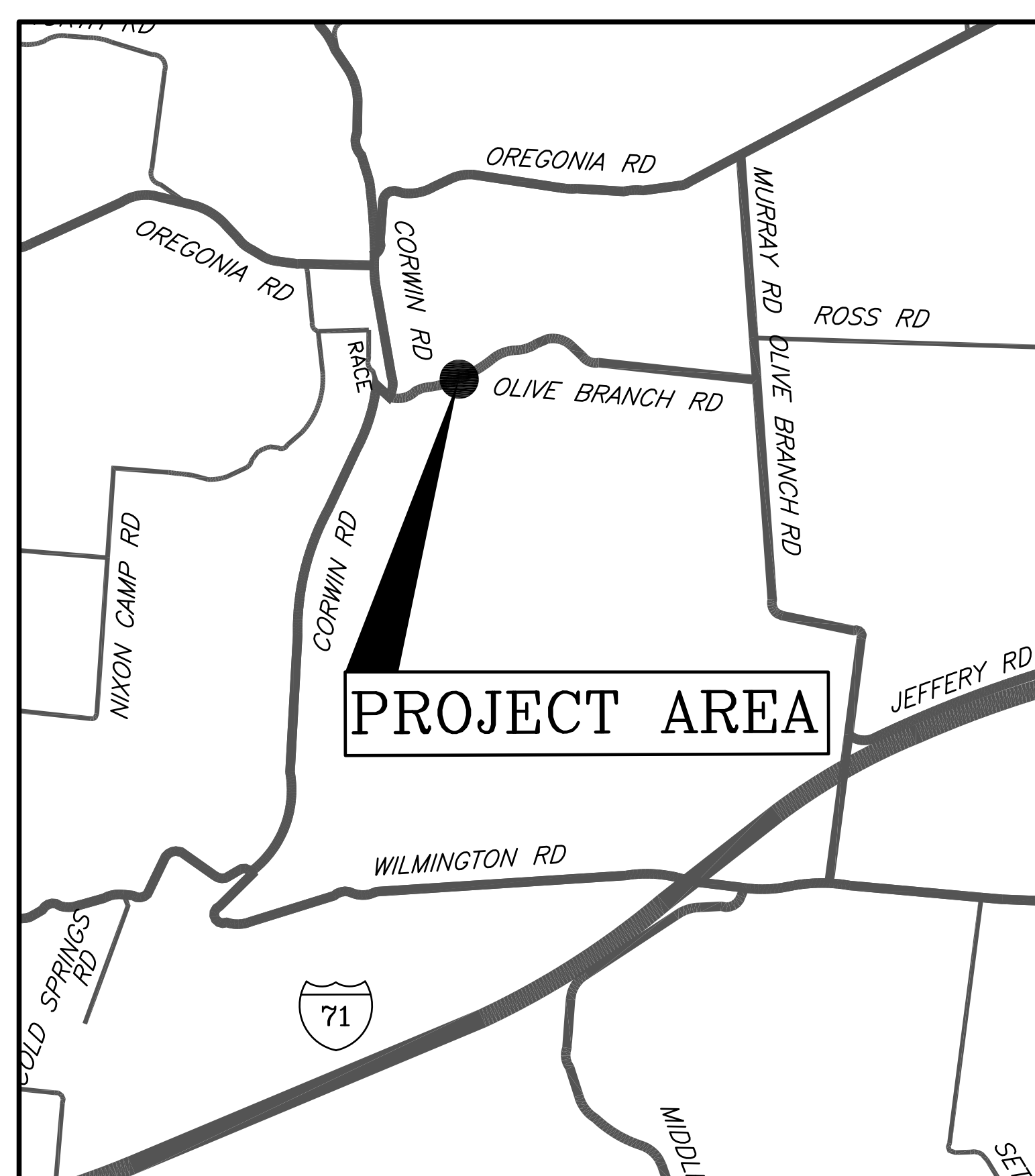
# DRILLED PIER WALL PROJECT OLIVE BRANCH ROAD



**Warren  
County  
Engineer's  
Office**

*Neil S. Fuison, P.E., P.S.*  
Warren County Engineer  
210 W. Main Street  
Lebanon, Ohio 45036  
513 695 3301 Phone  
513 695 7714 Fax

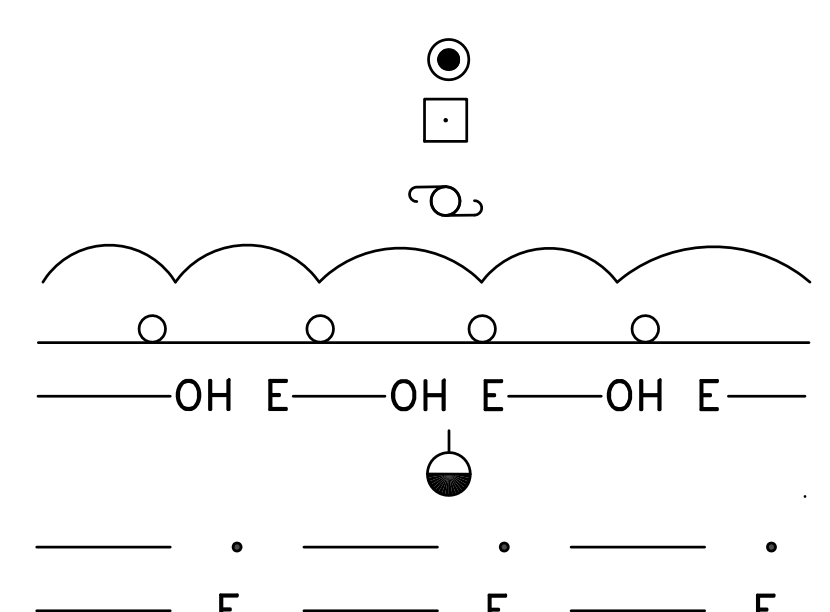
WASHINGTON TOWNSHIP  
WARREN COUNTY, OHIO



VICINITY MAP  
NOT TO SCALE

## CONVENTIONAL SIGNS

- PK NAIL (SET)
- HUB & TACK (SET)
- EX. POLE
- EX. TREELINE
- EX. & PROP. GUARDRAIL
- EX. AERIAL ELECTRIC
- EX. GUY WIRE
- EX. FLOW LINE
- EX. FIBER LINE



## SHEET NUMBER

- TITLE SHEET
- PIER WALL PLAN SHEET
- DETOUR SHEET

- 1
- 2-4
- 5

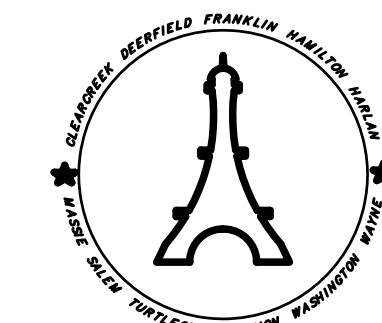
UNDERGROUND UTILITIES  
2 WORKING DAYS  
BEFORE YOU DIG  
CALL TOLL FREE 800-362-2764  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS MUST BE  
CALLED DIRECTLY

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY ENGINEER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ WARREN COUNTY COMMISSIONER



PLANS PREPARED BY:  
THE WARREN COUNTY ENGINEERING DEPARTMENT  
210 W. MAIN STREET  
LEBANON, OHIO 45036

TITLE SHEET  
OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
WASHINGTON TOWNSHIP

NO.	DATE	BY	DESCRIPTION

SCALE: \_\_\_\_\_ DATE: 01/21/25

DRAWN BY: JL CHECKED BY: DMB

PROJECT NO.: CR 217 - 2025 FILE: CR 217 - 2025  
Pier Wall

DRAWING NO. \_\_\_\_\_

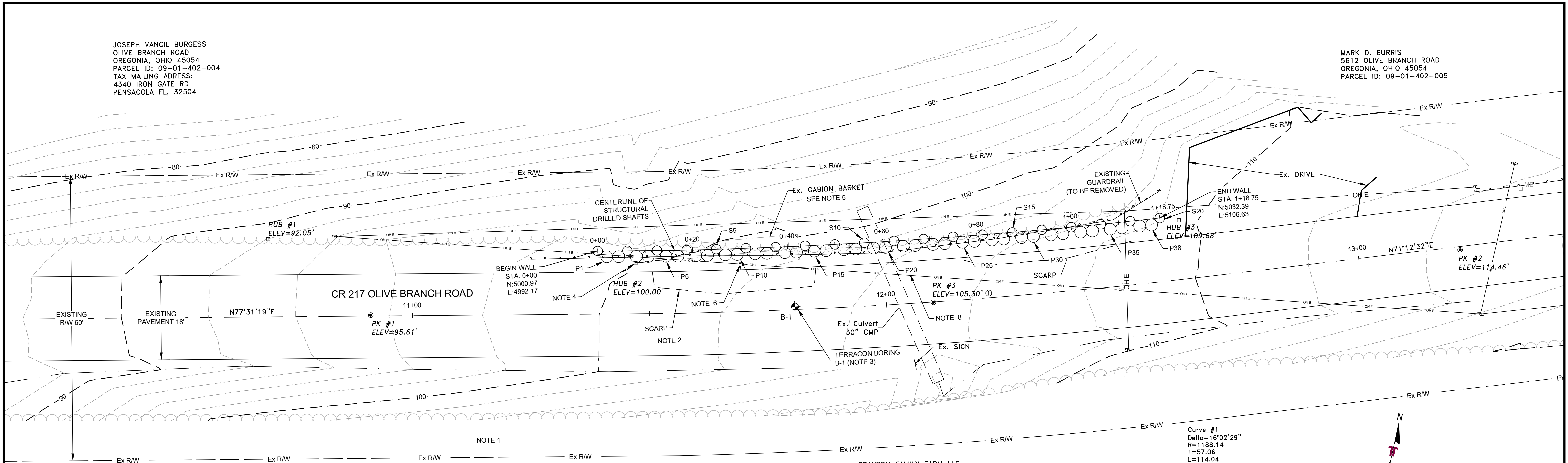
DATE: 01/21/2025

SHEET 1 OF 5



JOSEPH VANCIL BURGESS  
 OLIVE BRANCH ROAD  
 OREGONIA, OHIO 45054  
 PARCEL ID: 09-01-402-004  
 TAX MAILING ADDRESS:  
 4340 IRON GATE RD  
 PENSACOLA FL, 32504

MARK D. BURRIS  
 5512 OLIVE BRANCH ROAD  
 OREGONIA, OHIO 45054  
 PARCEL ID: 09-01-402-005



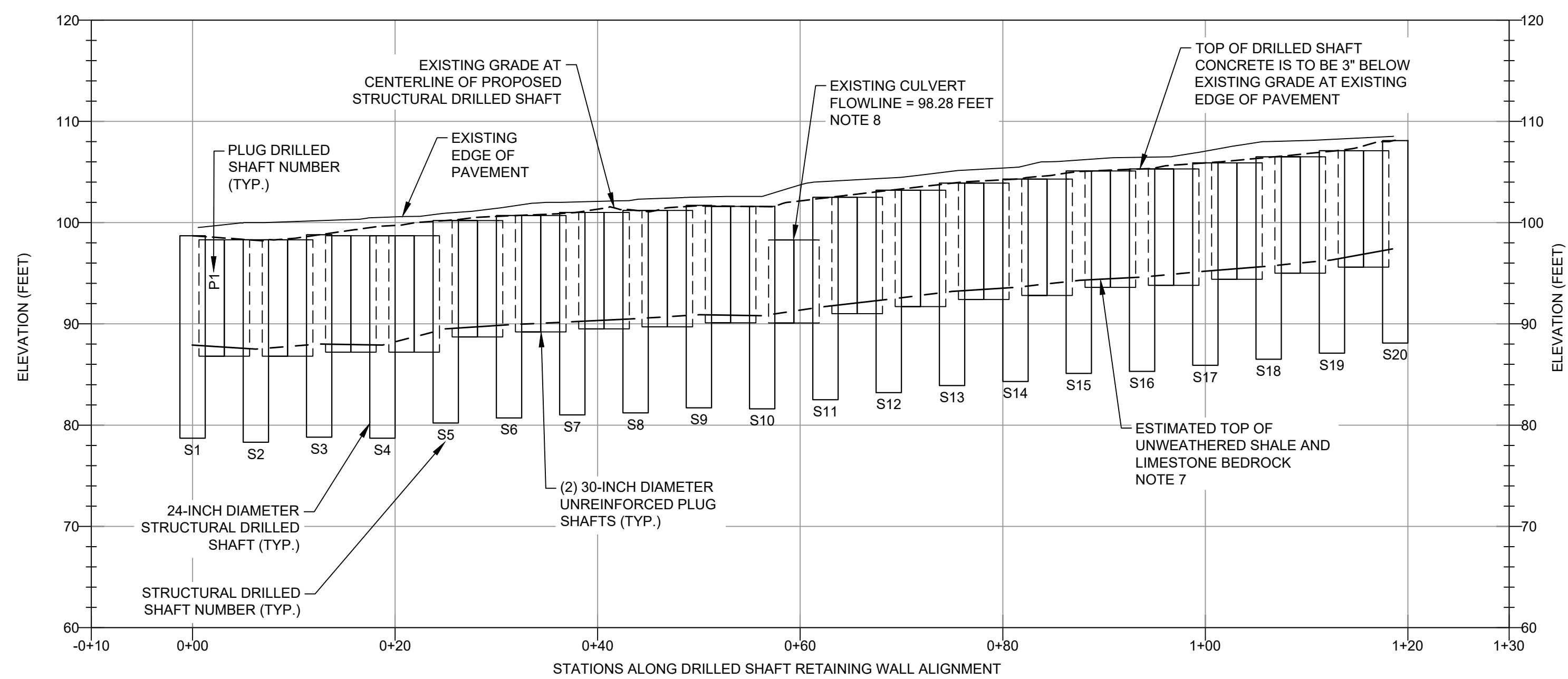
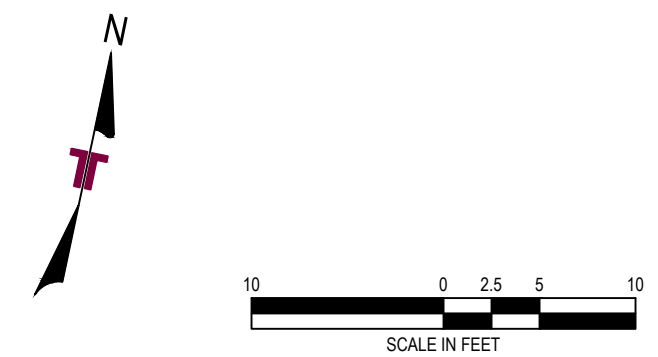
**PLAN NOTES:**

1. BASE MAP OBTAINED FROM CHAD HARVILLE (WARREN COUNTY ENGINEER'S OFFICE) ON JULY 22, 2020. ACTUAL ELEVATIONS AND FEATURES SHOULD BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION.
2. HEAD SCARP LIMITS BASED ON OBSERVATIONS MADE BY TERRACON ON FEBRUARY 28, 2020. HEAD SCARP LOCATION MAY HAVE CHANGED AND SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION. IF HEAD SCARP AT THE TIME OF CONSTRUCTION IS BEYOND DRILLED SHAFT WALL LIMITS, TERRACON SHOULD BE IMMEDIATELY NOTIFIED.
3. AN ADDITIONAL BORING B-2 WAS ALSO PLANNED ON OLIVE-BRANCH ROAD BUT WAS NOT COMPLETED DUE TO INSUFFICIENT CLEARANCE FROM OVERHEAD UTILITIES. INSTEAD, MULTICHANNEL ANALYSIS OF SURFACE WAVES (MASW) GEOPHYSICAL TESTING WAS PERFORMED ALONG OLIVE-BRANCH ROAD WITHIN THE SLIDE LIMITS TO OBTAIN THE TOP OF BEDROCK PROFILE (SEE SHEET 3).
4. ELEVATIONS ARE RELATIVE TO A PROJECT BENCHMARK. HUB #2 IS TEMPORARY PROJECT BENCHMARK, ELEVATION = 100.00 FEET.
5. REMOVE EXISTING GABIONS PRIOR TO INSTALLING DRILLED SHAFTS.
6. DRILLED SHAFT WALL TO BE INSTALLED SUCH THAT BACK OF STRUCTURAL SHAFTS ARE SPACED A MINIMUM DISTANCE OF 3 1/2 FEET FROM EDGE OF PAVEMENT.
7. APPROXIMATE TOP OF UNWEATHERED (GRAY) SHALE AND LIMESTONE BEDROCK SURFACE IS ANTICIPATED TO BE ABOUT 11 FEET BELOW EXISTING SITE GRADES BASED ON BORING B-1 AND MASW TESTING. TOP OF COMPETENT BEDROCK SURFACE ELEVATIONS MAY VARY AND WILL NEED TO BE VERIFIED IN THE FIELD.
8. THE TOP OF PLUG SHAFTS P19 AND P20 WILL EXTEND UP TO THE FLOWLINE OF THE 30-INCH CONDUIT. BASED ON INFORMATION PROVIDED BY WARREN COUNTY THE CONDUIT FLOWLINE IN THE LOCATION OF THE DRILLED SHAFT WALL IS AT A PROJECT ELEVATION OF APPROXIMATELY 98.28 FEET. THE CONTRACTOR IS TO REMOVE THE ENTIRE CMP CONDUIT AT THE TIME OF WALL INSTALLATION. ONCE THE PLUG SHAFTS HAVE BEEN INSTALLED, THE NEW CONDUIT WILL BE PLACED, AND A CONCRETE COLLAR SHALL BE POURED AROUND THE CONDUIT AT THE LOCATION OF THE DRILLED SHAFT WALL.

PLAN VIEW  
 SCALE: 1"=10'

GRAYSON FAMILY FARM LLC  
 OLIVE BRANCH ROAD  
 OREGONIA, OHIO 45054  
 PARCEL ID: 09-01-476-002  
 TAX MAILING ADDRESS:  
 5304 CANYON RIDGE DR.  
 LIBERTY TOWNSHIP OH, 45011

Curve #1  
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 R=1188.14  
 T=57.06  
 L=114.04  
 CH=113.99  
 CH Bearing=N73°37'31"E

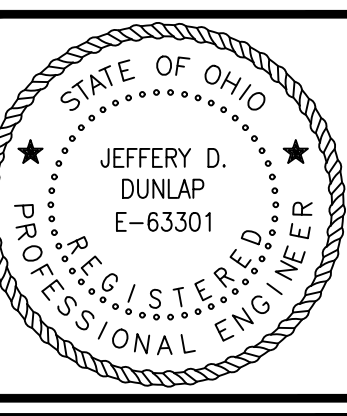


ELEVATION VIEW  
 SCALE: 1"=10' H&V

REV.	DATE	BY	DESCRIPTION

PLAN AND ELEVATION VIEW  
 OLIVE BRANCH ROAD (CR 217) LANDSLIDE REMEDIATION  
 WARREN COUNTY ENGINEER'S OFFICE  
 WARREN COUNTY, OHIO

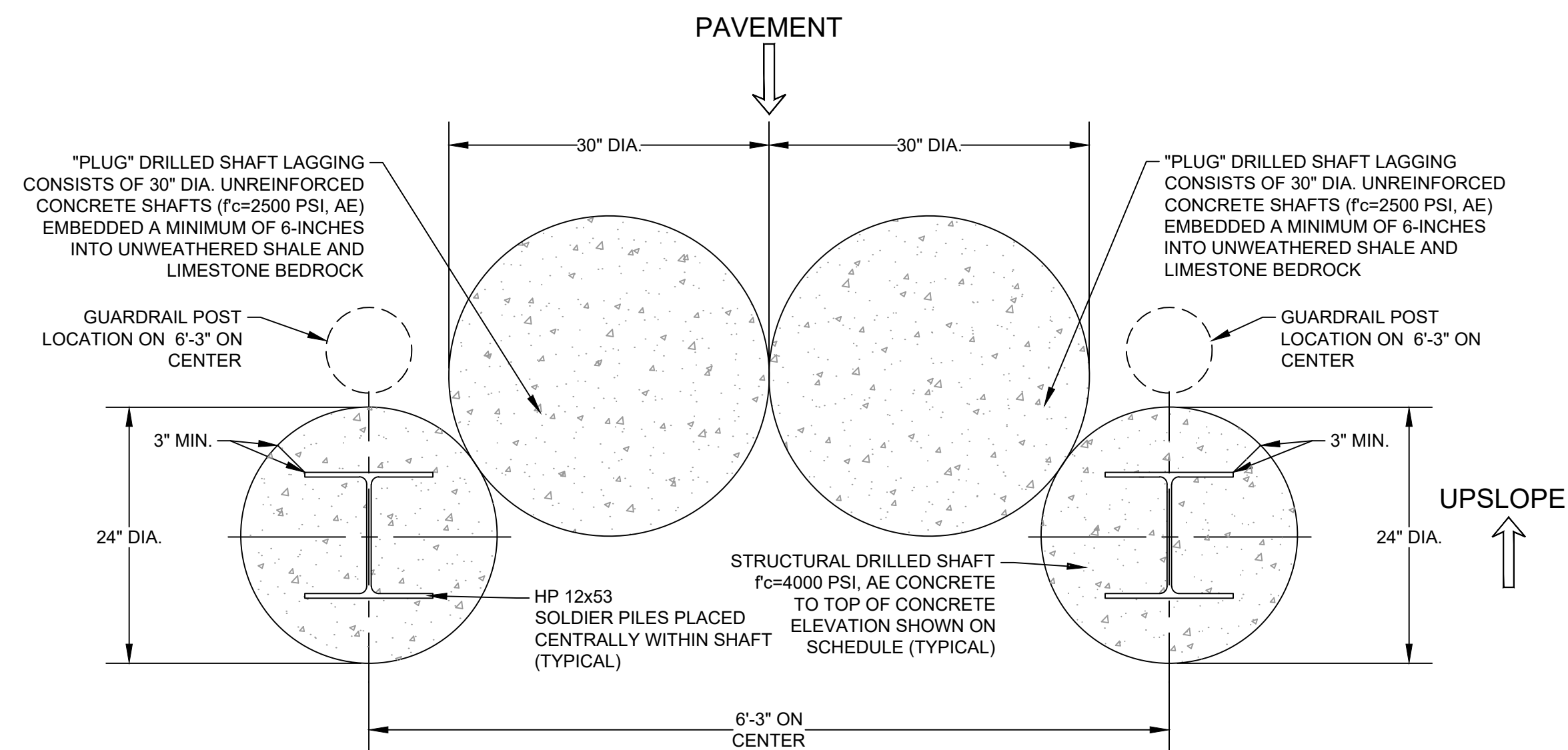
**Terracon**  
 Consulting Engineers and Scientists  
 611 LUNKENPARK DRIVE  
 CINCINNATI, OHIO 45226  
 PH: (513) 321-5816  
 FAX: (513) 321-4540



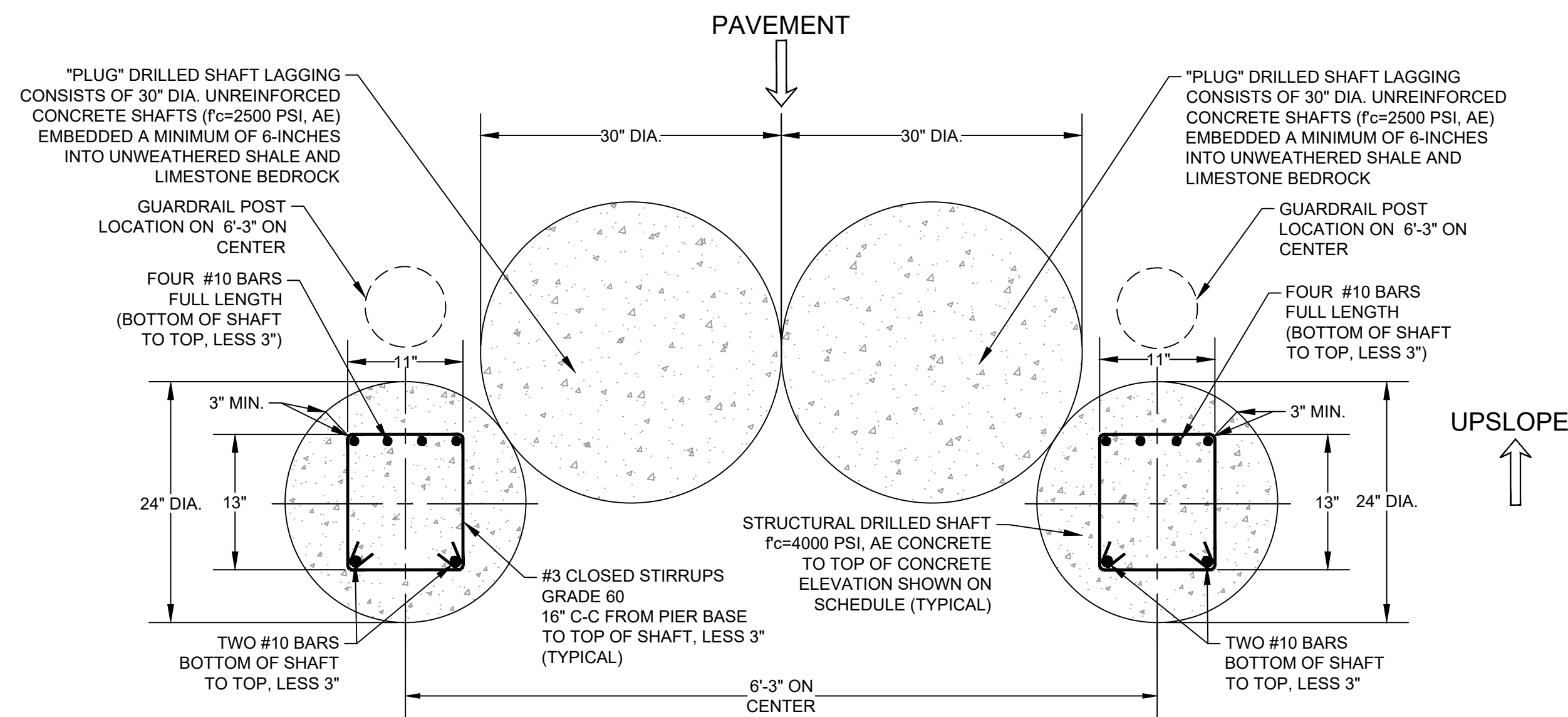
**SHEET 2**

DESIGNED BY:	ASK/DWW
DRAWN BY:	KM
APPVD. BY:	JDD
SCALE:	AS SHOWN
DATE:	07/29/2020
JOB NO.:	N1205222
ACAD NO.:	WC RW.DWG
SHEET NO.:	2

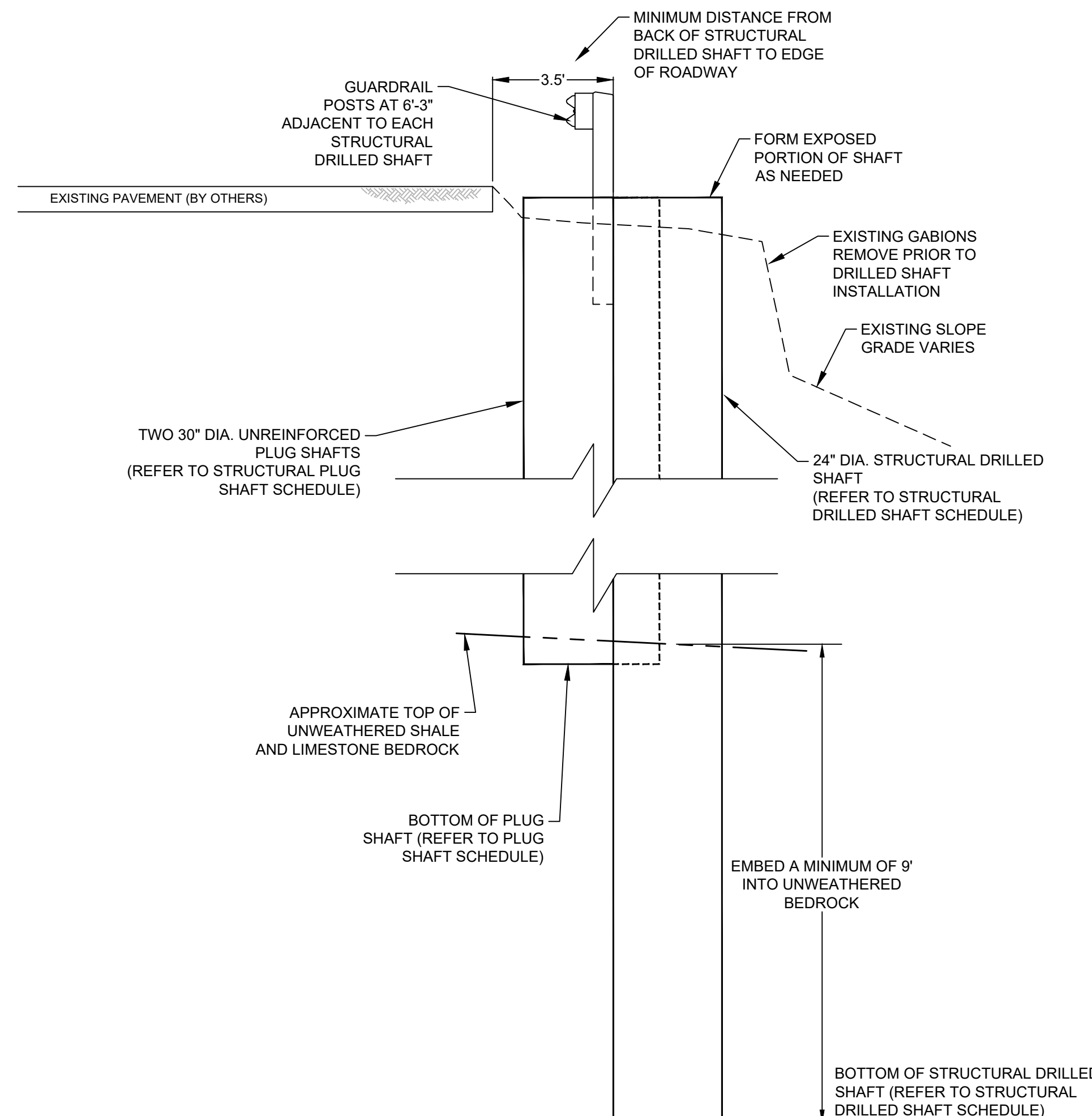
Date: 7/31/2020 12:06 PM File Path: D:\DRAWINGS\1205222\WC RW.DWG



(ALTERNATE 1):  
STRUCTURAL DRILLED SHAFT WITH HP 12x53 REINFORCEMENT DETAIL AND "PLUG" SHAFT LAGGING  
SCALE: 1"=1'



(ALTERNATE 2):  
STRUCTURAL DRILLED SHAFT WITH STEEL CAGE REINFORCEMENT DETAIL AND "PLUG" SHAFT LAGGING  
SCALE: 1"=1'



DRILLED SHAFT RETAINING WALL SECTION (TYPICAL)  
SCALE: NOT TO SCALE

**DRILLED SHAFT CONSTRUCTION NOTES**

**DRILLED SHAFT INSTALLATION**

- CONSTRUCT THE RETAINING WALL CONSISTING OF 24-INCH DIAMETER DRILLED STRUCTURAL SHAFTS WITH PLUG SHAFT LAGGING USING ROLLED STEEL SECTIONS OR STEEL CAGE REINFORCEMENT AS SHOWN AND DESCRIBED ON PLANS. THIS PURPOSE OF THIS WORK IS TO STOP LATERAL CREEP-TYPE MOVEMENT ON THE DOWNSLOPE (NORTH) SIDE OF OLIVE BRANCH ROAD. CONTRACTOR IS RESPONSIBLE FOR CLEARING OVERHEAD AND UNDERGROUND UTILITIES AND PROVIDING ACCESS FOR EQUIPMENT. THE SHAFT EXCAVATION SHALL BE UNCLASSIFIED.
- THE REINFORCED DRILLED SHAFT RETAINING WALL WILL CONSIST OF DRILLED SHAFTS SPACED APPROXIMATELY ON 6 FEET -3 INCHES (6'-3") ON CENTER, AS SHOWN ON THE SITE PLAN DRAWING. ESTIMATED EMBEDMENT DEPTHS INTO INTERBEDDED SHALE AND LIMESTONE BEDROCK ARE SHOWN ON THE DRILLED SHAFT SCHEDULE TABLE ON THIS SHEET; HOWEVER, ACTUAL EMBEDMENT DEPTHS WILL BE BASED ON ACTUAL FIELD CONDITIONS AS DETERMINED BY THE GEOTECHNICAL CONSULTANT.
- THE SHAFTS SHALL BE LOCATED AS SHOWN ON PLAN WITHIN 6" OF PLAN LOCATION. THE SHAFTS SHALL MAINTAIN A PLUMBNESS DEVIATION OF A MAXIMUM OF 1" IN 12 FT. VERTICAL HEIGHT. A MINIMUM 3' CONCRETE COVER BETWEEN THE REINFORCING STEEL AND THE EXTERIOR (SIDES AND TOP) OF THE DRILLED SHAFT SHALL BE PROVIDED.
- TWO ALTERNATIVES FOR REINFORCEMENT OF STRUCTURAL SHAFTS HAVE BEEN PROVIDED. REINFORCEMENT FOR THE STRUCTURAL SHAFTS SHALL CONSIST OF EITHER ROLLED STEEL SECTIONS HAVING YIELD STRENGTH OF 60 KSI OR CAGE REINFORCING STEEL HAVING A YIELD STRENGTH OF 60 KSI. ROLLED STEEL SECTIONS (ALTERNATIVE 1) SHOULD CONSIST OF HP 12X53, AS NOTED ON THE PLANS. THE CONFIGURATION OF THE STEEL REINFORCING CAGE (ALTERNATIVE 2) HAS BEEN SHOWN ON THE PLANS.
- THE PRE-DRILLED SHAFT WILL BE BACKFILLED WITH CONCRETE TO THE TOP OF CONCRETE ELEVATION. THE TOP OF SHAFT CONCRETE ELEVATION SHALL BE ABOUT 3 INCHES BELOW THE APPROXIMATE EXISTING GRADE AT THE CENTERLINE OF THE PROPOSED DRILLED SHAFTS, TO AVOID CONTACT BY SNOW PLOWS. STRUCTURE SHAFT CONCRETE SHALL BE CONCRETE (28-DAY  $f_c = 4000$  PSI, MAXIMUM SLUMP = 6 INCHES; 4% TO 6% AIR ENTRAINMENT) PLACED USING FREE FALL METHOD OF PLACEMENT. CONCRETE SHALL BE PLACED INTO EACH SHAFT EXCAVATION ON THE SAME DAY THAT THE DRILLING IS COMPLETED. SEE ITEM 9 BELOW.
- TEMPORARY STEEL CASING SHOULD BE ON-SITE AND USED WHEREVER REQUIRED TO STABILIZE LOOSE OR CAVING MATERIALS, OR TO SEAL OFF WATER BEARING ZONES ENCOUNTERED DURING CONSTRUCTION.
- THE WALL DESIGN IS BASED ON MAXIMUM DEPTH TO UNWEATHERED (GRAY) INTERBEDDED SHALE AND LIMESTONE BEDROCK ABOUT 11 FEET BELOW GRADE AS NOTED IN THE DRILLED SHAFT SCHEDULE. HOWEVER, IF BEDROCK IS ENCOUNTERED MORE THAN 1.0 FT. BELOW PLAN DESIGN ELEVATION, TERRACON SHALL BE NOTIFIED IMMEDIATELY TO REVIEW AND PROVIDE ADDITIONAL RECOMMENDATIONS. EACH SHAFT SHALL BE SOCKETED INTO BEDROCK A MINIMUM OF 9 FEET, AS DESCRIBED ON THE PLANS.
- THE CONTRACTOR SHALL MAINTAIN A RECORD OF EACH SHAFT DRILLED, WHICH WILL INCLUDE AT A MINIMUM: SHAFT NUMBER; GROUND ELEVATION; SHAFT TOP ELEVATION; TOP OF UNWEATHERED (GRAY) BEDROCK ELEVATIONS; AS-BUILT ROCK SOCKET DEPTH; ELEVATION OF THE TOP OF THE SHAFT CONCRETE; DATE DRILLED; DATE COMPLETED; AND WEATHER CONDITIONS.
- IT IS ANTICIPATED THAT WATER MAY ENTER SOME OF THE SHAFT EXCAVATIONS. THE DEPTH OF PONDED WATER AT THE BOTTOM OF THE SHAFT EXCAVATIONS SHOULD NOT EXCEED 2 INCHES, PRIOR TO PLACING CONCRETE. IF THE WATER CANNOT BE PUMPED DOWN, TREMIE PLACEMENT METHODS WILL BE REQUIRED.
- THE DRILLED SHAFT EXCAVATIONS SHOULD BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO CONFIRM THAT THE DRILLED SHAFTS ARE SOCKETED INTO BEDROCK ACCORDING TO DESIGN, AND THAT THE DRILLED SHAFTS HAVE BEEN CONSTRUCTED PER SPECIFICATIONS.
- SHAFT SPOILS SHALL BE TRUCKED FROM THE SITE (NOT WASTED ON THE HILLSIDE). NO FILL PLACEMENT SHOULD BE ALLOWED DOWNSLOPE OF THE SLOPE FACE.

**PLUG SHAFT INSTALLATION**

- TWO 30-INCH DIAMETER PLUG SHAFTS CONSISTING OF UNREINFORCED CONCRETE (28-DAY  $f_c = 2500$  PSI, MAXIMUM SLUMP = 6 INCHES; 4% TO 6% AIR ENTRAINMENT) AS NOTED ON THE CROSS-SECTION DETAILS WILL ACT AS LAGGING FOR THE SHAFT WALL.
- PLUG SHAFT INSTALLATION FOR THE DRILLED SHAFT RETAINING WALL SHALL BEGIN AFTER THE STRUCTURAL SHAFT ELEMENTS HAVE GAINED STRENGTH (AT LEAST 24 HOURS AFTER PLACEMENT OF STRUCTURAL SHAFT CONCRETE).
- THE TOP OF THE PLUG SHAFT CONCRETE SHALL BE ABOUT 3 INCHES BELOW THE PAVEMENT.
- THE BOTTOM OF ALL THE PLUG SHAFTS INSTALLED SHOULD EXTEND TO THE ELEVATIONS DETAILED IN THE DRILLED SHAFT SCHEDULE (A MINIMUM OF 6 INCHES BELOW TOP OF UNWEATHERED BEDROCK).
- PLUG SHAFT SPOILS SHALL BE TRUCKED FROM THE SITE (NOT WASTED ON THE HILLSIDE).

**DRAINAGE AND OTHER CONSTRUCTION CONSIDERATIONS**

- NEW STRUCTURAL FILL MAY BE PLACED ON UPSLOPE SIDE OF SHAFTS TO RETAIN GRADE NEXT TO THE EDGE OF PAVEMENT. SONOTUBES OR EQUIVALENT WILL BE REQUIRED IN SOME AREAS, DUE TO THE STEEPLY SLOPING HILLSIDE BELOW THE WALL. FILL SHOULD BE PLACED AND COMPACTED PER ODOT SPECIFICATIONS (ITEM 203). ONLY HAND-OPERATED EQUIPMENT SHOULD BE USED WITHIN 5 FEET OF THE FRONT OF THE SHAFTS.

**FIELD QUALITY CONTROL**

A. OWNER WILL COORDINATE FIELD CONSTRUCTION INSPECTION AND REPORTING THROUGH IN-HOUSE PERSONNEL OR EXTERNAL TESTING AGENCY.  
DOCUMENTATION SHALL INCLUDE THE FOLLOWING AT EACH DRILLED SHAFT:

- GROUND ELEVATION
- AS-BUILT SHAFT DIAMETER AND TOP AND BOTTOM SHAFT ELEVATIONS.
- TOP OF WEATHERED (IF ANY) AND UNWEATHERED (GRAY) BEDROCK ELEVATION.
- DESCRIPTION OF ENCOUNTERED SOIL MATERIALS.
- DESCRIPTION, LOCATION, AND DIMENSIONS OF OBSTRUCTIONS.
- FINAL TOP CENTERLINE LOCATION AND DEVIATIONS FROM REQUIREMENTS.
- VARIATION OF SHAFT FROM PLUMB.
- DRILLED SHAFT EXCAVATING METHOD.
- LENGTH OF ROCK SOCKET.
- LEVELNESS OF SHAFT BOTTOM AND ADEQUACY OF CLEANOUT.
- GROUND-WATER CONDITIONS AND WATER-INFILTRATION RATE, DEPTH, AND PUMPING.
- DESCRIPTION, DIAMETER, AND TOP AND BOTTOM ELEVATIONS OF TEMPORARY OR PERMANENT CASINGS.
- DESCRIPTION OF SOIL OR WATER MOVEMENT, SIDEWALL STABILITY, LOSS OF GROUND, AND MEANS OF CONTROL.
- DATE AND TIME OF STARTING AND COMPLETING DRILLED SHAFT EXCAVATION.
- POSITION OF REINFORCING STEEL.
- CONCRETE PLACEMENT METHOD, INCLUDING DELAYS.
- ELEVATION OF CONCRETE DURING REMOVAL OF CASINGS.
- LOCATIONS OF CONSTRUCTION JOINTS, IF ANY.
- REMARKS, UNUSUAL CONDITIONS ENCOUNTERED, AND DEVIATIONS FROM REQUIREMENTS.

STRUCTURAL SHAFT SCHEDULE						
Shaft No.	Diameter		Approx. Top of Shaft Concrete Elevation <sup>(1)</sup>	Approx. Top of Unweathered Bedrock Elevation <sup>(2)</sup>	Approximate Drilled Shaft Bottom Elevation	Design Drilled Shaft Length <sup>(3)</sup>
	Inches	Feet				
S1	24	0+00	98.7	87.9	78.7	20
S2	24	0+06.25	98.3	87.5	78.3	20
S3	24	0+12.5	98.8	88.0	78.8	20
S4	24	0+18.75	98.7	87.9	78.7	20
S5	24	0+25	100.2	89.5	80.2	20
S6	24	0+31.25	100.7	89.9	80.7	20
S7	24	0+37.5	101.0	90.2	81.0	20
S8	24	0+43.75	101.2	90.5	81.2	20
S9	24	0+50	101.7	90.9	81.7	20
S10	24	0+56.25	101.6	90.8	81.6	20
S11	24	0+62.5	102.5	91.7	82.5	20
S12	24	0+68.75	103.2	92.4	83.2	20
S13	24	0+75	103.9	93.2	83.9	20
S14	24	0+81.25	104.3	93.6	84.3	20
S15	24	0+87.5	105.1	94.3	85.1	20
S16	24	0+93.75	105.3	94.6	85.3	20
S17	24	1+00	105.9	95.2	85.9	20
S18	24	1+6.25	106.5	95.7	86.5	20
S19	24	1+12.5	107.1	96.3	87.1	20
S20	24	1+18.75	108.1	97.4	88.1	20

1) TOP OF SHAFT CONCRETE ELEVATION IS 3" BELOW THE APPROXIMATE GRADES AT THE EDGE OF PAVEMENT.  
2) THE DESIGN HAS BEEN BASED ON A MAXIMUM DEPTH TO COMPETENT UNWEATHERED (GRAY) SHALE AND LIMESTONE BEDROCK OF 11- FEET BELOW EXISTING SITE GRADES. IF COMPETENT BEDROCK IS ENCOUNTERED AT A GREATER DEPTH DURING CONSTRUCTION, PLEASE NOTIFY TERRACON FOR FURTHER EVALUATION.  
3) ACTUAL DRILLED SHAFT LENGTH CAN BE ALTERED IN FIELD BY CONTRACTOR, PROVIDED THE MINIMUM SOCKET LENGTH OF 9- FEET INTO UNWEATHERED BEDROCK IS ACHIEVED AND CONFIRMED BY GEOTECHNICAL PERSONNEL IN THE FIELD.

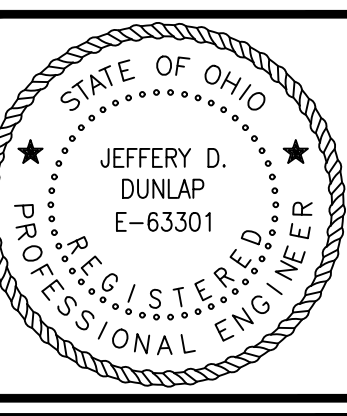
PLUG SHAFT SCHEDULE					
Plug Shaft No's.	Diameter	Approx. Top of Shaft Concrete Elevation <sup>(1)</sup>	Approximate Drilled Shaft Bottom Elevation	Approximate Drilled Shaft Length <sup>(2)</sup>	
					inches
P1	P2	30	98.3	86.8	11.5
P3	P4	30	98.3	86.8	11.5
P5	P6	30	98.7	87.2	11.5
P7	P8	30	98.7	87.2	11.5
P9	P10	30	100.2	88.7	11.5
P11	P12	30	100.7	89.2	11.5
P13	P14	30	101.0	89.5	11.5
P15	P16	30	101.2	89.7	11.5
P17	P18	30	101.6	90.1	11.5
P19	P20	30	98.28	90.1	8.2
P21	P22	30	102.5	91.0	11.5
P23	P24	30	103.2	91.7	11.5
P25	P26	30	103.9	92.4	11.5
P27	P28	30	104.3	92.8	11.5
P29	P30	30	105.1	93.6	11.5
P31	P32	30	105.3	93.8	11.5
P33	P34	30	105.9	94.4	11.5
P35	P36	30	106.5	95.0	11.5
P37	P38	30	107.1	95.6	11.5

1) TOP OF PLUG SHAFT CONCRETE ELEVATION IS 3" BELOW THE APPROXIMATE GRADES AT EDGE OF PAVEMENT.  
2) ACTUAL PLUG SHAFT LENGTH TO BE DETERMINED BY CONDITIONS ENCOUNTERED IN FIELD. PLUG SHAFTS SHOULD EXTEND A MINIMUM OF 6" INTO TOP OF UNWEATHERED (GRAY) BEDROCK.

REV.	DATE	BY	DESCRIPTION

**DETAILS, SCHEDULES AND CONSTRUCTION NOTES**  
 OLIVE BRANCH ROAD (CR 217) LANDSLIDE REMEDIATION  
**WARREN COUNTY ENGINEER'S OFFICE**  
 WARREN COUNTY, OHIO

**Terracon**  
 Consulting Engineers and Scientists  
 611 LUNKEN PARK DRIVE  
 CINCINNATI, OHIO 45226  
 PH: (513) 321-5816  
 FAX: (513) 321-4540

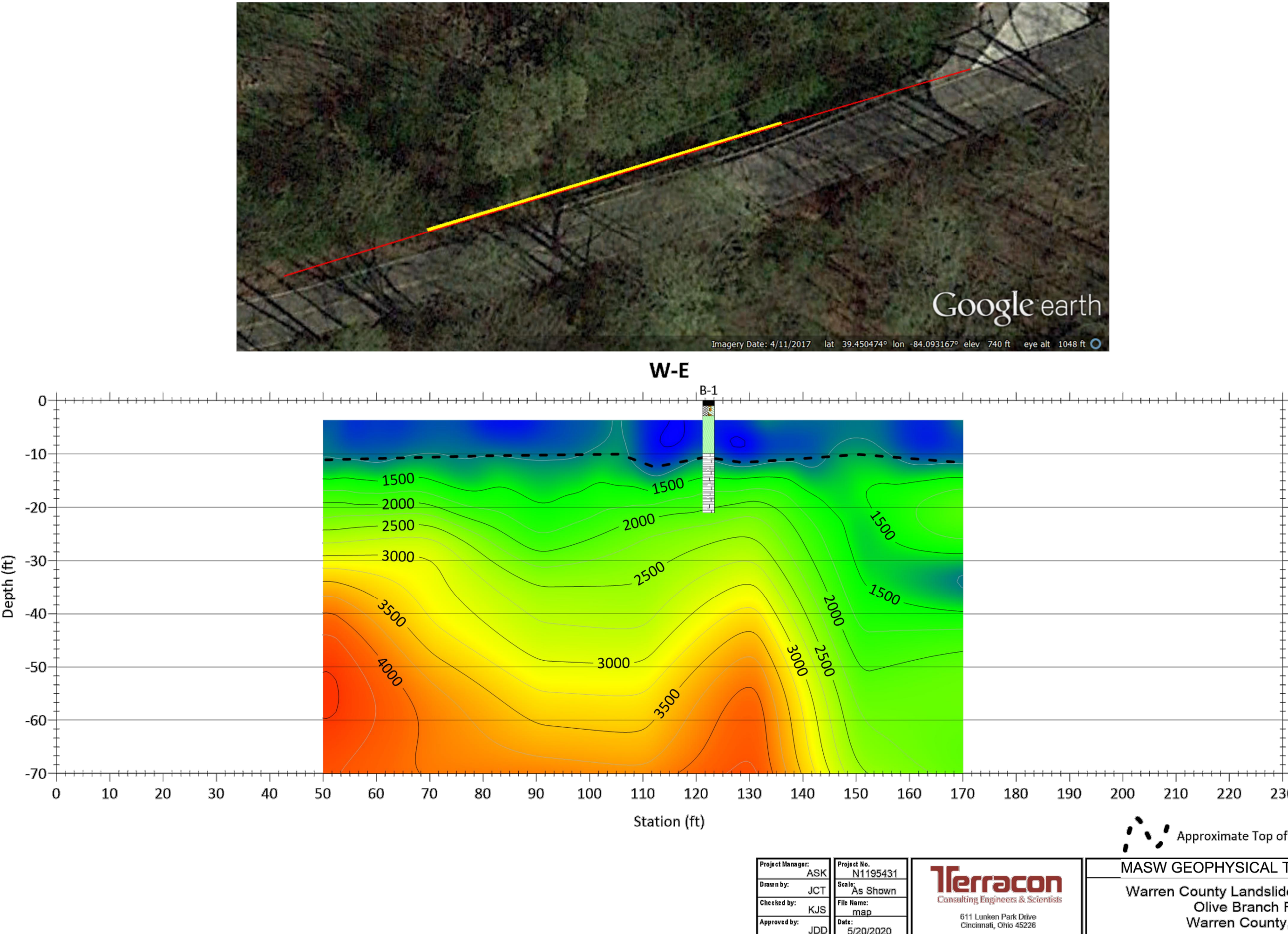


**SHEET 3**

DESIGNED BY:	ASK/DWW
DRAWN BY:	KM
APPVD. BY:	JDD
SCALE:	AS SHOWN
DATE:	07/29/2020
JOB NO.:	N1205222
ACAD NO.:	WC RW.DWG
SHEET NO.:	3

Date: 7/2/2020 10:30 AM File Path: \\DRAWINGS\1205222\WC RW.DWG

BORING LOG NO. B-1		Page 1 of 1	
PROJECT: Warren County Landslide Exploration		CLIENT: Warren County OH Lebanon, OH	
SITE: Various Locations in Warren County Warren County, OH		LOCATION: See Exploration Plan Latitude: 39.460303° Longitude: -84.062989° Surface Elev. 755.1 (FL) ELEVATION (ft.)	
DEPTH (ft.)	DESCRIPTION	LABORATORY TEST RESULTS	REMARKS
0.0	ASPHALT, 14 inches		
1.1	FILL - SAND WITH CLAY AND GRAVEL, with asphalt and limestone fragments, brown	33	9-9-5 N=14
3.0		55	3-5-7 N=12
5.0	LEAN CLAY, with gravel and sand, brownish gray, stiff to hard (Glacial Till)	67	5-9-15 N=24
7.5		67	9-14-14 N=28
10.0		100	50/5"
10.0	INTERBEDDED SHALE AND LIMESTONE, gray, slightly weathered, very weak shale and strong limestone		
16.0	INTERBEDDED SHALE AND LIMESTONE, Shale (75%); gray, unweathered, very weak to weak, bed thickness ranging from 1/4 inch to 6 inches Limestone (21%); light gray, unweathered, strong, bed thickness ranging from 1/4 inch to 3 inches	58	
18.0		100	
21.0			
Boring Terminated at 21 Feet			
Stratification lines are approximate. In-situ, the transition may be gradual.			
Advancement Method: 3.25-inch Continuous-Flight Hollow-Stem Augers 3-inch Split-Spoon Samplers NQ2 Rock Core Barrel Boring method used with auger cuttings and concrete plug and asphalt patch upon completion.		See Exploration and Testing Procedures for a description of field and laboratory procedures (used and additional data if any). See Supporting Information for explanation of symbols and abbreviations. Elevation Reference: Leica Zeno GPS	
<b>WATER LEVEL OBSERVATIONS</b> Boring started: 03-23-2020 Boring completed: 03-23-2020 Drill Rig: Diederich D90 Driller: A. Moore Project No.: N1195431		<b>Terracon</b> 611 Lunken Park Dr Cincinnati, OH	



Project Manager: ASK	Project No.: N1195431	<b>Terracon</b> Consulting Engineers & Scientists 611 Lunken Park Drive Cincinnati, Ohio 45226	<b>MASW GEOPHYSICAL TEST RESULTS</b> Warren County Landslide Remediation Olive Branch Road Warren County, Ohio
Drawn by: JCT	File Name: As Shown		
Checked by: KJS	Date: 03/23/2020		
Approved by: JDD			

GENERAL NOTES DESCRIPTION OF SYMBOLS AND ABBREVIATIONS			
<b>SAMPLING</b> Rock Core Standard Penetration Test Split Spoon	<b>WATER LEVEL</b> Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time  Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	<b>FIELD TESTS</b> N Standard Penetration Test Resistance (Blows/ft) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-ionization Detector (OVA) Organic Vapor Analyzer	
DESCRIPTIVE SOIL CLASSIFICATION			
Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptions are boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.			
LOCATION AND ELEVATION NOTES			
Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.			
RELATIVE DENSITY OF COARSE-GRAINED SOILS		CONSISTENCY OF FINE-GRAINED SOILS	
(More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		(50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance	
Descriptive Term (Density)	Standard Penetration or N-Value (Blows/ft)	Descriptive Term (Consistency)	Standard Penetration or N-Value (Blows/ft)
Very Loose	0 - 3	Very Soft	less than 0.25
Loose	4 - 9	Soft	0.25 to 0.50
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00
Dense	30 - 50	Stiff	1.00 to 2.00
Very Dense	> 50	Very Stiff	2.00 to 4.00
		Hard	> 4.00
			> 30
RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12
GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	Particle Size	Term	Plasticity Index
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests A			Soil Classification	
	Group Symbol	Group Name B	Soil Classification	Group Name B
<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve	<b>Clean Gravels:</b> Cu < 4 and/or (Cc<1 or Cc>3.0)	GW	Well-graded gravel	F
	<b>Gravels with Fines:</b> More than 12% fines	GP	Poorly graded gravel	F
<b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve	<b>Clean Sands:</b> Cu > 6 and/or (Cc<1 or Cc>3.0)	SW	Well-graded sand	S
	<b>Sands with Fines:</b> More than 12% fines	SP	Poorly graded sand	S
<b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve	<b>Inorganic:</b> Liquid limit < 25 and Plasticity index < 7	ML	Lean clay	CL, ML, N
	<b>Organic:</b> Liquid limit > 25 and Plasticity index > 7	OL	Organic silt	ML, OL, N
<b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve	<b>Inorganic:</b> Liquid limit < 25 and Plasticity index < 7	OH	Organic clay	CL, OL, N
	<b>Organic:</b> Liquid limit > 25 and Plasticity index > 7	PT	Peat	

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests A		
<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve <b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve <b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve <b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve <b>Highly organic soils:</b> Primarily organic matter, dark in color, and organic odor	$Cu = D_{60}/D_{10}$ $Cc = (D_{30})^2 / (D_{10} \times D_{60})$ $Cc = (D_{30})^2 / (D_{10} \times D_{60})$	<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve. <sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name. <sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GC well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay. <sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay. <sup>E</sup> If soil contains > 15% sand, add "with sand" to group name. <sup>F</sup> If soil contains > 15% sand, add "with sand" to group name. <sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests A		
<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve <b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve <b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve <b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve <b>Highly organic soils:</b> Primarily organic matter, dark in color, and organic odor	<sup>H</sup> If fines are organic, add "with organic fines" to group name. <sup>I</sup> If soil contains > 15% gravel, add "with gravel" to group name. <sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay. <sup>K</sup> If soil contains 15 to 25% plus No. 200, add "with sand" or "with gravel," whichever is predominant. <sup>L</sup> If soil contains > 30% plus No. 200 predominantly sand, add "sandy" to group name. <sup>M</sup> If soil contains > 30% plus No. 200, predominantly gravel, add "gravelly" to group name. <sup>N</sup> PI > 4 and plots on or above "A" line. <sup>O</sup> PI < 4 or plots below "A" line. <sup>P</sup> PI plots on or above "A" line. <sup>Q</sup> PI plots below "A" line.	

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DESCRIPTION OF ROCK PROPERTIES			
WEATHERING		STRENGTH OR HARDNESS	
Term	Description	Description	Uniaxial Compressive Strength, psi (MPa)
<b>Unweathered</b>	No visible sign of rock material weathering, perhaps slight discoloration on major discontinuity surfaces.	<b>Extremely weak</b>	40-150 (0.3-1)
<b>Slightly weathered</b>	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.	<b>Very weak</b>	150-700 (1-5)
<b>Moderately weathered</b>	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a continuous framework or as coredones.	<b>Weak rock</b>	700-4,000 (5-30)
<b>Highly weathered</b>	More than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as coredones.	<b>Medium strong</b>	4,000-7,000 (30-50)
<b>Completely weathered</b>	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.	<b>Strong rock</b>	7,000-15,000 (50-100)
<b>Residual soil</b>	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.	<b>Very strong</b>	15,000-36,000 (100-250)
		<b>Extremely strong</b>	>36,000 (>250)
DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)	Spacing	Bedding Spacing (May Include Foliation or Banding)	Spacing
<b>Extremely close</b>	< 1/4 in (<19 mm)	<b>Laminated</b>	< 1/4 in (<12 mm)
<b>Very close</b>	3/4 in - 2-1/2 in (19 - 60 mm)	<b>Very thin</b>	1/2 in - 2 in (12 - 50 mm)
<b>Close</b>	2-1/2 in - 8 in (60 - 200 mm)	<b>Thin</b>	2 in - 1 ft. (50 - 300 mm)
<b>Moderate</b>	8 in - 2 ft. (200 - 600 mm)	<b>Medium</b>	1 ft. - 3 ft. (300 - 900 mm)
<b>Wide</b>	2 ft. - 6 ft. (600 mm - 2.0 m)	<b>Thick</b>	3 ft. - 10 ft. (900 mm - 3 m)
<b>Very Wide</b>	6 ft. - 20 ft. (2.0 - 6 m)	<b>Massive</b>	> 10 ft. (3 m)
ROCK QUALITY DESIGNATION (RQD) <sup>1</sup>			
Description	RQD Value (%)		
<b>Very Poor</b>	0 - 25		
<b>Poor</b>	25 - 50		
<b>Fair</b>	50 - 75		
<b>Good</b>	75 - 90		
<b>Excellent</b>	90 - 100		

ROCK QUALITY DESIGNATION (RQD) <sup>1</sup>	
Description	RQD Value (%)
Very Poor	0 - 25
Poor	25 - 50
Fair	50 - 75
Good	75 - 90
Excellent	90 - 100

ROCK QUALITY DESIGNATION (RQD) <sup>1</sup>	
Description	RQD Value (%)
Very Poor	0 - 25
Poor	25 - 50
Fair	50 - 75
Good	75 - 90
Excellent	90 - 100

1. The combined length of all sound and intact core segments equal to or greater than four inches in length, expressed as a percentage of the total core run length.

