

**PROJECT DESCRIPTION**

THIS PROJECT, DESIGNATED LUC/OTT SIGN FY 2025, PID 114413, INCLUDES THE ADDITION OR REPLACEMENT OF EXISTING OVERHEAD SIGNAGE ALONG STATE ROUTE 2 (SR-2), SR-53, AND SR2/SR-163 INTERCHANGE IN OTTAWA COUNTY, OHIO. ALTHOUGH THE PROJECT NAME INCORPORATES "LUC" IN THE DESCRIPTION, NO SIGN LOCATIONS ARE INDICATED IN LUCAS COUNTY. THE PROJECT AREA DESIGNATED FOR NEW OVERHEAD SIGNAGE SPANS APPROXIMATELY 1 1/4 LINEAR MILES.

**HISTORIC RECORDS**

REVIEW OF ODOT RECORDS FROM THE TRANSPORTATION INFORMATION MAPPING SYSTEM (TIMS) INDICATED THAT HUNDREDS OF BORINGS HAD BEEN DRILLED ALONG STATE ROUTE 2 (SR 2) AND INTERSECTING ROADS AS PART OF FIVE PROJECTS ASSOCIATED WITH THE CONSTRUCTION (RECONSTRUCTION) OF SR 2 PERFORMED IN 1960, 1961, AND 1962. OF THESE BORINGS ONLY A HAND FULL WERE WITHIN THE VICINITY OF THE PROPOSED SIGN FOUNDATIONS. ONLY THE CLOSEST BORING TO EACH OVERHEAD SIGN LOCATION IS DESCRIBED AND DISCUSSED HEREIN. HOWEVER, GENERAL DISCUSSIONS ABOUT ROCK DEPTH CONSIDERED ALL AVAILABLE HISTORIC BORINGS. THE COVER SHEETS, BORING LOGS (WHEN AVAILABLE), LABORATORY DATA (WHEN AVAILABLE), AND THE PLAN-AND-PROFILE DRAWINGS FROM THE HISTORIC PROJECTS ARE INCLUDED IN THE STRUCTURE FOUNDATION EXPLORATION REPORT PREPARED FOR THIS PROJECT.

THE HISTORIC BORINGS WERE NOT ENUMERATED. FOR DESIGNATION ON THESE PLANS, THE HISTORIC BORINGS WERE NUMERATED AS B-CCC-D-EE. WHERE B = BORING, CCC = WHOLE HISTORIC STATION NUMBER (40 FOR STA. 40+75, ETC.), D = NUMBER OF TIMES OFFSET FROM ORIGINAL BORING LOCATION (0 SINCE NONE WERE OFFSET), AND EE = DATE WHICH THE BORINGS WERE PERFORMED (61 FOR 1961).

THE HISTORIC BORINGS GENERALLY CONSISTED OF HAND AUGER HOLES THAT RANGED IN DEPTH FROM 10 TO 15 FEET AND GENERALLY CONTAINED NO SPT N-VALUES, NO HAND PENETROMETER VALUES, OR ANY OTHER STRENGTH TESTING. OF THE FEW BORINGS THAT DID CONTAIN STRENGTH DATA, TYPICALLY AT THE BRIDGES ALONG/INTERSECTING WITH SR 2, THEY WERE OVER 100 FEET AWAY FROM THE PROPOSED OVERHEAD SIGN LOCATIONS.

IN GENERAL, THE MAJORITY OF THE SOILS DESCRIBED IN THE HISTORIC BORINGS WERE CONSISTENT WITH THOSE ENCOUNTERED DURING THIS EXPLORATION. HOWEVER, A NOTABLE EXCEPTION TO THIS WAS DESCRIBED IN HISTORIC BORING B-020-0-62, NEAR OVERHEAD SIGN 2R-9, WHICH ENCOUNTERED SANDS AND NON-PLASTIC SILTS TO AN ELEVATION OF APPROXIMATELY 570 FEET. IN THE BORINGS FOR THE CURRENT EXPLORATION, BORINGS B-015 AND B-017, ENCOUNTERED PREDOMINANTLY STIFF OR BETTER COHESIVE MATERIALS TO THESE ELEVATIONS.

SEVERAL HISTORIC BORINGS IN THE GENERAL AREA OF THE PROPOSED OVERHEAD SIGNS WERE PERFORMED DEEPER OR STARTED AT A LOWER ELEVATION (DRILLED BEFORE EMBANKMENT WAS PLACED) THAN BORING PERFORMED AS PART OF THIS EXPLORATION. THE ELEVATION OF BEDROCK BASED ON THE HISTORIC BORINGS IS DESCRIBED BELOW.

ELEVATION OF BEDROCK, BASED ON HISTORIC BORINGS	
OVERHEAD SIGN REFERENCE NUMBER(S)	APPROXIMATE ELEVATION OF BEDROCK, BASED ON HISTORIC BORINGS
2-7	DEEPER THAN 557 FEET, BEDROCK NOT ENCOUNTERED IN THE HISTORIC BORINGS.
2-17	529 FEET
2-90	529 FEET
2-26	530 FEET
2-39	DEEPER THAN 542 FEET, BEDROCK NOT ENCOUNTERED IN THE HISTORIC BORINGS. HOWEVER, REFUSAL ON BOULDERS WAS NOTED IN B-488-0-62 AT 567 FEET
2-44	HIGHLY VARIED ROCK DEPTH IN THE AREA. 585 TO 575 FEET IN SOME BORINGS THAT HAD ROCK CORING, AS DEEP AS 545 FEET IN ANOTHER. AUGER REFUSAL DEPTHS ALSO VARIED SIGNIFICANTLY. BASED ON THE BORINGS FROM THE CURRENT EXPLORATION, B-008 AND B-009, 569 AND 567 FEET.
2-63	538 FEET. HOWEVER, SEVERAL BORINGS INDICATED REFUSAL ON BOULDERS AT 563 TO 566 FEET
2-58	DEEPER THAN 524 FEET, BEDROCK NOT ENCOUNTERED IN THE HISTORIC BORINGS.
2-56	DEEPER THAN 535 FEET, BEDROCK NOT ENCOUNTERED IN THE HISTORIC BORINGS.
2R-9	530 FEET
2R-13	530 FEET
53-11	529 FEET
53-7	529 FEET
53-9	529 FEET

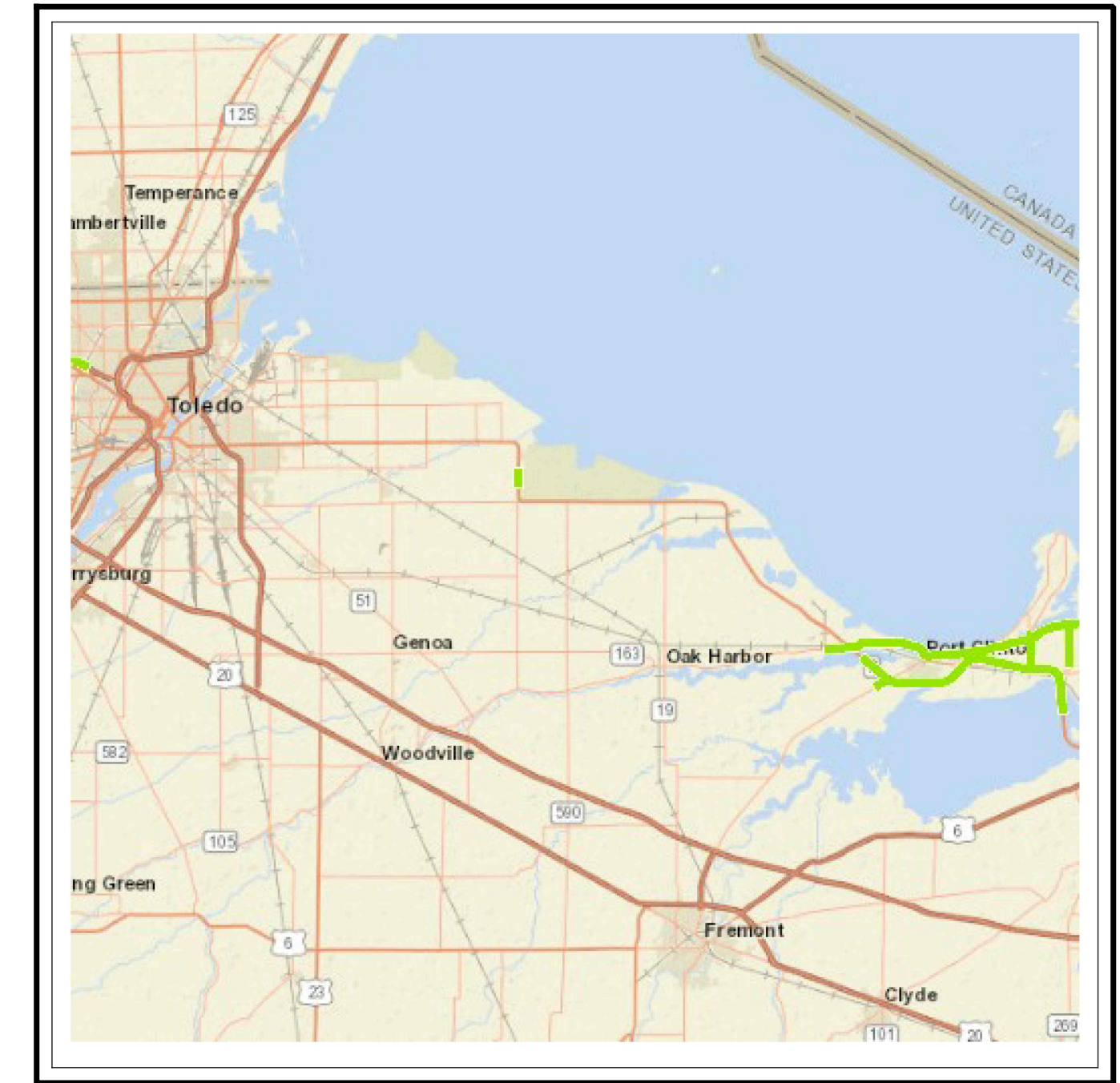
IN THE HISTORIC PLANS, TWO AREAS NEAR OVERHEAD SIGN 2-44, APPROXIMATELY 400 AND 1,200 FEET TO THE EAST, ARE MARKED AS "SINK HOLES". BASED ON GOOGLE EARTH IMAGES, THERE IS A POND APPROXIMATELY 1,200 FEET TO THE EAST, POSSIBLY ONE OF THE "SINK HOLES". THE OTHER "SINK HOLE" IS NOT VISIBLE ON CURRENT AERIALS, POSSIBLY FILLED DURING THE CONSTRUCTION OF SR 2.

WE HAVE ASSUMED THAT THE INFORMATION PROVIDED IN THE HISTORIC BORINGS WAS ACCURATE AND CORRECT, AT THE TIME OF THOSE RESPECTIVE INVESTIGATIONS, BUT CANNOT GUARANTEE AS SUCH. ADDITIONALLY, SUBGRADE SOIL CONDITIONS MAY HAVE CHANGED OR MAY HAVE BEEN MODIFIED DUE TO CONSTRUCTION PERFORMED FOLLOWING COMPLETION OF THE HISTORIC SUBSURFACE EXPLORATIONS.

**CONT. SHEET 2**

**LEGEND**

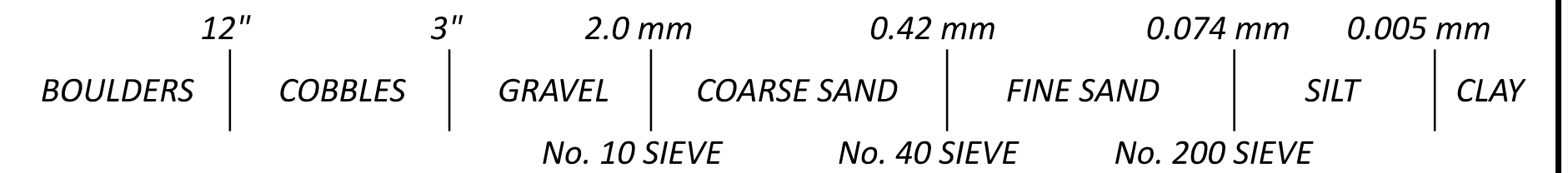
DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
GRAVEL AND/OR STONE FRAGMENTS	A-1-A	1 0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-B	0 9
GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT AND CLAY	A-2-6	2 0
FINE SAND	A-3	0 2
COARSE AND FINE SAND	A-3A	2 3
SANDY SILT	A-4A	10 13
SILT	A-4B	0 1
SILT AND CLAY	A-6A	21 41
SILTY CLAY	A-6B	10 55
CLAY	A-7-6	13 5
	TOTAL	59 129
SHALE		
DOLOMITE		
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL	
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL	
BORING LOCATION - PLAN VIEW.		
HISTORIC BORING LOCATION - PLAN VIEW.		
WC	INDICATES WATER CONTENT IN PERCENT.	
N <sub>60</sub>	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.	
X/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL	
X/Y/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X = NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED) Y/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL	
W	INDICATES FREE WATER ELEVATION.	
	INDICATES STATIC WATER ELEVATION.	
TR	TOP OF ROCK	
SS	INDICATES A NON-PLASTIC SAMPLE.	
RC	INDICATES A ROCK CORE.	
QU	UNCONFINED COMPRESSIVE STRENGTH (ASTM D 2166 FOR SOIL, ASTM D 7012 METHOD C FOR ROCK)	



LOCATION MAP  
NOT TO SCALE



**PARTICLE SIZE DEFINITIONS**



RECON. - LGH 03/12/24  
 DRILLING - K. CONRAD 03/18/24 - 03/27/24  
 DRAWN - TLS 09/24  
 REVIEWED - LGH 09/24

DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	1 TOTAL 24
SHEET	P.89 TOTAL 112



**GEOLOGY**

PUBLISHED GEOLOGIC MAPS FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) INDICATE THAT THE PROJECT SITE IS LOCATED WITHIN THE MAUMEE LAKE PLAINS PHYSIOGRAPHIC REGION OF THE HURON-ERIE LAKE PLAINS SECTION. WITHIN THIS REGION, THE GEOLOGIC DEPOSITS CONSIST OF PLEISTOCENE-AGE, SILT, CLAY, AND WAVE-PLANED CLAYEY GLACIAL TILL.

THE GLACIAL TILL, ALSO REFERRED TO AS MORaine, WAS DEPOSITED BY THE ADVANCE AND RETREAT OF GLACIAL ICE. DUE TO THE WEIGHT OF THE ICE MASS, THE TILL DEPOSITS ARE MODERATELY TO HIGHLY OVER-CONSOLIDATED, THAT IS, THE EXISTING SOIL DEPOSITS HAVE EXPERIENCED A PREVIOUS VERTICAL STRESS SIGNIFICANTLY HIGHER THAN THE PRESENT EFFECTIVE VERTICAL STRESS DUE TO THE REMAINING OVERLYING SOIL STRATA IN THE PROFILE. THE TILL MAY CONTAIN COBBLES AND/OR BOULDERS LEFT IN THE TILL SOIL MATRIX. ADDITIONALLY, SEAMS OF GRANULAR SOILS MAY ALSO BE ENCOUNTERED WITHIN GLACIAL TILLS. THESE GRANULAR SEAMS MAY OR MAY NOT BE WATER BEARING. IN THE MAUMEE LAKE PLAINS PHYSIOGRAPHIC REGION, THE SURFACE OF THE GLACIAL TILL HAS GENERALLY EXPERIENCED SOME REWORKING FROM WAVE ACTION OF THE HISTORIC LAKE.

