



June 18, 2025

ms consultants, inc.
333 East Federal Street
Youngstown, Ohio 44503

Attention: Mr. Brian Hughes, P.E.

Reference: **Geotechnical Desktop Study**
TP 26 NE Ohio Site 13 – MAH-11 Vacant Rest Areas (PID 122881)
Mahoning County, Ohio
S&ME Project No. 24170232

Mr. Hughes:

In accordance with our revised proposal dated March 25, 2025, and the executed agreement between ms consultants, inc. (ms) and S&ME, Inc. (S&ME) dated May 5, 2025, S&ME is pleased to submit this report summarizing our geotechnical desktop study of the proposed truck parking facility to be constructed in the currently unused Rest Areas along SR 11 in Mahoning County, Ohio. S&ME previously submitted a copy of the geotechnical portion of the ODOT Project Initiation Package (PIP) for this site on June 6, 2025. This information is also included at the end of Appendix C in this report.

Project Information

Based on information provided by ms and ODOT, S&ME understands that ODOT is proposing to construct multiple truck parking areas across the state of Ohio to meet the parking needs. Each site will be designed to facilitate the largest quantity of truck parking spots while addressing impacts to environmentally sensitive areas, geometric alignments and the cost of construction. This site is part of the TP 26 NE Ohio grouping of six (6) general locations and includes ten (10) total parking areas.

Site 13 consists of two proposed parking areas in the currently vacant northbound and southbound rest areas along SR 11, south of Canfield, Ohio, and approximately 0.5 miles north of South Range Road.

Site 2 – General Geology

Various publicly available resources were reviewed to obtain general geologic information for these proposed parking areas. These resources, and a summary of the information obtained, are presented in Table 1. Supporting figures are provided as Plates 1 through 13 in Appendix A.



Table 1: Summary of Geologic Information

Topic	Resource(s)	Summary of Findings
Surface Topography	Ground Surface Topography Mapping (Mahoning County GIS & Google Earth)	The ground surface elevation (El.) at the southbound (SB) parking area ranges from approximate El. 1155 to El. 1160. The ground surface elevation at the northbound (NB) parking area ranges from approximate El. 1170 to El. 1177.
Soil Overburden	Physiographic Regions of Ohio Map (ODNR) Drift Thickness Mapping (ODNR) Quaternary Geology Mapping (ODNR) Surficial Geology Mapping (ODNR) Groundwater Pollution Potential Mapping (ODNR) Groundwater Resource Potential Mapping (ODNR) Water Well Logs (ODNR) Soil Web Survey (NRCS)	The site lies within the Glaciated Allegheny Plateaus section of Ohio which is located within the Killbuck-Glaciated Pittsburgh Plateau Physiographic Region. Overburden soil within this region is typically composed of Wisconsinan-age clayey glacial till. However, Site 13 is located over a buried valley, and geologic references indicate this valley is filled with outwash deposits of generally granular soil. The thickness of the soil overburden is estimated to range from approximately 60 feet near the southbound parking area and approximately 75 feet near the northbound parking area. Water well logs indicate the glacial soil overburden at Site 13 is anticipated to be predominantly granular, with a cap of cohesive soil at the surface.
Bedrock	Physiographic Regions of Ohio Map (ODNR) Bedrock Topography Mapping (ODNR) Water Well Logs (ODNR)	Bedrock is anticipated to be Pennsylvanian-age shale, siltstone, sandstone, conglomerate, and coal of the Allegheny and Pottsville Groups Undivided. Bedrock topography mapping indicates bedrock is expected to be encountered near El. 1050 at the southbound parking area and near El. 1100 at the northbound parking area. Water well logs for wells installed on both the NB and SB rest areas indicate rock was encountered at approximately El. 1100 at both the southbound and northbound parking areas.



Topic	Resource(s)	Summary of Findings
Groundwater	Groundwater Resource Potential Mapping (ODNR) Groundwater Vulnerability Mapping (ODNR) Water Well Logs (ODNR)	The primary groundwater aquifer is anticipated to be within Pennsylvanian-age interbedded sedimentary bedrock developing yields from 10 to 25 gallons per minute (gpm). In the western half of the southbound parking area, the primary aquifer changes to buried valley deposits of sand/gravel with yields ranging from 25 to 50 gpm. Below the buried valley aquifer, the secondary aquifer in this area is the same sedimentary bedrock to the east. Groundwater vulnerability mapping* indicates that groundwater may be encountered at both sites between depths of 15 to 30 feet. The northbound parking area and the eastern half of the southbound parking area have a groundwater vulnerability index of 111, whereas the western half of the southbound area has a vulnerability index of 137. Water well logs indicate that the permanent production water wells for households near Site 13 are extended into the sedimentary bedrock. Test pumping rates for household wells in the area ranged from 8 to 35 gpm. One well log indicated artesian conditions.
Geohazards	Karst Interactive Map Viewer (ODNR) GeoFacts 8: Landslides in Ohio (ODNR) Mines of Ohio Online Mapping Tool (ODNR)	No known karst features are in the general vicinity of the project site. The site is not in an area of the state subject to several slope failure. No known active or abandoned mines (surface or below ground) are located within the vicinity of the project area.

* Groundwater vulnerability mapping is an assessment of an area's vulnerability to groundwater contamination based on its hydrogeologic, topographic and soil media characteristics. The scoring ranges from 1 (least vulnerable) to 250 (most vulnerable), with some areas within Ohio not receiving a rating.

Historic Boring Information

S&ME searched the online ODOT Transportation Information Mapping System (TIMS) for historic soil boring information in the project vicinity. Within TIMS, 1962 soil plan and profile sheets were located which included subgrade borings drilled within the limits of both the NB and SB parking areas of Site 13. These borings generally encountered layers of cohesive soils (A-4a, A-6a) with occasional layers of sand/gravel (A-1-b, A-3a). The approximate locations and stratigraphic profiles of the historic borings are provided on Plates 1 to 2 of Appendix B.