Reference: U.S. Department of Transportation, Federal Highway Administration, Publication No. FHWA-NHI-10-034, December 2009 Technical Manual for Design and Construction of Road Tunnels - Civil Elements

**BORING LOG AND SUPPORTING INFO**

OLIVE BRANCH ROAD (CR 217) LANDSLIDE REMEDIATION  
**WARREN COUNTY ENGINEER'S OFFICE**  
 WARREN COUNTY, OHIO

 Consulting Engineers and Scientists 611 LUNKEN PARK DRIVE PH. (513) 321-5816 CINCINNATI, OHIO 45226 FAX. (513) 321-4540	<b>SHEET 4</b> DESIGNED BY: ASK/DWW DRAWN BY: KM APPVD. BY: JDD SCALE: AS SHOWN DATE: 07/29/2020 JOB NO.: N1205222 ACAD NO.: WC.RW.DWG SHEET NO.: 4
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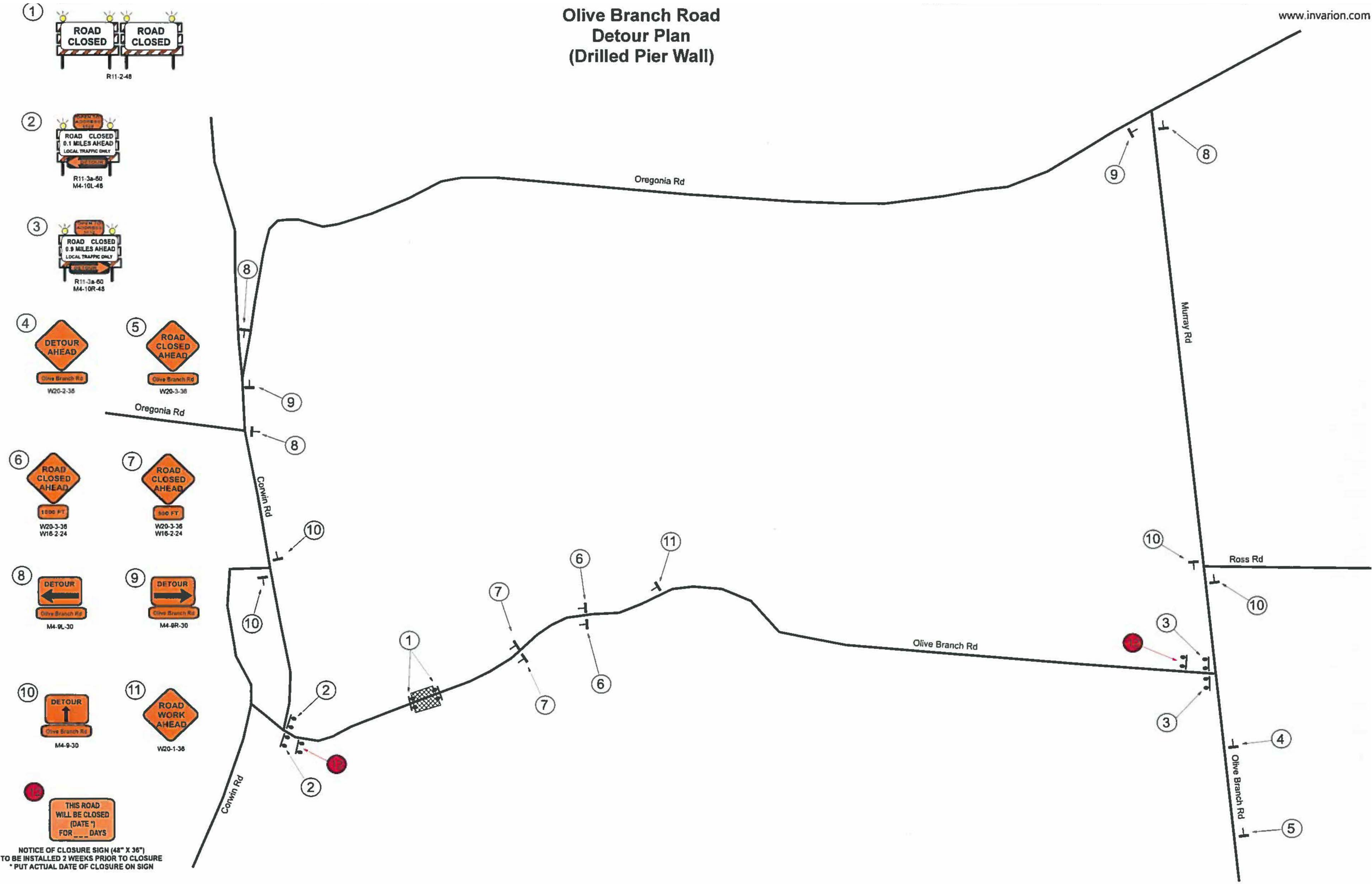


**Warren County Engineer's Office**

Neil J. Fuisson, P.E., P.S.  
Warren County Engineer  
210 W. Main Street  
Lebanon, Ohio 45036  
513 695 3301 Phone  
513 695 7714 Fax

**Olive Branch Road  
Detour Plan  
(Drilled Pier Wall)**

www.invarion.com



All signs to be installed per the Manual of Uniform Traffic Control Devices

DETOUR SHEET  
OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
WASHINGTON TOWNSHIP

REVISIONS	
NO.	DESCRIPTION

SCALE	DATE
	OK / 21 / 25
DRAWN BY	CHECKED BY
JL	DWB
PROJECT NO.	FILE
OK 217 - 2025	OK 217 - 2025 Pier Wall
DRAWING NO.	
SHEET 5 OF 5	

***BID/CONTRACT DOCUMENTS  
2024 PIER WALL PROJECT  
ON BEHALF OF  
NEIL F. TUNISON  
WARREN COUNTY ENGINEER***

**WARREN COUNTY BOARD OF COMMISSIONERS  
406 JUSTICE DRIVE  
LEBANON, OHIO 45036  
(513) 695-1250**

**PROPOSAL PRICE (BID) SHEET**

**EMMONS ROAD, LIBERTY-KEUTER ROAD AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
BID PROPOSAL**

<b>Item No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
	<b>Emmons Road</b>				
201	Clearing and Grubbing	1	Lump		
202	Guardrail Removed	275	FT		
203	Excavation	12	CY		
204	Subgrade Compaction	45	SY		
301	Asphalt Concrete Base PG 64-22	20	Ton		
304	Aggregate Base	18	CY		
441	Asphalt Concrete Surface Course, Type 1, (448), PG 64-22	24	Ton		
524	Drilled Shafts, 30" Diameter, Unreinforced	840	FT		
524	Drilled Shafts, 30" Diameter, Reinforced	630	FT		
606	Guardrail, Type 5	275	FT		
614	Maintaining Traffic	1	Lump		
623	Construction Layout Stakes and Surveying	1	Lump		
624	Mobilization	1	Lump		
626	Barrier Reflector, Type 2A	6	Each		
642	Edge Line, 4 inch, Type 1	0.06	Mile		
659	Seeding and Mulching	170	SY		
Special	Cast-In-Place Concrete Lagging (Over Culvert)	1	Lump		
Special	Existing Stone Culvert Repair with Gunite	1	Lump		
				Sub Total =	
	<b>Liberty-Keuter Road</b>				
201	Clearing and Grubbing	1	Lump		
202	Guardrail Removed	150	FT		
203	Excavation	13	CY		
204	Subgrade Compaction	45	SY		
301	Asphalt Concrete Base PG 64-22	20	Ton		
304	Aggregate Base	8	CY		
441	Asphalt Concrete Surface Course, Type 1, (448), PG 64-22	5	Ton		
524	Drilled Shafts, 30" Diameter, Unreinforced	1,295	FT		
524	Drilled Shafts, 30" Diameter, Reinforced	1,020	FT		
606	Guardrail, Type 5 Without Blockouts	262.5	FT		
614	Maintaining Traffic	1	Lump		
623	Construction Layout Stakes and Surveying	1	Lump		
624	Mobilization	1	Lump		
626	Barrier Reflector, Type 2A	6	Each		
642	Center Line, Type 1	0.05	Mile		
642	Edge Line, 4 inch, Type 1	0.05	Mile		
659	Seeding and Mulching	90	SY		
Special	Mailbox Removed and Reset	1	Each		
				Sub Total =	
	<b>Olive Branch Road</b>				
201	Clearing and Grubbing	1	Lump		
202	Structures Removed, As Per Proposal Note	1	Lump		
202	Guardrail Removed	137.5	FT		
202	Pipe Removed	40	FT		
203	Excavation	21	CY		
204	Subgrade Compaction	49	SY		
301	Asphalt Concrete Base PG 64-22	27	Ton		
304	Aggregate Base	26	Ton		
441	Asphalt Concrete Surface Course, Type 1, (448), PG 64-22	6	Ton		
524	Drilled Shafts, 24" Diameter, Reinforced	412	FT		
524	Drilled Shafts, 30" Diameter, Unreinforced	443	FT		
601	Rock Channel Protection, Type B with Filter	8	CY		
606	Guardrail, Type 5	137.5	FT		
611	30" Conduit, Type A (707.65)	40	FT		
614	Maintaining Traffic	1	Lump		
623	Construction Layout Stakes and Surveying	1	Lump		
624	Mobilization	1	Lump		
626	Barrier Reflector, Type 2A	3	Each		
642	Center Line, Type 1	0.03	Mile		
642	Edge Line, 4 inch, Type 1	0.05	Mile		
659	Seeding and Mulching	100	SY		
				Sub Total =	
				<b>Total Bid Price =</b>	

**BID PROPOSAL – cont.**

Proposal for the drilled pier wall and roadway work on Emmons Road, Liberty-Keuter Road and Olive Branch Road. This work consists of constructing the drilled pier wall and the related items for the 2024 Drilled Pier Wall Project. The drilled pier wall project shall be as per plans and specifications as provided by the Warren County Engineer.

The undersigned do hereby propose to furnish all labor, materials, tools, equipment, etc., necessary to construct this project for the Warren County Engineer’s Office. The above quotations to be in full force and effect for sixty (60) days after the date of opening bids. The full name and address of all persons and parties interested in the foregoing bids as principals are as follows:

**Total Bid Price \$** \_\_\_\_\_

The contract will be awarded to the best and most responsive bid based on the qualifications of the Contractor and the total price of the Total Bid.

**SIGNED**

\_\_\_\_\_  
PRESIDENT

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
SECRETARY

\_\_\_\_\_  
BY

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_



## EXCEPTION SHEET

Exceptions: Exceptions to any bid specification must be clearly stated on this sheet. This sheet must be submitted with each bid. If there are no exceptions, please indicate "none" below.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

6) \_\_\_\_\_

7) \_\_\_\_\_

8) \_\_\_\_\_

9) \_\_\_\_\_

10) \_\_\_\_\_

**BIDDER IDENTIFICATION**

ATTENTION BIDDER:

Please fill out this form and submit with your bid.

COMPANY NAME:

---

CHIEF EXECUTIVE OFFICER:

---

ADDRESS:

---

---

PHONE NUMBER:

---

FAX NUMBER:

---

PROJECT CONTACT PERSON:

---

PHONE NUMBER:

---

E-MAIL ADDRESS:

---

FEDERAL ID #:

---

WEBSITE ADDRESS:

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- Proposal Price (Bid) Sheet
- Exception Sheet
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- B) General Instructions to Bidders
  
- C) Affidavit of Non-Collusion
  
- D) Bid Guaranty & Contract Bond
  
- E) Performance Bond
  
- F) Contract
  
- G) Bond & Insurance Requirements
  
- H) Experience Statement
  
- I) Affidavit of Non-Delinquency of Real and/or Personal Property Tax
  
- J) Non-Discrimination and Equal Employment Opportunity Requirements and Affidavit
  
- K) Findings for Recovery Affidavit
  
- L) Wage Rate Determination
  
- M) Special Provisions/Technical Specifications

***SECTION A***

***INVITATION TO BIDDERS***

## INVITATION TO BIDDERS

Sealed bids will be received by the Clerk of the County Commissioners, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio 45036, until 9:30 a.m., January 24, 2024, and then at said time bids will be opened and read aloud for the 2024 Pier Wall Project.

Bid documents and specifications are available online at the Warren County's Website at <https://www.co.warren.oh.us/commissioners/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Logan Smith, Project Engineer, at the Warren County Engineer's Office, at (513) 695-3318. Each bid shall contain the full name of each person or company submitting the bid and be accompanied by a bid bond for the full amount of the bid or a certified check in the amount equal to ten (10) percent of the bid.

Contact the Warren County Commissioner's Office at (513) 695-1250 should you need assistance in accessing the bidding information on the County's website. All contract addenda will be posted to the website prior to the bid opening. Bidders should check the website regularly to stay updated on any changes to the project.

**Please be aware that if you are downloading this document to bid this project, and in order to stay updated on any change, please email Krystal Powell in the Commissioners' Office at [krystal.powell@co.warren.oh.us](mailto:krystal.powell@co.warren.oh.us) with your contact information.**

A Bid guaranty, as required by Ohio Revised Code, Section 153.54, shall accompany each proposal submitted, as follows:

1. A Certified check, cashier's check, or letter of credit equal to ten (10) percent of the bid. A letter of credit may only be revocable by the Owner. Upon entering into a contract with the Owner, the contractor must file a performance bond for the amount of the contract, and the bid guaranty will then be returned to the successful and unsuccessful bidders upon contract execution.

**OR**

2. A form of bid guaranty bond (attached) for the full amount of the bid. Such bond is retained for the successful bidder, but returned to unsuccessful bidders after the contract is executed.

Attention of bidders is called to all of the requirements contained in the bid packet. No bidder may withdraw his/her bid within sixty (60) days after the actual date of the opening thereof. All bids shall be properly signed by an authorized representative of the bidder.

All bids shall be sealed and plainly marked "**Bid Opening – 2024 PIER WALL PROJECT, June 24, 2024 @ 9:30 a.m.**"

Warren County reserves the right to reject any or all bids submitted, to waive any irregularities in bids, and enter into a contract with the Bidder who in Warren County's consideration offered the lowest and best bid.

By order of the Board of County Commissioner, County of Warren, State of Ohio.

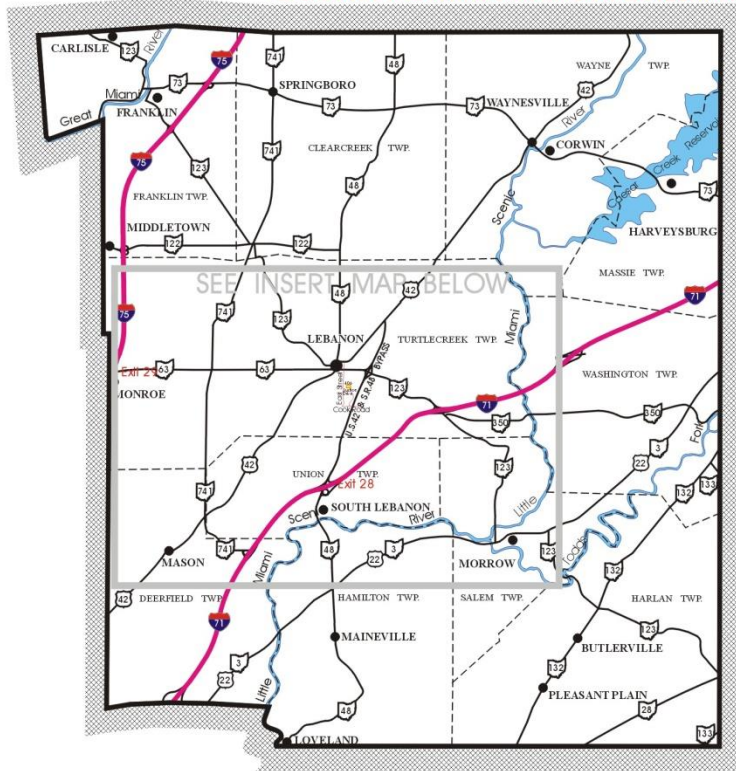
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Tina Osborne, Clerk



# DIRECTIONS FROM INTERSTATE HIGHWAYS 71 & 75 TO WARREN COUNTY, OHIO

## COUNTY ADMINISTRATION BUILDING



### TRI-STATE REGION COUNTIES

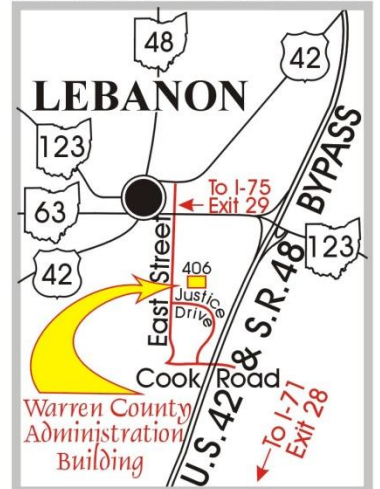


- FROM INTERSTATE 75:**
- Take Monroe / Lebanon Exit 29,
  - Head East on S. R. 63 into Lebanon,
  - Turn right onto East Street,
  - Turn left onto Justice Drive,
  - Turn left into parking lot,
  - At first driveway on left.
- FROM INTERSTATE 71:**
- Take Lebanon / South Lebanon Exit 28,
  - Head North on U. S. 42 / S. R. 48 Bypass,
  - Turn left onto Cook Road at traffic light,
  - Turn at first right onto Justice Drive,
  - Turn right at first street on right,
  - Then left into parking lot at first left.

INSERT FROM ABOVE MAP



INSERT FROM MAP AT LEFT



Map Prepared By: Warren County Regional Planning Commission

***SECTION B***

***GENERAL INSTRUCTIONS TO BIDDERS***

## GENERAL INSTRUCTIONS TO BIDDERS

1. **Receipt and Opening of Bids:** The Warren County Board of Commissioners (herein referred to as "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Office of the Warren County Board of Commissioners until 9:30 a.m., January 24, 2024, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Warren County Board of Commissioners at 406 Justice Drive, Lebanon, Ohio 45036. Bids shall be submitted in a sealed envelope clearly marked **“Bid Opening – 2024 Pier Wall Project, January 24, 2024 @ 9:30 a.m.”**

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof.

2. **Withdrawal of Bid:** A Bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids, provided the bid was submitted in good faith and the reason for the price being substantially lower was a clerical mistake as opposed to a judgment mistake and was actually due to an unintentional omission of a substantial quantity of work, labor or material made directly in the compilation of the bid. Request to withdraw such bid must be made in writing and filed with the Owner within two business days after the opening of bids and prior to the acceptance thereof.
3. **Preparation of Bid:** Each bid must be submitted on the prescribed form and such documents as hereunder described. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing certifications must be fully completed and executed when submitted.
4. **Method of Bidding:** The Owner invites the following bid(s):

### **2024 PIER WALL PROJECT**

Bids shall be submitted at the time and place indicated in the Invitation to Bidder and shall be included in a sealed envelope, marked with the project title and name and address of the bidder and accompanied by the bid security and other required documents.

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.

The Owner invites unit price bids for the construction described in the plans and specifications. These unit prices shall be extended by estimated quantities to develop a total price for the project.

If the total price received from the lowest and best bidder exceeds the amount of funds available to finance the contract, the Owner may:

- a. Reject all bids;



- b. Augment the funds available in an amount sufficient to enable award to the lowest and best bidder;
  - c. Reduce the scope of work by eliminating certain items of work to produce a total bid which is within available funds;
  - d. Reduce the scope of work by reducing the quantity of certain items of work to produce a total bid which is within available funds;
  - e. Reduce the scope of work by a combination of adjustments as outlined in "c" and "d" above to produce a total bid which is within available funds.
  - f. The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternates as produces a net amount which is within the available funds.
  - g. The Owner may consider informal and may reject any bid not prepared and submitted in accordance with the provisions hereof. The Owner reserves the right to reject all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed lowest and best.
5. **Qualification of Bidder:** The Owner may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein; conditional bids will not be accepted.
6. **Bid Security:** Each bid must be accompanied by cash, certified check of the bidder, letter of credit equal to ten (10) percent of the bid, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner. (See Invitation to Bidders for required amounts) Such cash, checks or bid bonds will be returned to bidders after the Owner has awarded the bid and has executed the contract, or, if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.
7. **Liquidated Damages for Failure to Enter into Contract:** Submission of a bid shall be a representation by the Contractor that it has fully reviewed and is familiar with the Contract and all contract documents as defined in the contract and will execute the contract if awarded the bid. The successful bidder, upon his/her failure or refusal to execute and deliver the Contract (attached hereto) and required bonds within 10 days after he/she has received notice of the acceptance of his/her bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.
8. **Time of Completion and Liquidated Damages:** Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 8 weeks after the written Notice to Proceed has been issued. The completion date may be extended in the event of adverse weather conditions. Bidder must agree also to pay as liquidated damage of ODOT CMS 108.07 for each consecutive calendar day thereafter.

9. **NO DAMAGE FOR DELAY:** No payment, compensation or adjustment of any kind shall be made to the contract price for damages incurred by the contractor because of hindrances or delays in the progress of the work from any cause that is not proximately caused by the Owner's action or failure to act. Whether such hindrances or delays are avoidable or unavoidable, the contractor agrees that he or she will make no claim for compensation, damages or mitigation of liquidated damages for any such delays. Examples of delays include (but are in no manner limited to) obtaining all necessary permission from any government agency or any private party, any act or failure to act by any other contractor, subcontractor and/or supplier, all foreseen and unforeseen events and any conditions or acts of God. It is understood and agreed that the contractor assumes all risks of delays in prosecuting or completing the work under the contract that are not proximately caused by the Owner's action or failure to act. The contractor will accept in full satisfaction for such delays, an extension of time, if any, agreed to by the Owner.
10. **Conditions of Work:** Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible the contractor, in carrying out the work, must employ such methods or means or will not cause any interruption of or interference with the work of any other contractor.
11. **Addenda and Interpretations:** No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation must be in writing and addressed to: Logan Smith, Warren County Engineer's Office, 210 West Main Street, Lebanon, Ohio, 45036, and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. All such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), no later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from any obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents.
12. **Security for Faithful Performance:** Simultaneously with the delivery of the executed Contract, the Contractor shall furnish payment and performance bonds as security for faithful performance of this contract and for the payment of all subcontracts, suppliers and laborers performing labor on the project under the Contract and furnishing materials in connection with the Contract.  
  
The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner. Please note that upon execution of the Contract if a Bid Guaranty/Contract Bond was submitted with your original bid a Performance Bond will not be required.
13. **Power of Attorney:** Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.
14. **Laws and Regulations:** The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

15. **Method of Award - Lowest Qualified Bidder:** The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternates as produces a net amount which is within the available funds.
16. **Obligation of Bidder:** At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his/her bid.
17. **Safety Standards and Accident Prevention:** With respect to all work performed under this contract, the Contractor shall:
  - a. Comply with the safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of title 29 of the code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, N. 75, Saturday, April 17, 1971.
  - b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
  - c. Maintain at his/her office or other well-known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or doctor's care of persons (including employees) who may be injured at the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.
18. **Examination of Site:** Each bidder shall, and is hereby directed to inspect the entire site of the proposed work and judge for him/herself as to all the circumstances affecting the cost and progress of the work and shall assume all patent and latent risks in connection therewith.
19. **Soil Conditions:** Subject to the convenience of the Owner, prospective bidders will be permitted to explore the site by making borings or digging test pits. In such event, the work shall be done at the sole expense and risk of the bidder, and he/she shall maintain and restore the site to original condition. The Owner does not guarantee the accuracy of any information or samples which it may have obtained from test borings or otherwise as to the kind or condition of the soil that may be encountered in the prosecution of the proposed work, neither does the Owner represent that the plans and specifications drawn are based upon any data so obtained. The Owner does not make any representation as to the soil which may be encountered or of soil or water which underlies the work or is adjacent thereto, including any difficulties that may be due to quicksand, or other unfavorable conditions that may be encountered in the work, whether apparent upon surface inspection or disclosed in the process of carrying forward the work.
20. **Water Supply:** All water for construction purposes, as well as the expense of having water conveyed about the work, must be provided by the Contractor and the cost of this work shall be included in the unit prices stipulated for the various items of the work to be done under this contract.

21. **Working Facilities:** The plans show, in the general manner, the existing structures and the land available for construction purposes. The bidders must satisfy themselves of the conditions and difficulties that may be encountered in the execution of the work at this site.
22. **Permits:** The Contractor shall take out all necessary permits from the proper authorities, and shall give all notices required by law or ordinance. The charge or fee for any permit issued by the proper authority shall be borne by the contractor.
23. **Signature of Bidders:** The firm, corporate or individual name of the bidder must be signed in ink in the space provided for the signatures on the proposed blanks. In the case of a corporation, the title of the officer signing must be stated and such officer must be thereunto duly authorized and the seal of said corporation duly affixed. In the case of a partnership, the signature of at least one of the partners must follow the firm name, using the term "member of the firm." In the case of an individual, use the terms "doing business as", or "sole owner." The bidder shall further state in his/her proposal the name and address of each person or corporation interested therein.
24. **Right to Accept or Reject Proposals:** The Owner may consider informal and may reject any bid not prepared and submitted in accordance with the provisions hereof. The Owner reserves the right to reject all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed lowest and best.
25. **Non-Collusion Affidavit:** The successful bidder will be required to submit a non-collusion affidavit on the form included in these Bid/Contract documents (Section C). This affidavit shall be dated and executed as part of this bid.
26. **EEO Compliance:** Bidders please see Section J for EEO Compliance Requirements and Affidavit.
27. **Prevailing Wage Rates:** This Project is subject to Prevailing Wage Requirements. In the event that the rate of wages paid for any trade or occupant in the locality where such work is being performed are under current collective agreements or understandings between bona fide organizations of labor and employer, then the wages to be paid shall be not less than such agreed wage rates, nor less than the minimum rates compiled by the Federal Labor Standard Act. A copy of these prevailing wage rates has been included in these specifications as Exhibit L. Every Contractor and Subcontractor who is subject to Ohio Revised Code, Chapter 4115 shall, as soon as he/she begins performance under his/her contract with the Owner, supply the Prevailing Wage Coordinator for the Owner a schedule of the dates on which he/she is required to pay wages to employees. He/ She shall also deliver to the Prevailing Wage Coordinator within three weeks after each pay date, a certified copy of his/her payroll which shall exhibit for each employee paid any wages, name, current address, social security number, number of hours worked each day of the pay period and the total for each week, hourly rate of pay, job classification, fringe payments, and deductions from wages. The certification of each payroll shall be executed by the Contractor, Subcontractor, or duly appointed agent thereof and shall recite that the payroll is correct and complete and that the wage rate shown is not less than those required by the contract.

In case the Owner orders the Contractor to perform extra or additional work which may make it necessary for the Contractor or any Subcontractor under this contract to employ a person not herein specified, the Owner will include in the contract change order for such extra or additional work, a minimum wage rate for such trade or occupation, and insofar as such extra or additional work is concerned, there shall be paid to each employee engaged in work of such

trade or occupation, not less than the wage so included. Insofar as possible, local labor shall be employed on this work.

28. **Subletting of Contract:** The Contractor shall not sublet, sell, transfer or assign any portion of the contract without written consent of the Owner or his/her designated agent. When such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his/her own organization, work amounting to no less than fifty percent of the total contract cost, except that any time designated in the contract before computing the amount of work required to be performed by the Contractor with his/her own organization, No subcontract, or transfer of contract, shall in any way release the Contractor of his/her liability under the contract and bonds.
29. **Required Insurance:** In accordance with the specifications, the Contractor, without restricting the obligations and liabilities assumed under the Contract Documents, shall at his/her own cost and expense purchase and maintaining in force until final acceptance of his/her work, the forms of insurance coverage listed below.

Certificates from the insurance carrier stating the limits of liability and expiration date shall be filed with the Owner before operations are begun. Such certificates shall not merely name the types of policy provided, **but shall specifically refer to this Contract** and shall name the Board of Warren County Commissioners as additionally insured. However, the original policy for Owner's Protective Bodily Injury (Item D) and Property Damages (Item E) shall at this time be delivered to the Owner for its possession.

All policies as hereinafter required shall be so written that the Owner will be notified of cancellation or restrictive amendment at least ten days prior to the effective date of such cancellation or amendment.

Item A - Workmen's Compensation and/or Employer's liability Insurance as required or specified by State Law.

Item B – Comprehensive General Liability Insurance: In an amount not less than \$1,000,000.00 per occurrence for Bodily Injury and \$500,000 for explosion underground and collapse, commonly known as “XCU.” The following endorsement documents provided by Warren County:

- a. CG 20 10 10 01 – additional insured endorsement (or equivalent)
- b. CG 20 37 10 01 – additional insured endorsement (or equivalent)
- c. CG 25 03 03 97 – designated location aggregate (or equivalent)

General Liability needs to be written on Primary/Non-contributory basis for the benefit of the additional insured.

Item C – Umbrella: In an amount not less than \$1,000,000 occurrence and \$1,000,000 aggregate. Umbrella needs to attach to General Liability, Employers Liability, Auto Liability. Umbrella needs to be written on follow-form primary.

Item D - Bodily Injury Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item E - Property Damage Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item F - (If Applicable) - Such Protective (including Railroad Protective) and Contractual Bodily Injury Liability Insurance and such Protective (including Railroad Protective) and Contractual Property Damage Liability Insurance as shall be required by the railroad and other utility companies whose property, facilities or rights-of-way may be affected by the work to be done under this contract, in such amounts and in such form as each such utility company may require.

If any part of the work is sublet, insurance of the same types and limits as required by above items numbered A, B, C, D, E, and F shall be provided by or on behalf of the Subcontractors to cover that part

of the work they have contracted to perform including Property Damage Liability Special Hazards coverage if so required by this contract.

Protective and Contractual Bodily Injury Liability Insurance required by Item F (if applicable) shall be in an amount and form as each railroad or utility company may require.

Builders Risk Insurance: All Risk form, including subsidence and theft of materials from the job site. Such coverage shall be maintained until final acceptance of the Contract by the Owner and payable to the Owner for the benefit of the contractor. The limit for Builders Risk shall be the full value of construction. (Sample form at end of this section)

30. Maintenance of Rights-Of-Way: All construction as proposed along all City, Township, County, State and Federal roads including storage and stockpiling of materials, is to be conducted within the limits of the public right-of-way. Bracing sheeting and shoring shall be used to keep all construction work within the construction limits unless work agreements are secured from the adjacent property Owners. It is the Contractor's responsibility to secure these work agreements, if deemed necessary. Copies of the work agreements shall be delivered to the Engineer and Owner prior to any work beginning on the affected property.

31. Lights, Signs and Barricades: Lights, signs and barricades shall be used to maintain traffic and safety for vehicular and pedestrian traffic during the course of this contract and shall be the sole responsibility of the Contractor.

32. Foreign Corporation and Contractors:

*Foreign Corporations*

Definition: "Foreign Corporation" means a corporation incorporated under the laws of another state. No contract shall be entered into with a foreign corporation until the Secretary of State has certified that such corporation is authorized to do business in Ohio: and until, if the bidder so awarded the Contract is a person or partnership, it has filed with the Secretary of State a Power of Attorney designating the Secretary of State as its agent for the purpose of accepting service of summons in any action brought under Ohio Revised Code, Section 153.05 or under Sections 4123.01 to 4123.94, inclusive.

33. Subcontracts: Contractor shall provide an explanation as part of its bid package of all subcontractors intended to be used in performance of the work described in Part II, Section

- D. In the event the Owner does not object, Contractor may have such work performed by a subcontractor. Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of, the Contract, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in the Agreement shall create any contractual relationship between any subcontractors and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.
34. **Real and/or Personal Property Tax Affidavit:** All bidders must complete the Real and/or Personal property tax affidavit (Section I) and submit with your bid. ***This section should be fully completed whether or not you as a vendor/contractor own property in Warren County, Ohio.***
35. **Description of Project:**  
See Section M
36. **Scope of Work:** Provide all work as required by Contract and described in the Specifications herein (Section M) as necessary to provide for project completion.
37. **Required Forms:** Each Bidder shall complete and submit the following forms with his/her bid:  
Proposal Price (Bid) Sheet  
Exception Sheet  
Bidder Identification  
Non-Collusion Affidavit  
Bid Guaranty & Contract Bond  
Experience Statement  
Affidavit of Non-Delinquency of Taxes  
Certificate of Compliance Non-Discrimination and Equal Employment Opportunity Affidavit  
Findings for Recovery Affidavit
38. The successful Contractor may be required, at the request of the Owner, to submit a list of sub-contractors and suppliers for said project.
39. **Additional Obligations Upon Contract Award:** Upon award of the bid but prior to execution of the Contract and Notice to Proceed, the Contractor shall submit all of the following documents, completed as required:  
  - 1) Contract
  - 2) Required Bonds
  - 3) Payment Draw Schedule (Required for Projects of \$500,000 or more)
  - 4) Certificates of Insurance
40. ***Entire bid packet must be completed (except contract – Section F) and returned with bid proposal, as the entire bid packet becomes part of the contract documents.***
41. **STATEMENT: Do not submit confidential documents or documents of any type that contain trade secrets. All materials submitted become public records once opened and may be copied upon request to anybody including competitive bidders.**



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW...

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER: Insurance Agency Name & Address
CONTACT NAME: Insurance Agent Contact
PHONE (A/C, No, Ext):
FAX (A/C, No):
E-MAIL ADDRESS:
INSURER(S) AFFORDING COVERAGE NAIC #
INSURED: Contractors Name & Address
INSURER A: Insurance Company A
INSURER B: Insurance Company B
INSURER C: Insurance Company C
INSURER D: Insurance Company D
INSURER E: Insurance Company E
INSURER F: Insurance Company F

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSD, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Includes rows for Commercial General Liability, Automobile Liability, Umbrella Liab, and Workers Compensation.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Board of Warren County Commissions are listed as additional insureds with respects to the General Liability for ongoing and completed operations as per attached CG 2010 10/01 and CG 2037 10/01. General Liability is primary and non-contributory for the benefit of the additional insured. Waiver of subrogation applies to the General Liability.

CERTIFICATE HOLDER: Board of Warren County Commissioners
406 Justice Drive
Lebanon, OH 45036
CANCELLATION: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
AUTHORIZED REPRESENTATIVE
INSURANCE AGENTS SIGNATURE



POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 20 10 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – SCHEDULED PERSON OR  
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

**Name of Person or Organization:**

Board of Warren County Commissioners  
406 Justice Drive, Lebanon, OH 45036

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**A. Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

**B.** With respect to the insurance afforded to these additional insureds, the following exclusion is added:

**2. Exclusions**

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- (1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or
- (2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 20 37 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

<b>Name of Person or Organization:</b> Board of Warren County Commissioners 406 Justice Drive Lebanon, OH 45036
<b>Location And Description of Completed Operations:</b>  
<b>Additional Premium:</b>  

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**Section II – Who Is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 25 03 03 97

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

Designated Construction Projects:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under COVERAGE A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under COVERAGE C regardless of the number of:
    - a. Insureds;
    - b. Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".
  3. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
- 4.** The limits shown in the Declarations for Each Occurrence, Fire Damage and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under COVERAGE A (SECTION I), and for all medical expenses caused by accidents under COVERAGE C (SECTION I), which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under COVERAGE A for damages or under COVERAGE C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

**\*\*SAMPLE\*\***

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of Limits Of Insurance (SECTION III) not otherwise modified by this endorsement shall continue to apply as stipulated.

***SECTION C***

***AFFIDAVIT OF NON-COLLUSION***

**AFFIDAVIT OF NONCOLLUSION**

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, holding the title and position of \_\_\_\_\_ at the firm \_\_\_\_\_, affirm that I am authorized to speak on behalf of the company, board directors and owners in setting the price on the bid or proposal. I understand that any misstatements in the following information will be treated as fraudulent concealment of true facts on the submission of the bid or proposal.

I hereby swear and depose that the following statements are true and factual to the best of my knowledge:

The bid/proposal is genuine and not made on the behalf of any other person, company or client, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS.

The price of the bid/proposal was determined independent of outside consultation and was not influenced by other companies, clients or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS.

No companies, clients or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS have been solicited to propose a fake bid/proposal for comparative purposes.

No companies, clients or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS have been solicited to refrain from bidding or to submit any form of noncompetitive bidding.

The price of the bid/proposal has not been disclosed to any client, company or contractor, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS, and will not be disclosed until the formal date on \_\_\_\_\_

\_\_\_\_\_  
AFFIANT

Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_

\_\_\_\_\_  
(Notary Public),

\_\_\_\_\_ County.

My commission expires \_\_\_\_\_ 20 \_\_\_\_

***SECTION D***

***BID GUARANTY AND CONTRACT BOND***

**BID GUARANTY AND CONTRACT BOND**

**KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,**

\_\_\_\_\_

(Insert full name or legal title of Contractor and Address)

as \_\_\_\_\_ Principal \_\_\_\_\_ and

\_\_\_\_\_

(Insert full name or legal title of Surety)

as Surety, are hereby held and firmly bound unto the Warren County Board of Commissioners hereinafter called the Oblige, in the penal sum of the dollar amount of the bid submitted by the Principal to the Oblige on \_\_\_\_\_ to undertake the project known as:

**2024 PIER WALL PROJECT**

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Oblige, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Oblige, which are accepted by the Oblige, In no case shall the penal sum exceed the amount of \_\_\_\_\_ DOLLARS, \$\_\_\_\_\_.

If this item is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including alternates in dollars and cents. A percentage is not acceptable.

For the payment of the penal sum well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

**THE CONDITION OF THE ABOVE OBLIGATION IS SUCH** that whereas the above named Principal has submitted a bid on the above referred to project;

**NOW, THEREFORE,** if the Oblige accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Oblige the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which the Oblige may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the Oblige does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal will pay the Oblige the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising, and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect. If the Oblige accepts the bid of the Principal and within TEN days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

**IF THE SAID PRINCIPAL SHALL** well and faithfully perform each and every condition of such contract; and indemnify the Oblige against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract: we agreeing and assenting that this undertaking shall be for benefit of any materialman or laborer having a just claim, as well as for the Oblige herein; **THEN THIS OBLIGATION SHALL**



be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

**THE SAID** surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefor shall in any wise affect the obligations of said surety on its bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this \_\_\_\_ day of \_\_\_\_\_ 2024.

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_

By: \_\_\_\_\_

Attorney-in-fact

Title: \_\_\_\_\_

Surety Agent's Name and Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***SECTION E***  
***PERFORMANCE BOND***

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS:** that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called  
(Corporation, Partnership or Individual)

Principal, and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

WARREN COUNTY, OHIO BOARD OF COMMISSIONERS  
406 Justice Drive  
Lebanon, OH 45036

hereinafter called OWNER, in the penal sum of \_\_\_\_\_ Dollars,  
\$(\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and  
truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these  
presents.

**THE CONDITION OF THIS OBLIGATION** is such that whereas, the Principal entered into a  
certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2024, a copy of  
which is hereto attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOW, THEREFORE**, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the guaranty period(s), and if he/she shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

**PROVIDED, FURTHER**, that the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition of the terms of the contract or the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

**PROVIDED, FURTHER**, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

**IN WITNESS WHEREOF**, this instrument is executed in counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_ 2024.

ATTEST:

\_\_\_\_\_  
(Principal)

\_\_\_\_\_  
(SEAL)

By \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
(SEAL)

\_\_\_\_\_  
(Surety)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

***IMPORTANT:*** Pursuant to Ohio Revised Code §122.87(A) a surety company is defined as, “. . . a company that is authorized by the department of insurance to issue bonds as a surety”.

***SECTION F***

***CONTRACT***

## CONTRACT

**THIS AGREEMENT**, made this \_\_\_\_\_ day of \_\_\_\_\_, 2024, with the Warren County Board of Commissioners, 406 Justice Drive, Lebanon, Ohio hereinafter called "Owner" and **NAME, ADDRESS**, doing businesses as (an individual, partner, a corporation) hereinafter called "Contractor."

**WITNESSETH:** That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner, the Contractor hereby agrees with the Owner to commence and complete the construction described as follows:

### 2024 PIER WALL PROJECT

hereinafter called the project, for the sum of **\$AMOUNT (AMOUNT TYPED OUT)**, and all work in connection therewith, under the terms as stated in the Conditions of the Contract; and as his/her (its or their) own proper cost and expense furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, Conditions of the Contract, the Specifications and Contract Documents. "Contract Documents" means and includes the following:

- Proposal Price (Bid) Sheet
- Exception Sheet
- Bidder Identification
- A) Invitation to Bidders
- B) General Instruction to Bidders
- C) Non-Collusion Affidavit
- D) Bid Guaranty & Contract Bond
- E) Performance Bond
- F) Contract
- G) Bonding & Insurance Requirements
- H) Experience Statement
- I) Affidavit of Non-Delinquency of Real and/or Personal Property Tax
- J) Equal Employment Opportunity Requirements, Bid Conditions and Non-discrimination and Equal Employment Opportunity Affidavit
- K) Findings for Recovery Affidavit Wage Rate Determination
- L) Wage Rate Determination
- M) Special Provision/Technical Specifications

The CONTRACTOR hereby agrees to commence work under this contract on or before a date to be specified in a Written "Notice to Proceed" of the OWNER, and to fully complete the project by August 25, 2023. The Contractor further agrees to pay, as liquidated damages, the sum of \$300.00 for each consecutive calendar day thereafter.

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

OWNER may terminate or suspend performance of this Agreement for OWNER'S convenience upon a written notice to CONTRACTOR. CONTRACTOR shall terminate or suspend performance of the services/work on a schedule acceptable to OWNER.

The CONTRACTOR will indemnify and save the OWNER, their officers and employees, harmless from loss, expenses, costs, reasonable attorney's fees, litigation expenses, suits at law or in equity, causes of action, actions, damages, and obligations arising from (a) negligent, reckless or willful and wanton acts, errors or omissions by CONTRACTOR, its agents, employees, licensees, consultants or subconsultants; (b) the failure of the CONTRACTOR, its agents, employees, licensees, consultants or subconsultants to observe the applicable standard of care providing services pursuant to this agreement; (c) the intentional misconduct of the CONTRACTOR, its agents, employees, licensees, consultants or subconsultants that result in injury to persons or damage to property for which the OWNER may be held legally liable.

The CONTRACTOR does hereby agree to indemnify and hold the OWNER harmless for any and all sums for which the OWNER may be required to pay or for which the OWNER may be held responsible for failure of the CONTRACTOR or any subcontractor to pay the prevailing wage upon this project.

The OWNER agrees to pay the CONTRACTOR in the manner and at such times as set forth in the General Provisions such amounts as required by the Contract Documents.

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of, this Agreement, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.

**IN WITNESS WHEREOF**, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in two counterparts, each of which shall be deemed an original on the date first above written.

**WARREN COUNTY BOARD OF COMMISSIONERS**  
(Owner)

\_\_\_\_\_  
David G. Young, President

**NAME**

By: \_\_\_\_\_  
Name

\_\_\_\_\_  
Title

Approved as to Form:

\_\_\_\_\_  
Assistant Prosecutor

***SECTION G***

***BONDING AND INSURANCE REQUIREMENTS***



## **BONDING AND INSURANCE REQUIREMENTS**

A state or local unit of government receiving a grant from the federal government which requires contracting for construction of facility improvement shall follow its own requirements relating to bid guarantees, performance bonds, and payment bonds, except for contracts or subcontracts exceeding \$100,000. For contracts or subcontracts exceeding \$100,000, the Federal agency may accept the bonding policy and requirements of the grantee provided the Federal agency has made a determination that the Government's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:

- a. **A bid guaranty from each bidder.** The "bid guaranty" shall consist of a firm commitment such as a bid bond in the amount of one hundred (100) percent of the bid price, or ten (10) percent of the bid price if certified check or other negotiable instrument accompanying a bid, as assurance the bidder will, upon acceptance of his/her bid, execute such contractual documents as may be required within the time specified.
  
- b. **A performance bond on the part of the Contractor for 100 percent of the contract price.** A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

***SECTION H***

***EXPERIENCE STATEMENT***

**EXPERIENCE STATEMENT**

The Bidder is required to state in detail in the space provided below, what work he/she has done of a character similar to that included in the proposed contract, to give references and such other detailed information as will enable the Owner to judge of his/her responsibility, experience, skill and financial standing. Among other things, this statement shall include the following:

A record of similar work performed and evidence to the effect:

- (1) That the Bidder maintains a permanent place of business;
- (2) Has adequate facilities and equipment available for the work under the proposed contract;
- (3) That the Bidder has suitable financial means to meet obligations incidental to the work;
- (4) That the Bidder has appropriate technical experience and possesses sufficient skill and experience.

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***SECTION I***

***AFFIDAVIT OF NON-DELINQUENCY OF REAL  
AND/OR PERSONAL PROPERTY TAX***

**THIS SECTION SHOULD BE FULLY COMPLETED WHETHER OR NOT YOU AS A VENDOR/CONTRACTOR OWN PROPERTY IN WARREN COUNTY, OHIO.**

**AFFIDAVIT**

STATE OF \_\_\_\_\_ )

) SS:

COUNTY OF \_\_\_\_\_ )

\_\_\_\_\_ being duly cautioned and sworn, states as follows:

1. That he/she is \_\_\_\_\_ of  
(Title)

\_\_\_\_\_  
(Name of Contracting Party)

2. That \_\_\_\_\_ is not presently  
(Name of Contracting Party)  
charged with any delinquent Real and/or Personal property taxes on the general tax  
list of Real and/or Personal property of Warren County.

**-OR-**

1. That \_\_\_\_\_ is charged with  
(Name of Contracting Party)

delinquent Real and/or Personal property tax on the general tax list of Real and/or Personal  
property of Warren County. The amount of delinquent Real and/or Personal property tax due  
and unpaid including any due and unpaid penalty and interest is:  
\$ \_\_\_\_\_

Further, affiant states not.

\_\_\_\_\_  
Affiant

Sworn to and subscribed in my presence this \_\_\_\_ day of \_\_\_\_\_ 2024.

\_\_\_\_\_  
Notary Public

This instrument was prepared by:  
\_\_\_\_\_.

**Note to Fiscal Office:** If any Real and/or Personal property taxes are delinquent, you must send a copy of this statement to the County Treasurer within 30 days of the date it is submitted.

**WARNING:** MAKING A FALSE STATEMENT ON THIS AFFIDAVIT MAY BE PUNISHABLE BY A FINE AND/OR IMPRISONMENT

***SECTION J***

***EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS,  
BID CONDITIONS AND  
NON-DISCRIMINATION AND EQUAL  
EMPLOYMENT OPPORTUNITY AFFIDAVIT***

**EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS  
AND BID CONDITIONS FOR  
WARREN COUNTY CONSTRUCTION PROJECTS**

**CERTIFICATE OF COMPLIANCE FOR EEO PURPOSES:** (This section applies only to projects that are funded with Federal and State monies)

All bidders on the project **shall** submit together with their bid, a copy of a valid Certificate of Compliance for Equal Employment Opportunity purposes contained herein.

A copy of the Certificate of Compliance is enclosed with this bid response? \_\_\_\_ Yes \_\_\_\_ No

**BIDDER'S EEO COVENANTS:**

Throughout its performance of any contract awarded to it on this project, the bidder agrees to the following covenants:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry or sex. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry or sex. Such action shall include, but is not limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the prime contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry or sex.
3. The contractor agrees to fully cooperate with the County, the State Equal Employment Opportunity Coordinator and with any other official or agency, or the State or Federal government which seeks to eliminate unlawful employment discrimination, and with all other State and Federal efforts to assure equal employment practices under its contract and the contractor shall comply promptly with all requests and directions from the County, the State Equal Opportunity Coordinator and any of the State of Ohio officials and agencies in this regard, both before and during construction.
4. Full cooperation as expressed in clause (3), above, shall include, but not be limited to, being a witness and permitting employees to be witnesses and complainants in any proceedings involving questions of unlawful employment practices, furnishing all information requested by the County and the State Equal Employment Opportunity Coordinator, and permitting access to its books, records, and accounts by the County and the State Equal Employment Opportunity Coordinator for purposes of investigation to ascertain compliance with applicable rules, regulations and orders.

5. In the event of the contractor's noncompliance with the nondiscrimination clauses of its contract or with any of the said rules, regulations, or orders, its contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further County construction contracts.

In the event that is contract is terminated for a material breach of EEO requirements, the contractor shall become liable for any and all damages which shall accrue to the County as a result of said breach.

6. The contractor will require the inclusion of language reflecting these same six covenants within every subcontract or purchase order it executes in the performance of its contract unless exempted by rules, regulations or orders of the State Equal Employment Opportunity Coordinator so that these provisions will be binding upon each subcontractor or vendor. The contractor will take such as the County may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in any litigation with a subcontractor, vendor or other party as a result of such direction by the County, the contractor may be requested to protect the interests of the County.

**The bidder hereby adopts the foregoing covenants?**

\_\_\_\_\_ Yes    \_\_\_\_\_No

**PLEASE NOTE:** *The bidder's failure to adopt the Bidder's EEO Covenants and complete the foregoing certification will cause the bidder's proposal to be rejected as being non-responsive.*







***SECTION K***

***FINDINGS FOR RECOVERY AFFIDAVIT***

**FINDINGS FOR RECOVERY AFFIDAVIT**

**STATE OF** \_\_\_\_\_  
**COUNTY OF** \_\_\_\_\_, SS:

\_\_\_\_\_, upon being duly cautioned and sworn, hereby states the following based on personal knowledge:

- 1) That he/she is \_\_\_\_\_ (title), of \_\_\_\_\_ (name of bidder) and authorized to execute this affidavit; and,
- 2) That \_\_\_\_\_ (name of bidder) is not a person or entity against whom a finding for recovery has been issued by the Auditor of State, which finding for recovery is unresolved as defined in Ohio Revised Code [General Provisions] Section 9.24 (B); and,
- 3) That \_\_\_\_\_ (name of bidder) does not appear in the database of unresolved findings of recovery maintained by the Auditor of State pursuant to Ohio Revised Code [General Provisions] Section 9.24 (D).

\_\_\_\_\_  
Affiant

Sworn to and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

\_\_\_\_\_  
Notary Public  
My Commission expires: \_\_\_\_\_

***SECTION L***

***WAGE RATE DETERMINATION***



**Mike DeWine**  
Governor

**Sheryl Maxfield**  
Director

# **PREVAILING WAGE GUIDE**

## **WARREN COUNTY**

### **OHIO DEPARTMENT OF COMMERCE**

Division of Industrial Compliance  
Bureau of Wage and Hour Administration  
6606 Tussing Road, PO Box 4009  
Reynoldsburg, Ohio 43068-9009  
Phone: 614-644-2239  
Fax: 614-728-8639  
[www.com.ohio.gov](http://www.com.ohio.gov)  
TTY/TDD: 1-800-750-0750

The Ohio Department of Commerce is an Equal Opportunity Employer and Service Provider

This packet of information is provided as a summary of the Prevailing Wage guidelines and responsibilities. The Ohio Revised Code, Chapter 4115 should be referred to for the exact wording of the law. Also included are references and forms which should be helpful in the compliance of the Prevailing Wage Law.

## PACKET INFORMATION INDEX

### A. The Ohio Department of Commerce-Division of Industrial Compliance, Wage and Hour Administration Investigators and their assigned counties

1. The Wage and Hour Investigators for the State of Ohio are listed with their contact information.
  - a. If you have questions or need assistance pertaining to Prevailing Wage, you can contact the Investigator in your area.

### B. Prevailing Wage Guide for Public Authorities

1. Notice of change of the Prevailing Wage Threshold Level.
  - a. A notification will be sent to you when there is a change of the Prevailing Wage threshold level
2. Outline of the Public Authority's responsibilities for Prevailing Wage.
3. Public Authority's Compliance Checklist form.
  - a. A form for tracking the progress of a Prevailing Wage project
4. Request form for Prevailing Wage Rates.
  - a. Prevailing Wage Rates can be obtained on the website [www.com.ohio.gov](http://www.com.ohio.gov)
    - (1) Prevailing Wage Determination Schedule of wages must be attached to and made part of the specifications for the project, and must be printed on the bidding blanks where the work is done by contract.
5. Bid Tabulation form
  - a. A form to be completed and returned to ODOC-DIC-Bureau of Wage and Hour Administration when the contract has been awarded.
6. Prevailing Wage Bonds form
  - a. Information needed to be kept on file by the Prevailing Wage Coordinator when bonds from the Public Authority are used for a project.

### C. Prevailing Wage Guidelines for the Public Authority's Coordinator

1. Guideline for the Prevailing Wage Coordinator
  - a. The Prevailing Wage complaint form and instructions can be obtained on the website [www.com.ohio.gov](http://www.com.ohio.gov)
2. Record of the Certified Payroll Reports Received form
  - a. Helpful form for recording the Certified Payroll Reports and the dates received from the contractors and subcontractors.
3. Employee Interview form
  - a. Helpful form for the use by the Prevailing Wage Coordinator when making on-site visits.
4. Employee vs. Independent Contractor
  - a. Helpful questions when determining if a person is an Employee or an Independent Contractor.

### D. Prevailing Wage Guide for Contractors

(Incorporate this section in the Specifications or supply copies for the pre-construction meeting.)

1. Outline of responsibilities for the Prevailing Wage Contractor
2. Notification form from the Contractor to the Employee
  - a. The contractor must submit to employees a completed and signed notification form.
  - b. Some Prevailing Wage Coordinators may require a copy of the completed Notification to the Employee form be submitted with the Certified Payroll Reports.
3. Certified Payroll Report form
  - a. The contractor can use any form/format he chooses as long as **ALL** the information has been provided.
4. Certified Payroll Report form instruction sheet
5. Corrected Certified Payroll Report Example
6. Affidavit of Compliance form
  - a. No Public Authority shall make final payment unless the **Final Affidavits** have been filed by the contractors and subcontractors.



**Mike DeWine**  
Governor

**Sheryl Maxfield**  
Director

# **INVESTIGATORS CONTACT INFORMATION**

## **OHIO DEPARTMENT OF COMMERCE**

Division of Industrial Compliance  
Bureau of Wage and Hour Administration  
6606 Tussing Road, PO Box 4009  
Reynoldsburg, Ohio 43068-9009  
Phone: 614-644-2239  
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[www.com.ohio.gov](http://www.com.ohio.gov)  
TTY/TDD: 1-800-750-0750

The Ohio Department of Commerce is an Equal Opportunity Employer and Service Provider



OHIO DEPARTMENT OF COMMERCE  
 Division of Industrial Compliance  
 Bureau of Wage and Hour Administration  
 Chief, Stephen Clegg

6606 Tussing Road, PO Box 4009  
 Reynoldsburg, Ohio 43068-9009  
 614-644-2239  
 fax: 614-728-8639  
<http://www.com.ohio.gov>

## INVESTIGATORS and THEIR HEADQUARTER COUNTY

<p><b>#48 Dave Horvath</b>          PO Box 1512          Lima, Ohio 45802-1512          Voice: (419) 302-1200          Fax: (614) 728-8639  <a href="mailto:Dave.Horvath@com.state.oh.us">Dave.Horvath@com.state.oh.us</a></p>	<p>Allen *</p>
<p><b>#30 Mike McKee</b>          P.O. Box 1342          Cambridge, Ohio 43725-2247          Voice/Fax: (740) 432-1987  <a href="mailto:Michael.McKee@com.state.oh.us">Michael.McKee@com.state.oh.us</a></p>	<p>Guernsey*</p>
<p><b>#56 Shawn Miles</b>          P.O. Box 2547          North Canton, Ohio 44720          Voice/Fax: (614) 496-9076  <a href="mailto:Shawn.Miles@com.state.oh.us">Shawn.Miles@com.state.oh.us</a></p>	<p>Stark *</p>
<p><b>#37 David Rice</b>          P.O. Box 41241          Dayton, Ohio 45441          Voice: (740) 502-0883          Fax: (614) 995-7768  <a href="mailto:Dave.Rice@com.state.oh.us">Dave.Rice@com.state.oh.us</a></p>	<p>Montgomery *</p>
<p><b>#35 Sean Seibert</b>          P.O. Box 422          Painesville, Ohio 44077-3938          Voice: (614) 557-8662          Fax: (614) 232-9541  <a href="mailto:Sean.Seibert@com.state.oh.us">Sean.Seibert@com.state.oh.us</a></p>	<p>Lake *</p>
<p><b>#11 Kela D. Thompson</b>          6606 Tussing Rd, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-5007          Fax: (614) 232-9537  <a href="mailto:Kela.Thompson@com.state.oh.us">Kela.Thompson@com.state.oh.us</a></p>	<p>Franklin *</p>

**\* Headquarter County**

<p><b>Stephen Clegg, Chief</b>          6606 Tussing Road, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-8686          Fax: (614) 728-8639  <a href="mailto:Stephen.Clegg@com.state.oh.us">Stephen.Clegg@com.state.oh.us</a></p>	<p><b>#90 Jackie Clark, Supervisor</b>          6606 Tussing Rd, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-5019          Fax: (614) 222-2357  <a href="mailto:Jackie.Clark@com.state.oh.us">Jackie.Clark@com.state.oh.us</a></p>
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**Mike DeWine**  
Governor

**Sheryl Maxfield**  
Director

# **PREVAILING WAGE GUIDE FOR PUBLIC AUTHORITIES**

## **OHIO DEPARTMENT OF COMMERCE**

Division of Industrial Compliance  
Bureau of Wage and Hour Administration  
6606 Tussing Road, PO Box 4009  
Reynoldsburg, Ohio 43068-9009  
Phone: 614-644-2239  
Fax: 614-728-8639  
[www.com.ohio.gov](http://www.com.ohio.gov)  
TTY/TDD: 1-800-750-0750

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# PREVAILING WAGE THRESHOLD LEVELS

## IMPORTANT NOTICE

Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the Public Authority shall have the Ohio Department of Commerce-Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.

<b>“New” construction threshold for <i>Building Construction</i>:</b>	<b>\$250,000</b>
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<b>“Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting” threshold level for <i>Building Construction</i>:</b>	<b>\$75,000</b>
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<b>As of January 1, 2018:</b>
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<b>“New” construction that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:</b>	<b>\$91,150</b>
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<b>“Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting” that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:</b>	<b>\$27,309</b>
---	-----------------

- A) Thresholds are to be adjusted biennially by the Director of the Ohio Department of Commerce.
- B) Biennial adjustments to threshold levels are made according to the Building Cost for Skilled Labor Index published by McGraw-Hill’s Engineering News-Record, but may not increase or decrease more than 3% for any year.