BEDROCK IN THE PROJECT AREA IS BROADLY MAPPED ON THE “GEOLOGIC MAP OF OHIO” AS SILURIAN-AGE MONROE LIMESTONE. OTHER BEDROCK MAPS INDICATE THAT DOLOMITE, ANHYDRITE, GYPSUM, SALT, AND SHALE MAY BE ENCOUNTERED WITHIN THE PROJECT AREA. THE BEDROCK ENCOUNTERED DURING THIS EXPLORATION ONLY CONSISTED OF WEATHERED SHALE IN BORING B-009 AND DOLOMITE IN BORINGS B-008 AND B-009. TOP OF BEDROCK IN THE AREA IS MAPPED AT ELEVATIONS RANGING FROM 540 TO 520 FEET ACROSS THE SITE. THIS IS GENERALLY CONSISTENT WITH ROCK DEPTHS INDICATED IN HISTORIC BORINGS. HOWEVER, IN THE AREA OF OVERHEAD SIGN 2-44, BORINGS B-008 AND B-009 ENCOUNTERED BEDROCK AT DEPTHS OF 569 FEET AND 567 FEET. ADDITIONALLY, BASED ON THE HISTORIC BORINGS, BEDROCK IN THIS AREA IS HIGHLY VARIED, SEE PREVIOUS SECTION.

REVIEW OF THE ODNR “INTERACTIVE KARST MAP” WEBSITE INDICATED THAT THE SITE(S) IS/ARE IN AN AREA OF PROBABLE KARST. SUSPECTED KARST WAS MAPPED WITHIN A ¼ MILE TO THE NORTHWEST OF BORING B-001, WITHIN 3 TO 4 MILES OF BORINGS B-002 THROUGH B-004 AND B-019 THROUGH B-021, AS WELL AS WITHIN APPROXIMATELY A MILE OF THE REMAINING BORINGS. HOWEVER, THE CLOSE FIELD VERIFIED KARST WAS MAPPED APPROXIMATELY 3 MILES NORTH BY NORTHEAST OF BORING B-011 AND SOUTH OF BORING B-014.

THE USDA WEB SOIL SURVEY (WSS) INDICATES THAT THE NEAR-SURFACE SOILS IN THE PROJECT AREA ARE MAPPED AS TOLEDO SILTY CLAY (TO), BONO SILTY CLAY (BO), NAPPANEE SILTY CLAY LOAM (NPA), AND UDORTHERNTS (UD). THE “TO” SOILS ARE MAPPED IN THE AREA OF BORINGS B-001, B-005, B-011, B-020, AND B-021. “BO” SOILS ARE MAPPED IN THE AREA OF BORINGS B-002, B-003, B-004, AND B-019. “NPA” SOILS ARE MAPPED IN THE AREA OF BORINGS B-006 THROUGH B-009 AND B-015 THROUGH B-018. “UD” FILL MATERIALS ARE MAPPED IN THE AREA OF BORINGS B-012, B-013, AND B-014. HOWEVER, BASED ON SEVERAL OTHER BORINGS BEING PERFORMED THROUGH WHAT IS EXPECTED TO BE EMBANKMENT FILL, UD FILL MATERIALS ARE FAR MORE PREVALENT AT THE BORINGS THAN THE WEB SOIL SURVEY SUGGESTS. THE “TO” SOILS ARE COMPRISED OF CLAYEY LACUSTRINE DEPOSITS FORMED ON HISTORIC LAKEBEDS AND ARE CONSIDERED TO BE VERY POORLY DRAINED WITH A VERY LOW TO LOW PERMEABILITY. THE “BO” SOILS ARE COMPRISED OF CLAYEY LACUSTRINE DEPOSITS FORMED IN DEPRESSIONS ARE CONSIDERED TO BE VERY POORLY DRAINED WITH A LOW TO MODERATELY HIGH PERMEABILITY. THE “NPA” SOILS ARE COMPRISED OF TILL FORMED ON LAKE PLAINS AND ARE CONSIDERED TO BE SOMEWHAT POORLY DRAINED WITH A MODERATELY LOW TO MODERATELY HIGH PERMEABILITY.

**RECONNAISSANCE**

CT PERFORMED SITE RECONNAISSANCE ON MARCH 12, 2024.

EXISTING PAVEMENT CONDITIONS, NEW PAVEMENTS WERE ENCOUNTERED AT BORINGS B-005, B-006, B-007, AND B-009 AND WERE IN GOOD CONDITION. ALTHOUGH BORING B-008 WAS NEAR B-009, THE CLOSEST PAVEMENT, THE TURN LANE, WAS HIGHLY WEATHERED AND IN POOR CONDITION WITH A FREQUENT UNSEALED TRANSVERSE CRACKS OBSERVED. FAIRLY NEW PAVEMENTS APPEARED TO BE ENCOUNTERED AT BORINGS B-001 THROUGH B-004 AND WERE IN GOOD CONDITION. THE REMAINING BORINGS WERE GENERALLY IN AREAS OF POOR PAVEMENT CONDITIONS WITH A WEATHERED TO HIGHLY WEATHERED PAVEMENT SURFACE AND FREQUENT TRANSVERSE AND LONGITUDINAL CRACKS. CRACKS WERE GENERALLY DID NOT APPEAR TO BE SEALED, WITH THE EXCEPTION OF BORINGS B-013 AND B-014, THAT HAD SOME OF THE CRACKS IN THE DRIVE LANES SEALED.

EROSION, A FEW AREAS OF MINOR EROSION WERE EVIDENT IN THE GENERAL AREA OF BORINGS B-001, B-013, AND B-016. ADDITIONALLY, EROSION WAS ENCOUNTERED AROUND NEARLY EVERY GUARD RAIL POST IN THE AREA OF BORING B-018. NOTABLE EROSION WAS NOT OBSERVED IN THE IMMEDIATE AREA OF THE REMAINING BORINGS.

DRAINAGE, A FEW SMALL AREAS OF PONDED WATER, APPROXIMATELY ONE INCH IN DEPTH, WERE OBSERVED IN THE DITCHES NEAR BORING B-001. A RELATIVELY LARGE AREA OF PONDED WATER, APPROXIMATELY 4 TO 6 INCHES IN DEPTH, WAS OBSERVED IN THE DITCH NEAR BORINGS B-002 AND B-003. PLANTS GENERALLY ASSOCIATED WITH SATURATED SOILS WERE GROWING AND AROUND THE DITCH AND A LARGE NUMBER OF SNAILS WERE OBSERVED IN THE WATER. A SMALL AREA OF PONDED WATER, APPROXIMATELY 3 TO 4 INCHES IN DEPTH, WAS OBSERVED IN THE DITCH NEAR BORING B-004. PLANTS GENERALLY ASSOCIATED WITH SATURATED SOILS WERE GROWING AND AROUND THE DITCH AND THE WATER APPEARED TO HAVE ALGAE GROWTH. THE CONDITIONS IN THE DITCHES NEAR BORINGS B-002, B-003, AND B-004 IMPLY THAT THESE AREAS ARE POORLY DRAINED AND CAN BE OBSERVED TO HAVE PONDED WATER FOR EXTENDED PERIODS. DRAINAGE ISSUES WERE NOT OBSERVED IN THE IMMEDIATE AREA OF THE REMAINING BORINGS.

MINES, REVIEW OF THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) MAP OF MINES INDICATED TWO AREAS OF MINING ACTIVITY IN THE GENERAL LOCATION OF THE SITE(S). A “RELEASED” SURFACE MINE WAS INDICATED TO BE APPROXIMATELY 0.4 MILES WEST OF BORING B-001. IT IS NOT CLEAR TO CT WHAT “RELEASED” MEANS IN TERMS OF MINES. HOWEVER, BASED ON GOOGLE EARTH, THE AREA APPEARED TO NOW BE A POND, SUGGESTING THAT IT IS NOT ACTIVE. AN “ACTIVE” SURFACE MINE WAS INDICATED TO BE APPROXIMATELY 0.4 MILES SOUTH OF BORINGS B-005 THROUGH B-007 AND B-015 THROUGH B-018.

**SUBSURFACE EXPLORATION**

THIS EXPLORATION INCLUDED TWENTY (20) TEST BORINGS, DESIGNATED AS BORINGS B-001-0-24 THROUGH B-009-0-24 AND B-011-0-24 THROUGH B-021-0-24 WERE PERFORMED FOR THIS EXPLORATION. BORING B-010-0-24 WAS ELIMINATED FROM THE SCOPE DUE TO THE EXISTING MAINTENANCE OF TRAFFIC IN THE AREA PREVENTING BORING B-010 FROM BEING DRILLED CLOSER THAN APPROXIMATELY 40 TO 50 FEET TO THE PROPOSED LOCATION OF THE FOUNDATION INTENDED TO SUPPORT THE WEST SIDE OF THE OVERHEAD SIGN NUMBER 2-63. AS SUCH, BORING B-010 WAS CANCELLED AFTER DISCUSSION OVER PHONE AND EMAILS WITH JOREY SUMMERSSET OF ODOT DISTRICT 2 IN LATE MAY 2024, IN FAVOR OF RELYING ON ONLY BORING B-011 FOR SOILS DATA IN THE AREA, A BORING APPROXIMATELY 50 TO 55 FEET FROM PROPOSED LOCATION OF THE FOUNDATION INTENDED TO SUPPORT THE WEST SIDE OF THE OVERHEAD SIGN. BORINGS WERE DRILLED BY DLZ UNDER THE GUIDANCE OF CT FROM MARCH 18 THROUGH MARCH 27, 2024. THESE BORINGS ARE FULLY DESIGNATED IN ACCORDANCE WITH ODOT PROTOCOL, BUT THE “-0-24” PORTION OF THE NOMENCLATURE IS GENERALLY OMITTED IN THE DISCUSSIONS HEREIN.

THE TEST BORINGS PERFORMED DURING THIS EXPLORATION WERE DRILLED WITH A TRUCK-MOUNTED CME-75 DRILL RIG UTILIZING 3¼-INCH INSIDE DIAMETER HOLLOW-STEM AUGERS. DURING AUGER ADVANCEMENT OF THE TEST BORINGS, SPLIT-SPOON DRIVE SAMPLES WERE GENERALLY TAKEN AT 2½-FOOT INTERVALS TO AUGER REFUSAL. THE CALIBRATED HAMMER/ROD ENERGY RATIO FOR THE DRILL RIG UTILIZED IN THIS PROJECT WAS 72% PERCENT, BASED ON CALIBRATION PERFORMED ON JULY 27, 2023.

A CORE SAMPLE, CONSISTING OF A 5-FOOT RUN OF THE BEDROCK WAS OBTAINED FROM BORINGS B-008 AND B-009, USING AN NQ2 DIAMOND-BIT CORE BARREL AND CORING TECHNIQUES IN GENERAL ACCORDANCE WITH ASTM D 2113.

**EXPLORATION FINDINGS**

THE SURFACE MATERIALS ENCOUNTERED IN THE BORINGS CONSISTED OF TOPSOIL OR PAVEMENT MATERIALS. TOPSOIL WAS ENCOUNTERED IN BORINGS B-001, B-002, B-005, B-008, AND B-017 RANGING FROM 1 TO 8 INCHES IN THICKNESS. ASPHALT PAVEMENT WAS ENCOUNTERED IN THE REMAINING BORINGS RANGING FROM 2 TO 9 INCHES IN THICKNESS. APPROXIMATELY HALF OF THE BORINGS ENCOUNTERED AN AGGREGATE BASE UNDERLYING THE ASPHALT THAT VARIED FROM 9 TO 26 INCHES IN THICKNESS. BORINGS B-013 AND B-014 ENCOUNTERED CONCRETE PAVEMENT UNDERLYING 2 INCHES OF ASPHALT THAT WAS ON THE ORDER OF 8 TO 9 INCHES IN THICKNESS.

BASED ON THE RESULTS OF OUR FIELD AND LABORATORY TESTS, THE SUBSOILS ENCOUNTERED IN THE BORINGS UNDERLYING THE SURFACE MATERIALS CAN BE GENERALLY DESCRIBED PREDOMINANTLY COHESIVE SOILS WIDELY VARYING IN STRENGTH AND MOISTURE CONTENTS. HOWEVER, GRANULAR LAYERS WERE ALSO ENCOUNTERED AT OVERHEAD SIGN LOCATIONS 2-26, 2-44, 2-58, AND 2-56. ADDITIONALLY, BEDROCK WAS ENCOUNTERED UNDERLYING A LAYER OF GRANULAR SOILS AT OVERHEAD SIGN LOCATION 2-44.

IN BORING B-008, ROCK CORING STARTED AT THE ENCOUNTERED TOP OF ROCK AT A DEPTH OF 13½ FEET AND WAS DETERMINED TO BE A STRONG DOLOMITE.

IN BORING B-009, ROCK CORING STARTED AT A DEPTH OF 18.6 FEET, AFTER THE ENCOUNTERED TOP OF ROCK AT A DEPTH OF 16 FEET. WHERE WEATHERED SHALE WAS NOTED AS THE MATERIAL FROM A DEPTH OF 16 FEET TO A DEPTH OF 18.5 FEET AND WEATHERED DOLOMITE WAS NOTED FROM 18.5 TO 18.6 FEET. THE CORED ROCK WAS DETERMINED TO BE A MODERATELY STRONG DOLOMITE. A SUMMARY OF THE ROCK CORING DATA IS PROVIDED IN THE FOLLOWING TABLE.

ROCK CORE DATA							
BORING NUMBER	ROCK CORE NUMBER	DEPTH (FEET)	APPROXIMATE ELEVATION (FEET)	RECOVERY (%)	RQD (%)	UNCONFINED COMPRESSIVE STRENGTH TEST SPECIMEN DEPTH (FEET)	UNCONFINED COMPRESSIVE STRENGTH (PSI)
B-008-0-24	RC-1	13.5 – 18.5	569.0 – 564.0	80	54	14.6	14,400
B-009-0-24	RC-1	18.6 – 23.6	568.4 – 559.8	88	47	19.1	6,560

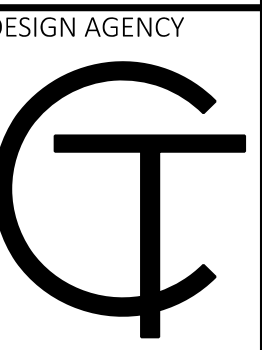
GROUNDWATER WAS INITIALLY ENCOUNTERED IN BORINGS B-005 AND B-009 AT DEPTHS OF 13.5 AND 6.2 FEET, RESPECTIVELY. GROUNDWATER WAS OBSERVED UPON COMPLETION OF DRILLING AT DEPTHS OF 5.3 TO 11.1 FEET IN BORINGS B-8, B-9, AND B-14 AS WELL AS AT DEPTHS OF 18.4 TO 20.5 FEET IN BORINGS B-5, B-12, AND B-13. IT SHOULD BE NOTED THAT THE BOREHOLES WERE DRILLED AND BACKFILLED WITHIN THE SAME DAY, AND STABILIZED WATER LEVELS MAY NOT HAVE OCCURRED OVER THIS LIMITED TIME PERIOD. INSTRUMENTATION WAS NOT INSTALLED TO OBSERVE LONG TERM GROUND LEVELS.