Site Reconnaissance

S&ME, accompanied by representatives from 2LMN, visited Site 13 on May 15, 2025. Select site photos taken by S&ME during the site reconnaissance visit are included as Plates 2 through 5 of Appendix C. The following items were noted during our site visit and also annotated on Figure 1 of Appendix C:

- The bottom of the existing drainage swale adjacent to the SB outside shoulder of SR 11 was roughly 10 feet below the SR 11 pavement. The bottom of the swale adjacent to the NB outside shoulder of SR 11 was roughly 3 to 4 feet below the SR 11 pavement.
- There is an active salt storage dome located in the southbound parking area.
- A fenced-in area with an empty storage shed is also located on the northwest corner of the southbound parking area. A few piles of concrete rubble were observed within this fenced-in area.
- Multiple 10-foot square concrete pads were observed throughout the grass portion of the SB parking area.
- In the NB parking area, significant areas of asphalt and concrete pavement have been left in place following the closure of the rest areas.
- Areas of possible wetlands were observed adjacent to and inside the tree lines surrounding the SB parking area. A few isolated areas of potential wetlands were noted within the wooded areas outside the NB parking area.

Potential Geotechnical Considerations or Issues

Based on our observations during our site visit, available geologic information, and preliminary layout alternatives being considered by 2LMN, S&ME does not anticipate encountering significant geotechnical issues during the development of the proposed truck parking facilities at Site 13 along NB and SB SR 11 in Mahoning County, Ohio. We do, however, recommend the following geotechnical issues be considered during the design and construction at this site:

- The possible presence of deposits of soft/loose/weak materials at the subgrade level of proposed ramps and parking areas, especially in areas where standing water was observed/is present, and where pavement was not previously constructed as part of the former rest areas.
- The possible need for fill placement on existing sloping surfaces depending on the final grading required for the truck parking areas.



Closing

It has been our pleasure to prepare this geotechnical desktop study. Please do not hesitate to contact us with any questions you may have regarding this report.

Sincerely,

S&ME, Inc.

A handwritten signature in blue ink, appearing to read 'B. K. Sears'.

Brian K. Sears, P.E.
Senior Engineer | Project Manager

A handwritten signature in blue ink, appearing to read 'R. S. Weigand'.

Richard S. Weigand, P.E.
Principal Engineer | Senior Reviewer

Submitted: 1 copy via email, Brian Hughes (bhughes@msconsultants.com)
Attachments: Appendix A (13 sheets) – Geologic Information Figures
Appendix B (2 sheets) – Historic Boring Information
Appendix C (7 sheets) – Site Photos and Reconnaissance Notes, Geotechnical PIP



Appendix A



Figure Credits: Mahoning County GIS Mapping (Mahoning County GIS)



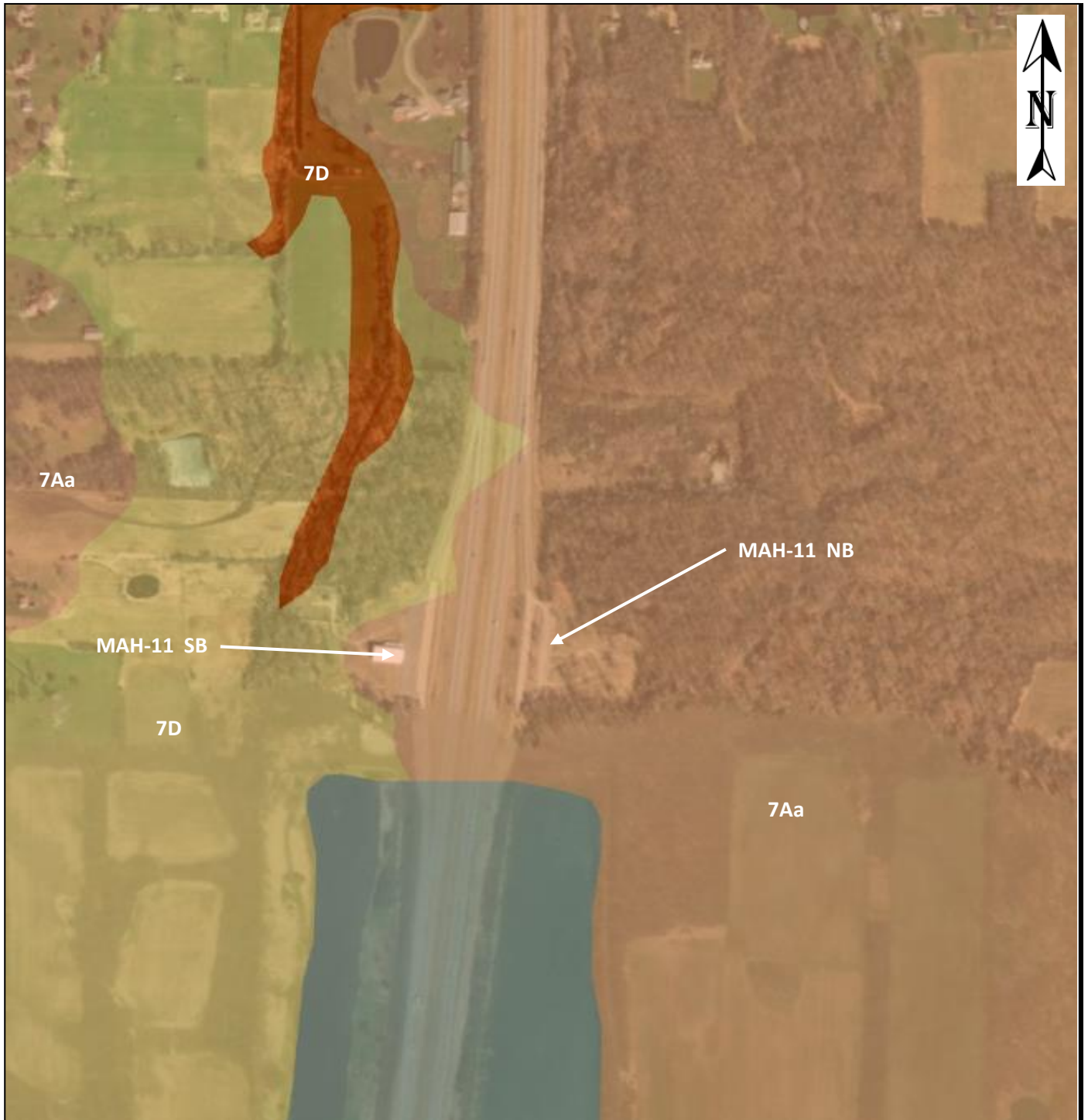
Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH 11
Client: ms consultants, inc.