If there are questions concerning this notification, please contact:

Ohio Department of Commerce  
Division of Industrial Compliance  
Bureau of Wage and Hour Administration  
6606 Tussing Road, PO Box 4009  
Reynoldsburg, Ohio 43068-9009  
Phone: 614-644-2239  
Fax: 614-728-8639  
[www.com.ohio.gov](http://www.com.ohio.gov)

**Public Authority Responsibilities**  
**ORC Chapter 4115: Wages and Hours on Public Works**  
**(Prevailing Wage Coordinator)**

1. Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the public authority shall have the Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.
  - a) "New" construction has a threshold level of **\$250,000.**
  - b) "Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" has a threshold level of **\$75,000.**
  - c) "New" construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction has a threshold level of **\$84,314.**
  - d) "Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction has a threshold of **\$25,261.**
    - i.) Thresholds are to be adjusted biennially by the Director of Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration.
    - ii.) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census, but may not increase or decrease more than 3% for any year.
2. Every contract for public work shall contain a provision that each worker employed by the contractor or subcontractor, or other person about or upon the public work, must be paid the prevailing rate of wages.
3. If contracts are not awarded or construction undertaken within ninety days (90) from the date of the determination of the prevailing wage there shall be a re-determination of the wage rates before the contract is awarded.
4. Within **seven (7) working days** after the receipt of notification of a change in the prevailing wage rates, the public authority shall notify all affected contractors and subcontractors. If it is determined that a contractor or subcontractor has violated sections 4115.03 to 4115.16 of the Ohio Revised Code because they were not notified as required, **the public authority is liable** for any back wages, fines, damages, court costs and attorney's fees for the period of time covering the receipt of wage changes, until they give the required notice.
5. No public authority shall award a contract for a public improvement to any contractor or subcontractor whose name appears on the list of debarred contractors. This list is filed with the Secretary of State by the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration **The filing of the notice of conviction with the secretary of state constitutes notice to all public authorities.** These contractors are prohibited from working on public improvements for periods ranging from one to three years. The list of debarred contractors can be located on the website [www.com.ohio.gov/laws](http://www.com.ohio.gov/laws)
6. A public authority must designate and appoint **one of its own employees** to serve as the Prevailing Wage Coordinator during the life of the contract for constructing the public improvement. A Prevailing Wage Coordinator must be appointed no later than ten days before the first payment of wages by contractors to employees working on the public improvement.

## PUBLIC AUTHORITY'S COMPLIANCE CHECKLIST FOR PREVAILING WAGE

Project:		Number:
Department:		Phone#:
PW Coordinator:		Phone#:
Architect/Engineer:		Phone#:
Contractor:		Phone#:
Contact Person:		Title:
General Contractor:		Prime Contractor:
		Construction Mgr:
Date Completed		Compliance Item Description
	1.	Request Prevailing Wage Determination Schedule from ODOC-DIC-Wage & Hour
	2.	Received Prevailing Wage Determination Schedule
	3.	Incorporate Determination Schedule in Specs./Bidding Blanks
	4.	Incorporate notice of Prevailing Wage requirements in Invitation for Bids/Notice to Bidders
	5.	Incorporate Prevailing Wage requirements in Contract
	6.	Submit complete Invitation for Bid to ODOC-DIC-Wage & Hour
	7.	Invitation for Bids
	8.	Bid Opening
	9.	Check Listing of Violators
	10.	Award of Contract. (see note)
	11.	Submit Bid Tabulation/Award to ODOC-DIC-WAGE & HOUR
	12.	Notice to Successful Bidder
	13.	Work Commenced...(see note)
	14.	Appoint Prevailing Wage Coordinator
	15.	Received list of Subcontractors' names, addresses, phone #'s & email's
	16.	Received Payroll Date Schedule
	17.	Received Registered Apprenticeship Agreement Certifications
	18.	Received Deduction Agreements
	19.	Received Payroll Reports with Certification...(see attachment)
	20.	Visited project site
	21.	Received Changes to Determination Schedule
	22.	Notice to Contractors of Determination Schedule change
	23.	Request Final Compliance Affidavit from contractors & subcontractors
	24.	Received Final Affidavits from all contractors & subcontractors
	25.	Certify Final Payment

**Note:** If contract is not awarded or construction undertaken within 90 days from the date of establishment of the Prevailing Wage Rates, a re-determination of the Prevailing Wage Rates is required.

**REQUEST FOR STATE OF OHIO PREVAILING WAGE RATES**

Date	(Mark (X) One) <input type="checkbox"/> ~ Residential <input type="checkbox"/> ~ Construction
------	--

Project Information (only one project and one county per request form please)

County of Project	Project Name	This form <b>MUST</b> be filled out <b>COMPETELY &amp; CORRECTLY</b> for us to process your request. Forms not completed correctly will be <b>RETURNED TO THE SENDER.</b>
Site Address	City	

Owner/Public Authority	Prevailing Wage Rates can be obtained on the website <a href="http://www.com.ohio.gov">www.com.ohio.gov</a>
------------------------	---

Address	Telephone Number	<b>ODOC-DIC-WAGE &amp; HOUR DATE STAMP</b>
City	Zip Code	
PW Coordinator	Telephone Number	
Issuing Authority of Bonds	Type of Financing	

<b>Estimated Total Overall Project Cost</b> <input type="checkbox"/> New Construction <input type="checkbox"/> "Old" Construction *  A copy of this form will be returned to you with your wage rates. You must send that copy to us with your bid tabulations once the contract has been awarded.	<b>PLEASE MAIL THIS REQUEST TO:</b> Ohio Department of Commerce Division of Industrial Compliance Bureau of Wage & Hour Administration 6606 Tussing Road, PO Box 4009 Reynoldsburg, Ohio 43068-9009  PHONE: (614) 644-2239 FAX: (614) 728-8639
---	--

Expected Date of Contract Award	PHONE: (614) 644-2239 FAX: (614) 728-8639
---------------------------------	--

Projected Completion Date	
---------------------------	--

Send Wage Rates to: (contractors are charged \$5.00 per county)	<b>ODOC-DIC-W&amp;H DATE STAMP (bid tab)</b>
---	--

<input type="checkbox"/> Mail <input type="checkbox"/> Pick Up <input type="checkbox"/> Federal Express Account Number	
---	--

Name	Company or Public Authority
------	-----------------------------

Address	

City	Zip	Telephone Number
------	-----	------------------

\* "Old" construction is reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

# BID TABULATION SHEET

Please attach a copy of your original dated and stamped "Request for Prevailing Wage Rates" with this Bid Tabulation. Please check mark which company was awarded the contract for the project.  
**(Note: DO NOT SEND UNTIL THE CONTRACT HAS BEEN OFFICIALLY AWARDED.)**

Ohio Department of Commerce  
 Division of Industrial Compliance, Bureau of Wage & Hour  
 6606 Tussing Road, PO Box 4009  
 Reynoldsburg, Ohio 43068-9009  
 (Phone) 614-644-2239, (Fax) 614-728-8639 [www.com.ohio.gov](http://www.com.ohio.gov)

**Contracting Public Authority:**

**Project Name:**

**Project #:**

**Bid Date:**

**Estimate:**

**Contract Description:**  General  HVAC  Electrical  Plumbing  Asbestos  Other:

AWARDED TO (CHECK)	LIST OF THE BIDDING CONTRACTORS	TOTAL BID AMOUNT
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
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<input type="checkbox"/>		
<input type="checkbox"/>		

### SUBMITTED BY

<b>Print Name:</b>	<b>Title:</b>
<b>Telephone Number:</b> (     )	<b>FAX #:</b>
	<b>EMAIL:</b>
<b>Signature:</b>	<b>Date:</b>

## INDUSTRIAL DEVELOPMENT BONDS

<b>Bond Projects require the Public Authority to keep the following information on file</b>			
1. Type of Bonds issued:		Amount:	
2. The total cost of the Project:			
3. The other type of financing involved in the project:			
4. Portion of the project being constructed with each type of financing:			
5. Are Prevailing Wage Rates being applied to all construction on the project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
6. The name of the political subdivision who issued the bonds:			
7. When were the bonds issued:			
8. For what purpose were the bonds issued:			
9. Who handles the funds once the bonds are sold:			
10. Who is the lending institution that purchased the bonds:			
11. How are the funds to be paid out:			
12. When are the funds to be paid out:			
13. Who is the Bond Council:			
14. Who has been appointed as the Prevailing Coordinator:			
PWC Address:			
City:	OHIO	Zip:	Telephone #:
15. Obtain a copy of the inducement and other official documents for the issuance of the bonds.			





**Mike DeWine**  
Governor

**Sheryl Maxfield**  
Director

# **PREVAILING WAGE GUIDELINES**

## **FOR THE**

### **PUBLIC AUTHORITY'S**

### **PW COORDINATOR**

**OHIO DEPARTMENT OF COMMERCE**

Division of Industrial Compliance and Labor

Bureau of Wage and Hour Administration

6606 Tussing Road, PO Box 4009

Reynoldsburg, Ohio 43068-9009

Phone: 614-644-2239

Fax: 614-728-8639

[www.com.ohio.gov](http://www.com.ohio.gov)

TTY/TDD: 1-800-750-0750

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## Prevailing Wage Coordinator Guidelines

For more detailed information please refer to Chapter 4115 of the Ohio Revised Code

- A. Attend any pre-bid and/or pre-construction meetings.
  - 1. To explain the prevailing wage rate requirements.
  - 2. To explain the contractor's responsibilities.
- B. Set up and maintain files containing all contractors' and subcontractors' payroll reports, affidavits, and related documents. These files must be available for public inspection.
- C. Obtain from each contractor a list of their subcontractors' names, addresses, telephone numbers, and email addresses.
- D. Require each contractor and subcontractor to provide their project dates. This will be used to make a time schedule for receiving their certified payrolls.
- E. Obtain from each contractor, the name and address of their Bonding\Surety Company.
- F. Obtain from out-of-state corporations, the name and address of their Statutory Agent. (This agent must be located in the State of Ohio and registered with the Ohio Secretary of State.)
  - 1. Records made in connection with the public improvement must not be removed from the State of Ohio for the period of one year following the completion of the project.
- G. Supply contractors with any changes in the Prevailing Wage Rates.
- H. Within two weeks after the first pay, obtain a certified payroll report from each contractor. A certified report is one that is sworn to and signed by the contractor.
  - 1. If the job will exceed four months, all reports after the initial report can be filed once per month. (The initial report must be filed within two weeks.)
  - 2. If the job will last less than four months, all reports are to be filed weekly after the initial report.
- I. Establish and follow procedures to monitor compliance by contractors and subcontractors.
  - 1. Visit project to verify posting requirements and job classifications.
  - 2. Review certified payroll reports to ensure they are submitted in a timely fashion and complete with the following information for each employee:
    - a) Name, current address, and their social security number or last 4 when permitted
    - b) Classification (must be specific for laborers and operators, including level)
    - c) Hours worked on the project
    - d) Hourly rate
    - e) Fringe benefits, if applicable
    - f) Total hours worked for the week (all jobs)
    - g) Gross wages, all deductions, net pay
  - 3. Compare rates and fringes reported to rates in prevailing wage schedule.
- J. Upon completion of the project and prior to the final payment, require an affidavit of compliance from each contractor and subcontractor. **No public authority shall make final payment to any contractor or subcontractor unless the final affidavits have been filed by the respective contractor and subcontractor. (O.R.C. section 4115.07)**
- K. Report any non-compliance to Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage & Hour Administration. The PW complaint form and instructions can be obtained on the website [www.com.ohio.gov](http://www.com.ohio.gov).

## RECORD OF THE CERTIFIED PAYROLL REPORTS RECEIVED

<b>Project:</b>		<b>Number:</b>
<b>Contractor:</b>		<b>Phone #:</b> <b>Email:</b>
<b>General Contractor:</b>	<b>Prime Contractor:</b>	<b>Subcontractor:</b>
<b>Date work commenced:</b>	<b>Completed:</b>	<b>Final Affidavit:</b>

Payroll	Payroll Date	Date Received		Payroll	Payroll Date	Date Received
1				33		
2				34		
3				35		
4				36		
5				37		
6				38		
7				39		
8				40		
9				41		
10				42		
11				43		
12				44		
13				45		
14				46		
15				47		
16				48		
17				49		
18				50		
19				51		
20				52		
21				53		
22				54		
23				55		
24				56		
25				57		
26				58		
27				59		
28				60		
29				61		
30				62		
31				63		
32				64		

## PREVAILING WAGE INVESTIGATION\EMPLOYEE INTERVIEW

Failure to complete this interview form may reduce our ability to recover back wages which may be owed to you.

Project:		Case #:	
Address:		City:	County:
Employee Name:			Last 4 digits of the SS#:
Address:	City:	State:	Zip:
Telephone #: (Home)	(Work)	Email:	Best time to be reached:
Another source by which we can contact you. (Someone not living at your address):			
Name:		Relationship:	Telephone #:
Contractor's Name:		Telephone #:	
Address:		City:	State: Zip:
Date hired:	Date started on this project :	Approximate hours - Straight time:	Overtime:
Method of recording hours: <input type="checkbox"/> Time Card <input type="checkbox"/> Called into office		Recorded by: <input type="checkbox"/> Employee <input type="checkbox"/> Foreman	
Did you keep a personal record of your hours worked on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No		Do you have check stubs? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Did anyone else keep a personal record ? <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, who:	
List your job classification(s):		<input type="checkbox"/> Journeyman <input type="checkbox"/> Helper <input type="checkbox"/> Apprentice - Level	
List your specific job duties:		List tools\equipment used:	
Hourly rate of pay for this project:		Your regular rate of pay:	
Fringe benefits paid by contractor: <input type="checkbox"/> None <input type="checkbox"/> Health Insurance <input type="checkbox"/> Life Insurance <input type="checkbox"/> Pension <input type="checkbox"/> Bonus ~ Vacation - Amount _____ <input type="checkbox"/> Holidays - Amount _____ <input type="checkbox"/> Apprenticeship training <input type="checkbox"/> Profit Sharing ~ Other (list):			
Did you work overtime? <input type="checkbox"/> Yes <input type="checkbox"/> No		Were hours over 40 per week paid at time and one half? <input type="checkbox"/> Yes <input type="checkbox"/> No	
When is your pay day?		Method of payment: <input type="checkbox"/> Check <input type="checkbox"/> Cash <input type="checkbox"/> Direct Deposit	
List names of co-workers on this project:			
Comments:		Please provide a detailed list of the dates, times and hours worked within each classification that may apply to the work performed on a separate sheet.	
<b>SIGNATURE AND NOTARY</b>			
Affiant is further informed that Section 2921.13 of the Ohio Revised Code provides a penalty of a misdemeanor of the first degree and that prosecution will be pursued of those persons who "knowingly swear or affirm the truth of a false statement when ...the statement is sworn or affirmed before a notary public..." Sworn to before me and subscribed by the said:		I hereby certify that this is a true statement to the best of my knowledge and belief.	
_____		Signature _____ Date _____	
in my presence this _____ day of _____, 20_____.		Return to: Ohio Department of Commerce Division of Industrial Compliance & Labor Bureau of Wage and Hour Administration 6606 Tussing Road P.O. Box 4009 Reynoldsburg, Ohio 43068-9009 (614) 644-2239 <a href="http://www.com.ohio.gov">www.com.ohio.gov</a>	
_____ Notary Public			
Signature of PW Coordinator:			Date:

# EMPLOYEE VS. INDEPENDENT CONTRACTOR

EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Does the employer have the right to control and direct worker?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Does the worker receive instructions about how and where the work is to be done instead of the employer merely specifying the desired result?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Is payment based on time spent rather than a set price for the work to be performed?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Does the worker devote virtually all his working time to the employer rather than offering services to the general public?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Does the worker performing services make their services available to the general public and/or other businesses?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Is there a continuing relationship between employer and worker?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Can the worker be discharged at will?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Did the employer train the worker for the job?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR
EMPLOYEE	↔	<input checked="" type="checkbox"/> YES	Does the employer have employees performing the same work as the independent contractor?	<input type="checkbox"/> NO	↔	INDEPENDENT CONTRACTOR

EMPLOYEE VS. INDEPENDENT CONTRACTOR-continued

EMPLOYEE ↔  YES  NO ↔ INDEPENDENT CONTRACTOR  
Does the worker perform services personally rather than delegating them to others?

EMPLOYEE ↔  YES  NO ↔ INDEPENDENT CONTRACTOR  
Does the employer set a specific time when the individual services are to be performed?

EMPLOYEE ↔  YES  NO ↔ INDEPENDENT CONTRACTOR  
Does the employer furnish the tools and materials used by the worker performing services?

EMPLOYEE ↔  YES  NO ↔ INDEPENDENT CONTRACTOR  
Is the employer assuming all the financial risk, rather than the worker making a significant financial investment in the job and having the opportunity to realize a profit or loss from the work?

EMPLOYEE ↔  NO  YES ↔ INDEPENDENT CONTRACTOR  
Does the individual performing the services publicly advertise these services in for example, the newspaper or yellow pages ?

EMPLOYEE ↔  NO  YES ↔ INDEPENDENT CONTRACTOR  
Does the individual performing the services have a business license?

EMPLOYEE ↔  NO  YES ↔ INDEPENDENT CONTRACTOR  
Does the individual performing the services operate d.b.a. or under a tradename?



**Mike DeWine**  
Governor

**Sheryl Maxfield**  
Director

# **PREVAILING WAGE GUIDE FOR CONTRACTORS**

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OHIO DEPARTMENT OF COMMERCE  
 Division of Industrial Compliance  
 Bureau of Wage and Hour Administration  
 Chief, Stephen Clegg

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## INVESTIGATORS and THEIR HEADQUARTER COUNTY

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<p><b>#30 Mike McKee</b>          P.O. Box 1342          Cambridge, Ohio 43725-2247          Voice/Fax: (740) 432-1987  <a href="mailto:Michael.McKee@com.state.oh.us">Michael.McKee@com.state.oh.us</a></p>	<p>Guernsey*</p>
<p><b>#56 Shawn Miles</b>          P.O. Box 2547          North Canton, Ohio 44720          Voice/Fax: (614) 496-9076  <a href="mailto:Shawn.Miles@com.state.oh.us">Shawn.Miles@com.state.oh.us</a></p>	<p>Stark *</p>
<p><b>#37 David Rice</b>          P.O. Box 41241          Dayton, Ohio 45441          Voice/Fax: (740) 502-0883  <a href="mailto:Dave.Rice@com.state.oh.us">Dave.Rice@com.state.oh.us</a></p>	<p>Montgomery *</p>
<p><b>#35 Sean Seibert</b>          P.O. Box 422          Painesville, Ohio 44077-3938          Voice: (614) 557-8662          Fax: (614) 232-9541  <a href="mailto:Sean.Seibert@com.state.oh.us">Sean.Seibert@com.state.oh.us</a></p>	<p>Lake *</p>
<p><b>#11 Kela D. Thompson</b>          6606 Tussing Rd, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-5007          Fax: (614) 232-9537  <a href="mailto:kela.thompson@com.state.oh.us">kela.thompson@com.state.oh.us</a></p>	<p>Franklin *</p>

**\* Headquarter County**

<p><b>Stephen Clegg, Chief</b>          6606 Tussing Road, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-8686          Fax: (614) 728-8639  <a href="mailto:Stephen.Clegg@com.state.oh.us">Stephen.Clegg@com.state.oh.us</a></p>	<p><b>#90 Jackie Clark, Supervisor</b>          6606 Tussing Rd, PO Box 4009          Reynoldsburg, Ohio 43068-9009          Voice: (614) 728-5019          Fax: (614) 222-2357  <a href="mailto:Jackie.Clark@com.state.oh.us">Jackie.Clark@com.state.oh.us</a></p>
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## PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

**This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to Chapter 4115 of the Ohio Revised Code**

### General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$250,000 for new construction or \$75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$91,150 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or \$27,309 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

- a) Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration
- b) Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census\*, but may not increase or decrease more than 3% for any year

### Penalties for violation

Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

### Intentional Violations

If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.
- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.



### Responsibilities

- A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.
1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.
  2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
  3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.
- B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.
1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
  2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.
- C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
  2. Payroll ledger/journals and canceled checks/check register.
  3. Fringe benefit records must include program, address, account number, & canceled checks.
  4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
  5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.
- D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.
- E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.
- F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. **Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.**



- G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.
- H. Supply all subcontractors with the Prevailing Wage Rates and changes.
- I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
  - 1. Employees' names, addresses, and social security numbers.
    - a. Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
  - 2. Employees' work classification.
    - a. Be specific about the laborers and/or operators (Group)
    - b. For all apprentices, show level/year and percent of journeyman's rate
  - 3. Hours worked on the project for each employee.
    - a. The number of hours worked in each day and the total number of hours worked each week.
  - 4. Hourly rate for each employee.
    - a. The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.
    - b. All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.
  - 5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
    - a. When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
    - b. When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by **dividing the total yearly contribution by 2080**.
  - 6. Gross amount earned on all projects during the pay period.
  - 7. Total deductions from employee's wages.
  - 8. Net amount paid.
- J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.
- K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

## PREVAILING WAGE NOTIFICATION to EMPLOYEE

4115.05...the contractor or subcontractor shall furnish each employee NOT covered by a collective bargaining agreement written notification of the job classification to which the employee is assigned, the prevailing wage determined to be applicable to that classification, separated into the hourly rate of pay and the fringe payments, and the identity of the prevailing wage coordinator appointed by the public authority. The contractor or subcontractor shall furnish the same notification to each affected employee every time the job classification of the employee is changed.

Project Name:		Job Number:
Contractor:		
Project Location:		
<b>Prevailing Wage Coordinator</b>	<b>Employee</b>	
Public Authority:	Name:	
Name of PWC:	Street:	
Street:	City:	
City:	State/Zip:	
State/Zip:	Phone:	Email:
Phone:	Last 4 Digits of SS #:	

You will be performing work on this project that falls under these classifications. You will be paid the appropriate rate for the type of work you are performing.

Classification:	Prevailing Wage Rate Total Package:	Minus your fringe benefits *:	Your hourly base rate and overtime:
			/
			/
			/
			/
			/
			/

Hourly fringe benefits paid on your behalf by this company (Yearly amount the company pays divided by 2080):

Fringe	Amount	Fringe	Amount
Health Insurance		Vacation	
Life Insurance		Holiday	
Pension		Sick Pay	
Other (Specify)		Training	
Other (Specify)		<b>Total Hourly Fringes *</b>	

Contractor's Signature:	Date:
Employee's Signature:	Date:

# INSTRUCTIONS FOR PREPARING CERTIFIED PAYROLL REPORTS

## General

Contractors and subcontractors are required by law to submit certified payroll reports for work on projects covered by Ohio's Prevailing Wage Law. This form meets the reporting requirements established by Ohio Revised Code Chapter 4115. The use of this form is not mandatory; employers may submit their own forms provided that all of the required information is included. This form may be reproduced, or additional copies obtained from:

Ohio Department of Commerce  
Division of Industrial Compliance and Labor  
Bureau of Wage & Hour Administration  
6606 Tussing Rd, P. O. Box 4009  
Reynoldsburg, OH 43068-9009  
Phone: (614) 644-2239  
[www.com.ohio.gov](http://www.com.ohio.gov)

## Certified Payroll Heading

**Employer name and address:** Company's full name and address... Indicate if the company is a subcontractor.

**Subcontractor:** Check and list the name of the General Contractor or Prime.

**Project:** Name and location of the project, including county.

**Contracting Public Authority:** Name and address of the contracting public authority... (Owner of the project).

**Week Ending:** Month, day, and year for the last day of the reporting period.

**Payroll #:** Indicate first, second, third, etc. payroll filed by the company for the project.

**Page Indicator:** number of pages included in the report.

**Project Number:** Determined by the public authority... if there is no number leave it blank.

## Payroll Information by Column

- Employee Name, Address and Social Security number:** This information must be provided for all employees that perform physical labor on the project. Corporate officers, partners, and salaried employees are considered employees and must be paid the prevailing rate. Individual sole proprietors do not have to pay themselves prevailing rate but must report their hours on the project.
- Work Class:** List classification of work actually performed by employee. If unsure of work classification, consult the Ohio department of Commerce, Wage and Hour Bureau. Employees working more than one classification should have separate line entries for each classification. Indicate what year/level for Apprentices. Be specific when using laborer and operator classifications; for example, Backhoe Operator or Asphalt Laborer.
- Hours Worked, Day & Date:** In the first row of column 3 enter days of pay period example; M T W T H F S S. The second row is for the date that corresponds with each day for the pay period. In the employee information section enter the number of hours worked on the prevailing wage project and which day the hours were worked. Separate rows are labeled for (ST) straight time hours and (OT) overtime hours. All hours worked after 40, must be paid at the appropriate overtime rate.
- Project Total Hours:** Total the hours entered for pay period.
- Base Rate:** Enter actual rate per hour paid to the employee. The overtime hourly rate is time and one-half the base rate listed in the prevailing wage schedule plus fringe benefits at straight time rate. The prevailing wage schedule lists the base rate plus fringe benefit amounts. These amounts added together equal the total prevailing wage rate. Employers must pay this total amount in one of three ways.
  - Total rate may be paid in entirety in the base rate to the employee; in which case, the cash designation will be checked for fringe benefits.
  - Total rate may be paid as listed in prevailing wage rate schedule with total fringe amounts paid approved plans.
  - Total rate may be paid with a combination of base rate and fringe payments to approved plans in amounts other than those listed in schedule.
- Project Gross:** Enter total gross wages earned on the project for straight time and overtime. Project hours X base rate should equal project gross.
- Fringes:** If fringe benefits are paid in the hourly base rate, indicate this by marking the **Cash** space. If fringe benefits are paid to approved plans as listed in the prevailing wage rate schedule, mark the space **Approved Plans**. If fringe benefits are paid partially in the base rate and partially to approved plans, mark the space **Cash & Approved plans**. List the hourly amount paid to approved plans for each fringe. If payments are not made on a per hour basis, **calculate the hourly fringe credit by dividing the yearly employer contribution by** the lesser of: hours actually worked in the year (these must be documented) or **2080**. Fringe benefits include: **Employer's share** of health insurance, life insurance, retirement plan, bonus/profit sharing, sick pay, holiday pay, personal leave, vacation, and education/training programs. If unsure of a possible fringe benefit, contact the Ohio Department of Commerce - Division of Industrial Compliance and Labor - Bureau of Wage & Hour Administration.
- Total Hours All Jobs:** Total all hours worked during the pay period including non-prevailing wage jobs.
- Total Gross All Jobs:** Gross amount earned in the pay period for all hours worked.
- Self explanatory.
- Self explanatory.

# Certified Payroll Report

**Report for:**  Check if Subcontractor<sup>1)</sup> Contract No: \_\_\_\_\_ Payroll No: \_\_\_\_\_  
 Company: <sup>1)</sup> \_\_\_\_\_ If Sub, GC/Prime Contractor Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ Project Name & Location: \_\_\_\_\_ Week Ending: \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_ Public Authority (Owner): \_\_\_\_\_ Sheet:<sup>2)</sup> \_\_\_\_\_ of \_\_\_\_\_  
 Phone No: \_\_\_\_\_

1. Employee Name, Address, & SS# (Last 4 digits if permitted)	2. Work Class <sup>3)</sup>	3. Prevailing Wage Project			4. Total Hours	5. Base Rate	6. Project Gross	7. Fringes:				8. Total Hrs for all Jobs			9. Total Gross on All Jobs			10. Total Deductions		11. Net Pay on All Jobs	
		Hours Worked - Day & Date						H&W	Pens	Vac	Hol	Other	Total	Total	Total	Total	Total				
																		Fringe Rate Your Company Pays Per Hour			
	OT																				
	ST																				
	OT																				
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1) By signing below, I certify that: (1) I pay, or supervise the payment of the employees shown above; (2) during the pay period reported on this form, all hours worked on this project have been paid at the appropriate prevailing wage rate for the class of work done; (3) the fringe benefits have been paid as indicated above; (4) no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissible deductions as defined in ORC Chapter 4115; and (5) apprentices are registered with the U.S. Dept. of Labor, Bureau of Apprenticeship and Training. I understand that the willful falsification of any of the above statements may subject the Contractor or Subcontractor to civil or criminal prosecution.

Type or Print Name and Title \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

<sup>2)</sup> Attach additional sheets as necessary. <sup>3)</sup> Type in continuous line, text will wrap.

**DO NOT REDO FORM AND CHANGE RATES IF AN ERROR HAS BEEN MADE! SUBMIT A CORRECTED REPORT**

\*\*\* CORRECTED \*\*\*

## Certified Payroll Report

Fill out all other areas of the form as usual

Total Hours being corrected for this indiv.

Difference in base rate & corrected base rate if applicable

**Report for:**  Check if Subcontractor<sup>1)</sup>  If Sub, GC/Prime Contractor Name: \_\_\_\_\_ Contract No: \_\_\_\_\_ Payroll No: \_\_\_\_\_  
 Company: <sup>1)</sup> \_\_\_\_\_  
 Address: \_\_\_\_\_ Project Name & Location: \_\_\_\_\_ Week Ending: \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_ Public Authority (Owner): \_\_\_\_\_  
 Phone No: \_\_\_\_\_ Sheet<sup>2)</sup> \_\_\_\_\_ of \_\_\_\_\_

1. Employee Name, Address, & SSN (Last 4 digits if permitted)	2. Work Class <sup>3)</sup>	3. Prevailing Wage Project Hours Worked - Day & Date	4. Total Hours	5. Base Rate	6. Project Gross	7. Fringes:				8. Total Hrs for all Jobs			9. Total Gross on All Jobs			10. Total Deductions	11. Net Pay on All Jobs
						Cash	Cash & Approved Plans	Approved Plans	H&W	Pens	Vac	Hol	Other	Total	Total		
<div data-bbox="630 1570 727 1864" style="border: 1px solid black; padding: 2px;">Name Address Last 4 SSN</div> <div data-bbox="630 1507 727 1570" style="border: 1px solid black; padding: 2px;">Class</div>	OT ST OT ST OT ST OT ST OT ST																
<div data-bbox="922 898 1149 1045" style="border: 1px solid black; padding: 5px;">Put the period that is being corrected, i.e.: Oct 26 to Nov 02, not individual weekly dates</div> <div data-bbox="516 961 760 1108" style="border: 1px solid black; padding: 5px;">Difference in fringes &amp; corrected fringes if applicable.</div> <div data-bbox="191 972 386 1108" style="border: 1px solid black; padding: 5px;">The net paid will be the total of difference paid and the total hours being corrected. Provide check # in the margin.</div>																	

1) By signing below, I certify that: (1) I pay, or supervise the payment of the employees shown above; (2) during the pay period reported on this form, all hours worked on this project have been paid at the appropriate prevailing wage rate for the class of work done; (3) the fringe benefits have been paid as indicated above; (4) no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissible deductions as defined in ORC Chapter 4115; and (5) apprentices are registered with the U.S. Dept. of Labor, Bureau of Apprenticeship and Training. I understand that the willful falsification of any of the above statements may subject the Contractor or Subcontractor to civil or criminal prosecution.

Type or Print Name and Title \_\_\_\_\_ Signature \_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_  
 Complete \_\_\_\_\_

11/14 jc <sup>2)</sup> Attach additional sheets as necessary. <sup>3)</sup> Type in continuous line, text will wrap.

Send cover letter stating what happened along with a signed letter from the employee acknowledging that they were underpaid, received payment, check or transaction number. Contractor provided cancelled endorsed bank check.

**IMPORTANT NOTICE** - This process may be different if the Public Authority is using **LCPTracker** or some other online system to collect Certified Payroll Report from the contractors.



Affidavit of Compliance
Prevailing Wages

I, \_\_\_\_\_ (Name of person signing affidavit) (Title)

do hereby certify that the wages paid to all employees of

\_\_\_\_\_ (Company Name)

for all hours worked on the

\_\_\_\_\_ (Project name and location)

project, during the period from \_\_\_\_\_ to \_\_\_\_\_ are in (Project Dates)

compliance with prevailing wage requirements of Chapter 4115 of the Ohio Revised Code. I further certify that no rebates or deductions have been or will be made, directly or indirectly, from any wages paid in connection with this project, other than those provided by law.

\_\_\_\_\_ (Signature of Officer or Agent)

Sworn to and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_ (Notary Public)

The above affidavit must be executed and sworn to by the officer or agent of the contractor or subcontractor who supervises the payment of employees. This affidavit must be submitted to the owner (public authority) before the surety is released or final payment due under the terms of the contract is made.



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## Prevailing Wage Determination Cover Letter

County: WARREN ▼  
Determination Date: 03/09/2022  
Expiration Date: 06/09/2022

THE FOLLOWING PAGES ARE PREVAILING RATES OF WAGES ON PUBLIC IMPROVEMENTS FAIRLY ESTIMATED TO BE MORE THAN THE AMOUNT IN O.R.C. SEC. 4115.03 (b) (1) or (2), AS APPLICABLE.

Section 4115.05 provides, in part: "Where contracts are not awarded or construction undertaken within ninety days from the date of the establishment of the prevailing wages, there shall be a redetermination of the prevailing rate of wages before the contract is awarded." The expiration date of this wage schedule is listed above for your convenience only. This wage determination is not intended as a blanket determination to be used for all projects during this period without prior approval of this Department.

Section 4115.04, Ohio Revised Code provides, in part: "Such schedule of wages shall be attached to and made a part of the specifications for the work, and shall be printed on the bidding blanks where the work is done by contract..."

The contract between the letting authority and the successful bidder shall contain a statement requiring that mechanics and laborers be paid a prevailing rate of wage as required in Section 4115.06, Ohio Revised Code.

The contractor or subcontractor is required to file with the contracting public authority upon completion of the project and prior to final payment therefore an affidavit stating that he has fully complied with Chapter 4115 of the Ohio Revised Code.

The wage rates contained in this schedule are the "Prevailing Wages" as defined by Section 4115.03, Ohio Revised Code (the basic hourly rates plus certain fringe benefits). These rates and fringes shall be a minimum to be paid under a contract regulated by Chapter 4115 of the Ohio Revised Code by contractors and subcontractors. The prevailing wage rates contained in this schedule include the effective dates and wage rates currently on file. In cases where future effective dates are not included in this schedule, modifications to the wage schedule will be furnished to the Prevailing Wage Coordinator appointed by the public authority as soon as prevailing wage rates increases are received by this office.

"There shall be posted in a prominent and accessible place on the site of work a legible statement of the Schedule of Wage Rates specified in the contract to the various classifications of laborers, workmen, and mechanics employed, said statement to remain posted during the life of such contract." Section 4115.07, Ohio Revised Code.

Apprentices will be permitted to work only under a bona fide apprenticeship program if such program exists and if such program is registered with the Ohio Apprenticeship Council.

Section 4115.071 provides that no later than ten days before the first payment of wages is due to any employee of any contractor or subcontractor working on a contract regulated by Chapter 4115, Ohio Revised Code, the contracting public authority shall appoint one of his own employees to act as the prevailing wage coordinator for said contract. The duties of the prevailing wage coordinator are outlined in Section 4115.071 of the Ohio Revised Code.

Section 4115.05 provides for an escalator in the prevailing wage rate. Each time a new rate is established, that rate is required to be paid on all ongoing public improvement projects.

A further requirement of Section 4115.05 of the Ohio Revised Code is: "On the occasion of the first pay date under a contract, the contractor shall furnish each employee not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of Labor with individual written notification of the job classification to which the employee is assigned, the prevailing wage determined to be applicable to that classification, separated into the hourly rate of pay and the fringe payments, and the identity of the prevailing wage Coordinator appointed by the public authority. The contractor or subcontractor shall furnish the same notification to each affected employee every time the job classification of the employee is changed."

Work performed in connection with the installation of modular furniture may be subject to prevailing wage.

**THIS PACKET IS NOT TO BE SEPARATED BUT IS TO REMAIN COMPLETE AS IT IS SUBMITTED TO YOU. (Reference guidelines and forms are included in this packet to be helpful in the compliance of the Prevailing Wage law.)**  
wh1500

# Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 50 Zone 1

Change # : LCN02-2023ibAsbLoc50Zone1

Craft : Asbestos Worker Effective Date : 07/05/2023 Last Posted : 07/05/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			II&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>												
Asbestos Insulation Mechanic	\$36.21		\$8.45	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$57.36	\$75.46
Firestop Technician	\$36.21		\$8.45	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$57.36	\$75.46
<b>Apprentice</b>	<b>Percent</b>											
1st year	54.62	\$19.78	\$8.21	\$0.00	\$0.44	\$0.00	\$0.50	\$0.10	\$0.00	\$0.00	\$29.03	\$38.92
2nd year	66.14	\$23.95	\$8.45	\$0.95	\$0.44	\$0.00	\$0.85	\$0.10	\$0.00	\$0.00	\$34.74	\$46.71
3rd year	76.83	\$27.82	\$8.45	\$2.38	\$0.44	\$0.00	\$1.25	\$0.10	\$0.00	\$0.00	\$40.44	\$54.35
4th year	84.03	\$30.43	\$8.45	\$2.38	\$0.44	\$0.00	\$1.50	\$0.10	\$0.00	\$0.00	\$43.30	\$58.51

**Special Calculation Note :** \*other is Labor Mgt Training Fund

**Ratio :**

1 Journeymen to 1 Apprentice  
4 Journeymen to 1 Apprentice thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ATHENS, AUGLAIZE, BUTLER\*, CLINTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HARDIN, HOCKING, KNOX, LICKING, LOGAN, MADISON, MARION, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, ROSS, SHELBY, UNION, VINTON, WARREN\*

**Special Jurisdictional Note :** Township of Butler County-Townships of Lemon and Madison. Warren County-Township of Cleer Creek, Franklin, Massie, Turtle Creek and Wayne

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 8 Heat & Frost Insulators

Change # : LCN01-2023ibAsbLoc8

Craft : Asbestos Worker Effective Date : 03/01/2023 Last Posted : 02/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Asbestos Insulators	\$33.08		\$7.89	\$9.35	\$0.45	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$53.77	\$70.31
Apprentice	Percent											
1st year	47.04	\$15.56	\$7.89	\$5.10	\$0.45	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$32.00	\$39.78
2nd year	53.69	\$17.76	\$7.89	\$6.65	\$0.45	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$35.75	\$44.63
3rd year	58.22	\$19.26	\$7.89	\$6.65	\$0.45	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$37.25	\$46.88
4th year	62.76	\$20.76	\$7.89	\$6.65	\$0.45	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$38.75	\$49.13

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

- 1 Journeymen to 1 Apprentice
- 2 Journeymen to 2 Apprentice
- 3 Journeymen to 3 Apprentice
- 3 Journeymen to 1 Apprentice there After

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, BROWN, BUTLER\*, CLERMONT, HAMILTON, HIGHLAND, WARREN\*

**Special Jurisdictional Note :** In Butler County: townships of Fairfield, Hanover, Liberty, Milford, Morgan, Oxford, Ripley, Ross, St. Clair, Union & Wayne. In Warren County: Townships of Deerfield, Hamilton, Harlan, Salem, Union & Washington

**Details :**

All work in connection with Asbestos Removal, Abatement, Encapsulation, Lead Abatement, Hazardous Materials and Fire Stopping which is performed by employees in the Mechanic or Apprentice Classification shall be covered under the terms of this Agreement.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 207 OH

Change # : LCN01-2018fbLoc207OH

Craft : Asbestos Worker Effective Date : 08/23/2018 Last Posted : 08/23/2018

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>											
Asbestos Abatement	\$25.50	\$7.25	\$6.45	\$0.65	\$0.00	\$0.00	\$0.07	\$0.00	\$0.00	\$39.92	\$52.67
Trainee	\$16.50	\$7.25	\$1.50	\$0.65	\$0.00	\$0.00	\$0.07	\$0.00	\$0.00	\$25.97	\$34.22

**Special Calculation Note :**

**Ratio :**

3 Journeymen to 1 Trainee

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ASHLAND, ASHTABULA\*, ATHENS, AUGLAIZE, BROWN, BUTLER\*, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GEauga, GREENE, GUERNSEY, HAMILTON, HARDIN, HARRISON, HIGHLAND, HOCKING, HOLMES, HURON, KNOX, LAKE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PORTAGE, PREBLE, RICHLAND, ROSS, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN\*, WAYNE

**Special Jurisdictional Note :** Butler County:( townships of

Fairfield, Hanover, Liberty, Milford, Morgan, Oxford, Ripley, Ross, StClair, Union & Wayne.) (Lemon & Madison) Warren County: (townships of: Deerfield, Hamilton, Harlan, Salem, Union & Washington). ( Clear Creek, Franklin, Mossie, Turtle Creek & Wayne). Ashtabula County: (post offices & townships of Ashtabula, Austinburg, Geneva, Harperfield, Jefferson, Plymouth & Saybrook) (townships of Andover, Cherry Valley, Colbrook, Canneaut, Denmark, Dorset, East Orwell, Hartsgrove, Kingville, Lenox, Monroe, Morgan, New Lyme, North Kingsville, Orwell, Pierpoint, Richmond Rock Creek, Rome, Sheffield, Trumbull, Wayne, Williamsfield & Windsor) Erie County:(post offices & townships of Berlin, Berlin Heights, Birmingham, Florence ,Huron, Milan, Shinrock & Vermilion)

**Details :**

Asbestos & lead paint abatement including, but not limited to the removal or encapsulation of asbestos & lead paint, all work in conjunction with the preparation of the removal of same & all work in conjunction with the clean up after said removal. The removal of all insulation materials, whether they contain asbestos or not, from mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) is recognized as being the exclusive work of the Asbestos Abatement Workers.

On all mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) that are going to be demolished, the removal of all insulating materials whether they contain asbestos or not shall be the exclusive work of the Laborers.

An Abatement Journeyman is anyone who has more than 300 hours in the Asbestos Abatement field.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Boilermaker Local 105

Change # : LCN02-2013fbLoc 105

Craft : Boilermaker Effective Date : 10/01/2013 Last Posted : 09/25/2013

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Boilermaker	\$35.26		\$7.07	\$13.28	\$0.89	\$0.00	\$3.00	\$0.55	\$0.00	\$0.00	\$60.05	\$77.68
<b>Apprentice</b>	<b>Percent</b>											
1st 6 months	70.03	\$24.69	\$7.07	\$11.30	\$0.89	\$0.00	\$2.10	\$0.55	\$0.00	\$0.00	\$46.60	\$58.95
2nd 6 months	75.02	\$26.45	\$7.07	\$11.30	\$0.89	\$0.00	\$2.25	\$0.55	\$0.00	\$0.00	\$48.51	\$61.74
3rd 6 months	80.00	\$28.21	\$7.07	\$11.30	\$0.89	\$0.00	\$2.40	\$0.55	\$0.00	\$0.00	\$50.42	\$64.52
4th 6 months	85.02	\$29.98	\$7.07	\$11.30	\$0.89	\$0.00	\$2.55	\$0.55	\$0.00	\$0.00	\$52.34	\$67.33
5th 6 months	87.52	\$30.86	\$7.07	\$13.28	\$0.89	\$0.00	\$2.63	\$0.55	\$0.00	\$0.00	\$55.28	\$70.71
6th 6 months	90.03	\$31.74	\$7.07	\$13.28	\$0.89	\$0.00	\$2.70	\$0.55	\$0.00	\$0.00	\$56.23	\$72.11
7th 6 months	92.50	\$32.62	\$7.07	\$13.28	\$0.89	\$0.00	\$2.78	\$0.55	\$0.00	\$0.00	\$57.19	\$73.49
8th 6 months	95.00	\$33.50	\$7.07	\$13.28	\$0.89	\$0.00	\$2.85	\$0.55	\$0.00	\$0.00	\$58.14	\$74.89

**Special Calculation Note :** Other is Supplemental Health and Welfare

**Ratio :**

5 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ATHENS, BROWN, BUTLER,  
CHAMPAIGN, CLARK, CLERMONT, CLINTON,  
FAIRFIELD, FAYETTE, FRANKLIN, GALLIA,  
GREENE, GUERNSEY, HAMILTON, HIGHLAND,  
HOCKING, JACKSON, LAWRENCE, LICKING,  
MADISON, MEIGS, MIAMI, MONTGOMERY,  
MORGAN, MUSKINGUM, NOBLE, PERRY,  
PICKAWAY, PIKE, PREBLE, ROSS, SCIOTO,  
VINTON, WARREN

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Boilermaker Local 154

Change # : LCN01-2012kpLoc 154

Craft : Boilermaker Effective Date : 03/22/2012 Last Posted : 03/22/2012

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>												
Boilermaker	\$36.17		\$8.57	\$11.28	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$62.56	\$80.65
Trainee 60%	\$23.25		\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$41.95	\$53.57
Trainee 70%	\$27.13		\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$45.83	\$59.40
Trainee 80%	\$31.00		\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$49.70	\$65.20
Trainee 90%	\$34.88		\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$53.58	\$71.02
<b>Apprentice Registered After 11/01/2005</b>	<b>Percent</b>											
1st 6 months	60.00	\$21.70	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$40.40	\$51.25
2nd 6 months	65.00	\$23.51	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$42.21	\$53.97
3rd 6 months	70.00	\$25.32	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$44.02	\$56.68
4th 6 months	75.00	\$27.13	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$45.83	\$59.39
5th 6 months	80.00	\$28.94	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$47.64	\$62.10
6th 6 months	85.00	\$30.74	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$49.44	\$64.82
7th 6 months	90.00	\$32.55	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$51.25	\$67.53
8th 6 months	95.00	\$34.36	\$8.57	\$3.59	\$0.55	\$0.00	\$4.25	\$0.34	\$0.00	\$1.40	\$53.06	\$70.24

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**  
5 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**  
BUTLER, COLUMBIANA, FAYETTE, JEFFERSON,  
LAWRENCE, MERCER, WARREN, WASHINGTON

**Special Jurisdictional Note :**

**Details :**

Work includes but not limited to: boiler making, acetylene burning, riveting, chipping, caulking, rigging, fitting-up, grinding, reaming, impact machine operating, unloading, and handling of boilermaker's material and equipment. Boilermakers, Blacksmiths, Forgers, Iron Shipbuilders

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 18

Change # : LCN01-2022sksLoc18

Craft : Bricklayer Effective Date : 06/01/2022 Last Posted : 06/01/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>												
Bricklayer	\$31.87		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.30	\$64.24
Stone Mason	\$31.87		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.30	\$64.24
Pointer Caulker Cleaner	\$31.87		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.30	\$64.24
Refractory Workers	\$32.87		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.30	\$65.73
Refractory Worker Hot Pay	\$34.87		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.30	\$68.73
Sawman	\$32.12		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.55	\$64.61
Layout Man	\$32.12		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.55	\$64.61
Free Standing Chimney	\$32.37		\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.80	\$64.98
<b>Apprentice</b>												
	<b>Percent</b>											
1st 6 months	60.00	\$19.12	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.55	\$45.11
2nd 6 months	65.00	\$20.72	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.15	\$47.50
3rd 6 months	70.00	\$22.31	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.74	\$49.89
4th 6 months	75.00	\$23.90	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.33	\$52.28
5th 6 months	80.00	\$25.50	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.93	\$54.67
6th 6 months	85.00	\$27.09	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.52	\$57.06
7th 6 months	90.00	\$28.68	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.11	\$59.45
8th 6 months	95.00	\$30.28	\$9.55	\$6.20	\$0.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.71	\$61.84



MASON FINISHER 1st 180 Days	45.00	\$14.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.34	\$21.51
1st Year H&W after 6 months	45.00	\$14.34	\$9.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.89	\$31.06
2nd Year	50.00	\$15.94	\$9.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.48	\$33.45

**Special Calculation Note :** \*\*In order to utilize a Pre-Apprentice, you must have 1 Registered Apprentice in your employ.

**Ratio :**

- 1-2 Journeyman to 1 Apprentice
- 3-4 Journeyman to 2 Apprentice
- 5-6 Journeyman to 2 Apprentice
- 7-10 Journeyman to 3 Apprentice

- 1 Apprentice permits 1 Mason Trainee
- 2 Apprentice permits 1 Mason Trainee
- 3 Apprentice permits 2 Mason Trainees
- 4 Apprentice permits 2 Mason Trainees

For each additional 5 Journeyman to 1 Apprentice, for every 3 additional Apprentices, 1 Mason Finisher may be added

**Special Jurisdictional Note :** In Preble County the following townships are included: (Dixon, Gasper, Graits, Israel, Lanier and Somers)

**Details :**

MASON FINISHER:duties shall be to work in all aspects of Masonry construction taking direction from the employer and the Journeyman Bricklayer & Stone Mason's working on the job. Mason Finisher's may work on job site only when a registered apprentice is on job and the ratios in table above will strictly be enforced.

Refractory work is classified as working with any of the following materials:  
Acid brick, carbon black brick or carbon black block, firebrick grinding, plastics (with a gun) and any resinous cement.

Fifty cents (\$0.50) per hour above scale shall be paid to employees working on free standing industrial or institutional chimneys which are completely detached from any building structure.

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE\*, WARREN

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 18 Tile Mechanic

Change # : LCN01-2022sksLoc18

Craft : Bricklayer Effective Date : 09/01/2022 Last Posted : 08/12/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Tile Terrazzo Marble Mason Mechanic	\$31.21		\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.05	\$62.66
Marble Layout Work	\$31.71		\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.55	\$63.41
Swing Scaffold Worker	\$32.71		\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.55	\$64.90
Apprentice after 2 years (2400 hrs) as Apprentice Finisher												
5th/6 Months 0- 600 hrs.	70.00	\$21.85	\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.69	\$48.61
6th/6 months 601-1200 hrs.	80.00	\$24.97	\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.81	\$53.29
7th/6 months 1201-1800 hrs.	85.00	\$26.53	\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.37	\$55.63
8th/6 months 1801-2400 hrs.	90.00	\$28.09	\$9.67	\$5.60	\$0.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.93	\$57.97

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

**Ratio :**

1 Journeyman to 1 Apprentice  
5 Journeymen to 1 Apprentice  
10 Journeymen to 2 Apprentices  
15 Journeymen to 3 Apprentices  
20 Journeymen to 4 Apprentices  
25 Journeymen to 5 Apprentices

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, BROWN, BUTLER, CLERMONT, GALLIA,  
HAMILTON, LAWRENCE, PREBLE\*, SCIOTO,  
WARREN

**Special Jurisdictional Note :** In Preble County the Townships of Dixon, Israel, Gasper, Lanier, Somers and Gratis.

**Details :**

\*\*In order to utilize a Pre-Apprentice, you must have 1 Registered Apprentice in your employ.\*\*

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 18 Tile Finisher

Change # : LCN01-2022sksLoc18

Craft : Bricklayer Effective Date : 09/01/2022 Last Posted : 08/12/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Tile Marble Terrazzo Finisher	\$26.66		\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.46	\$55.79
Terrazzo Base Grinder	\$27.16		\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.96	\$56.54
Marble Sander Polisher	\$26.76		\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.56	\$55.94
Apprentices	Percent											
1st 6 months 0-600 hrs	65.00	\$17.33	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.13	\$41.79
2nd 6 months 601-1200 hrs	70.00	\$18.66	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.46	\$43.79
3rd 6 months 1201-1800 hrs	75.00	\$20.00	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.80	\$45.79
4th 6 months 1801-2400 hrs	80.00	\$21.33	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.13	\$47.79
5th 6 months 2401-3000 hrs	85.00	\$22.66	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.46	\$49.79
6th 6 months 3001-3600	95.00	\$25.33	\$9.67	\$5.60	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.13	\$53.79
1-30 Days Prior to Entering Apprenticeship	60.00	\$16.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16.00	\$23.99

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

**Ratio :**

- 1 Journeyman to 1 Apprentice
- 5 Journeymen to 1 Apprentice
- 10 Journeymen to 2 Apprentices
- 15 Journeymen to 3 Apprentices

**Jurisdiction ( \* denotes special jurisdictional note ) :**

- ADAMS, BROWN, BUTLER, CLERMONT, GALLIA, HAMILTON, LAWRENCE, PREBLE\*, SCIOTO, WARREN, WARREN\*

20 Journeymen to 4 Apprentices

25 Journeymen to 5 Apprentices

**Special Jurisdictional Note :** Warren in the townships of Dixon, Gasper, Isrsel, Somers & Gratis in Prebble County

**Details :**

**\*\*In order to utilize a Pre-Apprentice, you must have 1 Registerd Apprentice in your employ.\*\***

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (A)

Change # : LCN01-2023ibLoc23HevHwyA

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Sewer Water Works A	\$32.40		\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.70	\$67.90
Apprentice	Percent											
1st year	70.00	\$22.68	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.98	\$53.32
2nd year	80.00	\$25.92	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.22	\$58.18
3rd year	90.00	\$29.16	\$9.75	\$9.03	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.46	\$63.04

**Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.**

**Ratio :**

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 3 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

**Special Jurisdictional Note :**

**Details :**

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (B)

Change # : LCN01-2023ibLoc23HevHwyB

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	\$33.39		\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$52.70	\$69.39
Apprentice	Percent											
1st year	70.00	\$23.37	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.68	\$54.37
2nd year	80.00	\$26.71	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.02	\$59.38
3rd year	90.00	\$30.05	\$9.75	\$9.03	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.36	\$64.39

**Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.**

**Ratio :**

- 3 Journeymen to 1 Apprentice
- 5 Journeymen to 2 Apprentice
- 9 Journeymen to 2 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

- ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT,



**Special Jurisdictional Note :**

**Details :**

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Cincinnati)

Change # : LCN01-2023ibLoc23Cinci

Craft : Bricklayer Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer	\$33.48		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.03	\$66.77
Stone Mason	\$33.48		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.03	\$66.77
Pointer Caulker Cleaner	\$33.48		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.03	\$66.77
Refractory Workers	\$34.48		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.03	\$68.27
Refractory Worker Hot Pay	\$36.48		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53.03	\$71.27
Sawman	\$33.73		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.28	\$67.14
Layout Man	\$33.73		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.28	\$67.14
Free Standing Chimney	\$33.98		\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.53	\$67.52
<b>Apprentice</b>	<b>Percent</b>											
1st 6 months	70.00	\$23.44	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.99	\$51.70
2nd 6 months	74.00	\$24.78	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.33	\$53.71
3rd 6 months	78.00	\$26.11	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.66	\$55.72
4th 6 months	82.00	\$27.45	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.00	\$57.73
5th 6 months	86.00	\$28.79	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.34	\$59.74
6th 6 months	90.00	\$30.13	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.68	\$61.75
7th 6 months	94.00	\$31.47	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.02	\$63.76
8th 6 months	98.00	\$32.81	\$9.55	\$6.27	\$0.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.36	\$65.77

MASON FINISHER 1-90 Days	45.00	\$15.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.07	\$22.60
90-365 Days	45.00	\$15.07	\$9.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$24.62	\$32.15
366+ Days	50.00	\$16.74	\$9.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$26.29	\$34.66

**Special Calculation Note :** \*\*In order to utilize a Pre-Apprentice, you must have 1 Registered Apprentice in your employ.

Mason Trainees Health and Welfare after 180 days

**Ratio :**

- 1-2 Journeyman to 1 Apprentice
- 3-4 Journeyman to 2 Apprentice
- 5-6 Journeyman to 2 Apprentice
- 7-10 Journeyman to 3 Apprentice

- 1 Apprentice permits 1 Mason Trainee
- 2 Apprentice permits 1 Mason Trainee
- 3 Apprentice permits 2 Mason Trainees
- 4 Apprentice permits 2 Mason Trainees

For each additional 5 Journeyman to 1 Apprentice,  
for every 3 additional Apprentices, 1 Mason Finisher  
may be added

**Special Jurisdictional Note :** In Preble County the following townships are included: (Dixon, Gasper, Graits, Israel, Lanier and Somers)

**Details :**

MASON FINISHER:duties shall be to work in all aspects of Masonry construction taking direction from the employer and the Journeyman Bricklayer & Stone Mason's working on the job. Mason Finisher's may work on job site only when a registered apprentice is on job and the ratios in table above will strictly be enforced.

Refractory work is classified as working with any of the following materials:  
Acid brick, carbon black brick or carbon black block, firebrick grinding, plastics (with a gun)  
and any resinous cement.

Fifty cents (\$0.50) per hour above scale shall be paid to employees working on free standing industrial or institutional chimneys which are completely detached from any building structure.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Tile Finisher

Change # : LCN01-2023ibLoc23TF

Craft : Bricklayer Effective Date : 09/01/2023 Last Posted : 08/30/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Bricklayer Tile Marble Terrazzo Finisher	\$27.87		\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$44.18	\$58.12
Terrazzo Base Grinder	\$28.37		\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$44.68	\$58.87
Marble Sander Polisher	\$27.97		\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$44.28	\$58.27
<b>Apprentices</b>												
	<b>Percent</b>											
1st 6 months 0-600 hrs	65.00	\$18.12	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$34.43	\$43.48
2nd 6 months 601-1200 hrs	70.00	\$19.51	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$35.82	\$45.57
3rd 6 months 1201-1800 hrs	75.00	\$20.90	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$37.21	\$47.66
4th 6 months 1801-2400 hrs	80.00	\$22.30	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$38.61	\$49.75
5th 6 months 2401-3000 hrs	85.00	\$23.69	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$40.00	\$51.84
6th 6 months 3001-3600	95.00	\$26.48	\$9.67	\$5.85	\$0.54	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$42.79	\$56.02
1-30 Days Prior to Entering Apprenticeship	60.00	\$16.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16.72	\$25.08

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

**Ratio :**

- 1 Journeyman to 1 Apprentice
- 5 Journeymen to 1 Apprentice
- 10 Journeymen to 2 Apprentices
- 15 Journeymen to 3 Apprentices

**Jurisdiction ( \* denotes special jurisdictional note ) :**

- ADAMS, BROWN, BUTLER, CLERMONT, GALLIA, HAMILTON, LAWRENCE, PREBLE\*, SCIOTO, WARREN, WARREN\*

20 Journeymen to 4 Apprentices  
25 Journeymen to 5 Apprentices

**Special Jurisdictional Note :** Warren in the townships of Dixon, Gasper, Isrsel, Somers & Gratis in Prebble County

**Details :**

**\*\*In order to utilize a Pre-Apprentice, you must have 1 Registerd Apprentice in your employ.\*\***

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Tile Mechanic

Change # : LCN01-2023ibLoc23TM

Craft : Bricklayer Effective Date : 09/01/2023 Last Posted : 08/30/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Bricklayer Tile Terrazzo Marble Mason Mechanic	\$32.41		\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$48.75	\$64.95
Marble Layout Work	\$32.91		\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$49.25	\$65.70
Swing Scaffold Worker	\$33.91		\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$50.25	\$67.20
Apprentice after 2 years (2400 hrs) as Apprentice Finisher	Percent											
5th/6 Months 0- 600 hrs	70.00	\$22.69	\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$39.03	\$50.37
6th/6 months 601-1200 hrs	80.00	\$25.93	\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$42.27	\$55.23
7th/6 months 1201-1800 hrs.	85.00	\$27.55	\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$43.89	\$57.66
8th/6 months 1801-2400 hrs.	90.00	\$29.17	\$9.67	\$5.85	\$0.57	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$45.51	\$60.09

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

**Ratio :**

1 Journeyman to 1 Apprentice  
5 Journeymen to 1 Apprentice  
10 Journeymen to 2 Apprentices  
15 Journeymen to 3 Apprentices  
20 Journeymen to 4 Apprentices  
25 Journeymen to 5 Apprentices

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, BROWN, BUTLER, CLERMONT, GALLIA,  
HAMILTON, LAWRENCE, PREBLE\*, SCIOTO,  
WARREN

**Special Jurisdictional Note :** In Preble County the Townships of Dixon, Israel, Gasper, Lanier, Somers and Gratis.

**Details :**

**\*\*In order to utilize a Pre-Apprentice, you must have 1 Registered Apprentice in your employ.\*\***

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Pile Driver SW District HevHwy

Change # : LCN01-2023ibCarpSWHevHwy

Craft : Carpenter Effective Date : 05/03/2023 Last Posted : 05/03/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Journeyman	\$33.28		\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$53.99	\$70.63
Apprentice	Percent											
1st 6 Months	60.00	\$19.97	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$40.68	\$50.66
2nd 6 Months	65.00	\$21.63	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$42.34	\$53.16
3rd 6 Months	70.00	\$23.30	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$44.01	\$55.65
4th 6 Months	75.00	\$24.96	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$45.67	\$58.15
5th 6 Months	80.00	\$26.62	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$47.33	\$60.65
6th 6 Months	85.00	\$28.29	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$49.00	\$63.14
7th 6 Months	90.00	\$29.95	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$50.66	\$65.64
8th 6 Months	95.00	\$31.62	\$8.44	\$6.95	\$0.60	\$0.00	\$4.57	\$0.15	\$0.00	\$0.00	\$52.33	\$68.13

**Special Calculation Note :** Other is UBC National Fund.

**Ratio :**

1 Journeymen to 1 Apprentice

An employer shall have the right to employ one (1) Apprentice for one (1) Journeyman Carpenter in its employment for the first Apprentice employed, and 1 (1) Apprentice for two (2) Journeyman Carpenter for additional Apprentices employed.