**SPECIFICATIONS**

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (SGE), DATED JULY 2023.

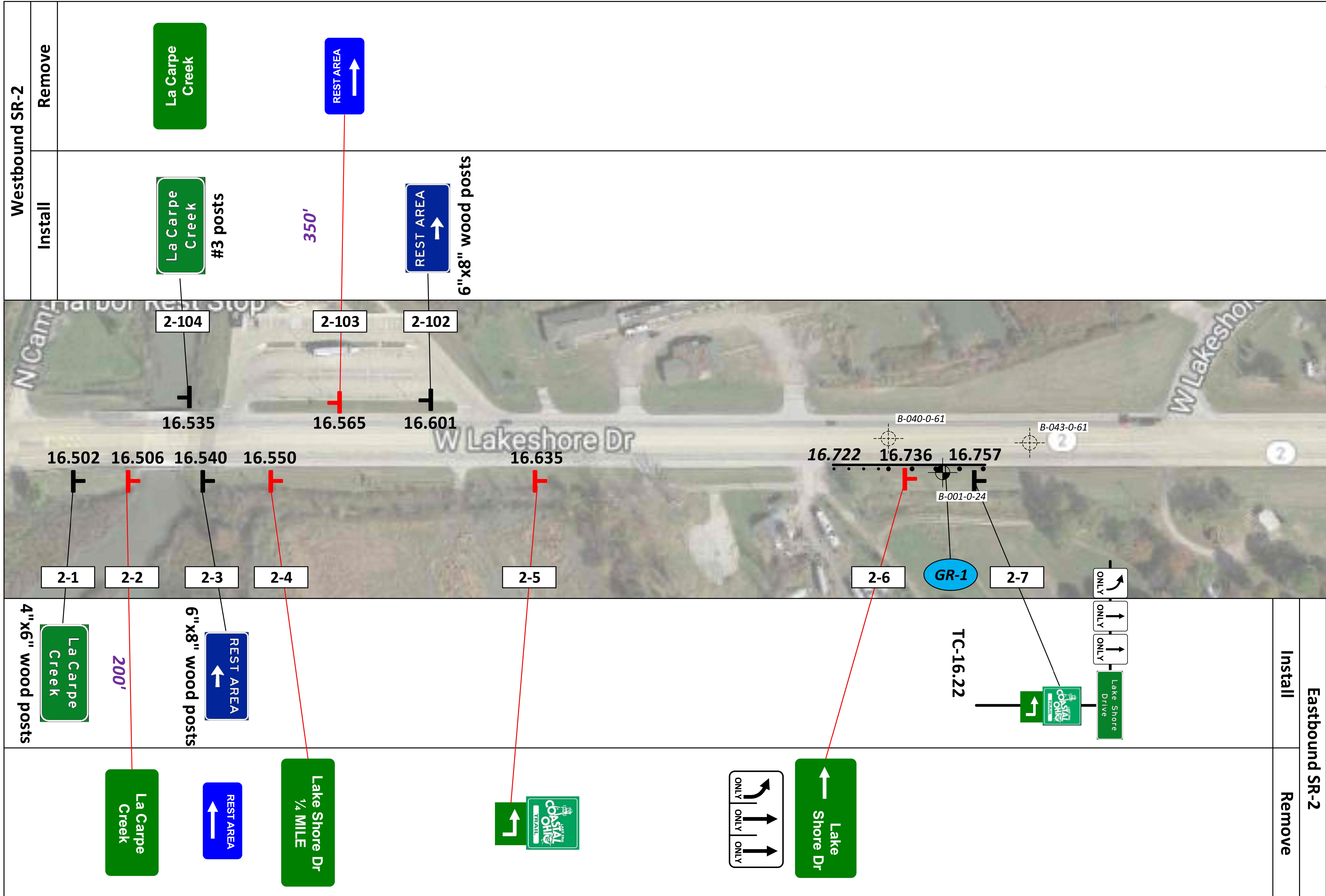
**AVAILABLE INFORMATION**

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

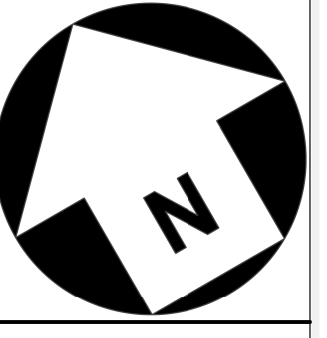


DESIGN AGENCY	
DESIGNER TLS	
REVIEWER LGH 09/05/24	
PROJECT ID 114413	
SUBSET 2	TOTAL 24
SHEET P.90	TOTAL 112





**OTT-2 Proposed Layouts**  
**MP 16.50-16.75**

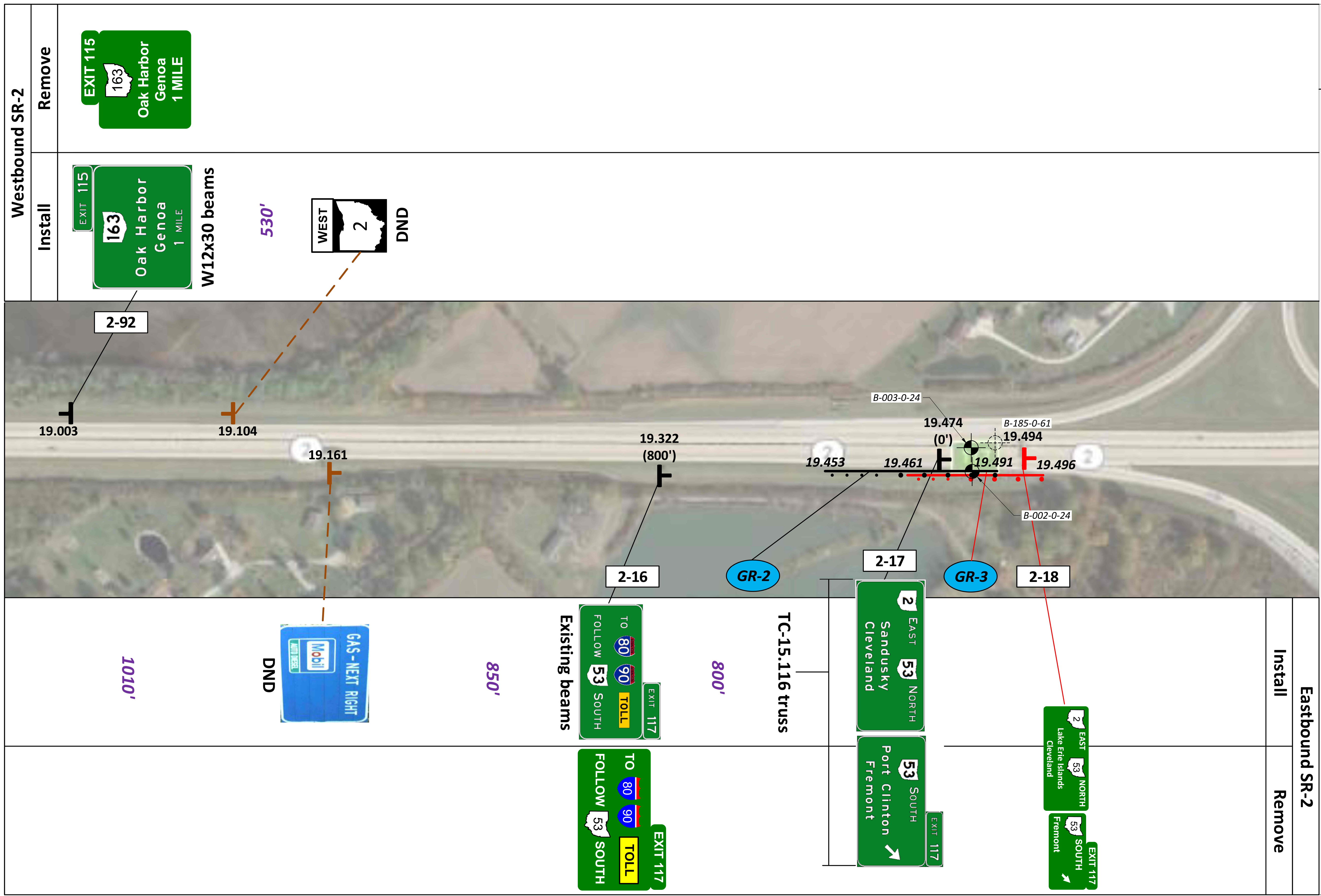


NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAPED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	TOTAL
3	24
SHEET	TOTAL
P.91	112

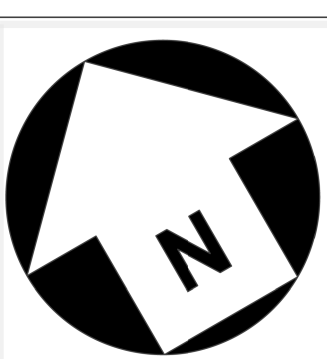
GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 MP. 16.50 - 16.75





Westbound SR-2	
Install	 W12x30 beams 530'  DND
Remove	

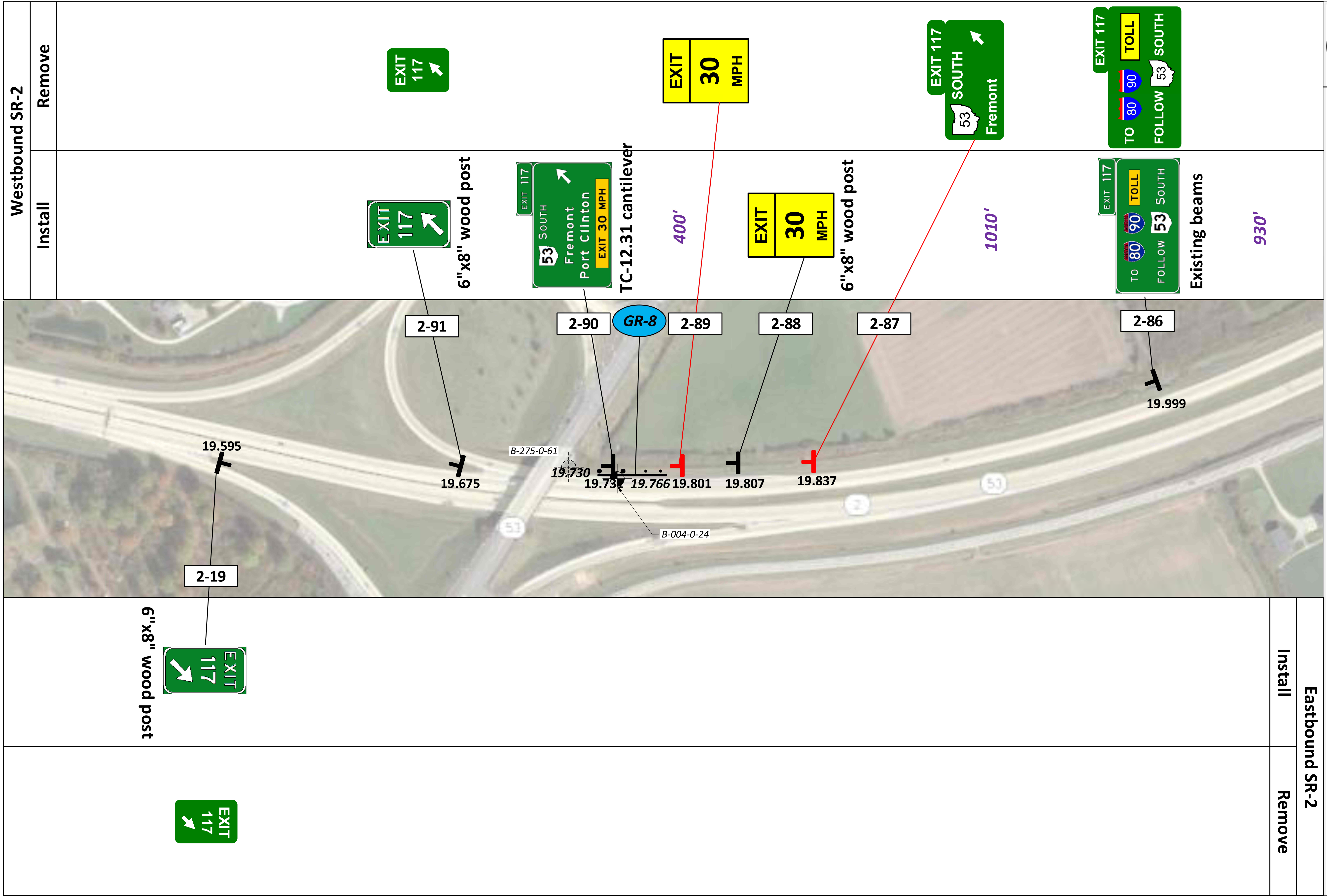
**OTT-2 Proposed Layouts**  
**MP. 19.00-19.50**



Eastbound SR-2	
Install	 850'  DND 1010' Existing beams 800' TC-15.116 truss  2 EAST Sandusky Cleveland 53 NORTH 2 EAST Port Clinton Fremont 53 SOUTH EXIT 117  2 EAST Lake Erie Islands Cleveland 53 NORTH 53 SOUTH Fremont EXIT 117
Remove	

NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.





**OTT-2 Proposed Layouts**  
**MP 19.50-20.00**



Westbound SR-2	
Install	Remove
<p>EXIT 117</p> <p>6"x8" wood post</p> <p>EXIT 117</p> <p>53 SOUTH Fremont Port Clinton EXIT 30 MPH</p> <p>TC-12.31 cantilever</p> <p>400'</p> <p>EXIT 30 MPH</p> <p>6"x8" wood post</p> <p>1010'</p> <p>EXIT 117</p> <p>53 SOUTH Fremont</p> <p>EXIT 117</p> <p>TO 80 90 TOLL FOLLOW 53 SOUTH</p> <p>Existing beams</p> <p>930'</p>	

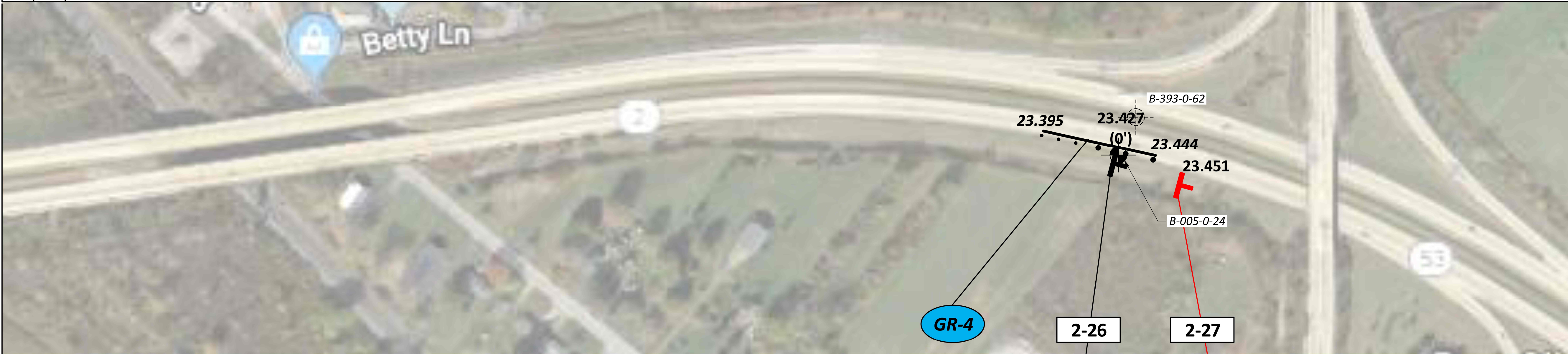
Eastbound SR-2	
Install	Remove
<p>6"x8" wood post</p> <p>EXIT 117</p>	<p>EXIT 117</p>

NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAPPED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	TOTAL
5	24
SHEET	TOTAL
P.93	112

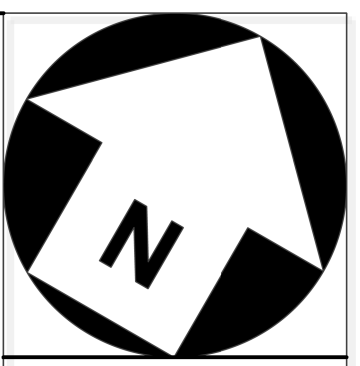


<b>Westbound SR-2</b>	
<b>Install</b>	<b>Remove</b>



<b>Eastbound SR-2</b>	
<b>Install</b>	<b>Remove</b>

2630'



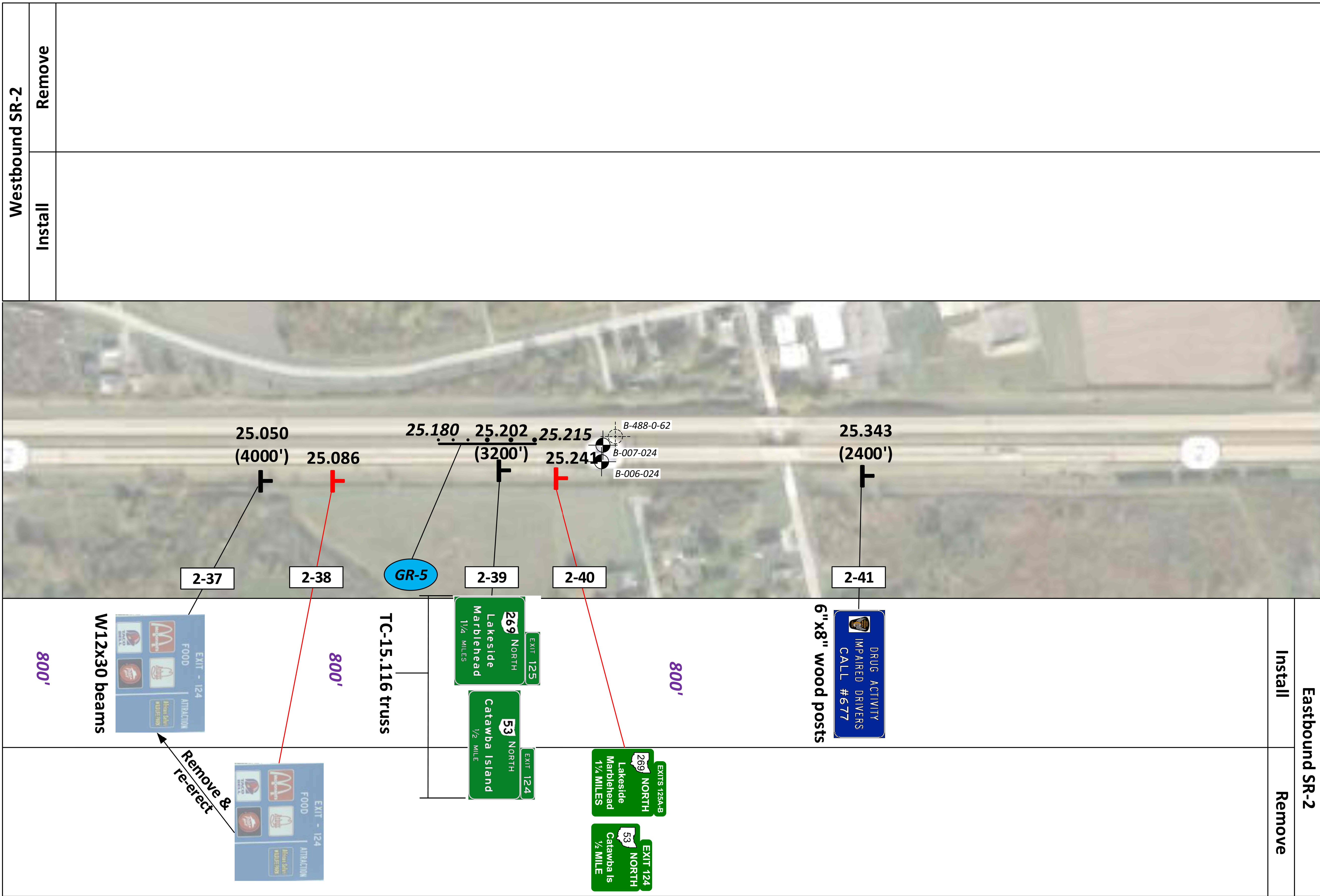
## OTT-2 Proposed Layouts MP 23.00-23.50

NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

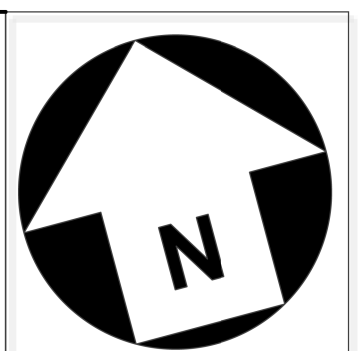
DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	TOTAL
6	24
SHEET	TOTAL
P.94	112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
MP. 23.00 - 23.50





**OTT-2 Proposed Layouts**  
**MP. 25.00-25.50**

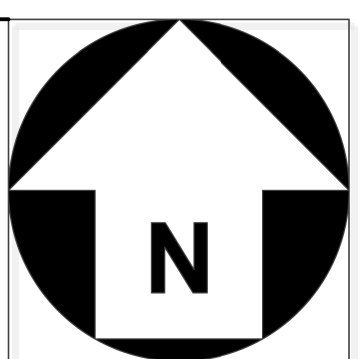


NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

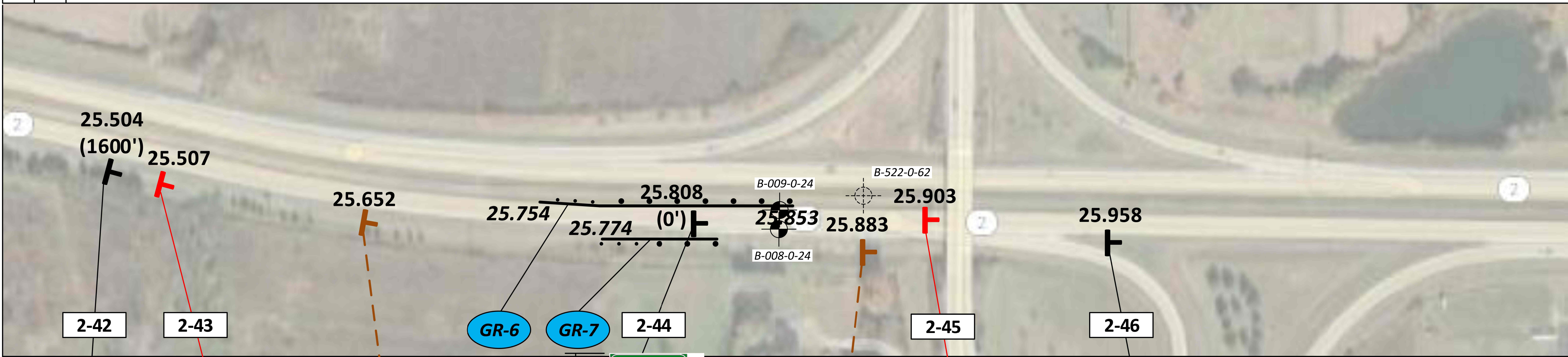
DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	TOTAL
7	24
SHEET	TOTAL
P.95	112



**OTT-2 Proposed Layouts**  
**MP. 25.50-26.00**



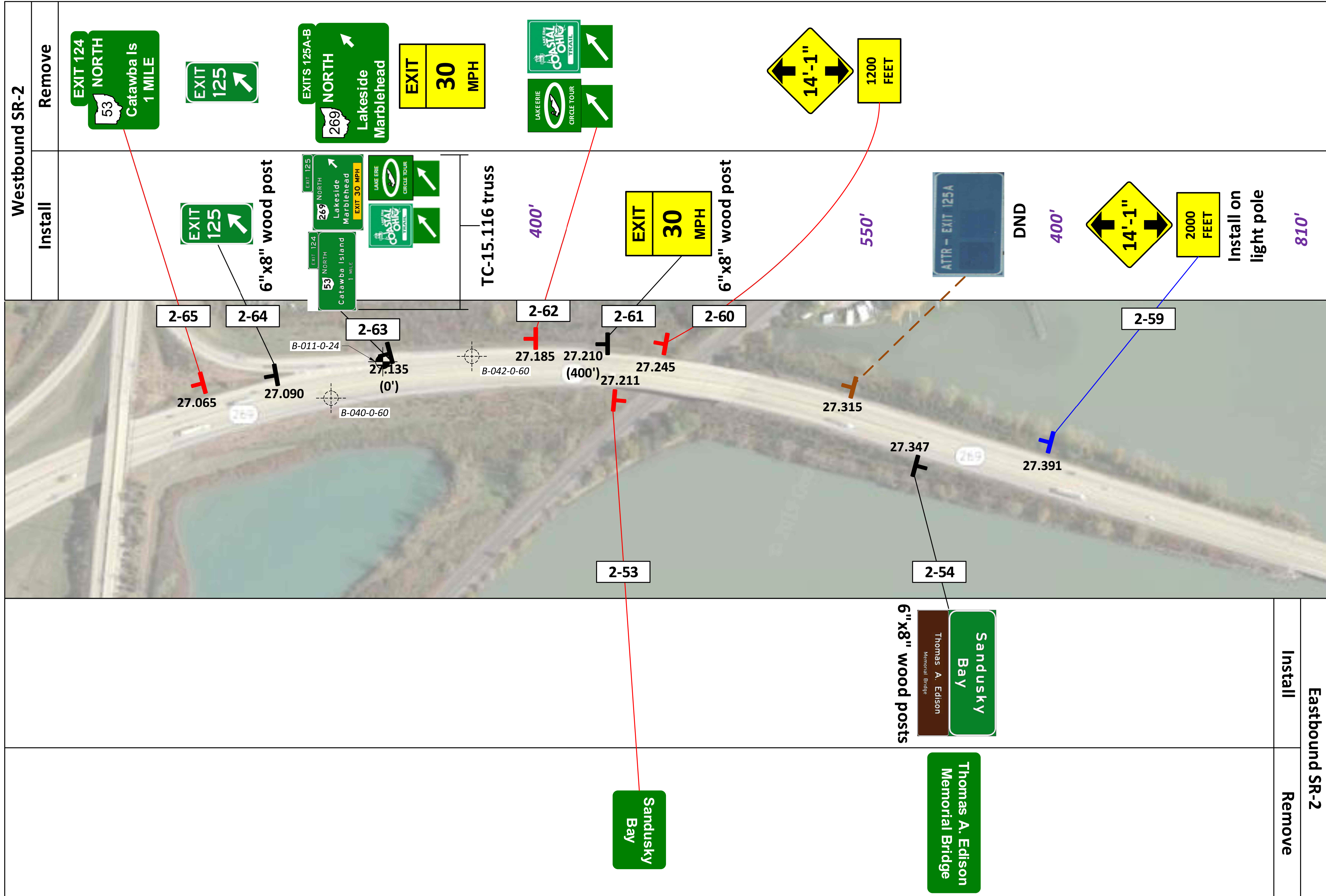
Westbound SR-2	Remove
Install	Remove



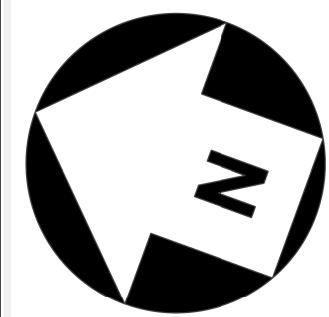
Eastbound SR-2	Install
Remove	Remove

NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.





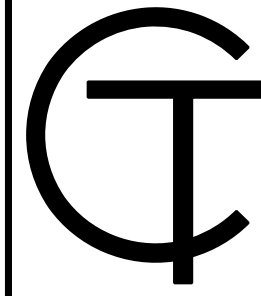
**OTT-2 Proposed Layouts**  
**MP 27.00-27.50**



Eastbound SR-2	
Install	Remove

NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

DESIGN AGENCY



DESIGNER

TLS

REVIEWER

LGH 09/05/24

PROJECT ID

114413

SUBSET TOTAL

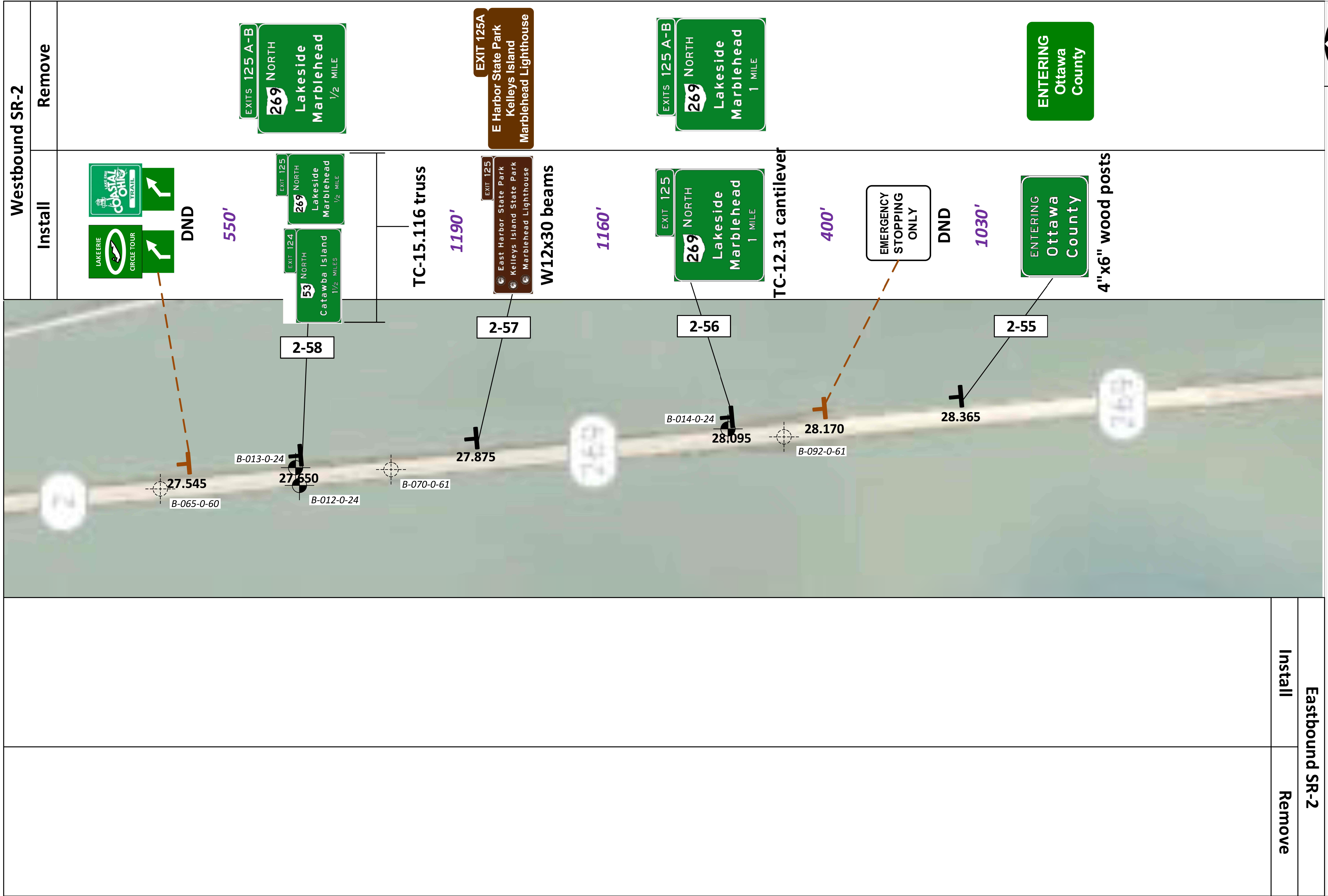
9 24

SHEET TOTAL

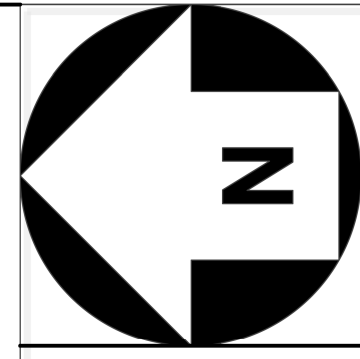
P.97 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
MP. 27.00 - 27.50