Prepared By: KAH
Date: 6/18/25



Figure Desc.: Site locations and surficial geology mapping

Figure Credits: Surficial Geology (ODNR Interactive Map)



LEGEND

7Aa - Glacial Till over Bedded Sedimentary Rocks
7D - Buried Valley

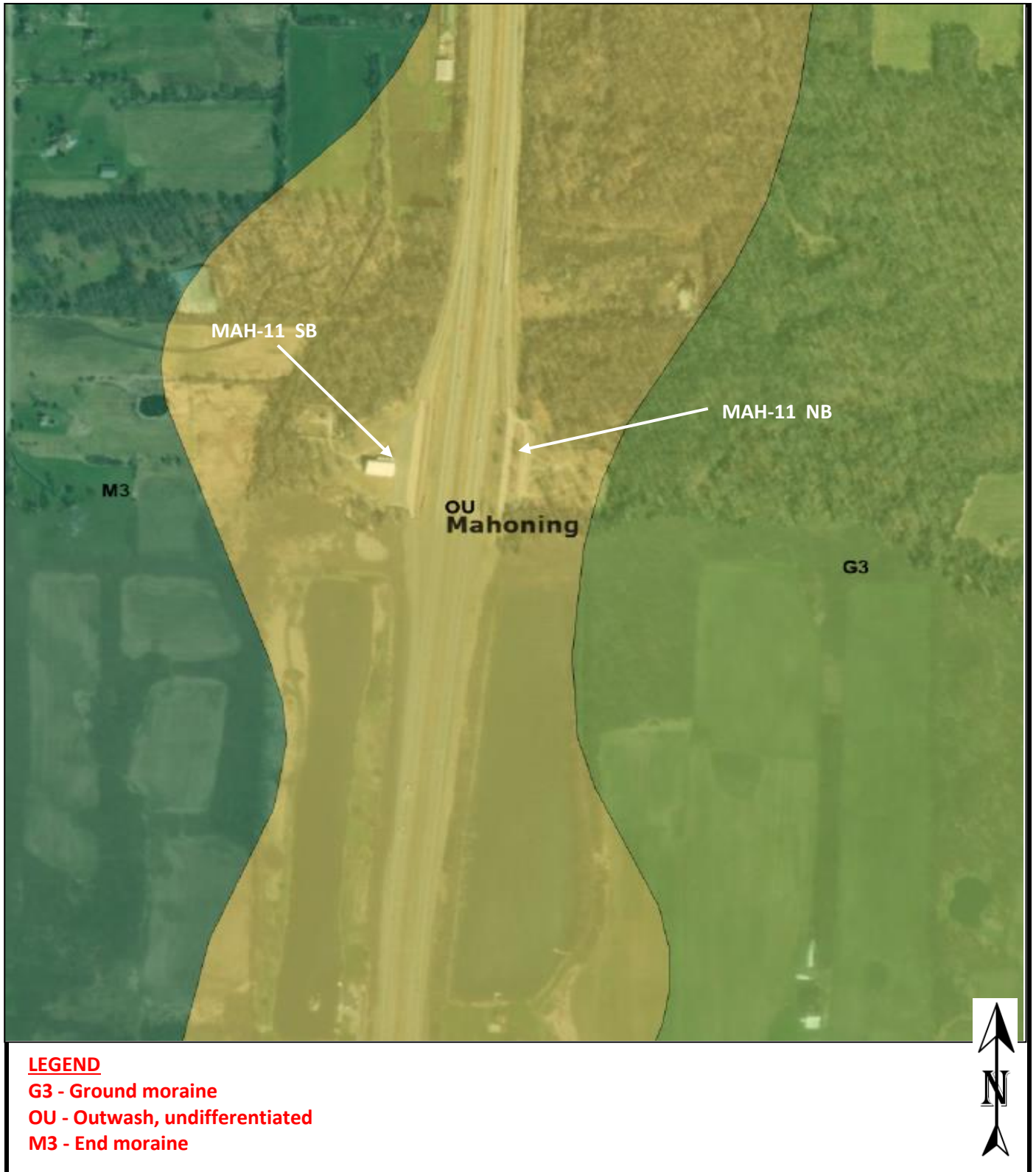
Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH 11
Client: ms consultants, inc.

Prepared By: KAH
Date: 6/18/25



Figure Desc.: Site locations and quaternary geology mapping

Figure Credits: Quaternary Geology (ODNR online interactive map)



Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH 11
Client: ms consultants, inc.

Prepared By: KAH
Date: 6/18/25



Figure Desc.: Site locations and bedrock geology mapping

Figure Credits: Bedrock Geology (ODNR online interactive map)



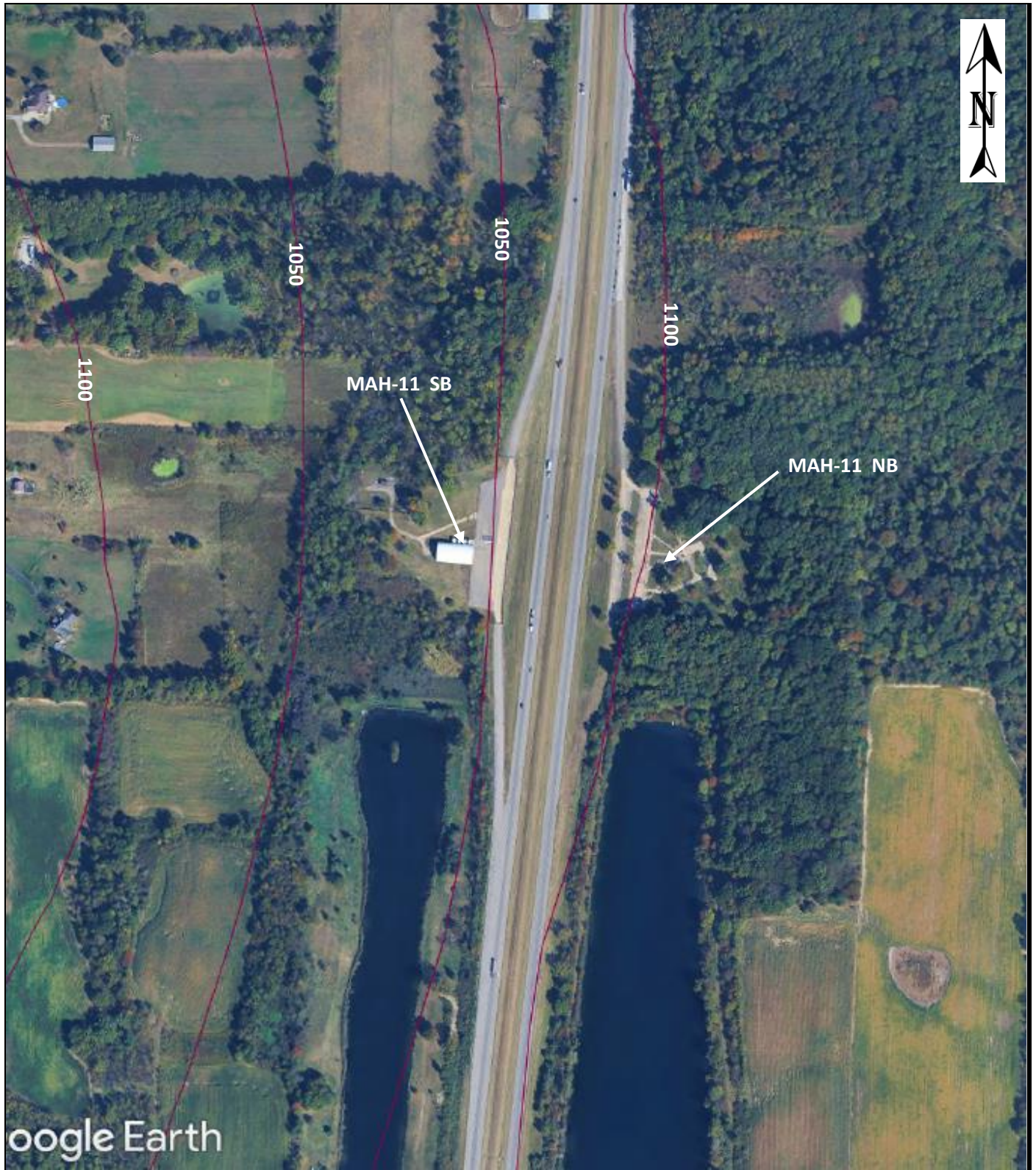
Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH 11
Client: ms consultants, inc.