Thereafter, every third additional carpenter hired shall be an apprentice, if available, and if practical for the type of work being performed.

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY, WARREN

**Special Jurisdictional Note :**



**Details :**

Highway Construction, Airport Construction, Heavy Construction but not limited to:(tunnels,subways,drainage projects,flood control,reservoirs). Railroad Construction,Sewer Waterworks & Utility Construction but not limited to: (storm sewers, waterlines, gaslines). Industrial & Building Site, Power Plant, Amusement Park, Athletic Stadium Site, Sewer and Water Plants.

When the Contractor furnishes the necessary underwater gear for the Diver, the Diver shall be paid one and one half (1&1/2) times the journeyman rate for the time spent in the water.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Pile Driver  
SW Zone 2

Change # : LCN01-2023ibLoc2SWZone2

Craft : Carpenter Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Carpenter	\$30.22		\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$48.52	\$63.63
Pile Driver	\$30.22		\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$48.52	\$63.63
<b>Apprentice</b>	<b>Percent</b>											
1st 3 Months	60.00	\$18.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.13	\$27.20
2nd 3 Months	60.00	\$18.13	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$29.48	\$38.55
2nd 6 Months	60.00	\$18.13	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$29.48	\$38.55
3rd 6 Months	65.00	\$19.64	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$30.99	\$40.81
4th 6 Months	65.00	\$19.64	\$8.00	\$0.00	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$30.99	\$40.81
5th 6 Months	70.00	\$21.15	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$39.45	\$50.03
6th 6 Months	75.00	\$22.66	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$40.97	\$52.30
7th 6 Months	80.00	\$24.18	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$42.48	\$54.56
8th 6 Months	85.00	\$25.69	\$8.00	\$6.95	\$0.60	\$0.00	\$2.60	\$0.15	\$0.00	\$0.00	\$43.99	\$56.83

**Special Calculation Note :** Other is for UBC National Fund.

**Ratio :**

4 Journeyman to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, CLINTON, HAMILTON, WARREN

**Special Jurisdictional Note :**

**Details :**

Carpenter duties shall include but not limited to: Pile driving, milling, fashioning, joining, assembling, erecting, fastening, or dismantling of all material of

wood, plastic, metal, fiber, cork, and composition, and all other substitute materials: pile driving, cutting, fitting, and placing of lagging, and the handling, cleaning, erecting, installing, and dismantling of machinery, equipment, and erecting pre-engineered metal buildings.

Pile Drivers work but not limited to: unloading, assembling, erection, repairs, operation, signaling, dismantling, and reloading all equipment that is used for pile driving including pile butts. pile butts is defined as sheeting or scrap piling. Underwater work that may be required in connection with the installation of piling. The diver and his tender work as a team and shall arrive at their own financial arrangements with the contractor. Any configuration of wood, steel, concrete, or composite that is jetted, driven, or vibrated onto the ground by conventional pile driving equipment for the purpose of supporting a future load that may be permanent or temporary.

Driving bracing, plumbing, cutting off and capping of all piling whether wood, metal, pipe piling or composite. Loading, unloading, erecting, framing, dismantling, moving, and handling of pile driving equipment. piling used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, and the erection of all sea walls and breakwaters. All underwater and marine work on bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed.

Rate shall include carpenters, acoustic, and ceiling installers, drywall installers, pile drivers, and floorlayers.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Floorlayer SW District G

Change # : LCN01-2023ibLocSWG

Craft : Carpenter Effective Date : 09/20/2023 Last Posted : 09/20/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter Floorlayer	\$29.02		\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$47.31	\$61.82
Apprentice	Percent											
1st 3 months	65.00	\$18.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.86	\$28.29
2nd 3 months	65.00	\$18.86	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$30.20	\$39.63
2nd 6 months	65.00	\$18.86	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$30.20	\$39.63
3rd 6 months	70.00	\$20.31	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$31.65	\$41.81
4th 6 months	75.00	\$21.76	\$8.31	\$0.00	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$33.11	\$43.99
5th 6 months	80.00	\$23.22	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$41.51	\$53.11
6th 6 months	85.00	\$24.67	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$42.96	\$55.29
7th 6 months	90.00	\$26.12	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$44.41	\$57.47
8th 6 months	95.00	\$27.57	\$8.31	\$6.95	\$0.60	\$0.00	\$2.28	\$0.15	\$0.00	\$0.00	\$45.86	\$59.64

**Special Calculation Note :** Other fs for UBC National Fund and Install

**Ratio :**

1 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY, WARREN

**Special Jurisdictional Note :**

**Details :**

Scope of work shall include, but not be limited to: receiving,unloading,handling,distribution and installation of all carpeting materials,carpet padding or matting materials and all resilient materials whether for use on walls,

floors, counter, sink, table and all preparation work necessary in connection therewith, including sanding work. the installation of nonstructural under-layment and the work of removing, cleaning waxing of any of the above. Carpeting shall include any floor covering composed of either natural or synthetic fibers that are made in breadths to be sewed, fastened or directly glued to floors or over cushioning sound-proofing materials. Resilient Floors shall consist of and include the laying of all special designs of wood, wood block, wood composition, cork, linoleum, asphalt, mastic, plastic, rubber tile, whether nailed or glued.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Millwright Local 1090 SW Zone I

Change # : LCN01-2023ibLoc1090SWZ1

Craft : Carpenter Effective Date : 09/20/2023 Last Posted : 09/20/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter Millwright	\$34.45		\$8.13	\$6.95	\$0.62	\$0.00	\$7.57	\$0.18	\$0.00	\$0.00	\$57.90	\$75.13
Apprentice	Percent											
1st 6 months	60.00	\$20.67	\$8.13	\$4.27	\$0.62	\$0.00	\$4.54	\$0.18	\$0.00	\$0.00	\$38.41	\$48.75
2nd 6 months	65.00	\$22.39	\$8.13	\$4.61	\$0.62	\$0.00	\$4.92	\$0.18	\$0.00	\$0.00	\$40.85	\$52.05
3rd 6 months	70.00	\$24.12	\$8.13	\$4.94	\$0.62	\$0.00	\$5.30	\$0.18	\$0.00	\$0.00	\$43.28	\$55.34
4th 6 months	75.00	\$25.84	\$8.13	\$5.28	\$0.62	\$0.00	\$5.68	\$0.18	\$0.00	\$0.00	\$45.73	\$58.65
5th 6 months	80.00	\$27.56	\$8.13	\$5.61	\$0.62	\$0.00	\$6.06	\$0.18	\$0.00	\$0.00	\$48.16	\$61.94
6th 6 months	85.00	\$29.28	\$8.13	\$5.95	\$0.62	\$0.00	\$6.43	\$0.18	\$0.00	\$0.00	\$50.59	\$65.23
7th 6 months	90.00	\$31.01	\$8.13	\$6.28	\$0.62	\$0.00	\$6.81	\$0.18	\$0.00	\$0.00	\$53.03	\$68.53
8th 6 months	95.00	\$32.73	\$8.13	\$6.62	\$0.62	\$0.00	\$7.19	\$0.18	\$0.00	\$0.00	\$55.47	\$71.83

**Special Calculation Note :** Other (\$0.18) \$0.13 National Fund and National Millwright Fund \$0.05

**Ratio :**

3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, CLINTON, HAMILTON, WARREN

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter NE District Industrial Dock & Door

Change # : LCN01-2014fbCarpNEStatewide

Craft : Carpenter Effective Date : 03/05/2014 Last Posted : 03/05/2014

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Carpenter	\$19.70		\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$25.90	\$35.75
<b>Trainee</b>												
	<b>Percent</b>											
1st Year	60.00	\$11.82	\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.02	\$23.93
2nd Year	80.20	\$15.80	\$5.05	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22.00	\$29.90

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 Journeymen to 1 Trainee

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :** Industrial Dock and Door is the installation of overhead doors, roll up doors and dock leveling equipment

**Details :**

10/27/10 New Contract jc

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Bricklayer Local 97 HevHwy A

Change # : LCN01-2021fbHvyHwy

Craft : Bricklayer Effective Date : 06/01/2021 Last Posted : 05/26/2021

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Sewer Water Works A	\$30.40		\$9.50	\$7.57	\$0.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.95	\$63.15
Apprentice	Percent											
1st year	50.00	\$15.20	\$9.50	\$7.57	\$0.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.75	\$40.35
2nd year	70.00	\$21.28	\$9.50	\$7.57	\$0.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.83	\$49.47
3rd year	90.00	\$27.36	\$9.50	\$7.57	\$0.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.91	\$58.59

**Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.**

**Ratio :**

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 3 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE



**Special Jurisdictional Note :**

**Details :**

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Bricklayer Local 97 HevHwy B

Change # : LCN01-2021fbHvyHwy

Craft : Bricklayer Effective Date : 06/01/2021 Last Posted : 05/26/2021

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	\$31.39		\$9.50	\$7.57	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.95	\$64.64
Apprentice	Percent											
1st year	50.00	\$15.70	\$9.50	\$7.57	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.26	\$41.10
2nd year	70.00	\$21.97	\$9.50	\$7.57	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.53	\$50.52
3rd year	90.00	\$28.25	\$9.50	\$7.57	\$0.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.81	\$59.94

**Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.**

**Ratio :**

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 2 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEauga, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT,

TRUMBULL, TUSCARAWAS, UNION, VAN WERT,  
VINTON, WARREN, WASHINGTON, WAYNE

**Special Jurisdictional Note :**

**Details :**

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy

Change # : LCN01-2023ibCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Cement Mason	\$33.74		\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$52.76	\$69.63
<b>Apprentice</b>	<b>Percent</b>											
1st Year	70.00	\$23.62	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$42.64	\$54.45
2nd Year	80.00	\$26.99	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$46.01	\$59.51
3rd Year	90.00	\$30.37	\$8.50	\$7.55	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$49.39	\$64.57

**Special Calculation Note :** Other \$0.07 is for International Training Fund

**Ratio :**

1 Journeymen to 1 Apprentice  
2 to 1 thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA\*, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA\*, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON\*, GALLIA, GEAUGA\*, GREENE, GUERNSEY, HAMILTON, HANCOCK\*, HARDIN, HARRISON, HENRY\*, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE\*, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS\*, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM\*, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD\*, WYANDOT

**Special Jurisdictional Note :** (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site, Heavy

Construction, Airport Construction Or Railroad Construction Work, Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facilities Construction.

\*For Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facility Construction work in the following Counties: Ashtabula, Cuyahoga, Fulton, Geauga, Hancock, Henry, Lake, Lucas, Putnam and Wood Counties, those counties will use the Cement Mason Statewide Heavy Highway Exhibit B District 1 Wage Rate.

**Details :**

This rate replaces the previous Cement Mason Heavy Highway Statewide Rates (Exhibit A and Exhibit B rates), except for Cement Mason Statewide Heavy Highway Exhibit B Dist 1. sks

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Local 132 (Cincinnati)

Change # : LCN01-2023ibLoc132

Craft : Cement Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Cement Mason	\$30.50		\$7.60	\$6.50	\$0.65	\$0.00	\$0.24	\$0.06	\$0.00	\$0.00	\$45.55	\$60.80
<b>Apprentice</b>	<b>Percent</b>											
1st yr	70.00	\$21.35	\$7.60	\$6.50	\$0.65	\$0.00	\$0.24	\$0.06	\$0.00	\$0.00	\$36.40	\$47.08
2nd yr	80.00	\$24.40	\$7.60	\$6.50	\$0.65	\$0.00	\$0.24	\$0.06	\$0.00	\$0.00	\$39.45	\$51.65
3rd yr	90.00	\$27.45	\$7.60	\$6.50	\$0.65	\$0.00	\$0.24	\$0.06	\$0.00	\$0.00	\$42.50	\$56.23

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time. \*Other is International Training

**Ratio :**

- 1 Journeymen to 1 Apprentice
- 4 Journeymen to 2 Apprentice
- 7 Journeymen to 3 Apprentice
- 10 Journeymen to 4 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN

**Special Jurisdictional Note :**

**Details :**

- \*Cement Masons working on silo & slip form work shall receive \$.50 per hour over Journeyman scale.
- \*Cement Masons working on swinging scaffolds shall receive \$.50 per hour over Journeyman scale.
- \*Cement Masons working on high lifts from 20' and above shall receive \$.50 per hour over Journeyman scale.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy Exhibit A District II

Change # : OCN01-2021fbCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2021 Last Posted : 04/23/2021

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>												
Cement Mason	\$31.15		\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$49.72	\$65.29
<b>Apprentice</b>	<b>Percent</b>											
1st Year	70.00	\$21.80	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$40.37	\$51.28
2nd Year	80.00	\$24.92	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$43.49	\$55.95
3rd Year	90.00	\$28.03	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$46.60	\$60.62

**Special Calculation Note** : Other \$0.07 is for International Training Fund

**Ratio :**

1 Journeymen to 1 Apprentice  
2 to 1 thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL, CLERMONT, COLUMBIANA, DEFIANCE, ERIE, HAMILTON, HARDIN, HIGHLAND, HOLMES, HURON, LOGAN, LORAIN, MAHONING, MEDINA, MERCER, OTTAWA, PAULDING, PORTAGE, SANDUSKY, SENECA, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, VAN WERT, WARREN, WAYNE, WILLIAMS

**Special Jurisdictional Note** : (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site, Heavy Construction, Airport Construction Or Railroad Construction Work.

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy Exhibit B District II

Change # : OCN01-2021fbCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2021 Last Posted : 04/23/2021

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason	\$32.02		\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$50.59	\$66.60
Apprentice	Percent											
1st Year	70.00	\$22.41	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$40.98	\$52.19
2nd Year	80.00	\$25.62	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$44.19	\$56.99
3rd Year	90.00	\$28.82	\$8.25	\$7.35	\$0.65	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$47.39	\$61.80

**Special Calculation Note :** Other \$0.07 is for International Training Fund.

<p><b>Ratio :</b></p> <p>1 Journeymen to 1 Apprentice 2 to 1 thereafter</p>	<p><b>Jurisdiction ( * denotes special jurisdictional note ) :</b></p> <p>ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL, CLERMONT, COLUMBIANA, DEFIANCE, ERIE, HAMILTON, HARDIN, HIGHLAND, HOLMES, HURON, LOGAN, LORAIN, MAHONING, MEDINA, MERCER, OTTAWA, PAULDING, PORTAGE, SANDUSKY, SENECA, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, VAN WERT, WARREN, WAYNE, WILLIAMS</p>
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**Special Jurisdictional Note :** (B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

**Details :**



# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 High Tension Pipe Type Cable

Change # : LCN01-2023ibLoc7

Craft : Lineman Effective Date : 03/01/2023 Last Posted : 03/01/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lineman	\$48.59	\$7.00	\$1.46	\$0.49	\$0.00	\$11.66	\$0.75	\$0.00	\$0.00	\$69.95	\$94.24
Certified Lineman Welder	\$48.59	\$7.00	\$1.46	\$0.49	\$0.00	\$11.66	\$0.75	\$0.00	\$0.00	\$69.95	\$94.24
Certified Cable Splicer	\$48.59	\$7.00	\$1.46	\$0.49	\$0.00	\$11.66	\$0.75	\$0.00	\$0.00	\$69.95	\$94.24
Operator A	\$43.54	\$7.00	\$1.31	\$0.44	\$0.00	\$10.45	\$0.75	\$0.00	\$0.00	\$63.49	\$85.26
Operator B	\$38.54	\$7.00	\$1.16	\$0.39	\$0.00	\$9.25	\$0.75	\$0.00	\$0.00	\$57.09	\$76.36
Operator C	\$30.97	\$7.00	\$0.93	\$0.31	\$0.00	\$7.43	\$0.75	\$0.00	\$0.00	\$47.39	\$62.88
Groundman 0-12 months Exp	\$24.30	\$7.00	\$0.73	\$0.24	\$0.00	\$5.83	\$0.75	\$0.00	\$0.00	\$38.85	\$51.00
Groundman 0-12 months Exp w/CDL	\$26.72	\$7.00	\$0.80	\$0.27	\$0.00	\$6.41	\$0.75	\$0.00	\$0.00	\$41.95	\$55.31
Groundman 1 yr or more	\$26.72	\$7.00	\$0.80	\$0.27	\$0.00	\$6.41	\$0.75	\$0.00	\$0.00	\$41.95	\$55.31
Groundman 1 yr or more w/CDL	\$31.58	\$7.00	\$0.95	\$0.32	\$0.00	\$7.58	\$0.75	\$0.00	\$0.00	\$48.18	\$63.97
Equipment Mechanic A	\$38.54	\$7.00	\$1.16	\$0.39	\$0.00	\$9.25	\$0.75	\$0.00	\$0.00	\$57.09	\$76.36
Equipment Mechanic B	\$34.75	\$7.00	\$1.04	\$0.35	\$0.00	\$8.34	\$0.75	\$0.00	\$0.00	\$52.23	\$69.60
Equipment Mechanic C	\$30.97	\$7.00	\$0.93	\$0.31	\$0.00	\$7.43	\$0.75	\$0.00	\$0.00	\$47.39	\$62.88

X-Ray Technician	\$48.59	\$7.00	\$1.46	\$0.49	\$0.00	\$11.66	\$0.75	\$0.00	\$0.00	\$69.95	\$94.24	
<b>Apprentice</b>	<b>Percent</b>											
1st 1000 hrs	60.00	\$29.15	\$7.00	\$0.87	\$0.29	\$0.00	\$7.00	\$0.75	\$0.00	\$0.00	\$45.06	\$59.64
2nd 1000 hrs	65.00	\$31.58	\$7.00	\$0.95	\$0.32	\$0.00	\$7.58	\$0.75	\$0.00	\$0.00	\$48.18	\$63.98
3rd 1000 hrs	70.00	\$34.01	\$7.00	\$1.02	\$0.34	\$0.00	\$8.16	\$0.75	\$0.00	\$0.00	\$51.28	\$68.29
4th 1000 hrs	75.00	\$36.44	\$7.00	\$1.09	\$0.36	\$0.00	\$8.75	\$0.75	\$0.00	\$0.00	\$54.39	\$72.61
5th 1000 hrs	80.00	\$38.87	\$7.00	\$1.17	\$0.39	\$0.00	\$9.33	\$0.75	\$0.00	\$0.00	\$57.51	\$76.95
6th 1000 hrs	85.00	\$41.30	\$7.00	\$1.24	\$0.41	\$0.00	\$9.91	\$0.75	\$0.00	\$0.00	\$60.61	\$81.26
7th 1000 hrs	90.00	\$43.73	\$7.00	\$1.31	\$0.44	\$0.00	\$10.50	\$0.75	\$0.00	\$0.00	\$63.73	\$85.60

**Special Calculation Note : Other is Health Retirement Account**

**Operator "A"**

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater then 25 tons and less than 45 tons).

**Operator "B"**

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

**Operator "C"**

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

\*All Operators of cranes 45 ton or larger shall be paid the journeyman rate of pay. \$0.30 is for Health Retirement Account.

**Ratio :**

1 Journeyman to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO,

SHELBY, STARK, SUMMIT, TRUMBULL,  
TUSCARAWAS, UNION, VINTON, WARREN,  
WASHINGTON, WAYNE

**Special Jurisdictional Note :**

**Details :**

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Outside Cincinnati

Change # : LCN01-2023ibLoc71Cincinnati

Craft : Lineman Effective Date : 03/01/2023 Last Posted : 03/01/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lineman	\$43.02	\$7.00	\$1.29	\$0.43	\$0.00	\$8.60	\$0.56	\$0.00	\$0.00	\$60.90	\$82.41
Traffic Signal & Lighting Journeyman	\$41.43	\$7.00	\$1.24	\$0.41	\$0.00	\$8.29	\$0.56	\$0.00	\$0.00	\$58.93	\$79.64
Equipment Operator	\$37.78	\$7.00	\$1.13	\$0.38	\$0.00	\$7.56	\$0.56	\$0.00	\$0.00	\$54.41	\$73.30
Groundman 0-12 months (W/O CDL)	\$22.91	\$7.00	\$0.69	\$0.23	\$0.00	\$4.58	\$0.56	\$0.00	\$0.00	\$35.97	\$47.42
Groundman 0-21 Months (W/CDL)	\$25.03	\$7.00	\$0.75	\$0.25	\$0.00	\$5.01	\$0.56	\$0.00	\$0.00	\$38.60	\$51.12
Groundman 1 Year or More (W/CDL)	\$27.71	\$7.00	\$0.81	\$0.28	\$0.00	\$5.43	\$0.56	\$0.00	\$0.00	\$41.79	\$55.65
Traffic Signal Apprentices											
1st 1,000 hours	\$24.86	\$7.00	\$0.75	\$0.25	\$0.00	\$4.97	\$0.56	\$0.00	\$0.00	\$38.39	\$50.82
2nd 1,000 hours	\$26.93	\$7.00	\$0.81	\$0.27	\$0.00	\$5.39	\$0.56	\$0.00	\$0.00	\$40.96	\$54.43
3rd 1,000 hours	\$29.00	\$7.00	\$0.87	\$0.29	\$0.00	\$5.80	\$0.56	\$0.00	\$0.00	\$43.52	\$58.02
4th 1,000 hours	\$31.07	\$7.00	\$0.93	\$0.31	\$0.00	\$6.21	\$0.56	\$0.00	\$0.00	\$46.08	\$61.62
5th 1,000 hours	\$33.14	\$7.00	\$0.99	\$0.33	\$0.00	\$6.63	\$0.56	\$0.00	\$0.00	\$48.65	\$65.22
6th 1,000 hours	\$37.29	\$7.00	\$1.12	\$0.37	\$0.00	\$7.46	\$0.56	\$0.00	\$0.00	\$53.80	\$72.45

Apprentice Lineman	Percent											
1st 1,000 Hours	60.00	\$25.81	\$7.00	\$0.77	\$0.26	\$0.00	\$5.16	\$0.56	\$0.00	\$0.00	\$39.56	\$52.47
2nd 1,000 Hours	65.00	\$27.96	\$7.00	\$0.84	\$0.28	\$0.00	\$5.59	\$0.56	\$0.00	\$0.00	\$42.23	\$56.21
3rd 1,000 Hours	70.00	\$30.11	\$7.00	\$0.90	\$0.30	\$0.00	\$6.02	\$0.56	\$0.00	\$0.00	\$44.89	\$59.95
4th 1,000 Hours	75.00	\$32.27	\$7.00	\$0.97	\$0.32	\$0.00	\$6.54	\$0.56	\$0.00	\$0.00	\$47.66	\$63.79
5th 1,000 Hours	80.00	\$34.42	\$7.00	\$1.03	\$0.34	\$0.00	\$6.88	\$0.56	\$0.00	\$0.00	\$50.23	\$67.43
6th 1,000 Hours	85.00	\$36.57	\$7.00	\$1.10	\$0.37	\$0.00	\$7.31	\$0.56	\$0.00	\$0.00	\$52.91	\$71.19
7th 1,000 Hours	90.00	\$38.72	\$7.00	\$1.16	\$0.39	\$0.00	\$7.74	\$0.56	\$0.00	\$0.00	\$55.57	\$74.93

**Special Calculation Note :** Other is for Safety and Education Fund (\$0.06) And HRA (\$0.50).

**Ratio :**

1 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, HAMILTON, WARREN

**Special Jurisdictional Note :**

**Details :**

A groundman when directed shall assist a Journeyman in the performance of his/her work on the ground, including the use of hand tools. A Groundman under no circumstances shall climb poles, towers, ladders, or work from an elevated platform or bucket truck.

No more than three (3) Groundmen shall work alone. Jobs with more than three Groundmen shall be supervised by a Groundcrew Foreman, Journeyman Lineman, Journeyman Traffic Signal Technician or an Equipment Operator.

Scope of Work: installation and maintenance of highway and street lighting, highway and street sign lighting, electronic message boards and traffic control systems, camera systems, traffic signal work, substation and line construction including overhead and underground projects for private and industrial work as in accordance with the IBEW Constitution. This Agreement includes the operation of all tools and equipment necessary for the installation of the above projects.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Outside Utility Power

Change # : LCN01-2023ibLoc7

Craft : Lineman Effective Date : 03/01/2023 Last Posted : 03/01/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lineman	\$46.03	\$7.00	\$1.38	\$0.46	\$0.00	\$11.05	\$0.75	\$0.00	\$0.00	\$66.67	\$89.68
Substation Technician	\$46.03	\$7.00	\$1.38	\$0.46	\$0.00	\$11.05	\$0.75	\$0.00	\$0.00	\$66.67	\$89.68
Cable Splicer	\$48.21	\$7.00	\$1.45	\$0.48	\$0.00	\$11.57	\$0.75	\$0.00	\$0.00	\$69.46	\$93.56
Operator A	\$41.26	\$7.00	\$1.24	\$0.41	\$0.00	\$9.90	\$0.75	\$0.00	\$0.00	\$60.56	\$81.19
Operator B	\$36.47	\$7.00	\$1.09	\$0.36	\$0.00	\$8.75	\$0.75	\$0.00	\$0.00	\$54.42	\$72.65
Operator C	\$29.28	\$7.00	\$0.88	\$0.29	\$0.00	\$7.03	\$0.75	\$0.00	\$0.00	\$45.23	\$59.87
Groundman 0-12 months Exp	\$23.02	\$7.00	\$0.69	\$0.23	\$0.00	\$5.52	\$0.75	\$0.00	\$0.00	\$37.21	\$48.72
Groundman 0-12 months Exp w/CDL	\$25.32	\$7.00	\$0.76	\$0.25	\$0.00	\$6.08	\$0.75	\$0.00	\$0.00	\$40.16	\$52.82
Groundman 1 yr or more	\$25.32	\$7.00	\$0.76	\$0.25	\$0.00	\$6.08	\$0.75	\$0.00	\$0.00	\$40.16	\$52.82
Groundman 1 yr or more w/CDL	\$29.92	\$7.00	\$0.90	\$0.30	\$0.00	\$7.18	\$0.75	\$0.00	\$0.00	\$46.05	\$61.01
Equipment Mechanic A	\$36.47	\$7.00	\$1.09	\$0.36	\$0.00	\$8.75	\$0.75	\$0.00	\$0.00	\$54.42	\$72.65
Equipment Mechanic B	\$32.88	\$7.00	\$0.99	\$0.33	\$0.00	\$7.89	\$0.75	\$0.00	\$0.00	\$49.84	\$66.28
Equipment Mechanic C	\$29.28	\$7.00	\$0.88	\$0.29	\$0.00	\$7.03	\$0.75	\$0.00	\$0.00	\$45.23	\$59.87
Line Truck w/uuger	\$32.28	\$7.00	\$0.97	\$0.32	\$0.00	\$7.75	\$0.75	\$0.00	\$0.00	\$49.07	\$65.21

Apprentice	Percent											
1st 1000 hrs	60.00	\$27.62	\$7.00	\$0.83	\$0.28	\$0.00	\$6.63	\$0.75	\$0.00	\$0.00	\$43.11	\$56.92
2nd 1000 hrs	65.00	\$29.92	\$7.00	\$0.90	\$0.30	\$0.00	\$7.18	\$0.75	\$0.00	\$0.00	\$46.05	\$61.01
3rd 1000 hrs	70.00	\$32.22	\$7.00	\$0.97	\$0.32	\$0.00	\$7.73	\$0.75	\$0.00	\$0.00	\$48.99	\$65.10
4th 1000 hrs	75.00	\$34.52	\$7.00	\$1.04	\$0.35	\$0.00	\$8.28	\$0.75	\$0.00	\$0.00	\$51.94	\$69.20
5th 1000 hrs	80.00	\$36.82	\$7.00	\$1.10	\$0.37	\$0.00	\$8.84	\$0.75	\$0.00	\$0.00	\$54.88	\$73.30
6th 1000 hrs	85.00	\$39.13	\$7.00	\$1.17	\$0.39	\$0.00	\$9.39	\$0.75	\$0.00	\$0.00	\$57.83	\$77.39
7th 1000 hrs	90.00	\$41.43	\$7.00	\$1.24	\$0.41	\$0.00	\$9.94	\$0.75	\$0.00	\$0.00	\$60.77	\$81.48

**Special Calculation Note : Other is Health Retirement Account**

**Operator "A"**

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater then 25 tons and less than 45 tons).

**Operator "B"**

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

**Operator "C"**

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

**Ratio :**

(1) Journeyman Lineman to (1) Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

**Special Jurisdictional Note : 0.30 is for Health Retirement Account.**

**Details :**

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the

Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Voice Data Video Outside

Change # : LCR01-2017fbLoc71VDV

Craft : Voice Data Video Effective Date : 10/18/2017 Last Posted : 10/18/2017

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Installer Technician I	\$23.46	\$5.50	\$0.70	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$29.96	\$41.69
Installer Technician II	\$22.37	\$5.50	\$0.67	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$28.84	\$40.03
Equipment Operator I	\$22.37	\$5.50	\$0.67	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$28.84	\$40.03
Equipment Operator II	\$18.43	\$5.50	\$0.55	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$24.78	\$33.99
Installer /Repair Outside	\$22.37	\$5.50	\$0.67	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$28.84	\$40.03
Ground Driver W/CDL	\$15.83	\$5.50	\$0.47	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$22.10	\$30.01
Groundman	\$13.24	\$5.50	\$0.40	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$19.44	\$26.06
Cable Splicer	\$23.46	\$5.50	\$0.70	\$0.00	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$29.96	\$41.69

**Special Calculation Note :**

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEauga, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT,

**Special Jurisdictional Note :**

**Details :**

Cable Splicer: Inspect and test lines or cables, analyze results, and evaluate transmission characteristics. Cover conductors with insulation or seal splices with moisture-proof covering. Install, splice, test, and repair cables using tools or mechanical equipment. This will include the splicing of fiber.

Journeyman Technician I: Must know all aspects of telephone and cable work. This is to include aerial, underground, and manhole work. Must know how to climb and run bucket. Must have all the tools required to perform these tasks. Must be able to be responsible for the safety of the crew at all times. Must also have CDL license and have at least 5 years experience.

Installer/Repairman: Perform tasks of repairing, installing, and testing phone and CATV services.

Technician II: Have at least three years of telephone and CATV experience. Must have the knowledge of underground, aerial, and manhole work. Must be able to climb and operate bucket. Must have CDL. Must have all tools needed to perform these tasks.

Equipment Operator I: Able to operate a digger derrick or bucket truck. Have at least 5 years of experience and must have a valid CDL license.

Equipment Operator II: Able to operate a digger derrick or bucket truck. Have at least 3 years of experience and must have a valid CDL license.

Groundman W/CDL: Must have a valid CDL license and be able to perform tasks such as: climbing poles, pulling downguys, making up material, and getting appropriate tools for the job. Must have at least 5 year's experience.

Groundman: Perform tasks such as: climbing poles, pulling downguys, making up material, and getting appropriate tools for the job. Experience 0-5 years.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Inside

Change # : LCN01-2022ibLoc82in

Craft : Electrical Effective Date : 12/05/2022 Last Posted : 11/23/2022

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician	\$34.25		\$7.45	\$9.63	\$0.58	\$0.00	\$3.60	\$0.00	\$0.00	\$0.00	\$55.51	\$72.63
<b>Apprentice</b>	Percent											
1st period 0 - 1000 hrs	42.00	\$14.39	\$4.07	\$0.63	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$19.32	\$26.52
2nd period 1001-2000 hrs	42.00	\$14.39	\$4.07	\$0.63	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$19.32	\$26.52
3rd period 2001-3500 hrs	47.00	\$16.10	\$6.92	\$4.52	\$0.27	\$0.00	\$1.69	\$0.00	\$0.00	\$0.00	\$29.50	\$37.55
4th period 3501-5000 hrs	52.00	\$17.81	\$6.97	\$5.00	\$0.30	\$0.00	\$1.87	\$0.00	\$0.00	\$0.00	\$31.95	\$40.85
5th period 5001-6500 hrs	62.02	\$21.24	\$7.07	\$5.97	\$0.36	\$0.00	\$2.23	\$0.00	\$0.00	\$0.00	\$36.87	\$47.49
6th period 6501-8000 hrs	77.00	\$26.37	\$7.22	\$7.41	\$0.45	\$0.00	\$2.77	\$0.00	\$0.00	\$0.00	\$44.22	\$57.41

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 to 3 Journeymen to 3 Apprentices  
4 to 6 Journeymen to 6 Apprentices  
per job site

**Jurisdiction ( \* denotes special jurisdictional note ) :**

CLINTON, DARKE, GREENE, MIAMI,  
MONTGOMERY, PREBLE, WARREN\*

**Special Jurisdictional Note :** The following townships in Warren County are included: Clearcreek, Franklin and Wayne.

**Details :**

Only correction made on 6-19-19 was the 5th year Apprentice fb.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Inside Lt Commercial South West

Change # : LCNO1-2021sksLoc82in

Craft : Electrical Effective Date : 03/30/2022 Last Posted : 03/30/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician	\$33.25		\$6.47	\$9.35	\$0.72	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$53.29	\$69.91
CE-3 12,001- 14,000	\$24.66		\$6.47	\$0.74	\$0.72	\$0.00	\$0.74	\$0.00	\$0.00	\$0.10	\$33.43	\$45.76
CE-2 10,001- 12,000 Hrs	\$19.56		\$6.47	\$0.59	\$0.72	\$0.00	\$0.59	\$0.00	\$0.00	\$0.10	\$28.03	\$37.81
CE-1 8,001- 10,000 Hrs	\$17.86		\$6.47	\$0.54	\$0.72	\$0.00	\$0.54	\$0.00	\$0.00	\$0.10	\$26.23	\$35.16
CW-4 6,001- 8,000 Hrs	\$16.16		\$6.47	\$0.48	\$0.72	\$0.00	\$0.48	\$0.00	\$0.00	\$0.10	\$24.41	\$32.49
CW-3 4,001- 6,000 Hrs	\$14.46		\$6.47	\$0.43	\$0.72	\$0.00	\$0.43	\$0.00	\$0.00	\$0.10	\$22.61	\$29.84
CW-2 2,001- 4,000 Hrs	\$13.61		\$6.47	\$0.41	\$0.72	\$0.00	\$0.41	\$0.00	\$0.00	\$0.10	\$21.72	\$28.52
CW-1 0- 2,000 Hrs	\$12.76		\$6.47	\$0.38	\$0.72	\$0.00	\$0.38	\$0.00	\$0.00	\$0.10	\$20.81	\$27.19
<b>Apprentice</b>	<b>Percent</b>											
1st period 0 - 1000 hrs	42.00	\$13.97	\$4.07	\$0.62	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.89	\$25.88
2nd period 1001-2000 hrs	42.00	\$13.97	\$4.07	\$0.62	\$0.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.89	\$25.88
3rd period 2001-3500 hrs	47.00	\$15.63	\$6.92	\$4.39	\$0.27	\$0.00	\$1.65	\$0.00	\$0.00	\$0.00	\$28.86	\$36.67
4th period 3501-5000 hrs	52.00	\$17.29	\$6.97	\$4.86	\$0.29	\$0.00	\$1.82	\$0.00	\$0.00	\$0.00	\$31.23	\$39.88
5th period 5001-6500	62.00	\$20.61	\$7.07	\$5.80	\$0.35	\$0.00	\$2.17	\$0.00	\$0.00	\$0.00	\$36.01	\$46.31

hrs												
6th period 6501-8000 hrs	77.00	\$25.60	\$7.22	\$7.20	\$0.44	\$0.00	\$2.70	\$0.00	\$0.00	\$0.00	\$43.16	\$55.96

**Special Calculation Note :** \*Misc amount is Administrative Fees

**Ratio :**

1 to 3 Journeymen to 3 Apprentices  
 4 to 6 Journeymen to 6 Apprentices  
 per job site

**Jurisdiction ( \* denotes special jurisdictional note ) :**

CLINTON, DARKE, GREENE, MIAMI,  
 MONTGOMERY, PREBLE, WARREN\*

**Construction Electrician and Construction Wireman Ratio**

There shall be a minimum ratio of one inside Journeyman to every (4) employees of different classification per jobsite. An inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used.

**Special Jurisdictional Note :** The following townships in Warren County are included: Clearcreek, Franklin and Wayne.

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square fee), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 82 Lightning Rod

Change # : LCN02-2022ibLoc82

Craft : Electrical Effective Date : 12/05/2022 Last Posted : 11/23/2022

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrical Lightning Rod Technican	\$32.79	\$7.45	\$9.58	\$0.00	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$53.32	\$69.71

**Special Calculation Note :** No Apprentice approved by OSAC.

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

CLINTON, DARKE, GREENE, MIAMI,  
MONTGOMERY, PREBLE, WARREN\*

**Special Jurisdictional Note :** The following townships in Warren County are included: (Clearcreek, Franklin and Wayne)

**Details :**

# Prevailing Wage Rate

## Skilled Crafts

Name of Union: Electrical Local 82 Voice Data Video

Change # : LCN01-2023ibLoc82VDV

Craft : Voice Data Video Effective Date : 11/27/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Installer Technician A	\$27.70		\$6.70	\$6.83	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.76	\$55.61
Electrical Installer Technician B	\$26.32		\$6.70	\$6.79	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.31	\$53.47
JW Installer Technician	\$24.93		\$6.70	\$6.75	\$0.47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.85	\$51.32
NON BICSI Installer	\$18.01		\$3.94	\$0.54	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$22.83	\$31.83
Apprentice	Percent											
1st 0-1000 hours	55.00	\$15.24	\$3.94	\$3.76	\$0.29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.23	\$30.84
2nd 1001-2000 hours	55.00	\$15.24	\$3.94	\$3.76	\$0.29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.23	\$30.84
3rd 2001-3000 hours	65.00	\$18.00	\$6.65	\$4.44	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.44	\$38.44
4th 3001-4000 hours	65.00	\$18.00	\$6.65	\$4.44	\$0.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.44	\$38.44
5th 4001-5000 hours	75.00	\$20.77	\$6.66	\$6.62	\$0.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.45	\$44.83
6th 5001-6000 hours	75.00	\$20.77	\$6.66	\$6.62	\$0.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.45	\$44.83
7th 6001-7000 hours	80.00	\$22.16	\$6.67	\$6.66	\$0.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.91	\$46.99
8th 7001 hours	80.00	\$22.16	\$6.67	\$6.66	\$0.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.91	\$46.99
Cable Puller	50.00	\$13.85	\$3.94	\$0.42	\$0.26	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$18.72	\$25.65

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 Journeymen to 2 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

CLINTON, DARKE, GREENE, MIAMI,  
MONTGOMERY, PREBLE, WARREN\*

**Special Jurisdictional Note :** The following townships in Warren County are included: (Clearcreek, Franklin and Wayne)

**Details :**

Work covered but not limited to: installation which utilize transmission and/or transference of voice, sound, vision or digital for commercial, education, security and entertainment purposes for the following:

TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multimedia, multiplex, nurse call system, radio page, school intercom, sound and low voltage master clock systems.

Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit.

All HVAC control work is not covered by this wage rate but by the Inside Electrical wage rate.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 648 Voice Data Video

Change # : LCN01-2023ibLoc648VDV

Craft : Voice Data Video Effective Date : 11/27/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Installer Technician A	\$29.30		\$6.70	\$0.88	\$0.56	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$41.84	\$56.49
Electrical Installer Technician B	\$27.84		\$6.70	\$0.84	\$0.53	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$40.31	\$54.23
JW Installer Technician B	\$26.37		\$6.70	\$0.79	\$0.50	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$38.76	\$51.95
Non BICSI Installer	\$19.05		\$3.94	\$0.57	\$0.36	\$0.00	\$2.00	\$0.00	\$0.00	\$0.00	\$25.92	\$35.45
<b>Apprentice</b>												
	Percent											
1st period 0-800 hrs	55.00	\$16.12	\$3.94	\$0.48	\$0.31	\$0.00	\$2.42	\$0.00	\$0.00	\$0.00	\$23.26	\$31.32
2nd period 801-1600 hrs	55.00	\$16.12	\$3.94	\$0.48	\$0.31	\$0.00	\$2.42	\$0.00	\$0.00	\$0.00	\$23.26	\$31.32
3rd period 1601-2400 hrs	65.00	\$19.05	\$6.65	\$0.57	\$0.36	\$0.00	\$2.86	\$0.00	\$0.00	\$0.00	\$29.48	\$39.01
4th period 2401-3200 hrs	65.00	\$19.05	\$6.65	\$0.57	\$0.36	\$0.00	\$2.86	\$0.00	\$0.00	\$0.00	\$29.48	\$39.01
5th period 3201-4000 hrs	75.00	\$21.98	\$6.66	\$0.66	\$0.42	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$34.12	\$45.10
6th period 4001-4800 hrs	75.00	\$21.98	\$6.66	\$0.66	\$0.42	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$34.12	\$45.10
7th period 4801-4900hr	80.00	\$23.44	\$6.67	\$0.70	\$0.45	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$35.66	\$47.38

8th period 4901- 5000hrs	80.00	\$23.44	\$6.67	\$0.70	\$0.45	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$35.66	\$47.38
Cable Puller	50.00	\$14.65	\$3.94	\$0.44	\$0.25	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$19.53	\$26.86

**Special Calculation Note :**

**Ratio :**

1 Technician to 2 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BUTLER, WARREN\*

**Special Jurisdictional Note :** The following townships In Warren County are included: (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union, and Washington)

**Details :**

The following work is excluded from the Teledata Technician work scope:

\*The installation of computer systems in industrial applications such as assembly lines, robotics, computer controller manufacturing systems.

\*The installation of conduit and/or raceways shall be installed by Inside Wireman. On sites where there is no Inside Wireman employed, the

Teledata Technician may install raceway or conduit not greater than 10 ft.

\*Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit

\*All HVAC control work.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 648 Inside

Change # : LCN01-2023ibLoc648in

Craft : Electrical Effective Date : 09/13/2023 Last Posted : 09/13/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrician	\$34.00		\$7.45	\$7.64	\$0.51	\$0.00	\$5.36	\$1.02	\$0.00	\$0.00	\$55.98	\$72.98
<b>Apprentice</b>		<b>Percent</b>										
1st period 0-1000 hrs	50.00	\$17.00	\$4.32	\$0.00	\$0.26	\$0.00	\$3.07	\$0.51	\$0.00	\$0.00	\$25.16	\$33.66
2nd period 1001- 2000 hrs	50.00	\$17.00	\$4.32	\$0.00	\$0.26	\$0.00	\$3.07	\$0.51	\$0.00	\$0.00	\$25.16	\$33.66
3rd period 2001- 3500 hrs	55.00	\$18.70	\$7.45	\$4.20	\$0.28	\$0.00	\$4.01	\$0.56	\$0.00	\$0.00	\$35.20	\$44.55
4th period 3501- 5000 hrs	60.00	\$20.40	\$7.45	\$4.58	\$0.31	\$0.00	\$4.15	\$0.61	\$0.00	\$0.00	\$37.50	\$47.70
5th period 5001- 6500 hrs	65.00	\$22.10	\$7.45	\$4.97	\$0.33	\$0.00	\$4.31	\$0.66	\$0.00	\$0.00	\$39.82	\$50.87
6th period 6501- 8000 hrs	75.00	\$25.50	\$7.45	\$5.73	\$0.38	\$0.00	\$4.59	\$0.77	\$0.00	\$0.00	\$44.42	\$57.17

**Special Calculation Note :** Other is NEBF (Natioanl Electrical Benifit Fund.)

**Ratio :**

1-3 Journeyman to 2 Apprentices or fraction thereof:  
 4-6 Journeymen to 4 Apprentice  
 7-9 Journeymen to 6 Apprentice  
 10-12 Journeymen to 8 Apprentice  
 first person assigned to any job site shall be a  
 journeyman

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BUTLER, WARREN\*

**Special Jurisdictional Note :** In Warren County the following townships are included: (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union, and Washington)

**Details :**

Electricians while splicing cable shall receive \$.50 an hour above the regular electrical rate.

All work that requires the use of gas masks or respirators, shall be paid 50% above the appropriate rate of pay. Work up to & including 40 feet shall be paid \$.50 over the journeyman rate. All work from a Boatswain Chair, Swinging Scaffold, or Barrel shall be at double the Journeyman rate. Workmen required to work 50 feet or more below the surface of the earth will be paid 50% above the Journeyman rate.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 648 Lt Commercial South West

Change # : LCN01-2023ibLoc648in

Craft : Electrical Effective Date : 01/11/2023 Last Posted : 01/11/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Electrician	\$33.00	\$7.35	\$7.80	\$0.50	\$0.00	\$4.80	\$0.99	\$0.00	\$0.20	\$54.64	\$71.14
CE-3 12,001- 14,000 Hrs	\$25.38	\$6.51	\$0.76	\$0.76	\$0.00	\$0.76	\$0.51	\$0.00	\$0.00	\$34.68	\$47.37
CE-2 10,001- 12,000 Hrs	\$20.13	\$6.51	\$0.60	\$0.76	\$0.00	\$0.60	\$0.51	\$0.00	\$0.00	\$29.11	\$39.17
CE-1 8,001- 10,000 Hrs	\$18.38	\$6.51	\$0.55	\$0.76	\$0.00	\$0.55	\$0.51	\$0.00	\$0.00	\$27.26	\$36.45
CW-4 6,001- 8,000 Hrs	\$16.63	\$6.51	\$0.50	\$0.76	\$0.00	\$0.50	\$0.51	\$0.00	\$0.00	\$25.41	\$33.72
CW-3 4,001- 6,000 Hrs	\$14.88	\$6.51	\$0.45	\$0.76	\$0.00	\$0.45	\$0.51	\$0.00	\$0.00	\$23.56	\$31.00
CW-2 2,001- 4,000 Hrs	\$14.00	\$6.51	\$0.42	\$0.76	\$0.00	\$0.42	\$0.51	\$0.00	\$0.00	\$22.62	\$29.62
CW-1 0- 2,000 Hrs	\$13.13	\$6.51	\$0.39	\$0.76	\$0.00	\$0.39	\$0.51	\$0.00	\$0.00	\$21.69	\$28.26

**Special Calculation Note :** Other is for NEBF (National Electrical Benefit Fund)

**Ratio :**

Construction Electrician and Construction Wireman Ratio

There shall be a minimum ratio of one inside Journeyman to every (4) employees of different classification per jobsite. An inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BUTLER, WARREN\*

**Special Jurisdictional Note :** In Warren County the following townships are included: (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union, and Washington)

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square feet), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

**Details :**

Electricians while splicing cable shall receive \$.50 an hour above the regular electrical rate.

All work that requires the use of gas masks or respirators, shall be paid 50% above the appropriate rate of pay. Work up to & including 40 feet shall be paid \$.50 over the journeyman rate. All work from a Boatswain Chair, Swinging Scaffold, or Barrel shall be at double the Journeyman rate. Workmen required to work 50 feet or more below the surface of the earth will be paid 50% above the Journeyman rate.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 648 Voice Data Video

Change # : LCR01-2021sksLoc648VDV

Craft : Voice Data Video Effective Date : 12/22/2021 Last Posted : 12/22/2021

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Installer Technician A	\$25.95		\$6.60	\$0.78	\$0.49	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$38.22	\$51.20
Electrical Installer Technician B	\$24.65		\$6.60	\$0.74	\$0.47	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$36.86	\$49.18
JW Installer Technician B	\$23.36		\$6.60	\$0.70	\$0.44	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$35.50	\$47.18
Non BICSI Installer	\$16.87		\$3.00	\$0.51	\$0.32	\$0.00	\$2.40	\$0.00	\$0.00	\$0.00	\$23.10	\$31.53
<b>Apprentice</b>												
	Percent											
1st period 0-800 hrs	55.00	\$14.27	\$3.00	\$0.43	\$0.27	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$18.22	\$25.36
2nd period 801-1600 hrs	55.00	\$14.27	\$3.00	\$0.43	\$0.27	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$18.22	\$25.36
3rd period 1601-2400 hrs	65.00	\$16.87	\$6.50	\$0.51	\$0.32	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$28.60	\$37.03
4th period 2401-3200 hrs	65.00	\$16.87	\$6.50	\$0.51	\$0.32	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$28.60	\$37.03
5th period 3201-4000 hrs	75.00	\$19.46	\$6.53	\$0.58	\$0.37	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$31.34	\$41.07
6th period 4001-4800 hrs	75.00	\$19.46	\$6.53	\$0.58	\$0.37	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$31.34	\$41.07
7th period 4801-4900hr	80.00	\$20.76	\$6.54	\$0.62	\$0.39	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$32.71	\$43.09

8th period 4901- 5000hrs	80.00	\$20.76	\$6.54	\$0.62	\$0.39	\$0.00	\$4.40	\$0.00	\$0.00	\$0.00	\$32.71	\$43.09
Cable Puller	50.00	\$12.98	\$3.00	\$0.39	\$0.25	\$0.00	\$0.25	\$0.00	\$0.00	\$0.00	\$16.86	\$23.35

**Special Calculation Note :**

**Ratio :**

1 Technician to 2 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BUTLER, WARREN\*

**Special Jurisdictional Note :** The following townships In Warren County are included: (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union, and Washington)

**Details :**

The following work is excluded from the Teledata Technician work scope:

\*The installation of computer systems in industrial applications such as assembly lines, robotics, computer controller manufacturing systems.

\*The installation of conduit and/or raceways shall be installed by Inside Wireman. On sites where there is no Inside Wireman employed, the Teledata Technician may install raceway or conduit not greater than 10 ft.

\*Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit

\*All HVAC control work.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Elevator Local 11

Change # : LCN01-2020fbLoc11

Craft : Elevator Effective Date : 01/05/2021 Last Posted : 01/05/2021

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Elevator Mechanic	\$48.82		\$15.88	\$10.46	\$0.64	\$3.91	\$8.85	\$1.56	\$0.00	\$0.00	\$90.12	\$114.53
Probationary Apprentice	50.00	\$24.41	\$0.00	\$0.00	\$0.00	\$1.46	\$0.00	\$0.78	\$0.00	\$0.00	\$26.65	\$38.86
1st year	55.00	\$26.85	\$15.88	\$10.46	\$0.64	\$1.61	\$8.85	\$0.86	\$0.00	\$0.00	\$65.15	\$78.58
2nd year	65.00	\$31.73	\$15.88	\$10.46	\$0.64	\$1.90	\$8.85	\$1.02	\$0.00	\$0.00	\$70.48	\$86.35
3rd year	70.00	\$34.17	\$15.88	\$10.46	\$0.64	\$2.05	\$8.85	\$1.09	\$0.00	\$0.00	\$73.14	\$90.23
4th year	80.00	\$39.06	\$15.88	\$10.46	\$0.64	\$2.34	\$8.85	\$1.25	\$0.00	\$0.00	\$78.48	\$98.00
Helper	70.00	\$34.17	\$15.88	\$10.46	\$0.64	\$2.05	\$8.85	\$1.09	\$0.00	\$0.00	\$73.14	\$90.23
Assistant Mechanic	80.00	\$39.06	\$15.88	\$10.46	\$0.64	\$2.34	\$8.85	\$1.25	\$0.00	\$0.00	\$78.48	\$98.00

**Special Calculation Note :** Other is Holiday Pay. Vacation calculated at 6%.

## Ratio :

The total number of Helpers & Apprentices employed shall not exceed the number of Mechanics on any one job, except on jobs where (2) teams or more are working, (1) extra Helper or Apprentice may be employed for the first (2) teams and an extra Helper or Apprentice for each additional (3) teams.

- 1 Journeymen to 1 Apprentice
- 2 Journeymen to 5 Apprentice
- 3 Journeymen to 6 Apprentice

## Special Jurisdictional Note :

## Details :

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, BROWN, BUTLER, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, HIGHLAND, MIAMI, MONTGOMERY, PREBLE, SCIOTO, SHELBY, WARREN

# Prevailing Wage Rate Skilled Crafts

Name of Union: Glazier Local 387

Change # : LCN01-2023ibLoc387

Craft : Glazier Effective Date : 11/22/2023 Last Posted : 11/22/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>												
Glazier	\$31.95		\$6.50	\$11.25	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.15	\$66.12
<b>Apprentice</b>												
	<b>Percent</b>											
1st Year	65.00	\$20.77	\$6.50	\$7.86	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.58	\$45.96
2nd Year	75.00	\$23.96	\$6.50	\$8.83	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.74	\$51.72
3rd Year	85.00	\$27.16	\$6.50	\$9.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.91	\$57.49
4th Year	95.00	\$30.35	\$6.50	\$10.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.07	\$63.25

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

Each employer may employ and train Apprentices in the following ratio to journeymen workers employed.  
1 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, FAYETTE\*, GREENE, HAMILTON, HIGHLAND, MIAMI, MONTGOMERY, PREBLE, WARREN

**Special Jurisdictional Note :** Fayette County: Eastern portion of route #41 being the dividing line between locals 372 and 387. Local 387 has jurisdiction of projects built on property which borders route #41 East.

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 44

Change # : LCN01-2023ibLoc44

Craft : Ironworker Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Ironworker Reinforcing	\$32.87		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$56.37	\$72.80
Structural	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Ornamental	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Machine Mover/Rigger	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Conveyer Mechanic	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Maintenance/Heavy Hwy	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Welder A	\$32.62		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$56.12	\$72.43
Welder B	\$32.87		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$56.37	\$72.80
Sheeter	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
Fence Erector	\$30.75		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$54.25	\$69.62
Ironworker	\$32.37		\$8.90	\$9.50	\$0.60	\$0.00	\$4.30	\$0.20	\$0.00	\$0.00	\$55.87	\$72.05
<b>Apprentice</b>	<b>Percent</b>											
Apprentice												
1st yr A	60.00	\$19.72	\$8.90	\$9.50	\$0.60	\$0.00	\$1.08	\$0.20	\$0.00	\$0.00	\$40.00	\$49.86
1st yr B	65.00	\$21.37	\$8.90	\$9.50	\$0.60	\$0.00	\$1.08	\$0.20	\$0.00	\$0.00	\$41.65	\$52.33
2nd yr A	70.00	\$23.01	\$8.90	\$9.50	\$0.60	\$0.00	\$1.08	\$0.20	\$0.00	\$0.00	\$43.29	\$54.79
2nd yr B	75.00	\$24.65	\$8.90	\$9.50	\$0.60	\$0.00	\$1.08	\$0.20	\$0.00	\$0.00	\$44.93	\$57.26
3rd yr A	80.00	\$26.30	\$8.90	\$9.50	\$0.60	\$0.00	\$2.15	\$0.20	\$0.00	\$0.00	\$47.65	\$60.79
3rd yr B	85.00	\$27.94	\$8.90	\$9.50	\$0.60	\$0.00	\$2.15	\$0.20	\$0.00	\$0.00	\$49.29	\$63.26
4th yr A	90.00	\$29.58	\$8.90	\$9.50	\$0.60	\$0.00	\$3.23	\$0.20	\$0.00	\$0.00	\$52.01	\$66.80
4th yr B	95.00	\$31.23	\$8.90	\$9.50	\$0.60	\$0.00	\$3.23	\$0.20	\$0.00	\$0.00	\$53.66	\$69.27
4th yr C	100.00	\$32.87	\$8.90	\$9.50	\$0.60	\$0.00	\$3.23	\$0.20	\$0.00	\$0.00	\$55.30	\$71.73

**Special Calculation Note : Other is Impact Fund Training**

Ratio :

Jurisdiction ( \* denotes special jurisdictional note ) :

1 Journeymen to 1 Apprentice  
2 Journeymen to 2 Apprentice  
10 Journeymen to 4 Apprentices

ADAMS\*, BROWN, BUTLER\*, CLERMONT,  
CLINTON\*, HAMILTON, HIGHLAND\*, WARREN\*

**Special Jurisdictional Note :** Adams County Twps included: Bratton, Scott, Winchester, Wayne. Butler County Twps included: Oxford, St. Clair, Fairfield, Morgan, Liberty, Union, Ross, Reily, Hanover, West Chester. In Clinton County, Manchester and South West Borrow. Highland County Twps included: Dotson, Salem, Clay, White Oak, Hamer, New Market, Concord, Jackson, Washington. Warren County Twps included: Harlan, Deerfield, Hamilton.

**Details :**

Structural Iron Work but not limited to: field fabrication, all loading to and including the erecting, rigging, assembly, dismantling, placing, temporary and permanent securing by any means of all structural iron, steel, ornamental lead, bronze, brass, copper, aluminum, glass all ferrous and non ferrous metal and composite material, precast prestressed and post-stressed concrete structures. Bridges and bridge rails, bridge viaducts, bucks bulkheads, bumper and bumper post, canopies and unistrut canopies, corrugated ferrous and non ferrous sheets when attached to steel frames, columns, beams, bar-joists, trusses, grinders, roof decking, electrical supports, elevator cars, elevator fronts and enclosures, erection of steel towers, flag poles, gymnasium equipment, stadium and arena seating, jail cell work, jail cell beds, benches, bunks, chairs, tables, mirrors, jail cell access doors, rigging and installation of machinery and equipment (erecting, aligning, anchoring and dismantling, erection and dismantling of tower cranes, derrick monorail systems, Chicago booms, overhead cranes, gantries, material and personnel hoists, tanks, hoppers and conveyors. All pre-engineered metal buildings and their entirety including siding, roofing, gutters, downspouts and erection of all.

Reinforcing Iron Work but not limited to: Any work in connection with field fabrication, handling, racking, sorting, cutting, bending, hoisting, placing, burning, welding and tying of all materials used to reinforce concrete construction, except that loading and unloading by hand and carrying to a centralized point adjacent to or upon site of the project on which such materials are to be used. Realigning of reinforcing iron, wire mesh placing, bricking, pulling and similar reinforcing materials, placing steel dowels, as well as refastening and resetting same while concrete is being poured. Reinforcing steel and wire mesh in roadways and sidewalks in connection with building construction, also erection and fabrication of preconnection with building construction, also erection and fabrication of prestressed and precast joist, beams, columns, and slabs, walls, roofs, tanks, manholes, trenches and covers. The handling and placing of "J" or Jack bars on slip form construction; the placing of all clips, bolts, steel rods and wire fabric or mesh pertaining to gunite construction; the placing of steel-tex or paper-back mesh used for reinforcing and placing wire mesh to reinforce gypsum roof construction. Metal decking similar "corruflex" used for floor forms over metal or concrete supports whether welded or clipped. Post tension. All loading and unloading, hoisting, placing and tying of all post tensioning cables. Wrecking of cones, wedging of tendons, stressing, cutting and repairing.