**OTT-2 Proposed Layouts**  
**MP 27.50-28.70**



<b>Eastbound SR-2</b>	
<b>Install</b>	<b>Remove</b>

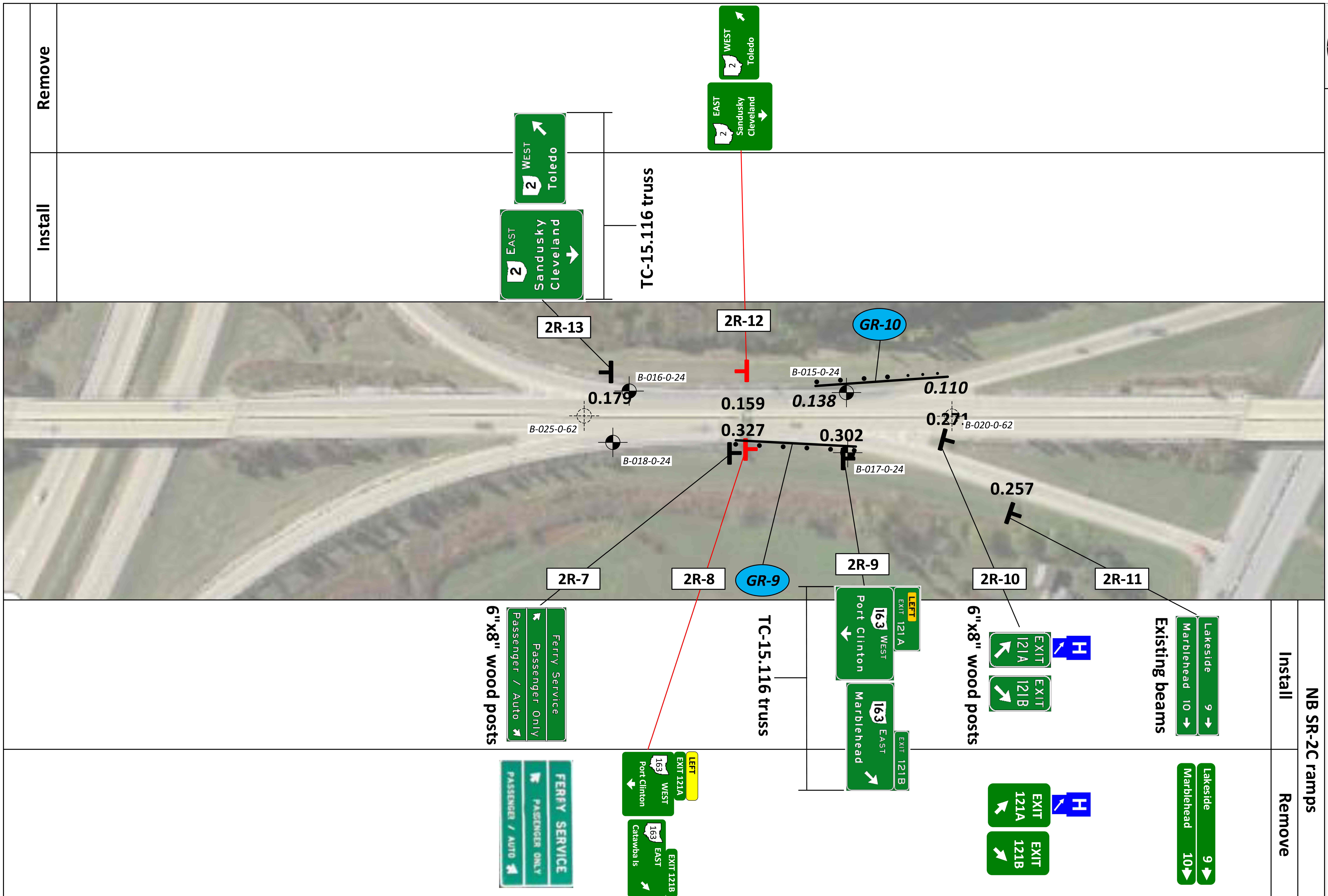
NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

<b>DESIGN AGENCY</b>	
<b>DESIGNER</b>	
TLS	
<b>REVIEWER</b>	
LGH 09/05/24	
<b>PROJECT ID</b>	
114413	
<b>SUBSET</b>	<b>TOTAL</b>
10	24
<b>SHEET</b>	
P.98	112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
MP. 27.50 - 28.70



**OTT-2 Proposed Layouts**  
**Exit 121 (SR-163)**

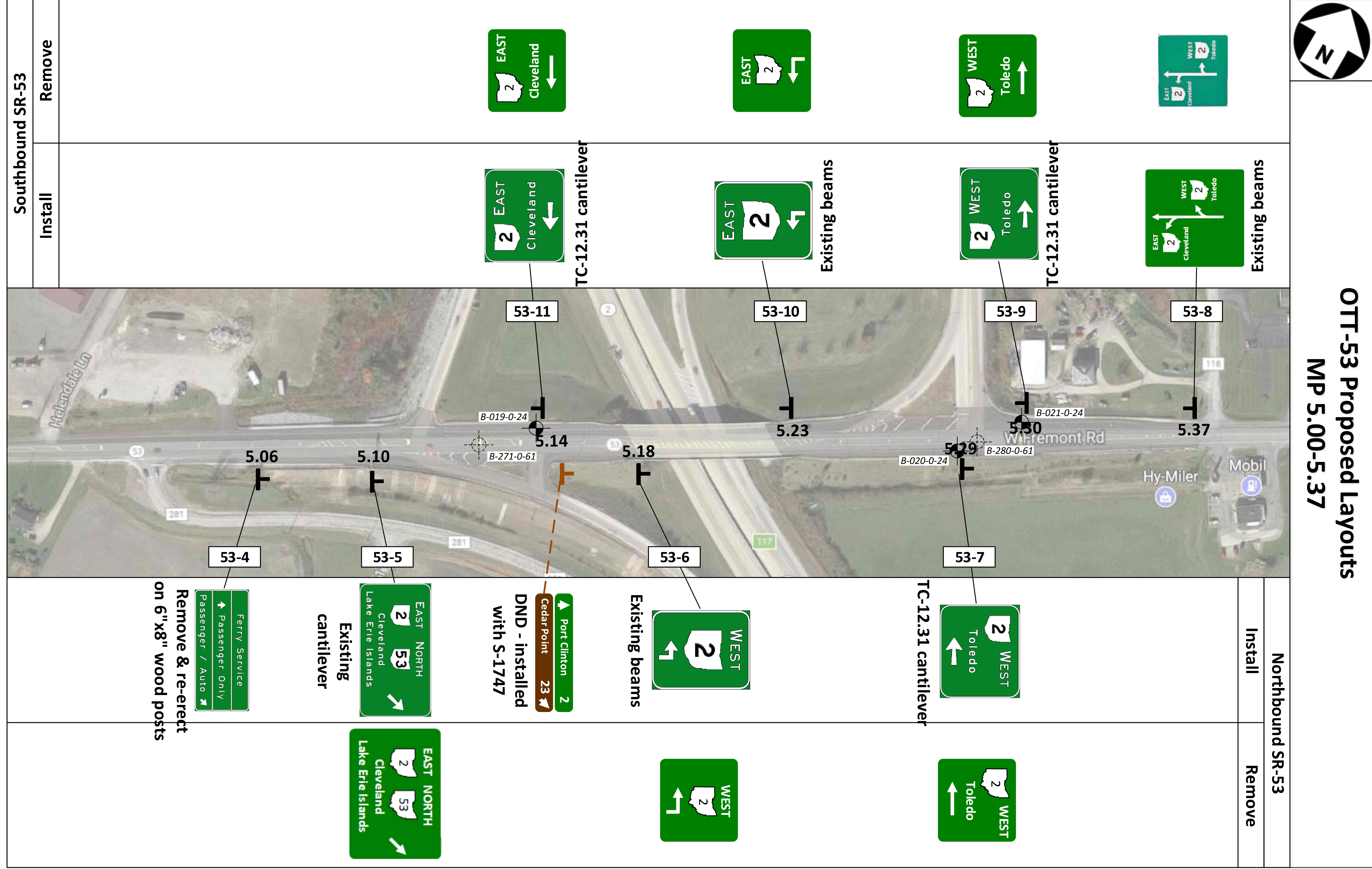


NOTE: LOCATION OF BORINGS APPROXIMATED BASED ON AERIAL IMAGE. REMAINING OVERLAYED ITEMS ARE NOT TO SCALE ON AERIAL. AS SUCH, BORING LOCATIONS ARE NOT TO SCALE WITH SIGN FOUNDATION LOCATIONS.

Install Remove

NB SR-2-C ramps  
Install Remove





Southbound SR-53

Install

Remove

**OTT-53 Proposed Layouts**  
**MP 5.00-5.37**

Northbound SR-53

Install

Remove

DESIGN AGENCY	
DESIGNER	TLS
REVIEWER	LGH 09/05/24
PROJECT ID	114413
SUBSET	TOTAL
12	24
SHEET	TOTAL
P.100	112



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 12:21:32 PM USER: somogyl H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID001.dgn

PROJECT: LUC/OTT SIGN FY 2025		DRILLING FIRM / OPERATOR: DLZ / K. CONRAD		DRILL RIG: '23 CME 75-KC-777		SLM/DIRECTION: 16.758 / EB		EXPLORATION ID																					
TYPE: LIGHT TOWER		SAMPLING FIRM / LOGGER: DLZ / MIDDLETON		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 2		B-001-0-24																					
PID: 114413 SFN: 2-7		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 7/27/23		ELEVATION: 578.2 (NAVD88) EOB: 25.0 ft.		PAGE																					
START: 3/18/24 END: 3/18/24		SAMPLING METHOD: SPT		ENERGY RATIO (%): 72.5		LAT / LONG: 41.526861, -83.013968		1 OF 1																					
MATERIAL DESCRIPTION AND NOTES																													
		ELEV.		SPT/ RQD		REC SAMPLE (%)		GRADATION (%)		ATTEMBERG		ODOT CLASS (GI)		ABAN-DONED															
		578.2		DEPTHS		ID		GR CS FS SI CL		LL PL PI		WC																	
TOPSOIL - 6 INCHES		577.7		1																									
VERY STIFF TO HARD, BROWN/DARK BROWN/GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST FILL				2		12						19		A-6a (V)															
@3.5' GRAY, DAMP				3		61						15		A-6a (V)															
MEDIUM STIFF, DARK GRAY/DARK BROWN/GRAY, CLAY, SOME SILT, LITTLE SAND, SLIGHTLY ORGANIC, MOIST Qu = 8.4 PSI = 1,210 PSF, FILL		572.2		4		8		23		67		58		27		31		34		A-7-6 (20)									
STIFF, BROWN, SILTY CLAY, SOME SAND, MOIST FILL		569.7		5		50						26		A-6b (V)															
MEDIUM STIFF, GRAY/BROWN, SILTY CLAY, LITTLE SAND, TRACE WOOD, MOIST Qu = 7.5 PSI = 1,060 PSF, (ORGANIC ODOR NOTED), FILL		567.2		6		7		22		1.00		29		A-6b (V)															
VERY STIFF TO HARD, GRAY/BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		564.7		7		18		4.50		7		11		21		54		34		19		15		16		A-6a (10)			
MEDIUM STIFF TO STIFF, DARK GRAY/BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, DAMP		562.2		8		10		83		1.00		16		A-6b (V)															
VERY STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST		559.7		9		19		100		2.25		15		A-6b (V)															
		553.2		10		31		100		3.50		22		A-6b (V)															
				11		7		22		4.25		15		A-6b (V)															
				12		7		100		4.50		7		11		21		54		34		19		15		16		A-6a (10)	
				13		3		7		1.00		29		A-6b (V)															
				14		3		18		4.50		7		11		21		54		34		19		15		16		A-6a (10)	
				15		3		4		10		83		1.00		16		A-6b (V)											
				16		3		4		10		83		1.00		16		A-6b (V)											
				17		3		4		10		83		1.00		16		A-6b (V)											
				18		4		7		9		19		100		2.25		15		A-6b (V)									
				19		4		7		9		19		100		2.25		15		A-6b (V)									
				20		5		7		11		22		100		4.25		15		A-6b (V)									
				21		5		7		11		22		100		4.25		15		A-6b (V)									
				22		5		7		11		22		100		4.25		15		A-6b (V)									
				23		5		7		11		22		100		4.25		15		A-6b (V)									
				24		5		7		11		22		100		4.25		15		A-6b (V)									
				25		5		7		11		22		100		4.25		15		A-6b (V)									
				EOB		553.2		31		3.50		22		100		4.25		15		A-6b (V)									

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 2.5 BAGS BENTONITE CEMENT GROUT, SHOVELED SOIL CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