Prepared By: KAH
Date: 6/18/25



Figure Desc.: Site locations and top of bedrock contour mapping

Figure Credits: Google Earth, ODNR



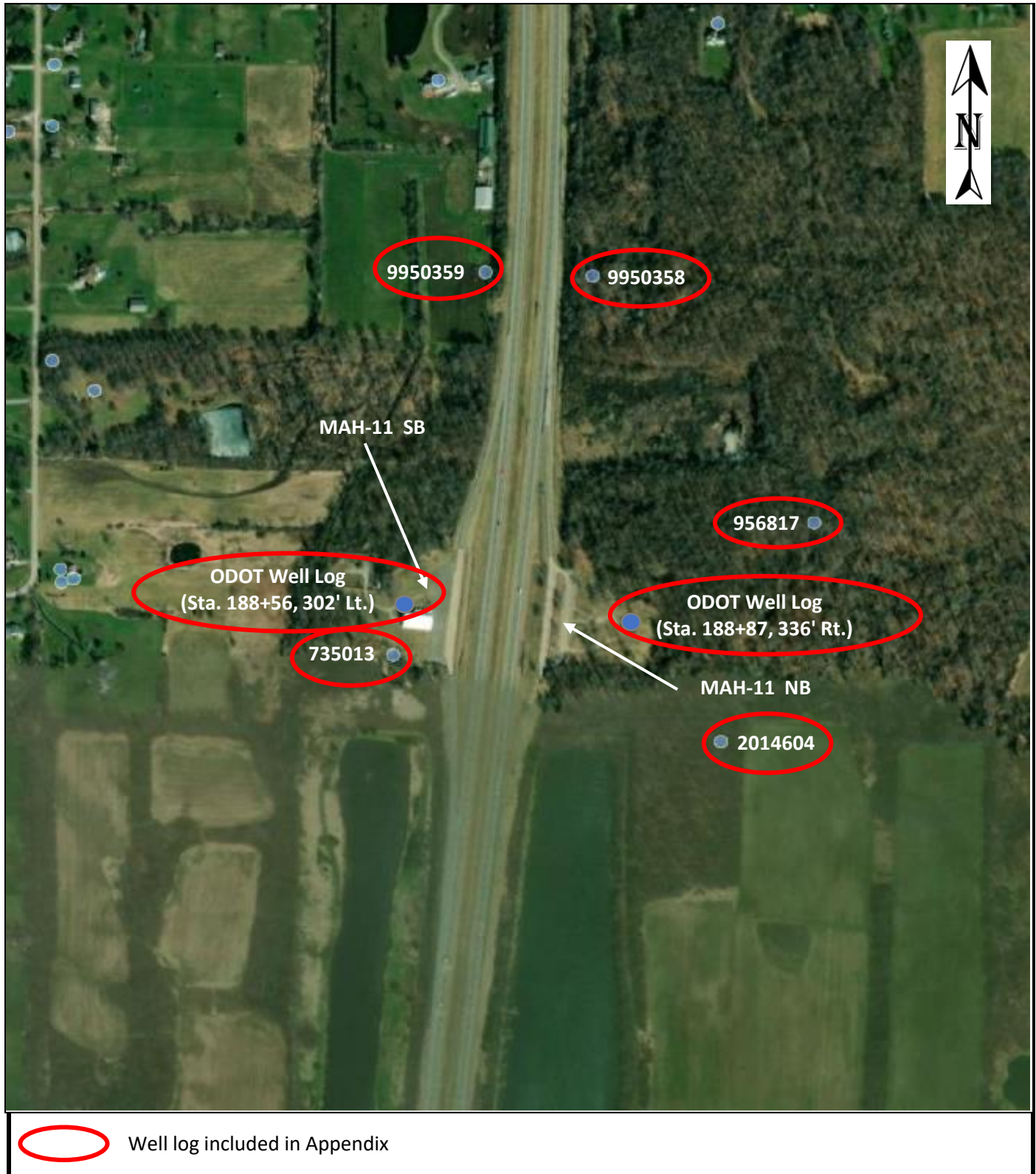
Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH 11
Client: ms consultants, inc.

Prepared By: KAH
Date: 6/18/25



Figure Desc.: Site locations and water well mapping

Figure Credits: Water Well Map (ODNR interactive map)



State of Ohio
Department of Highways
Testing Laboratory

WELL LOG

Well No. _____ Surface Elev. _____

Station & Offset 188+56, 302' Lt.