Ornamental Iron Work but not limited to: all work in connection with field fabrication, handling including loading/off loading, sorting, cutting, fastening, anchoring, bending, hoisting, placing, burning, welding, and tying, dismantling of all materials used in miscellaneous iron or steel, for stairs, hand railings, rolling doors, rolling gates, rolling shutters, fence, windows, curtain wall, erection and welding of all metal, sash, architectural and ornamental treatments, but not necessarily limited to all sizes and types of ornamental, steel iron, lead, bronze, brass, copper, aluminum, all ferrous and non ferrous metals and composite materials

Fence Erector Iron Worker but not limited to: All work in connection with the field fabrication and erection of chain link fence, which includes but not limited to the loading and of the fence fabric and posts also the installation of the above.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 290

Change # : LCN01-2023ibLoc290

Craft : Ironworker Effective Date : 11/17/2023 Last Posted : 11/17/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Ironworker Structural	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Welder	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Fence Erector	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Reinforcing Rods	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Machinery Mover	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Sheeter	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Metal Building Erector	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Rigger & Erector	\$32.69		\$8.90	\$9.50	\$0.65	\$0.00	\$5.00	\$0.01	\$0.00	\$0.00	\$56.75	\$73.10
Apprentice	Percent											
1st year	64.60	\$21.12	\$8.90	\$9.50	\$0.65	\$0.00	\$3.50	\$0.01	\$0.00	\$0.00	\$43.68	\$54.24
2nd year	74.60	\$24.39	\$8.90	\$9.50	\$0.65	\$0.00	\$3.50	\$0.01	\$0.00	\$0.00	\$46.95	\$59.14
3rd year	84.60	\$27.66	\$8.90	\$9.50	\$0.65	\$0.00	\$3.50	\$0.01	\$0.00	\$0.00	\$50.22	\$64.04
4th year	94.62	\$30.93	\$8.90	\$9.50	\$0.65	\$0.00	\$3.50	\$0.01	\$0.00	\$0.00	\$53.49	\$68.96

**Special Calculation Note :** Other is for Industry Fund.

**Ratio :**

ON STRUCTURAL WORK: 1 Apprentice to 3 Journeymen

ON ROD WORK: 1 Apprentice to 3 Journeymen

ON ALL FINISHING, STEEL SASH, STAIRWAY AND ORNAMENTAL WORK: 1 Apprentice to 1 Journeyman

ON ALL INDUSTRIAL MAINTENANCE PROJECTS

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ALLEN\*, AUGLAIZE, BUTLER\*, CHAMPAIGN\*, CLARK, CLINTON, DARKE, FAYETTE\*, GREENE, HARDIN\*, HIGHLAND\*, LOGAN\*, MADISON\*, MERCER\*, MIAMI, MONTGOMERY, PREBLE, SHELBY, VAN WERT\*, WARREN\*

## NOT COVERED BY OTHER SPECIALTY

AGREEMENTS: 2 Apprentices to 2 Journeymen

**Special Jurisdictional Note :** Allen County Twps included are: Auglaize, Perry, Shawnee, Amanda, Spencer, Marion, Sugar Creek, American, Bath, Jackson. Butler County Twps included are: Milford, Wayne, Madison, Lemon. Champaign Cnty Twps included are: Union, Urbana, Jackson, Concord, Salem, Mad River, Johnson, Harrison, Adams. Fayette County Twps included are: Green, Jasper, Concord, Jefferson. Hardin County Twps included are: Round Head, Marion, Liberty. Highland County Twps included are: Fairfield, Penn, Union, Marshall, Liberty, Paint, Brush Creek. Logan County Twps included are: Richland, Stokes, Bloomfield, Washington, Harrison, McArthur, Lake, Liberty, Pleasant, Miami. Madison County Twps included are: Stokes. Mercer County Twps included are: Dublin, Washington, Jefferson, Recovery, Gibson, Union, Liberty, Butler, Granville, Center, Hopewell, Franklin, Marion. VanWert County Twps included are: Jennings. Warren County Twps included are: Franklin, Clear Creek, Turtle Creek, Wayne, Massie, Washington, Salem, Union.

### Details :

Structural Iron Work but not limited to: field fabrication, all loading to and including the erecting, rigging, assembly, dismantling, placing, temporary and permanent securing by any means of all structural iron, steel, ornamental lead, bronze, brass, copper, aluminum, glass all ferrous and non ferrous metal and composite material, precast prestressed and post-stressed concrete structures. Bridges and bridge rails, bridge viaducts, bucks bulkheads, bumper and bumper post, canopies and unistrut canopies, corrugated ferrous and non ferrous sheets when attached to steel frames, columns, beams, bar-joists, trusses, grinders, roof decking, electrical supports, elevator cars, elevator fronts and enclosures, erection of steel towers, flag poles, gymnasium equipment, stadium and arena seating, jail cell work, jail cell beds, benches, bunks, chairs, tables, mirrors, jail cell access doors, rigging and installation of machinery and equipment (erecting, aligning, anchoring and dismantling, erection and dismantling of tower cranes, derrick monorail systems, Chicago booms, overhead cranes, gantries, material and personnel hoists, tanks, hoppers and conveyors. All pre-engineered metal buildings and their entirety including siding, roofing, gutters, downspouts and erection of all.

Ornamental Iron Work but not limited to: all work in connection with field fabrication, handling including loading/off loading, sorting, cutting, fastening, anchoring, bending, hoisting, placing, burning, welding, and tying, dismantling of all materials used in miscellaneous iron or steel, for stairs, hand railings, rolling doors, rolling gates, rolling shutters, fence, windows, curtain wall, erection and welding of all metal, sash, architectural and ornamental treatments, but not necessarily limited to all sizes and types of ornamental, steel iron, lead, bronze, brass, copper, aluminum, all ferrous and non ferrous metals and composite materials

Fence Erector Iron Worker but not limited to: All work in connection with the field fabrication and erection of chain link fence, which includes but not limited to the loading and of the fence fabric and posts also the installation of the above.

# Prevailing Wage Rate

## Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2023ibLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Laborer Group 1	\$34.62		\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.42	\$65.73
Group 2	\$34.79		\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.59	\$65.98
Group 3	\$35.12		\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.92	\$66.48
Group 4	\$35.57		\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$49.37	\$67.15
Watch Person	\$27.35		\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$41.15	\$54.83
<b>Apprentice</b>												
	<b>Percent</b>											
0-1000 hrs	60.00	\$20.77	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$34.57	\$44.96
1001-2000 hrs	70.00	\$24.23	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$38.03	\$50.15
2001-3000 hrs	80.00	\$27.70	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$41.50	\$55.34
3001-4000 hrs	90.00	\$31.16	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$44.96	\$60.54
More than 4000 hrs	100.00	\$34.62	\$8.20	\$4.05	\$0.45	\$0.00	\$1.00	\$0.00	\$0.10	\$0.00	\$48.42	\$65.73

**Special Calculation Note** : Watchmen have no Apprentices. Tunnel Laborer rate with air-pressurized add \$1.00 to the above wage rate.

**Ratio :**

- 1 Journeymen to 1 Apprentice
- 3 Journeymen to 1 Apprentice thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW,

MUSKINGUM, NOBLE, PAULDING, PERRY,  
PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND,  
ROSS, SCIOTO, SENECA, SHELBY,  
TUSCARAWAS, UNION, VAN WERT, VINTON,  
WARREN, WASHINGTON, WAYNE, WILLIAMS,  
WYANDOT

**Special Jurisdictional Note :** Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

**Details :**

**Group 1**

Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, \*Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

\*Bridge Man will perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by members of the Laborers' International Union of North America."

**Group 2**

Asphalt Raker, Screwman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Striper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air), Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), \*\*\*Lead Abatement, Hazardous Waste (level C)

\*\*\*Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

**Group 3**

Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarnier, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

**Group 4**

Miner, Welder, Gunitite Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc.



The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Labor Local 534 Building

Change # : LCN01-2023ibLoc534

Craft : Laborer Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$31.54		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.34	\$60.11
Laborer Group 2	\$31.64		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.44	\$60.26
Laborer Group 3	\$31.74		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.54	\$60.41
Laborer Group 4	\$31.87		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.67	\$60.60
Laborer Group 5	\$32.12		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.92	\$60.98
Laborer Group 6	\$31.89		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.69	\$60.64
Laborer Group 7	\$31.09		\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.89	\$59.43
<b>Apprentice</b>	<b>Percent</b>											
0-1000 hrs	60.00	\$18.92	\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$31.72	\$41.19
1001-2000 hrs	70.00	\$22.08	\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$34.88	\$45.92
2001-3000 hrs	80.00	\$25.23	\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$38.03	\$50.65
3001-4000	90.00	\$28.39	\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$41.19	\$55.38
4001	100.00	\$31.54	\$8.20	\$4.05	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.34	\$60.11

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 Journeyman to 1 Apprentice  
3 Journeyman to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BUTLER, WARREN

**Special Jurisdictional Note :**

**Details :**

Note:

Group 1: Building & Common Laborer; All general laborers work including all forms of landscaping, Rough Rider - all pump's 4 inch or smaller, Small Pump Portable Generators-Bobcat to Cleanup, Firewatch and Monitor, (Safety Person)

Group 2: Asphalt Raker, Tamper, Smoother, Hand Air Pump, Hand air Tamper, Chisel, Power Tamper, Operator, Switch, Assemblies, Handling & Laying Precast Concrete Floors & Deck Tool Repairman.

Group 3: Concrete Specialist; Skid Steers (with attachments to perform Laborer's duties) Jack Hammer \* Concrete Busterman, Barco Tamper Man, Power Georgia Buggy Man, Power Sweeper Man, Vibrator, Concrete Saw Man, Rail Spikers, Acetylene Burner, Pipelayers, Bos'n Cradleman, Bottom Man, Chipping Hammer Grade Checker, Radio Operator, Form Cleanout & blowout Man, Red Concrete Coloring Man (Electrical Safety)

Group 4: Mason Tender, Mortar Mixers & Scaffold Builders

Group 5: Fork Lift for Mason, all work involving Refractory Materials Including Demolition of Refractory Materials.

Asbestos Removal and Hazardous Waste Removal (handling, control, removal abatement, encapsulation or disposal of asbestos & hazardous waste),

Group 6: Gunnite Man, Sand Blaster, Concrete & Grout Pump & Hose Man, Blast Trac, Miners & Muckers, Free Air, Powderman or Blaster, Mortar or Gypsum Machineman, Welder, Scuba Diver.

Group 7: Watchman & Tool Checker/Toolroom Man



1st Year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$37.00	\$47.37
2nd Year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$41.14	\$53.59
3rd Year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$45.29	\$59.81
4th Year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.44	\$66.04

**Special Calculation Note :** Other: Education & Safety \$0.09; \*Misc is National Training

**Ratio :**

For every (3) Operating Engineer Journeymen employed by the company there may be employed (1) Registered Apprentice or trainee Engineer through the referral when they are available. An apprenice, while employed as part of a crew per Article VIII, paragraph 78, will not be subject to the apprenticeship ratios in this collective bargaining agreement

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

**Special Jurisdictional Note :**

**Details :**

Note: There will be a 10% increase for the apprentices on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Group A- Barrier Moving Machines; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types); Compact Cranes, track or rubber over 4,000 pounds capacity; Cranes self-erecting, stationary, track or truck (all configurations); Derricks (all types); Draglines; Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Forklift (rough terrain with winch/hoist); Gradalls; Helicopter Operators, hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Horizontal Directional Drill; Hydraulic Gantry (lift system); Laser Finishing Machines; Laser Screed and like equipment; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Operator/Technician(Mechanic Operator/Technician and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms; Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all), used on caissons for foundations and sub-structure; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Trench Machines (over 24" wide); Tug Boats.

Group B - Articulating/end dumps (minus \$4.00/hour from Group B rate); Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs.; Bulldozers; CMI type Equipment; Concrete Saw, Vermeer-type; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats,, Rotomills (all), grinders and planers of all types.

Group C - A-Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or Skid Steer Loader with or without attachments; Boilers (15 lbs. pressure and over); All Concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drills - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled), Buck Hoists, Transport Platforms, Construction Elevators; Hydro Vac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Man Lifts; Material hoist/elevators; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie (Inserter/Remover); Rotovator (Lime-Soil Stabilizer); Submersible Pumps (4" and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24" and under); Utility Operators.

Group D - Backfillers and Tampers; Ballast Re-locator; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Mixers, more than one bag capacity; Concrete Mixers, one bag capacity (side loaders); All Concrete Pumps (without boom with 4" or smaller system); Concrete Spreader; Conveyors, used for handling building materials; Crushers; Deckhands; Drum Fireman (in asphalt plants); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators; Guniting Machines; Hydro-seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2" discharge); Road Widening Trenchers; Rollers (except asphalt); Self-propelled sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepsfoot post roller or grader; VAC/ALLS; Vibratory Compactors, with integral power; Welders.

Group E - Allen Screed Paver (concrete); Boilers (less than 15 lbs. pressure); Cranes-Compact, track or rubber (under 4,000 pounds capacity); Directional Drill "Locator"; Fueling and greasing +\$3.00; Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson, Submersible Pumps (under 4" discharge).

Master Mechanics - Master Mechanic

Cranes 150' - 180' - Boom & Jib 150 - 180 feet

Cranes 180' - 249' - Boom & Jib 180 - 249 feet

Cranes 250' and over - Boom & Jib 250-feet or over

# Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - HevHwy Zone II

Change # : LCN01-2023ibLoc18hevhwyl

Craft : Operating Engineer Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Operator Class A	\$41.49		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.74	\$78.48
Operator Class B	\$41.37		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.62	\$78.30
Operator Class C	\$40.33		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$56.58	\$76.74
Operator Class D	\$39.15		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$55.40	\$74.97
Operator Class E	\$33.69		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.94	\$66.78
Master Mechanic	\$41.74		\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$57.99	\$78.86
<b>Apprentice</b>	<b>Percent</b>											
1st Year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$37.00	\$47.37
2nd Year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$41.14	\$53.59
3rd Year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$45.29	\$59.81
4th Year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.44	\$66.04
Field Mech Trainee Class 2												
1st year	50.00	\$20.75	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$37.00	\$47.37
2nd year	60.00	\$24.89	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$41.14	\$53.59
3rd year	70.00	\$29.04	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$45.29	\$59.81
4th year	80.00	\$33.19	\$9.01	\$6.25	\$0.85	\$0.00	\$0.00	\$0.09	\$0.00	\$0.05	\$49.44	\$66.04

**Special Calculation Note :** Other: Education & Safety Fund is \$0.09 per hour. \*Misc is National Training

**Ratio :**

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice or Trainee Engineer through the referral when they are available. An Apprentice, while

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE,

employed as part of a crew per Article VIII, paragraph 65 will not be subject to the apprenticeship ratios in this collective bargaining agreement

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

### **Special Jurisdictional Note :**

#### **Details :**

\*\*Apprentices will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if they are required to have CDL.

Class A - Air Compressors on Steel Erection; Asphalt Plant Engineers (Cleveland District Only); Barrier Moving Machine; Boiler Operators, Compressor Operators, or Generators, when mounted on a rig; Boom Trucks (all types); Cableways; Cherry Pickers; Combination- Concrete Mixers & Towers; Concrete Plants (over 4 yd capacity); Concrete Pumps; Cranes (all types); Compact Cranes track or rubber over 4,000 pounds capacity; Cranes self-erecting stationary, track or truck; Derricks (all types); Draglines; Dredges dipper, clam or suction; Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls; Helicopter Crew (Operator- hoist or winch); Hoes (all types); Hoisting Engines; Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial-type Tractors; Jet Engine Dryer (D8 or D9) diesel Tractors; Locomotives (standard gauge); Maintenance Operators/Technicians (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic lifting and aligning device); Refrigerating Machines (freezer operation); Rotary Drills, on caisson work; Rough Terrain Fork Lift with winch/hoist; Side Booms; Slip Form Pavers; Survey Crew Party Chiefs; Tower Derricks; Tree Shredders; Trench Machines (over 24" wide); Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators.

Class B - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or Skid Steer Loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Concrete Saws, Vermeer type; Endloaders; Horizontal Directional Drill (50,000 ft. lbs. thrust and over); Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Maintenance Operators/Technicians, Class B; Material Transfer Equipment (shuttle buggy) Asphalt; Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Rotomills (all), Grinders and Planners of all types, Groovers (excluding walk-behinds); Trench Machines (24 inch wide and under).

Class C - A-Frames; Air Compressors, on tunnel work (low Pressure); Articulating/straight bed end dumps if assigned (minus \$4.00 per hour); Asphalt Plant Engineers (Portage and Summit Counties only); Bobcat-type and/or skid steer loader with or without attachments; Drones; Highway Drills (all types); HydroVac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Locomotives (narrow gauge); Material Hoist/Elevators; Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Power Boilers (over 15 lbs. pressure); Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rollers, Asphalt; Rotovator (lime-soil Stabilizer); Switch & Tie Tampers (without lifting and aligning device); Utilities Operators, (small equipment); Welding Machines and



## Generators.

Class D – Backfillers and Tampers; Ballast Re-locator; Bar and Joint Installing Machines; Batch Plant Operators; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yds. and under); Concrete Saws (multiple); Conveyors (highway); Crushers; Deckhands; Farm type tractors, with attachments (highway); Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway), except masonry; Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers (hydraulic or cable); Plant Mixers; Post Drivers; Post Hole Diggers; Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Steam Firemen; Survey Instrument men; Tractors, pulling sheepsfoot rollers or graders; Vibratory Compactors, with integral power.

Class E - Compressors (portable, Sewer, Heavy and Highway); Cranes-Compact, track or rubber under 4,000 pound capacity; Drum Firemen (asphalt plant); Fueling and greasing (Primary Operator with Specialized CDL Endorsement Add \$3.00/hr); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oil Heaters (asphalt plant); Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson; Survey Rodmen or Chairmen; Tire Repairmen; VAC/ALLS.  
Master Mechanic - Master Mechanic

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Locals 123 & 238

Change # : LCN02-2023ibLoc123-238

Craft : Drywall Finisher Effective Date : 11/15/2023 Last Posted : 11/15/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
<b>Classification</b>												
Painter Drywall Finisher	\$27.54		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.80	\$54.57
Tapers and Finishers	\$27.54		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.80	\$54.57
r												
<b>Apprentice</b>	<b>Percent</b>											
1st Year	65.00	\$17.90	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$27.01	\$35.96
2nd Year	70.00	\$19.28	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.39	\$38.03
3rd Year	80.00	\$22.03	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.14	\$42.16
4th Yea	90.00	\$24.79	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.90	\$46.29

**Special Calculation Note :** Apprentices shall be paid the proper % of the classification above.

**Ratio :**

1 Journeyman to 1 Apprentice per job

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, CLINTON, HAMILTON, WARREN

**Special Jurisdictional Note :**

**Details :**

Industrial Work paid as commercial work above for each class which includes, Industrial Plants, repair garages, processing plants, storage tanks, warehouses, skeletons structures, bridges unless highest point of clearance is 60 feet or more whether new or old construction offices and office buildings in industrial sites are at industrial rates. Heavy & Highway Bridges-Guard Rails- Light Poles. A hazardous steeplejack rate shall apply on radio towers, stacks, light towers, water towers, steeples, skeleton steel, and exterior industrial conveyors over 25 feet, where such items require steeplejack methods and the rate of pay shall be a \$1.00 per hour above the industrial rate. Steeplejack rate to apply to bridges where highest point of clearance is 60 feet.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Locals 123 & 238  
Commercial & Industrial

Change # : LCN02-2023ibLoc123ComInd

Craft : Painter Effective Date : 11/15/2023 Last Posted : 11/15/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Brush Roll	\$27.54		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.80	\$54.57
Paper Hanger	\$27.54		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.80	\$54.57
Spray Painter	\$28.04		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.30	\$55.32
Sand Blaster Water Blaster	\$28.29		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.55	\$55.70
Elevated Tanks	\$28.54		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.80	\$56.07
<b>Apprentice</b>	<b>Percent</b>											
1st Year	65.00	\$17.90	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$27.01	\$35.96
2nd Year	70.00	\$19.28	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.39	\$38.03
3rd Year	80.00	\$22.03	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.14	\$42.16
4th Year	90.00	\$24.79	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.90	\$46.29

**Special Calculation Note :** Apprentices shall be paid the proper % of the classification above.

**Ratio :**

(1) Journeymen to (1) Apprentice per jobsite

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, CLINTON,  
HAMILTON, WARREN

**Special Jurisdictional Note :**

**Details :**

Industrial Work paid as commercial work above for each class which includes, Industrial Plants, repair garages, processing plants, storage tanks, warehouses, skeletons structures, bridges unless highest point of clearance is 60 feet or more whether new or old construction offices and office buildings in industrial sites are at industrial rates. Heavy & Highway Bridges-Guard Rails- Light Poles. A hazardous steeplejack rate shall apply on radio towers, stacks, light towers, water towers, steeples, skeleton steel, and exterior industrial conveyors over 25 feet, where such items require steeplejack methods and the rate of pay shall be a \$1.00 per hour above the

industrial rate. Steeplejack rate to apply to bridges where highest point of clearance is 60 feet.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 123 & 238 Hwy Hwy

Change # : LCN02-2023ibLoc123

Craft : Painter Effective Date : 11/15/2023 Last Posted : 11/15/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Bridge Class 1	\$37.93		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.19	\$70.15
Bridge Painter, Rigger, Containment Builder, Spot Blaster Class 2	\$30.93		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.19	\$59.66
Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mixer, Traffic Control, Boat Person Class 3	\$30.93		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.19	\$59.66
Concrete Sealing, Concrete Blasting/Power Washing, Etc. Class 4	\$30.93		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.19	\$59.66
Quality Control/Quality Assurance, Traffic Safety, Competent Person Class 5	\$30.93		\$6.50	\$6.45	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.19	\$59.66
<b>Apprentice</b>	<b>Percent</b>											
1st Year	65.00	\$24.65	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.76	\$46.09
2nd Year	70.00	\$26.55	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.66	\$48.94
3rd Year	80.00	\$30.34	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.45	\$54.63
4th Year	90.00	\$34.14	\$6.50	\$2.30	\$0.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.25	\$60.32

**Special Calculation Note :** Apprentices shall be paid proper % of the classification above..

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

**Special Jurisdictional Note :**

**Details :**

Industrial Work paid as commercial work above for each class which includes, Industrial Plants, repair garages, processing plants, storage tanks, warehouses, skeletons structures, bridges unless highest point of clearance is 60 feet or more whether new or old construction offices and office buildings in industrial sites are at industrial rates. Heavy & Highway Bridges-Guard Rails- Light Poles. A hazardous steeplejack rate shall apply on radio towers, stacks, light towers, water towers, steeples, skeleton steel, and exterior industrial conveyors over 25 feet, where such items require steeplejack methods and the rate of pay shall be a \$1.00 per hour above the industrial rate. Steeplejack rate to apply to bridges where highest point of clearance is 60 feet.

Class 1 – Abrasive blasting of any kind.

Class 2 – Bridge painting, coating application of any kind. All steel surface preparation other than abrasive blasting. All necessary rigging and containment building. All remedial/ spot blasting.

Class 3 – Tend to all equipment including but not limited to abrasive blasting, power washing, spray painting, forklifts, hoists, trucks, etc. Load and unload trucks, handle materials, man safety boats, handle traffic control, clean up/ vacuum abrasive blast materials and related tasks.

Class 4 – All aspects of concrete coating/ sealing including but not limited to preparation, containment, etc.

Class 5 – Verify and record that all work is completed according to job specifications. Assure that all health and safety standards are adhered to. Assure all traffic is safely handled.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2023ibLoc639

Craft : Painter Effective Date : 03/22/2023 Last Posted : 03/22/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Sign Journeyman Tech/Team Leader Class A	\$25.28	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.68	\$0.00	\$0.00	\$27.87	\$40.51
Painter Sign Journeyman Tech/Team Leader Class B	\$25.28	\$1.70	\$0.21	\$0.00	\$0.49	\$0.00	\$0.68	\$0.00	\$0.00	\$28.36	\$41.00
Painter Sign Journeyman Tech/Team Leader Class C	\$25.28	\$1.70	\$0.21	\$0.00	\$0.97	\$0.00	\$0.68	\$0.00	\$0.00	\$28.84	\$41.48
Painter Sign Journeyman Tech/Team Leader Class D	\$25.28	\$1.70	\$0.21	\$0.00	\$1.46	\$0.00	\$0.68	\$0.00	\$0.00	\$29.33	\$41.97
Sign Journeyman Class A	\$25.00	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.67	\$0.00	\$0.00	\$27.58	\$40.08
Sign Journeyman Class B	\$25.00	\$1.70	\$0.21	\$0.00	\$0.48	\$0.00	\$0.67	\$0.00	\$0.00	\$28.06	\$40.56
Sign Journeyman Class C	\$25.00	\$1.70	\$0.21	\$0.00	\$0.96	\$0.00	\$0.67	\$0.00	\$0.00	\$28.54	\$41.04
Sign Journeyman Class D	\$25.00	\$1.70	\$0.21	\$0.00	\$1.44	\$0.00	\$0.67	\$0.00	\$0.00	\$29.02	\$41.52
Tech Sign Fabrication/ Erector Class A	\$19.67	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$22.11	\$31.95

Tech Sign Fabrication/ Erector Class B	\$19.67	\$1.70	\$0.21	\$0.00	\$0.38	\$0.00	\$0.53	\$0.00	\$0.00	\$22.49	\$32.33
Tech Sign Fabrication/ Erector Class C	\$19.67	\$1.70	\$0.21	\$0.00	\$0.76	\$0.00	\$0.53	\$0.00	\$0.00	\$22.87	\$32.71
Tech Sign Fabrication/ Erector Class D	\$19.67	\$1.70	\$0.21	\$0.00	\$1.13	\$0.00	\$0.53	\$0.00	\$0.00	\$23.24	\$33.08

**Special Calculation Note :** Other is for paid holidays.

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GREENE, HAMILTON, HANCOCK, HARDIN, HENRY, HIGHLAND, HOLMES, HURON, JACKSON, KNOX, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MERCER, MIAMI, MONTGOMERY, MORROW, MUSKINGUM, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, WARREN, WAYNE, WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

Class A: less that 1 year.

Class B: 1-3 years.

Class C; 3-10 years.

Class D: More than 10 years.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639

Change # : LCNO1-2015fbLoc639

Craft : Painter Effective Date : 06/10/2015 Last Posted : 06/10/2015

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
<b>Classification</b>											
Painter Metal Finisher/Helpers											
Top Helper Class A	\$19.09	\$3.65	\$0.00	\$0.00	\$0.66	\$0.00	\$0.00	\$0.00	\$0.00	\$23.40	\$32.94
Top Helper Class B	\$19.09	\$3.65	\$0.65	\$0.00	\$1.03	\$0.00	\$0.37	\$0.00	\$0.00	\$24.79	\$34.33
Top Helper Class C	\$19.09	\$3.65	\$1.00	\$0.00	\$1.76	\$0.00	\$0.37	\$0.00	\$0.00	\$25.87	\$35.41
Helper Class A	\$14.69	\$3.65	\$0.00	\$0.00	\$0.51	\$0.00	\$0.00	\$0.00	\$0.00	\$18.85	\$26.19
Helper Class B	\$14.69	\$3.65	\$0.65	\$0.00	\$0.79	\$0.00	\$0.28	\$0.00	\$0.00	\$20.06	\$27.40
Helper Class C	\$14.69	\$3.65	\$1.00	\$0.00	\$1.64	\$0.00	\$0.28	\$0.00	\$0.00	\$21.26	\$28.60
New Hire 90 Days	\$11.00	\$3.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.65	\$20.15

**Special Calculation Note :** Other is Sick and Personal Time

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEauga, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY,

SCIOTO, SENECA, SHELBY, STARK, SUMMIT,  
TRUMBULL, TUSCARAWAS, UNION, VAN  
WERT, VINTON, WARREN, WASHINGTON,  
WAYNE, WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

Top Helper: Shall perform the responsibilities of a Helper and be responsible for the setup, break down, safety and quality of the company's product.

Helper : Shall be responsible for performing tasks in refinishing, compliance with safety procedures, setting up and breaking down job sites, scaffolding and swing stages and preparing surfaces for refinishing including but not limited to, masking and stripping and cleaning, oxidizing, polishing and scratch removal on various surfaces

Class A Workers: Less than 1 Year of Service.

Class B Workers: More than 1 and less than 8 Years of Service.

Class C Workers: More than 8 Years of Service.

Metal Polisher Scope of Work: Polishing, buffing, stripping, coloring, lacquering, spraying, cleaning and maintenance of ornamental and architectural metals, iron, bronze, nickel, aluminum and stainless steel and in mental specialty work, various stone finishes, stone specialty work and any other work pertaining to the finishing of metal, stones, woods, and any window washing/cleaning done in conjunction with this work, using chemicals, solvents, coatings and hand applied lacquer thinner, removing scratches from mirror finished metals, burnishing of bronze, statuary finishes on exterior and interior surfaces and the use of all tools required to perform such work, including but not limited to polishes, spray equipment and scaffolding.

Swing State Rate: All work on scaffold 4 sections or higher, including any boom lifts and swing stage scaffolds including the rigging and derigging of hanging/suspended swing stage systems and rappelling/bolson chair work, ADD \$1.50 per hour.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2016fbLoc639

Craft : Painter Effective Date : 08/03/2016 Last Posted : 08/03/2016

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Sign Journeyman Tech/Team Leader Class A	\$21.25	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.57	\$0.00	\$0.00	\$23.29	\$33.92
Painter Sign Journeyman Tech/Team Leader Class B	\$21.25	\$1.33	\$0.14	\$0.00	\$0.41	\$0.00	\$0.57	\$0.00	\$0.00	\$23.70	\$34.32
Painter Sign Journeyman Tech/Team Leader Class C	\$21.25	\$1.33	\$0.14	\$0.00	\$0.82	\$0.00	\$0.57	\$0.00	\$0.00	\$24.11	\$34.74
Painter Sign Journeyman Tech/Team Leader Class D	\$21.25	\$1.33	\$0.14	\$0.00	\$1.23	\$0.00	\$0.57	\$0.00	\$0.00	\$24.52	\$35.14
Sign Journeyman Class A	\$20.98	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.56	\$0.00	\$0.00	\$23.01	\$33.50
Sign Journeyman Class B	\$20.98	\$1.33	\$0.14	\$0.00	\$0.40	\$0.00	\$0.56	\$0.00	\$0.00	\$23.41	\$33.90
Sign Journeyman Class C	\$20.98	\$1.33	\$0.14	\$0.00	\$0.81	\$0.00	\$0.56	\$0.00	\$0.00	\$23.82	\$34.31
Sign Journeyman Class D	\$20.98	\$1.33	\$0.14	\$0.00	\$1.21	\$0.00	\$0.56	\$0.00	\$0.00	\$24.22	\$34.71
Tech Sign Fabrication/Erector Class A	\$15.90	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.43	\$0.00	\$0.00	\$17.80	\$25.75
Tech Sign Fabrication/Erector Class B	\$15.90	\$1.33	\$0.14	\$0.00	\$0.31	\$0.00	\$0.43	\$0.00	\$0.00	\$18.11	\$26.06
Tech Sign Fabrication/Erector Class C	\$15.90	\$1.33	\$0.14	\$0.00	\$0.61	\$0.00	\$0.43	\$0.00	\$0.00	\$18.41	\$26.36
Tech Sign Fabrication/Erector Class D	\$15.90	\$1.33	\$0.14	\$0.00	\$0.92	\$0.00	\$0.43	\$0.00	\$0.00	\$18.72	\$26.67

**Special Calculation Note :** Other is for paid holidays.

**Ratio :**

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, AUGLAIZE, BROWN, BUTLER,  
CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON,  
COLUMBIANA, COSHOCTON, CRAWFORD, DARKE,  
DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE,  
FRANKLIN, FULTON, GREENE, HAMILTON, HANCOCK,  
HARDIN, HENRY, HIGHLAND, HOLMES, HURON,  
JACKSON, KNOX, LICKING, LOGAN, LORAIN, LUCAS,  
MADISON, MAHONING, MARION, MERCER, MIAMI,  
MONTGOMERY, MORROW, MUSKINGUM, OTTAWA,  
PAULDING, PERRY, PICKAWAY, PIKE, PREBLE,  
PUTNAM, ROSS, SANDUSKY, SCIOTO, SENECA,  
SHELBY, STARK, TRUMBULL, TUSCARAWAS, UNION,  
VAN WERT, WARREN, WAYNE, WILLIAMS, WOOD,  
WYANDOT

**Special Jurisdictional Note :**

**Details :**

Class A: less than 1 year.

Class B: 1-3 years.

Class C: 3-10 years.

Class D: More than 10 years.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Plasterer Local 132 (Cincinnati)

Change # : LCN01-2023ibLoc132Cinci

Craft : Plasterer Effective Date : 07/01/2023 Last Posted : 06/28/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plasterer	\$28.40		\$5.80	\$8.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$44.70	\$58.90
Apprentice	Percent											
1st 900 hours	70.00	\$19.88	\$5.80	\$0.00	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$27.44	\$37.38
2nd 900 hours	74.00	\$21.02	\$5.80	\$0.00	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$28.58	\$39.08
3rd 900 hours	78.00	\$22.15	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$37.45	\$48.53
4th 900 hours	82.00	\$23.29	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$38.59	\$50.23
5th 900 hours	86.00	\$24.42	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$39.72	\$51.94
6th 900 hours	90.00	\$25.56	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$40.86	\$53.64
7th 900 hours	94.00	\$26.70	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$42.00	\$55.34
8th 900 hours	98.00	\$27.83	\$5.80	\$7.74	\$0.70	\$0.00	\$1.00	\$0.06	\$0.00	\$0.00	\$43.13	\$57.05

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

\*Other is International Training

**Ratio :**

- 1 Journeyman to 1 Apprentice
- 4 Journeyman to 2 Apprentice
- 7 Journeyman to 3 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN

**Special Jurisdictional Note :**

**Details :**

Apprentice and Shop Hand Pension are \$1.00 less than Journeyman.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Plumber Pipefitter Local 392

Change # : LCN01-2023ibLoc392

Craft : Plumber/Pipefitter Effective Date : 06/01/2023 Last Posted : 05/31/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plumber Pipefitter	\$38.62		\$10.58	\$13.93	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$64.45	\$83.76
Plumber Helper	\$25.10		\$10.48	\$7.24	\$0.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.61	\$56.16
Apprentice	Percent											
1st Year	52.00	\$20.08	\$10.38	\$1.05	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$32.83	\$42.87
2nd Year	55.00	\$21.24	\$10.38	\$1.05	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$33.99	\$44.61
3rd Year	58.00	\$22.40	\$10.38	\$7.74	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$41.84	\$53.04
4th Year	62.00	\$23.94	\$10.38	\$7.74	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$43.38	\$55.36
5th Year	75.00	\$28.96	\$10.38	\$13.93	\$0.79	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$54.60	\$69.08

**Special Calculation Note : OTHER IS: SUPPLEMENTAL UNEMPLOYMENT BENEFITS.**

**Ratio :**

- 1 Journeymen to 1 Apprentice
- 2 Journeymen to 4 Apprentices
- 3 Journeymen to 6 Apprentices

**Jurisdiction ( \* denotes special jurisdictional note ) :**

BROWN, BUTLER, CLERMONT, HAMILTON, WARREN

When more than Sixteen (16) Journeymen are employed additional apprentices may be acquired at a ratio of one (1) apprentice to four (4) journeymen.

**Special Jurisdictional Note :**

**Details :**

Helpers shall be permitted to work on ONLY , Exterior Sewers, Concrete, Vitrified Clay or PVC Pipe and Digging and Backfilling for Piping Work. The ratio shall not exceed 2 helpers to 1 Journeymen when performing the scope of work listed above

# Prevailing Wage Rate Skilled Crafts

Name of Union: Roofer Local 42

Change # : LCNO1-2022ibLoc42

Craft : Roofer Effective Date : 12/07/2022 Last Posted : 12/07/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Roofer	\$30.90		\$8.20	\$8.15	\$0.50	\$0.00	\$1.25	\$0.15	\$0.00	\$0.00	\$49.15	\$64.60
Tradesmen	\$24.72		\$8.20	\$6.51	\$0.00	\$0.00	\$1.25	\$0.06	\$0.00	\$0.00	\$40.74	\$53.10
Apprentice	Percent											
1st period	65.02	\$20.09	\$8.20	\$5.30	\$0.00	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$34.84	\$44.89
2nd period	70.00	\$21.63	\$8.20	\$5.71	\$0.00	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$36.79	\$47.60
3rd period	80.00	\$24.72	\$8.20	\$6.52	\$0.00	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$40.69	\$53.05

**Special Calculation Note :** Other is for Training Fund

**Ratio :**

Employer may employ 1 apprentice for every 2 journeymen in his employment.

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, BROWN, BUTLER, CLERMONT, HAMILTON, PIKE, WARREN

**Special Jurisdictional Note :**

**Details :**

Any Tradesman Worker completing 2,000 hours in (2) years may move to Journeyman status by utilizing the Training Yard to improve their skills. Tradesman Workers will be tested at these yards to determine their competency for Journeyman status. Tradesman Workers must schedule and successfully complete the industry test battery in order to gain journeyman status.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Sheet Metal Local 24 (Dayton)

Change # : LCN01-2023ibLoc24(Day)

Craft : Sheet Metal Worker Effective Date : 06/07/2023 Last Posted : 06/07/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Sheet Metal Worker	\$31.23		\$9.64	\$15.10	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$57.02	\$72.63
<b>Apprentice</b>	<b>Percent</b>											
Apprentice												
5th Year B	85.00	\$26.55	\$9.40	\$11.47	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.47	\$61.74
5th Year A	80.00	\$24.98	\$9.31	\$10.28	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.62	\$58.12
4th Year B	75.00	\$23.42	\$9.23	\$9.07	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.77	\$54.48
4th Year A	70.00	\$21.86	\$9.15	\$7.85	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.91	\$50.84
3rd year B	65.00	\$20.30	\$9.06	\$6.65	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.06	\$47.21
3rd Year A	60.00	\$18.74	\$8.98	\$5.44	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.21	\$43.58
2 Year B	57.52	\$17.96	\$8.94	\$4.84	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.79	\$41.78
2 Year A	55.00	\$17.18	\$8.90	\$4.23	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.36	\$39.94
Probationary 1 Year	52.50	\$16.40	\$8.86	\$3.63	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.94	\$38.13

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 Journeyman to 1 Apprentice then,  
1 Apprentice for every 2 Journeymen thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ALLEN, AUGLAIZE, BUTLER, CHAMPAIGN,  
CLARK, CLINTON, DARKE, GREENE, HARDIN,  
LOGAN, MERCER, MIAMI, MONTGOMERY,  
PREBLE, SHELBY, VAN WERT, WARREN,  
WYANDOT

**Special Jurisdictional Note :**

**Details :**



# Prevailing Wage Rate Skilled Crafts

Name of Union: Sprinkler Fitter Local 669

Change # : LCN01-2022sksLoc669

Craft : Sprinkler Fitter Effective Date : 04/06/2022 Last Posted : 04/06/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Sprinkler Fitter	\$43.75		\$10.99	\$7.10	\$0.52	\$0.00	\$5.12	\$0.00	\$0.00	\$0.00	\$67.48	\$89.35
Apprentice Indentured after April 1, 2013	Percent											
CLASS 1	45.00	\$19.69	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.06	\$37.90
CLASS 2	50.02	\$21.88	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.25	\$41.20
CLASS 3	54.43	\$23.81	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$43.57	\$55.48
CLASS 4	59.43	\$26.00	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$45.76	\$58.76
CLASS 5	64.43	\$28.19	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$48.20	\$62.29
CLASS 6	69.43	\$30.38	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$50.39	\$65.57
CLASS 7	74.43	\$32.56	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$52.57	\$68.85
CLASS 8	79.42	\$34.75	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$54.76	\$72.13
CLASS 9	84.43	\$36.94	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$56.95	\$75.42
CLASS 10	89.44	\$39.13	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$59.14	\$78.70

**Special Calculation Note :**

**Ratio :**

1 Journeyman to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW,

MUSKINGUM, NOBLE, OTTAWA, PAULDING,  
PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE,  
PUTNAM, RICHLAND, ROSS, SANDUSKY,  
SCIOTO, SENECA, SHELBY, STARK, SUMMIT,  
TRUMBULL, TUSCARAWAS, UNION, VAN WERT,  
VINTON, WARREN, WASHINGTON, WAYNE,  
WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

Sprinkler Fitter work shall consist of the installation, dismantling, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes and hose connections to sprinkler systems used in connection with sprinkler and alarm systems. Also all tanks and pumps connected thereto, also included shall be CO-2 and Cardox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 1  
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 1 4 wheel service, dump, and batch trucks; drivers on tandems; truck sweepers (not to include power sweepers & scrubbers)	\$31.24		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.39	\$64.01
Apprentice	Percent											
First 6 months	80.00	\$24.99	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.14	\$54.64
7-12 months	85.00	\$26.55	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.70	\$56.98
13-18 months	90.00	\$28.12	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.27	\$59.32
19-24 months	95.00	\$29.68	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.83	\$61.67
25-30 months	100.00	\$31.24	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.39	\$64.01

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK,

CLERMONT, CLINTON, COLUMBIANA,  
COSHOCTON, CRAWFORD, DARKE, DEFIANCE,  
DELAWARE, ERIE, FAIRFIELD, FAYETTE,  
FRANKLIN, FULTON, GALLIA, GREENE,  
GUERNSEY, HAMILTON, HANCOCK, HARDIN,  
HARRISON, HENRY, HIGHLAND, HOCKING,  
HOLMES, HURON, JACKSON, JEFFERSON,  
KNOX, LAWRENCE, LICKING, LOGAN, LORAIN,  
LUCAS, MADISON, MAHONING, MARION,  
MEDINA, MEIGS, MERCER, MIAMI, MONROE,  
MONTGOMERY, MORGAN, MORROW,  
MUSKINGUM, NOBLE, OTTAWA, PAULDING,  
PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE,  
PUTNAM, RICHLAND, ROSS, SANDUSKY,  
SCIOTO, SENECA, SHELBY, STARK, SUMMIT,  
TRUMBULL, TUSCARAWAS, UNION, VAN WERT,  
VINTON, WARREN, WASHINGTON, WAYNE,  
WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Truck Driver Bldg & Hwy Class 2  
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHwy

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 2 Tractor Trailer-Semi Tractor Trucks; Pole Trailers; Ready Mix Trucks; Fuel Trucks; 5 Axle & Over; Belly Dumps; Low boys - Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation; Truck Mechanics (when needed)	\$31.66		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.64
Apprentice	Percent											
First 6 months	80.00	\$25.33	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.48	\$55.14
7-12 months	85.00	\$26.91	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.06	\$57.52
13-18 months	90.00	\$28.49	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.64	\$59.89
19-24 months	95.00	\$30.08	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.23	\$62.27
25-30 months	100.00	\$31.66	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.81	\$64.64

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON,

KNOX, LAWRENCE, LICKING, LOGAN, LORAIN,  
LUCAS, MADISON, MAHONING, MARION,  
MEDINA, MEIGS, MERCER, MIAMI, MONROE,  
MONTGOMERY, MORGAN, MORROW,  
MUSKINGUM, NOBLE, OTTAWA, PAULDING,  
PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE,  
PUTNAM, RICHLAND, ROSS, SANDUSKY,  
SCIOTO, SENECA, SHELBY, STARK, SUMMIT,  
TRUMBULL, TUSCARAWAS, UNION, VAN WERT,  
VINTON, WARREN, WASHINGTON, WAYNE,  
WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate

## Skilled Crafts

Name of Union: Truck Driver Bldg & HevHwy Class 3  
 Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCN01-2023ibBldgHevHwy3

Craft : Truck Driver Effective Date : 05/01/2023 Last Posted : 04/26/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 3 Articulated Dump Trucks; Ridge-Frame Rock Trucks; Distributor Trucks)	\$32.66		\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.81	\$66.14
Apprentice	Percent											
First 6 months	80.00	\$26.13	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.28	\$56.34
7-12 months	85.00	\$27.76	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.91	\$58.79
13-18 months	90.00	\$29.39	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.54	\$61.24
19-24 months	95.00	\$31.03	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.18	\$63.69
25-30 months	100.00	\$32.66	\$7.75	\$9.20	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.81	\$66.14

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE,

GUERNSEY, HAMILTON, HANCOCK, HARDIN,  
HARRISON, HENRY, HIGHLAND, HOCKING,  
HOLMES, HURON, JACKSON, JEFFERSON,  
KNOX, LAWRENCE, LICKING, LOGAN, LORAIN,  
LUCAS, MADISON, MAHONING, MARION,  
MEDINA, MEIGS, MERCER, MIAMI, MONROE,  
MONTGOMERY, MORGAN, MORROW,  
MUSKINGUM, NOBLE, OTTAWA, PAULDING,  
PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE,  
PUTNAM, RICHLAND, ROSS, SANDUSKY,  
SCIOTO, SENECA, SHELBY, STARK, SUMMIT,  
TRUMBULL, TUSCARAWAS, UNION, VAN WERT,  
VINTON, WARREN, WASHINGTON, WAYNE,  
WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**



***SECTION M***

***SPECIAL PROVISIONS/TECHNICAL  
SPECIFICATIONS***

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

The 2023 Ohio Department of Transportation Construction and Material Specifications and the Supplemental Specifications shall govern this project unless stated otherwise by the Warren County Engineer, herein referred to as “Engineer”, “Project Engineer” and “County Engineer”.

**Operations Schedule**

The Contractor shall advise and coordinate all work with the Engineer. A detailed schedule of operations shall be furnished by the Contractor to the Engineer and shall list the order of operations and the time frame for the completion of each item of work. The Engineer and the Owner prior to the beginning of the work shall approve the schedule of operations. Changes to said schedule are to be issued in writing and approved by the Engineer before operations are changed or rescheduled. The Contractor shall schedule operations so that the improved areas have had sufficient time to cure, set and/or harden before the area is opened to traffic or use. The Contractor shall be responsible for the immediate repair of the improved area if any damage is done by traffic. The Contractor shall also be responsible for the immediate rectification of problems created in areas outside of the improved areas attributable to the failure of the improved area, i.e., the tracking of materials into unimproved areas.

**Bid Proposal**

The Emmons Road Drilled Pier Wall, the Liberty-Keuter Road Drilled Pier Wall, and the Olive Branch Road Drilled Pier Wall will be awarded to one Bidder based on the total bid price. The Bidder shall furnish unit price bids for all pier walls solely for invoicing purposes.

**Preconstruction Meeting**

Prior to the commencement of the construction activities, the Warren County Engineer will arrange a meeting between the Contractor, the Ohio Scenic Rivers Regional Manager, Turtlecreek Township and the Warren County Engineer. The time, date and location of said meeting will be determined after the awarding of the contract, and all parties will be notified by the Warren County Engineer. At the preconstruction meeting the Contractor shall submit to the Project Manager a construction schedule, list of subcontractors, and list of suppliers.

**Project Start Date**

The Contractor shall begin the construction once a written notice-to-proceed has been given by the Board of Warren County Commissioners and a preconstruction meeting has been held.

**Completion Time**

All work for the Emmons Road Pier Wall shall be completed within 4 weeks after the start of construction. All work for the Liberty-Keuter Road Pier Wall shall be completed within 4 weeks after the start of construction. All work for the Olive Branch Road Pier Wall shall be completed within 4 weeks after the start of construction. All work for all three pier walls shall be completed by October 25, 2024. Work on the pier walls shall begin after the written notice-to-proceed has

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
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been issued by the Board of Warren County Commissioners and a preconstruction meeting has been held. Liquidated damages for non-completion beyond the specified duration of construction for a specific pier wall and/or October 25, 2024 shall follow the ODOT CMS Section 108.07. Once work has started it shall be expected that work will be performed every work day on the project in an expeditious manner until the project is complete unless of inclement weather.

**Working Restrictions**

No work shall be done between 5:00 p.m Friday and 7:00 a.m. Monday or during holidays. In addition, night work of any type shall be strictly prohibited.

**Payment of Work**

Contractor Estimates shall not be submitted more than once a month to the County Engineer for work included in the Contract between the County Commissioners and the Contractor.

**Retainage and Affidavits**

The contractor shall provide the County Engineer with affidavits stating that all subcontractors and suppliers for this project have been paid in full in accordance with Item 109. A percentage of the original contract bid amount shall be retained on this project. Until 50% of the original contract has been performed, 8% of the amount of work performed will be retained. Once 50% of the contract has been performed and thereafter, a total of 4% of the original contract bid amount will be retained. The entire retainage will be released to the Contractor after the final inspection has been performed, after the County Engineer has accepted the construction and after all affidavits have been submitted to the County Engineer by the Contractor.

**Change Orders**

No change orders involving performance or nonperformance contract quantities of project materials shall be processed without direct approval by the Warren County Engineer.

**Storage of Construction Materials**

The Contractor shall obtain prior approval of the Owner and/or Engineer for the locations to be used for the temporary storage of construction materials, tools, and/or machinery. All such materials, tools, and machinery shall be neatly and compactly piled in such a manner as to cause the least inconvenience to the property owners and to traffic. Under no circumstances shall existing drainage courses be blocked or water hydrants, valves, or meter pits covered. Storage of any fuel or toxic/hazardous materials within the 100 year floodplain of the Little Miami River is prohibited.

**Protection of Areas Outside of Work Limits**

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

The work limits for the Emmons Road portion of this project shall be confined to the existing 60 foot right-of-way of Emmons Road shown on sheet 1 in the Emmons Road plans. The work limits for the Liberty-Keuter Road portion of this project shall be confined to the existing 40 foot right-of-way of Liberty-Keuter Road shown on sheet 1 in the Liberty-Keuter Road plans. The work limits for the Olive Branch portion of this project shall be confined to the existing 60 foot right-of-way of Olive Branch Road shown on sheet 2 in the Olive Branch Road plans. The Contractor shall be responsible for the protection of areas outside of the designated work limits, but which may be adjacent to those work limits. This will include those areas used by construction traffic for access to and from the work areas. Where the Engineer determines that the Contractor's operations have been responsible for damage to areas outside of the work limits, the Contractor shall be responsible for the repair of the area subject to the approval of the Engineer. No additional compensation will be due to the Contractor for any repair of these areas.

**Debris Removal**

The Contractor will be responsible for removal from the site of all construction debris material. All debris material shall be disposed of in a proper manner and shall be as directed by any applicable local, state or federal regulations.

**Utility Notification**

The Contractor shall notify at least 48 hours before breaking ground all public and/or private service corporation having wires, poles, conduits, manholes, or other structures that may be affected by the construction on this project, including all structures which are affected and not shown on the plans. Owners of underground utilities, which are members of OUPS, can be notified by calling 1-800-362-2764. Non-member underground utility owners must be called directly.

**Utility Adjustments**

The Contractor shall adjust to proposed grade all existing utility facilities, i.e. manholes, catch basins, valves, boxes, etc., prior to the commencement of paving operation. This shall include utility facilities, not shown on the plan, which may be found to be located within the pavement area. Work performed on the utility facilities shall be in strict accordance with the specifications of the applicable utility owner and shall be performed under the direction, supervision and inspection of said owner.

**Existing Pipe**

The location, size, type and depth of all existing pipe are shown as according to the best information. The Engineer will not be responsible for any variations found during construction. The Contractor shall conduct his operations so as to maintain at all times storm water flows through existing facilities.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

**Testing of Construction Materials**

The Engineer may select a testing firm for this project. The Engineer will notify the Contractor of the selected firm during the pre-construction meeting. The Contractor shall be responsible for the scheduling of all testing as per the general testing requirements listed below or as modified by the Engineer. The Engineer shall be responsible for the costs incurred in the testing of the construction materials both on site and at the plant. However, the Contractor shall note that he will be responsible for any and all costs incurred by the scheduling and/or rescheduling of the testing firm's activities by the Contractor and the subsequent delay and/or cancellation of said activities due to the delay and/or cancellation of the scheduled construction by the Contractor.

**Description of Work**

The work to be done consists of furnishing all labor, tools, equipment and materials for the construction of drilled piers as well as for the paving, striping, and guardrail on Emmons Road, Liberty-Keuter Road, and Olive Branch Road according to the plans and specifications.

Emmons Road (TR 93) - located near 5103 Emmons Road. This project consists of constructing 30" Diameter Reinforced Drilled Piers, 30" Diameter Unreinforced Drilled Piers, Cast-In-Place Concrete Lagging, rehabilitating the Existing Stone Culvert with Gunite, and placing Type 5 Guardrail.

Liberty-Keuter Road (TR 95) – located near 1204-1236 Liberty-Keuter Road. This project consists of constructing 30" Diameter Reinforced Drilled Piers, 30" Diameter Unreinforced Drilled Piers, and placing Type 5 Guardrail without blockouts.

Olive Branch Road (CR 217) – located between address 5612 and 5628 Olive Branch Road. This project consists of constructing 24" Diameter Reinforced Drilled Piers, 30" Diameter Unreinforced Drilled Piers, replacing the Existing 30" Conduit, and placing Type 5 Guardrail.

**Little Miami River Work Coordination**

The Contractor shall notify the Ohio Department of Natural Resources SW Ohio Scenic Rivers Regional Manager seven days prior to performing any work near the Little Miami River. Contact information is:

SW Ohio Scenic Rivers Regional Manager  
Aaron Rourke  
1750 Osborn Road  
Wilmington, OH 45177  
937-382-1096 (Office)  
614-230-8534 (Cell)

The SW Ohio Scenic Rivers Regional Manager shall conduct a final inspection before completion of the project.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
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**Item 201 - Clearing and Grubbing**

This work shall consist of clearing, grubbing, scalping, removal of trees and stumps, and removing and disposing of all vegetation and debris within the limits of the existing right-of-way as deemed necessary by the Engineer for the construction of the drilled pier wall, except such objects as are to remain or are to be removed in accordance with other sections of these specifications. Clearing, grubbing, and tree trimming and tree removal shall be kept to a minimum. There is an 18" tree above the headwall at the outlet of the Emmons Road culvert that is to be removed. Payment for the work listed above shall be included in the Lump Sum bid price for Item 201 Clearing and Grubbing.

**Item 202 – Removals**

This work shall consist of the removal, wholly or in part, and satisfactory disposal of all buildings, fences, guardrails, structures, old pavements, abandoned pipe lines, storage tanks, septic tanks, privy vaults, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed of under other items in the contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

**Item 202 – Structure Removed, As Per Proposal Note**

This work shall consist of the removal of the existing gabion baskets located on Olive Branch Road within the limits of the proposed drilled pier wall. Payment for the work listed above, including any equipment, materials, and labor needed to perform the work, shall be included in the lump sum bid for Item 202 Structure Removed, As Per Proposal Note.

**Item 203 - Excavation**

The damaged existing asphalt pavement shall be removed as directed by the Engineer. The locations and depth of the excavations will be determined by the Engineer. The Contractor shall saw cut the pavement areas before it is removed to obtain a uniform edge. The cost of saw cutting, removing the existing asphalt pavement, and removing the base material shall be included in the unit price bid per CY for Item 203 Excavation.

**Item 304 - Aggregate Base**

All Item 304 Aggregate Base work shall be as directed by the Engineer. Where areas of unsuitable subgrade material are found, the unsuitable material shall be removed and Item 304 Aggregate Base shall be placed and compacted in the excavated areas. The removal of the material will be to the limits determined in the field by the Engineer, and the limits of the removal will be measured by the Engineer in order to determine quantities for payment. The Contractor shall be responsible for scheduling his operations with the Engineer so that the proper

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
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measurements may be obtained for the calculations. Item 304 may also be used for roadway shoulder material as directed by the Engineer.

The Contractor shall place Item 304 Aggregate Base in the excavated areas where the unsuitable subgrade material was located, as directed by the Engineer. The depth shall be determined in the field by the Engineer. Item 304 Aggregate Base shall be compacted in compliance with section 304.05 of the ODOT Construction and Material Specifications.

Payment for the removal of unsuitable subgrade material and placement/compaction of Item 304 Aggregate Base shall be included in the price bid per CY for Item 304 Aggregate Base.

**Asphalt Concrete**

All material furnished and work performed shall conform to the 2023 Ohio Department of Transportation Construction and Material Specifications (ODOT CMS) for Item 301 Asphalt Concrete Base and Item 441 Asphalt Concrete Surface Course. All asphalt concrete work shall be as directed by the Engineer.

The Contractor shall supply the County Engineer with a weigh ticket for each load of material placed. Periodic asphalt samples will be obtained for test purposes and an independent testing laboratory will perform tests.

**No material shall be placed upon collected water. Asphalt surfaces shall be clear of dirt and debris prior to the placing of each subsequent lift. The Contractor shall adhere to the judgment of the Warren County Engineer's designated representatives.**

The Contractor's attention is directed to Section 401.14 of the ODOT Specifications and he is hereby instructed that requirements for preparation of asphalt pavement to be resurfaced will be adhered to, and cost of any and all cleaning is to be included in the unit bid price for Item 301 and Item 441.

Item 301 Asphalt Concrete Base shall be placed on top of the subgrade in two-5 inch lifts in the excavated areas. Item 301 Asphalt Concrete Base shall be placed at locations determined by the Engineer. Item 441 Asphalt Surface Course shall be placed on top of Item 301 and the existing asphalt in one to two inch leveling course as directed by the Engineer.

Item 407 Tack Coat shall be applied on top of the existing pavement or Item 301 Asphalt Concrete Base at a rate of 0.10 gallon per square yard as directed by the Warren County Engineer. The application of Item 407 Tack Coat shall be applied to the entire width of the asphalt base pavement immediately prior to paving the surface course. The cost of Item 407 Tack Coat shall be included in the cost per ton bid for Item 441 Asphalt Concrete Surface Course.

**Butt Joints** - A butt joint shall be constructed by grinding/planing existing pavement at each start/stop location. All grinding/ planing shall be in accordance with Item 254 Pavement Planing,

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
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Bituminous. The butt joints shall be constructed by grinding/planing the existing pavement for a length of 6 feet, varying in depth from 2" to 0". The newly formed joint shall be properly installed so as to provide a smooth transition and shall also be properly sealed. The cost of constructing each butt joint by pavement planing/grinding shall be included and paid for in Item 441 Asphalt Concrete Surface Course.

**Reinforcing Steel Alternates**

The plans detail the reinforced drilled piers with Steel H-Piles (Alternate 1) and with Epoxy Coated Reinforcing (Alternate 2) on sheets 2 or 3. The Engineer will accept either Alternate selected by the Contractor. All reinforcing steel shall be paid for in the unit price bid per FT for Item 524 Drilled Shafts, 24" or 30" Diameter, Reinforced.

**Item 524 – Drilled Shafts, 30" Diameter, Reinforced (Emmons Road and Liberty-Keuter Road)**

**Measurement:**

Measurement for the piers will be the total number of lineal feet from the bottom of the drilled shaft to the top of the finished concrete pier. Payment will be made at the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Reinforced which will include full compensation for all forms, mobilizing and removing drilling equipment, satisfactory removal of drilling spoils, furnishing of liners and casings as required, concrete, reinforcing H-piles or steel cages, miscellaneous hardware, and all other incidentals necessary to complete this item.