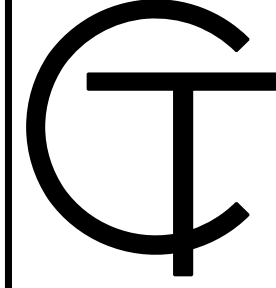
PROJECT: LUC/OTT SIGN FY 2025		DRILLING FIRM / OPERATOR: DLZ / K. CONRAD		DRILL RIG: '23 CME 75-KC-777		SLM/DIRECTION: 19.472 / EB		EXPLORATION ID							
TYPE: LIGHT TOWER		SAMPLING FIRM / LOGGER: DLZ / MIDDLETON		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 2		B-002-0-24							
PID: 114413 SFN: 2-17 (SW)		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 7/27/23		ELEVATION: 577.5 (NAVD88) EOB: 25.0 ft.		PAGE							
START: 3/18/24 END: 3/18/24		SAMPLING METHOD: SPT		ENERGY RATIO (%): 72.5		LAT / LONG: 41.501587, -82.974062		1 OF 1							
MATERIAL DESCRIPTION AND NOTES															
		ELEV.		SPT/ RQD		REC SAMPLE (%)		GRADATION (%)		ATTEMBERG		ODOT CLASS (GI)		ABAN-DONED	
		577.5		DEPTHS		ID		GR CS FS SI CL		LL PL PI		WC			
TOPSOIL - 8 INCHES		576.8		1											
VERY STIFF, GRAY, SILTY CLAY, TRACE SAND, MOIST				2		15						28		A-6b (V)	
STIFF, BROWN/GRAY, CLAY, SOME SILT, LITTLE SAND, MOIST		574.0		3		61						26		A-7-6 (18)	
STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST Qu = 26.4 PSI = 3,800 PSF		571.5		4		10		27		57		23		A-6b (10)	
STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		569.0		5		12		10		27		15		A-6a (V)	
LOOSE, DARK BROWN/DARK GRAY, COARSE AND FINE SAND, SOME SILT, LITTLE CLAY, WET (SEEPAGE NOTED)		566.5		6		6		15		24		12		A-3a (V)	
SOFT TO MEDIUM STIFF, DARK BROWN/GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST Qu = 11.7 PSI = 1,685 PSF		566.3		7		72		8		15		17		A-6a (8)	
VERY SOFT TO SOFT, DARK GRAY/BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 5.8 PSI = 835 PSF		564.0		8		4		100		0.00		19		A-6b (V)	
MEDIUM STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		561.5		9		8		100		0.25		19		A-6b (V)	
				10		8		100		0.25		18		A-6b (V)	
				11		8		100		0.75		17		A-6b (V)	
				12		8		100		0.75		17		A-6b (V)	
				13		8		100		0.75		17		A-6b (V)	
				14		8		100		0.75		17		A-6b (V)	
				15		8		100		0.75		17		A-6b (V)	
				16		8		100		0.75		17		A-6b (V)	
				17		8		100		0.75		17		A-6b (V)	
				18		8		100		0.75		17		A-6b (V)	
				19		8		100		0.75		17		A-6b (V)	
				20		8		100		0.75		17		A-6b (V)	
				21		8		100		0.75		17		A-6b (V)	
				22		8		100		0.75		17		A-6b (V)	
				23		8		100		0.75		17		A-6b (V)	
				24		8		100		0.75		17		A-6b (V)	
				25		8		100		0.75		17		A-6b (V)	
				EOB		552.5		8		0.75		18		A-6b (V)	

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 2.5 BAGS BENTONITE CEMENT GROUT, SHOVELED SOIL CUTTINGS

DESIGN AGENCY



DESIGNER

TLS

REVIEWER

LGH 09/05/24

PROJECT ID

114413

SUBSET

13 TOTAL 24

SHEET

P.101 TOTAL 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
OVERHEAD SIGN REFERENCE NUMBERS 2-7 & 2-17 (SW)  
BORING LOGS B-001-0-24 & B-002-0-24



LUC/OTT SIGN FY2025

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 9/5/2024 TIME: 9:29:54 AM USER: somogyi H:\2024\114413\400-Engineering\Geotechnical\Sheets\114413\_ID002.dgn

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	DRILL RIG: '23 CME 75-KC-777	SLM/DIRECTION: 19.472 / EB	EXPLORATION ID
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 2	B-003-0-24
PID: 114413 SFN: 2-17 (NE)	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/27/23	ELEVATION: 577.6 (NAVD88) EOB: 25.0 ft.	PAGE
START: 3/19/24 END: 3/19/24	SAMPLING METHOD: SPT	ENERGY RATIO (%): 72.5	LAT / LONG: 41.501693, -82.973947	1 OF 1
<b>MATERIAL DESCRIPTION AND NOTES</b>				
ASPHALT - 6 INCHES	ELEV. 577.6	SPT/ RQD	GRADATION (%)	ODOT CLASS (G)
AGGREGATE BASE - 10 INCHES (WITH SAND, TRACE SILT, TRACE CLAY)	577.1	7		
STIFF, BROWN/GRAY, SILTY CLAY, TRACE SAND	576.3	4 4		A-1-b (V)
STIFF, BROWN/GRAY, CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST	574.1	4 5 4		A-6b (V)
STIFF TO VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, LITTLE GRAVEL, DAMP Qu = 50.1 PSI = 7,215 PSF	571.6	5 6 7		
@8.5': TRACE GRAVEL		5 8 10		A-6a (V)
STIFF TO VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 50.8 PSI = 7,315 PSF	566.6	4 6 7		A-6b (10)
MEDIUM STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 10.8 PSI = 1,555 PSF	561.6	3 3 6		A-6b (V)
		2 2 4		A-6b (V)
		2 3 4		A-6b (V)
		3 2 4		A-6b (V)
		2 2 3		A-6b (V)
	552.6	2 2 3		A-6b (V)

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: USED 0.3 ASPHALT PATCH; TREMIED 2.5 BAGS BENTONITE CEMENT GROUT; SHOVELED SOIL CUTTINGS

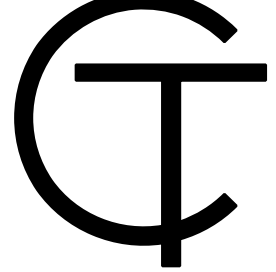
PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	DRILL RIG: '23 CME 75-KC-777	SLM/DIRECTION: 19.733 / WB	EXPLORATION ID
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 2	B-004-0-24
PID: 114413 SFN: 2-90	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/27/23	ELEVATION: 576.1 (NAVD88) EOB: 25.0 ft.	PAGE
START: 3/19/24 END: 3/19/24	SAMPLING METHOD: SPT	ENERGY RATIO (%): 72.5	LAT / LONG: 41.499541, -82.969808	1 OF 1
<b>MATERIAL DESCRIPTION AND NOTES</b>				
ASPHALT - 5 INCHES	ELEV. 576.1	SPT/ RQD	GRADATION (%)	ODOT CLASS (G)
AGGREGATE BASE - 10 INCHES	575.7	5		
MEDIUM STIFF TO STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	574.8	4 4		A-6b (V)
@3.5': WET, BROWN/GRAY, TRACE SAND (FREE WATER NOTED)		3 3 4		A-6b (V)
VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 48.3 PSI = 6,955 PSF	570.1	3 3 6		A-6a (8)
@8.5': SOME SAND		6 7 7		A-6a (V)
MEDIUM STIFF, GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST	565.1	2 4 3		A-6a (V)
@13.5': Qu = 14.1 PSI = 2,030 PSF		2 3 3		A-6a (8)
STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	557.6	2 2 4		A-6a (V)
		2 4 5		A-6b (V)
		2 4 5		A-6b (V)
		2 4 4		A-6b (V)
	551.1	2 4 4		A-6b (V)

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED 0.25 BAGS ASPHALT PATCH; TREMIED 2.5 BAGS BENTONITE CEMENT GROUT; SOIL CUTTINGS

DESIGN AGENCY



DESIGNER: TLS

REVIEWER: LGH 09/05/24

PROJECT ID: 114413

SUBSET: 14 TOTAL: 24

SHEET: P.102 TOTAL: 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
OVERHEAD SIGN REFERENCE NUMBERS 2-17 (NE) & 2-90  
BORING LOGS B-003-0-24 & B-004-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:30:21 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID003.dgn

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	SLM/DIRECTION: 23.428 / EB	EXPLORATION ID: B-005-0-24
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	ALIGNMENT: SR 2	
PID: 114413 SFN: 2-26	DRILLING METHOD: 3.25" HSA	ELEVATION: 578.9 (NAVD88) EOB: 25.0 ft.	PAGE: 1 OF 1
START: 3/19/24 END: 3/19/24	SAMPLING METHOD: SPT	LAT / LONG: 41.511391, -82.906339	
MATERIAL DESCRIPTION AND NOTES			
TOPSOIL - 1 Inch	ELEV. 578.9	SPT/ RQD	ABAN-DONED
STIFF TO VERY STIFF, DARK BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	578.8	1 5	
		2 5	
		3	
@3.5': BROWN		4 5	
		5 7	
	572.9		
SOFT, DARK BROWN/GRAY CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST Qu = 3.6 PSI = 520 PSF (SEEPAGE NOTED)		6 2	
		7 2	
	570.4		
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP		8	
		9 7	
		10 11	
@11': GRAY		11 7	
		12 11	
	565.4		
MEDIUM DENSE, GRAY, GRAVEL AND STONE FRAGMENTS, SOME SAND, LITTLE SILT, TRACE CLAY, WET (SEEPAGE NOTED)		13 6	
		14 10	
	562.9		
STIFF, GRAY, SILT AND CLAY, LITTLE SAND, LITTLE GRAVEL, DAMP TO MOIST Qu = 15.4 PSI = 2,220 PSF		15 6	
		16 3	
		17 5	
		18	
	560.5		
		19 3	
		20 4	
		21 6	
		22 10	
	555.4		
SOFT TO MEDIUM STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST		23 7	
		24 5	
	553.9		
		25 2	
		3 4	

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

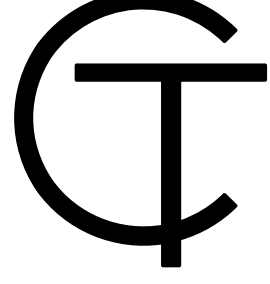
ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 2.5 BAGS BENTONITE CEMENT GROUT; SHOVELED SOIL CUTTINGS

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	SLM/DIRECTION: 25.224 / EB	EXPLORATION ID: B-006-0-24
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	ALIGNMENT: SR 2/SR 53	
PID: 114413 SFN: 2-39 (S)	DRILLING METHOD: 3.25" HSA	ELEVATION: 603.5 (NAVD88) EOB: 25.0 ft.	PAGE: 1 OF 1
START: 3/20/24 END: 3/20/24	SAMPLING METHOD: SPT	LAT / LONG: 41.507307, -82.872576	
MATERIAL DESCRIPTION AND NOTES			
ASPHALT - 3 INCHES	ELEV. 603.5	SPT/ RQD	ABAN-DONED
AGGREGATE BASE - 26 INCHES (WITH TRACE ASPHALT FRAGMENTS, TRACE SILT, TRACE CLAY)	603.2	1 9	
		2 22	
STIFF, BROWN/GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST FILL	601.0	3 20	
		4 6	
		5 5	
MEDIUM STIFF TO STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP Qu = 20.1 PSI = 2,895 PSF, FILL	597.5		
		6 3	
		7 3	
		8 4	
STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST FILL	595.0		
		9 3	
		10 4	
	592.5		
STIFF TO VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP Qu = 35.8 PSI = 5,155 PSF		11 5	
		12 3	
	590.0		
STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		13 5	
		14 6	
	587.5		
STIFF TO VERY STIFF, GRAY/BLACK, SILTY CLAY, TRACE SAND, TRACE ORGANICS, WET (ORGANIC ODOR NOTED)		15 6	
		16 5	
	585.0		
STIFF TO HARD, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, TRACE SHALE FRAGMENTS, MOIST		17 8	
		18 4	
		19 4	
@21': DAMP (SLIGHT SCRAPING NOTED)		20 5	
		21 12	
		22 14	
	580.0		
HARD, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST		23 6	
		24 13	
	578.5		
		16 13	
		35 16	

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: USED .5 BAGS ASPHALT PATCH; TREMIED 2.5 BAGS BENTONITE CEMENT GROUT; SHOVELED SOIL CUTTINGS

DESIGN AGENCY  
  
 DESIGNER: TLS  
 REVIEWER: LGH  
 PROJECT ID: 114413  
 SUBSET: 15 / TOTAL: 24  
 SHEET: P.103 / TOTAL: 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBERS 2-26 & 2-39 (S)  
 BORING LOGS B-005-0-24 & B-006-0-24



**LUC/OTT SIGN FY2025**

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 9/5/2024 TIME: 9:30:47 AM USER: somogyi  
 H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID004.dgn

PROJECT: TYPE: PID: START:	LUC/OTT SIGN FY 2025 LIGHT TOWER 114413 SFN: 2-39 (N) 3/20/24 END: 3/20/24	DRILLING FIRM / OPERATOR: SAMPLING FIRM / LOGGER: DRILLING METHOD: SAMPLING METHOD:	DLZ / K. CONRAD DLZ / MIDDLETON 3.25" HSA SPT	DRILL RIG: HAMMER: CALIBRATION DATE: ENERGY RATIO (%):	'23 CME 75-KC-777 CME AUTOMATIC 7/27/23 72.5	SLM/DIRECTION: ALIGNMENT: ELEVATION: LAT / LONG:	GRADATION (%)									ATTERBERG LL PL PI	WC	ODOT CLASS (G)	EXPLORATION ID B-007-0-24
							GR	CS	FS	SI	CL	LL	PL	PI	WC				
<b>MATERIAL DESCRIPTION AND NOTES</b>		ELEV.	DEPTHS	SPT / ROD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G) <td>ABANDONED</td>	ABANDONED	
ASPHALT - 7 INCHES		603.7	1	4															
AGGREGATE BASE - 10 INCHES		603.1	2	5	13	61	2.50												
STIFF BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST FILL		602.3	3	6															
@3.5': GRAY/BROWN, TRACE SAND			4	4	12	78	1.75												
			5	6															
MEDIUM STIFF TO STIFF, GRAY/BROWN CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST Qu = 11.2 PSI = 1,615 PSF, FILL		597.7	6	3	10	72	1.25	4	2	4	25	65	45	22	23				
			7	5															
STIFF BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST FILL		595.2	8	3	4	11	1.50												
@11': Qu = 24.4 PSI = 3,515 PSF			9	5															
			10	4															
@13.5': TRACE GRAVEL			11	4	11	100	1.50	8	6	13	24	49	34	19	15				
			12	5															
VERY STIFF, BROWN, SILTY CLAY, TRACE SAND, MOIST		587.7	13	3	4	12	3.00												
@18.5': TRACE GRAVEL, DAMP			14	6															
			15	6															
VERY STIFF, BROWN, SILTY CLAY, TRACE SAND, MOIST			16	7	18	89	2.00												
			17	8															
@18.5': TRACE GRAVEL, DAMP			18	7	17	100	2.25	4	1	6	23	66	38	21	17				
			19	8															
VERY STIFF TO HARD, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, MOIST		582.7	20	6	17	100													
			21	3	10	29	4.50												
			22	14															
			23																
			24	6	13	37	4.50												
			25	18															

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\1241008.GPJ

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: .3 BAGS ASPHALT PATCH; TREMIED 2.5 BAGS BENTONITE CEMENT GROUT

DESIGN AGENCY  
  
 DESIGNER  
 TLS  
 REVIEWER  
 LGH 09/05/24  
 PROJECT ID  
 114413  
 SUBSET TOTAL  
 16 24  
 SHEET TOTAL  
 P.104 112

**GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBER 2-39 (N)  
 BORING LOG B-007-0-24**



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:31:01 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID0005.dgn