Date Started 7-10-67 Date Completed _____

Crew Thompson, Ponn, Ryan, Price

Project Identification MAHONING

MAH-11-2.46

Diameter of Casing 6 5/8" O.D. Length of Casing 70.0'

Type of Casing _____ Length of Screen _____

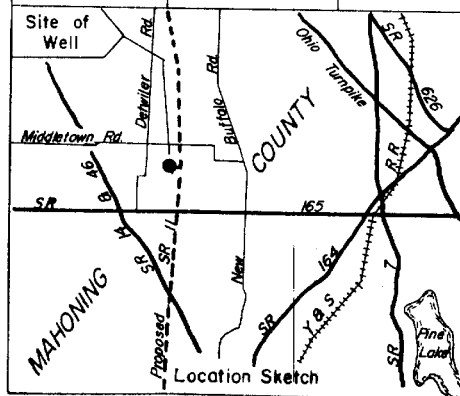
Gravel Pack: Yes _____ No _____ Length of Gravel Pack _____

Field Rate (Bailing) 35 gpm

Depth to Source of Water 135.0'

Depth to Static Water Level Artesian

Depth		Elev.		DESCRIPTION
From	To	From	To	
0.0	8.0			Brown Silty Clay
8.0	20.0			Brown and Gray Silty Sand
20.0	63.0			Gray Silty Sand and Clay With Some Gravel
63.0				TOP OF ROCK
63.0	100.0			Gray Shale
100.0	145.0			Gray Shale With Sandstone Layers
145.0				BOTTOM OF BORING



Remarks

Casing diameter used was 6" I. D.
galvanized seamless steel pipe.

WELL LOG

Depth to Static Water Level 11'

145.0

BOTTOM OF BORING



galvanized seamless steel pipe.



WATER WELL LOG & DRILLING REPORT

Ohio Department of Natural Resources
Division of Geological Survey
Phone: 614-265-6740

Well Log Number: 735013

Original Owner & Location

Original Owner Name: *ODOT*

County: *MAHONING*

Address:

City:

Location Number:

Latitude: *40.95105*

Township: *BEAVER*

State: *OH*

Location Map Year:

Longitude: *-80.72141*

Section Number:

Zip Code:

Location Area:

Construction Details

Borehole Diameter 1: *in.*

Casing Diameter 1: *6 in.*

Casing Height Above Ground: *ft.*

Date of Completion: *08/21/1991*

Drilling Company Name: *FLINNER DRILLING INC*

DBA FRONTZ

Borehole Depth 1: *160 ft.*

Casing Length 1: *70 ft.*

Aquifer Type: *COAL*

Total Depth: *160*

Depth to Bedrock: *61 ft.*

Casing Thickness 1: *in.*

Well Use: *PUBLIC/SEMI-PUB*

Well Test Details

Static Water Level: *ft.*

Drawdown: *ft.*

Test Rate: *8 gpm*

Test Duration: *1 hrs.*

Associated Documents:

Comments

1/4 MILE N OF SR 165 ON THE WEST SIDE OF PROPOSED SR11

Drilling Log

Formations:	From:	To:
CLAY	0	9
SAND & GRAVEL	9	26
CLAY	26	32
SAND & GRAVEL	32	55
GRAVEL & CLAY	55	61
SHALE	61	107
SHALE	107	129
SHALE	129	147
SHALE	147	159
COAL	159	160



WATER WELL LOG & DRILLING REPORT

Ohio Department of Natural Resources
Division of Geological Survey
Phone: 614-265-6740

Well Log Number: 9950359

Original Owner & Location

Original Owner Name: *ST OF ODOT*

County: *MAHONING*

Address: *SR 11*

Township: *BEAVER*

Section Number:

City:

State: *OH*

Zip Code:

Location Number: *141*

Location Map Year: *1990*

Location Area:

Latitude: *40.955311*

Longitude: *-80.720142*

Construction Details

Borehole Diameter 1: *in.*

Borehole Depth 1: *145 ft.*

Depth to Bedrock: *63 ft.*

Casing Diameter 1: *6.63 in.*

Casing Length 1: *70 ft.*

Casing Thickness 1: *in.*

Casing Height Above Ground: *ft.*

Aquifer Type: *SHALE & SANDSTONE*

Well Use: *PUBLIC/SEMI-PUB*

Date of Completion: *07/10/1967*

Total Depth: *145*

Drilling Company Name: *OTHER*

Well Test Details

Static Water Level: *0 ft.*

Test Rate: *35 gpm*

Drawdown: *ft.*

Test Duration: *hrs.*

Associated Documents:

Comments

63' TOP OF ROCK, CASING DIAMETER USED WAS 6" I.C. GALVANIZED SEAMLESS STEEL PIPE, STATION AND OFFSET 188+56, 302' LT., CREW: THOMPSON, PONN, RYAN,, PRICE, DEPTH TO STATIC WATER LEVEL, ARTESIAN

Drilling Log

Formations:	From:	To:
CLAY	0	8
SAND	8	20
SAND/CLAY/GRAVEL	20	63
SHALE	63	100
SHALE & SANDSTONE	100	145



WATER WELL LOG & DRILLING REPORT

Ohio Department of Natural Resources
Division of Geological Survey
Phone: 614-265-6740

Well Log Number: 9950358

Original Owner & Location

Original Owner Name: *ST OF ODOT*

County: *MAHONING*

Address: *SR 11*

Township: *BEAVER*

Section Number: *17*

City:

State: *OH*

Zip Code:

Location Number: *140*

Location Map Year: *1990*

Location Area:

Latitude: *40.955279*

Longitude: *-80.718667*

Construction Details

Borehole Diameter 1: *in.*

Borehole Depth 1: *145 ft.*

Depth to Bedrock: *76 ft.*

Casing Diameter 1: *6.63 in.*

Casing Length 1: *80 ft.*

Casing Thickness 1: *in.*

Casing Height Above Ground: *ft.*

Aquifer Type: *SANDSTONE*

Well Use: *TEST WELL*

Date of Completion: *06/30/1967*

Total Depth: *145*

Drilling Company Name: *OTHER*

Well Test Details

Static Water Level: *11 ft.*

Test Rate: *20 gpm*

Drawdown: *ft.*

Test Duration: *hrs.*

Associated Documents:

Comments

TOP OF ROCK 76', CASING DIAMETER USED WAS 6" I.D., GALVANIZED SEAMLESS STEEL PIPE, STATION AND OFFSET 188+ 87, 336' RT. CREW: THOMPSON, HOPKINS, ELBEN, LAWRENCE