**Pier Log:**

Each pier shall be numbered between S1 to S15 in the field for logging purposes for Emmons Road. Each pier shall be numbered between S1 to S33 in the field for logging purposes for Liberty-Keuter Road. The numbers shall be permanently marked onto the top of each pier. The Contractor shall keep a log which includes the total depth of each pier. A copy of the log shall be provided to the County Engineer at the completion of the project. Measurement for the piers will be the total number of linear feet from the bottom of the drilled shaft to the top of the finished concrete pier.

**Location of Drilled Piers:**

All reinforced drilled piers shall be spaced 6'-3" from centerline of pier to centerline of pier as shown on the plans. The centerline of the piers shall be laterally offset off the edge of pavement such that the back edge of the structural piers is per the plan requirements from edge of pavement.

**Reinforcing Steel:**

If using steel H-piles for reinforcement they shall meet all the requirements of Item 507.07 Steel H-Piles, Grade 50. If using epoxy coated reinforcing for reinforcement it shall meet all the requirements of Item 509 Epoxy Coated Reinforcing, except the welding of ties to the longitudinal bars will not be permitted. Minimum yield strength of the epoxy coated reinforcing steel shall be 60,000 psi. Splices for epoxy coated reinforcing shall be lapped not less than 50"



**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
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or welded to develop at least 125% of yield strength. No more than 50% of the tensile epoxy coated reinforcement in any one pier may be spliced. Epoxy coated reinforcing cages shall be securely and rigidly tied and accurately located in the forms and drilled shafts so as to maintain the clearance shown on the plans.

**Concrete:**

Concrete shall meet all requirements of Item 511 – Concrete for Structures. Concrete shall be Class QC 1 (28 day compressive strength = 4,000 psi). The aggregate shall have a maximum size of one inch (such as AASHTO #67 stone). The required slump is six (6) inches, plus or minus one-half inch. The above listed specifications for concrete supersede the specifications listed in the plan set referring to concrete and a maximum slump equal to four (4) inches. The maximum water to cement ratio shall be 0.50 if concrete is placed under water. The requirements of adding 10 percent more cement to the concrete mix shall be waived. Only a minimal vibratory effort is necessary. All concrete shall be placed with mechanical vibration. **Special care shall be taken not to over-vibrate the drilled shaft concrete. No horizontal construction joints will be permitted without the approval of the County Engineer.**

**Drilling:**

The center of the shaft shall be located within one inch (1") of plan location, and the shaft shall be plumb within one percent (1%) of its length. Any shafts varying by more than the above tolerances shall be corrected to the satisfaction of the County Engineer. Drilling shall extend through any materials which may be encountered, and shall penetrate a minimum depth, as detailed in the plans, into layered shale and/or limestone bedrock. Bottom elevation of piers shall be determined by the County Engineer. Temporary steel liners or casings shall be provided where necessary and as directed by the County Engineer to prevent caving or slipping of the shaft walls. Liners shall be withdrawn as the concrete is being placed, maintaining sufficient head of concrete within the liner to prevent the extraneous material from falling in from the sides of the shaft and mixing with the concrete. Drilling into the shale and limestone must be done with a core roller or other bit approved by the County Engineer, so that the sides of the shaft will be left smooth and firm without disturbed seams of rock. **All drilling spoils shall be hauled off-site.** Interfering Objects - Any objects such as fence, signs, brush, tree limbs, etc., which interfere with the drilling and placement of the Piers, shall be removed by the Contractor as directed by the County Engineer. The cost of removing any interfering objects, which are not designated as a separate removal, shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Reinforced.

**Forms:**

Forms shall be truly cylindrical in shape without any bulges or depressions, and be plumb and securely braced so that the centerline of the top of the pier is within one inch (1") of the plan location. The top of the form shall be cut to the elevation of the top of the pier so the concrete can be finished smooth and level. Sonotube, or an equal, with an interior diameter matching the diameter of the drilled shaft, shall be used to form the top of the shaft up to the top of the pier. The cost of the sonotube shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Reinforced.

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**Concrete Placement:**

The concrete for the drilled shafts shall be placed as per Item 511. The concrete placement operation shall be continuous from start to finish. The concrete for the bedrock socket shall be placed against the insitu bedrock and shall be placed promptly after the final inspection of the shaft. If practicable, the concrete shall be placed in a clean dry excavation. Care shall be taken to ensure that concrete is not being placed in moving water. The concrete can be placed in a dry drilled shaft excavation by the free fall method provided the concrete falls to its final position through air without striking the sides of the hole, the reinforcing steel, or any other obstruction. The free fall method allows the concrete to be dropped from the top through a centering chute to the concrete's final position. If the engineer determines that dewatering is not practicable, the contractor will be given permission to place the concrete under water. To place concrete under water, the drilled shaft excavation shall be filled with water to such a depth that all water motion ceases. The concrete shall then be placed by means of a concrete pump. The concrete pump pipe shall have a diameter that is not less than 4 inches. The concrete pump equipment shall be so arranged that no vibrations result which might damage fresh concrete. Pipes carrying concrete from the pump to the shaft should be arranged with a minimum number of bends. The pipe used to convey the concrete to the bottom of the drilled shaft excavation shall be anchored to the steel casing to prevent the pipe from undulating during the initial placement of the concrete. The pumping equipment shall be suitable in kind and adequate in capacity for the work required. The use of aluminum pipe as a conveyance for the concrete will not be permitted. An adequate quantity of grout, mortar or concrete with coarse aggregate omitted shall be pumped through the equipment ahead of the specification concrete to provide lubrication to the pumping system. The concrete used for lubrication shall not be placed in the shaft. The lubrication process will not be repeated as long as the pumping operations are continuous. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced, in order to prevent the contamination of the concrete placed initially at the bottom of the shaft. The outlet end of the pumping pipe shall be sealed with a diaphragm or plug that is flushed out when the hydrostatic pressure from the column of concrete exceeds that of the water in the shaft. The initial rate of concrete placement must be carefully controlled so as not to lift or displace the reinforcing steel. The conveying system shall be water tight and the outlet end shall always remain well below the top of the freshly placed concrete. The preferred concrete placement procedure is to maintain the outlet end of the pumping system at approximately 15 feet below the top of the fresh concrete. When the concrete reaches the top of the drilled shaft column all laitance shall be removed. The cost of dewatering or adding water and concrete pump shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Reinforced.

**Item 524 – Drilled Shafts, 24" Diameter, Reinforced (Olive Branch Road)**

**Measurement:**

Measurement for the piers will be the total number of lineal feet from the bottom of the drilled shaft to the top of the finished concrete pier. Payment will be made at the unit price bid per FT of Item 524 Drilled Shafts, 24" Diameter, Reinforced which will include full compensation for all forms, mobilizing and removing drilling equipment, satisfactory removal of drilling spoils,

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furnishing of liners and casings as required, concrete, reinforcing H-piles or steel cages, miscellaneous hardware, and all other incidentals necessary to complete this item.

**Pier Log:**

Each pier shall be numbered between S1 to S20 in the field for logging purposes. The numbers shall be permanently marked onto the top of each pier. The Contractor shall keep a log which includes the total depth of each pier. A copy of the log shall be provided to the County Engineer at the completion of the project. Measurement for the piers will be the total number of linear feet from the bottom of the drilled shaft to the top of the finished concrete pier.

**Location of Drilled Piers:**

All reinforced drilled piers shall be spaced 6'-3" from centerline of pier to centerline of pier as shown on the plans. The centerline of the piers shall be laterally offset off the edge of pavement such that the back edge of the structural piers is per the plan requirements from edge of pavement.

**Reinforcing Steel:**

If using steel H-piles for reinforcement they shall meet all the requirements of Item 507.07 Steel H-Piles, Grade 50. If using epoxy coated reinforcing for reinforcement it shall meet all the requirements of Item 509 Epoxy Coated Reinforcing, except the welding of ties to the longitudinal bars will not be permitted. Minimum yield strength of the epoxy coated reinforcing steel shall be 60,000 psi. Splices for epoxy coated reinforcing shall be lapped not less than 50" or welded to develop at least 125% of yield strength. No more than 50% of the tensile epoxy coated reinforcement in any one pier may be spliced. Epoxy coated reinforcing cages shall be securely and rigidly tied and accurately located in the forms and drilled shafts so as to maintain the clearance shown on the plans.

**Concrete:**

Concrete shall meet all requirements of Item 511 – Concrete for Structures. Concrete shall be Class QC 1 (28 day compressive strength = 4,000 psi). The aggregate shall have a maximum size of one inch (such as AASHTO #67 stone). The required slump is six (6) inches, plus or minus one-half inch. The above listed specifications for concrete supersede the specifications listed in the plan set referring to concrete and a maximum slump equal to four (4) inches. The maximum water to cement ratio shall be 0.50 if concrete is placed under water. The requirements of adding 10 percent more cement to the concrete mix shall be waived. Only a minimal vibratory effort is necessary. All concrete shall be placed with mechanical vibration. **Special care shall be taken not to over-vibrate the drilled shaft concrete. No horizontal construction joints will be permitted without the approval of the County Engineer.**

**Drilling:**

The center of the shaft shall be located within one inch (1") of plan location, and the shaft shall be plumb within one percent (1%) of its length. Any shafts varying by more than the above tolerances shall be corrected to the satisfaction of the County Engineer. Drilling shall extend through any materials which may be encountered, and shall penetrate a minimum depth, as detailed in the plans, into layered shale and/or limestone bedrock. Bottom elevation of piers shall

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be determined by the County Engineer. Temporary steel liners or casings shall be provided where necessary and as directed by the County Engineer to prevent caving or slipping of the shaft walls. Liners shall be withdrawn as the concrete is being placed, maintaining sufficient head of concrete within the liner to prevent the extraneous material from falling in from the sides of the shaft and mixing with the concrete. Drilling into the shale and limestone must be done with a core roller or other bit approved by the County Engineer, so that the sides of the shaft will be left smooth and firm without disturbed seams of rock. **All drilling spoils shall be hauled off-site.** Interfering Objects - Any objects such as fence, signs, brush, tree limbs, etc., which interfere with the drilling and placement of the Piers, shall be removed by the Contractor as directed by the County Engineer. The cost of removing any interfering objects, which are not designated as a separate removal, shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 24" Diameter, Reinforced.

**Forms:**

Forms shall be truly cylindrical in shape without any bulges or depressions, and be plumb and securely braced so that the centerline of the top of the pier is within one inch (1") of the plan location. The top of the form shall be cut to the elevation of the top of the pier so the concrete can be finished smooth and level. Sonotube, or an equal, with an interior diameter matching the diameter of the drilled shaft, shall be used to form the top of the shaft up to the top of the pier. The cost of the sonotube shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 24" Diameter, Reinforced.

**Concrete Placement:**

The concrete for the drilled shafts shall be placed as per Item 511. The concrete placement operation shall be continuous from start to finish. The concrete for the bedrock socket shall be placed against the insitu bedrock and shall be placed promptly after the final inspection of the shaft. If practicable, the concrete shall be placed in a clean dry excavation. Care shall be taken to ensure that concrete is not being placed in moving water. The concrete can be placed in a dry drilled shaft excavation by the free fall method provided the concrete falls to its final position through air without striking the sides of the hole, the reinforcing steel, or any other obstruction. The free fall method allows the concrete to be dropped from the top through a centering chute to the concrete's final position. If the engineer determines that dewatering is not practicable, the contractor will be given permission to place the concrete under water. To place concrete under water, the drilled shaft excavation shall be filled with water to such a depth that all water motion ceases. The concrete shall then be placed by means of a concrete pump. The concrete pump pipe shall have a diameter that is not less than 4 inches. The concrete pump equipment shall be so arranged that no vibrations result which might damage fresh concrete. Pipes carrying concrete from the pump to the shaft should be arranged with a minimum number of bends. The pipe used to convey the concrete to the bottom of the drilled shaft excavation shall be anchored to the steel casing to prevent the pipe from undulating during the initial placement of the concrete. The pumping equipment shall be suitable in kind and adequate in capacity for the work required. The use of aluminum pipe as a conveyance for the concrete will not be permitted. An adequate quantity of grout, mortar or concrete with coarse aggregate omitted shall be pumped through the equipment ahead of the specification concrete to provide lubrication to the pumping system. The concrete used for lubrication shall not be placed in the shaft. The lubrication process will not be

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repeated as long as the pumping operations are continuous. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced, in order to prevent the contamination of the concrete placed initially at the bottom of the shaft. The outlet end of the pumping pipe shall be sealed with a diaphragm or plug that is flushed out when the hydrostatic pressure from the column of concrete exceeds that of the water in the shaft. The initial rate of concrete placement must be carefully controlled so as not to lift or displace the reinforcing steel. The conveying system shall be water tight and the outlet end shall always remain well below the top of the freshly placed concrete. The preferred concrete placement procedure is to maintain the outlet end of the pumping system at approximately 15 feet below the top of the fresh concrete. When the concrete reaches the top of the drilled shaft column all laitance shall be removed. The cost of dewatering or adding water and concrete pump shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 24" Diameter, Reinforced.

**Item 524 – Drilled Shafts, 30" Diameter, Unreinforced (Emmons Road, Liberty-Keuter Road and Olive Branch Road)**

**Measurement:**

Measurement for the piers will be the total number of lineal feet from the bottom of the drilled shaft to the top of the finished concrete pier. Payment will be made at the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Unreinforced which will include full compensation for all forms, mobilizing and removing drilling equipment, satisfactory removal of drilling spoils, furnishing of liners and casings as required, concrete, miscellaneous hardware, and all other incidentals necessary to complete this item.

**Pier Log:**

Each pier shall be numbered between P1 to P26 in the field for logging purposes for Emmons Road. Each pier shall be numbered between P1 to P64 in the field for logging purposes for Liberty-Keuter Road. Each pier shall be numbered between P1 to P38 in the field for logging purposes for Olive Branch Road. The numbers shall be permanently marked onto the top of each pier. The Contractor shall keep a log which includes the total depth of each pier. A copy of the log shall be provided to the County Engineer at the completion of the project. Measurement for the piers will be the total number of linear feet from the bottom of the drilled shaft to the top of the finished concrete pier.

**Location of Drilled Piers:**

All unreinforced drilled piers shall be used as lagging between the reinforced drilled piers as shown on the plans. The centerline of the plug piers shall be laterally offset off the edge of pavement per plan for 30" diameter plug piers.

**Concrete:**

Concrete shall meet all requirements of Item 511 – Concrete for Structures. Concrete shall be Class QC 1 (28 day compressive strength = 2,500 psi). The aggregate shall have a maximum size of one inch (such as AASHTO #67 stone). The required slump is six (6) inches, plus or minus one-half inch. The above listed specifications for concrete supersede the specifications listed in the plan set referring to concrete and a maximum slump equal to four (4) inches. The

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maximum water to cement ratio shall be 0.50 if concrete is placed under water. The requirements of adding 10 percent more cement to the concrete mix shall be waived. Only a minimal vibratory effort is necessary. All concrete shall be placed with mechanical vibration. **Special care shall be taken not to over-vibrate the drilled shaft concrete. No horizontal construction joints will be permitted without the approval of the County Engineer.**

**Drilling:**

The center of the shaft shall be located within one inch (1") of plan location, and the shaft shall be plumb within one percent (1%) of its length. Any shafts varying by more than the above tolerances shall be corrected to the satisfaction of the County Engineer. Drilling shall extend through any materials which may be encountered, as detailed in the plans. Bottom elevation of piers shall be determined by the County Engineer. Temporary steel liners or casings shall be provided where necessary and as directed by the County Engineer to prevent caving or slipping of the shaft walls. Liners shall be withdrawn as the concrete is being placed, maintaining sufficient head of concrete within the liner to prevent the extraneous material from falling in from the sides of the shaft and mixing with the concrete. **All drilling spoils shall be hauled off-site.** Interfering Objects - Any objects such as fence, signs, brush, tree limbs, etc., which interfere with the drilling and placement of the Piers, shall be removed by the Contractor as directed by the County Engineer. The cost of removing any interfering objects, which are not designated as a separate removal, shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Unreinforced.

**Forms:**

Forms shall be truly cylindrical in shape without any bulges or depressions, and be plumb and securely braced so that the centerline of the top of the pier is within one inch (1") of the plan location. The top of the form shall be cut to the elevation of the top of the pier so the concrete can be finished smooth and level. Sonotube, or an equal, with an interior diameter matching the diameter of the drilled shaft, shall be used to form the top of the shaft up to the top of the pier. The cost of the sonotube shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Unreinforced.

**Concrete Placement:**

The concrete for the drilled shafts shall be placed as per Item 511. The concrete placement operation shall be continuous from start to finish. The concrete shall be placed promptly after the final inspection of the shaft. If practicable, the concrete shall be placed in a clean dry excavation. Care shall be taken to ensure that concrete is not being placed in moving water. The concrete can be placed in a dry drilled shaft excavation by the free fall method provided the concrete falls to its final position through air without striking the sides of the hole or any other obstruction. The free fall method allows the concrete to be dropped from the top through a centering chute to the concrete's final position. If the engineer determines that dewatering is not practicable, the contractor will be given permission to place the concrete under water. To place concrete under water, the drilled shaft excavation shall be filled with water to such a depth that all water motion ceases. The concrete shall then be placed by means of a concrete pump. The concrete pump pipe shall have a diameter that is not less than 4 inches. The concrete pump equipment shall be so arranged that no vibrations result which might damage fresh concrete. Pipes carrying concrete

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from the pump to the shaft should be arranged with a minimum number of bends. The pipe used to convey the concrete to the bottom of the drilled shaft excavation shall be anchored to the steel casing to prevent the pipe from undulating during the initial placement of the concrete. The pumping equipment shall be suitable in kind and adequate in capacity for the work required. The use of aluminum pipe as a conveyance for the concrete will not be permitted. An adequate quantity of grout, mortar or concrete with coarse aggregate omitted shall be pumped through the equipment ahead of the specification concrete to provide lubrication to the pumping system. The concrete used for lubrication shall not be placed in the shaft. The lubrication process will not be repeated as long as the pumping operations are continuous. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced, in order to prevent the contamination of the concrete placed initially at the bottom of the shaft. The outlet end of the pumping pipe shall be sealed with a diaphragm or plug that is flushed out when the hydrostatic pressure from the column of concrete exceeds that of the water in the shaft. The conveying system shall be water tight and the outlet end shall always remain well below the top of the freshly placed concrete. When the concrete reaches the top of the drilled shaft column all laitance shall be removed. The cost of dewatering or adding water and concrete pump shall be included in the unit price bid per FT of Item 524 Drilled Shafts, 30" Diameter, Unreinforced.

**Item 601 Rock Channel Protection, Type B with Filter**

The Contractor shall place rock channel protection with filter at the outlet and inlet of the new 30" culvert near Station 12+04 on the Olive Branch Road plans, as directed by the Engineer. Payment for the work listed above shall be included in the bid price per CY for Item 601 Rock Channel Protection, Type B with Filter.

**Item 606 – Guardrail, Type 5**

The Contractor shall install new guardrail approximately from Station 11+20 to Station 13+85 on the Liberty-Keuter Road plans without blockouts. The Contractor shall install new guardrail approximately from Station 11+25 to Station 12+60 on the Olive Branch Road plans. The Contractor shall install new guardrail on both sides of the roadway from approximately from Station 10+00 to Station 11+20 on the west side and from approximately from Station 10+20 to Station 11+70 on the east side Emmons Road plans. The Contractor shall install the new Type 5 guardrail posts, in the front of the structural piers at 6'-3" on center. This work shall conform to the Ohio Department of Transportation's Plan Insert Sheet GR 2.1. Type 5 Guardrail shall also include the placement of reflective material on each new end treatments. Payment for the work listed above shall be included in the price bid per FT for Item 606 Guardrail, Type 5 with and without blackout for Emmons Road, Liberty-Keuter Road and Olive Branch Road.

**Item 611 - Pipe Culverts, Sewers, Drains, and Drainage Structures**

**All work associated with drainage items shall consist of the work as described in Item 611 Pipe Culverts, Sewers, Drains, and Drainage Structures, except as herein modified. The following items will not be required: Installation Plan, Construction Inspection Forms, Performance Inspections and Reports, and Conduit and Drainage Structure Evaluations.**

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This work shall consist of the construction or reconstruction of pipe culverts, sewers and drains hereinafter referred to as Type A, Type B, Type C, Type D, Type E and Type F Conduit. The work shall be in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or established by the Engineer. This work shall include the following: excavating for pipe and foundations for same, including clearing and grubbing and the removal of all materials necessary for placing the pipe except removals listed separately; furnishing and placing granular or concrete bedding and granular backfill as required; constructing and subsequently removing all necessary cofferdams, cribs and sheeting; pumping and dewatering; sealing or banding all pipe joints where required; furnishing and installing all necessary pipe bends and branches of a type at least equal to the conduit of which they become a part; joining to existing and proposed appurtenances as required; performing leakage tests as specified; restoration of disturbed facilities and surfaces; and providing erosion control pads and animal guards on underdrain and farm drain outlets.

**Item 611 – 30” Conduit, Type A, 707.65 (Olive Branch Road)**

The Contractor shall remove the existing 30” culvert near Station 12+04. After plug piers P19 and P20 are constructed the Contractor shall place a new 30” conduit to match the existing conduit slope. After the pier and conduit work is complete the Contractor shall form a 12 inch thick concrete collar around and above the conduit extending from the top of the short plug piers (approx. 98.28 ft) to the top of the structural piers (approx. 102.5 ft.) for the entire width of the opening. The Concrete used in the collar shall be Class QC1 (4,000 psi). The collar shall have a minimum of one 12 inch No. 5 rebar doweled 6 inches vertically into each plug pier and horizontally into each structural pier, as directed by the Engineer. Payment for the work listed above, except for the pipe removal, shall be included in the bid price per FT for Item 611 30” Conduit, Type A (707.65).

**Item 614 - Maintaining Traffic**

Traffic control shall be the sole responsibility of the Contractor. The County of Warren shall be held harmless from liabilities caused by improper traffic control by the Contractor. The contractor shall indemnify Warren County from any and all liabilities due to improper maintenance of traffic. All road construction signs shall also be the responsibility of the Contractor. All traffic control shall conform to the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) as well as the Ohio Department of Transportation Standards at all times.

Any devices that are determined by the Engineer to be substandard shall be repaired to the satisfaction of the Engineer or shall be immediately removed from the site and replaced with acceptable devices. Any temporary traffic control devices that are determined by the Engineer to have become substandard during the course of the project shall be removed from the jobsite and immediately replaced by devices meeting the approval of the Engineer.

The Contractor shall provide and maintain all signs, barricades, labor, flagmen, steel plates, etc. for all work on this project. The Contractor shall notify the Warren County Engineer two (2)



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weeks prior to any road closure. The Contractor shall install the advanced closure signs two (2) weeks prior to any road closure. The Contractor shall provide a minimum of two (2) Type III Barricades on each end of the closed section of each Road. The barricades shall be chain linked together and fixed to the ground or some other object over night.

Methods of maintaining traffic shall conform to the Manual of Uniform Traffic Control Devices and Item 614 of the ODOT Specifications. Payment for the work listed above shall be included in the Lump Sum bid price for Item 614 Maintaining Traffic.

**Detour Route**

Emmons Road, Liberty-Keuter Road, and Olive Branch Road shall each be closed during the entire drilled pier wall project. The detour routes are detailed on the last page of each plan set. Any changes shall be as directed by the Engineer. The payment for all work associated with the road closure and detour shall be included in the Lump Sum bid price for Item 614 Maintaining Traffic.

**Item 623 - Construction Layout Stakes and Surveying**

All centerline of survey and property line monumentation that is disturbed during construction shall be reset by a Professional Surveyor. Payment for the work listed above shall be included in the Lump Sum bid price for Item 623 Construction Layout Stakes.

**Pavement Marking**

All pavement marking material and work shall comply with Item 641 Pavement Marking-General, Item 642 Traffic Paint, Type 1 in the current ODOT Construction and Materials Specifications.

**Item 653 – Topsoil Furnished and Placed**

All applications of topsoil shall be applied as directed by the Engineer. Payment for the application shall be included in the bid price per CY for Item 653 Topsoil Furnished and Placed. The contractor shall submit supporting documentation concerning the applications.

**Item 659 – Seeding and Mulching**

All applications of seeding and mulching shall be applied as directed by the Engineer. Payment for the application shall be included in the bid price per SY for Item 659 Seeding & Mulching. The contractor shall submit supporting documentation concerning the applications.

**Soil Boring Logs**

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The soil boring log for each Road is located at the end of technical specifications as well as on sheet 4 of the construction plan set.

**Item Special – Existing Stone Wall Repair with Gunite (Emmons Road)**

The Contractor shall furnish and apply shotcrete to the existing stone conduit and outfall wall located in the Emmons Road Pier Wall Project. The Contractor shall clean and prep the stone conduit and outfall wall, heavy debris shall be removed and placed along the stream bed. The stone conduit shall be water blasted to remove all remaining dirt and debris. A 2"x2" – 12 gauge galvanized welded wire mesh shall be attached to the stone conduit and outfall wall with self-tapping screws, located on 24 inch centers each way, prior to placing 3 inches of 5,000 psi (28 days) shotcrete for the conduit and 2 inches of 5,000 psi (28 days) shotcrete for the outfall wall. The wire mesh shall be tied to the anchors with 16 gauge annealed tie wire. The freshly placed shotcrete shall be broomed and allowed to naturally cure. The Contractor shall take precautions to keep overspray from entering the stream. All rebound material shall be cleaned up on a daily basis and all debris created as the result of this operation shall be removed and disposed of properly. The 66 inch diameter conduit is approximately 96 foot long while the outfall wall is approximately 370 square feet. Payment for the gunite work listed above and any scaffolding and safety equipment necessary for this work shall be included in the Lump Sum bid price for Item Special Existing Stone Wall Repair with Gunite.

All gunite/shotcrete work shall be completed in strict accordance with the American Concrete Institute's 506 R95 Guide to Shotcrete. The shotcrete mix will be comprised of 1 CF of portland cement type I-II cement mixed thoroughly with 3 cubic feet of ASTM C-33 concrete sand and enhanced with 7 pounds of micro-silica. The dry ingredients shall be pneumatically projected through the shotcrete hose and hydrated with 4.5 gallons of potable water at the nozzle.

National Gunite Contact Information

Tim Martin – National Gunite Midwest Regional Director  
111 Roosevelt Boulevard  
Johnstown, PA 15906  
tmartin@nationalgunite.com  
317-426-2205 (Office)  
317-749-6007 (Cell)

SPECIFICATIONS FOR GUNITE LINING

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**PART I        GENERAL**

**RELATED DOCUMENTS**

The Bid and General Provisions of the Contract Documents, including General and Supplementary Conditions and General Requirements, apply to the work specified in this Section.

**DESCRIPTION OF WORK**

This work consists of the furnishing of all labor, material and equipment required to apply a gunite lining to the existing materials (brick, block, concrete, corrugated steel/brick, invert, etc.) as described in the Technical Specification note and in accordance with these Specifications. The gunite consists of a sulfate-resisting cementitious gunite material containing silica fume.

**PART 2        PRODUCTS**

**GUNITE MATERIALS**

Cement- Portland cement shall conform to ASTM C 1450, Type I-II.

Silica Fume shall conform to ASTM C1 240.

Aggregate- Normal weight aggregates conforming to ASTM C 33, with the combined gradation of coarse and fine aggregates conforming to the following:

Passing 3/8 inch Sieve	100 Percent
Passing No. 4 Sieve	95-100 Percent
Passing No. 8 Sieve	80-100 Percent
Passing No. 16 Sieve	50-85 Percent
Passing No. 30 Sieve	25-60 Percent
Passing No. 50 Sieve	10-30 Percent
Passing No. 100 Sieve	2- 10 Percent

Water - Potable water for mixing

Acceptable Gunite Mixes

1. Available products: Subject to compliance with the requirements, products that may be incorporated into the work include, but are not limited to, the following:

Bulk gunite ingredients mixed on-site meeting the requirements of the specifications subject to the approval of the Engineer or Owner.

King Shotcrete Solutions MS-D1

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With or without Synthetic Fibers or Admixtures

Quikcrete Shotcrete MS

Quikcrete Shotcrete MS – Polyfiber Reinforced

SikaCrete- Gunite-103 Dry Process, machine applied silica fume enhanced cementitious mortar.

2. Admixtures- Admixtures containing calcium chloride or triethanolamine shall not be used. Admixtures used in combination shall be physically and chemically compatible and shall be so certified by the manufacturer. The admixture manufacturer shall provide assistance and advice of the proper use of the admixture. This service shall be provided at no increase in Contract Price.

Air-entraining admixtures shall conform to ASTM C 260

Chemical admixtures shall conform to ASTM C 494

3. Welded Wire Reinforcement – The reinforcement shall be with 2"x2" 12/12 (3" x3" 10/10 alternate) welded smooth wire fabric, galvanized, in conformance with ASTM A185, "Specifications for Welded Steel Wire Fabric for Concrete Reinforcement". The fabric shall be supported by one-fourth inch hook bolts, self tapping screws, or other approved type fasteners set into the stone wall on not more than twenty-four inch centers. Steel, 16-gauge tie wire shall be used to secure the fabric at laps and supports.

### MIX PROPORTIONS

General – Proportions of Gunite ingredients shall be selected by the testing laboratory by trial mixes to produce 28-day compressive strength (ASTM C-42) of moist-cured laboratory samples of 8,000 psi unless otherwise specified, and 1,200 psi flexural strength (ASTM C-78) both values for the dry process of application. Bid prices shall include all costs of determining the mix proportions by testing laboratory.

#### Batching and Mixing

Mixing proportions shall be controlled by weight batching, or by volume batching meeting the requirements of ASTM C 685. If permitted, other volume batching procedures shall be used provided a minimum of one weight batching check is made every four hours for control purposes, to ensure that the specified mixture design is being achieved.

Use batching and mixing equipment capable of proportioning and mixing all ingredients (except water in the case of dry-mix equipment) at a rate that will provide adequate production and with an accuracy that will ensure uniformity of batches. Weighing equipment shall be capable of batching with an accuracy specified in ASTM C94. Volumetric equipment shall be capable of batching with the accuracy specified in ASTM C685.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

**QUALITY ASSURANCE**

Unless otherwise specified or shown, the work of this section shall conform to ACI 506.2 Specifications for Materials, Proportioning, and Application of gunite where applicable. A copy of the qualifications shall be submitted to the Owner and Engineer for their review and approval with the submittal of the bid.

Foreman Qualifications - Foreman of the gunning crew shall have at least twenty years of gunite experience including ten (10) years as a gunite nozzleman.

Nozzleman Qualifications and Duties - The nozzleman must be a Certified Nozzleman by the American Shotcrete Association (ASA)

Contractor Qualifications -The Contractor and/or Subcontractor performing the work must certify that he/she has not less than five (5) years of experience in the application of gunite in rehabilitation projects. The Contractor shall also submit a record of experience and/or references with project name and contact information with his bid indicating 20 projects completed in the last year so that the Owner and Engineer can verify the quality of the work.

Testing Agency Qualifications -The Contractor shall provide the service of a testing laboratory meeting the requirements of ASTM E329. The laboratory shall be normally engaged in testing of concrete materials and concrete. The materials testing laboratory shall make all tests to ensure that the gunite materials and gunite provided meet or exceed all requirements specified. The materials testing laboratory shall be acceptable to the Engineer and the Owner. cause interpretation of test results is required, the tesengineer licensed in the State of O

**SUBMITTALS**

A. Testing Results - Copies of the mix proportions and compressive strength test results shall be submitted to the Engineer and the Owner two weeks prior to the start of the gunite being used on site.

**PART 3 EXECUTION**

**3.01 DELIVERY AND STORAGE OF MATERIAL/EQUIPMENT**

Cement shall be stored in weather-tight enclosures and protected against dampness, contamination, and warehouse set.

Aggregate

Stockpile to prevent segregation or contamination with other materials or other sizes of aggregates.

Use only one supply source for each aggregate stockpile.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

Admixtures

Store to prevent contamination, evaporation, deterioration and damage to packaging or containers.

Protect liquid admixture from freezing and from harmful temperature ranges.

Agitate emulsions prior to use.

Welded Wire Reinforcement shall be kept off the ground during storage and shall be kept free of mud, oil or non-metallic coatings that adversely affect bonding capacity.

**PRE-INSTALLATION**

Flow Control - During the gunite lining operations, it will be necessary to dewater sections of the bridge in which gunite is being applied and cured. This may be accomplished by (a) fluming across the sections; (b) pumping around the sections above grade to a downstream manhole or to another sewer with suitable capacity; other method subject to the approval of the Owner and Engineer. When bypass pumping is required, the Contractor shall supply the necessary pumps, conduits and other equipment and facilities to dewater the section in which gunite lining is constructed. The bypass system shall be of sufficient capacity to handle existing flows plus additional flow that may occur during a rainstorm. Absolutely no bypassing of sanitary sewer flows into local streams and rivers is permitted. The Contractor shall be responsible for furnishing the necessary labor and supervision to set up and operate the dewatering system. If pumping is required on a 24 hour basis, all engines shall be equipped in a manner to keep pump noise at a minimum. Precautions shall be taken to ensure that flow control and dewatering operations do not cause flooding or damage to public or private properties being served by the sewers involved. When flow in a sewer line is plugged, blocked, or bypassed; sufficient precautions must be taken to protect the sewer lines from damage that might result from sewer surcharging. Under no circumstances will the dumping of raw sewage onto private property or onto city streets, streams, storm sewer, streams, etc. be allowed. At the end of each working day, a temporary tie-in may be made between the relined section and the existing system and the bypass plug removed. All work materials, pumping and flume piping shall be removed from the bridge at the end of a day's work.

Cleaning of Work Surface - All unsound or loose material shall be removed manually before applying gunite. The Contractor shall trim each area to be repaired to remove offsets which could cause an abrupt change in thickness without suitable reinforcement or thickness of gunite. Edges shall be tapered to leave no square shoulders at the perimeter of the cavity. After the trimming operation is completed, the entire surface shall be thoroughly cleaned as directed with an approved high pressure water blast in order to remove all dirt, grease, and loose particles that would inhibit bonding between the existing stone, mortar joints and gunite. The minimum water pressure shall be 3000 psi. Adjust the pressure to avoid dislocating sound mortar and stone from the wall. This item is incidental to the wall liner installation.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
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Filling Holes and Earth Cavities - Holes extending beyond the outside of the work area and the surrounding earth shall be filled with concrete, pressure grout, or gunite to the plane of the outside of the wall, and any holes in the wall shall be built up with gunite. Class A Concrete shall be used and forms are to be utilized, if necessary.

Damage to Existing Structure - The Contractor shall be responsible for the repair of any damage to the existing structure resulting from this operation at no additional cost to the Owner.

**INSTALLATION**

Welded Wire Fabric - Galvanized Wire Fabric shall be placed in the center of the gunite lining thickness and not less than 3/4" from the prepared surface nor less than 3/4" from the finished inside surface of the wall lining. The wire fabric shall be rolled into cylinders and placed circumferentially on the hook bolts or Hilti support anchors. End and side laps of the fabric are to be not less than three inches, securely tied with 16-gauge wire, and the entire mat firmly secured in a rigid position to withstand impact of the gunite application without displacement. Placement of wire fabric shall be inspected and approved by the Owner and Engineer before the start of the gunite application.

Placement of gunite - The dry method is only to be utilized for concrete placement. Gunite shall be placed using suitable delivery equipment and procedures that will result in the dry mixed gunite being in compliance with all requirements in the Specifications.

**Placement Techniques**

Control thickness, method of support, air pressure, and/or water content of gunite to preclude sagging or sloughing off.

Dampen absorptive substrate surfaces prior to placement of gunite to facilitate bond and to reduce the possibility of shrinking or cracking developing from premature loss of the mixing water.

Broom or scarify the surface or freshly-place gunite to which, after hardening, additional layers of gunite will be applied. Dampen surface just prior to application of each succeeding layer.

First, fill with sound material all corners and each area where rebound cannot escape or be below free.

Provide a supply of clean, dry air adequate for maintaining sufficient nozzle velocity for all parts of the work and, if required, for simultaneous operation of a suitable blow pipe for cleaning away rebound.

Placement All-Around Reinforcement.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS**

Hold the Nozzle at appropriate distance and angle to place material behind reinforcement before material is allowed to accumulate on its face. Additional water may be added to the mix when encasing reinforcement to facilitate a smooth flow of material behind the bars.

Do not place gunite through more than one layer of reinforcing steel rods or mesh in one application unless demonstrated by preconstruction tests that steel will be properly encased.

Cover of Reinforcement - Place gunite to provide the following minimum cover over reinforcement.

For gunite used as lining or coatings: ¾” for fine aggregate gunite and 1½” for coarse aggregate gunite.

Line and Thickness Control -The Contractor shall use adequate ground wires or other accepted means to establish the thickness, surface planes and finish lines of the concrete.

#### Placement Precautions

Gunite shall not be placed if drying or stiffening of the mix takes place at any time prior to delivery to the nozzle. Do not use rebound or previously expended material in the gunite mix.

Retempering shall not be permitted. Mixed material unused for more than 45 minutes after the addition of the initial mixing water shall be discarded.

All overspray and rebound shall be removed prior to the final set and before the placement of the gunite material on surfaces adjacent to areas of prior application.

Repair of Surface Defects - The Contractor shall remove and replace gunite which lacks uniformity, exhibits segregation, honeycombing, or lamination, or which contains dry patches, voids or sand pockets.

Finishing - Unless otherwise designated on the drawings, the Contractor shall provide a brush finish for dry methods

Construction Joints - Taper construction joints to a shallow edge form, about one inch (1”) thick. The entire joint shall be thoroughly cleaned and wetted prior to the application of additional gunite. Make joints perpendicular to the main reinforcement. Continue reinforcement across joints.

### 3.4 TESTING

A. Procedures - The following testing services shall be performed by the testing laboratory provided by the Contractor at no increase in contract price.  
Review and test the Contractor's proposed materials for compliance with the specifications.



**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
DRILLED PIER WALL PROJECT  
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Review and test the Contractor's proposed mix design.

Secure production samples of materials at plants or stock piles during the course of the work and test for compliance with the specifications.

Conduct strength tests of concrete during construction in accordance with the following procedures.

Make one test panel with a minimum dimension of 18" x 18" x 3", gunned in the same position as the work represented, for every 50 cubic yards of gunite placed. Panels shall be gunned during the course of the work by the Contractor's regular nozzleman. Field-cure panels in the same manner as the work, except that the test specimens shall be soaked in water for a minimum of 40 hours prior to testing. The designated testing agency shall cut three-inch diameter cores or three-inch cubes from each panel for testing.

When the length of a core is less than twice the diameter, apply the correction factors given in ASTM C 42 to obtain the compressive strength of individual cores.

The average compressive strength of three cores taken from the structure or test panel representing 50 cubic yards of gunite shall equal  $fc'$ . The average of three cubes taken from a panel representing a shift or 50 cubic yards of gunite shall equal or exceed  $fc'$  with no individual cube less than  $0.88 fc'$ .

Final acceptance of the gunite will be based on results obtained from the core. Use of data obtained from impact hammers, ultrasonic equipment, or other nondestructive testing devices will not be permitted for final acceptance of gunite; however, these data may be useful for determining uniformity of the gunite.

Strength Level - The strength level of the gunite will be considered satisfactory when the averages of all strength tests results equal or exceed the specified strength, and no individual strength test result falls below the specified strength  $fc'$  by more than 500 psi.

Defect Assessment - Contractor shall replace the Work, or portions of the Work, not conforming to specified requirements at no additional cost to the Owner. If, in the opinion of the Owner or Engineer, it is not practical to remove and replace the Work, the Engineer or Owner will specify one of the following remedies:

The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner or Engineer.

The defective Work will be partially repaired to the instructions of the Owner or Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner or Engineer.

**EMMONS ROAD, LIBERTY-KEUTER ROAD, AND OLIVE BRANCH ROAD  
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The authority of the Engineer and/or Owner to assess the defect and identify payment adjustment is final.

**3.5 VIDEO TAPING**

A. Prior to and after the gunite lining has been completed a video of the work area(s) are to be videoed and submitted to the Engineer for review and approval. Following rehabilitation, the video tapes of the rehabilitated section(s) shall be provided to the Owner and Engineer for review. Payment for rehabilitation shall only be made where final tapes have been submitted to the Owner and Engineer.

**3.6 CLEANUP**

At the completion of the work, the Contractor shall clean and remove all rebound, unused material and rubbish from the site. The work area shall be in a condition satisfactory to the Owner and Engineer whose property was affected by the work.



# Geotechnical Engineering Report

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**Emmons Road Landslide  
Oregonia, Turtlecreek Township, Ohio**

November 6, 2018

Terracon Project No. N1175147

**Prepared for:**

Turtlecreek Township  
Lebanon, Ohio

**Prepared by:**

Terracon Consultants, Inc.  
Cincinnati, Ohio



November 6, 2018 (Revised)  
November 5, 2018



Turtlecreek Township  
670 North SR-123  
Lebanon, Ohio 45036

Attn: Mr. Ron Chasteen – Supervisor-Roadways  
P: (513) 932 4902  
E: rchasteen@turtlecreektownship.org

Re: Geotechnical Engineering Report  
Emmons Road Landslide  
5103 Emmons Road  
Oregonia, Turtlecreek Township, Ohio  
Terracon Project No. N1175147

Dear Mr. Chasteen:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PN1175147 dated April 22, 2017, as authorized by Gregory Johnson of Turtlecreek Township on June 27, 2017. This study included monitoring lateral movement in the roadway embankment for over one year. This report presents the findings of the subsurface exploration, the inclinometer reading results and provides geotechnical recommendations concerning the landslide occurring on the east side of Emmons Road.

We appreciate this opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact the writer.

Sincerely,  
**Terracon Consultants, Inc.**

Tyler J. Means, E.I.T.  
Staff Engineer

David W. Westendorf, P.E.  
Senior Associate

George C. Webb, P.E.  
Senior Engineer

**REPORT TOPICS**

**INTRODUCTION..... 1**

**PROJECT DESCRIPTION..... 1**

**GEOTECHNICAL CHARACTERIZATION..... 2**

**GEOTECHNICAL OVERVIEW ..... 3**

**GENERAL COMMENTS..... 4**

**Note:** This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

**ATTACHMENTS**

- EXPLORATION AND TESTING PROCEDURES**
- SITE LOCATION AND EXPLORATION PLANS**
- EXPLORATION RESULTS**
- SUPPORTING INFORMATION**

**Note:** Refer to each individual Attachment for a listing of contents.

**Geotechnical Engineering Report**  
**Emmons Road Landslide**  
**5103 Emmons Road**  
**Oregonia, Turtlecreek Township, Ohio**  
**Terracon Project No. N1175147**  
**November 6, 2018**

## **INTRODUCTION**

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the landslide located on the east side of the roadway embankment due east of 5103 Emmons Road in Oregonia, Turtlecreek Township, Ohio. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil and rock conditions
- Groundwater conditions
- Landslide remediation options
- Recorded lateral hillside movement

The geotechnical engineering Scope of Services for this project included the advancement of three soil test borings to depths ranging from approximately 17.7 to 41.5 feet below existing site grades. Each boring extended to undisturbed shale bedrock. One inclinometer was installed in boring T-1, following the drilling and sampling of the test boring. A baseline reading of the inclinometer was performed on September 14, 2017. Following the baseline reading, three additional readings were performed over a 13 month period.

Maps showing the site and test boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the test boring logs in the **Exploration Results** section.

## **PROJECT DESCRIPTION**

Accelerated hillside creep is occurring along Emmons Road (CR 93), due east of 5103 Emmons Road in Oregonia, Turtlecreek Township, Ohio. The affected roadway lies about 3,500 feet east of North Nixon Camp Road over a steepened tributary to the Little Miami River. An approximate 80 ft. section of road has cracked and settled on the south side of the approximate 16 foot wide road. Hillside movement was first noticed by the Township in 2008 and railroad rails were used to slow the movement. In addition, the south guardrail was relocated recently, due to the hillside creep. The centerline of the driveway to 5103 Emmons Road is located about 79 feet west of the existing 5 foot diameter stone culvert. The south face of the stone culvert headwall is in excellent condition. Some scour is occurring below the outfall. No bedrock outcrops were observed in the

creekbed downstream of the outfall during our initial site visit with Turtlecreek Township on April 14, 2017.

## GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction. The following table provides our geotechnical characterization.

This geotechnical characterization forms the basis of our geotechnical calculations and evaluation of the current movement along the side of the roadway. As noted in **General Comments**, the characterization is based upon three widely spaced exploration points across the site and variations between borings are likely, especially regarding the depth and quality of the existing fill.

Stratum	Approximate Depth to Bottom of Stratum (feet)	Material Description	Consistency/Density
Surface	0.5 to 2.5	Topsoil/Asphalt <sup>1</sup> /Rip-rap Boulders	N/A
1	3.5 to 20 <sup>2</sup>	Fill – lean clay with varying amounts of silt, sand, gravel, and limestone cobbles, brown	N/A
2	15 to 35	Lean clay/silt with varying amounts of sand and gravel, brown to brownish-gray	Stiff to very stiff
3	All borings terminated in this stratum at varying depths between 17.7 and 41.5 feet. The depth to top of shale bedrock varied from 15 to 35 feet at the test boring locations.	Highly weathered Shale with occasional limestone layers, gray	Very weak to weak rock

1. Asphalt and Aggregate Base only encountered at test boring T-3. Asphalt thickness 16 inches, Aggregate Base thickness 6 inches.
2. Fill in boring T-1 extended to a depth of approximately 20 feet. The maximum depth of fill in the other two borings was approximately 5.0 to 10.0 feet, indicating a buried valley.

Conditions encountered at each boring location are indicated on the individual boring logs shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

During our field exploration, we installed one inclinometer in boring T-1 to a depth of 35 feet. Inclinometers are plastic pipes drilled into the ground and socketed in bedrock or firm glacial till. These pipes create a raceway to insert wheeled inclination sensors. We made three site visits to monitor movement, following our initial site visit to get baseline readings on September 14, 2017. The monitoring of the inclinometers recorded the movement of the hillside and helped define the slip surface. Our results from the inclinometer monitoring program (Plot T-1) can be found in the appendix of this report. Based on these results, the depth of the failure surface is approximately 12 feet below existing grades.

### **Groundwater Conditions**

The boreholes were observed while drilling and immediately after completion for the presence and level of groundwater. Groundwater was not observed in any of our test borings during drilling and sampling or for the short duration the borings could remain open. Due to the low permeability of the soils encountered in the borings, a relatively long period may be necessary for a groundwater level to develop and stabilize in a borehole. Long term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels at other times may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the remediation of the landslide.

## **GEOTECHNICAL OVERVIEW**

Based on field observations, test borings, inclinometer readings and our experience with similar landslides in the area, we anticipate that the underlying shear plane occurs at a depth of approximately 12 feet below the existing roadway surface. It does not appear to have progressed beneath the roadway to the upslope shoulder, although this future progression is possible.

Based on the inclinometer results, existing site conditions, the depth to rock, the vegetation on the slope etc., some repair options such as regrading of slope, soil nailing and construction of retaining wall or wide buttress fill at the toe of the slope can be eliminated. It appears that the most feasible repair option would be to install a single row of drilled piers just downslope of the downslope (east) edge of the roadway.



At test boring T-1, bedrock was encountered at a depth of about 26 feet. Our preliminary assessment includes a row of 30-inch diameter drilled structural piers spaced at approximately 6'-3" center-to-center spacing with two 30-inch diameter unreinforced plug piers between two adjacent structural piers. The structural piers can be reinforced using W 18x119 beam sections with a pier length of approximately 36 feet within the vicinity of T-1. This analysis considered approximately 7 additional feet of soil loss downslope of the wall below the existing failure surface per the method recommended in ODOT GB-7 based on the depth to the failure surface and slope angle.

At test boring T-3, bedrock was encountered at a deeper depth of approximately 35 feet. Our preliminary assessment includes a row of 30-inch diameter drilled structural piers spaced at approximately 6'-3" center-to-center spacing with two 30-inch diameter unreinforced plug piers between two adjacent structural piers. The structural piers can be reinforced using W 18x119 beam sections with a pier length of approximately 45 feet within the vicinity of boring T-3. Terracon is available to perform detailed retaining wall analysis and provide design drawings at your request. This analysis considered approximately 7 additional feet of soil loss downslope of the wall below the existing failure surface per the method recommended in ODOT GB-7.

All structural piers should be embedded into competent shale bedrock a minimum of 10 feet. Plug piers should be embedded a minimum of 6 inches into weathered shale bedrock. Actual field conditions will dictate the length of each pier. A reinforcing cage option can be provided in the final design drawings, if requested.

The **General Comments** section provides an understanding of the report limitations.

## **GENERAL COMMENTS**

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

## Geotechnical Engineering Report

Emmons Road Landslide ■ Oregonia, Turtlecreek Township, Ohio

November 6, 2018 ■ Terracon Project No. N1175147



Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

## SITE LOCATION

Emmons Road Landslide-Warren County ■ Oregonia, OH  
November 6, 2018 ■ Terracon Project No. N1175147

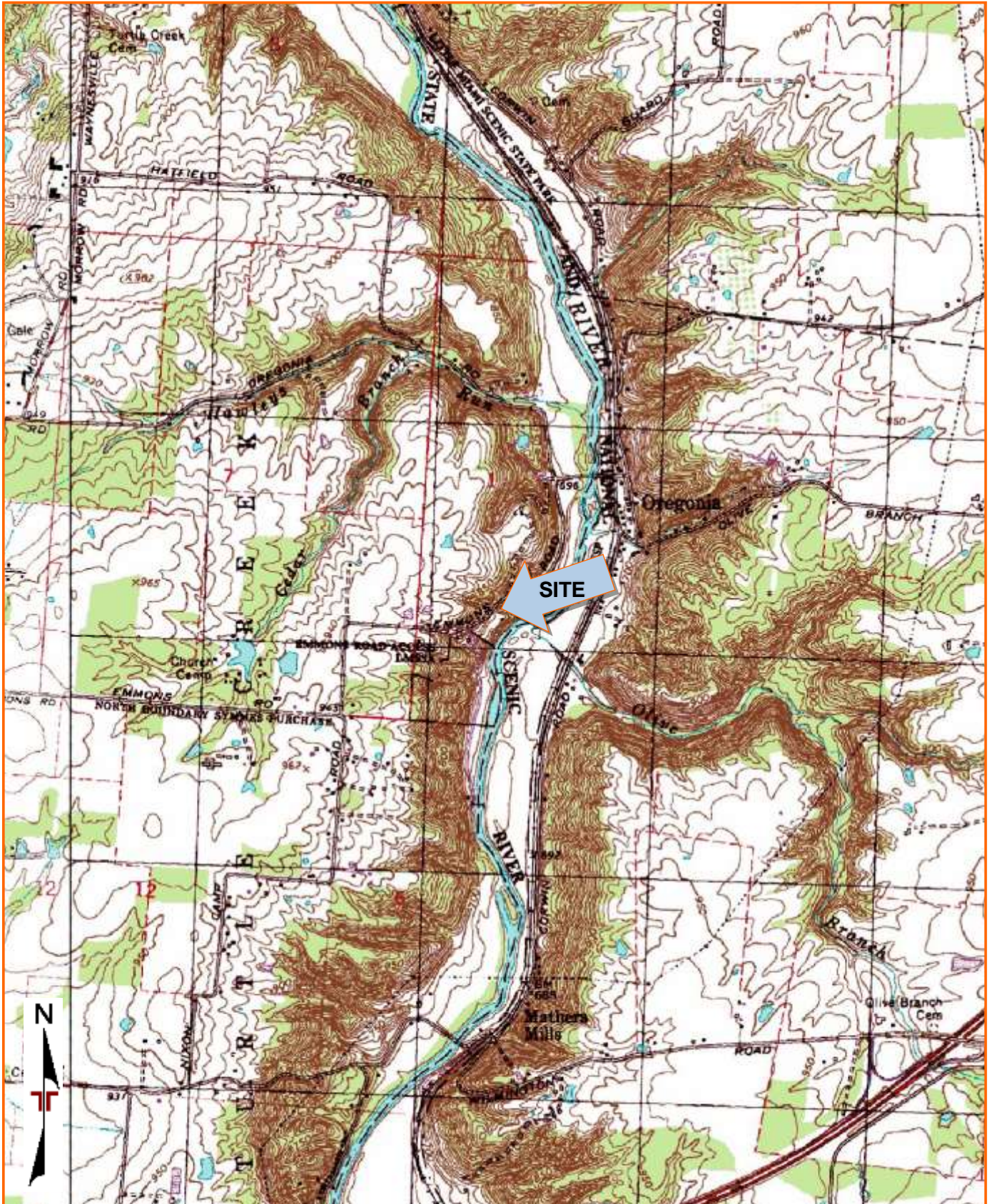


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY  
QUADRANGLES INCLUDE: LEBANON, OH (1/1/1992) and OREGONIA, OH (1/1/1996).

**EXPLORATION PLAN**

Emmons Road Landslide-Warren County ■ Oregonia, OH  
November 6, 2018 ■ Terracon Project No. N1175147

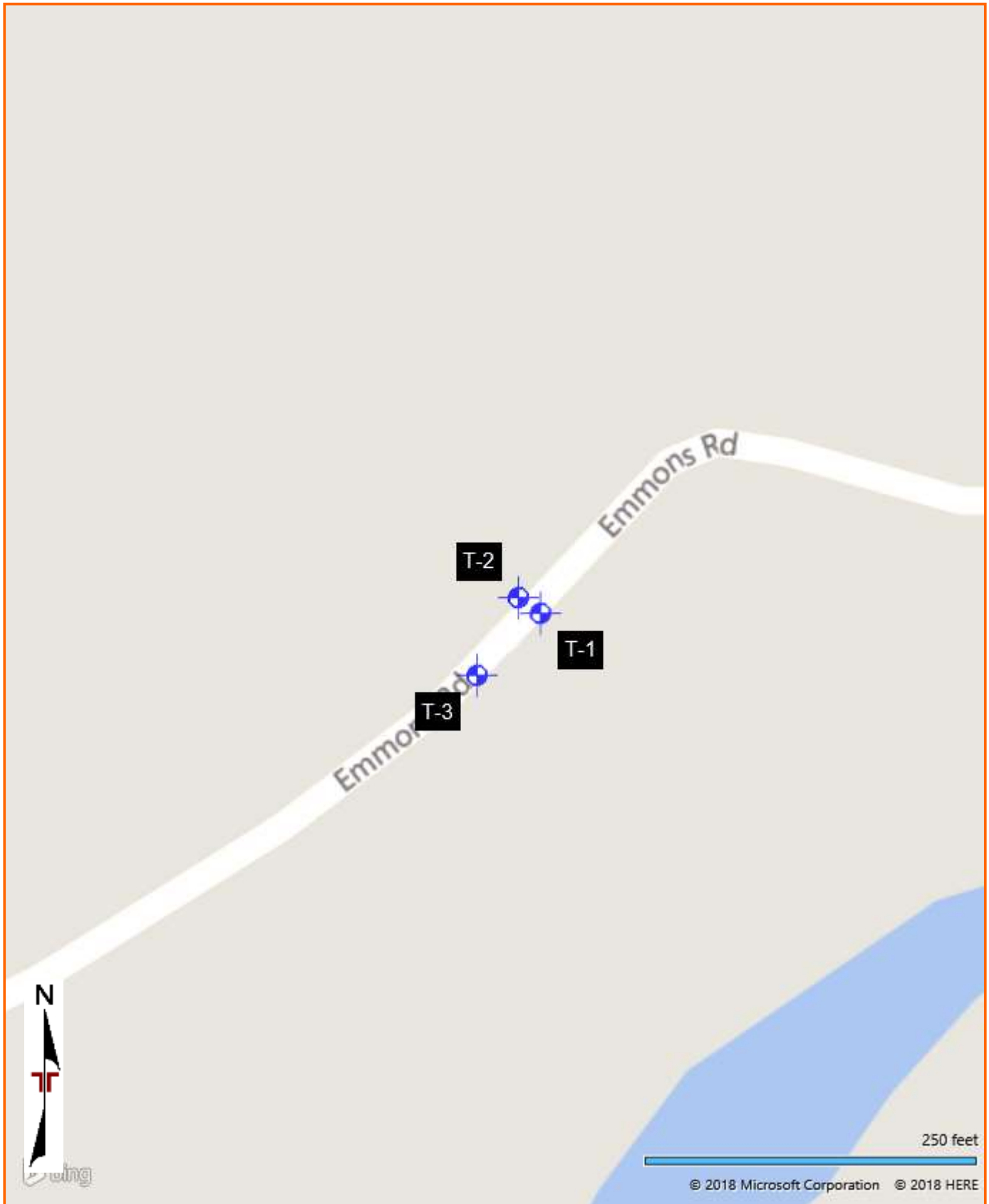


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

## EXPLORATION AND TESTING PROCEDURES

### Field Exploration

Number of Borings	Boring Depth (feet)	Planned Location
3	17.7 to 41.5	Active landslide location

**Boring Layout and Elevations:** Borings were laid out in the field during the initial site visit. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about  $\pm 2$  feet) and approximate elevations were measured in the field with our survey-grade GPS equipment.

**Subsurface Exploration Procedures:** We advanced the borings with a track-mounted drill rig using continuous flight augers (hollow stem). Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling and immediately following the completion of drilling. For safety purposes, all borings were backfilled with auger cuttings after their completion. Pavements were patched with cold-mix following backfilling.

One inclinometer casing was set in boring T-1 to a depth of about 35 feet and was set in shale bedrock. The inclinometer casing was grouted in place and a flush-mounted cap was also grouted at the ground surface to protect the inclinometer. The inclinometer was placed such that wheels for the inclinometer equipment would run perpendicular to the face of the hillside.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

## **Laboratory Testing**

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil and rock strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Rock classification was conducted using locally accepted practices for engineering purposes; petrographic analysis may reveal other rock types. Rock core samples typically provide an improved specimen for this classification. Boring log rock classification was determined using the Description of Rock Properties.




# BORING LOG NO. T-1

**PROJECT:** Emmons Road Landslide-Warren County

**CLIENT:** Turtle Creek Township  
Lebanon, OH

**SITE:** 5103 Emmons Road  
Oregonia, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - N1175147 EMMONS ROAD LANDS.GPJ TERRACON DATATEMPLATE.GDT 10/31/18

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.447267° Longitude: -84.103052°  Surface Elev.: 774 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	LABORATORY HP (sf)	WATER CONTENT (%)	ATTERBERG LIMITS
									LL-PL-PI
	<b>RIP-RAP BOULDERS</b>				0	2-2-3 N=5			
	<b>FILL</b> , lean clay, with gravel, trace fine to coarse sand, brown	2.5						8	
	<b>FILL</b> , lean clay, trace gravel, trace organic inclusions, brown	4.5							
		5			53	3-2-1 N=3	0.75 (HP)	28	33-17-16
		10			33	0-2-1 N=3	1.25 (HP)	15	35-18-17
		15			89	3-4-4 N=8	2.75 (HP)	17	
		20			78	2-4-5 N=9	2.50 (HP)	17	
		25			67	3-5-7 N=12	4.25 (HP)	13	
		30			89	5-7-8 N=15	4.5+ (HP)	18	
	<b>SANDY SILT</b> , dark brown, stiff	20.0			100	4-5-5 N=10	1.0 (HP)	15	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See Exhibit A-3 for description of field procedures.  
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:  
Inclinometer installed to 35 feet.

See Appendix C for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

*Not encountered during drilling*  
*Not observed immediately following completion*



Boring Started: 09-06-2017

Boring Completed: 09-06-2017

Drill Rig: Track

Driller: R. Mann

Project No.: N1175147

Exhibit: A-4

# BORING LOG NO. T-1

**PROJECT:** Emmons Road Landslide-Warren County

**CLIENT:** Turtle Creek Township  
Lebanon, OH

**SITE:** 5103 Emmons Road  
Oregonia, OH

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.447267° Longitude: -84.103052°								LL-PL-PI
	Surface Elev.: 774 (Ft.) ELEVATION (Ft.)								
26.0	<b>SANDY SILT</b> , dark brown, stiff ( <i>continued</i> )	748		X	89	11-20-32 N=52			
30.0	<b>SHALE</b> , grayish-brown, severely weathered, very soft	744							
31.5	<b>SHALE</b> , with occasional limestone seams, gray, moderately weathered, soft	742.5		X	100	45-50/3"			
<b>Boring Terminated at 31.5 Feet</b>									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See Exhibit A-3 for description of field procedures.  
See Appendix B for description of laboratory procedures and additional data (if any).  
See Appendix C for explanation of symbols and abbreviations.

Notes:

Abandonment Method:  
Inclinometer installed to 35 feet.

**WATER LEVEL OBSERVATIONS**

*Not encountered during drilling*  
*Not observed immediately following completion*



Boring Started: 09-06-2017

Boring Completed: 09-06-2017

Drill Rig: Track

Driller: R. Mann

Project No.: N1175147

Exhibit: A-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_ N1175147 EMMONS ROAD LANDS.GPJ TERRACON\_DATATEMPLATE.GDT 10/31/18



# BORING LOG NO. T-2

**PROJECT:** Emmons Road Landslide-Warren County

**CLIENT:** Turtle Creek Township  
Lebanon, OH

**SITE:** 5103 Emmons Road  
Oregonia, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. N1175147 EMMONS ROAD LANDS.GPJ TERRACON DATATEMPLATE.GDT 10/31/18

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.447298° Longitude: -84.10314°  Surface Elev.: 775 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	LABORATORY HP (sf)	WATER CONTENT (%)	ATTERBERG LIMITS
									LL-PL-PI
		0.5							
	<b>TOPSOIL</b> , 6 inches thick	774.5							
	<b>FILL</b> , lean clay, with limestone cobbles, trace organics inclusions, trace gravel, brown				78	3-4-8 N=12	3.75 (HP)	18	
					22	4-6-8 N=14	3.50 (HP)	14	
		5			67	20-22-39 N=61		5	
					44	8-10-18 N=28	4.5+ (HP)	14	
	<b>SAND</b> , fine grained, brown, loose to medium dense	10.0			78	5-5-4 N=9			
					78	2-7-15 N=22	4.25 (HP)	14	
	<b>LEAN CLAY</b> , trace silt and limestone fragments, brownish-gray, very stiff	13.5							
		15.0			100	21-50/5"			
	<b>SHALE</b> , with limestone fragments, brownish-gray, severely weathered, soft	17.5							
	<b>SHALE</b> , with limestone fragments, moderately weathered, medium hard	17.7			100	50/2"			
	<b>Boring Terminated at 17.7 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See Exhibit A-3 for description of field procedures.  
See Appendix B for description of laboratory procedures and additional data (if any).  
See Appendix C for explanation of symbols and abbreviations.

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

**WATER LEVEL OBSERVATIONS**

*Not encountered during drilling  
Not observed immediately following completion*



Boring Started: 09-06-2017

Boring Completed: 09-06-2017

Drill Rig: Track

Driller: R. Mann

Project No.: N1175147

Exhibit: A-5

# BORING LOG NO. T-3

**PROJECT:** Emmons Road Landslide-Warren County

**CLIENT:** Turtle Creek Township  
Lebanon, OH

**SITE:** 5103 Emmons Road  
Oregonia, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - N1175147 EMMONS ROAD LANDS.GPJ TERRACON\_DATATEMPLATE.GDT 10/31/18

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.447137° Longitude: -84.103182°  Surface Elev.: 776 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	LABORATORY HP (sf)	WATER CONTENT (%)	ATTERBERG LIMITS
									LL-PL-PI
	<b>ASPHALT</b> , 16 inches thick								
	1.3 _____ 774.5								
	1.8 _____ 774								
	<b>FILL</b> , lean clay, with sand and gravel, brownish-black								
	3.5 _____ 772.5				44	3-3-4 N=7		14	
	<b>LEAN CLAY</b> , trace gravel and sand, grayish-brown, very stiff								
		5							
					53	4-3-4 N=7	3.0 (HP)	17	
					33	3-4-3 N=7	3.5 (HP)	20	
	-- Black iron-oxide stains at 7.5 ft to 9 ft								
					53	3-3-4 N=7	3.50 (HP)	20	
	10.0 _____ 766	10							
	<b>LEAN CLAY</b> , trace organic inclusion, trace gravel, reddish-brown with black, stiff								
	12.0 _____ 764								
	<b>LEAN CLAY</b> , with limestone fragments, brownish-gray, stiff								
		15							
					78	3-6-8 N=14	1.50 (HP)	19	
					78	3-3-4 N=7	1.25 (HP)	21	
	17.5 _____ 758.5	20							
	<b>LEAN CLAY</b> , trace gravel, brownish-gray, medium stiff								
		25							
					100	3-2-4 N=6	1.0 (HP)	33	
					78	2-3-3 N=6	1.0 (HP)	21	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See Exhibit A-3 for description of field procedures.  
See Appendix B for description of laboratory procedures and additional data (if any).  
See Appendix C for explanation of symbols and abbreviations.

Notes:

Abandonment Method:  
Boring backfilled with Auger Cuttings  
Surface capped with asphalt.

**WATER LEVEL OBSERVATIONS**

*Not encountered during drilling*  
*Not observed immediately following completion*



Boring Started: 09-06-2017

Boring Completed: 09-06-2017

Drill Rig: Track

Driller: R. Mann

Project No.: N1175147

Exhibit: A-6

# BORING LOG NO. T-3

**PROJECT:** Emmons Road Landslide-Warren County

**CLIENT:** Turtle Creek Township  
Lebanon, OH

**SITE:** 5103 Emmons Raod  
Oregonia, OH

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.447137° Longitude: -84.103182°								LL-PL-PI
	Surface Elev.: 776 (Ft.)								
	ELEVATION (Ft.)								
30.0	<b>LEAN CLAY</b> , trace gravel, brownish-gray, medium stiff ( <i>continued</i> )			X	67	4-5-4 N=9	1.0 (HP)	24	
35.0	<b>LEAN CLAY</b> , trace gravel with limestone fragments, brown, very stiff			X	67	10-15-19 N=34	4.0 (HP)	14	
41.5	<b>SHALE</b> , with limestone fragments, gray, moderately weathered, soft			X	100	50/4"			
41.5	<b>Boring Terminated at 41.5 Feet</b>			X	100	50/3"			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See Exhibit A-3 for description of field procedures.  
See Appendix B for description of laboratory procedures and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with Auger Cuttings  
Surface capped with asphalt.

See Appendix C for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

*Not encountered during drilling*  
*Not observed immediately following completion*



Boring Started: 09-06-2017

Boring Completed: 09-06-2017

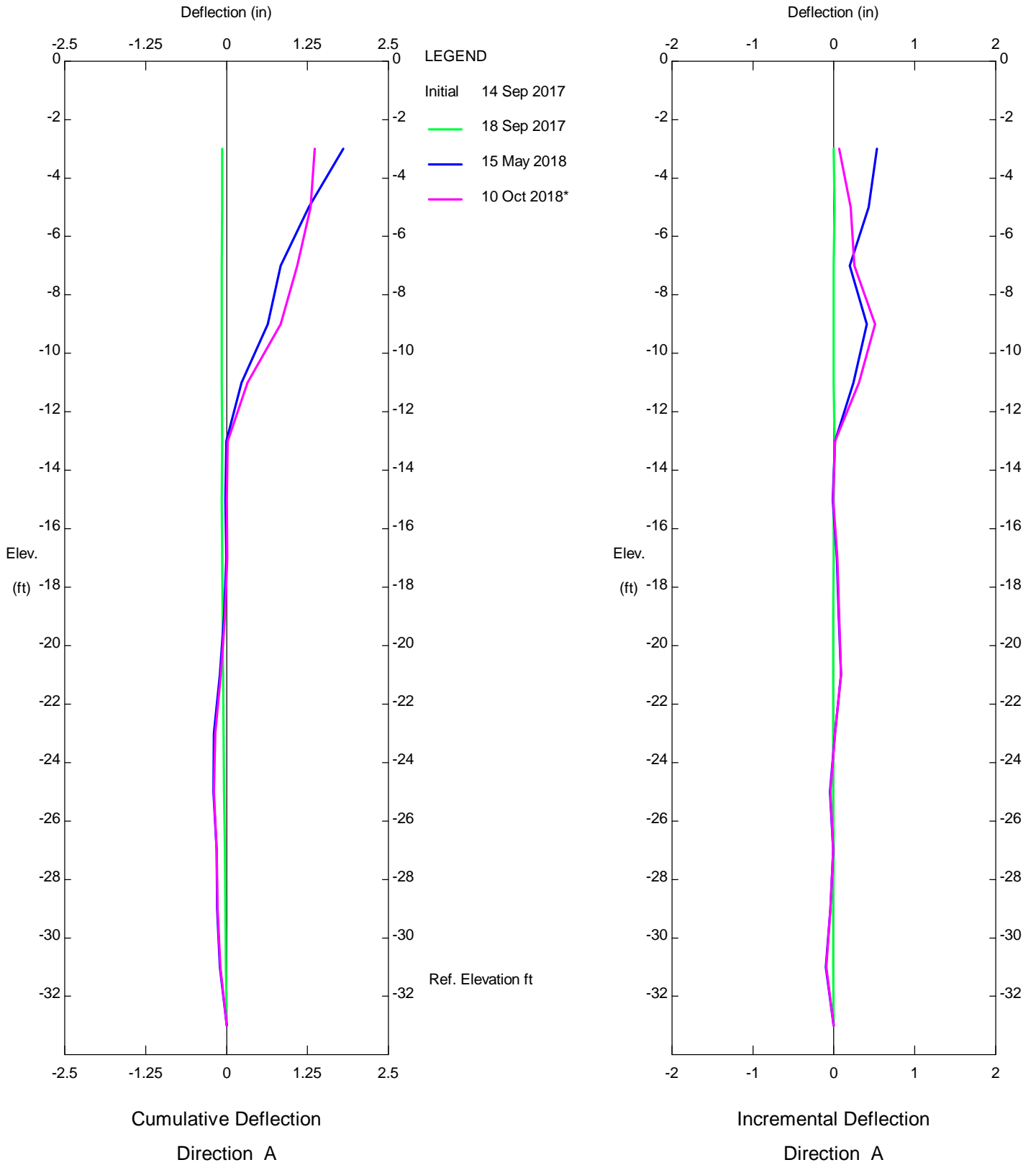
Drill Rig: Track

Driller: R. Mann

Project No.: N1175147

Exhibit: A-6

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. N1175147 EMMONS ROAD LANDS.GPJ TERRACON\_DATATEMPLATE.GDT 10/31/18



Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification		
				Group Symbol	Group Name <sup>B</sup>	
<b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve	<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve	<b>Clean Gravels:</b> Less than 5% fines <sup>C</sup>	$Cu \geq 4$ and $1 \leq Cc \leq 3$ <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>	
			$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>	
		<b>Gravels with Fines:</b> More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F, G, H</sup>	
			Fines classify as CL or CH	GC	Clayey gravel <sup>F, G, H</sup>	
	<b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve	<b>Clean Sands:</b> Less than 5% fines <sup>D</sup>	$Cu \geq 6$ and $1 \leq Cc \leq 3$ <sup>E</sup>	SW	Well-graded sand <sup>I</sup>	
			$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>	
		<b>Sands with Fines:</b> More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G, H, I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G, H, I</sup>	
<b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve	<b>Silts and Clays:</b> Liquid limit less than 50	<b>Inorganic:</b>	$PI > 7$ and plots on or above "A"	CL	Lean clay <sup>K, L, M</sup>	
			$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OL	Organic clay <sup>K, L, M, N</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, O</sup>
	<b>Silts and Clays:</b> Liquid limit 50 or more	<b>Inorganic:</b>	$PI$ plots on or above "A" line	CH	Fat clay <sup>K, L, M</sup>	
			$PI$ plots below "A" line	MH	Elastic Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OH	Organic clay <sup>K, L, M, P</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, Q</sup>
	<b>Highly organic soils:</b>	Primarily organic matter, dark in color, and organic odor			PT	Peat

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

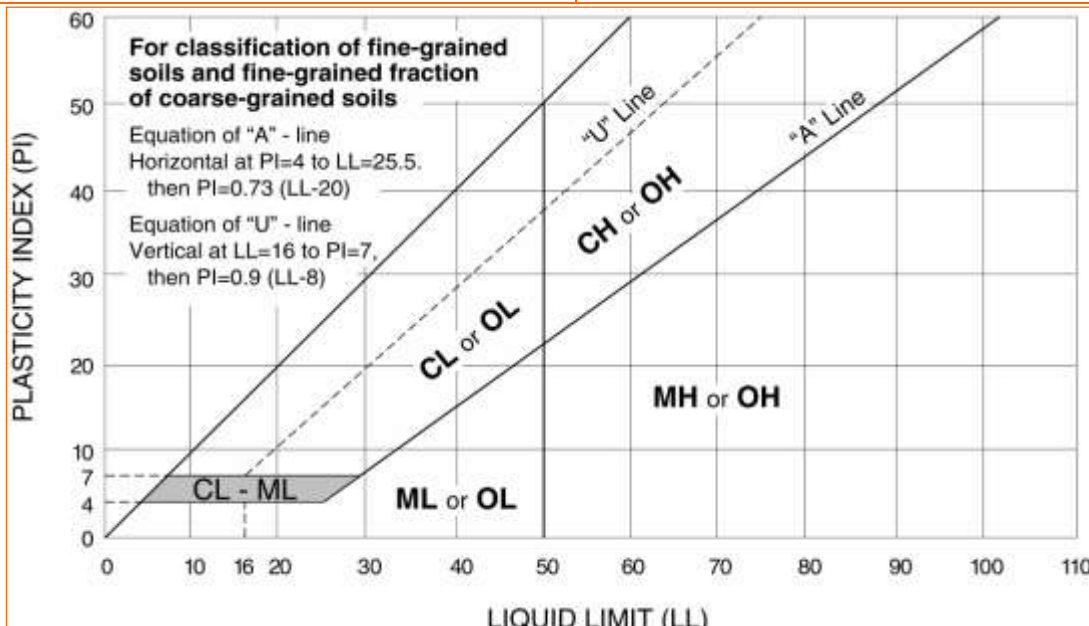
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.



WEATHERING	
Term	Description
<b>Unweathered</b>	No visible sign of rock material weathering, perhaps slight discoloration on major discontinuity surfaces.
<b>Slightly weathered</b>	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.
<b>Moderately weathered</b>	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a continuous framework or as corestones.
<b>Highly weathered</b>	More than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones.
<b>Completely weathered</b>	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.
<b>Residual soil</b>	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.

STRENGTH OR HARDNESS		
Description	Field Identification	Uniaxial Compressive Strength, psi (MPa)
<b>Extremely weak</b>	Indented by thumbnail	40-150 (0.3-1)
<b>Very weak</b>	Crumbles under firm blows with point of geological hammer, can be peeled by a pocket knife	150-700 (1-5)
<b>Weak rock</b>	Can be peeled by a pocket knife with difficulty, shallow indentations made by firm blow with point of geological hammer	700-4,000 (5-30)
<b>Medium strong</b>	Cannot be scraped or peeled with a pocket knife, specimen can be fractured with single firm blow of geological hammer	4,000-7,000 (30-50)
<b>Strong rock</b>	Specimen requires more than one blow of geological hammer to fracture it	7,000-15,000 (50-100)
<b>Very strong</b>	Specimen requires many blows of geological hammer to fracture it	15,000-36,000 (100-250)
<b>Extremely strong</b>	Specimen can only be chipped with geological hammer	>36,000 (>250)

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	Spacing	Description	Spacing
<b>Extremely close</b>	< ¼ in (<19 mm)	<b>Laminated</b>	< ½ in (<12 mm)
<b>Very close</b>	¼ in – 2-1/2 in (19 - 60 mm)	<b>Very thin</b>	½ in – 2 in (12 – 50 mm)
<b>Close</b>	2-1/2 in – 8 in (60 – 200 mm)	<b>Thin</b>	2 in – 1 ft. (50 – 300 mm)
<b>Moderate</b>	8 in – 2 ft. (200 – 600 mm)	<b>Medium</b>	1 ft. – 3 ft. (300 – 900 mm)
<b>Wide</b>	2 ft. – 6 ft. (600 mm – 2.0 m)	<b>Thick</b>	3 ft. – 10 ft. (900 mm – 3 m)
<b>Very Wide</b>	6 ft. – 20 ft. (2.0 – 6 m)	<b>Massive</b>	> 10 ft. (3 m)

**Discontinuity Orientation (Angle):** Measure the angle of discontinuity relative to a plane perpendicular to the longitudinal axis of the core. (For most cases, the core axis is vertical; therefore, the plane perpendicular to the core axis is horizontal.) For example, a horizontal bedding plane would have a 0-degree angle.

ROCK QUALITY DESIGNATION (RQD) <sup>1</sup>	
Description	RQD Value (%)
<b>Very Poor</b>	0 - 25
<b>Poor</b>	25 – 50
<b>Fair</b>	50 – 75
<b>Good</b>	75 – 90
<b>Excellent</b>	90 - 100

- The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

Reference: U.S. Department of Transportation, Federal Highway Administration, Publication No FHWA-NHI-10-034, December 2009  
Technical Manual for Design and Construction of Road Tunnels – Civil Elements

**WEATHERING**

Fresh	Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.
Very slight	Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show bright. Rock rings under hammer if crystalline.
Slight	Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
Moderate	Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.
Moderately severe	All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick.
Severe	All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left.
Very severe	All rock except quartz discolored or stained. Rock "fabric" discernible, but mass effectively reduced to "soil" with only fragments of strong rock remaining.
Complete	Rock reduced to "soil". Rock "fabric" no discernible or discernible only in small, scattered locations. Quartz may be present as dikes or stringers.

**HARDNESS (for engineering description of rock – not to be confused with Moh's scale for minerals)**

Very hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Moderately hard	Can be scratched with knife or pick. Gouges or grooves to ¼ in. deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
Medium	Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1-in. maximum size by hard blows of the point of a geologist's pick.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Very soft	Can be carved with knife. Can be excavated readily with point of pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

**Joint, Bedding, and Foliation Spacing in Rock <sup>1</sup>**

Spacing	Joints	Bedding/Foliation
Less than 2 in.	Very close	Very thin
2 in. – 1 ft.	Close	Thin
1 ft. – 3 ft.	Moderately close	Medium
3 ft. – 10 ft.	Wide	Thick
More than 10 ft.	Very wide	Very thick

1. Spacing refers to the distance normal to the planes, of the described feature, which are parallel to each other or nearly so.

**Rock Quality Designator (RQD) <sup>1</sup>**

RQD, as a percentage	Diagnostic description
Exceeding 90	Excellent
90 – 75	Good
75 – 50	Fair
50 – 25	Poor
Less than 25	Very poor

**Joint Openness Descriptors**

Openness	Descriptor
No Visible Separation	Tight
Less than 1/32 in.	Slightly Open
1/32 to 1/8 in.	Moderately Open
1/8 to 3/8 in.	Open
3/8 in. to 0.1 ft.	Moderately Wide
Greater than 0.1 ft.	Wide

1. RQD (given as a percentage) = length of core in pieces 4 inches and longer / length of run

References: American Society of Civil Engineers. Manuals and Reports on Engineering Practice - No. 56. Subsurface Investigation for Design and Construction of Foundations of Buildings. New York: American Society of Civil Engineers, 1976. U.S. Department of the Interior, Bureau of Reclamation, Engineering Geology Field Manual.

October 10, 2018



Turtlecreek Township  
670 N State Rt 123  
Lebanon, Ohio 45036

Attn: Ms. Tammy Boggs - Fiscal Officer  
P: [513] 932-4902  
C: [513] 349-4417  
E: tboggs@turtlecreektownship.org

Re: Geotechnical Report and Construction Drawings  
Slope Movement Evaluation- 1204 Liberty-Keuter Road  
Turtlecreek Township, Warren County, Ohio  
Terracon Project No. N1185161

Dear Ms. Boggs:

The purpose of this letter is to summarize our field observations, engineering analyses, our recommendations and construction drawings concerning the lateral hillside movement which is occurring on the downslope (west) side of N. Liberty Kueter Road in proximity to the address 1204 Liberty Kueter Road, Turtlecreek Township, Warren County, Ohio.

Based on our site visit and discussions in the field, we understand that this section of the roadway became unstable in March 2018. Field observation indicates the cause of the failure is due to erosion at the toe of the steep slope due the creek. The active landslide area at the time of our initial site visit on April 6, 2018 is approximately 120 feet wide at the toe of the slope (or wherever the measurement was made), with an additional 150 to 200 feet to the North that has an eroded slope toe and may also move in the future. Currently the head-scarp of the landslide is along the west edge of the roadway with distressed pavement noted in the western half of the southbound lane. The conditions observed on April 6, 2018 are shown in the photos on page 2.

The Terracon scope of work for this project consisted of drilling three soil test borings (B-1 to B-3) in the distressed area to define general near-surface soil conditions and to provide drilled pier design and construction drawings for remediation. Based on subsurface conditions encountered at the test boring locations, it was noted that variable soil conditions were encountered in the borings at different depths. No bedrock was encountered within the maximum 45-foot depth explored.

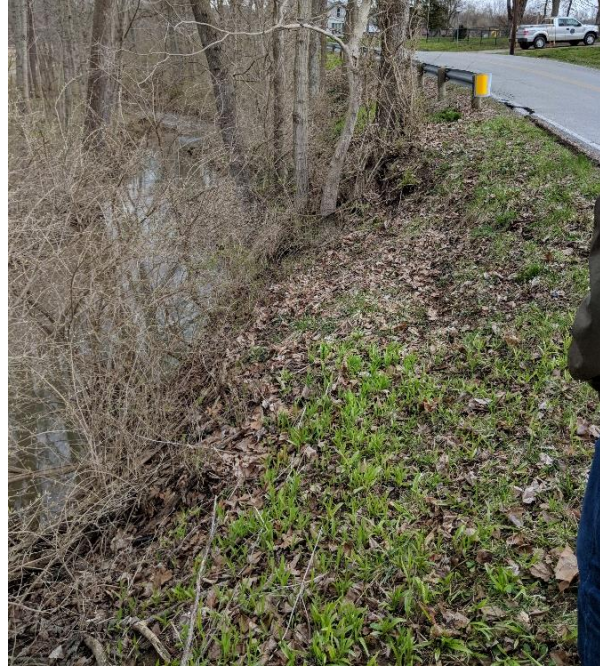
In general, the test borings encountered existing fill soils underlain by native alluvial soils including both cohesive soils and non-cohesive granular soils. The borings were completed near the western edge of the existing pavement, and the asphalt thickness varied from 8 to 12 inches, underlain by about 3.5 feet of fill soils. No crushed stone aggregate base was encountered at any

Terracon Consultants Inc., 611 Lunken Park Drive, Cincinnati, Ohio 45226  
P [513] 321-5816 F [513] 321-4540





of the test boring locations. Silt with sand and cohesive lean clay of stiff to hard consistency was encountered in all three borings, which is underlain by dense to very dense poorly graded sand with variable amounts of gravel at a depth of about 33.5 feet below pavement level.



**Photo 1:** Site conditions observed on April 6, 2018

## **Engineering Analyses**

Using the data developed in the field and laboratory, together with the site specific topographic survey data as prepared by Warren County Engineer's Office, engineering analyses for a drilled pier retaining wall has been completed and is presented in this report. The topo plan shows the roadway grade along the proposed drilled pier wall alignment range from a reference elevation of about 94 feet to 98 feet, whereas the creek level is near a reference elevation of 82 feet. Thus, the roadway embankment is typically about 12 to 16 feet high with grades typically on an slope of about 3H:1V. A shallow depth of water was flowing in the creek at the time of our April 2018 site visit, however we understand that this creek often flash floods. Based on the slope geometry, we anticipate a relatively shallow slope failure has occurred, which is attributed to erosion which has occurred in the creekbank at the toe of slope.

Engineering analyses were performed using the computer-aided program L-Pile (Version 6.37). We performed analyses for 30-inch diameter drilled piers of variable lengths, with various beam and cage reinforcement alternatives, with a controlling design factor of 3-inch of tolerable lateral deflection at the pier head.

Based on our analyses, we recommend 30-inch diameter piers with a length of 30 feet, drilled on 6'-3" centers. Reinforcement should consist of either a 50 ksi steel HP 14x89 section or a cage consisting of 60 ksi steel of one layer of six #8 deformed bars on the tension side. This design yields a calculated long-term lateral deflection of about 2.6 inches (with steel section reinforcement) or 1.6 inches (with cage reinforcement). Based on field observations, we recommend that the pier wall extend about 200 feet, from (Anurupa – need to be specific on this begin and end – and also show this on Sheet 1 of the drawings) Station 11+45 to Station 13+45 along the centerline of North Liberty Kueter Road. We understand that Turtlecreek Township may construct this wall in phases based on available funding. We say on page 1 that the failure is 120 feet long

From our site visit and the provided drawings, rather steep slopes to the creek were observed from about Project Station 0+00 to 1+00, beyond which the slopes flattened out. We recommend that the lagging for the pier wall consist of two unreinforced 30-inch diameter plug piers between each set of structural piers which extend to the elevations shown in the provided construction drawings.

The general notes have been included in the attached construction drawings. A shallow paved ditch to promote positive drainage and to minimize infiltration of surface water below the asphalt pavement, should be considered on the upslope (east) side of the roadway to reduce surface water flow towards the slide area.

Closing Remarks

The information presented in this report was used to prepare construction drawings for this project. We are available at any time to meet at the site and discuss this plan with Warren County Engineer's Office representatives, contractors and subcontractors. Please call if you would like to discuss.

Respectfully submitted,  
**Terracon Consultants, Inc.**

Anurupa S. Kumar, EIT  
Staff Geotechnical Engineer

David W. Westendorf, P.E.  
Senior Associate



George C. Webb, P.E., LEED AP  
Senior Principal

# BORING LOG NO. B-1

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. N1185161 N. LIBERTY-KEUTER.GPJ TERRACON\_DATA TEMPLATE.GDT 7/20/18

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4484° Longitude: -84.1518°  Reference Surface Elev: 95 (Ft.) +/- Approximate Surface Elev: 807 (Ft.) +/-							LL-PL-PI
	ELEVATION (Ft.)							
1.0	<b>ASPHALT (8 INCHES)</b>	806+/-						
3.5	<b>FILL - SILTY SAND (ML)</b> , trace fine gravel, trace cinder, brown, medium dense	803.5+/-		X	7-16-8 N=24		5	
6.0	<b>SILT WITH SAND (ML)</b> , trace clay, brown, medium dense	801+/-	5	X	4-4-6 N=10		13	
8.5	<b>SILT WITH SAND (ML)</b> , trace clay, brown, loose	798.5+/-		X	4-4-5 N=9		15	
11.0	<b>LEAN CLAY (CL)</b> , trace fine sand, brown, very stiff	796+/-	10	X	3-4-8 N=12	3.75 (HP)	12	
13.5	<b>LEAN CLAY (CL)</b> , trace fine sand, brown and gray, hard	793.5+/-		X	4-7-7 N=14	4.0 (HP)	15	28-15-13
16.0	<b>LEAN CLAY (CL)</b> , trace fine gravel, gray, very stiff	791+/-	15	X	3-3-7 N=10	4.0 (HP)		
20.0	<b>LEAN CLAY (CL)</b> , trace fine gravel, gray, very stiff		20	X	2-3-5 N=8	2.75 (HP)		
25.0	<b>LEAN CLAY (CL)</b> , trace fine gravel, gray, very stiff		25	X	3-3-20 N=23	2.75 (HP)		
28.0	<b>LEAN CLAY (CL)</b> , trace fine gravel, gray, very stiff			X	20-27-28 N=55	3.0 (HP)		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

- ▽ Water encountered at 42 ft during drilling.
- ▽ Water encountere at 36 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161

# BORING LOG NO. B-1

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4484° Longitude: -84.1518°							LL-PL-PI
	Reference Surface Elev: 95 (Ft.) +/- Approximate Surface Elev: 807 (Ft.) +/-							
	ELEVATION (Ft.)							
<b>LEAN CLAY (CL)</b> , trace fine gravel, gray, very stiff <i>(continued)</i>	778.5+/-							
<b>LEAN CLAY (CL)</b> , gray, very stiff	773.5+/-	30	X		4-4-12 N=16	2.75 (HP)		
<b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , trace silt, brown, dense	768.5+/-	35	X		23-50/3"			
<b>SILT (ML)</b> , with limestone fragment, gray, dense	763.5+/-	40	X		14-14-16 N=30			
<b>POORLY GRADED SAND (SP)</b> , gray, medium dense	762+/-	45	X		7-9-11 N=20			
<b>Boring Terminated at 45 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

- ▽ Water encountered at 42 ft during drilling.
- ▽ Water encountere at 36 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. N1185161 N. LIBERTY-KEUTER.GPJ TERRACON\_DATA TEMPLATE.GDT 7/20/18

# BORING LOG NO. B-2

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL. N1185161 N. LIBERTY-KEUTER.GPJ TERRACON\_DATATEMPLATE.GDT 7/20/18

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4486° Longitude: -84.1517°							LL-PL-PI
	Reference Surface Elev: 96 (Ft.) +/- Approximate Surface Elev: 808 (Ft.) +/-							
	DEPTH	ELEVATION (Ft.)						
1.0	<b>ASPHALT (12 INCHES)</b>	807+/-						
3.5	<b>FILL - LEAN CLAY WITH SILT (CL)</b> , trace roots, trace cinders, brown	804.5+/-		X	6-4-5 N=9		8	
6.0	<b>LEAN CLAY WITH SILT (CL)</b> , brown and gray, stiff	802+/-	5	X	4-3-5 N=8	3.0 (HP)	18	
8.5	<b>LEAN CLAY WITH SILT (CL)</b> , brown, stiff	802+/-		X	3-4-4 N=8	3.75 (HP)	15	
11.0	<b>LEAN CLAY WITH SILT (CL)</b> , grayish brown, very stiff	799.5+/-	10	X	2-5-6 N=11	3.5 (HP)	15	
15.0	<b>LEAN CLAY WITH SILT (CL)</b> , gray, very stiff	797+/-		X	2-4-7 N=11	2.5 (HP)		25-14-11
20.0			15	X	3-3-5 N=8	3.0 (HP)		
25.0				X	4-4-7 N=11	3.5 (HP)		
27.0			20	X	3-4-7 N=11	3.0 (HP)		24-15-9
30.0				X	13-17-19 N=36	3.0 (HP)		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

No water encountered during drilling.

Water encountere at 27 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161

# BORING LOG NO. B-2

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4486° Longitude: -84.1517°							LL-PL-PI
DEPTH	Reference Surface Elev: 96 (Ft.) +/- Approximate Surface Elev: 808 (Ft.) +/-	ELEVATION (Ft.)						
<b>LEAN CLAY WITH SILT (CL)</b> , gray, very stiff <i>(continued)</i>		30	▽	X	5-7-7 N=14	3.5 (HP)		
<b>POORLY GRADED SAND (SP)</b> , trace gravel, trace silt, brown, very dense		35		X	7-12-40 N=52			
<b>Boring Terminated at 35 Feet</b>								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

No water encountered during drilling.

▽ Water encountere at 27 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161

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# BORING LOG NO. B-3

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - N1185161 N. LIBERTY-KEUTER.GPJ TERRACON\_DATATEMPLATE.GDT 7/20/18

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4489° Longitude: -84.1516°  Reference Surface Elev: 101 (Ft.) +/- Approximate Surface Elev: 813 (Ft.) +/-							LL-PL-PI
	ELEVATION (Ft.)							
1.0	<b>ASPHALT (12 INCHES)</b>	812+/-						
1.0 - 3.5	<b>LEAN CLAY WITH SILT (CL)</b> , dark brown, stiff			X	2-1-1 N=2	2.5 (HP)	24	
3.5 - 6.0	<b>POORLY GRADED SAND WITH CLAY (SP)</b> , trace silt, brown, loose	809.5+/-		X	1-2-1 N=3		13	
6.0 - 8.5	<b>POORLY GRADED SAND WITH CLAY (SP)</b> , trace silt, brown, very stiff	807+/-		X	3-4-6 N=10		13	
8.5 - 10.0	<b>LEAN CLAY WITH SILT (CL)</b> , trace fine gravel, trace fine sand, brown, very stiff	804.5+/-		X	2-5-7 N=12	3.0 (HP)	12	17-14-3
10.0 - 15.0				X	10-8-9 N=17	2.75 (HP)		
15.0 - 20.0				X	4-5-8 N=13	3.5 (HP)		
20.0 - 25.0				X	6-5-9 N=14	3.5 (HP)		24-13-11
25.0 - 27.0				X	3-5-8 N=13	3.5 (HP)		
27.0 - 29.0				X	4-5-9 N=14	3.5 (HP)		
29.0 - 31.0				X	3-6-7 N=13	3.5 (HP)		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

No water encountered during drilling.

∇ Water encountere at 27 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161



# BORING LOG NO. B-3

**PROJECT:** N. Liberty-Keuter Rd Landslide

**CLIENT:** Turtlecreek Township  
Lebanon, OH

**SITE:** 1323 N. Liberty Keuter Rd.  
Turtlecreek Township, OH

GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a>	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
	Latitude: 39.4489° Longitude: -84.1516°							LL-PL-PI
	Reference Surface Elev: 101 (Ft.) +/- Approximate Surface Elev: 813 (Ft.) +/-							
	DEPTH ELEVATION (Ft.)							
	<b>LEAN CLAY WITH SILT (CL)</b> , trace fine gravel, trace fine sand, brown, very stiff <i>(continued)</i>	33.5	▽	X	4-4-5 N=9	3.5 (HP)		
		30		X	4-8-12 N=20	3.5 (HP)		
	<b>POORLY GRADED SAND (SP-SM)</b> , with gravel, trace silt, brown, very dense	33.5		X	9-30-50 N=80			
		35						
	<b>POORLY GRADED SAND (SP)</b> , with limestone fragments, gray and brown, very dense	38.5		X	25-37-21 N=58			
		40.0						
<b>Boring Terminated at 40 Feet</b>		40						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

No water encountered during drilling.

▽ Water encountere at 27 feet upon completion.



Boring Started: 05-31-2018

Boring Completed: 05-31-2018

Drill Rig: Truck-mounted

Driller: KH/MH

Project No.: N1185161

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# Field Exploration and Preliminary Geotechnical Engineering Report

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**Warren County Landslide Remediation – Various Sites**

**Warren County, Ohio**

May 27, 2020

Terracon Project No. N1195431

**Prepared for:**

Warren County Engineer's Office

Lebanon, Ohio

**Prepared by:**

Terracon Consultants, Inc.

Cincinnati, Ohio



May 27, 2020

Warren County Engineer's Office  
210 West Main Street  
Lebanon, Ohio 45036



Attn: Mr. Roy Henson, PE, PS  
P: (513) 673 9789  
E: roy.henson@co.warren.oh.us

Re: Field Exploration and Preliminary Geotechnical Engineering Report  
Warren County Landslide Remediation – Various Sites  
Warren County, Ohio  
Terracon Project No. N1195431

Dear Mr. Henson:

We have completed the Field Exploration and Preliminary Geotechnical Engineering services for the above referenced-project. This study was performed in general accordance with Terracon Proposal No. PN1195430 dated January 7, 2020 and authorized on February 18, 2020. This report presents the findings of the subsurface exploration and provides preliminary geotechnical recommendations concerning design and construction of drilled shaft retaining walls for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

**Terracon Consultants, Inc.**

Anurupa S. Kumar, EIT  
Staff Geotechnical Engineer

David W. Westendorf, P.E.  
Senior Associate

Jeffrey D. Dunlap, P.E.  
Senior Engineer

Terracon Consultants, Inc. 611 Lunken Park Drive Cincinnati, Ohio 45226  
P (513) 321 5816 F (513) 321 0294 terracon.com

Environmental



Facilities



Geotechnical



Materials

## REPORT TOPICS

<b>INTRODUCTION</b> .....	<b>1</b>
<b>SITE CONDITIONS</b> .....	<b>2</b>
<b>PROJECT DESCRIPTION</b> .....	<b>3</b>
<b>GEOTECHNICAL CHARACTERIZATION</b> .....	<b>3</b>
<b>GEOTECHNICAL OVERVIEW</b> .....	<b>5</b>
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<b>FIGURES</b> .....	<b>9</b>

**Note:** This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the **GeoReport** logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

## ATTACHMENTS

**EXPLORATION AND TESTING PROCEDURES**  
**SITE LOCATION AND EXPLORATION PLANS**  
**EXPLORATION RESULTS**  
**SUPPORTING INFORMATION**

**Note:** Refer to each individual Attachment for a listing of contents.

# Field Exploration and Preliminary Geotechnical Engineering Report

## Warren County Landslide Remediation – Various Sites

Warren County, Ohio

Terracon Project No. N1195431

May 27, 2020

### INTRODUCTION

This report presents the results of our subsurface exploration and preliminary geotechnical engineering services performed for the proposed retaining walls to be located at various sites in Warren County, Ohio. Terracon first visited the project sites with Mr. Roy Henson (Warren County Engineer) on December 3, 2019 to observe the conditions at the existing landslides. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil and rock conditions
- Short-term groundwater conditions
- Drilled shaft retaining wall design and construction

The geotechnical engineering scope of services for this project included the advancement of:

- One boring (B-1) on Olive-Branch Road to a depth of about 21 feet below existing site grades. Boring B-2 was also planned on Olive-Branch Road but was not completed due to insufficient clearance from overhead utilities. Instead, multichannel analysis of surface waves (MASW) geophysical testing was performed along Olive-Branch Road within the slide limits to obtain the top of bedrock profile.
- Two borings (B-3 and B-4) on the upslope portion of Oregonia Road to depths varying from about 34.6 to 38.8 feet below existing site grades.
- Two borings (B-5 and B-6) on the downslope portion of Oregonia Road to depths varying from about 20 to 25 feet below existing site grades.
- One boring (B-7) on East Lower Springboro Road to a depth of about 23.5 feet below existing site grades.

Maps showing the site and boring locations are included in the **Site Location** and **Exploration Plan** sections, respectively. The results of laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section of this report.

The shear wave velocity cross-section from the MASW geophysical testing is also displayed in **Exploration Results**. The different seismic velocities were used to identify the top of bedrock

and changes in material/lithology. In general, low velocity zones (blue to light green on the color scale) are indicative of overburden and higher velocity zones (dark green to red on the color scale) are indicative of increasingly competent bedrock. The cross-section indicates that top of rock ranges from 10 to 11 feet below the existing grade, matching the data collected in Test Boring B-1.

## SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly-available geologic and topographic maps.

Item	Description
<b>Parcel Information</b>	The project is located at various sites in Warren County, Ohio. The sites are along Olive Branch Road, East Lower Springboro Road and 2 sites along Oregonia Road.
<b>Approximate Length of Roadway Affected by Landslide</b>	<ul style="list-style-type: none"> <li>■ Olive Branch Road: 125 feet</li> <li>■ East Lower Springboro Road: 50 feet</li> <li>■ Oregonia Road Site 1: 100 feet</li> <li>■ Oregonia Road Site 2: 100 feet</li> </ul>
<b>Approximate Site Coordinates of Landslide Locations</b>	<ul style="list-style-type: none"> <li>■ Olive Branch Road: 39.45038°, -84.092782°</li> <li>■ East Lower Springboro Road: 39.518902°, -84.100549°</li> <li>■ Oregonia Road Site 1: 39.458181°, -84.095197°</li> <li>■ Oregonia Road Site 2: 39.458319°, -84.094311°</li> </ul>
<b>Existing Improvements</b>	Existing roadway.
<b>Current Ground Cover</b>	Asphalt/gravel/dirt pavement, brush/trees
<b>Existing Topography</b> (from Google Earth Pro)	<ul style="list-style-type: none"> <li>■ Olive Branch Road: Ground surface elevations range from about 750 feet to about 780 feet along the roadway and slope downward to the north to about 735 feet to 760 feet.</li> <li>■ East Lower Springboro Road: Ground surface elevations range from about 740 feet to about 760 feet along the roadway and slope downward to the east to about 740 feet to 810 feet.</li> <li>■ Oregonia Road Site 1: Ground surface elevations range from about 815 feet to about 830 feet along the roadway and slope downward to the north.</li> <li>■ Oregonia Road Site 2: Ground surface elevations range from about 875 feet to about 850 feet along the roadway and slope downward to the north.</li> </ul>

## PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
<b>Information Provided</b>	<p>Terracon completed two site visits with Mr. Roy Henson on December 3, 2019 and December 12, 2019.</p> <p>The following reports and plans were provided by Mr. Roy Henson:</p> <ul style="list-style-type: none"> <li>■ Subsurface Investigation and Stabilization Plans for Slide Repair in Lower Springboro Road near Cincinnati-Columbus Road (by TesTech, dated July 22, 1997)</li> <li>■ CR22, Lower Springboro Rd. and CR45, Middleboro Rd. Landslides (by Soil Nail Launcher Inc., dated January 19, 2006)</li> <li>■ Lower Springboro Road Water Improvement Project, PH II (by Jones Warner Consultants, Inc, dated November 11, 2019)</li> <li>■ Subsurface Investigation and Recommendations for Olive Branch Road Slide Repair Near Corwin Road (by TesTech, dated April 22, 1996)</li> <li>■ Roadway Stabilization Plan on Olive Branch Road near Corwin Road (by CESO, dated April 18, 1997)</li> <li>■ Report of Geotechnical Investigation Oregonia Road Landslide (by ATEC Associates, Inc, dated May 26, 1994)</li> </ul>
<b>Project Description</b>	<p>This study was performed to investigate the subsurface conditions and provide recommendations for remediation of the landslide at each of the locations.</p>
<b>Estimated Start of Construction</b>	<p>2020/2021</p>

## GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic settings at each site and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	FILL - SAND	with gravel and clay, with asphalt and limestone fragments, brown
2	LEAN CLAY	trace gravel and sand, brown, soft to medium stiff
3	LEAN CLAY (Glacial Till)	with gravel and sand, brown/ brownish gray, stiff to hard
4	LEAN CLAY (Residuum)	with limestone fragments, trace relic bedding planes, brownish gray, very stiff to hard
5	WEATHERED BEDROCK	brown and gray, moderately weathered, extremely weak shale and moderately strong limestone
6	UNWEATHERED BEDROCK	gray, slightly weathered to unweathered, very weak to weak shale and strong limestone

Glacial till is a dense conglomerate of silt, clay, sand and gravel that has been mixed, deposited and consolidated by the actions of glacial ice movement. It is commonly encountered with cobble-size fragments and meltwater channel deposits of silt and sand. These channels occasionally transmit groundwater. Glacial till is typically overconsolidated due to its depositional method.

Residual soils (residuum) are derived by near-surface weathering of the parent bedrock to a cohesive soil and are characterized by a soil-like consistency with trace bedding planes and horizontally-aligned limestone fragments indicative of the parent material.

Based on published bedrock literature, the overburden soils at the site are underlain by bedrock belonging to the Ordovician age Grant Lake and Fairview Formation, which typically comprises of interbedded shale (50 to 90%) and limestone (10 to 50%). The bedrock encountered in the test boring B-1 at the Olive-Branch Road site comprised of 78% shale and 21% limestone. The bedrock encountered in the test borings B-3 through B-6 at the Oregonia Road site comprised of 63 to 78% shale and 22 to 37% limestone. The bedrock encountered in the test boring B-7 at the Lower-Springboro Road site comprised of 78% shale and 22% limestone. The limestone beds/layers at the various sites were up to 3 to 5 inches thick.

Selected rock samples from the test borings were tested for unconfined compressive strength. Test results ranged from about 3 tsf to 63.5 tsf. At Borings B-1 and B-5, unconfined compressive



strengths of tested samples ranged from 2.9 to 3.0 tsf, respectively. It is suspected that the samples from Borings B-1 and B-5 may have been damaged during sample preparation for testing, and our experience in the area indicates the in-place unconfined compressive strengths for the shale bedrock would be higher.

The boreholes were observed while drilling and after completion for the presence and level of groundwater. The water levels observed in the boreholes can be found on the boring logs in **Exploration Results**. However, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. The water added to the boreholes as a drilling fluid during rock coring operations may have also affected the groundwater readings at the completion of drilling. Perched groundwater is often encountered at the existing fill/natural soil interface, within existing fill, at the overburden soil/bedrock interface or within seams in glacial soils, bedding planes or fractures within the bedrock. As a result, perched water could be encountered during construction. The gray color of the glacial till encountered below about 9.5 feet (El. 866.5+/-) in Boring B-3 could be an indication of groundwater. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. Long-term observations in piezometers, or observation wells sealed from the influence of surface water, are often required to define groundwater levels in profiles of this type.

## GEOTECHNICAL OVERVIEW

Based on field observations, test borings and our experience with similar projects, preliminarily a soldier pile and lagging wall (Drilled Shaft Retaining Wall) may be considered for the landslide remediation.

- Olive-Branch Site
  - Depth of slide surface below existing grades considered for design: 8 feet
  - Depth to unweathered (gray) shale and limestone bedrock below existing site grades: Varies from 10 to 11 feet
  - Drilled Shaft: 24-inch diameter (minimum) drilled shafts spaced at approximately 6.25-foot center-to-center spacing; (2)-30-inch plug shaft lagging
  - Drilled Shaft Beam Reinforcement (Alternate 1): HP12x53 (Grade 50 steel) soldier beam
  - Drilled Shaft Cage Reinforcement (Alternate 2): Rectangular cage (Grade 60 steel) with dimension 11"W x 13"D and (4) #8 bars in tension and (2) #8 bars in compression; Stirrups: #3 bars spaced at 13-inches center-to-center
  - Structural drilled shaft estimated length is 20 feet with a minimum socket of 9 feet into unweathered bedrock

- Plug shaft estimated length is 11.5 to 12 feet or a minimum of 6-inches into unweathered shale and limestone bedrock
  
- Oregonia Road Site 1
  - Depth of slide surface below existing grades considered for design: 8 feet
  - Depth to weathered (brown and gray/brown) shale and limestone bedrock below existing site grades: Approximately 22 feet
  - Depth to unweathered (gray) shale and limestone bedrock below existing site grades: Approximately 26 feet
  - Drilled Shaft: 24-inch diameter (minimum) drilled shafts spaced at approximately 6.25-foot center-to-center spacing; (2)-30-inch plug shaft lagging
  - Drilled Shaft Beam Reinforcement (Alternate 1): W14x74 (Grade 50 steel) soldier beam
  - Drilled Shaft Beam Reinforcement (Alternate 1A): HP14x73 (Grade 50 steel) soldier beam, if W14x74 in Alternate 1 is not readily available. *Structural shafts would need to be increased to 30-inch diameter for Alternate 1A.*
  - Drilled Shaft Cage Reinforcement (Alternate 2): Rectangular cage (Grade 60 steel) with dimension 11"W x 13"D and (6) #9 bars in tension and (2) #9 bars in compression; Stirrups: #3 bars spaced at 11-inches center-to-center
  - Structural drilled shaft estimated length is 30 feet with a minimum socket of 6 feet into weathered bedrock
  - Plug shaft estimated length is 24 feet or a minimum of 18-inches into weathered shale and limestone bedrock
  
- Oregonia Road Site 2
  - Depth of slide surface below existing grades considered for design: 8 feet
  - Depth to unweathered (gray) shale and limestone bedrock below existing site grades: Approximately 13 feet
  - Drilled Shaft: 24-inch diameter (minimum) drilled shafts spaced at approximately 6.25-foot center-to-center spacing; (2)-30-inch plug shaft lagging
  - Drilled Shaft Beam Reinforcement (Alternate 1): HP10x42 (Grade 50 steel) soldier beam
  - Drilled Shaft Cage Reinforcement (Alternate 2): Rectangular cage (Grade 60 steel) with dimension 11"W x 13"D and (5) #7 bars in tension and (2) #7 bars in compression; Stirrups: #3 bars spaced at 16-inches center-to-center
  - Structural drilled shaft estimated length is 20 feet with a minimum socket of 6 feet into unweathered bedrock
  - Plug shaft estimated length is 14 feet or a minimum of 6-inches into unweathered shale and limestone bedrock

■ East Lower Springboro Road

- Depth of slide surface below existing grades considered for design: 10 feet
- Depth to weathered (brown and gray/brown) shale and limestone bedrock below existing site grades: Approximately 12 feet
- Depth to unweathered (gray) shale and limestone bedrock below existing site grades: Approximately 17 feet
- Drilled Shaft: 24-inch diameter (minimum) drilled shafts spaced at approximately 6.25-foot center-to-center spacing; (2)-30-inch plug shaft lagging
- Drilled Shaft Beam Reinforcement (Alternate 1): HP10x42 (Grade 50 steel) soldier beam
- Drilled Shaft Cage Reinforcement (Alternate 2): Rectangular cage (Grade 60 steel) with dimension 11" W x 13" D and (2) #8 bars in tension and (4) #8 bars in compression; Stirrups: #4 bars spaced at 8-inches center-to-center
- Structural drilled shaft estimated length is 20 feet with a minimum socket of 6 feet into weathered bedrock
- Plug shaft estimated length is 14 feet or a minimum of 18-inches into weathered shale and limestone bedrock

If the depth to weathered shale and limestone bedrock is deeper than anticipated or if the gray shale and limestone is deeper than anticipated, the spacing between the structural shafts, socket lengths and the beam sections used for reinforcement of structural shafts will need to be re-evaluated.

Terracon is available to provide the retaining wall design drawings at your request. We request that we are provided with any finalized grading plans, topographic survey plans and any other pertinent information.

The **General Comments** section provides an understanding of the report limitations.

## GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, generally accepted geophysical practices and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

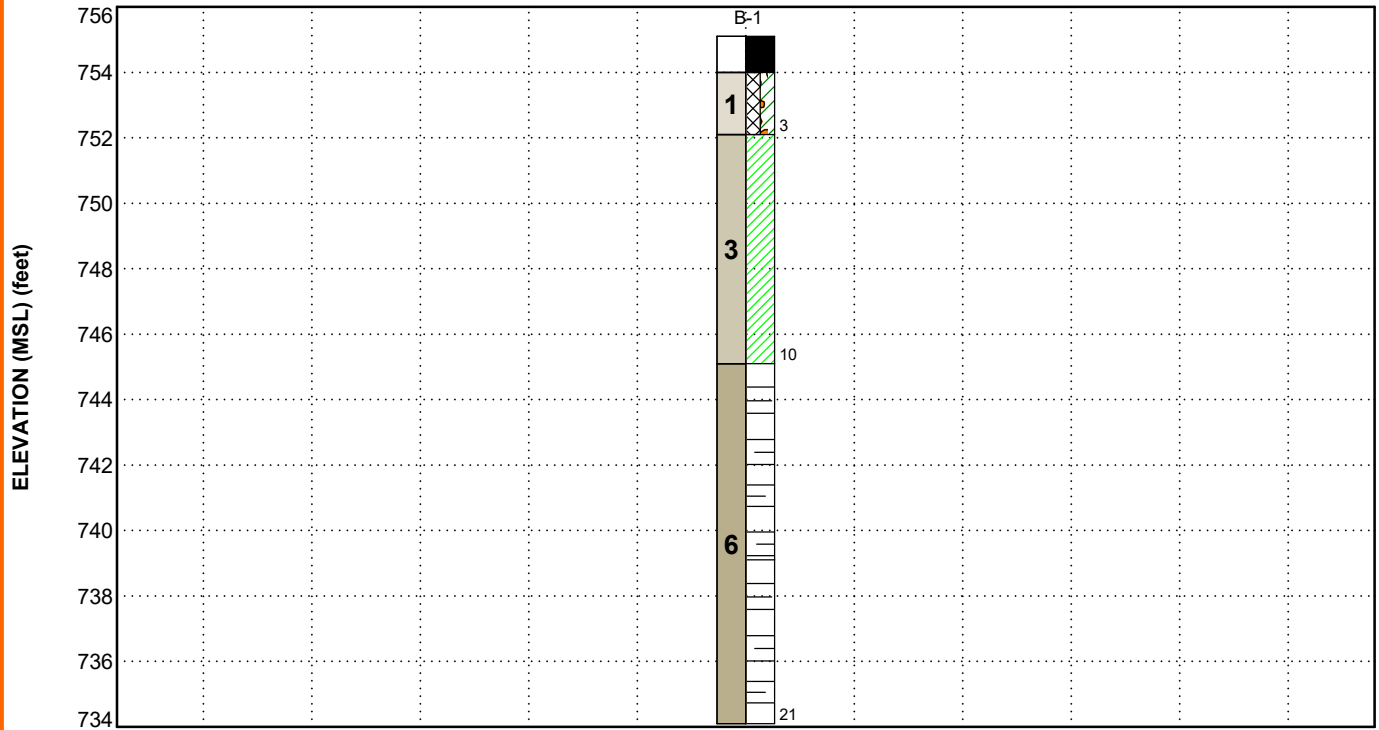
## FIGURES

### Contents:

GeoModel (4 pages)





## GEOMODEL

Warren County Landslide Exploration ■ Lebanon, OH  
Terracon Project No. N1195431



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

### LEGEND

-  Asphalt
-  Lean Clay
-  Poorly-graded Sand with Clay and Gravel Interbedded
-  Limestone and Shale 1

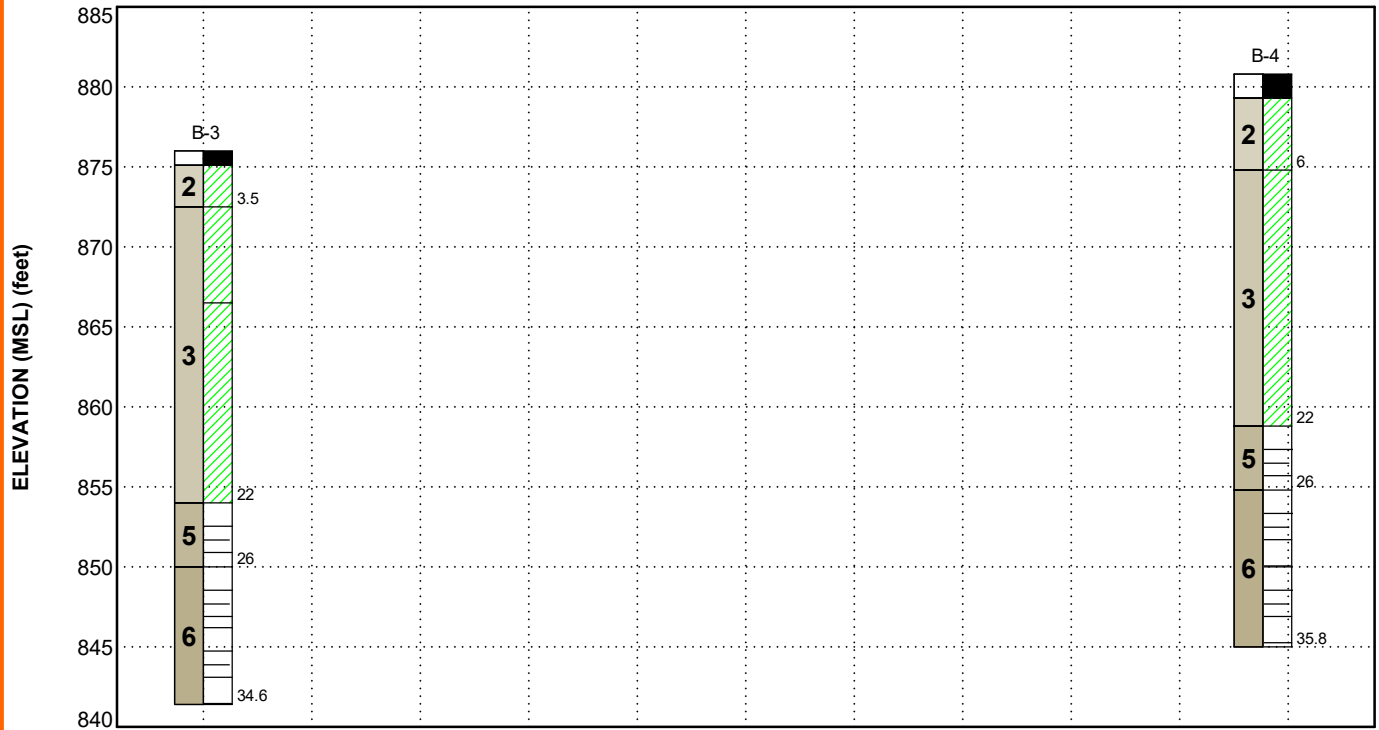
Model Layer	Layer Name	General Description
1	FILL - SAND	with gravel and clay, with asphalt and limestone fragments, brown
2	LEAN CLAY	trace gravel and sand, brown, soft to medium stiff
3	LEAN CLAY (Glacial Till)	some gravel and sand, brown/ brownish gray, stiff to hard
4	LEAN CLAY (Residuum)	with limestone fragments, trace relic bedding planes, brownish gray/gray , very stiff to hard
5	WEATHERED BEDROCK	brown and gray, moderately weathered, extremely weak shale and moderately strong limestone
6	UNWEATHERED BEDROCK	gray, slightly weathered to unweathered, very weak to weak shale and strong limestone

#### NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.

# GEOMODEL

Warren County Landslide Exploration ■ Lebanon, OH  
Terracon Project No. N1195431



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

### LEGEND

- Asphalt
- ▨ Interbedded
- Limestone and Shale 1
- ▨ Lean Clay

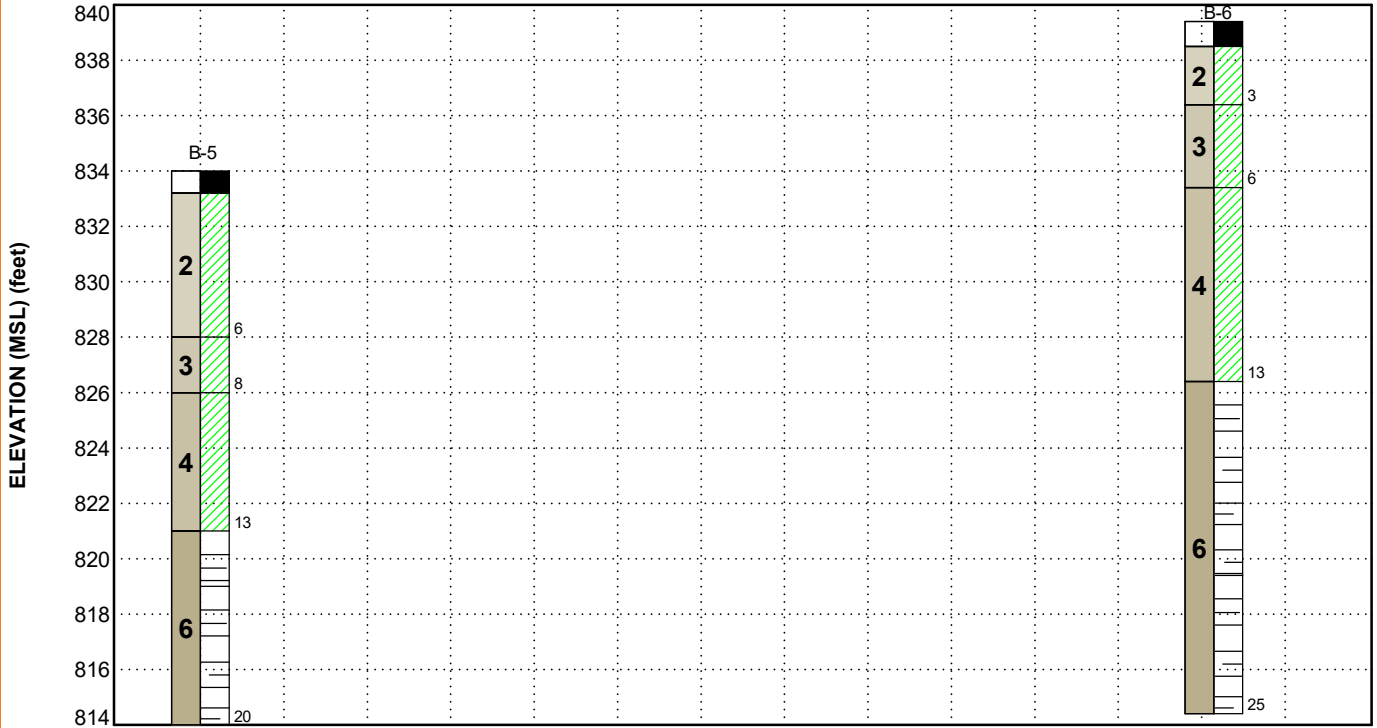
Model Layer	Layer Name	General Description
1	FILL - SAND	with gravel and clay, with asphalt and limestone fragments, brown
2	LEAN CLAY	trace gravel and sand, brown, soft to medium stiff
3	LEAN CLAY (Glacial Till)	some gravel and sand, brown/ brownish gray, stiff to hard
4	LEAN CLAY (Residuum)	with limestone fragments, trace relic bedding planes, brownish gray/gray , very stiff to hard
5	WEATHERED BEDROCK	brown and gray, moderately weathered, extremely weak shale and moderately strong limestone
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#### NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.