PROJECT:	LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR:	DLZ / K. CONRAD	DRILL RIG:	'23 CME 75-KC-777	SLM/DIRECTION:	25.844 / EB	EXPLORATION ID	B-008-0-24									
TYPE:	LIGHT TOWER	SAMPLING FIRM / LOGGER:	DLZ / MIDDLETON	HAMMER:	CME AUTOMATIC	ALIGNMENT:	SR 2/SR 53											
PID:	114413 SFN: 2-44 (S)	DRILLING METHOD:	3.25' HSA / NQ2	CALIBRATION DATE:	7/27/23	ELEVATION:	582.5 (NAVD88) EOB:	18.5 ft.	PAGE									
START:	3/21/24 END: 3/21/24	SAMPLING METHOD:	SPT / NQ2	ENERGY RATIO (%):	72.5	LAT / LONG:	41.505668, -82.860798	1 OF 1										
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	ABAN-DONED
TOPSOIL - 3 INCHES		582.5	1	6														
MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE CLAY, TRACE GRAVEL, TRACE SILT, MOIST		582.2	2	7	15	94	4.50									15	A-3a (V)	
SOFT TO MEDIUM STIFF, BROWN, SILT AND CLAY, SOME SAND, SOME GRAVEL, TRACE SHALE FRAGMENTS, MOIST Qu = 5.7 PSI = 820 PSF		579.0	3	3	8	72	0.25											
@6": "AND" SAND, Qu = 2.3 PSI = 330 PSF		574.0	4	3	4													
VERY DENSE, GRAY, SANDY SILT, LITTLE GRAVEL, TRACE CLAY, DAMP		571.5	5	2	7	89	0.00											
VERY DENSE, GRAY, FINE SAND, TRACE GRAVEL, TRACE SILT, TRACE CLAY, DAMP TO MOIST (CHATTER NOTED)		569.0	6	3	3													
DOLOMITE, GRAY, MODERATELY WEATHERED, STRONG, BRECCIATED, FRACTURED TO MODERATELY FRACTURED, @14.6": SLIGHTLY FRACTURED, Qu = 14,400 PSI			7	10	53	100	-	12	12	39	34	3	17	16	1	9	A-4a (0)	
@16.8": HIGHLY FRACTURED			8	41		71	-	-	-	-	-	-	-	-	-	6	A-3 (V)	
			9	21	23													
			10	10														
			11	41														
			12	50/1'														
			13															
			14															
			15															
			16															
			17															
			18															
			TR															
			EOB															

NOTES: NONE  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED



Office of Geotechnical Engineering

B-008-0-24

UCS Sample



Core Date:	March 21, 2024	Ground Surface Elevation:	582.2'
Run #:	RC-1	Recovery	RQD
Depth	13.5'	564.0'	54%
	18.5'	569.0'	80%
		48/60	32.5/60
LUC/OTT Sign FY 2025, PID 114413			

Prepared by



CT Project No.: 241008

DESIGN AGENCY	T	
DESIGNER	TLS	
REVIEWER	LGH 09/05/24	
PROJECT ID	114413	
SUBSET	17	TOTAL 24
SHEET	P.105	TOTAL 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBER 2-44 (S)  
 BORING & ROCK CORE PHOTO LOG B-008-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:31:21 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID006.dgn

PROJECT: LUC/OTT SIGN FY 2025		DRILLING FIRM / OPERATOR: DLZ / K. CONRAD		DRILL RIG: '23 CME 75-KC-777		SLM/DIRECTION: 25.844 / EB		EXPLORATION ID	
TYPE: LIGHT TOWER		SAMPLING FIRM / LOGGER: DLZ / MIDDLETON		HAMMER: CME AUTOMATIC		ALIGNMENT: SR 2/SR 53		B-009-0-24	
PID: 114413 SFN: 2-44 (N)		DRILLING METHOD: 3.25' HSA / NQ2		CALIBRATION DATE: 7/27/23		ELEVATION: 583.4 (NAVD88) EOB: 23.6 ft.		PAGE	
START: 3/20/24 END: 3/20/24		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 72.5		LAT / LONG: 41.505810, -82.860799		1 OF 1	
MATERIAL DESCRIPTION AND NOTES									
AGGREGATE BASE - 9 INCHES		ELEV. 583.4		SPT / ROD		GRADATION (%)		ODOT CLASS (G)	
MEDIUM STIFF TO STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP FILL		582.6		1 5		GR CS FS SI CL		WC	
LOOSE, BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, MOIST TO WET FILL		579.9		2 3		- - - - -		16 A-6a (V)	
VERY DENSE, BROWN, SANDY SILT, TRACE GRAVEL, TRACE CLAY, MOIST		577.4		3 2 3		0 8 60 28 4		21 19 2	
VERY DENSE, GRAY, COARSE AND FINE SAND, SOME SILT, TRACE GRAVEL, TRACE CLAY, MOIST		574.9		4 5		6 2 49 39 4		17 13 4	
VERY DENSE, GRAY, SILT, LITTLE CLAY, TRACE SHALE FRAGMENTS, TRACE SAND, MOIST		569.9		5 6		- - - - -		11 A-3a (V)	
GRAY, WEATHERED SHALE		567.4		6 7		- - - - -		8 A-3a (O)	
GRAY, WEATHERED DOLOMITE (CHATTER NOTED)		564.9		7 8		- - - - -		11 A-4b (V)	
DOLOMITE, GRAY WITH DARK GRAY, MODERATELY WEATHERED, MODERATELY STRONG, BRECCIATED, FRACTURED TO MODERATELY FRACTURED. @19.1' Qu = 6,560 PSI		564.8		8 9		- - - - -		8 A-3a (O)	
@22.2': VUGGY		559.8		9 10		- - - - -		CORE	

NOTES: NONE  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED



Office of Geotechnical Engineering

B-009-0-24



Core Date: March 20, 2024	Ground Surface Elevation: 583.4'	
Run #: RC-1	Depth: 18.6'	Elevation: 559.8'
		Recovery: 88%
		28.25/60
		47%
LUC/OTT Sign FY 2025, PID 114413		



Prepared by

CT Project No.: 241008

DESIGN AGENCY		
DESIGNER	TLS	
REVIEWER	LGH 09/05/24	
PROJECT ID	114413	
SUBSET	TOTAL	
18	24	
SHEET	TOTAL	
P.106	112	

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBER 2-44 (N)  
 BORING & ROCK CORE PHOTO LOG B-009-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:31:43 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID007.dgn

Table with columns: PROJECT, DRILLING FIRM / OPERATOR, DRILL RIG, SLM/DIRECTION, EXPLOSION ID, TYPE, LIGHT TOWER, HAMMER, ALIGNMENT, B-011-0-24, PID, SFN, END, DRILLING METHOD, 3.25" HSA, SPT, MATERIAL DESCRIPTION AND NOTES, ELEV., DEPTHS, SPT/RQD, REC SAMPLE ID, HP (tsf), GRADATION (%), ATTERBERG, ODOT CLASS (GI), START, 3/21/24, END, 3/21/24, SAMPLING METHOD, SPT, MATERIAL DESCRIPTION AND NOTES, ELEV., DEPTHS, SPT/RQD, REC SAMPLE ID, HP (tsf), GRADATION (%), ATTERBERG, ODOT CLASS (GI).

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

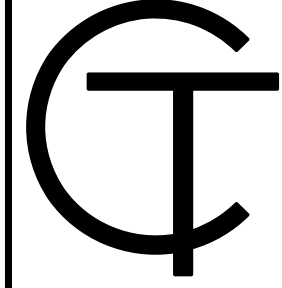
Table with columns: PROJECT, DRILLING FIRM / OPERATOR, DRILL RIG, SLM/DIRECTION, EXPLOSION ID, TYPE, LIGHT TOWER, HAMMER, ALIGNMENT, B-012-0-24, PID, SFN, END, DRILLING METHOD, 3.25" HSA, SPT, MATERIAL DESCRIPTION AND NOTES, ELEV., DEPTHS, SPT/RQD, REC SAMPLE ID, HP (tsf), GRADATION (%), ATTERBERG, ODOT CLASS (GI), START, 3/25/24, END, 3/25/24, SAMPLING METHOD, SPT, MATERIAL DESCRIPTION AND NOTES, ELEV., DEPTHS, SPT/RQD, REC SAMPLE ID, HP (tsf), GRADATION (%), ATTERBERG, ODOT CLASS (GI).

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

DESIGN AGENCY



DESIGNER

TLS

REVIEWER

LGH 09/05/24

PROJECT ID

114413

SUBSET TOTAL

19 24

SHEET TOTAL

P.107 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
OVERHEAD SIGN REFERENCE NUMBERS 2-63 (E) & 2-58 (W)  
BORING LOGS B-011-0-24 & B-012-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:32:09 AM USER: somogyi H:\2024\114413\400-Engineering\Geotechnical\Sheets\114413\_ID008.dgn

PROJECT: LUC/OTT SIGN FY 2025 TYPE: LIGHT TOWER PID: 114413 SFN: 2-58 (E) START: 3/27/24 END: 3/27/24	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD SAMPLING FIRM / LOGGER: DLZ / MIDDLETON DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	SLM/DIRECTION: 27.549 / WB ALIGNMENT: SR 2/SR 269 ELEVATION: 584.3 (NAV/D88) EOB: 25.0 ft. LAT / LONG: 41.494622, -82.836057	EXPLORATION ID B-013-0-24	DRILL RIG: '23 CME 75-KC-777 HAMMER: CME AUTOMATIC CALIBRATION DATE: 7/27/23 ENERGY RATIO (%): 72.5	GRADATION (%)													WC	ODOT CLASS (G)	ABAN-DONED
					GR	CS	FS	SI	CL	LL	PL	PI	GR	CS	FS	SI	CL			
<b>MATERIAL DESCRIPTION AND NOTES</b>				SPT/RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	ABAN-DONED		
ASPHALT - 2 INCHES				1																
CONCRETE - 9 INCHES				2																
MEDIUM DENSE, GRAY, FINE SAND, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, MOIST FILL				3																
STIFF TO VERY STIFF, GRAY/BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 39.3 PSI = 5,660 PSF, FILL				4																
@6": BROWN, LITTLE SAND				5																
VERY STIFF, GRAY, SANDY SILT, LITTLE CLAY, LITTLE GRAVEL, DAMP Qu = 18.0 PSI = 2,590 PSF, FILL				6																
DENSE GRAY, GRAVEL AND STONE FRAGMENTS WITH SAND, SILT, AND CLAY, DAMP FILL				7																
MEDIUM DENSE, GRAY, GRAVEL AND STONE FRAGMENTS, WET (CHATTER AND FREE WATER NOTED)				8																
@16": MOIST, LITTLE SAND, LITTLE SILT, TRACE CLAY				9																
VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP				10																
VERY STIFF, GRAY, SILTY CLAY, SOME GRAVEL, LITTLE SAND, DAMP				11																
HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP				12																
				13																
				14																
				15																
				16																
				17																
				18																
				19																
				20																
				21																
				22																
				23																
				24																
				25																

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE

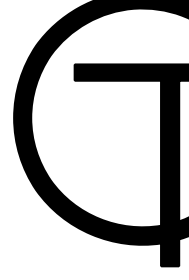
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: LUC/OTT SIGN FY 2025 TYPE: LIGHT TOWER PID: 114413 SFN: 2-56 START: 3/26/24 END: 3/26/24	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD SAMPLING FIRM / LOGGER: DLZ / MIDDLETON DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	SLM/DIRECTION: 28.092 / WB ALIGNMENT: SR 2/SR 269 ELEVATION: 583.1 (NAV/D88) EOB: 25.0 ft. LAT / LONG: 41.488168, -82.835279	EXPLORATION ID B-014-0-24	DRILL RIG: '23 CME 75-KC-777 HAMMER: CME AUTOMATIC CALIBRATION DATE: 7/27/23 ENERGY RATIO (%): 72.5	GRADATION (%)													WC	ODOT CLASS (G)	ABAN-DONED
					GR	CS	FS	SI	CL	LL	PL	PI	GR	CS	FS	SI	CL			
<b>MATERIAL DESCRIPTION AND NOTES</b>				SPT/RQD	N <sub>60</sub>	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (G)	ABAN-DONED		
ASPHALT - 2 INCHES				1																
CONCRETE - 8 INCHES				2																
MEDIUM STIFF TO STIFF, GRAY/BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL, MOIST FILL				3																
@3.5": LITTLE SAND, Qu = 19.9 PSI = 2,865 PSF				4																
MEDIUM STIFF TO STIFF, GRAY, SANDY SILT, LITTLE GRAVEL, LITTLE CLAY, DAMP TO MOIST Qu = 4,390 PSF, FILL				5																
MEDIUM STIFF, GRAY/BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP TO MOIST Qu = 10.4 PSI = 1,500 PSF, FILL				6																
STIFF, GRAY, SANDY SILT, SOME CLAY, TRACE GRAVEL, MOIST FILL				7																
LOOSE, GRAY, GRAVEL AND STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET FILL (FREE WATER NOTED)				8																
@16": (FREE WATER NOTED)				9																
@18.5": (FREE WATER NOTED)				10																
				11																
				12																
				13																
				14																
				15																
				16																
				17																
				18																
				19																
				20																
				21																
				22																
				23																
				24																
				25																

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: OFFSET INTO LANE DUE TO UTILITIES

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

DESIGN AGENCY  
  
 DESIGNER  
 TLS  
 REVIEWER  
 LGH 09/05/24  
 PROJECT ID  
 114413  
 SUBSET TOTAL  
 20 24  
 SHEET TOTAL  
 P.108 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBERS 2-58 (E) & 2-56  
 BORING LOGS B-013-0-24 & B-014-0-24



LUC/OTT SIGN FY2025

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 9/5/2024 TIME: 9:32:36 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID009.dgn

PROJECT: LUC/OTT SIGN FY 2025		DRILLING FIRM / OPERATOR: DLZ / K. CONRAD		SLIM/DIRECTION: 0.131 / SB		EXPLORATION ID		
TYPE: LIGHT TOWER		SAMPLING FIRM / LOGGER: DLZ / MIDDLETON		ALIGNMENT: SR 2/SR 163 INTERCHANGE		B-015-0-24		
PID: 114413 SFN: 2R-9 (SW)		DRILLING METHOD: 3.25" HSA		ELEVATION: 586.6 (NAVD88) EOB: 25.0 ft.		PAGE		
START: 3/25/24 END: 3/25/24		SAMPLING METHOD: SPT		LAT / LONG: 41.513833, -82.907090		1 OF 1		
MATERIAL DESCRIPTION AND NOTES								
		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ODOT CLASS (GI)
		586.6						
ASPHALT - 7 INCHES		586.0	1	5				
MEDIUM DENSE, GRAY, CRUSHED STONE WITH SAND, TRACE SILT, TRACE CLAY, DAMP TO MOIST AGGREGATE BASE - 23 INCHES (WITH SAND, TRACE SILT, TRACE CLAY)		584.1	2	6	56	SS-1		5 A-1-b (V)
VERY STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP Qu = 40.5 PSI = 5,830 PSF, FILL			3	5	89	SS-2	7 20 64	15 A-6b (10)
@6": MOIST			4	6	83	SS-3		30 A-6b (V)
VERY STIFF TO HARD, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST Qu = 53.8 PSI = 7,745 PSF		578.1	5	7	78	SS-4	5 16 26 48 39 17 22	18 A-6b (13)
STIFF TO VERY STIFF, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST		570.6	6	10	100	SS-5		17 A-6b (V)
@18.5": BROWN/GRAY, LITTLE SAND, DAMP			7	10	100	SS-6		22 A-6b (V)
MEDIUM STIFF, GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP TO MOIST		565.6	8	12	78	SS-7		17 A-6a (8)
@6": GRAY			9	14	33	SS-8		14 A-6a (V)
@8.5": "AND" CLAY			10	12	100	SS-9		18 A-6a (V)
STIFF TO VERY STIFF, BLACK, CLAY, "AND" SAND, SOME SILT, MODERATELY ORGANIC, MOIST Qu = 27.2 PSI = 3,915 PSF, FILL		579.1	11	3	72	SS-10		26 A-7-6 (8)
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP FILL		576.6	12	5	83	SS-11		15 A-6a (V)
VERY STIFF TO HARD, RED/BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, TRACE BRICK FRAGMENTS, DAMP TO MOIST FILL		574.1	13	7	89	SS-12		11 A-4a (V)
18.5": BROWN			14	11	83	SS-13		12 A-4a (V)
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP		569.1	15	6	100	SS-14		15 A-6a (V)
@23.5": LITTLE SAND			16	9	100	SS-15		15 A-6a (V)
		565.1	17	12	100	SS-16		14 A-6a (V)
			18	13	100	SS-17		14 A-6a (V)
			19	12	100	SS-18		14 A-6a (V)
			20	11	100	SS-19		14 A-6a (V)
			21	10	100	SS-20		14 A-6a (V)
			22	9	100	SS-21		14 A-6a (V)
			23	8	100	SS-22		14 A-6a (V)
			24	7	100	SS-23		14 A-6a (V)
			25	6	100	SS-24		14 A-6a (V)
			EOB	3	100	SS-25		14 A-6a (V)