Drilling Log

Formations:	From:	To:
CLAY	0	13
SAND	13	30
SAND/CLAY/GRAVEL	30	76
SHALE	76	100
CLAY & SHALE	100	125
SANDSTONE	125	145



WATER WELL LOG & DRILLING REPORT

Ohio Department of Natural Resources
Division of Geological Survey
Phone: 614-265-6740

Well Log Number: 956817

Original Owner & Location

Original Owner Name: *RICHARD MORROW*

County: *MAHONING*

Address: *3003 W MIDDLETOWN RD*

City: *COLUMBIANA*

Location Number:

Latitude: *40.95253*

Township: *BEAVER*

State: *OH*

Location Map Year:

Longitude: *-80.71563*

Section Number: *17*

Zip Code: *44408*

Location Area:

Construction Details

Borehole Diameter 1: *10.63 in.*

Casing Diameter 1: *6.63 in.*

Casing Height Above Ground: *1 ft.*

Date of Completion: *04/04/2003*

Drilling Company Name: *MCKAY & GOULD
DRILLING INC*

Borehole Depth 1: *200 ft.*

Casing Length 1: *145 ft.*

Aquifer Type: *SHALE*

Total Depth: *200*

Depth to Bedrock: *25 ft.*

Casing Thickness 1: *0.25 in.*

Well Use: *DOMESTIC*

Well Test Details

Static Water Level: *105 ft.*

Drawdown: *80 ft.*

Test Rate: *10 gpm*

Test Duration: *4 hrs.*

Associated Documents:

Comments

Drilling Log

Formations:	From:	To:
CLAY	0	6
CLAY	6	11
SAND & CLAY	11	25
SANDSTONE	25	32
TILL	32	57
SAND & GRAVEL	57	60
SANDSTONE	60	82
CLAY	82	98
CLAY/SAND/GRAVEL	98	125
SHALE	125	156
COAL	156	158
LIMESTONE	158	165
SHALE	165	200
WATER AT	180	180



WATER WELL LOG & DRILLING REPORT

Ohio Department of Natural Resources
Division of Geological Survey
Phone: 614-265-6740

Well Log Number: 2014604

Original Owner & Location

Original Owner Name: JIM AND DENISE

MCCONELL % GOODALL CONST.

County: MAHONING

Address: 11250 FOX RUN LN

City: CANFIELD

Location Number:

Latitude: 40.950089

Township: BEAVER

State: OH

Location Map Year:

Longitude: -80.716911

Section Number:

Zip Code: 44406

Location Area:

Construction Details

Borehole Diameter 1: 10 in.

Borehole Diameter 2: 6 in.

Casing Diameter 1: 6 in.

Casing Diameter 2: 4 in.

Casing Height Above Ground: 1 ft.

Date of Completion: 01/02/2008

Drilling Company Name: DILLAN WELL DRILLING
INC

Borehole Depth 1: 7 ft.

Borehole Depth 2: 120 ft.

Casing Length 1: 52 ft.

Casing Length 2: 114 ft.

Aquifer Type: SHALE

Total Depth: 120

Depth to Bedrock: 43 ft.

Casing Thickness 1: 0.316 in.

Casing Thickness 2: 0.214 in.

Well Use: DOMESTIC

Grout Material/Size: BENTONITE DRY GRANULAR Vol/Wt Used: 350

Method of Installation: DRY-DRIVEN

Placed: 0 to 51 ft.

Well Test Details

Static Water Level: 10 ft.

Drawdown: 27 ft.

Test Rate: 12 gpm

Test Duration: 1.5 hrs.

Associated Documents:

Comments

Drilling Log

Formations:	From:	To:
CLAY & GRAVEL	0	7
GRAVEL & CLAY	7	17
CLAY & GRAVEL	17	43
SANDSTONE	43	52
SANDSTONE	52	54
SANDSTONE	54	62
SANDSTONE	62	94
COAL	94	97
SHALE	97	99
SHALE	99	120
WATER AT	54	55
WATER AT	70	72
WATER AT	93	94



Appendix B

$$\frac{5}{20}$$

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

830

Note: For profile of South Range Rd. (SR 165), see sheet 14.

161

165

170

175

180

185

190

195

Cultivated

Weeds & Brush

Woods

Sta. 832+95.08, $\frac{1}{2}$ " Proposed South Range Rd. (SR 165) =
Sta. 161+34.90, $\frac{1}{2}$ " Proposed SR 11

835

Existing South Range Rd. (SR 165)

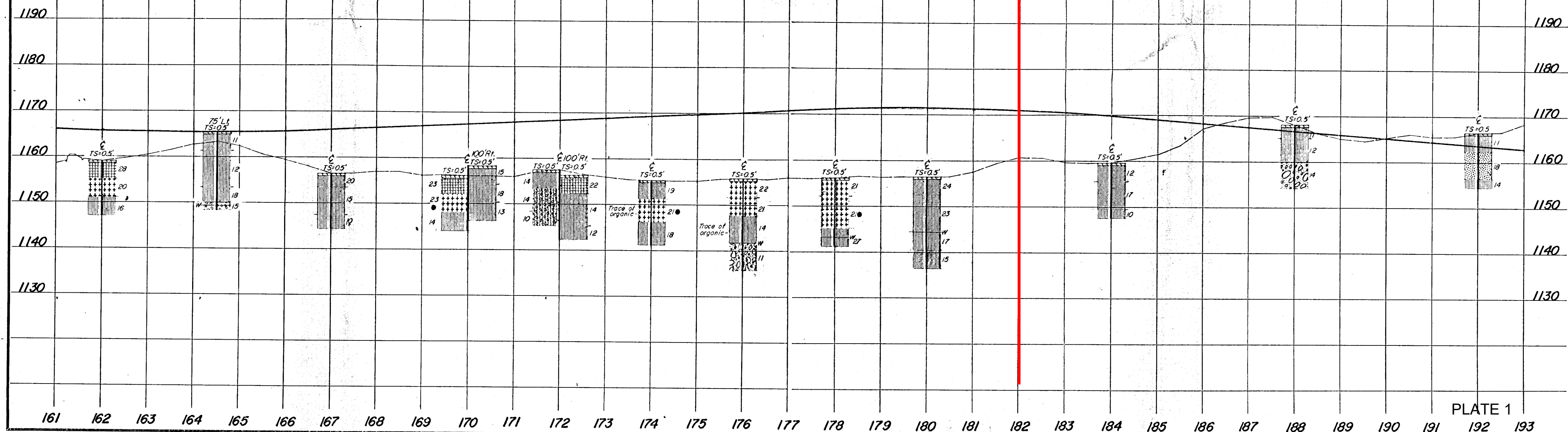
836

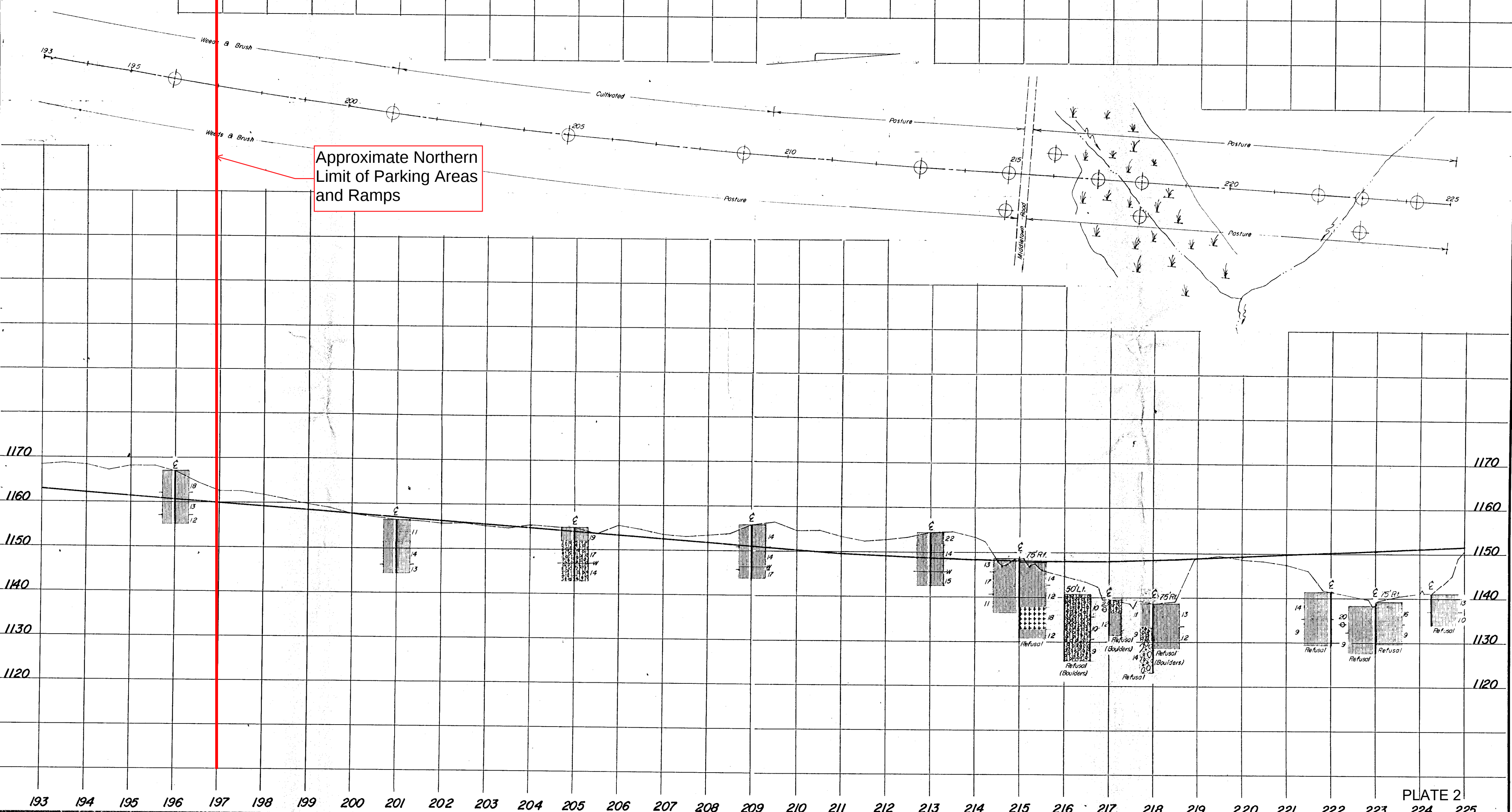
Cross Section Index	
Station	Sheet
176+00	16
180+00	16

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Index	
Station	Sheet
176+00	16
180+00	16

Approximate Southern
Limit of Parking Areas
and Ramps







Appendix C

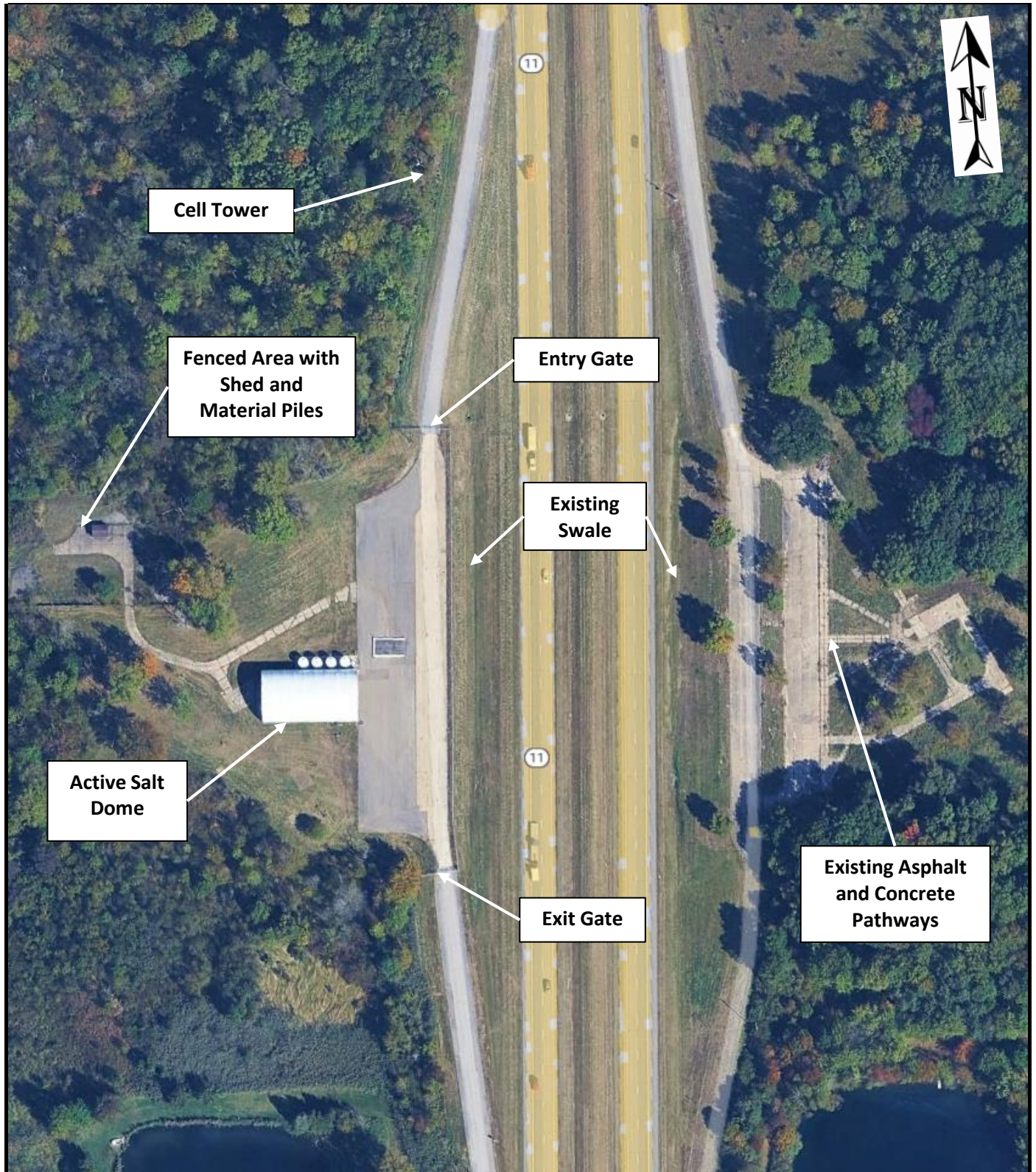
Project No.: 24170232
Project: TP 26 NE Ohio - Site 13 MAH-11
Client: ms consultants, inc.

Prepared By: BKS
Date: 6/18/25



Figure Desc.: Site Aerial with Reconnaissance Notes - SB and NB Parking Areas

Figure Credits: Google Earth



		Date: 5/15/2025
		Photographer: BKS
1	Location / Orientation	SB Site, Just Inside North Gate, Looking South
	Remarks	Active salt dome, existing pavement, main site

		Date: 5/15/2025
		Photographer: BKS
2	Location / Orientation	SB Site, Near South End, Looking West
	Remarks	Double barrel elliptical culvert

3			Date: 5/15/2025
			Photographer: BKS
Location / Orientation		SB Site, Near South End of Parking Area, Looking West	
Remarks		Main parking area, salt dome	

4			Date: 5/15/2025
			Photographer: BKS
Location / Orientation		SB Site, North End of Parking Area, Looking South	
Remarks		Swale between SR 11 and fenced, culvert	

		Date: 5/15/2025
		Photographer: BKS
5	Location / Orientation	NB Site, Near South End, Looking North
	Remarks	Ditch, entrance ramp, main parking area

		Date: 5/15/2025
		Photographer: BKS
6	Location / Orientation	NB Site, Near Center of Area, Looking East
	Remarks	Main site view, existing pavement and sidewalks

		Date: 5/15/2025
		Photographer: BKS
7	Location / Orientation	NB Site, NE Corner of Parking Area, Looking South
	Remarks	Eastern portion of site, concrete pads/sidewalks

		Date: 5/15/2025
		Photographer: BKS
8	Location / Orientation	NB Site, Near North End, Looking North
	Remarks	Exit ramp, existing ramp

Project Initiation Package

Instructions

- The Project Initiation Package is intended to focus on critical issues that can be identified with existing information from secondary sources and/or identified during a site visit.
- Each specialty area of the Project Initiation Package should be completed by individuals who possess sufficient experience to enable them to correctly identify and evaluate issues arising from the field review.
- In the Location/Comments field provide information concerning potential impacts that is brief but gives enough detail to allow an understanding of the issue(s).
- The scope of services document should account for any issues identified in the Project Initiation Package that have the potential to affect scope, schedule, and budget.
- In some instances, resources/subject areas that may need to be consulted for the secondary source review are identified on this form.

Project Initiation Package Deliverables

Provide an expanded Study Area Map identifying project design, utility, right of way and environmental constraints identified through the Project Initiation Package. Tables, USGS and/or aerial mapping, photographs keyed to available project mapping, the plan to inform and involve the public, and other support material should also be submitted with the Project Initiation Package to illustrate specific problem areas.

General

Date(s) of field review:	5-15-25
---------------------------------	---------

Project Name (County, Route, Section):	MAH-SR 11 Vacant Rest Areas	PID:	122881
Date Project Initiation Package Completed:	6/6/2025	Prepared By:	Brian Sears (S&ME) Kevin Harper (S&ME)
City, Township or Village Name(s):		ODOT Project Manager:	

Project Description: Construction of a truck parking facility on SR 11 in Mahoning County (Site 13).

Project Limits/Study Area/General Location: Existing vacant rest areas.
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Project Initiation Package

GEOTECHNICAL ISSUES: <i>Brian Sears (S&ME)</i>	
<i>Based on the information compiled during this study indicate whether or not the following geotechnical issues are present or should be further considered during project development. Provide additional comments as needed. Refer to Section 302.2 of the ODOT Specifications for Geotechnical Explorations for literature search resources.</i>	
Design Issues	Location/Comments
Is there evidence of soil drainage problems (e.g., wet or pumping subgrade, standing water, the presence of seeps, wetlands, swamps, bogs)?	Localized areas of standing water, primarily within existing ditches.
Will construction be impacted based on the groundwater table?	Not anticipated.
Is there evidence of any embankment or foundation problems (e.g., differential settlement, sag, foundation failures, slope failures, scours, evidence of channel migrations)?	No.
Is there evidence of any slope instability (soil or rock)?	No.
Is there evidence of unsuitable materials (e.g., presence of debris or man-made fills or waste pits containing these materials, indications from old soil borings)?	Yes. Many areas of existing pavement/sidewalks/concrete pads observed on both sites. Piles of construction debris were present within a fenced in area on the SB site.
Is there evidence of rock strata (e.g., presence of exposed bedrock, rock on the old borings)?	No.
Is there evidence of active, reclaimed or abandoned surface mines? Evidence of quarries?	No.
Is there information pertaining to the existence of underground mines?	No.
Is there Acid Mine Drainage present within the study area?	No.
Are there any other geotechnical issues? <i>Specify.</i>	No.