**GEOMODEL**

Warren County Landslide Exploration ■ Lebanon, OH  
 Terracon Project No. N1195431



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

**LEGEND**

- Asphalt
- ▨ Interbedded
- Limestone and Shale 1
- ▨ Lean Clay

Model Layer	Layer Name	General Description
1	FILL - SAND	with gravel and clay, with asphalt and limestone fragments, brown
2	LEAN CLAY	trace gravel and sand, brown, soft to medium stiff
3	LEAN CLAY (Glacial Till)	some gravel and sand, brown/ brownish gray, stiff to hard
4	LEAN CLAY (Residuum)	with limestone fragments, trace relic bedding planes, brownish gray/gray , very stiff to hard
5	WEATHERED BEDROCK	brown and gray, moderately weathered, extremely weak shale and moderately strong limestone
6	UNWEATHERED BEDROCK	gray, slightly weathered to unweathered, very weak to weak shale and strong limestone

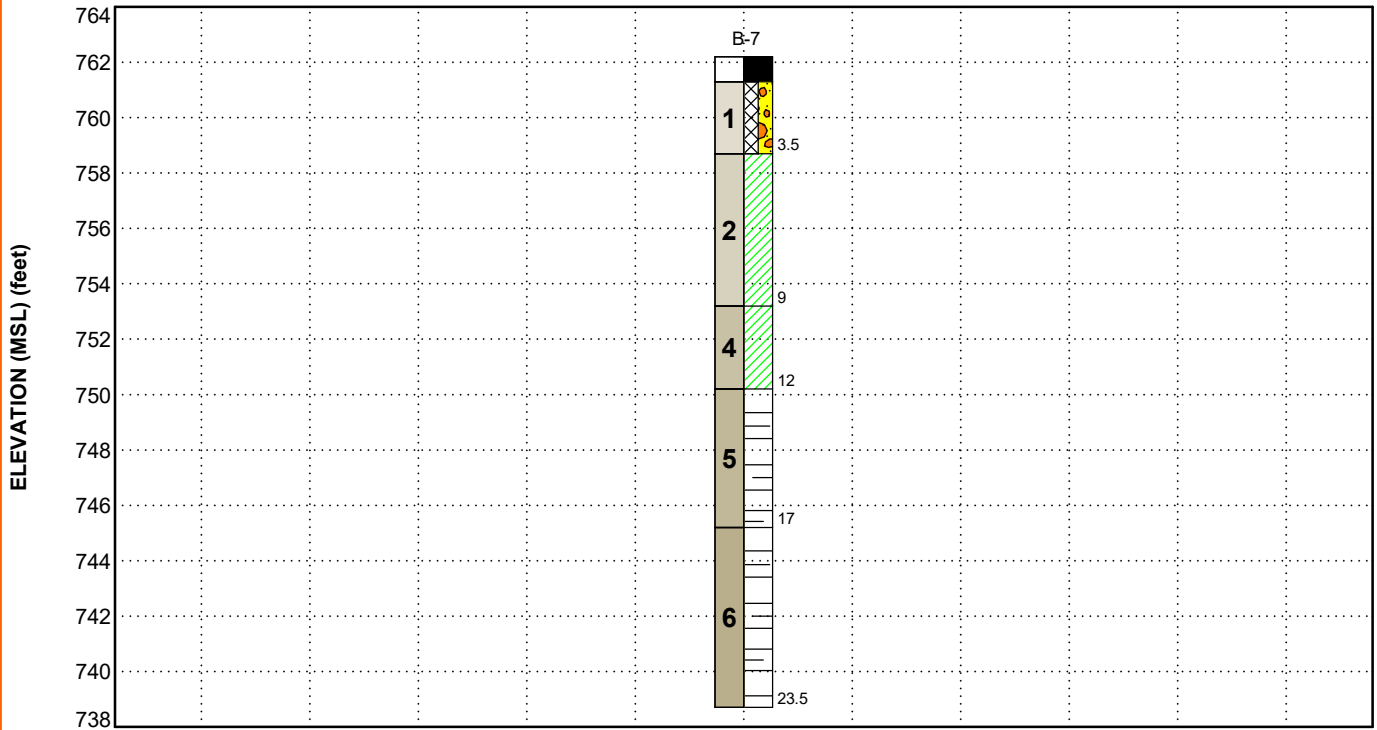
**NOTES:**

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.







## GEOMODEL

Warren County Landslide Exploration ■ Lebanon, OH  
Terracon Project No. N1195431



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

### LEGEND

 Asphalt	 Poorly-graded Sand with Gravel Interbedded
 Lean Clay	 Limestone and Shale 1

Model Layer	Layer Name	General Description
1	FILL - SAND	with gravel and clay, with asphalt and limestone fragments, brown
2	LEAN CLAY	trace gravel and sand, brown, soft to medium stiff
3	LEAN CLAY (Glacial Till)	some gravel and sand, brown/ brownish gray, stiff to hard
4	LEAN CLAY (Residuum)	with limestone fragments, trace relic bedding planes, brownish gray/gray , very stiff to hard
5	WEATHERED BEDROCK	brown and gray, moderately weathered, extremely weak shale and moderately strong limestone
6	UNWEATHERED BEDROCK	gray, slightly weathered to unweathered, very weak to weak shale and strong limestone

#### NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.

## ATTACHMENTS

## EXPLORATION AND TESTING PROCEDURES

### Field Exploration

The field exploration program consisted of the following:

Number of Exploration Locations	Approximate Depth (feet) <sup>1</sup>	Location
1	21	Edge of Roadway (Olive Branch Road)
2	34.6 to 35.8	Edge of Roadway (Oregonia Road Site 1)
2	20 to 25	Edge of Roadway (Oregonia Road Site 2)
1	23.5	Edge of Roadway (East Lower Springboro Road)

1. Below existing ground surface

As indicated previously, the planned second boring at the Olive Branch Road site could not be performed due to overhead utilities. In lieu of the second boring, multichannel analysis of surface waves (MASW) geophysical testing was performed along Olive-Branch Road within the slide limits to obtain the top of bedrock profile.

**Boring Layout and Elevations:** We used a handheld GPS equipment to locate the boring locations with an estimated horizontal and vertical accuracy of +/-1 feet.

**Subsurface Exploration Procedures:** We advanced the soil boring with a track-mounted drill rig using hollow stem augers. Four samples were obtained in the upper 10 feet of the test borings and at intervals of 5 feet thereafter. Soil sampling was performed using split-barrel sampling procedures. In the split barrel sampling procedure, a standard 2-inch outer diameter split barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration was recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, have been indicated on the boring logs at the test depths. The samples were placed in appropriate containers, taken to our soil laboratory for testing, and classified by a geotechnical engineer. In addition, we observed and recorded groundwater levels during drilling and sampling.

Upon encountering bedrock or refusal-to-drilling conditions, rock coring (using NQ2 rock core barrel) was performed at all the borings. A minimum of 5 feet of rock coring was performed at each of the test borings.

Our exploration team prepared field boring/sounding logs as part of standard drilling operations including sampling depths, penetration distances and other relevant sampling information. Field

logs include visual classifications of materials encountered during drilling, and our interpretation of subsurface conditions between samples. Final boring logs, prepared from field logs, represent the geotechnical engineer's interpretation, and include modifications based on observations and laboratory tests.

We backfilled the borings with auger cuttings after completion and the pavement was patched with cold-mix asphalt. Excess auger cuttings were dispersed in the general vicinity of the borehole. Because backfill material often settles below the surface after a period, we recommend boreholes are checked periodically and backfilled, if necessary. We can provide this service, or grout the boreholes for additional fees, at your request.

**Multichannel Analysis of Surface Waves (MASW):** Our method of investigation utilized a seismograph and a linear array of twenty-four 4.5Hz geophones to collect MASW data. MASW is performed by collecting surface waves created by a seismic source consisting of a sledgehammer striking an aluminum ground plate. The data is then processed using dispersion analysis software (SurfSeis, engineered by the Kansas Geological Survey) that extracts the fundamental-mode dispersion curve(s). The curves are inverted and modeled to yield a 1D shear-wave velocity profile along the array for a corresponding depth. Using subsets of geophones, many 1D profiles are created along an array and then combined to yield a 2D profile. These 2D profiles are then examined for changes in shear wave velocities to indicate the top of bedrock and potential karst features within the bedrock.

All geophysical testing methods rely on instrument signals to indicate physical conditions in the field. Signal information can be affected by on-site conditions beyond the control of the operator, such as, but not limited to, cultural features, standing water, high subsurface moisture content, and other buried objects. Interpretation of those signals is based on a combination of known factors combined with the experience of the operator and geophysical scientist evaluating the results. The provided depth measurements are estimations based on an estimation of the electrical properties of the subsurface material.

## **Laboratory Testing**

The project engineer reviewed the field data and assigned various laboratory tests to better understand the engineering properties of various soil and rock strata. Procedural standards noted below are for reference to methodology in general. In some cases, local practices and professional judgement require method variations. Standards noted below include reference to other related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

- ASTM D2166 Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens

Our laboratory testing program included examination of soil samples by an engineer. Based on the material's texture and plasticity, we have described and classified soil samples in accordance with the Unified Soil Classification System (USCS).

Bedrock samples obtained were classified using locally accepted practices for engineering purposes. Rock classification was conducted using locally accepted practices for engineering purposes. Boring log rock classification was determined using Terracon's Description of Rock Properties included in **Supporting Information**.

## **SITE LOCATION AND EXPLORATION PLANS**

### **Contents:**

Site Location Plan (2 pages)

Exploration Plan (3 pages)

Note: All attachments are one page unless noted above.

**SITE LOCATION 1**

Warren County Landslide Remediation – Various Sites ■ Warren County, Ohio  
May 27, 2020 ■ Terracon Project No. N1195431



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

**SITE LOCATION 2**

Warren County Landslide Remediation – Various Sites ■ Warren County, Ohio  
May 27, 2020 ■ Terracon Project No. N1195431

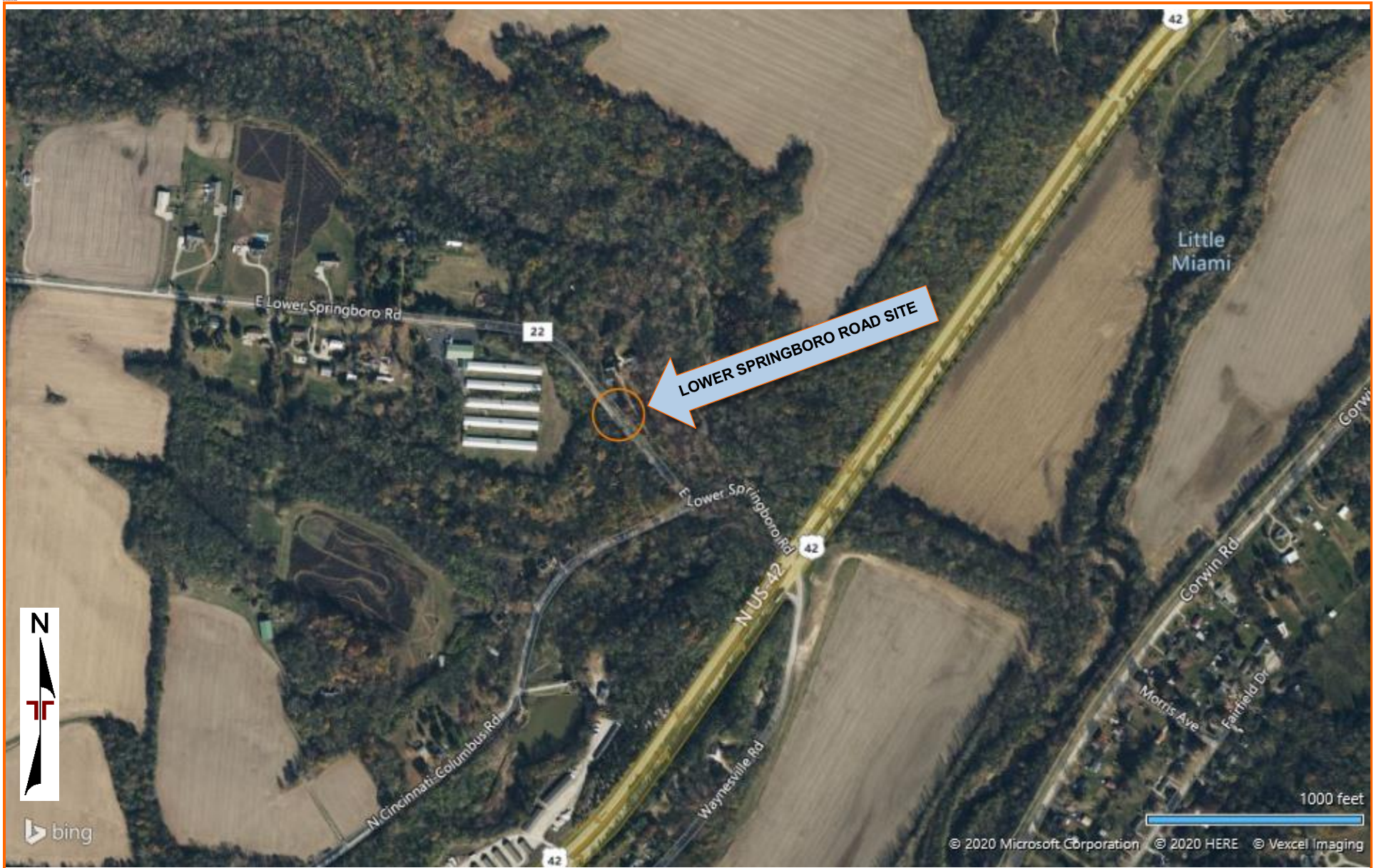


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS



**EXPLORATION PLAN 1**

Warren County Landslide Remediation – Various Sites ■ Warren County, Ohio  
May 27, 2020 ■ Terracon Project No. N1195431

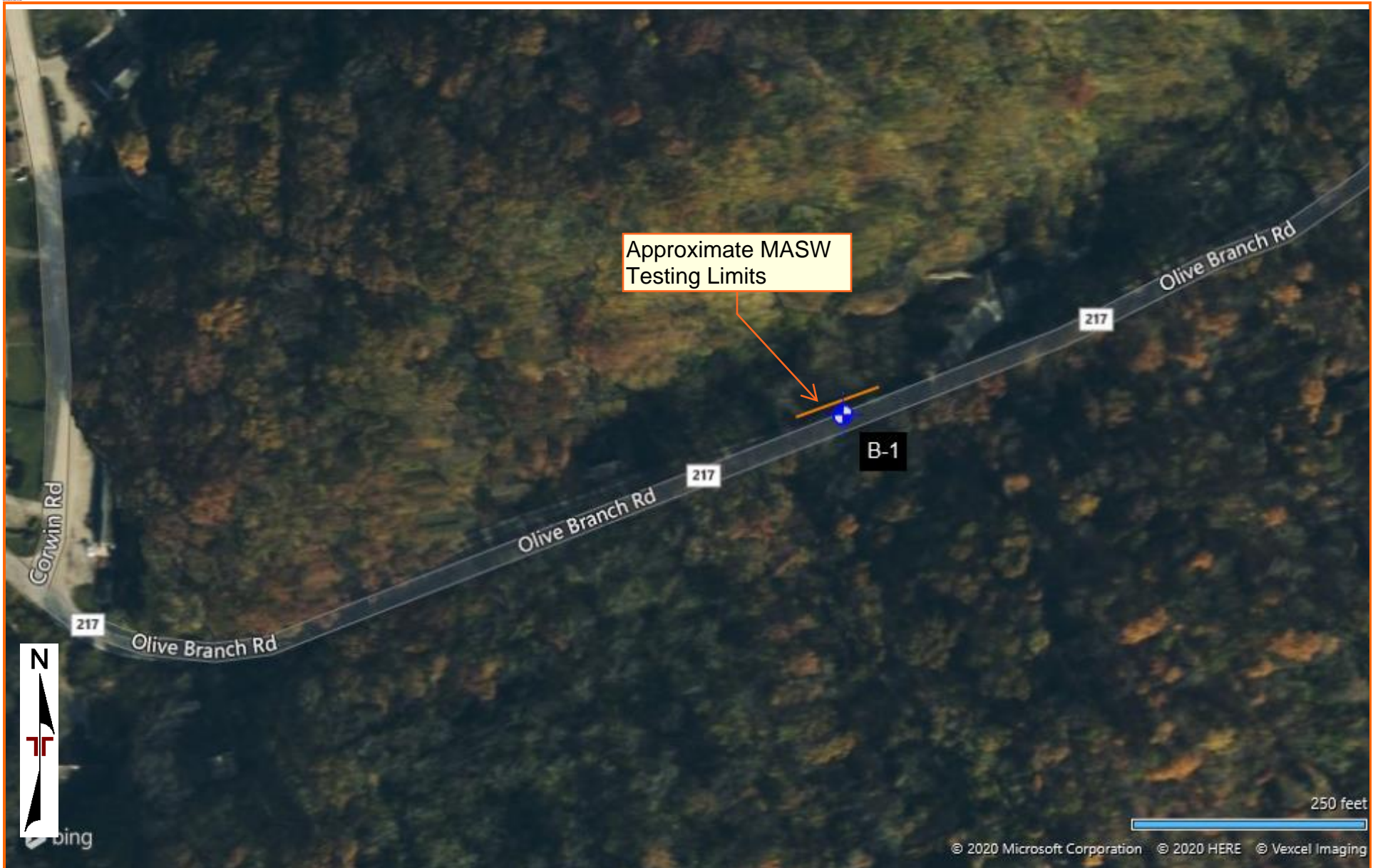


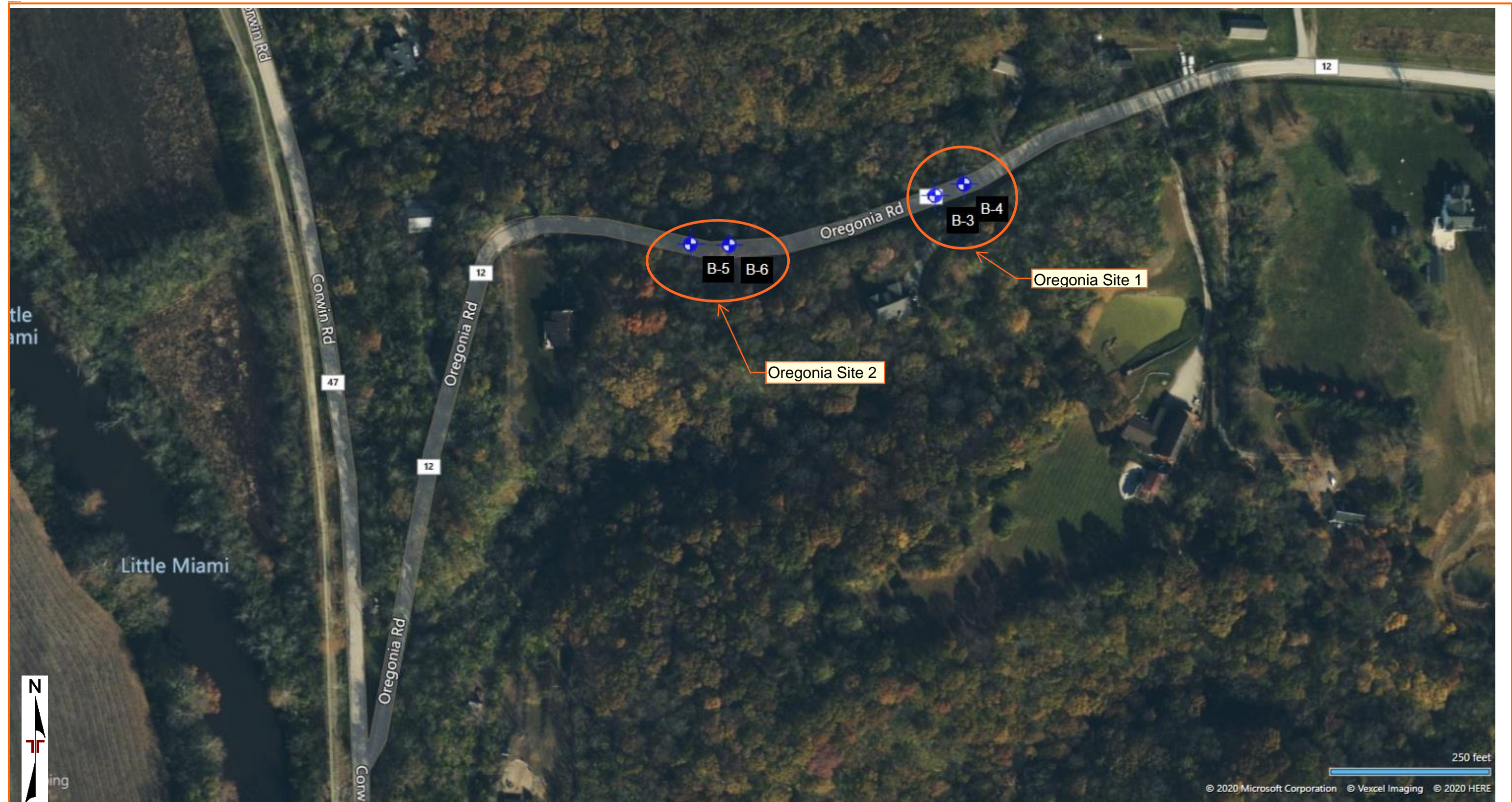
DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

**EXPLORATION PLAN 2**

Warren County Landslide Remediation – Various Sites ■ Warren County, Ohio

May 27, 2020 ■ Terracon Project No. N1195431



**EXPLORATION PLAN 3**

Warren County Landslide Remediation – Various Sites ■ Warren County, Ohio  
May 27, 2020 ■ Terracon Project No. N1195431

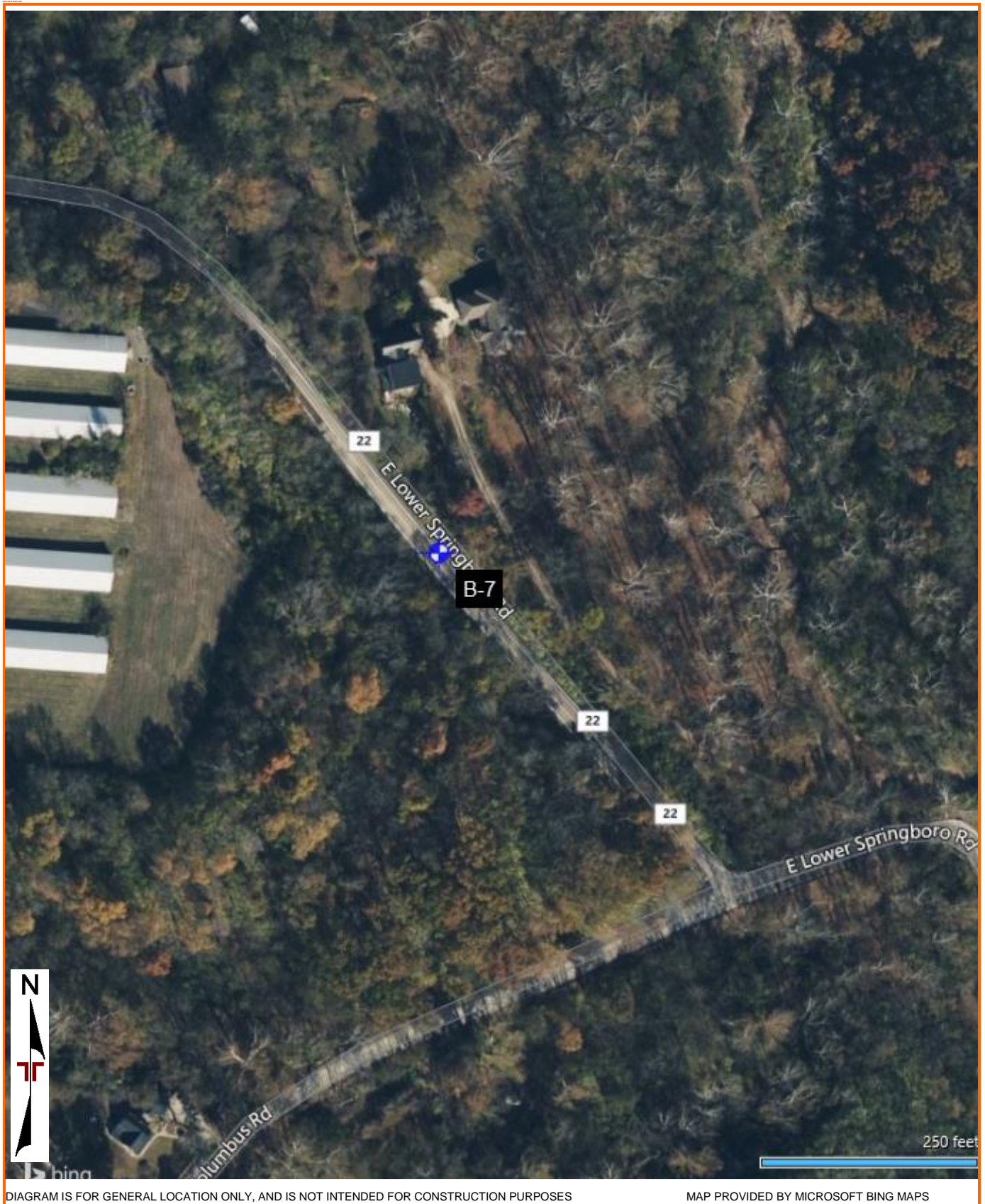


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

## **EXPLORATION RESULTS**

### **Contents:**

Boring Logs (B-1 through B-7)

Unconfined Compressive Strength of Rock (5 pages)

MASW Geophysical Testing Results

Note: All attachments are one page unless noted above.

# BORING LOG NO. B-1

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.450303° Longitude: -84.092989° Surface Elev.: 755.1 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
		<b>ASPHALT</b> , 14 inches	754										
1		<b>FILL - SAND WITH CLAY AND GRAVEL</b> , with asphalt and limestone fragments, brown	752		X	33	9-9-5 N=14						
3		<b>LEAN CLAY</b> , with gravel and sand, brownish gray, stiff to hard (Glacial Till)	5		X	55	3-5-7 N=12		3.25 (HP)		20		
3			10		X	77	5-9-15 N=24		4.25 (HP)		21		
3			10		X	67	9-14-14 N=28		4.5 (HP)		14		
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone	15		X	100	50/5"				13		
6		<b>INTERBEDDED SHALE AND LIMESTONE:</b> Shale (79%): gray, unweathered, very weak to weak, bed thickness ranging from ¼ inch to 6 inches Limestone (21%): light gray, unweathered, strong, bed thickness ranging from ¼ inch to 3 inches	20			58		25					
6			20			100		55		2.92	7	131	
		<b>Boring Terminated at 21 Feet</b>	734										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion .

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-23-2020

Boring Completed: 03-23-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

# BORING LOG NO. B-3

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458364° Longitude: -84.093963° Surface Elev.: 876.0 (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS
													LL-PL-PI
		DEPTH	ELEVATION (Ft.)										
		<b>ASPHALT</b> , 10 inches	0.9	875									
2		<b>LEAN CLAY</b> , with gravel and sand, brown, medium stiff to stiff	3.5	872.5	X	100	3-2-4 N=6		1.25 (HP)		20		25-14-11
		<b>LEAN CLAY</b> , with gravel and sand, brown, very stiff to hard (Glacial Till)	5		X	100	5-4-8 N=12		2.5 (HP)		16		
					X	100	5-8-9 N=17		4.25 (HP)				
			9.5	866.5	X	100	5-5-5 N=10		1.5 (HP)				
3		<b>LEAN CLAY</b> , with sand seams, trace sand and gravel, gray, stiff to very stiff (Glacial Till)	10										
			15		X	100	5-6-6 N=12		1.5 (HP)				
		-- Limestone and shale fragments encountered below 18.5 feet	20		X	100	8-13-4 N=17		2.0 (HP)		12		
5		<b>INTERBEDDED SHALE AND LIMESTONE</b> , brown and gray, moderately weathered, extremely weak shale and moderately strong limestone	22.0	854	X	100	50/2"				8		
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone	26.0	850									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-18-2020

Boring Completed: 03-18-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

# BORING LOG NO. B-3

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458364° Longitude: -84.093963°  Surface Elev.: 876.0 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS
													LL-PL-PI
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone <i>(continued)</i> 29.8 <span style="float: right;">846</span>	30		X	100	32-50/2"	0			7		
		<b>INTERBEDDED SHALE AND LIMESTONE:</b> Shale (63%): gray, unweathered, very weak to weak, bed thickness ranging from ¼ inch to 6 inches Limestone (37%): light gray, unweathered, strong, bed thickness ranging from ¼ inch to 4 inches 34.6 <span style="float: right;">841.5</span>		90	63	63.50	5	151					
		<b>Boring Terminated at 34.6 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-18-2020

Boring Completed: 03-18-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

# BORING LOG NO. B-4

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458413° Longitude: -84.093802°  Surface Elev.: 880.8 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS
													LL-PL-PI
		<b>ASPHALT</b> , 18 inches	1.5	879.5									
2		<b>LEAN CLAY</b> , with gravel and sand, dark brown, medium stiff	5		X	100	3-3-4 N=7		1.0 (HP)		23		
			6.0	875									
		<b>LEAN CLAY</b> , with gravel and sand, brown, very stiff to hard (Glacial Till)	10		X	100	4-2-1 N=3		0.5 (HP)		15		
			15		X	100	3-3-7 N=10		2.75 (HP)				
			20		X	100	6-7-11 N=18		4.5 (HP)				
		-- Limestone and shale fragments encountered below 18.5 feet	22.0	859									
5		<b>INTERBEDDED SHALE AND LIMESTONE</b> , brown, moderately weathered, extremely weak shale and moderately strong limestone	25		X	100	6-7-19 N=26		4.5 (HP)				
			26.0	855			45-50/2"		4.5 (HP)		12		
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone			X	100	50/1"						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



611 Lunken Park Dr  
Cincinnati, OH

Boring Started: 03-18-2020

Boring Completed: 03-18-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20



# BORING LOG NO. B-4

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458413° Longitude: -84.093802°  Surface Elev.: 880.8 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS  LL-PL-PI
6	[Stratification Diagram]	<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone <i>(continued)</i> 30.8 850	30			100		0					
	[Stratification Diagram]	<b>INTERBEDDED SHALE AND LIMESTONE:</b> Shale (78%): gray, unweathered, very weak to weak, bed thickness ranging from ¼ inch to 5 inches Limestone (22%): light gray, unweathered, strong, bed thickness ranging from ¼ inch to 2½ inches 35.8 845	35			100		38		20.24	7	143	
		<b>Boring Terminated at 35.8 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-18-2020

Boring Completed: 03-18-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

# BORING LOG NO. B-5

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458156° Longitude: -84.095319° Surface Elev.: 834.0 (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS
													LL-PL-PI
		DEPTH ELEVATION (Ft.)											
		0.8 <b>ASPHALT</b> , 10.5 inches	833										
2		<b>LEAN CLAY</b> , with gravel and sand, brown, soft to medium stiff			X	83	7-3-3 N=6		0.75 (HP)		17		19-11-8
		6.0	828		X	61	3-3-9 N=12		0.25 (HP)				
3		<b>LEAN CLAY</b> , with gravel and sand, brown, stiff (Glacial Till)			X	33	17-13-12 N=25		2.0 (HP)				
		8.0	826		X	88	17-28-43 N=71				13		
		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, extremely weak			X	96	28-43-50/4"				9		
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone			X	100		78	3.03	10	131		
		13.0	821										
		15.0	819										
		20.0	814										
		<b>Boring Terminated at 20 Feet</b>	20										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-19-2020

Boring Completed: 03-19-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

# BORING LOG NO. B-6

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.458152° Longitude: -84.095104° Surface Elev.: 839.4 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS
													LL-PL-PI
		<b>ASPHALT</b> , 11.5 inches	838.5										
2		<b>LEAN CLAY</b> , with gravel and sand, brown, soft to medium stiff	3.0		X	78	4-3-4 N=7		0.75 (HP)		19		
3		<b>LEAN CLAY</b> , with gravel and sand, brown, stiff (Glacial Till)	6.0		X	55	4-3-7 N=10		1.5 (HP)				
4		<b>LEAN CLAY</b> , with limestone fragments, trace relic bedding planes, brownish gray, very stiff to hard (Residuum)	13.0		X	100	3-9-10 N=19		3.0 (HP)		20		
					X	66	9-50/3"		4.5 (HP)		17		
6		<b>INTERBEDDED SHALE AND LIMESTONE</b> , gray, slightly weathered, very weak shale and strong limestone	20.0		X	100	50/2"						
		<b>INTERBEDDED SHALE AND LIMESTONE:</b> Shale (76%): gray, unweathered, very weak to weak, bed thickness ranging from ¼ inch to 5 inches Limestone (24%): light gray, unweathered, strong, bed thickness ranging from ¼ inch to 3 inches	25.0			83		61			7		
		<b>Boring Terminated at 25 Feet</b>	814.5										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

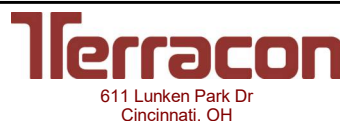
Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-19-2020

Boring Completed: 03-19-2020

Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431

# BORING LOG NO. B-7

**PROJECT:** Warren County Landslide Exploration

**CLIENT:** Warren County OH  
Lebanon, OH

**SITE:** Various Locations in Warren County  
Warren County, OH

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL N1195431 WARREN COUNTY LAN.GPJ TERRACON\_DATATEMPLATE.GDT 5/27/20

MODEL LAYER	GRAPHIC LOG	LOCATION See <a href="#">Exploration Plan</a> Latitude: 39.519311° Longitude: -84.101039° Surface Elev.: 762.2 (Ft.) DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	FIELD TEST RESULTS	RQD (%)	LABORATORY HP (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
		<b>ASPHALT</b> , 11.5 inches	0.9										
1		<b>FILL - POORLY GRADED SAND WITH GRAVEL</b> , brown	3.5			55	8-9-9 N=18						
2		<b>LEAN CLAY</b> , trace gravel and sand, trace organic odor, dark brown, medium stiff	9.0			55	4-3-2 N=5		1.0 (HP)				
4		<b>LEAN CLAY</b> , with limestone fragments, trace relic bedding planes, brownish gray, very stiff to hard (Residuum)	12.0			100	3-3-5 N=8		0.75 (HP)		27		42-21-21
5		<b>INTERBEDDED SHALE AND LIMESTONE</b> , brown and gray, moderately weathered, extremely weak shale and medium strong limestone	17.0			66	8-8-13 N=21		4.0 (HP)		12		
6		<b>INTERBEDDED SHALE AND LIMESTONE:</b> Shale (78%): gray, unweathered, very weak to weak, bed thickness ranging from 1/4 inch to 11 inches Limestone (22%): light gray, unweathered, strong, bed thickness ranging from 1/4 inch to 5 inches	23.5			100	75/5"				14		
		<b>Boring Terminated at 23.5 Feet</b>	738.5					63		30.90	6	144	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
3.25-inch Continuous-Flight Hollow-Stem Augers  
2-inch Split-Barrel Sampler  
NQ2 Rock Core Barrel

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

**Abandonment Method:**  
Boring backfilled with auger cuttings and concrete plug and asphalt patch upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevation Reference: Leica Zeno GPS

**WATER LEVEL OBSERVATIONS**



Boring Started: 03-20-2020

Boring Completed: 03-20-2020

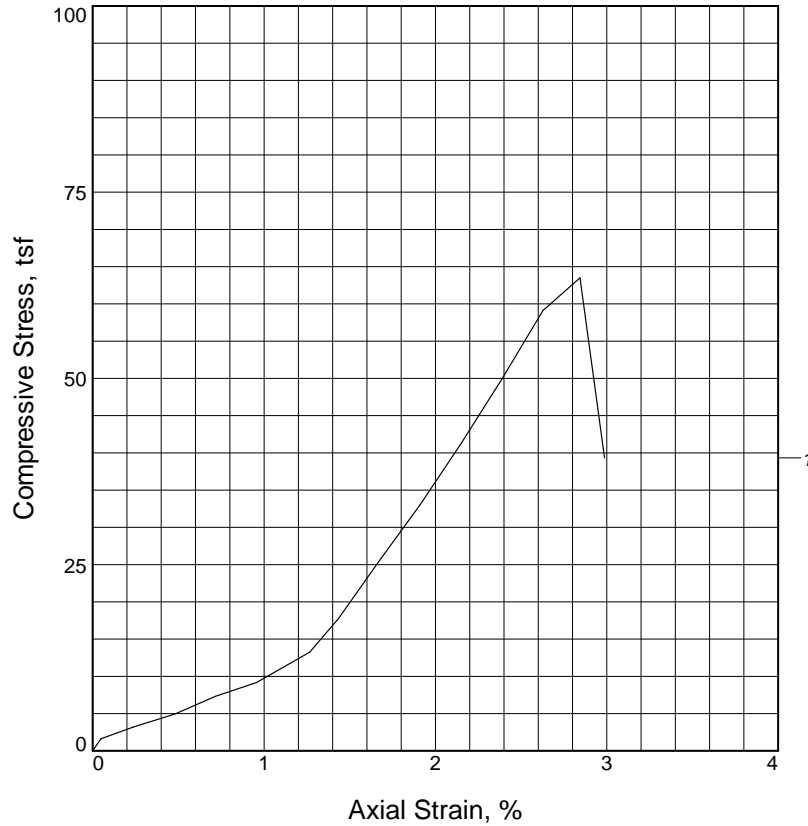
Drill Rig: Diedrich D90

Driller: A.Moore

Project No.: N1195431



# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, tsf	63.4989		
Undrained shear strength, tsf	31.7494		
Failure strain, %	2.8		
Strain rate, in./min.	0.041		
Water content, %	4.7		
Wet density, pcf	157.8		
Dry density, pcf	150.6		
Saturation, %	N/A		
Void ratio	N/A		
Specimen diameter, in.	1.980		
Specimen height, in.	4.185		
Height/diameter ratio	2.11		

**Description:** SHALE

**LL =**      **PL =**      **PI =**      **Assumed GS=**      **Type:** Shale

**Project No.:** N1195431  
**Date Sampled:** 4-2-20  
**Remarks:**

**Client:** WARREN COUNTY

**Project:** WARREN COUNTY LANDSLIDE

**Source of Sample:** B-3      **Depth:** 29.8-34.4'

**Sample Number:** C-2

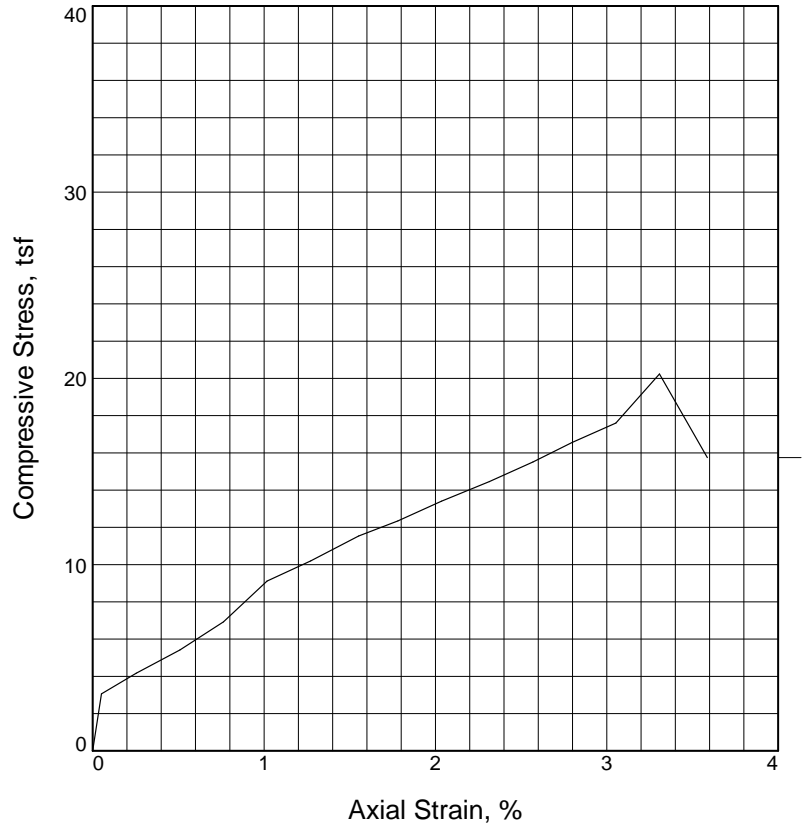
UNCONFINED COMPRESSION TEST

**Terracon, Inc.**  
Cincinnati, Ohio

**Exhibit** 1686

**Tested By:** SF      **Checked By:** GS

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, tsf	20.2368		
Undrained shear strength, tsf	10.1184		
Failure strain, %	3.3		
Strain rate, in./min.	0.039		
Water content, %	6.8		
Wet density, pcf	153.0		
Dry density, pcf	143.3		
Saturation, %	N/A		
Void ratio	N/A		
Specimen diameter, in.	1.942		
Specimen height, in.	3.931		
Height/diameter ratio	2.02		

**Description:** SHALE

**LL =**      **PL =**      **PI =**      **Assumed GS=**      **Type:** Shale

**Project No.:** N1195431  
**Date Sampled:** 4-2-20  
**Remarks:**

**Client:** WARREN COUNTY

**Project:** WARREN COUNTY LANDSLIDE

**Source of Sample:** B-4      **Depth:** 32.1-35.1'

**Sample Number:** C-2

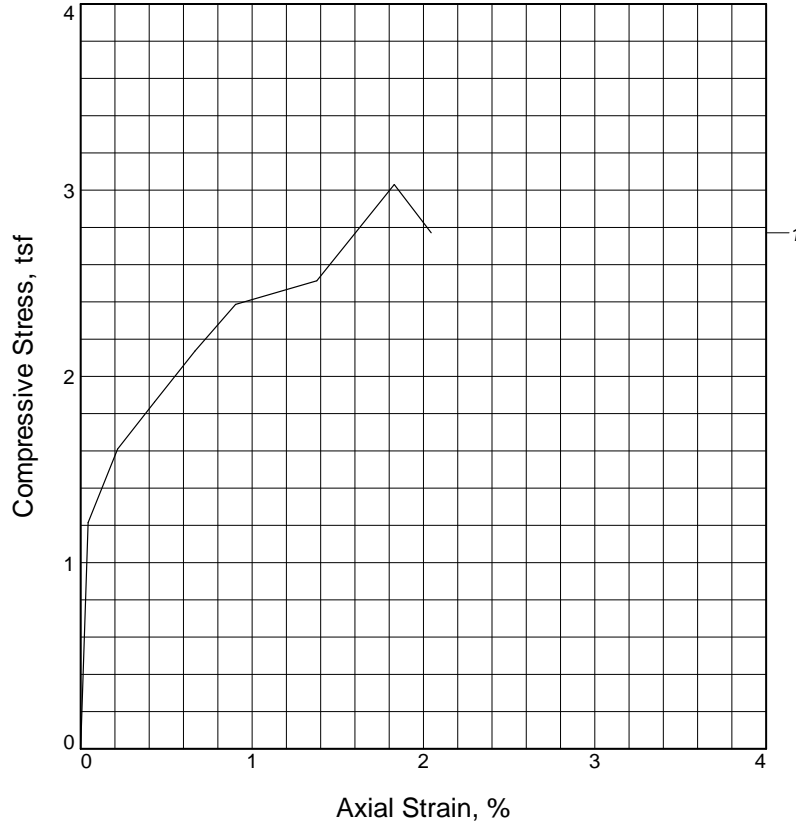
UNCONFINED COMPRESSION TEST

**Terracon, Inc.**  
Cincinnati, Ohio

**Exhibit** 1691

**Tested By:** SF \_\_\_\_\_ **Checked By:** GS \_\_\_\_\_

# UNCONFINED COMPRESSION TEST



Sample No.	1		
Unconfined strength, tsf	3.0302		
Undrained shear strength, tsf	1.5151		
Failure strain, %	1.8		
Strain rate, in./min.	0.046		
Water content, %	9.8		
Wet density, pcf	143.4		
Dry density, pcf	130.6		
Saturation, %	N/A		
Void ratio	N/A		
Specimen diameter, in.	1.980		
Specimen height, in.	4.645		
Height/diameter ratio	2.35		

**Description:** SHALE

<b>LL =</b>	<b>PL =</b>	<b>PI =</b>	<b>Assumed GS=</b>	<b>Type:</b> Shale
-------------	-------------	-------------	--------------------	--------------------

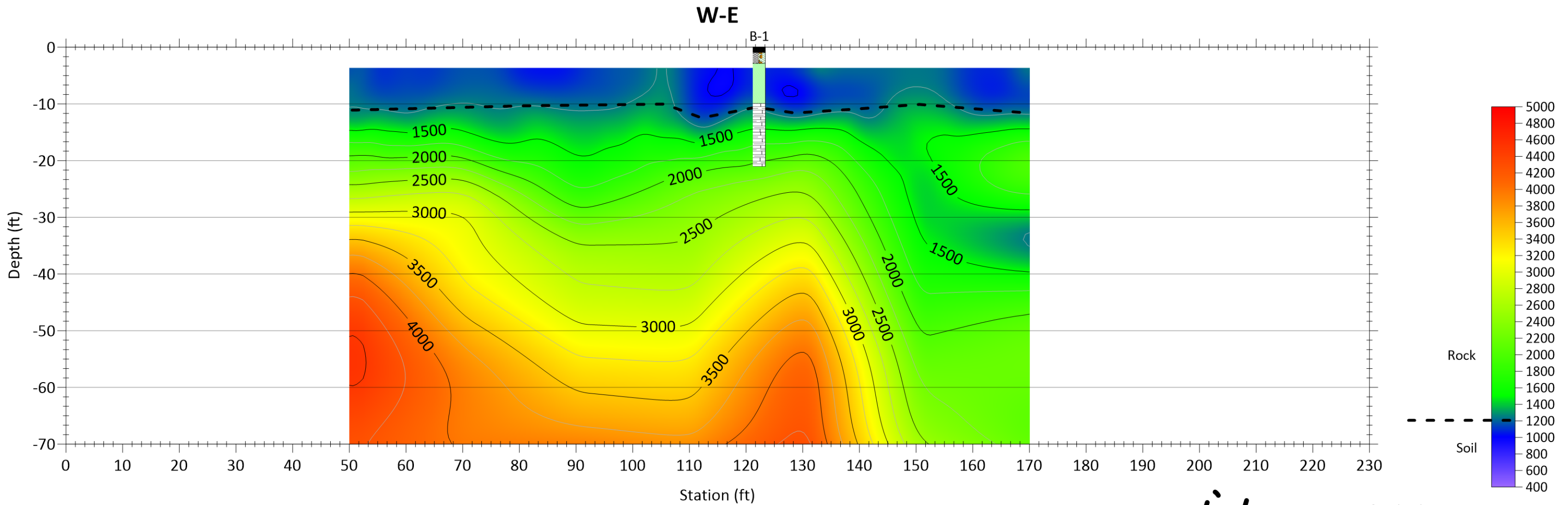
**Project No.:** N1195431  
**Date Sampled:** 4-2-20  
**Remarks:**  
  
**Exhibit** 1695

**Client:** WARREN COUNTY  
**Project:** WARREN COUNTY LANDSLIDE  
**Source of Sample:** B-5      **Depth:** 15-20'  
**Sample Number:** C-1  
 UNCONFINED COMPRESSION TEST  
**Terracon, Inc.**  
 Cincinnati, Ohio

**Tested By:** SF \_\_\_\_\_ **Checked By:** GS \_\_\_\_\_







Approximate Top of Bedrock

Project Manager:	ASK	Project No.:	N1195431
Drawn by:	JCT	Scale:	As Shown
Checked by:	KJS	File Name:	map
Approved by:	JDD	Date:	5/20/2020

**Terracon**  
 Consulting Engineers & Scientists  
 611 Lunken Park Drive  
 Cincinnati, Ohio 45226







**MASW GEOPHYSICAL TEST RESULTS**  
 Warren County Landslide Remediation  
 Olive Branch Road  
 Warren County, Ohio

## **SUPPORTING INFORMATION**

### **Contents:**

General Notes  
Unified Soil Classification System  
Description of Rock Properties

Note: All attachments are one page unless noted above.

SAMPLING	WATER LEVEL	FIELD TESTS
 Rock Core  Standard Penetration Test   Split Spoon	 Water Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time  Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	(N) Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer (UC) Unconfined Compressive Strength (PID) Photo-ionization Detector (OVA) Organic Vapor Analyzer

**DESCRIPTIVE SOIL CLASSIFICATION**

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

**LOCATION AND ELEVATION NOTES**

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

**STRENGTH TERMS**

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	Particle Size	Term	Plasticity Index
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification		
				Group Symbol	Group Name <sup>B</sup>	
<b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve	<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve	<b>Clean Gravels:</b> Less than 5% fines <sup>C</sup>	$Cu \geq 4$ and $1 \leq Cc \leq 3$ <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>	
			$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>	
		<b>Gravels with Fines:</b> More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F, G, H</sup>	
			Fines classify as CL or CH	GC	Clayey gravel <sup>F, G, H</sup>	
	<b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve	<b>Clean Sands:</b> Less than 5% fines <sup>D</sup>	$Cu \geq 6$ and $1 \leq Cc \leq 3$ <sup>E</sup>	SW	Well-graded sand <sup>I</sup>	
			$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>	
		<b>Sands with Fines:</b> More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G, H, I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G, H, I</sup>	
<b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve	<b>Silts and Clays:</b> Liquid limit less than 50	<b>Inorganic:</b>	$PI > 7$ and plots on or above "A" line	CL	Lean clay <sup>K, L, M</sup>	
			$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OL	Organic clay <sup>K, L, M, N</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, O</sup>
	<b>Silts and Clays:</b> Liquid limit 50 or more	<b>Inorganic:</b>	$PI$ plots on or above "A" line	CH	Fat clay <sup>K, L, M</sup>	
			$PI$ plots below "A" line	MH	Elastic Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OH	Organic clay <sup>K, L, M, P</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, Q</sup>
	<b>Highly organic soils:</b>	Primarily organic matter, dark in color, and organic odor			PT	Peat

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

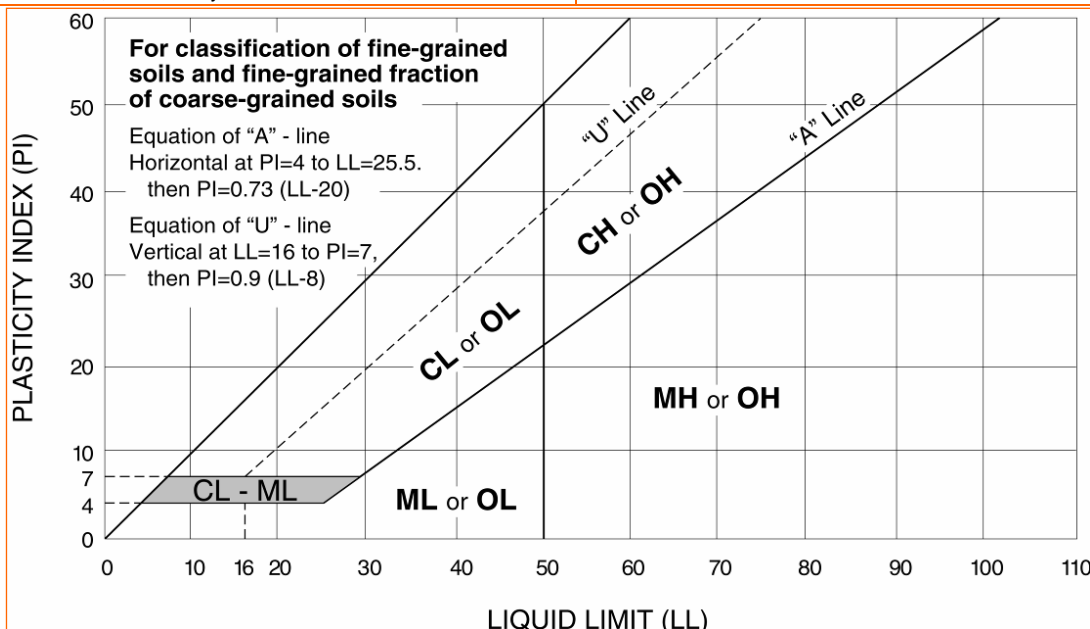
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.



WEATHERING	
Term	Description
<b>Unweathered</b>	No visible sign of rock material weathering, perhaps slight discoloration on major discontinuity surfaces.
<b>Slightly weathered</b>	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.
<b>Moderately weathered</b>	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a continuous framework or as corestones.
<b>Highly weathered</b>	More than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones.
<b>Completely weathered</b>	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.
<b>Residual soil</b>	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.

STRENGTH OR HARDNESS		
Description	Field Identification	Uniaxial Compressive Strength, psi (MPa)
<b>Extremely weak</b>	Indented by thumbnail	40-150 (0.3-1)
<b>Very weak</b>	Crumbles under firm blows with point of geological hammer, can be peeled by a pocket knife	150-700 (1-5)
<b>Weak rock</b>	Can be peeled by a pocket knife with difficulty, shallow indentations made by firm blow with point of geological hammer	700-4,000 (5-30)
<b>Medium strong</b>	Cannot be scraped or peeled with a pocket knife, specimen can be fractured with single firm blow of geological hammer	4,000-7,000 (30-50)
<b>Strong rock</b>	Specimen requires more than one blow of geological hammer to fracture it	7,000-15,000 (50-100)
<b>Very strong</b>	Specimen requires many blows of geological hammer to fracture it	15,000-36,000 (100-250)
<b>Extremely strong</b>	Specimen can only be chipped with geological hammer	>36,000 (>250)

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	Spacing	Description	Spacing
<b>Extremely close</b>	< ¼ in (<19 mm)	<b>Laminated</b>	< ½ in (<12 mm)
<b>Very close</b>	¼ in – 2-1/2 in (19 - 60 mm)	<b>Very thin</b>	½ in – 2 in (12 – 50 mm)
<b>Close</b>	2-1/2 in – 8 in (60 – 200 mm)	<b>Thin</b>	2 in – 1 ft. (50 – 300 mm)
<b>Moderate</b>	8 in – 2 ft. (200 – 600 mm)	<b>Medium</b>	1 ft. – 3 ft. (300 – 900 mm)
<b>Wide</b>	2 ft. – 6 ft. (600 mm – 2.0 m)	<b>Thick</b>	3 ft. – 10 ft. (900 mm – 3 m)
<b>Very Wide</b>	6 ft. – 20 ft. (2.0 – 6 m)	<b>Massive</b>	> 10 ft. (3 m)

**Discontinuity Orientation (Angle):** Measure the angle of discontinuity relative to a plane perpendicular to the longitudinal axis of the core. (For most cases, the core axis is vertical; therefore, the plane perpendicular to the core axis is horizontal.) For example, a horizontal bedding plane would have a 0-degree angle.

ROCK QUALITY DESIGNATION (RQD) <sup>1</sup>	
Description	RQD Value (%)
<b>Very Poor</b>	0 - 25
<b>Poor</b>	25 – 50
<b>Fair</b>	50 – 75
<b>Good</b>	75 – 90
<b>Excellent</b>	90 - 100

1. The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

Reference: U.S. Department of Transportation, Federal Highway Administration, Publication No FHWA-NHI-10-034, December 2009  
Technical Manual for Design and Construction of Road Tunnels – Civil Elements



**BOARD OF COUNTY COMMISSIONERS**  
**WARREN COUNTY, OHIO**

406 Justice Drive, Lebanon, Ohio 45036

[www.co.warren.oh.us](http://www.co.warren.oh.us)

[commissioners@co.warren.oh.us](mailto:commissioners@co.warren.oh.us)

Telephone (513) 695-1250

Facsimile (513) 695-2054

**SHANNON JONES**  
**DAVID G. YOUNG**  
**TOM GROSSMANN**

**ADVERTISEMENT FOR BIDS**

Sealed bids will be received by the Clerk of the County Commissioners, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio 45036, until 9:30 a.m., January 24, 2024, and then at said time bids will be opened and read aloud for the 2024 Pier Wall Project.

Bid documents and specifications are available online at the Warren County's Website at <https://www.co.warren.oh.us/commissioners/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Logan Smith, Project Engineer, at the Warren County Engineer's Office, at (513) 695-3318. Each bid shall contain the full name of each person or company submitting the bid and be accompanied by a bid bond for the full amount of the bid or a certified check in the amount equal to ten (10) percent of the bid.

Contact the Warren County Commissioner's Office at (513) 695-1250 should you need assistance in accessing the bidding information on the County's website. All contract addenda will be posted to the website prior to the bid opening. Bidders should check the website regularly to stay updated on any changes to the project.

**Please be aware that if you are downloading this document to bid this project, and in order to stay updated on any change, please email Krystal Powell in the Commissioners' Office at [krystal.powell@co.warren.oh.us](mailto:krystal.powell@co.warren.oh.us) with your contact information.**

The Board of Warren County Commissioners reserves the right to accept the lowest and best bid, to reject all bids, and to waive any irregularities in bids.

By order of the Board of County Commissioners, Warren County, Ohio.

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Tina Osborne, Clerk