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: LUC/OTT SIGN FY 2025		DRILLING FIRM / OPERATOR: DLZ / K. CONRAD		SLIM/DIRECTION: 0.185 / SB		EXPLORATION ID		
TYPE: LIGHT TOWER		SAMPLING FIRM / LOGGER: DLZ / MIDDLETON		ALIGNMENT: SR 2/SR 163 INTERCHANGE		B-016-0-24		
PID: 114413 SFN: 2R-13 (SW)		DRILLING METHOD: 3.25" HSA		ELEVATION: 590.1 (NAVD88) EOB: 25.0 ft.		PAGE		
START: 3/25/24 END: 3/25/24		SAMPLING METHOD: SPT		LAT / LONG: 41.513231, -82.906476		1 OF 1		
MATERIAL DESCRIPTION AND NOTES								
		ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GRADATION (%)	ODOT CLASS (GI)
		590.1						
ASPHALT - 6 INCHES		589.6	1	6				
MEDIUM DENSE, GRAY, CRUSHED STONE WITH SAND, TRACE SILT, TRACE CLAY, DAMP TO MOIST AGGREGATE BASE - 24 INCHES (WITH SAND, TRACE SILT, TRACE CLAY)		587.6	2	6	44	SS-1		6 A-1-b (V)
VERY STIFF TO HARD, RED/BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, TRACE BRICK FRAGMENTS, DAMP Qu = 64.5 PSI = 9,290 PSF, FILL			3	5	44	SS-2	8 9 26 41 16 23 14 9 10	10 A-4a (4)
@6": GRAY			4	4	50	SS-3		10 A-4a (V)
@8.5": "AND" CLAY			5	6	44	SS-4		15 A-4a (8)
STIFF TO VERY STIFF, BLACK, CLAY, "AND" SAND, SOME SILT, MODERATELY ORGANIC, MOIST Qu = 27.2 PSI = 3,915 PSF, FILL		579.1	6	8	72	SS-5		26 A-7-6 (8)
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP FILL		576.6	7	5	83	SS-6		15 A-6a (V)
VERY STIFF TO HARD, RED/BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, TRACE BRICK FRAGMENTS, DAMP TO MOIST FILL		574.1	8	7	89	SS-7		11 A-4a (V)
18.5": BROWN			9	12	83	SS-8		12 A-4a (V)
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, TRACE GRAVEL, DAMP		569.1	10	11	100	SS-9		15 A-6a (V)
@23.5": LITTLE SAND			11	10	100	SS-10		14 A-6a (V)
		565.1	12	9	100	SS-11		14 A-6a (V)
			13	8	100	SS-12		14 A-6a (V)
			14	7	100	SS-13		14 A-6a (V)
			15	6	100	SS-14		14 A-6a (V)
			16	5	100	SS-15		14 A-6a (V)
			17	4	100	SS-16		14 A-6a (V)
			18	3	100	SS-17		14 A-6a (V)
			19	2	100	SS-18		14 A-6a (V)
			20	1	100	SS-19		14 A-6a (V)
			21	0	100	SS-20		14 A-6a (V)
			22	0	100	SS-21		14 A-6a (V)
			23	0	100	SS-22		14 A-6a (V)
			24	0	100	SS-23		14 A-6a (V)
			25	0	100	SS-24		14 A-6a (V)
			EOB	0	100	SS-25		14 A-6a (V)

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

DESIGN AGENCY  
**TA**  
DESIGNER: TLS  
REVIEWER: LGH  
PROJECT ID: 114413  
SUBSET: 21 / TOTAL: 24  
SHEET: P.109 / TOTAL: 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
OVERHEAD SIGN REFERENCE NUMBERS 2R-9 (SW) & 2R-13 (SW)  
BORING LOGS B-015-0-24 & B-016-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: 34x22 (in.) DATE: 9/5/2024 TIME: 9:33:01 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID010.dgn

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	SLM/DIRECTION: 0.301 / NB	EXPLORATION ID
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	ALIGNMENT: SR 2/SR 163 INTERCHANGE	B-017-0-24
PID: 114413 SFN: 2R-9 (NE)	DRILLING METHOD: 3.25" HSA	ELEVATION: 586.2 (NAV/D88) EOB: 25.0 ft.	PAGE
START: 3/26/24 END: 3/26/24	SAMPLING METHOD: SPT	LAT / LONG: 41.513943, -82.906896	1 OF 1
MATERIAL DESCRIPTION AND NOTES			
TOPSOIL - 1 INCH	ELEV. 586.2	SPT/ RQD	ABAN- DONED
VERY STIFF TO HARD, BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP FILL	586.1	7 6	5-LV 7-L
@3.5': VERY STIFF, GRAY		8 10 7	5-LV 7-L
VERY STIFF TO HARD, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP Qu = 39.7 PSI = 5,715 PSF, FILL	580.2	4 5 8	
@8.5': TRACE GRAVEL		5 6 8	
@13.5': VERY STIFF		9 11	
@16': LITTLE SAND, LITTLE GRAVEL		9 11 15	
@18.5': TRACE GRAVEL		8 10 12	
STIFF, GRAY/BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	565.2	4 5 8	
STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, DAMP	562.7	3 4 4	
	561.2	3 4 5	
EOB			

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	SLM/DIRECTION: 0.356 / NB	EXPLORATION ID
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	ALIGNMENT: SR 2/SR 163 INTERCHANGE	B-018-0-24
PID: 114413 SFN: 2R-13 (NE)	DRILLING METHOD: 3.25" HSA	ELEVATION: 590.9 (NAV/D88) EOB: 25.0 ft.	PAGE
START: 3/26/24 END: 3/26/24	SAMPLING METHOD: SPT	LAT / LONG: 41.513320, -82.906232	1 OF 1
MATERIAL DESCRIPTION AND NOTES			
ASPHALT - 6 INCHES	ELEV. 590.9	SPT/ RQD	ABAN- DONED
STIFF, BROWN, SILTY CLAY, SOME CRUSHED STONE, LITTLE SAND, MOIST FILL	590.4	5 5 6	5-LV 7-L
VERY STIFF TO HARD, GRAY/BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST FILL	587.4	5 7 9	5-LV 7-L
@6': DARK BROWN		5 9 10	
VERY STIFF, GRAY, CLAY, LITTLE SILT, TRACE SAND, MOIST Qu = 44.7 PSI = 6,435 PSF (ORGANIC ODOR NOTED)	582.4	6 6 8	
@11': GRAY/BROWN		6 10 13	
STIFF TO VERY STIFF, GRAY/BROWN, SILTY CLAY, LITTLE SAND, MOIST	577.4	4 6 7	
VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	574.9	3 4 6	
@18.5': TRACE SAND		3 6 9	
@21.0': GRAY, SOME SAND		6 9 8	
MEDIUM STIFF TO STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST	567.4	4 3 4	
	565.9		
EOB			

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

DESIGN AGENCY  
**TA**  
DESIGNER: TLS  
REVIEWER: LGH  
PROJECT ID: 114413  
SUBSET: 22 / TOTAL: 24  
SHEET: P.110 / TOTAL: 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
OVERHEAD SIGN REFERENCE NUMBERS 2R-9 (NE) & 2R-13 (NE)  
BORING LOGS B-017-0-24 & B-018-0-24



LUC/OTT SIGN FY2025

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 9/5/2024 TIME: 9:33:27 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID011.dgn

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	DRILL RIG: '23 CME 75-KC-777	SLM/DIRECTION: 5.142 / SB	EXPLORATION ID											
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 53	B-019-0-24											
PID: 114413 SFN: 53-11	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/27/23	ELEVATION: 597.4 (NAVD88) EOB: 25.0 ft.	PAGE											
START: 3/22/24 END: 3/22/24	SAMPLING METHOD: SPT	ENERGY RATIO (%): 72.5	LAT / LONG: 41.499374, -82.971456	1 OF 1											
<b>MATERIAL DESCRIPTION AND NOTES</b>															
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	ABANDONED
597.4	1	3													
597.0	2	2	50	1.25									21	A-6b (V)	
593.9	3														
591.4	4	2	44	3.75	3	5	23	66	44	19	25		21	A-7-6 (15)	
	5	5													
	6	3	100	4.50									13	A-6a (V)	
588.9	7	6													
	8														
586.4	9	11	89	4.50									13	A-4a (V)	
	10	7													
	11	9	100	3.00									23	A-7-6 (V)	
	12	6													
	13	7													
	14	3	11	56	2.50	0	2	3	22	73	53	17	36	26	A-7-6 (19)
	15	6													
581.4	16	3	100	4.50									18	A-6a (V)	
	17	6													
	18	9													
	19	3	21	100	4.50								24	A-6a (V)	
	20	11													
576.4	21	3	100	2.25									32	A-6a (V)	
	22	5													
	23	6													
572.4	24	2	100	2.50									27	A-6b (V)	
	25	4													
E-O-B															

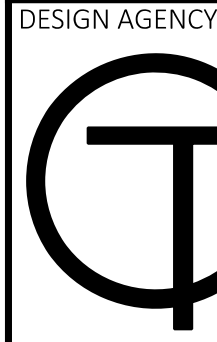
NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ

PROJECT: LUC/OTT SIGN FY 2025	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD	DRILL RIG: '23 CME 75-KC-777	SLM/DIRECTION: 5.287 / NB	EXPLORATION ID											
TYPE: LIGHT TOWER	SAMPLING FIRM / LOGGER: DLZ / MIDDLETON	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 53	B-020-0-24											
PID: 114413 SFN: 53-7	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 7/27/23	ELEVATION: 591.1 (NAVD88) EOB: 25.0 ft.	PAGE											
START: 3/22/24 END: 3/22/24	SAMPLING METHOD: SPT	ENERGY RATIO (%): 72.5	LAT / LONG: 41.500263, -82.968915	1 OF 1											
<b>MATERIAL DESCRIPTION AND NOTES</b>															
ELEV.	DEPTHS	SPT/ RQD	REC SAMPLE (%)	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	ABANDONED
591.1	1	3													
590.7	2	4	83	4.50									15	A-6b (V)	
	3	5													
	4	5	56	4.50	3	7	17	24	49	33	17	16	16	A-6b (10)	
	5	6													
	6	3	100	4.50									14	A-6b (V)	
	7	5													
	8	6													
	9	4	94	4.00									23	A-6b (V)	
	10	7													
580.1	11	5	100	3.25	14	1	3	19	63	57	23	34	25	A-7-6 (19)	
	12	6													
	13	7													
	14	8	100	2.25									27	A-7-6 (V)	
	15	10													
	16	4	89	3.25									26	A-7-6 (V)	
	17	6													
	18	8													
572.6	19	3	11	2.25	3	4	5	45	43	46	22	24	22	A-7-6 (15)	
	20	4													
570.1	21	2	100	1.75									29	A-6b (V)	
	22	3													
	23	5													
567.6	24	6	100	4.50									15	A-6a (V)	
	25	9													
	26	10													
E-O-B															

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\241008.GPJ



DESIGN AGENCY  
 DESIGNER: TLS  
 REVIEWER: LGH  
 PROJECT ID: 114413  
 SUBSET: 23 / TOTAL: 24  
 SHEET: P.111 / TOTAL: 112

GEOTECHNICAL PROFILE - SIGN SUPPORT FOUNDATIONS  
 OVERHEAD SIGN REFERENCE NUMBERS 53-11 & 53-7  
 BORING LOGS B-019-0-24 & B-020-0-24



LUC/OTT SIGN FY2025

MODEL: Sheet PAPER: SIZE: 34x22 (in.) DATE: 9/5/2024 TIME: 9:33:53 AM USER: somogyi H:\2024\241008\114413\400-Engineering\Geotechnical\Sheets\114413\_ID0012.dgn

PROJECT: LUC/OTT SIGN FY 2025 TYPE: LIGHT TOWER PID: 114413 SFN: 53-9 START: 3/21/24 END: 3/21/24	DRILLING FIRM / OPERATOR: DLZ / K. CONRAD SAMPLING FIRM / LOGGER: DLZ / MIDDLETON DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT	ELEV. 588.2 587.8 587.0 584.7 582.2 577.2 572.2 569.7 563.2	DEPTHS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	SPT/ ROD 6 3 3 5 4 3 6 8 9 4 4 6 4 5 15 4 5 6 3 3 5 2 5 6 4 10 8 3 4 7	REC (%) N <sub>60</sub> 7 33 8 44 21 83 12 100 24 89 13 100 10 100 13 100 22 100 13 100 13	HP (tsf) ID 1.50 4.50 2.50 2.50 1.50 2.75 1.75 4.25 4.50 3.00	GRADATION (%)							WC	ABAN- DONED
							GR	CS	FS	SI	CL	LL	PL		
ASPHALT - 5 INCHES															
AGGREGATE BASE - 9 INCHES															
MEDIUM STIFF TO STIFF, GRAY/BROWN, SILTY CLAY, LITTLE CRUSHED STONE, LITTLE SAND, DAMP FILL														17	A-6b (V)
STIFF TO HARD, GRAY, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP Qu = 60.3 PSI = 7,245 PSF, FILL															
STIFF TO VERY STIFF, GRAY/BROWN, CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, MOIST FILL															
@8.5': BROWN/GRAY, Qu = 29.6 PSI = 4,260 PSF															
STIFF TO VERY STIFF, GRAY, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST															
@13.5': TRACE SAND															
STIFF, BROWN, CLAY, LITTLE SILT, TRACE SAND, MOIST Qu = 20.4 PSI = 2,940 PSF															
STIFF TO VERY STIFF, BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, MOIST															
@21': BROWN/GRAY, DAMP															
@23.5': GRAY, SOME SAND															

SLM/DIRECTION:		5.299 / SB	
ALIGNMENT:		SR 53	
ELEVATION:		588.2 (NAVD88) EOB: 25.0 ft.	
LAT / LONG:		41.500554, -82.968681	

DRILL RIG:	'23 CME 75-KC-777
HAMMER:	CME AUTOMATIC
CALIBRATION DATE:	7/27/23
ENERGY RATIO (%):	72.5

EXPLOSION ID: B-021-0-24  
PAGE: 1 OF 1  
STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 9/4/24 14:17 - X:\PROJECTS\1241008.GPJ

NOTES: NONE  
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED