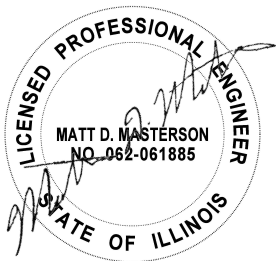


STRUCTURE GEOTECHNICAL REPORT

I-39 and US 20 Noise Abatement Walls 16-18
(I-39 Reconstruction)

Proposed SN 101-N7010



03/08/2024

FAI 39 & FAP 301
WINNEBAGO COUNTY, ILLINOIS
JOB NO. D-92-064-19
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Authored By:

Matt D. Masterson, P.E. &
Thaismara Garcia, E.I.

mmasterson@kaskaskiaeng.com
(618) 233-5877

Prepared For:

Alfred Benesch & Company
35 W Wacker Drive
Chicago, IL 60601

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EXHIBITS

- Exhibit A - Location Map
- Exhibit B - Boring Plan
- Exhibit C - General Plan and Elevation Plan (GP&E)
- Exhibit D - Boring Logs
- Exhibit E – Subsurface Profile
- Exhibit F - Foundation Analysis

1.0 PROJECT DESCRIPTION AND SCOPE

1.1 Introduction

The geotechnical study summarized in this report was performed by Kaskaskia Engineering Group, LLC (KEG) for proposed Noise Walls 16-18 adjacent to I-39. The project is located in Winnebago County, Illinois. The purpose of this report is to document subsurface geotechnical conditions, provide analyses of anticipated site conditions as they pertain to the project described herein, and to present design and construction recommendations for the proposed structure.

1.2 Project Description

The project consists of the placement of three noise abatement walls along the east ramp of I-39. The general location of the proposed structure is shown on a Location Map, Exhibit A. The project is located southeast of Rockford, IL.

1.3 Proposed Structure Information

The proposed structures will consist of two segments. The wall segment heights will vary between 2 ft and 14 ft with post spacing to a maximum of 20 ft. Table 1.3.1 shows the start and end station, as well as the approximate wall segment length. A Type, Size, and Location Plan (TS&L) is included in Exhibit C.

Table 1.3.1 – Wall Segments

Segment ID	Start Station	End Station	Length (ft)
1	16+99.66	48+10.56	3110.96
2	49+95.67	82+64.01	3268.35

Further substructure details will be based on the findings of this SGR.

2.0 FIELD EXPLORATION

2.1 Subsurface Exploration and Testing

Thirty-one standard penetration test (SPT) borings were drilled in July and August of 2021 by the Illinois Department of Transportation (IDOT) District 2. The boring locations are shown on the Boring Plan, Exhibit B. Detailed information regarding the nature and thickness of the soils encountered and the results of the field sampling and laboratory testing are shown on the Boring Logs, Exhibit D. A Soil Profile is included as Subsurface Profile, Exhibit E.

2.2 Subsurface Conditions

The profiles at the thirty-one (31) boring locations exhibited layers of asphalt, concrete, clay, silty clay, clay loam, sandy loam, and gravelly sand. Bedrock was encountered in two of the borings and consisted mostly of weathered limestone. Every boring but Boring B-26, B-27, B-28, and B-29 were drilled to 21' below ground surface elevation (GSE). Both borings B-26 and B-27 were drilled 26' below GSE, while both B-28 and B-29 were drilled 22.5' below GSE. Table 2.2.1 shows

a summary of the depth of drilling, the top of the rock, and (the GSE) of the borings. A summary of the general condition of the subsurface is described in Table 2.2.2.

Table 2.2.1 - Boring Information Summary

ID	Boring Number	Depth (ft)	Top of Rock (ft.)	GSE (ft.)
Segment 1	B-1	21	-	825.00
	B-2	21	802.5	824.5
	B-3	21	-	826.50
	B-4	21	811.50	828.50
	B-5	21	-	830.2
	B-6	21	-	832.70
	B-7	21	-	836
	B-8	21	-	839.7
	B-9	21	-	842.50
	B-10	21	-	845.50
	B-11	21	-	847.00
	B-12	21	-	846.00
	B-13	21	-	844.3
	B-14	21	-	842.28
	B-15	21	-	838.40
Segment 2	B-17	21	-	832.30
	B-18	21	-	830.25
	B-19	21	-	827.00
	B-20	21	-	823.7
	B-21	21	-	820.75
	B-22	21	-	819.4
	B-23	21	-	820.4
	B-24	21	-	820.0
	B-25	21	-	817.4
	B-26	26	-	812.50
	B-27	26	-	811.20
	B-28	25.5	-	810.00
	B-29	22.5	-	805.7
	B-30	21	-	803.5
	B-31	21	-	802.5
	B-32	21	-	809.5

Table 2.2.2 – Subsurface Profile Summary

Soil Type	N-Values (bpf)	Q _u (tsf)	WC (%)	Boring
Loam	9 - 52	1.0 – 4.6	7 – 29	B-3, B-4, B-5, B-6, B-7, B-10, B-11, B-13, B-14, B-15, B-19, B-21, B-22, B-26, B-27, B-29
Clay Loam	8 – 36	1.1 – 6.4	15 - 31	B-1, B-2, B-3, B-4, B-5, B-7, B-8, B-10, B-14, B-15, B-17, B-18, B-19, B-20, B-21, B-25, B-26, B-28
Sandy Loam	5 - 34	0.2 – 4.5	7 – 29	B-1, B-2, B-3, B-4, B-5, B-7, B-8, B-9, B-10, B-13, B-15, B-17, B-18, B-22, B-23, B-24, B-27, B-28, B-29, B-30, B-31
Silty Clay Loam	6 - 22	0.4 – 4.3	8 – 27	B-2, B-7, B-8, B-17, B-18, B-19, B-20, B-21, B-22, B-23, B-24, B-25, B-26, B-27, B-29, B-30
Sandy Clay Loam	7 - 34	1.1 – 5.0	8 – 19	B-3, B-4, B-5, B-6, B-7, B-8, B-9, B-12, B-13, B-15, B-17, B-21, B-22,
Sandy Clay Loam Till	7 – 42	1.1 – 6.0	9 – 20	B-7, B-8, B-9, B-11, B-12, B-13, B-14, B-15, B-20, B-26
Clay Loam Till	11 – 25	1.8 – 5.8	14 – 20	B-8, B-9, B-10, B-14, B-18, B-19, B-21,
Silty Loam	2 – 32	0.1 – 4.5	14 – 28	B-9, B-10, B-18, B-19, B-20, B-22, B-23, B-24, B-25, B-26
Sandy Loam Till	6 – 29	0.4 – 3.8	8 – 24	B-10, B-11, B-12, B-13, B-14, B-17, B-19, B-20, B-21, B-22, B-27, B-28, B-31, B-32
Silt	11	0.4	18	B-24
Silty Loam Till	6	0.5	18	B-19, B-25
Silty Clay	4 – 12	0.3 – 3.7	19 – 30	B-3, B-21, B-23, B-26, B-27, B-28
Silty Sand	6 – 19	0.3 – 0.4	19	B-4, B-24, B-28
Sand	8 – 48	0.3 – 0.5	6 – 23	B-1, B-18, B-23, B-26, B-28, B-29, B-31
Sandy Gravel	6 – 100	0.3	8 – 11	B-27, B-29, B-30, B-31, B-32
Limestone	47 - 100	-	-	B-2, B-4

2.3 Groundwater

Four (4) borings reached groundwater during drilling. It should be noted that the groundwater level is subject to seasonal and climatic variations. In addition, without extended periods of observation,

measurement of true groundwater levels may not be possible. A summary of the groundwater table elevation at the four (4) boring locations is described in Table 2.3.1.

Table 2.3.1 – Groundwater Table Elevation Summary

Boring	First Encounter (ft)	Upon Completion (ft)
B-26	791.2	DRY
B-27	795.5	786.0
B-28	794.4	787.7
B-29	795.5	788.5

3.0 GEOTECHNICAL EVALUATIONS

3.1 Settlement

Since no significant grading or changes to the existing grade level are expected, it is estimated that no settlement will be experienced. Therefore, no settlement calculations were performed for the proposed structure.

3.2 Seismic Considerations

The determination of Seismic Site Class was based on the method described by IDOT AGMU Memo 09.1 - Seismic Site Class Definition and the IDOT provided spreadsheet titled: '*Seismic Site Class Determination*.' Using these resources, the controlling global site class for this project is Soil Site Class D.

Additional seismic parameters were calculated for the structure's design. Published information and mapping from the USGS, including software directly applicable to the AASHTO Guide Specifications for LRFD Seismic Bridge Design, were used to develop the parameters for the bridge location. The values, based on Soil Site Class D, are summarized below.

Table 3.2.1 - Summary of Seismic Parameters

Parameter	Value
Soil Site Class	D
Spectral Response Acceleration, 0.2 Sec, S_{DS}	0.135 g (Site Class D)
Spectral Response Acceleration, 1.0 Sec, S_{D1}	0.080 g (Site Class D)
Seismic Performance Zone	1

As indicated in the table above, the Seismic Performance Zone is 1, based on S_{D1} and Table 3.15.2-1 in the IDOT Bridge Manual, the Soil Site Class D, and Figure 2.3.10-4 in the IDOT Bridge Manual.

4.0 FOUNDATION EVALUATIONS AND DESIGN RECOMMENDATIONS

4.1 Foundation Recommendations

The foundations supporting the proposed walls should be sufficient to resist the dead and dynamic loads. For the zones where the bedrock was not encountered within 15 ft below the GSE, the drilled shafts' side resistance was calculated using the alpha (α) method for cohesive soils and beta (β) method for cohesionless soils. LRFD Resistance Factors of 0.55 for side resistance and 0.5 for tip resistance for cohesionless soils, and resistance factors of 0.45 for side resistance and 0.4 for tip resistance for cohesive soils are incorporated into the allowable capacities, respectively.

For the zones where the bedrock was encountered, the provided capacities are based on empirical values of weathered limestone strength properties and utilizing the IDOT Drilled Shaft Axial Capacity in Rock spreadsheet as provided by IDOT BBS Foundations and Geotechnical Unit. LRFD Resistance Factors of 0.55 for side resistance and 0.5 for tip resistance are incorporated into the allowable capacities, respectively. (See Exhibit F – Foundation Analysis)

Table 4.1.1 shows the summary of the borings selected by stationing. The estimated Drilled Shaft Axial Capacity summary of Factored Shaft Resistances available for various shaft diameters based on socket depths are shown in Tables 4.1.2 through 4.1.8 below.

Table 4.1.1 - Summary of Foundation Recommendations

Stationing	Boring	Bottom of NWA Elevation	Top of Rock
16+99.66 – 27+00.00	B-3	825.90	-
27+00.00 – 37+00.00	B-10	844.99	-
37+00.00 – 48+10.56	B-13	843.99	-
49+95.67 – 62+00.00	B-19	826.46	-
62+00.00 – 67+00.00	B-23	819.96	-
67+00.00 – 74+00.00	B-26	811.22	-
74+00.00 – 82+64.01	B-29	809.33	-

Table 4.1.2 - Estimated Drilled Shaft Axial Capacity for STA 16+99.60 – 27+00.00 (Boring B-3)

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	123.70	61.85	15.16	8.34
	10	123.70	61.85	55.10	30.31
	15	163.46	65.38	118.26	61.99

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
36	5	178.13	89.06	18.19	10.00
	10	178.13	89.06	66.13	36.37
	15	235.38	94.15	141.92	74.39
42	5	242.45	121.23	21.22	11.67
	10	242.45	121.23	77.15	42.43
	15	320.38	128.15	165.57	86.79
48	5	316.67	158.34	24.25	13.34
	10	316.67	158.34	88.17	48.49
	15	418.46	167.38	189.22	99.19

Table 4.1.3 - Estimated Drilled Shaft Axial Capacity for STA 27+00.00 – 37+00.00 (Boring B-10)

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	70.69	35.34	13.08	7.19
	10	76.58	38.29	47.85	26.32
	15	83.01	33.20	85.98	43.93
36	5	101.79	50.89	15.70	8.63
	10	110.27	55.13	57.42	31.58
	15	119.53	47.81	103.18	52.72
42	5	138.54	69.27	18.31	10.07
	10	150.09	75.04	66.99	36.84
	15	162.69	65.08	120.37	61.50
48	5	180.96	90.48	20.93	11.51
	10	196.04	98.02	76.56	42.11
	15	212.50	85.00	137.57	70.29

**Table 4.1.4 - Estimated Drilled Shaft Axial Capacity for STA 37+00.00 – 48+10.56
(Boring B-13)**

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	88.36	44.18	15.16	8.34
	10	135.48	67.74	55.05	30.28
	15	135.48	67.74	116.16	63.89
36	5	127.23	63.62	18.19	10.00
	10	195.09	97.55	66.06	36.33
	15	195.09	97.55	139.39	76.66
42	5	173.18	86.59	21.22	11.67
	10	265.54	132.77	77.07	42.39
	15	265.54	132.77	162.62	89.44
48	5	226.19	113.10	24.25	13.34
	10	346.83	173.42	88.08	48.44
	15	346.83	173.42	185.85	102.22

**Table 4.1.5 - Estimated Drilled Shaft Axial Capacity for STA 49+95.66 – 62+00.00
(Boring B-19)**

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	143.58	57.43	63.81	28.72
	10	143.58	57.43	127.63	57.43
	15	70.69	35.34	177.87	84.48
36	5	206.76	82.70	76.58	34.46
	10	206.76	82.70	153.15	68.92
	15	101.79	50.89	213.45	101.38
42	5	281.42	112.57	89.34	40.20
	10	281.42	112.57	178.68	80.41
	15	138.54	69.27	249.02	118.27

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
48	5	367.57	147.03	102.10	45.95
	10	367.57	147.03	204.20	91.89
	15	180.96	90.48	284.60	135.17

**Table 4.1.6 - Estimated Drilled Shaft Axial Capacity for STA 62+00.00 – 67+00.00
(Boring B-23)**

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	94.25	47.12	15.16	8.34
	10	29.45	14.73	30.66	16.87
	15	29.45	14.73	50.74	27.91
36	5	135.72	67.86	18.19	10.00
	10	42.41	21.21	36.80	20.24
	15	42.41	21.21	60.89	33.49
42	5	184.73	92.36	21.22	11.67
	10	57.73	28.86	42.93	23.61
	15	57.73	28.86	71.04	39.07
48	5	241.27	120.64	24.25	13.34
	10	75.40	37.70	49.06	26.98
	15	75.40	37.70	81.19	44.66

**Table 4.1.7 - Estimated Drilled Shaft Axial Capacity for STA 67+00.00 – 74+00.00
(Boring B-26)**

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	88.36	44.18	40.46	18.36
	10	39.27	15.71	64.16	31.23
	15	62.59	25.03	93.61	44.48

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
36	5	127.23	63.62	48.56	22.04
	10	56.55	22.62	76.99	37.47
	15	90.12	36.05	112.33	53.38
42	5	173.18	86.59	56.65	25.71
	10	76.97	30.79	89.82	43.72
	15	122.67	49.07	131.05	62.28
48	5	226.19	113.10	64.74	29.38
	10	100.53	40.21	102.65	49.97
	15	160.22	64.09	149.77	71.17

Table 4.1.8 - Estimated Drilled Shaft Axial Capacity for STA 74+00.00 – 82+64.01 (Boring B-29)

Diameter Socket (in.)	Socket Depth (ft.)	Nominal Shaft Resistance Available (kips) TIP	Factored Shaft Resistance Available (kips) TIP	Nominal Shaft Resistance Available (kips) SIDE	Factored Shaft Resistance Available (kips) SIDE
30	5	55.33	22.13	29.73	13.38
	10	88.36	44.18	61.99	28.30
	15	265.07	132.54	126.51	63.78
36	5	79.68	31.87	35.68	16.06
	10	127.23	63.62	74.39	33.96
	15	381.70	190.85	151.81	76.54
42	5	108.45	43.38	41.63	18.73
	10	173.18	86.59	86.79	39.62
	15	519.54	259.77	177.11	89.30
48	5	141.65	56.66	47.58	21.41
	10	226.19	113.10	99.18	45.28
	15	678.58	339.29	202.42	102.05

4.2 Lateral Pile Response

Generally, the geotechnical engineer provides soil parameters to the structural engineer so that an L-Pile program or other approved software can be used for the lateral or displacement analysis of the foundations. Table 4.2.1 and Table 4.2.2 are included for the structural engineer's use in determining lateral pile response.

Table 4.2.1 - Soil Parameters for Lateral Pile Load Analysis

Boring	Soil Description	Depth at Bot. (Ft)	γ (pcf)	Short Term		Long Term		N Value Ave.	% Fines	K (pci)	ϵ_{50}
				c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
B-1	Sandy Loam	821.5	120	-	33	-	33	22	35	90	-
	Clay Loam	819.0	120	3100	0	100	26	12	65	1000	0.005
	Sandy Loam	809.0	120	-	32	-	32	15	35	90	-
	Fine Sand	804.0	115	-	40	-	40	43	5	225	-
B-2	Silty Clay Loam	822.5	120	1500	28	100	28	12	65	500	0.007
	Sandy Loam	813.5	120	-	30	-	30	11	35	60	-
	Clay Loam	806.0	120	2450	0	100	26	17	65	1000	0.005
B-3	Sandy Loam	813.0	120	-	31	-	31	16	35	90	-
	Clay Loam	805.5	120	2150	0	100	26	16	65	1000	0.005
B-4	Sandy Loam	817.5	120	-	32	-	32	18	35	90	-
	Clay Loam	814.0	120	3700	0	100	26	19	65	1000	0.005
	Silty Sand	811.5	115	-	33	-	33	19	25	90	-
B-5	Loam	814.2	120	-	37	-	37	31	25	225	-
	Clay Loam	809.2	120	1950	0	150	26	33	65	500	0.007
B-6	Loam	811.7	120	-	31	-	31	13	25	90	-
B-7	Silty Clay Loam	834.0	120	2500	28	150	28	28	65	1000	0.005
	Sandy Loam	830.0	120	-	32	-	32	20	35	90	-
	Sandy Clay Loam Till	822.5	125	-	32	-	32	19	45	90	-
	Clay Loam	815.0	120	2000	0	100	26	10	65	500	0.007
B-8	Silty Clay Loam	837.7	120	2500	28	150	28	31	65	1000	0.005
	Sandy Loam	836.2	120	-	35	-	35	31	35	225	-
	Clay Loam	828.7	120	3800	0	100	26	16	65	1000	0.005
	Sandy Clay Loam Till	818.7	125	-	33	-	33	20	45	90	-
B-9	Sandy Loam	831.5	120	-	31	-	31	14	35	90	-
	Silty Loam	829.0	120	-	36	-	36	32	65	225	-
	Sandy Clay Loam Till	824.0	125	-	39	-	39	40	45	225	-
	Silty Clay Loam Till	821.5	125	3500	30	150	30	25	65	1000	0.005
B-10	Loam	842.0	120	-	30	-	30	13	25	90	-
	Silty Loam	839.5	120	-	29	-	29	9	65	25	-
	Sandy Loam Till	834.5	125	-	30	-	30	10	35	90	-

Boring	Soil Description	Depth at Bot. (Ft)	γ (pcf)	Short Term		Long Term		N Value Ave.	% Fines	K (pci)	ϵ_{50}
				c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
	Silty Clay Loam Till	824.5	125	1900	30	100	30	14	65	500	0.007
B-11	Loam	845.0	120	-	31	-	31	16	25	90	-
	Sandy Loam Till	826.0	125	-	32	-	32	15	35	90	-
B-12	Sandy clay loam	842.5	120	-	30	-	30	11	45	90	-
	Sandy Clay Loam Till	825.0	125	-	31	-	31	14	45	90	-
B-13	Sandy Loam	835.8	120	-	30	-	30	11	35	90	-
	Sandy Loam Till	823.3	125	-	32	-	32	17	35	90	-
B-14	Clay Loam	838.7	120	3900	0	100	26	12	65	1000	0.005
	Sandy Clay Loam Till	826.2	125	-	32	-	32	15	45	90	-
	Silty Clay Loam Till	821.2	125	4250	30	100	30	20	65	2000	0.004
B-15	Sandy clay loam	827.4	120	-	31	-	31	14	45	90	-
	Clay Loam	824.9	120	2100	0	100	26	13	65	1000	0.005
	Sandy clay loam	817.4	120	-	32	-	32	16	45	90	-
B-17	Sandy Loam	826.3	120	-	30	-	30	11	35	90	-
	Silty Clay Loam	821.3	120	2400	28	100	28	14	65	1000	0.005
	Sandy Loam	813.8	120	-	34	-	34	21	35	90	-
	Silty Clay Loam	811.3	120	1300	28	100	28	6	65	500	0.007
B-18	Silty Clay Loam	821.7	120	3000	28	100	28	15	65	1000	0.005
	Silty Loam	818.2	120	21000	31	-	31	15	65	90	-
	Fine Sand	815.7	115	-	35	-	35	29	5	90	-
	Silty Clay Loam	814.2	120	2300	28	100	28	8	65	1000	0.005
	Silty Loam	811.7	120	-	29	-	29	7	65	25	-
	Sandy Loam	809.2	120	-	29	-	29	8	35	25	-
B-19	Silty Clay Loam	816.0	120	3250	28	100	28	12	65	1000	0.005
	Silty Loam	811.0	120	-	30	-	30	9	65	25	-
	Sandy Loam Till	806.0	125	-	30	-	30	10	35	90	-
B-20	Silty Clay Loam	817.7	120	3800	28	100	28	15	65	1000	0.005
	Silty Loam	815.2	120	-	31	-	31	17	65	90	-
	Sandy Loam Till	802.7	125	-	34	-	34	22	35	90	-
B-21	Clay Loam	809.7	120	2175	0	100	26	12	65	1000	0.005
	Sandy clay loam	807.2	120	2900	31	-	31	14	45	90	-
	Silty Clay	804.7	120	2400	0	100	26	9	65	1000	0.005
	Sandy Loam Till	799.7	125	1000	30	-	30	10	35	90	-
B-22	Silty Clay Loam	817.4	120	900	28	100	28	12	65	100	0.01
	Loam	813.4	120	-	29	-	29	10	25	90	-
	Sandy Loam Till	810.9	125	-	30	-	30	12	35	90	-
	Silty Loam	808.4	120	-	29	-	29	6	65	25	-

Boring	Soil Description	Depth at Bot. (Ft)	γ (pcf)	Short Term		Long Term		N Value Ave.	% Fines	K (pci)	ε ₅₀
				c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
	Sandy Loam	805.9	120	-	32	-	32	18	35	90	-
	Silty Clay Loam	803.4	120	1400	28	100	28	10	65	500	0.007
	Sandy Loam	800.9	120	-	31	-	31	11	35	90	-
	Sandy Loam Till	798.4	125	-	29	-	29	6	35	25	-
B-23	Sandy Loam	814.4	120	-	30	-	30	12	35	90	-
	Silty Loam	803.4	120	-	28	-	28	4	65	25	-
	Sand	799.4	115	-	31	-	31	12	3	90	-
B-24	Silty Clay Loam	814.0	120	1700	28	100	28	12	65	500	0.007
	Silty Sand	809.0	115	-	29	-	29	6	25	25	-
	Fine Sand	806.5	115	-	30	-	30	11	5	90	-
	Silty Loam	799.0	120	-	29	-	29	7	65	25	-
B-25	Silty Loam	806.4	120	-	29	-	29	9	65	25	-
	Silty Clay	803.9	120	3700	0	100	26	12	65	1000	0.005
	Clay Loam	797.4	120	1900	0	100	26	9	65	500	0.007
	Silty Loam Till	796.4	125	-	29	-	29	6	65	25	-
B-26	Silty Clay Loam	806.5	120	2100	28	100	28	8	65	1000	0.005
	Fine Sand	804.0	115	-	30	-	30	11	5	90	-
	Silty Loam	801.5	120	-	28	-	28	4	65	25	-
	Silty Clay	799.0	120	1000	0	100	26	7	65	100	0.01
	Clay Loam	795.5	120	1500	0	100	26	9	65	500	0.007
	Sand	791.5	115	-	32	-	32	15	3	60	-
	Sandy Loam	789.0	120	-	31	-	31	13	35	60	-
	Sandy Clay Loam Till	785.5	125	-	29	-	29	7	45	20	-
B-27	Silty Clay Loam	805.2	120	2100	28	100	28	8	65	1000	0.005
	Sandy Loam	802.7	120	-	29	-	29	9	35	25	-
	Silty Clay	794.2	120	1000	0	100	26	6	65	100	0.01
	Sandy Gravel	791.7	120	-	29	-	38	6	3	-	-
	Sandy Loam Till	787.7	125	-	33	-	33	18	35	60	-
	Sandy Gravel	785.2	120	-	34	-	38	21	3	-	-
B-28	Sandy Loam	806.5	120	-	30	-	30	11	35	90	-
	Silty Clay	804.0	120	2500	0	100	26	11	65	1000	0.005
	Fine Sand	801.5	115	-	29	-	29	10	5	90	-
	Clay Loam	799.0	120	1400	0	100	26	8	65	500	0.007
	Silty Clay	796.5	120	700	0	100	26	4	65	100	0.01
	Sand	794.0	115	-	36	-	36	29	3	60	-
	Sandy Loam Till	790.5	125	-	31	-	31	11	35	60	-
	Sandy Gravel	784.5	120	-	50	-	38	82	3	-	-

Boring	Soil Description	Depth at Bot. (Ft)	γ (pcf)	Short Term		Long Term		N Value Ave.	% Fines	K (pci)	ϵ_{50}
				c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
B-29	Silty Clay Loam	799.7	120	1350	28	100	28	8	65	500	0.007
	Sandy Loam	796.2	120	-	30	-	30	11	35	90	-
	Sandy Gravel	783.2	120	-	37	-	38	34	3	-	-
B-30	Silty Clay Loam	797.5	120	1800	28	100	28	9	65	500	0.007
	Sandy Loam	789.0	120	-	29	-	29	7	35	25	-
	Sandy Gravel	782.5	120	-	47	-	38	70	3	-	-
B-31	Silty Clay Loam	798.0	120	700	28	100	28	10	65	100	0.01
	Sand	795.5	115	-	30	-	30	13	3	90	-
	Sandy Loam Till	793.0	125	-	30	-	30	11	35	90	-
	Sandy Gravel	781.5	120	-	38	-	38	37	3	-	-
B-32	Silty Clay Loam	801.0	120	2300	28	100	28	13	65	1000	0.005
	Sandy Loam Till	797.5	125	-	32	-	32	19	35	90	-
	Sandy Gravel	788.5	120	-	35	-	38	26	3	-	-

Table 4.2.2 - Rock Parameters for Lateral Pile Load Analysis

Rock Type	γ (psf)	Q_u (tsf)	Φ (deg.)
Limestone	145	25	45

5.0 CONSTRUCTION CONSIDERATIONS

5.1 Construction Activities

Construction activities should be performed in accordance with the current IDOT Standard Specifications for Road and Bridge Construction and any pertinent Special Provisions or Policies.

Should any design considerations assumed by KEG change, KEG should be contacted to determine if the recommendations stated in this report still apply.

5.2 Temporary Sheet piling and Soil Retention

Temporary shoring is not anticipated.

5.3 Site and Soil Conditions

Provisions of the Standard Specifications should adequately address site and soil conditions.

6.0 COMPUTATIONS

Computations and analyses for specific circumstances, if any, are included as exhibits. Please refer to each section of the report for reference to the exhibit containing any such calculations or analysis used.

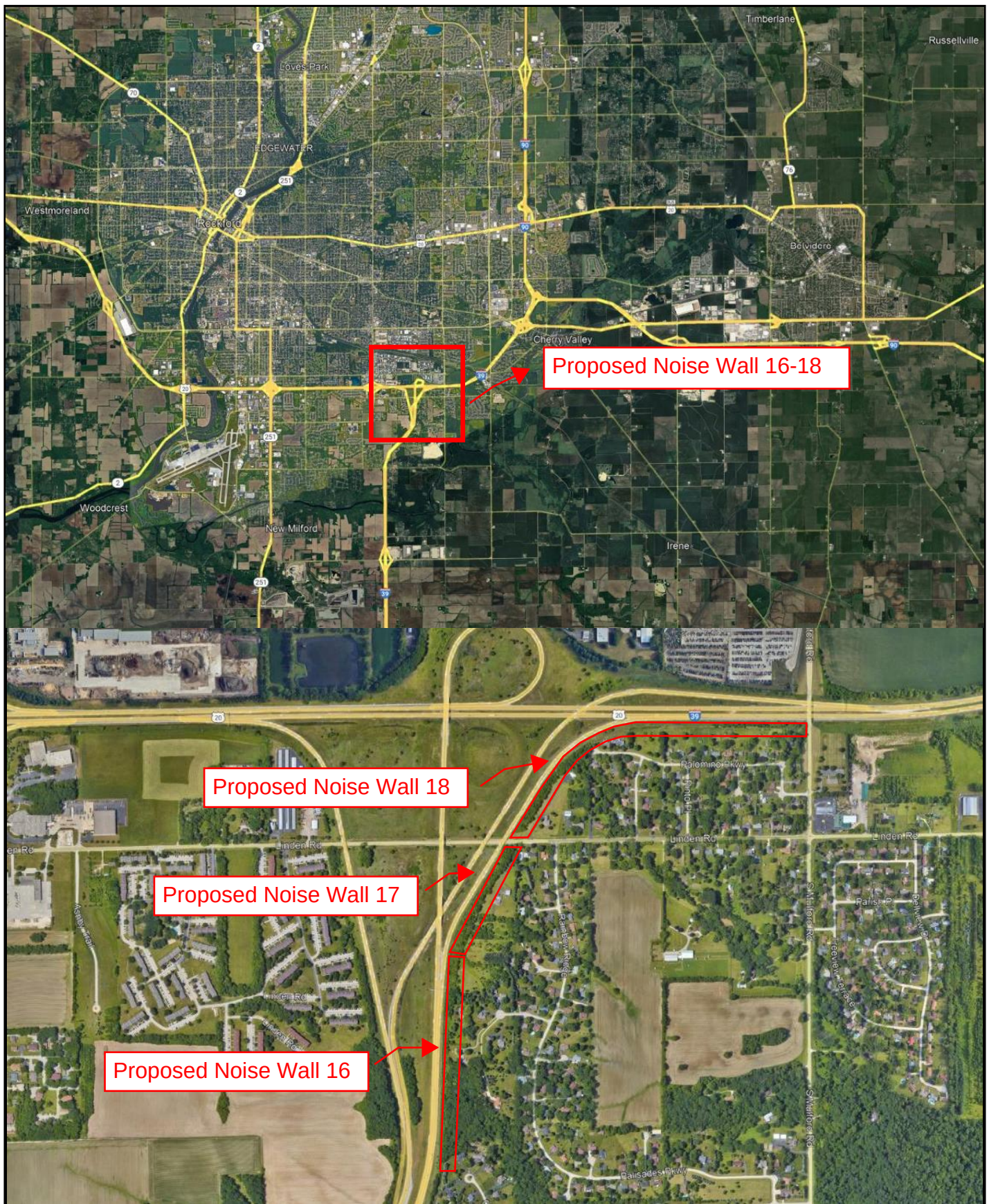
7.0 GEOTECHNICAL DATA

Soil boring logs and subsurface profiles can be found in Exhibit D. Foundation Design Tables can be found in Exhibit F.

8.0 LIMITATIONS

The recommendations provided herein are for the exclusive use of Alfred Benesch & Company and the Illinois Department of Transportation (IDOT) District 2. They are specific only to the project described. They are based on the subsurface information obtained by IDOT at thirty-one boring locations within the structure area, KEG's understanding of the project as described herein, and geotechnical engineering practice consistent with the standard of care. No other warranty is expressed or implied. KEG should be contacted if conditions encountered during construction are not consistent with those described.

EXHIBIT A
LOCATION MAP



LOCATION MAP

I-39 Noise
Abatement Wall 16-18
Winnebago County,
Illinois

Exhibit No.

A

KEG JOB #19-1138.00

EXHIBIT B
BORING PLAN



BORING LOCATION MAP

I-39 Noise
Abatement Wall 16-18
Winnebago County,
Illinois

Exhibit No.

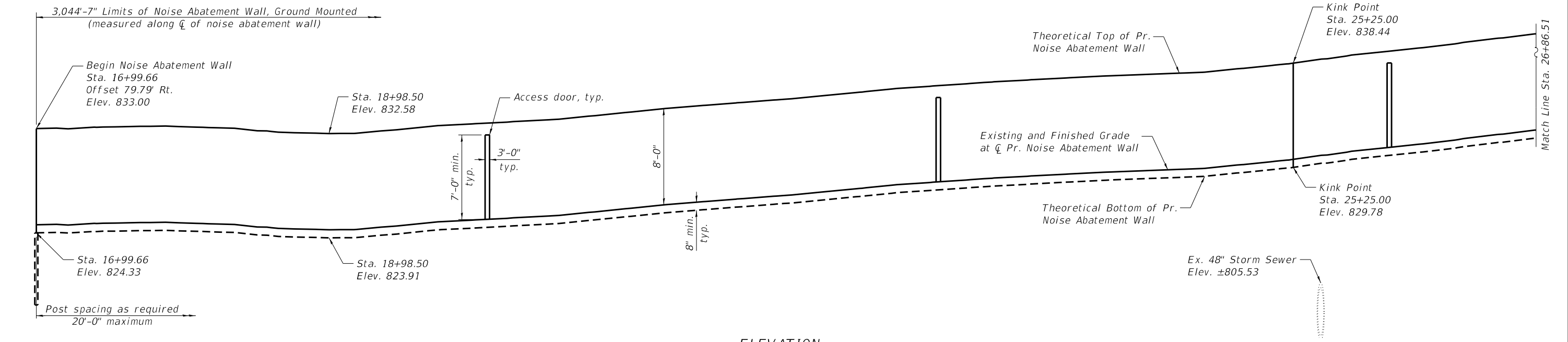
B

KEG JOB #19-1138.00

EXHIBIT C

GENERAL PLAN AND ELEVATION (GP&E)

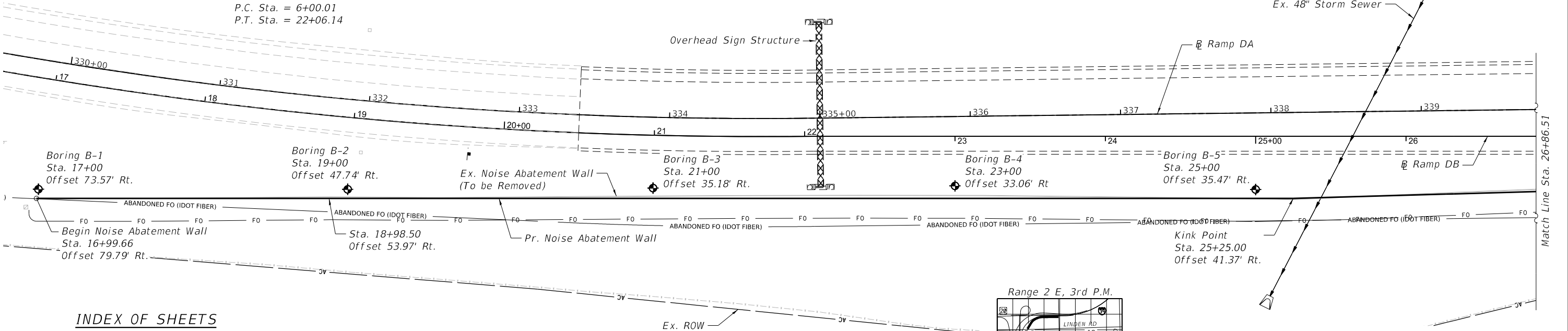
Benchmark: BM#454 - Cut "□" on westerly sign base of 30 mph ramp sign located 0.1 mile north of the centerline of Linden Road along the west side of I-39. Elev. 850.53, 42°13'06.4" N. 89°00'40.8" W.



CURVE DATA
PR CURVE PRAMPDB-1
P.I. Sta. = 14+23.59
 $\Delta = 31^\circ 14' 58''$ (LT)
D = $01^\circ 56' 44''$
R = 2,944.85'
T = 823.58'
L = 1,606.13'
E = 113.00'
e = 6.0%
T.R. = 75'
P.C. Sta. = 6+00.01
P.T. Sta. = 22+06.14

ELEVATION

- LEGEND**
- Noise Abatement Wall Soil Boring
 - Existing Fence
 - AC Access Control
 - FO Fiber Optic
 - ABANDONED FO (IDOT FIBER) Abandoned IDOT Fiber Optic

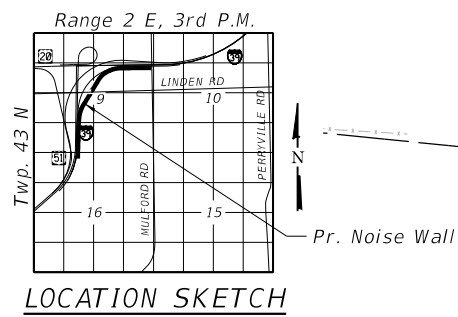


INDEX OF SHEETS

1. General Plan and Elevation I
2. General Plan and Elevation II
3. General Plan and Elevation III
4. General Plan and Elevation IV
5. General Plan and Elevation V
6. General Plan and Elevation VI
7. General Details
8. Data Table
- 9-10. Typical Sections
- 11-26. Boring Logs

Notes:
Offsets are measured from Ramp DB to centerline of Pr. Noise Abatement Wall or Boring location.
See Data Table on sheet 8 of 26 for Offsets and Theoretical Elevations along the centerline of Pr. Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW, and Finished Grade Elev. at centerline of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 8 of 26.
Access doors are to be spaced at 300' maximum intervals.

PLAN



**GENERAL PLAN AND ELEVATION
NOISE ABATEMENT WALL
F.A.I. ROUTE 39 SEC. (201-3)R & (4-1,5)R
WINNEBAGO COUNTY
STA. 16+99.66 TO STA. 82+64.01
STRUCTURE NO. 101-N7010**

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PLOT DATE =	05/09/2024	CHECKED -	MDC	REVISED -	

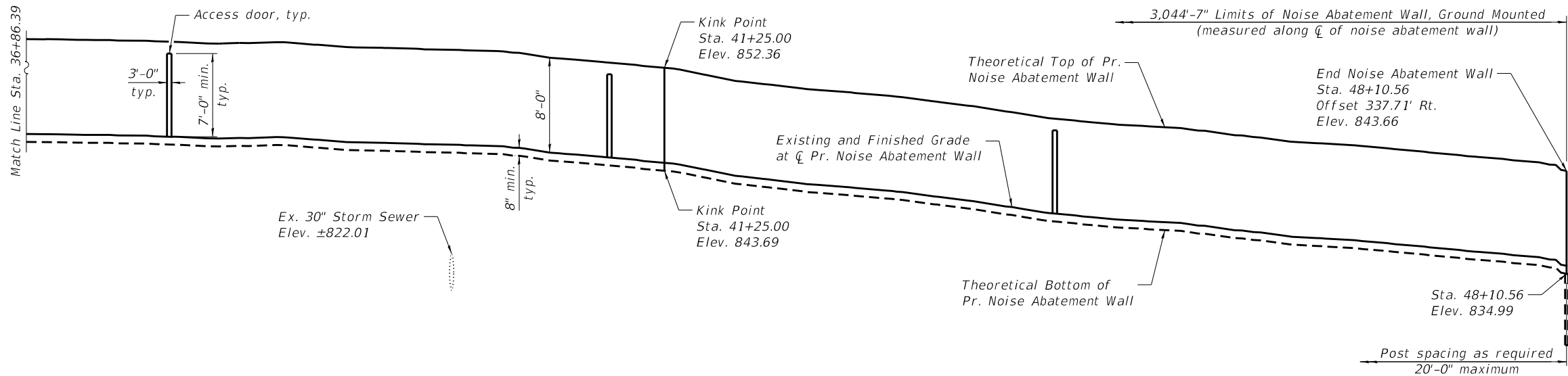
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION I
STRUCTURE NO. 101-N7010**

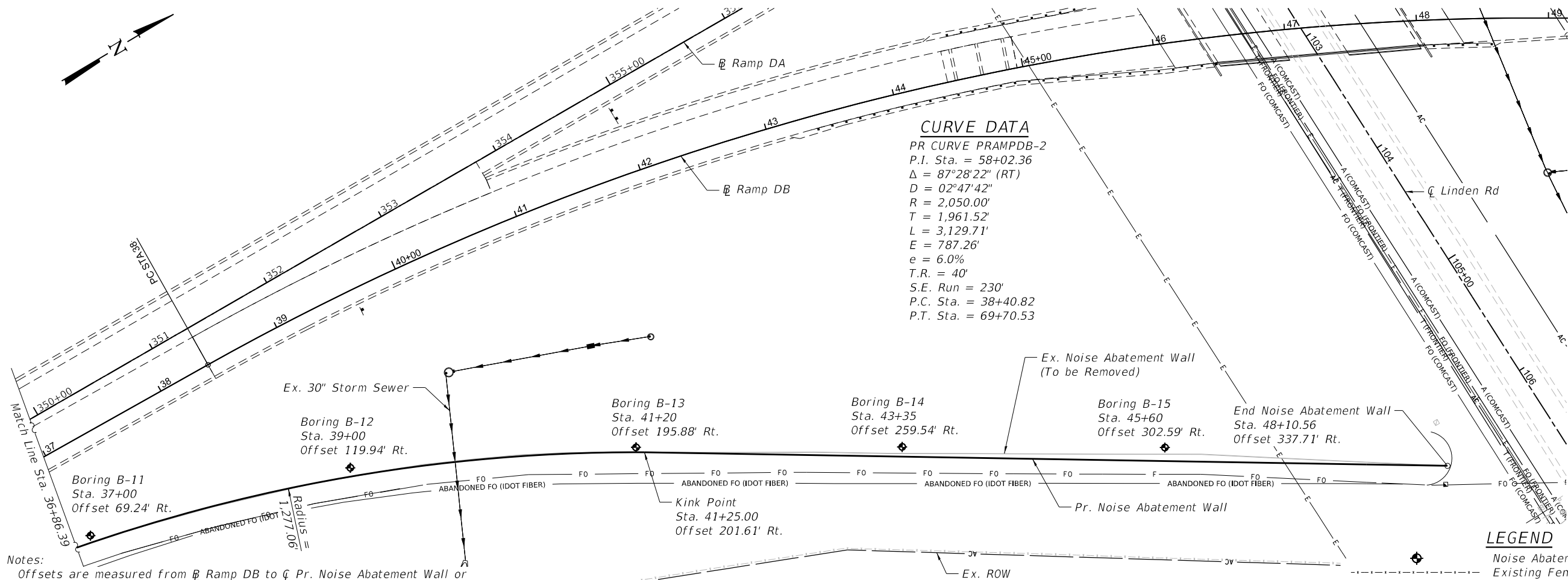
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CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

SHEET 1 OF 26 SHEETS

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ELEVATION



CURVE DATA

PR CURVE PRAMPDB-2
P.I. Sta. = 58+02.36
 $\Delta = 87^\circ 28' 22''$ (RT)
 $D = 02^\circ 47' 42''$
 $R = 2,050.00'$
 $T = 1,961.52'$
 $L = 3,129.71'$
 $E = 787.26'$
 $e = 6.0\%$
 $T.R. = 40'$
 $S.E. Run = 230'$
 $P.C. Sta. = 38+40.82$
 $P.T. Sta. = 69+70.53$

LEGEND

---+---+---	Noise Abatement Wall Soil Boring
---	Existing Fence
---	Access Control
---	FO (FRONTIER)
---	Frontier Fiber Optic
---	FO (COMCAST)
---	Comcast Fiber Optic
---	F0
---	Fiber Optic
---	ABANDONED FO (IDOT FIBER)
---	Abandoned IDOT Fiber Optic
---	T (FRONTIER)
---	Frontier Underground Telephone
---	E
---	Underground Electric
---	A (COMCAST)
---	Comcast Aerial Line

Notes:
Offsets are measured from R Ramp DB to C of Pr. Noise Abatement Wall or Boring location.
See Data Table on sheet 8 of 26 for Offsets and Theoretical Elevations along the C of Pr. Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at C of NAW, and Finished Grade Elev. at C of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 8 of 26.
Access doors are to be spaced at 300' maximum intervals.

PLAN



QUIGG ENGINEERING INC

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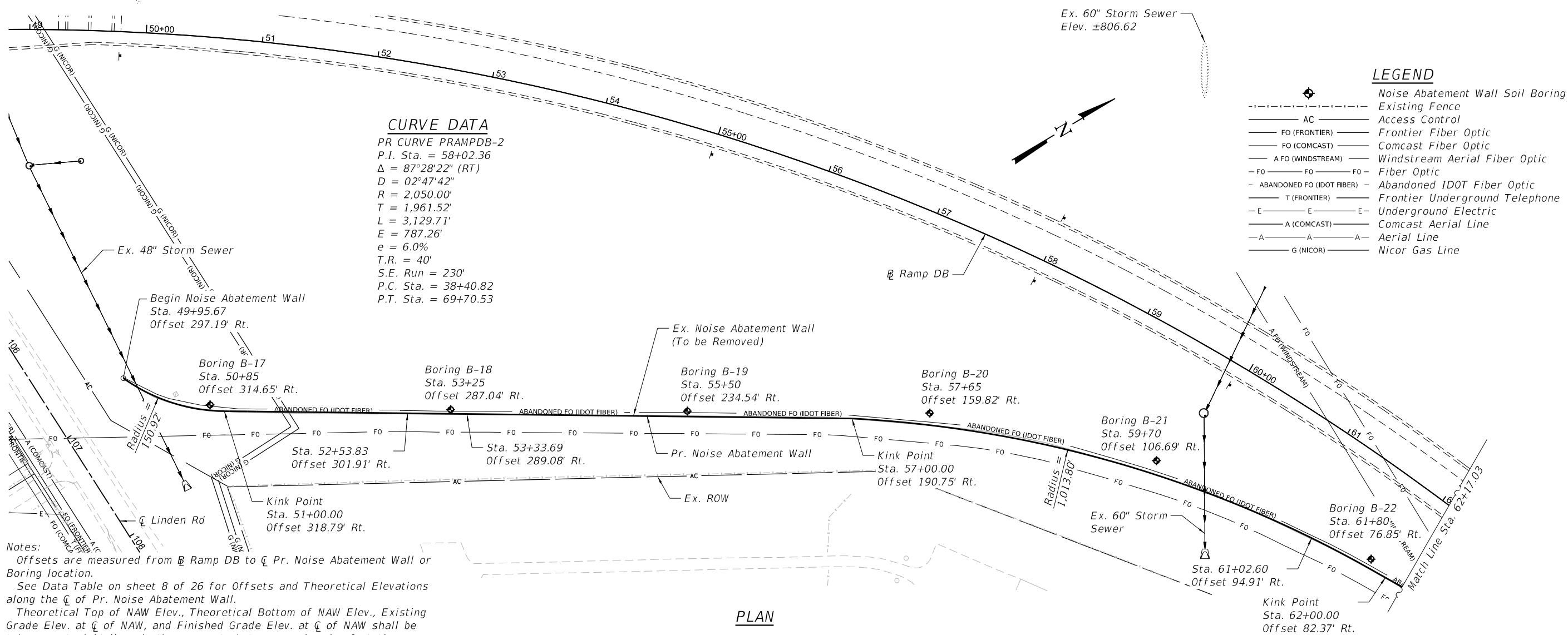
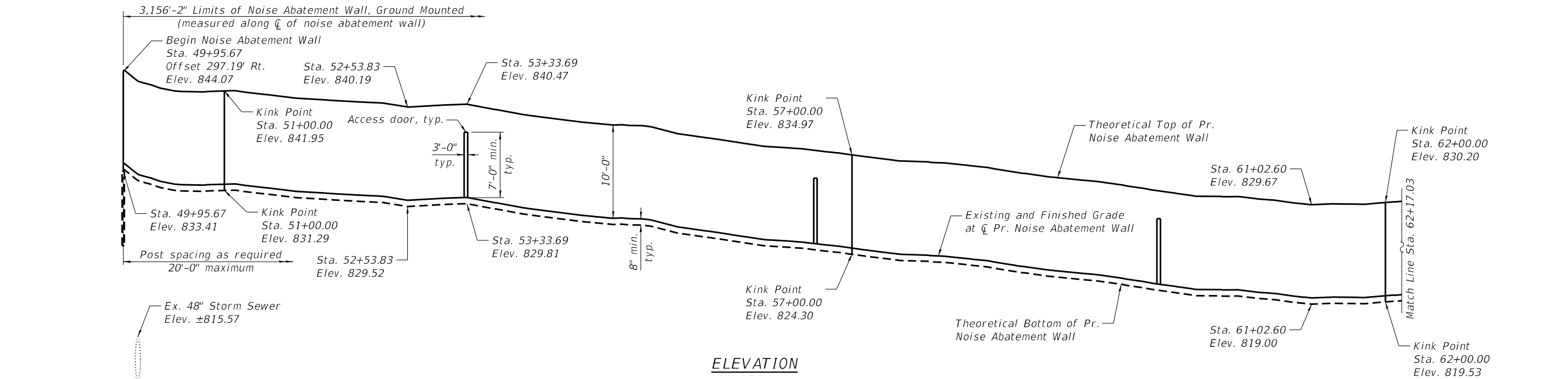
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION III
STRUCTURE NO. 101-N7010

SHEET 3 OF 26 SHEETS

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CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

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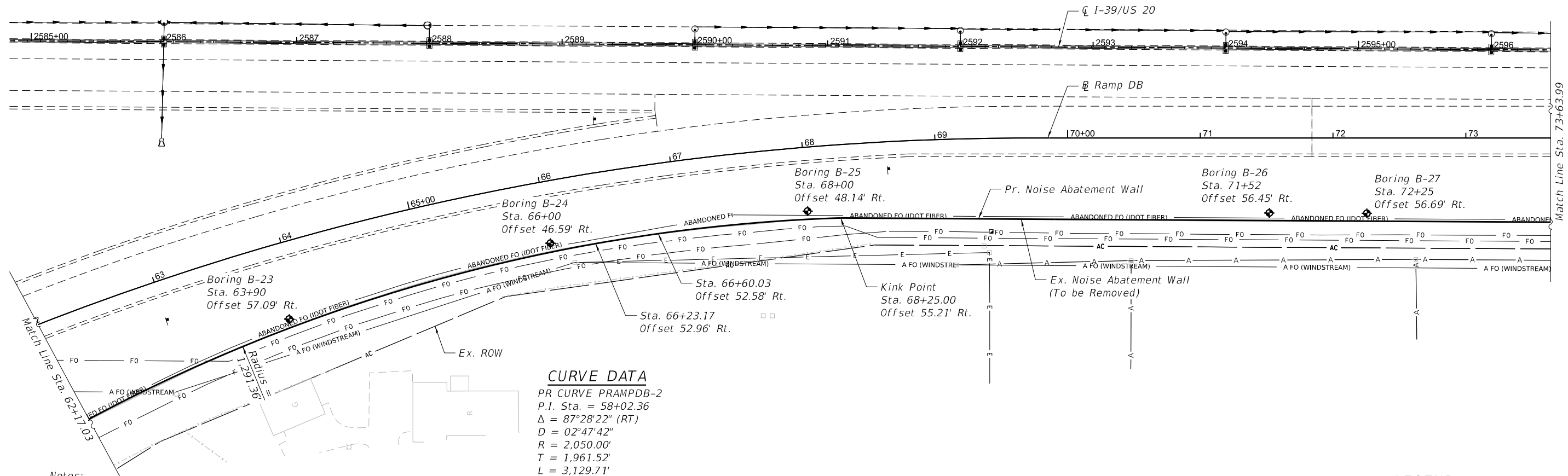
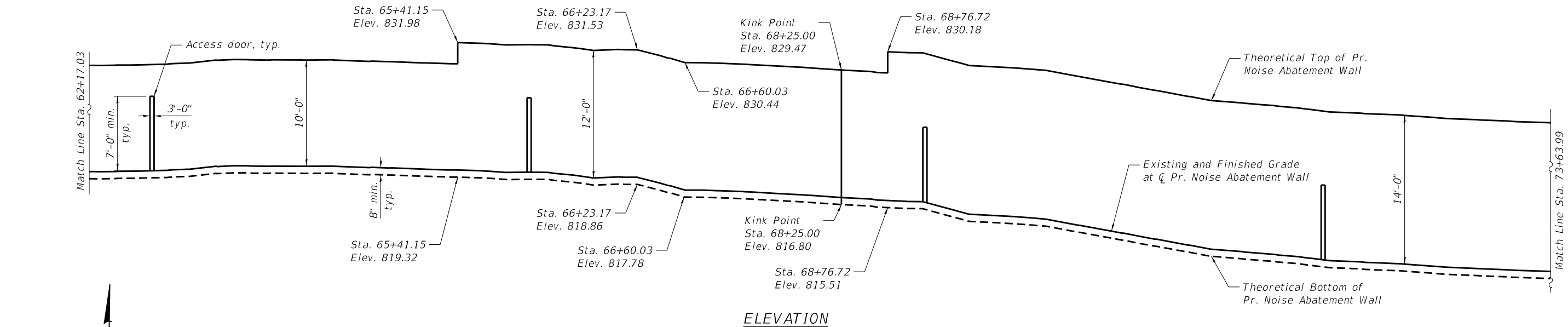
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION IV
STRUCTURE NO. 101-N7010

SHEET 4 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

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CURVE DATA
PR CURVE PRAMPDB-2
P.I. Sta. = 58+02.36
 $\Delta = 87^\circ 28' 22''$ (RT)
 $D = 02^\circ 47' 42''$
 $R = 2,050.00'$
 $T = 1,961.52'$
 $L = 3,129.71'$
 $E = 787.26'$
 $e = 6.0\%$
 $T.R. = 40'$
 $S.E. Run = 230'$
 $P.C. Sta. = 38+40.82$
 $P.T. Sta. = 69+70.53$

Notes:
Offsets are measured from $\mathbb{B}$ Ramp DB to $\mathbb{C}$ Pr. Noise Abatement Wall or Boring location.
See Data Table on sheet 8 of 26 for Offsets and Theoretical Elevations along the $\mathbb{C}$ of Pr. Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at $\mathbb{C}$ of NAW, and Finished Grade Elev. at $\mathbb{C}$ of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 8 of 26.
Access doors are to be spaced at 300' maximum intervals.

LEGEND	
	Noise Abatement Wall Soil Boring
	Existing Fence
	Access Control
	Windstream Aerial Fiber Optic
	Fiber Optic
	Abandoned IDOT Fiber Optic
	Underground Electric
	Aerial Line



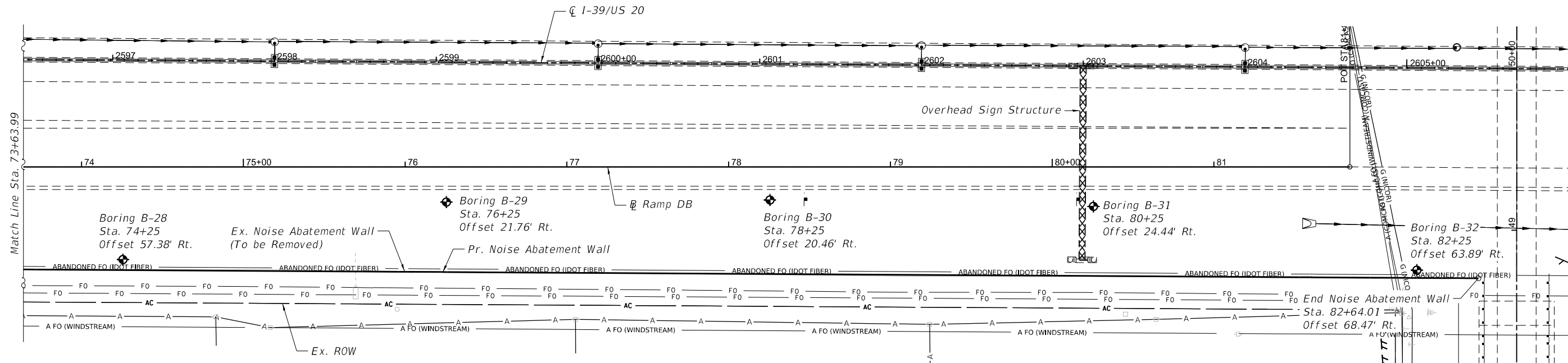
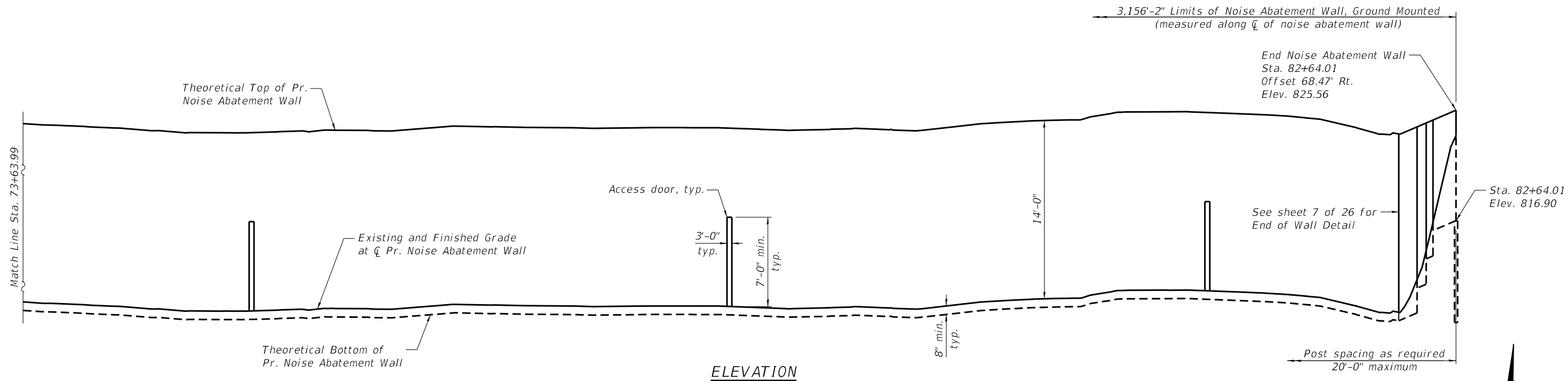
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION V
STRUCTURE NO. 101-N7010
SHEET 5 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

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Notes:
Offsets are measured from $\mathbb{R}$ Ramp DB to $\mathbb{C}$ Pr. Noise Abatement Wall or Boring location.
See Data Table on sheet 8 of 26 for Offsets and Theoretical Elevations along the $\mathbb{C}$ of Pr. Noise Abatement Wall.
Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at $\mathbb{C}$ of NAW, and Finished Grade Elev. at $\mathbb{C}$ of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 8 of 26.
Access doors are to be spaced at 300' maximum intervals.

PLAN

LEGEND

	Noise Abatement Wall Soil Boring
	Existing Fence
	Access Control
	Comcast Fiber Optic
	Fiber Optic
	Abandoned IDOT Fiber Optic
	Windstream Aerial Fiber Optic
	Comcast Aerial Line
	Aerial Line
	Nicor Gas Line
	Storm Sewer



QUIGG ENGINEERING INC

USER NAME =	z davidson	DESIGNED -	ZLD	REVISED -	
101W7010-64C24-006-GPE6.dgn		CHECKED -	KWB	REVISED -	
PLOT SCALE =		DRAWN -	ZLD	REVISED -	
PLOT DATE =	05/09/2024	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION VI
STRUCTURE NO. 101-N7010

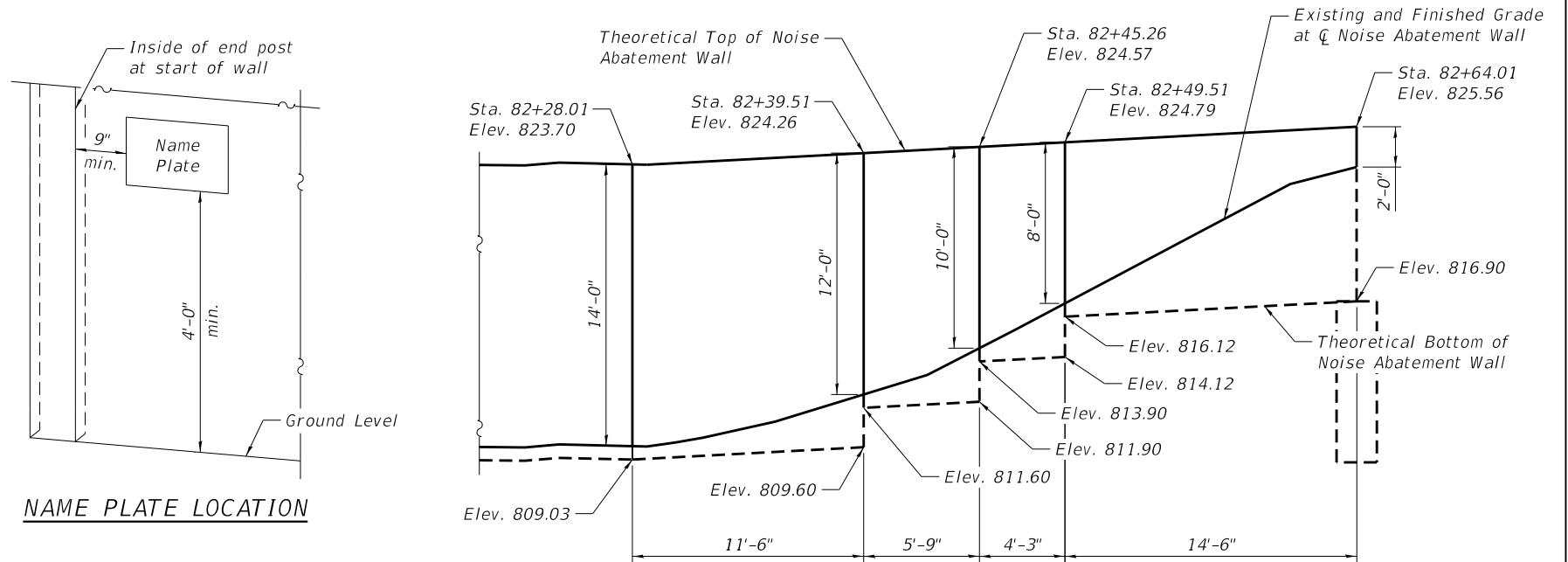
SHEET 6 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

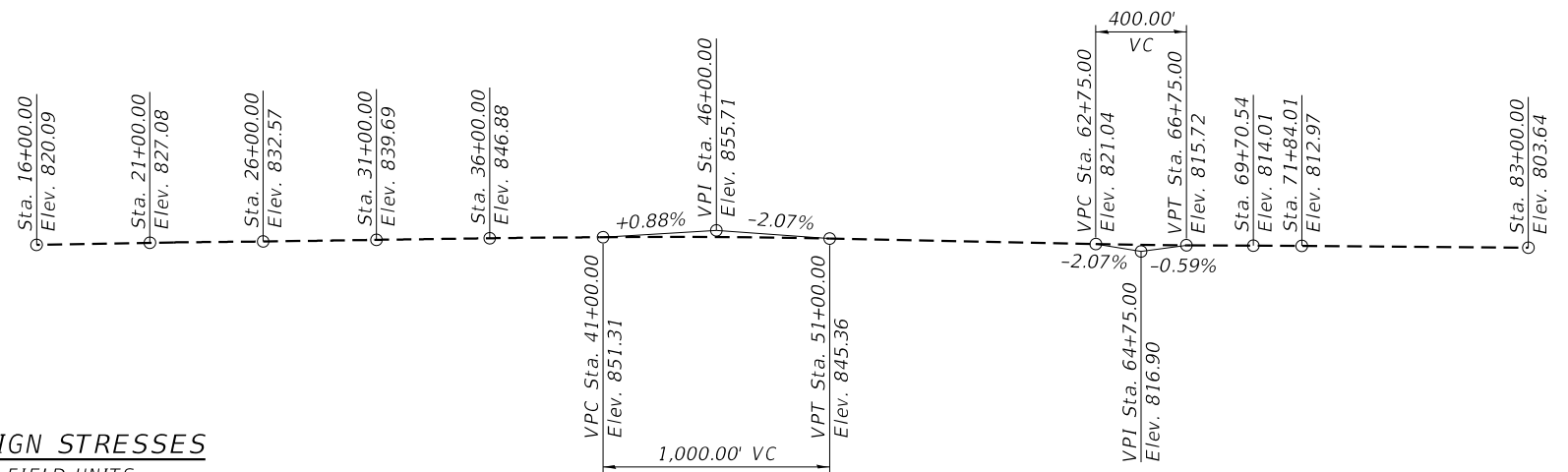
1. *Existing Noise Wall shall be completely removed. Cost included with "Removal of Existing Structures No. 9".*
2. *All excavation and grading below the finished grade elevation required for installation of the Noise Abatement Wall elements shall be included in the cost of Noise Abatement Wall, Ground Mounted.*
3. *Contractor shall follow requirements of Guide Bridge Special Provision "Noise Abatement Wall, Ground Mounted" for material, design, fabrication, construction and erection requirements of the proposed Noise Abatement Wall.*
4. *The Contractor shall field verify location of the existing utilities prior to construction. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost. All adjacent utilities shall be shown on the shop drawings.*
5. *Noise Abatement Wall drilled shaft foundation diameter, depth and spacing to be determined by the Contractor.*
6. *Precast panels for the Ground Mounted Noise Abatement Walls shall be cast using form liners with a simulated limestone surface. Form liners shall be used on both faces of the panels. The form liner shall match the exact size of each panel such that there are no joints crossing the stone modules. The relief shall be an average of 1½" deep and no greater than 2½" deep at any point. The desired appearance is as follows:*



7. *Form liners shall be made from high-strength elastomeric urethane and be removable without causing concrete surface damage or weakness in the substrate. Form release agents shall be non-staining, non-residual, non-reactive, and shall not contribute to the degradation of the form liner material.*
8. *The following form liner manufacturers have been pre-approved to provide the listed pattern for the simulated limestone surface:*
 - a. *Custom Rock International, St. Paul, MN (Jim Rogers; 800-637-2447)
#1104-R2 14¾" Random Cut Stone or #11016 16" Random Cut Stone*
 - b. *Milestones Incorporated, Hudson, WI (Paul Nasvik; 715-381-9660)
#MS-1018 16" Weathered Limestone*
 - c. *Architectural Polymers, New Ringgold, PA (Rick Fasching; 610-824-3322)
#893 14" Quarry Stone or #894 16" Quarry Stone*
- Other products will be considered, provided sufficient information is submitted 30-days prior to use to allow the Engineer to determine that products proposed are equivalent to those named.*
9. *Form liners shall be used in accordance with the manufacturer's recommendations, including, but not limited to, installation and removal methods, form release agents, cleaning procedures, inspection procedures, repair procedures, curing methods, concrete slump requirements, and consolidation methods to achieve the highest quality concrete appearance possible. Manufacturer recommendations shall not supplant requirements listed elsewhere in the Contract Documents without prior approval from the Engineer.*
10. *The finished exposed formed concrete surfaces shall be free of visible vertical seams, horizontal seams, and butt joint marks after removing the form liners. Grinding and chipping of finished formed surfaces shall be avoided.*
11. *The Contractor shall provide a full-size precast panel mockup containing the form liner surface. Upon receipt of comments from inspection of the mockup, adjustments or corrections shall be made where imperfections are found. If required, additional mockups shall be prepared when the initial mockup is found to be unsatisfactory.*
12. *All work and materials associated with form liners and mockups, including adjustments or corrections needed to address mockup comments and additional mockups, if required, will not be paid for separately but shall be included in the cost of Noise Abatement Wall, Ground Mounted.*



END OF WALL DETAIL
(Horizontal dimensions given along $\hat{C}$ Noise Abatement Wall)



FIELD UNITS

$f'_c = 4,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Struct. Steel, M270 Grade 50, posts)
 $f_y = 36,000$ psi (Struct. Steel, M270 Grade 36, all
other structural steel)

$f'_c = 4,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinforcement)}$
 $f_y = 65,000 \text{ psi (Welded Wire Reinforcement)}$

Strength III or V Wind: 35 psf
Service I Wind: 15 psf

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

(Along $\underline{B}$ Ramp DB)

NOISE ABATEMENT WALL
BUILT 202_ BY
STATE OF ILLINOIS
F.A.I. RT. 39
SEC. (201-3)R & (4-1,5)R
FROM STA. 16+99.66 TO STA. 82+64.01
STR. NO. 101-N7010

NAME PLATE
See Std. 515001

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 9	Each	1
Name Plates	Each	1
Noise Abatement Wall, Ground Mounted	Sq. Ft.	66,128

Noise Wall Structure Number	Face	From Sta.	To Sta.	Noise Reduction Coefficient	Comments
101-N7010	Ramp DB Face	16+99.66	82+64.01	Reflective	-
	Residential Face	16+99.66	82+64.01	Reflective	-

DATA TABLE

Station	Offset to C Wall (ft.)	Theor. Top of NAW Elev.	Exist./Finished Grade Elev. at C of NAW	Theor. Bottom of NAW Elev.
16+99.66	79.79	833.00	825.00	824.33
17+50.00	71.91	833.15	825.15	824.48
18+00.00	64.99	833.15	825.15	824.49
18+50.00	58.97	832.78	824.78	824.11
18+98.50	53.97	832.58	824.58	823.91
19+00.00	53.83	832.59	824.59	823.92
19+50.00	49.58	833.14	825.14	824.48
20+00.00	46.19	833.51	825.51	824.84
20+50.00	43.68	833.93	825.93	825.27
21+00.00	42.02	834.51	826.51	825.84
21+50.00	41.24	835.03	827.03	826.36
22+00.00	41.31	835.56	827.56	826.89
22+50.00	41.37	836.06	828.06	827.40
23+00.00	41.37	836.49	828.49	827.82
23+50.00	41.37	836.90	828.90	828.23
24+00.00	41.37	837.30	829.30	828.64
24+50.00	41.37	837.60	829.60	828.94
25+00.00	41.37	838.12	830.12	829.45
25+25.00	41.37	838.44	830.44	829.78
25+50.00	40.67	838.85	830.85	830.18
26+00.00	39.26	839.61	831.61	830.94
26+50.00	37.85	840.34	832.34	831.67
27+00.00	36.45	840.99	832.99	832.32
27+50.00	35.04	841.73	833.73	833.06
28+00.00	33.63	842.59	834.59	833.92
28+50.00	32.22	843.26	835.26	834.59
29+00.00	32.22	844.10	836.10	835.44
29+50.00	32.22	844.84	836.84	836.17
30+00.00	32.22	845.62	837.62	836.95
30+50.00	32.22	846.47	838.47	837.80
31+00.00	32.22	847.26	839.26	838.59
31+50.00	32.22	848.05	840.05	839.38
31+75.00	32.22	848.45	840.45	839.79
32+00.00	33.85	848.77	840.77	840.11
32+50.00	37.11	849.57	841.57	840.90
33+00.00	40.38	850.78	842.78	842.12
33+50.00	43.64	851.69	843.69	843.02
34+00.00	46.90	852.51	844.51	843.85
34+50.00	50.16	853.03	845.03	844.37
35+00.00	53.42	853.65	845.65	844.99
35+50.00	56.69	854.41	846.41	845.74
36+00.00	59.95	854.59	846.59	845.92
36+50.00	66.23	854.73	846.73	846.07
37+00.00	74.54	854.76	846.76	846.09
37+50.00	84.90	854.71	846.71	846.04
38+00.00	97.38	854.53	846.53	845.87
38+50.00	111.87	854.51	846.51	845.84
39+00.00	126.84	854.17	846.17	845.51
39+50.00	142.43	853.91	845.91	845.25

DATA TABLE - CONTINUED

Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist./Finished Grade Elev. at ℄ of NAW	Theor. Bottom of NAW Elev.
40+00.00	158.62	853.71	845.71	845.04
40+50.00	175.40	853.13	845.13	844.47
41+00.00	192.74	852.66	844.66	843.99
41+25.00	201.61	852.36	844.36	843.69
41+50.00	210.69	851.82	843.82	843.15
42+00.00	227.78	850.90	842.90	842.23
42+50.00	243.49	850.27	842.27	841.60
43+00.00	257.88	849.69	841.69	841.02
43+50.00	270.99	849.01	841.01	840.34
44+00.00	282.86	848.22	840.22	839.55
44+50.00	293.54	847.57	839.57	838.90
45+00.00	303.06	847.14	839.14	838.47
45+50.00	311.44	846.80	838.80	838.13
46+00.00	318.72	846.46	838.46	837.79
46+50.00	324.92	845.97	837.97	837.30
47+00.00	330.06	845.33	837.33	836.66
47+50.00	331.14	844.74	836.74	836.07
48+10.56	337.71	843.66	835.66	834.99
49+95.67	297.19	844.07	834.07	833.41
50+50.00	316.28	841.86	831.86	831.19
51+00.00	318.79	841.95	831.95	831.29
51+50.00	314.41	841.35	831.35	830.69
52+00.00	318.97	840.93	830.93	830.26
52+50.00	302.45	840.61	830.61	829.94
52+53.83	301.91	840.19	830.19	829.52
53+00.00	294.84	840.31	830.31	829.65
53+33.69	289.08	840.47	830.47	829.81
53+50.00	286.10	840.17	830.17	829.50
54+00.00	276.22	839.24	829.24	828.57
54+50.00	265.16	838.55	828.55	827.89
55+00.00	252.88	838.25	828.25	827.58
55+50.00	239.35	837.12	827.12	826.45
56+00.00	224.52	836.27	826.27	825.61
56+50.00	208.33	835.77	825.77	825.10
57+00.00	190.75	834.97	824.97	824.30
57+50.00	175.08	834.36	824.36	823.69
58+00.00	160.45	833.96	823.96	823.30
58+50.00	146.89	833.17	823.17	822.51
59+00.00	134.40	832.39	822.39	821.73
59+50.00	122.99	831.54	821.54	820.88
60+00.00	112.66	830.64	820.64	819.97
60+50.00	103.43	830.41	820.41	819.75
61+00.00	95.30	829.70	819.70	819.04
61+02.60	94.91	829.67	819.67	819.00
61+50.00	88.28	829.80	819.80	819.13
62+00.00	82.37	830.20	820.20	819.53
62+50.00	76.52	830.37	820.37	819.70
63+00.00	71.31	830.74	820.74	820.07

DATA TABLE - CONTINUED

Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist./Finished Grade Elev. at ℄ of NAW	Theor. Bottom of NAW Elev.
63+50.00	66.72	830.75	820.75	820.08
64+00.00	62.77	830.57	820.57	819.90
64+50.00	59.45	830.39	820.39	819.72
65+00.00	56.78	830.16	820.16	819.49
65+41.15	55.07	831.98	819.98	819.32
65+50.00	54.76	832.00	820.00	819.33
66+00.00	53.38	831.50	819.50	818.84
66+23.17	52.96	831.53	819.53	818.86
66+50.00	52.65	830.76	818.76	818.09
66+60.03	52.58	830.44	818.44	817.78
67+00.00	52.57	830.36	818.36	817.69
67+50.00	53.14	830.00	818.00	817.34
68+00.00	54.36	829.67	817.67	817.01
68+25.00	55.21	829.47	817.47	816.80
68+50.00	56.94	829.14	817.14	816.47
68+76.72	58.45	830.18	816.18	815.51
69+00.00	59.50	829.96	815.96	815.30
69+50.00	60.87	829.41	815.41	814.75
70+00.00	61.27	828.43	814.43	813.76
70+50.00	61.57	827.26	813.26	812.59
71+00.00	61.88	826.57	812.57	811.90
71+50.00	62.18	825.89	811.89	811.22
72+00.00	62.49	825.56	811.56	810.90
72+50.00	62.79	825.19	811.19	810.52
73+00.00	63.09	824.92	810.92	810.26
73+50.00	63.40	824.66	810.66	809.99
74+00.00	63.70	824.36	810.36	809.69
74+50.00	64.00	824.00	810.00	809.33
75+00.00	64.31	823.84	809.84	809.17
75+50.00	64.61	823.99	809.99	809.32
76+00.00	64.91	824.01	810.01	809.34
76+50.00	65.22	824.31	810.31	809.64
77+00.00	65.52	824.21	810.21	809.54
77+50.00	65.83	824.18	810.18	809.51
78+00.00	66.13	824.19	810.19	809.53
78+50.00	66.43	823.99	809.99	809.32
79+00.00	66.74	824.12	810.12	809.45
79+50.00	67.04	824.31	810.31	809.65
80+00.00	67.34	824.74	810.74	810.07
80+50.00	67.65	825.38	811.38	810.72
81+00.00	67.95	825.40	811.40	810.73
81+50.00	68.25	825.13	811.13	810.47
82+00.00	68.46	824.28	810.28	809.61
82+28.01	68.46	823.70	809.70	809.03
82+39.51	68.46	824.26	812.26	811.60
82+45.26	68.46	824.57	814.57	813.90
82+49.51	68.47	824.79	816.79	816.12
82+64.01	68.47	825.56	823.56	816.90



QUIGG ENGINEERING INC

USER NAME	=	zdauidson
101W7010-64C24-008-Data Tables.dgn		
PLOT SCALE	=	
PLOT DATE	=	05/09/2024

DESIGNED	-	ZLD
CHECKED	-	KWB
DRAWN	-	ZLD
CHECKED	-	MDC

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL DATA TABLE
STRUCTURE NO. 101-N7010

SHEET 8 OF 26 SHEETS

F.A.I.	
RTE.	

SECTION

COUNTY

TOTAL SHEETS	S

SHEET
NO.

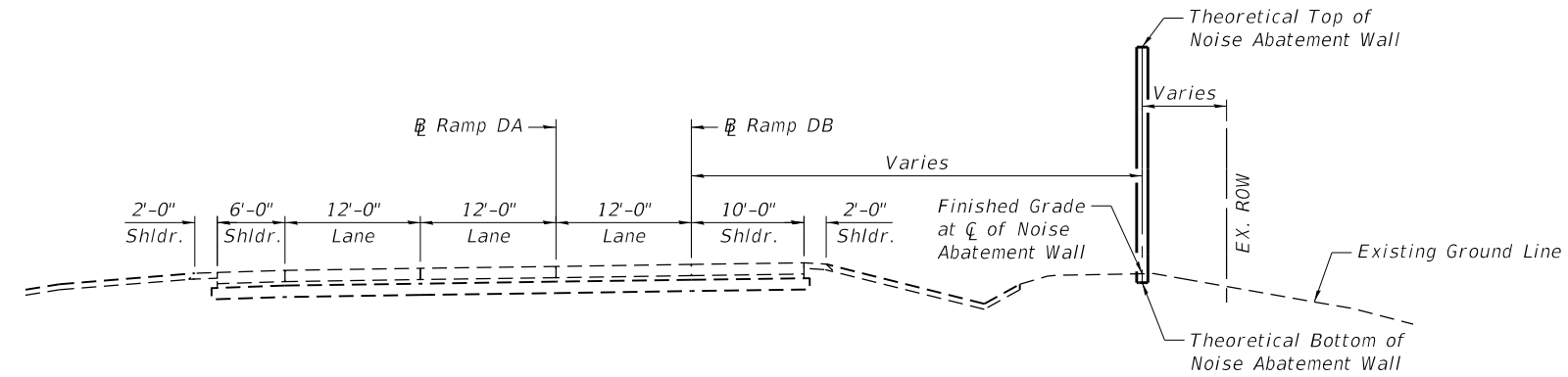
39

(201-3)R & (4-1,5)R

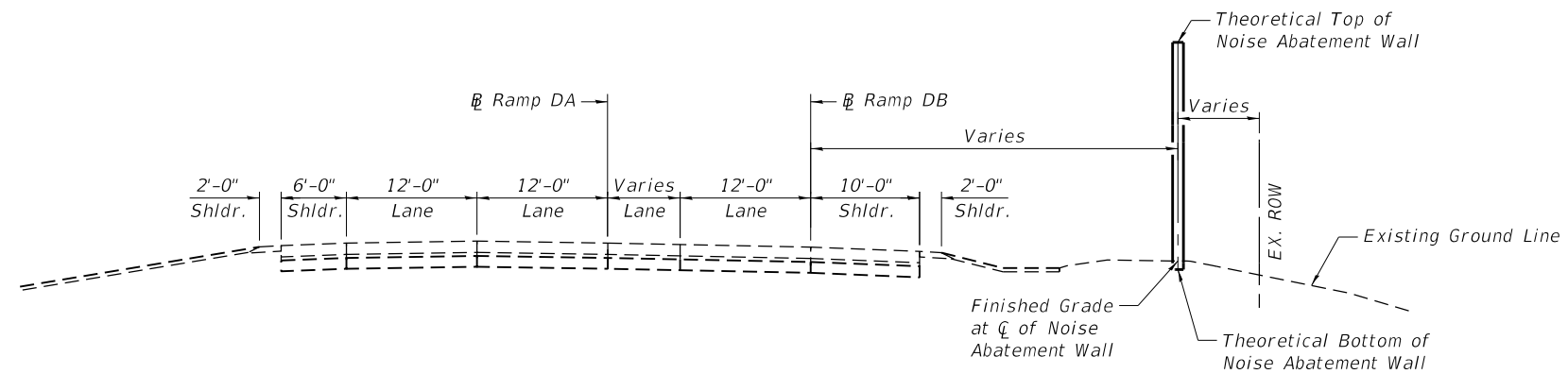
WINNEBAGO	1552	
-----------	------	--

CONTRACT NO. 64C

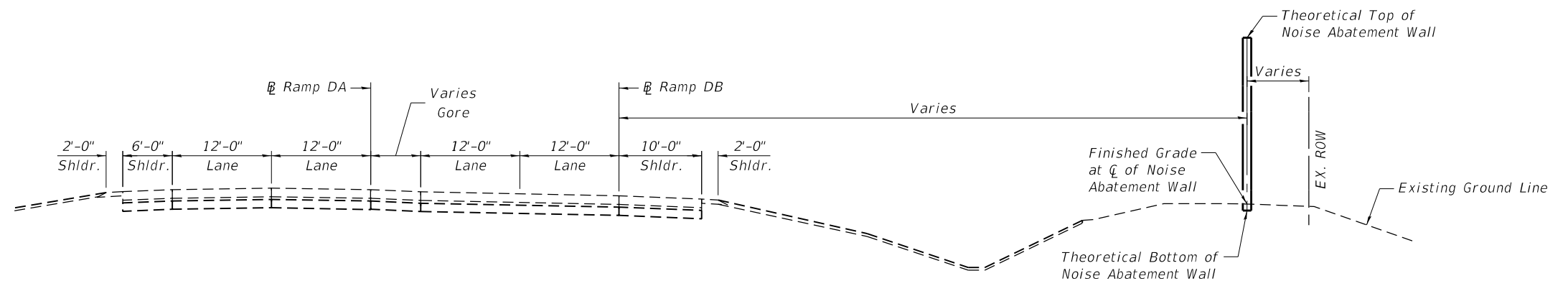
ILLINOIS	FED. AID PROJECT
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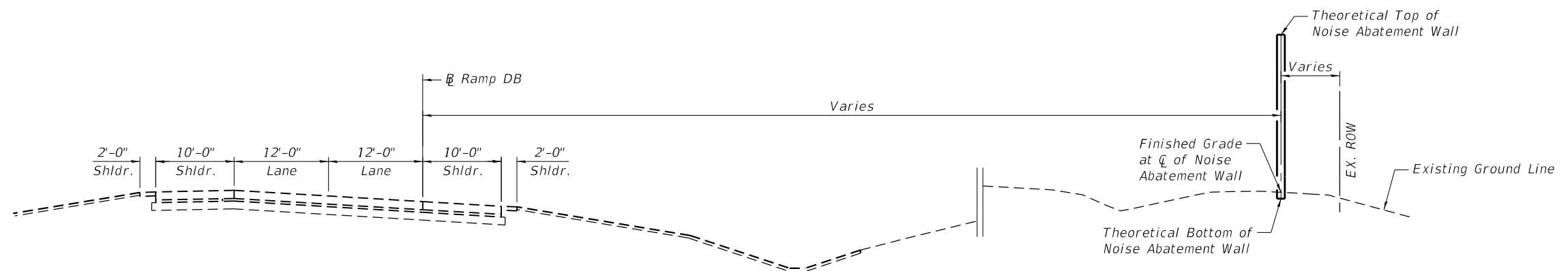
TYPICAL SECTION THRU WALL
(Sta. 16+99.66 to Sta. 22+04.08)
(Wall stations are measured along Ramp DB)



TYPICAL SECTION THRU WALL
(Sta. 22+04.08 to Sta. 32+06.12)
(Wall stations are measured along Ramp DB)



TYPICAL SECTION THRU WALL
(Sta. 32+06.12 to Sta. 40+89.45)
(Wall stations are measured along ~~B~~ Ramp DB)



Page 1 of 1Date 7/19/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(1/6")	(tsf)	(%)

Surface Water Elev.	_____	ft
Stream Bed Elev.	_____	ft
Groundwater Elev.:		
First Encounter	_____ None	ft
Upon Completion	_____ Dry	ft
After _____ Hrs.	_____	ft

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Northing and Easting were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



QUIGG ENGINEERING INC

5/9/2024 3:42:50 PM

Page 1 of 1Date 7/19/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After _____ Hrs. _____ ft

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 11 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1.5)R	WINNEBAGO	1552	806
CONTRACT NO. 64C24				
ILLINOIS		FED. AID PROJECT		



Page 1 of 1

Date 7/20/21

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME-45 Automatic
--------	-----------	-----------------	-------------------	-------------	------------------

Station _____

Station 21+00

Offset 5.00ft Lt of Wall

Ground Surface Elev. 826.50

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

Note:



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

Illinois Department of Transportation

Page 1 of 1

Date 7/20/21

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME-45 Automatic
--------	-----------	-----------------	-------------------	-------------	------------------

Station _____

Station 23+00Offset 6.00ft Lt of Wall

Ground Surface Elev. 828.50

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

Note:

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 12 OF 26 SHEETS

Page 1 of 1

Date 7/20/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,021,519.0880
Easting	2,609,577.7411

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**



QUIGG ENGINEERING INC

5/9/2024 3:43:41 PM

Page 1 of 1

Date 7/21/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,021,718.7380
Easting	2,609,598.3378

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 13 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	808
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		



Page 1 of 1

Date 7/22/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-7
Station 29+00
Offset 7.00ft Lt of Wall
Ground Surface Elev. 836.00

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 24.96' Rt



Page 1 of 1

Date 7/22/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-8
Station 31+00
Offset 6.00ft Lt of Wall
Ground Surface Elev. 839.70

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 25.10' Rt



USER NAME =	zdauidson	DESIGNED -	ZLD	REVISED -	
	101W7010-64C24-014-Boring Logs.dgn	CHECKED -	KWB	REVISED -	
PLOT SCALE =		DRAWN -	ZLD	REVISED -	
PLOT DATE =	05/09/2024	CHECKED -	MDC	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 14 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	809
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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MODEL: Default
FILE NAME: pw:\\benesch-pw.bentlev.com\\benesch-pw-01\\Documents\\10800s\\10800s\\10800S\\Wall Ramp DB [Quig]\\101W7010-64C24-014-Boring Logs.dgn



Page 1 of 1

Date 7/27/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,022,316.5893
Easting	2,609,605.9502

VERY STIFF tan SANDY LOAM with GRAVEL	6 7 7	2.4 P	11.0	
839.00				
	-5	15 8 6	1.8 P	11.0
STIFF tan SANDY LOAM with GRAVEL				
836.50				
STIFF light brown SANDY CLAY LOAM	3 4 6	1.3 B	16.0	
834.00				
STIFF light brown SANDY CLAY LOAM	-10	4 9 12	1.2 B	19.0
831.50				
HARD light gray SILTY LOAM	7 14 18	4.5 P	15.0	
829.00				
HARD tan SANDY CLAY LOAM TILL	-15	8 18 24	5.0 B	16.0
826.50				
VERY STIFF light brown SANDY CLAY LOAM TILL	9 18 21	2.9 B	15.0	
824.00				
	-20	6		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from B Ramp DB is 33.24' Rt.



Page 1 of 1

Date 7/27/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,022,516.3459
Easting	2,609,634.4017

LOOSE brown DRY LOAM				7.0
	843.50	6		
VERY STIFF tan SANDY LOAM with GRAVEL		6	3.5	9.0
	842.00	7	P	
MEDIUM tan SILTY LOAM		4		
		4	0.8	15.0
	839.50	5	S	
MEDIUM tan SANDY LOAM TILL		3		
		3	0.9	11.0
	837.00	5	B	
VERY STIFF tan SANDY LOAM TILL		4		
		5	2.5	10.0
	834.50	7	B	
STIFF tan CLAY LOAM TILL		2		
		5	1.8	17.0
	832.00	7	B	
No Recovery		4		
		7		
	829.50	7		
STIFF tan CLAY LOAM		5		
		7	1.7	21.0
	827.00	9	B	
		7		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from B Ramp DB is 47.32' Rt.



USER NAME =	zdauidson	DESIGNED =	ZLD	REVISED =	
101W7010-64C24-015-Boring Logs.dgn		CHECKED =	KWB	REVISED =	
PLOT SCALE =		DRAWN =	ZLD	REVISED =	
PLOT DATE =	05/09/2024	CHECKED =	MDC	REVISED =	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	810
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		



Page 1 of 1

Date 7/27/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-11
Station 37+00
Offset 5.00ft Lt of Wall
Ground Surface Elev. 847.00

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 69.24' Rt



Page 1 of 1

Date 7/28/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-12
Station 39+00
Offset 7.00ft Lt of Wall
Ground Surface Elev. 846.00

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 119.94' Rt.



USER NAME =	zdauidson	DESIGNED =	ZLD	REVISED =	
101W7010-64C24-016-Boring Logs.dgn		CHECKED =	KWB	REVISED =	
PLOT SCALE =		DRAWN =	ZLD	REVISED =	
PLOT DATE =	05/09/2024	CHECKED =	MDC	REVISED =	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 16 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	811
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
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MODEL: Default

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Page 1 of 1

Date 7/28/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

DEPTH	BLOWS	UCS	MOIST
(ft)	(16")	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After _____ hrs _____ ft

DEPTH	BLOWS	UCS	MOIST
(ft)	(16")	(tsf)	(%)

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\benesch-pw-01\Documents\10800s\10800s\10800s\Wall Ramp DB [Quiq]\101W7010-64C24-017-Boring Logs.dgn

Page 1 of 1

Date 7/28/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

DEPTH	BLOW COUNTS	UCS	MOISTURE
(ft)	(16")	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After Use _____ ft

D E P T H	B L O W S	U C S	M O I S T
(ft)	((6"))	(tsf)	(%)

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)



QUIGG ENGINEERING INC

REVISED	-
REVISED	-
REVISED	-
REVISED	-

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 17 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	812
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		



Page 1 of 1

Date 7/28/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-15
Station 45+60
Offset 5.00ft Lt of Wall
Ground Surface Elev. 838.40

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 302.59' Rt.



Page 1 of 1

Date 8/5/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-17
Station 50+85
Offset 4.00ft Lt of Wall
Ground Surface Elev. 832.30

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 314.65' Rt.



USER NAME =	zdauidson	DESIGNED =	ZLD	REVISED =	
101W7010-64C24-018-Boring Logs.dgn		CHECKED =	KWB	REVISED =	
PLOT SCALE =		DRAWN =	ZLD	REVISED =	
PLOT DATE =	05/09/2024	CHECKED =	MDC	REVISED =	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 18 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	813
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
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Page 1 of 1

Date 8/5/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	((6"))	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After _____ Hrs _____ ft

	D E P T H	B L O W S	U C S Qu	M O I S T
	(ft)	(/6")	(tsf)	(%)

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



QUIGG ENGINEERING INC

USER NAME	=	zdauidson
101W7010-64C24-019-Boring Logs.dgn		
PLOT SCALE	=	
PLOT DATE	=	05/09/2024

DESIGNED -	ZLD
CHECKED -	KWB
DRAWN -	ZLD
CHECKED -	MDC

REVISED	-
REVISED	-
REVISED	-
REVISED	-



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Date 8/5/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

D E P T H	B L O W S	U C S	M O I S T
(ft)	((6"))	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ None ft
Upon Completion _____ Dry ft
After _____ Hrs _____ ft

	D E P T H	B L O W S	U C S Qu	M O I S T
	(ft)	((6"))	(tsf)	(%)

Northings and Eastings were calculated using the II UD-WF coordinate system

BBS, from 137 (Rev. 8-99)

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 19 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	814
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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MODEL: Default
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Date 8/10/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,024,588.0017
Easting	2,610,837.9375

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from B Ramp DB is 76.85' Rt.



Page 1 of 1

Date 8/10/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Northing	2,024,695.1329
Easting	2,611,023.4162

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from B Ramp DB is 57.09' Rt.



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SHEET 21 OF 26 SHEETS

ILLINOIS	FED. AID PROJECT
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Page 1 of 1

Date 8/10/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Latitude	<u>42° 13' 11.37"</u>	Northing	<u>2,024,771.2942</u>
Longitude	<u>-89° 00' 18.43"</u>	Easting	<u>2,611,209.5861</u>

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\benesch-pw-bentlev.com\benesch-pw-01\Documents\10800s\10800-00\Eng Docs\CAD Sheets\Wall Ramp DB [Quiq]\101W7010-64C24-022-Boring Logs.dgn

Page 1 of 1

Date 8/11/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

Station _____

Latitude	<u>42° 13' 11.57"</u>	Northing	<u>2,024,794.9346</u>
Longitude	<u>-89° 00' 15.63"</u>	Easting	<u>2,611,419.7703</u>

Northings and Eastings were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)



QUIGG ENGINEERING INC

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 22 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	817
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		



Page 1 of 1

Date 8/11/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-26
Station 71+52
Offset 6.00ft Lt of Wall
Ground Surface Elev. 812.50

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 56.45' Rt



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Date 8/12/21

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-27
Station 72+25
Offset 6.00ft Lt of Wall
Ground Surface Elev. 811.20

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from ~~B~~ Ramp DB is 56.69' Rt



USER NAME =	zdaavidson	DESIGNED =	ZLD	REVISED =	
101W7010-64C24-023-Boring Logs.dgn		CHECKED =	KWB	REVISED =	
PLOT SCALE =		DRAWN =	ZLD	REVISED =	
PLOT DATE =	05/09/2024	CHECKED =	MDC	REVISED =	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 23 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	818
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\benesch-pw-01\Documents\10800s\10800s\10800s\Wall Ramp DB [Quiq]\101W7010-64C24-023-Boring Logs.dgn

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Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 8/12/21

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude 42° 13' 11.68" Northing 2,024,813.4801
Station Longitude -89° 00' 07.86" Easting 2,612,004.1668

BORING NO. B-28
Station 74+25
Offset 6.00ft Lt of Wall
Ground Surface Elev. 810.00 ft

Station _____				D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	D E P T H	B L O W S	U C S	M O I S T		
BORING NO. _____ B-28				(ft)	(/6")	Qu	(tsf)	(%)	Groundwater Elev.:		(ft)	(/6")	(tsf)	(%)	
Station _____ 74+25									First Encounter _____ 795.5 ft ▼	Upon Completion _____ 786.0 ft ▼					
Offset _____ 6.00ft Lt of Wall									After _____ Hrs. _____ ft						
Ground Surface Elev. _____ 810.00 ft															
VERY STIFF light brown SANDY LOAM				_____	4 4 7	2.5 S	12.0	DENSE tan DIRTY SANDY GRAVEL (continued) _____ 789.00		_____	21 27				

806.50				_____				VERY DENSE tan WELL CEMENTED SANDY GRAVEL _____ 786.50		_____	100 for 6"		9.0		
				_____				_____ ▼		_____					
				_____						_____					
VERY STIFF gray SILTY CLAY				_____ -5	3 5 6	2.5 B	19.0	VERY DENSE light gray WELL CEMENTED SANDY GRAVEL _____ 784.50		_____ -26	100 for 6"		8.0		
804.00				_____						End of Boring _____				_____	
				_____										_____	
LOOSE light brown FINE SAND				_____	2 4 6					_____					
				_____										_____	
801.50				_____										_____	
STIFF gray CLAY LOAM				_____ -10	2 4 4	1.4 B	22.0			_____ -30					
				_____										_____	
799.00				_____										_____	
MEDIUM tan SILTY CLAY				_____	0 1 3	0.7 B	30.0			_____					
				_____										_____	
796.50				_____										_____	
MEDIUM tan MEDIUM SAND				_____ ▼ -15	2 11 18					_____ -35					
				_____										_____	
794.00				_____										_____	
STIFF tan SANDY LOAM TILL				_____	2 3 8	1.1 P	11.0			_____					
				_____										_____	
790.50				_____										_____	
				_____ -20	8					_____ -40					
				_____										_____	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Note:
Offset from @ Ramp DB is 57.38' Rt.



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 8/4/21

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude 42° 13' 11.88" Northing 2,024,837.1700
Station Longitude -89° 00' 05.38" Easting 2,612,190.7792

BORING NO. B-29
Station 76+25
Offset 43.00ft Lt of Wall
Ground Surface Elev. 805.70 ft

Station _____		D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	D E P T H	B L O W S	U C S	M O I S T	
BORING NO. _____ B-29		(ft)	(/6")	Qu	(tsf)	(%)	Groundwater Elev.:		(ft)	(/6")	(tsf)	(%)
Station _____ 76+25							First Encounter _____ ft ▼	Upon Completion _____ ft				
Offset _____ 43.00ft Lt of Wall							Dry	After _____ Hrs.				
Ground Surface Elev. _____ 805.70 ft							ft	ft				
HARD brown LOAM												
				4.0	13.0		VERY DENSE tan WELL CEMENTED SANDY GRAVEL (continued)	784.70	100 for 7"			
STIFF gray SILTY CLAY LOAM												
	803.70		4				VERY DENSE tan WELL CEMENTED SANDY GRAVEL	783.20	100 for 3"			
			3	1.8	25.0		End of Boring					
	802.20		6	B								
MEDIUM light gray SILTY CLAY LOAM												
			2									
			3	0.9	29.0							
	799.70		4	B								
MEDIUM tan SANDY LOAM												
			6									
			6	0.8	11.0							
			5	P								
	796.20											
LOOSE tan DIRTY SAND with MEDIUM GRAVEL												
			5									
			3		11.0							
	794.70		5									
LOOSE tan DIRTY SAND with MEDIUM GRAVEL												
			1									
			4	0.3	11.0							
	792.20		5	P								
MEDIUM tan DIRTY SANDY GRAVEL with LIMESTONE												
			2									
			4									
	789.70		15									
VERY DENSE tan WELL CEMENTED SAND AND GRAVEL												
			13									
			24									
	787.20		100									
			36									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Note:
Offset from @ Ramp DB is 21.76' Rt.

MODEL: Default
FILE NAME: pw:\ibenesch-pw-bentley.com\benesch-pw-01\Documents\10800s\10800s\101W7010-64C24-024-Boring_Logs.dgn



QUIGG ENGINEERING INC

USER NAME =	z davidson	DESIGNED -	ZLD	REVISED -	
101W7010-64C24-024-Boring_Logs.dgn		CHECKED -	KWB	REVISED -	
PLOT SCALE =		DRAWN -	ZLD	REVISED -	
PLOT DATE =	05/09/2024	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 24 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1,5)R	WINNEBAGO	1552	819
CONTRACT NO. 64C24				
ILLINOIS FED. AID PROJECT				

Page 1 of 1Date 8/4/21

ROUTE	I-39	DESCRIPTION	P92-111-06 - Noise wall along NB I-39/EB US Bypass 20	LOGGED BY	W. Garza
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SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____ Latitude 42° 13' 11.37" Northing 2,024,793.0134
 Station _____ Longitude -88° 59' 57.20" Easting 2,612,807.2891

BORING NO. B-32
Station 82+25
Offset 5.00ft Lt of Wall
Ground Surface Elev. 809.50 ft

Northings and Eastings were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Offset from B Ramp DB is 63.89' Rt.



USER NAME =	zdaavidson	DESIGNED -	ZLD	REVISED -	
101W7010-64C24-026-Boring Logs.dgn		CHECKED -	KWB	REVISED -	
PLOT SCALE =		DRAWN -	ZLD	REVISED -	
PLOT DATE =	05/09/2024	CHECKED -	MDC	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-N7010

SHEET 26 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-15)R	WINNEBAGO	1552	821
		CONTRACT NO. 64C24		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\benesch-pw-01\Documents\10800s\10800s\10800s\Wall Ramp DB [Quiq]\101W7010-64C24-026-Boring Logs.dgn

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EXHIBIT D
BORING LOGS



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station	(ft)	(/6")	(tsf)	(%)	Stream Bed Elev.	ft	(ft)	(/6")	(tsf)	(%)
BORING NO. <u>B-1</u>					Groundwater Elev.:					
Station <u>17+00</u>					First Encounter	<u>None</u> ft				
Offset <u>6.0 ft LT</u>					Upon Completion	<u>Dry</u> ft				
Ground Surface Elev. <u>825.00</u> ft					After <u> </u> Hrs.	ft				
LOOSE tan VERY DRY SANDY LOAM				7	DENSE tan FINE SAND		16			
					(continued)	804.0	23			
					End of Boring					
823.0		9								
VERY STIFF tan SANDY LOAM		11	2.0	8						
		11	P							
820.5										
VERY STIFF light brown CLAY LOAM		4								
		4	3.1	22						
		8	B							
818.0										
VERY STIFF light brown SANDY LOAM with GRAVEL		5								
		5	3.0	11						
		6	P							
815.5										
STIFF tan SANDY LOAM with SAND LENS		5								
		6	1.3	8						
		6	P							
813.0										
VERY STIFF tan SANDY LOAM with GRAVEL		5								
		5	2.5	10						
		6	P							
810.5										
STIFF tan SANDY LOAM with GRAVEL		6								
		8	1.3	9						
		20	S							
808.0										
DENSE tan FINE SAND		19								
		19		6						
		29								
805.5										
DENSE tan FINE SAND		9								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station					Stream Bed Elev.	ft				
BORING NO. <u>B-2</u>					Groundwater Elev.:					
Station <u>19+00</u>					First Encounter	<u>None</u> ft				
Offset <u>5.0 ft LT</u>					Upon Completion	<u>Dry</u> ft				
Ground Surface Elev. <u>824.50</u> ft	(ft)	(/6")	(tsf)	(%)	After <u> </u> Hrs.	ft	(ft)	(/6")	(tsf)	(%)
STIFF brown SILTY CLAY LOAM			1.5 P	22	VERY DENSE tan WEATHERED LIMESTONE (continued)	803.5	100/3"			
822.5		5			End of Boring					
STIFF light brown SANDY LOAM		5 7	1.8 P	11						
820.0										
VERY STIFF tan SANDY LOAM		5 7 8		10						
817.5		3 3 4		16						
STIFF light brown SANDY CLAY LOAM			1.3 B							
815.0		6 5 6		15						
STIFF light brown SANDY CLAY LOAM			1.8 B							
812.5		3 7 11		22						
VERY STIFF gray CLAY LOAM			2.3 B							
810.0		6 8 11		19						
VERY STIFF tan CLAY LOAM			3.5 B							
807.5		4 6 8		22						
STIFF tan SILTY CLAY LOAM			1.6 B							
805.0		13								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-3</u> Station <u>21+00</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>826.50</u>									
LOOSE tan SANDY LOAM				8	STIFF gray LOAM with LIMESTONE FRAGMENTS (continued)	805.5	5 4	1.5 P	18
	824.5	9	10 11	4.0 P	End of Boring				
HARD tan SANDY LOAM with LIMESTONE FRAGMENTS									
	822.0	5	8 9	2.3 P					
VERY STIFF tan SANDY LOAM									
	819.5	3	4 7	0.5 B					
MEDIUM tan SANDY LOAM with GRAVEL									
	817.0	5	5 8	1.1 B					
STIFF light brown SANDY CLAY LOAM									
	814.5	4	7 13	2.7 B					
VERY STIFF light brown SANDY CLAY LOAM									
	812.0	5	8 11	2.7 B					
VERY STIFF tan CLAY LOAM									
	809.5	5	9 13	2.3 P					
VERY STIFF gray SILTY CLAY LOAM with LIMESTONE FRAGMENTS									
	807.0	5							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-4</u> Station <u>23+00</u> Offset <u>6.0 ft LT</u> Ground Surface Elev. <u>828.50</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: _____ ft				
					First Encounter _____ ft				
					Upon Completion _____ ft				
					After _____ Hrs. _____ ft				
MEDIUM brown LOAM			1.0 P	15	VERY DENSE tan WEATHERED LIMESTONE (<i>continued</i>)	807.5			
	826.5	6			End of Boring				
VERY STIFF light brown SANDY LOAM with LIMESTONE		10 10	2.5 P	9					
	824.0								
STIFF tan SANDY LOAM		5							
		6 10	1.6 S	12					
	821.5								
STIFF tan SANDY CLAY LOAM		8							
		9 8	1.3 P	15					
	819.0								
STIFF tan SANDY LOAM		6							
		7 13	2.0 P	11					
	816.5								
VERY STIFF light brown CLAY LOAM		4							
		9 10	3.7 B	20					
	814.0								
MEDIUM tan SILTY FINE SAND		4							
		9 10		12					
	811.5								
DENSE tan DIRTY WEATHERED LIMESTONE		7							
		21 26							
	809.0								
		100/2"							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station	(ft)	(/6")	(tsf)	(%)	Stream Bed Elev.	ft	(ft)	(/6")	(tsf)	(%)
BORING NO. <u>B-5</u>					Groundwater Elev.:					
Station <u>25+00</u>					First Encounter	ft				
Offset <u>6.0 ft LT</u>					Upon Completion	ft				
Ground Surface Elev. <u>830.20</u>	ft				After <u> </u> Hrs.	ft				
LOOSE brown DRY LOAM				11	STIFF light brown CLAY LOAM		12		1.4	22
					(continued)	809.2	18		B	
					End of Boring					
No Recovery	828.2	23								
		29								
		23								
STIFF tan SANDY LOAM with GRAVEL	825.7	6								
	-5	10	1.2	11			-25			
		7	B							
STIFF brown SANDY CLAY	823.2	5								
		8	1.3	19						
		10	B							
VERY STIFF tan SANDY LOAM with GRAVEL	820.7	5								
	-10	16	3.3	8			-30			
		15	P							
STIFF tan SANDY LOAM with LIMESTONE FRAGMENTS	818.2	9								
		16	1.1	11						
		18	P							
VERY STIFF light brown SANDY CLAY LOAM	815.7	7								
	-15	16	2.7	15			-35			
		18	B							
VERY STIFF light brown CLAY LOAM with LIMESTONE FRAGMENTS	813.2	6								
		16	2.5	29						
		20	B							
STIFF light brown CLAY LOAM	810.7	6								
	-20						-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
BORING NO. <u>B-6</u> Station <u>27+00</u> Offset <u>6.0 ft LT</u> Ground Surface Elev. <u>832.70</u> ft									
MEDIUM light brown LOAM			1.0 P	13	STIFF tan SANDY LOAM (continued) 811.7	5 7		1.1 S	10
830.7		5			End of Boring				
MEDIUM tan SANDY LOAM with GRAVEL		4 4	0.8 P	9					
828.2									
VERY STIFF tan SANDY LOAM with GRAVEL		8							
		8	2.3 P	9					
825.7									
SOFT tan SANDY LOAM with GRAVEL		2							
		2	0.3 P	10					
		4							
823.2									
STIFF tan SANDY LOAM		10							
		9	1.1 S	8					
		6							
820.7									
HARD gray SANDY CLAY LOAM		4							
		7	5.0 B	13					
		14							
818.2									
VERY STIFF light brown SANDY CLAY LOAM		5							
		8	3.5 B	17					
		11							
815.7									
STIFF light brown SANDY LOAM with DIRTY FINE SAND LENS		2							
		3	1.8 P	14					
		5							
813.2									
STIFF tan SANDY LOAM		3							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	ft	DEPTH H	BLOW S	UCS Qu	MOIST T
BORING NO. <u>B-7</u> Station <u>29+00</u> Offset <u>7.0 ft LT</u> Ground Surface Elev. <u>836.00</u>	ft	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
VERY STIFF brown SILTY CLAY LOAM			2.5 P	12	STIFF light brown CLAY LOAM (continued)	815.0	3 7	1.3 B	21	
	834.0		19		End of Boring					
HARD tan SANDY LOAM with LIMESTONE		15 13	4.5 P	7						
	831.5		5							
STIFF light brown LOAM		6 8	1.3 P	13						
	829.0		5							
STIFF light brown SANDY CLAY LOAM		7 12	1.6 B	14						
	826.5		5							
STIFF light brown SANDY CLAY LOAM TILL		7 13	2.0 P	9						
	824.0		4							
VERY STIFF gray SANDY CLAY LOAM TILL		7 12	2.1 B	16						
	821.5		3							
VERY STIFF light brown CLAY LOAM		4 9	3.3 B	20						
	819.0		3							
STIFF light brown SILTY CLAY LOAM		4 5	1.5 P	23						
	816.5		2							
STIFF light brown CLAY LOAM										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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ROUTE	I-39	DESCRIPTION	P92-111-06 - Noise wall along NB I-39/EB US Bypass 20	LOGGED BY	W. Garza
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SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, 9

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-45 Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

Date 7/27/21

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-9</u> Station <u>33+00</u> Offset <u>7.0 ft LT</u> Ground Surface Elev. <u>842.50</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft				
VERY STIFF tan SANDY LOAM with GRAVEL	838.0	6 7 7	2.4 P	11	VERY STIFF light brown CLAY LOAM TILL (<i>continued</i>)	10 15	3.5 B	19	
STIFF tan SANDY LOAM with GRAVEL	835.5	15 8 6	1.8 P	11	End of Boring				
STIFF light brown SANDY CLAY LOAM	833.0	3 4 6	1.3 B	16					
STIFF light brown SANDY CLAY LOAM	830.5	4 9 12	1.2 B	19					
HARD light gray SILTY LOAM	828.0	7 14 18	4.5 P	15					
HARD tan SANDY CLAY LOAM TILL	825.5	8 18 24	5.0 B	16					
VERY STIFF light brown SANDY CLAY LOAM TILL	823.0	9 18 21	2.9 B	15					
		6							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. ft	Stream Bed Elev. ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-10</u> Station <u>35+00</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>845.50</u>										
LOOSE brown DRY LOAM				7						
	843.5	6								
VERY STIFF tan SANDY LOAM with GRAVEL		6	3.5	9						
		7	P							
	841.0	4								
MEDIUM tan SILTY LOAM		4	0.8	15						
		5	S							
	838.5	3								
MEDIUM tan SANDY LOAM TILL		3	0.9	11						
		5	B							
	836.0	4								
VERY STIFF tan SANDY LOAM TILL		5	2.5	10						
		7	B							
	833.5	2								
STIFF tan CLAY LOAM TILL		5	1.8	17						
		7	B							
	831.0	4								
No Recovery		7								
		7								
	828.5	5								
STIFF tan CLAY LOAM		7	1.7	21						
		9	B							
	826.0									
		7								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-11</u> Station <u>37+00</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>847.00</u> ft									
HARD brown LOAM				7	STIFF tan SANDY LOAM TILL (continued) 826.0	10 17		2.0 S	12
	845.0	8	3.3 P	11	End of Boring				
VERY STIFF light brown SANDY LOAM TILL		8							
	842.5	3							
STIFF tan SANDY LOAM TILL		3	1.3 B	14					
		5							
	840.0	1							
STIFF light brown SANDY LOAM TILL		3	1.3 B	13					
		5							
	837.5	5							
STIFF light brown SANDY CLAY LOAM TILL		5	1.3 B	13					
		5							
	835.0	2							
GARD light brown SANDY CLAY LOAM TILL		5	1.7 B	12					
		6							
	832.5	5							
HARD light brown SANDY CLAY LOAM TILL		8	5.2 B	13					
		14							
	830.0	6							
HARD light brown SANDY CLAY LOAM TILL		8	4.3 B	12					
		13							
	827.5								
STIFF tan SANDY LOAM TILL		7							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
BORING NO. <u>B-12</u> Station <u>39+00</u> Offset <u>7.0 ft LT</u> Ground Surface Elev. <u>846.00</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft				
VERY STIFF light brown SANDY CLAY LOAM	841.5	4 5 6	3.9 B	11	VERY STIFF tan SANDY CLAY LOAM TILL (continued)	9 12	3.5 B	15	
VERY STIFF light brown SANDY CLAY LOAM TILL	839.0	3 5 7	2.9 B	13	End of Boring				
STIFF tan SANDY LOAM TILL	836.5	3 5 7	1.3 S B	15					
STIFF tan SANDY LOAM TILL	834.0	3 5 7	1.9 B	12					
VERY STIFF light brown SANDY CLAY LOAM TILL	831.5	3 4 7	1.2 B	13					
STIFF light brown SANDY CLAY LOAM TILL	829.0	4 6 9	4.1 B	12					
HARD light brown SANDY CLAY LOAM TILL	826.5	6							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
BORING NO. <u>B-13</u> Station <u>41+20</u> Offset <u>4.0 ft LT</u> Ground Surface Elev. <u>844.30</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft				
HARD brown LOAM			4.5 P	12	HARD gray SANDY CLAY LOAM TILL (continued) 823.3	7 8		4.3 P	17
842.3 VERY STIFF tan SANDY LOAM with GRAVEL		4 5 6	3.5 B	11	End of Boring				
839.8 VERY STIFF tan SANDY LOAM TILL	-5	3 4 5	3.8 P	8		-25			
837.3 VERY STIFF tan SANDY LOAM TILL		4 7 8	2.1 B	19					
834.8 STIFF light brown SANDY CLAY LOAM with LIMESTONE	-10	3 8 15	1.8 B	13		-30			
832.3 STIFF tan SANDY LOAM TILL		7 9 12	1.7 B	12					
829.8 HARD light brown SANDY CLAY LOAM TILL	-15	5 8 9	6.0 B	12		-35			
827.3 VERY STIFF gray/tan SANDY CLAY LOAM TILL		4 9 10	2.1 B	19					
824.8	-20	5				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
BORING NO. <u>B-14</u> Station <u>43+35</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>842.28</u> ft									
DRY brown LOAM				7	VERY STIFF light brown CLAY LOAM (continued) 821.3	6 9		2.7 B	20
	840.3	4	3.9 B	19	End of Boring				
VERY STIFF light brown CLAY LOAM		4							
		8							
	837.8	3							
VERY STIFF tan SANDY LOAM TILL	-5	4	2.1 B	11		-25			
		8							
	835.3	4							
VERY STIFF light brown SANDY CLAY LOAM TILL		6	3.7 B	16					
		9							
	832.8	4							
VERY STIFF light brown SANDY CLAY LOAM TILL	-10	6	2.7 B	20		-30			
		8							
	830.3	5							
VERY STIFF light brown SANDY CLAY LOAM TILL		9	2.3 B	13					
		12							
	827.8	5							
VERY STIFF tan SANDY LOAM TILL	-15	6	2.3 B	13		-35			
		11							
	825.3	5							
HARD gray CLAY LOAM TILL		10	5.8 B	14					
		15							
	822.8	4							
	-20					-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-15</u> Station <u>45+60</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>838.40</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft				
DRY brown LOAM				9	VERY STIFF light brown SANDY CLAY LOAM (<i>continued</i>)	817.4	7 9	2.9 B	17
	836.4	5	4 2.3 6 B	17	End of Boring				
VERY STIFF light brown SANDY CLAY LOAM									
	833.9	5	7 3.9 9 B	11					
VERY STIFF tan SANDY CLAY LOAM TILL									
	831.4	4	7 2.1 9 B	13					
VERY STIFF light brown SANDY CLAY LOAM TILL									
	828.9	4	5 2.7 10 B	24					
VERY STIFF tan/gray SANDY CLAY LOAM with SAND LENS									
	826.4	4	5 2.1 8 B	20					
VERY STIFF gray CLAY LOAM									
	823.9	4	8 3.1 12 B	16					
VERY STIFF light brown SANDY CLAY LOAM									
	821.4	4	11 1.4 11 S	12					
STIFF gray SANDY LOAM									
	818.9	3							
	-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	ft	DEPTH H	BLOW S	UCS Qu	MOIST T
BORING NO. <u>B-17</u> Station <u>50+85</u> Offset <u>4.0 ft LT</u> Ground Surface Elev. <u>832.30</u>	ft	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
DRY brown SILTY CLAY LOAM				8	STIFF light brown SILTY CLAY LOAM (continued)	811.3	2	1.3	23	
	830.3	5	1.4	29	End of Boring					
STIFF light brown SANDY LOAM		6	P							
	827.8	3								
VERY STIFF gray SANDY CLAY LOAM		4	2.1	13						
		7	B							
	825.3	4								
VERY STIFF gray CLAY LOAM		6	3.4	17						
		8	P							
	822.8	2								
STIFF gray SILTY CLAY LOAM		6	1.4	23						
		8	B							
	820.3	7								
VERY STIFF tan SANDY LOAM TILL		10	2.2	12						
		14	P							
	817.8	4								
HARD gray SANDY LOAM		13	4.5	10						
		16	P							
	815.3	3								
STIFF light brown SANDY LOAM		4	1.7	15						
		6	S							
	812.8	0								
	-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-18</u> Station <u>53+25</u> Offset <u>4.0 ft LT</u> Ground Surface Elev. <u>830.25</u> ft									
					STIFF light brown SANDY LOAM (continued) 809.3	3 5		1.4 P	12
					End of Boring				
VERY STIFF brown CLAY LOAM		6							
		6	3.7	15					
		8	S						
825.8									
VERY STIFF gray CLAY LOAM TILL	-5	3				-25			
		5	2.5	20					
		9	B						
823.3									
VERY STIFF tan SILTY CLAY LOAM TILL		4							
		7	2.9	19					
		10	B						
820.8									
VERY STIFF tan SILTY LOAM	-10	4				-30			
		7	2.1	16					
		8	P						
818.3									
MEDIUM light brown DIRTY FINE SAND		9							
		13		6					
		16							
815.8									
VERY STIFF tan SILTY CLAY LOAM with SILT LENS	-15	2				-35			
		3	2.3	21					
		5	B						
813.3									
MEDIUM tan SILTY LOAM		2							
		2	0.8	24					
		5	B						
810.8									
STIFF light brown SANDY LOAM	-20	2				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-19
Station 55+50
Offset 4.0 ft LT
Ground Surface Elev. 827.00 ft

D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
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Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.: First Encounter _____ None ft	Upon Completion _____ Dry ft	After _____ Hrs. _____ ft
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D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
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HARD light brown CLAY LOAM	827.00	5			STIFF tan SANDY LOAM TILL (continued)	806.0	4	1.1	12
		8	6.3	16			5	B	
		8	S		End of Boring				
VERY STIFF light brown SILTY CLAY LOAM	822.5	4							
		6	2.5	21					
		9	B						
STIFF tan LOAM	820.0	6							
		4	1.7	18					
		12	B						
VERY STIFF tan CLAY LOAM TILL with LIMESTONE FRAGMENTS	817.5	4							
		6	2.5	18					
		7	B						
MEDIUM tan SILTY LOAM	815.0	4							
		4	0.6	28					
		5	P						
MEDIUM tan SILTY LOAM with SAND LENS	812.5	2							
		3	0.5	19					
		5	B						
MEDIUM tan SANDY LOAM TILL	810.0	3							
		5	0.5	9					
		7	S						
STIFF tan SANDY LOAM TILL	807.5	1							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-20</u> Station <u>57+65</u> Offset <u>11.0 ft LT</u> Ground Surface Elev. <u>823.70</u> ft									
STIFF brown SILTY CLAY LOAM			2.0 P	24	STIFF tan SANDY LOAM TILL (continued) 802.7	13 12		1.5 P	9
821.7		6			End of Boring				
HARD light brown CLAY LOAM		8 9	6.4 S	17					
819.2		3							
VERY STIFF light brown SILTY CLAY LOAM	-5	6 8	3.1 B	16		-25			
816.7		4							
STIFF tan SILTY LOAM		7 10	1.9 S	18					
814.2		4							
VERY STIFF light brown SANDY CLAY LOAM TILL	-10	7 11	2.3 B	18		-30			
811.7		4							
STIFF tan SANDY LOAM TILL		6 13	1.1 P	9					
809.2		7							
STIFF tan SANDY LOAM TILL	-15	11 12	1.6 P	9		-35			
806.7		8							
STIFF tan SANDY LOAM TILL		14 13	1.5 P	8					
804.2		9							
STIFF tan SANDY LOAM TILL	-20					-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station					Stream Bed Elev.	ft				
BORING NO. <u>B-21</u>					Groundwater Elev.:					
Station <u>59+70</u>					First Encounter	<u>None</u> ft				
Offset <u>12.0 ft LT</u>					Upon Completion	<u>Dry</u> ft				
Ground Surface Elev. <u>820.75</u> ft	(ft)	(/6")	(tsf)	(%)	After <u> </u> Hrs.	ft	(ft)	(/6")	(tsf)	(%)
MEDIUM brown LOAM			0.6 P	29	MEDIUM tan SANDY LOAM TILL (continued)	799.8	3 5	0.9 B	11	
818.8		4			End of Boring					
VERY STIFF light brown CLAY LOAM TILL		7 8	2.1 B	20						
816.3		2								
VERY STIFF light brown CLAY LOAM		4 6	3.5 B	22						
813.8		3 5 8								
VERY STIFF light brown SILTY CLAY LOAM			2.5 B	21						
811.3		3								
VERY STIFF gray SILTY CLAY LOAM with LIMESTONE FRAGMENTS		5 9	2.1 B	20						
808.8		3 6 8								
VERY STIFF gray SANDY CLAY LOAM			2.9 B	12						
806.3		2								
VERY STIFF gray SILTY CLAY		3 6	2.4 P	19						
803.8		2								
STIFF gray SANDY LOAM TILL		7 6	1.1 P	12						
801.3		0								
MEDIUM tan SANDY LOAM TILL										

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

Date 8/10/21

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)
BORING NO. <u>B-22</u> Station <u>61+80</u> Offset <u>8.0 ft LT</u> Ground Surface Elev. <u>819.40</u> ft					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ None ft Upon Completion _____ Dry ft After _____ Hrs. _____ ft				
MEDIUM brown SILTY CLAY LOAM			0.9 B	21	MEDIUM tan SANDY LOAM TILL (continued) 798.4	2 4		0.5 B	12
817.4		3			End of Boring				
VERY STIFF brown LOAM		5	3.1 B	14					
814.9		2							
VERY STIFF light brown LOAM		4	2.5 B	18					
812.4		3							
VERY STIFF tan SANDY LOAM TILL		4	2.1 B	14					
809.9		1							
MEDIUM tan SILTY LOAM		2	0.6 P	23					
807.4		8							
STIFF gray SANDY LOAM VERY FINE SILTY SAND		9	1.6 P	12					
804.9		3							
STIFF gray SILTY CLAY LOAM		4	1.4 B	24					
802.4		2							
SOFT tan SANDY LOAM		6	0.4 P	21					
799.9		1							
MEDIUM tan SANDY LOAM TILL									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station	(ft)	(/6")	(tsf)	(%)	Stream Bed Elev.	ft	(ft)	(/6")	(tsf)	(%)
BORING NO. <u>B-23</u>					Groundwater Elev.:					
Station <u>63+90</u>					First Encounter	ft				
Offset <u>6.0 ft LT</u>					Upon Completion	ft				
Ground Surface Elev. <u>820.40</u>	ft				After <u> </u> Hrs.	ft				
					MEDIUM tan MOIST DIRTY SAND with LIMESTONE FRAGMENTS (continued)	799.4		7		13
					End of Boring			8		
VERY STIFF brown SANDY LOAM		5								
		6	2.7	12						
		7	S							
	815.9									
MEDIUM light brown SANDY LOAM with FINE SAND LENS	-5	3						-25		
		4	0.7	11						
		7	S							
	813.4									
SOFT tan SILTY LOAM		1								
		2	0.3	27						
		4	P							
	810.9									
SOFT tan SILTY LOAM	-10	0						-30		
		2	0.3	28						
		2	B							
	808.4									
VERY STOFT tan SILTY LOAM with SAND LENS		0								
		1	0.1	22						
		1	P							
	805.9									
VERY SOFT tan SILTY LOAM	-15	1						-35		
		1	0.2	24						
		4	P							
	803.4									
MEDIUM tan FINE SAND with SANDY LOAM LENS		1								
		4	0.5	23						
		6	P							
	800.9									
	-20	2						-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Station	(ft)	(/6")	(tsf)	(%)	Stream Bed Elev.	ft	(ft)	(/6")	(tsf)	(%)
BORING NO. <u>B-24</u>					Groundwater Elev.:					
Station <u>66+00</u>					First Encounter	<u>None</u> ft				
Offset <u>6.0 ft LT</u>					Upon Completion	<u>Dry</u> ft				
Ground Surface Elev. <u>820.00</u> ft					After <u> </u> Hrs.	<u> </u> ft				
MEDIUM brown SILTY CLAY LOAM			0.8 P	26	MEDIUM light gray SILTY LOAM (continued)	799.0	3	5	0.7 B	23
818.0		6			End of Boring					
VERY STIFF light brown SANDY LOAM		6	2.1 S	13						
		7								
815.5										
VERY STIFF light brown SILTY CLAY LOAM		5								
		5	2.3 B	21						
		6								
813.0										
SOFT tan VERY FINE SILTY SAND		2								
		3	0.3 P	19						
		3								
810.5										
SOFT tan VERY FINE SILTY SAND		1								
		2	0.4 S	19						
		4								
808.0										
SOFT tan SILT with FINE SAND LENS		2								
		4	0.4 P	18						
		7								
805.5										
SOFT light gray SILTY LOAM		1								
		3	0.3 B	24						
		3								
803.0										
MEDIUM gray SILTY LOAM		1								
		3	0.6 B	23						
		5								
800.5										
MEDIUM light gray SILTY LOAM		1								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ 795.5 ft ▼ Upon Completion _____ 788.5 ft ▼ After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
MEDIUM brown SILTY CLAY LOAM			0.5 P	18	MEDIUM tan MEDIUM SAND (continued)	9 9			
	810.5					790.5			
HARD brown LOAM		3			SOFT tan SANDY LOAM with SAND LENS		4		
		4	4.6	14			4	0.3	12
		5	S				9	B	
	808.0					788.0			
STIFF light brown SILTY CLAY LOAM		2			STIFF tan SANDY CLAY LOAM TILL		1		
		3	1.2	23			2	1.1	16
		5	B			786.5	5	P	
	805.5				End of Boring				
SOFT light brown DIRTY FINE SAND		2							
		5	0.3	15					
		6	P						
	803.0								
MEDIUM light gray SILTY LOAM with SAND LENS		1							
		1	0.6	22					
		3	P						
	800.5								
MEDIUM light gray SILTY CLAY		1							
		2	1.0	26					
		5	B						
	798.0								
STIFF light gray CLAY LOAM		3							
		4	1.5	24					
		5	B						
	795.5 ▼								
MEDIUM tan MEDIUM SAND		3							
		4							
		9							
	793.0								
MEDIUM tan MEDIUM SAND		4							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	ft ft	DEPTH H	BLOW S	UCS Qu	MOIST T
BORING NO. <u>B-27</u> Station <u>72+25</u> Offset <u>6.0 ft LT</u> Ground Surface Elev. <u>811.20</u>	ft	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
STIFF brown SILTY CLAY LOAM			1.2 P	15	MEDIUM tan VERY MOIST SANDY LOAM TILL (<i>continued</i>)		7 21	0.4 P	12	
VERY STIFF light brown LOAM	809.2	5	7 9	3.7 B	13	SOFT tan SAND LOAM TILL	789.2	7 4 5	0.4 P	12
STIFF gray SILTY CLAY LOAM	806.7	3	4 5	1.5 B	22	MEDIUM tan DIRTY SANDY GRAVEL	786.7 -25	3 7 14		11
MEDIUM light brown SANDY LOAM with SAND LENS	804.2	1 4 5	0.6 P	17	End of Boring					
STIFF light gray SILTY CLAY	801.7	2 2 3	1.8 B	23						
MEDIUM light gray SILTY CLAY	799.2	2 4 5	0.9 B	26						
SOFT light gray SILTY CLAY	796.7	2 2 4	0.3 P	30						
LOOSE tan DIRTY SANDY GRAVEL	794.2	2 2 4								
	791.7	3								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	D E P T H ft	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev.	ft	D E P T H ft	B L O W S (/6")	U C S Qu	M O I S T (%)
Station					Stream Bed Elev.					
BORING NO. <u>B-28</u>					Groundwater Elev.:					
Station <u>74+25</u>					First Encounter	<u>795.5</u>	ft ▼			
Offset <u>6.0 ft LT</u>					Upon Completion	<u>786.0</u>	ft ▼			
Ground Surface Elev. <u>810.00</u>	ft	(ft)	(/6")	(tsf)	After	Hrs.	ft	(ft)	(/6")	(tsf)
					DENSE tan DIRTY SANDY GRAVEL (continued)			21		
								27		
						788.0				
VERY STIFF light brown SANDY LOAM		4			VERY DENSE tan WELL CEMENTED SANDY GRAVEL			100/6"		
		4	2.5	12						9
		7	S							
	805.5						▽			
VERY STIFF gray SILTY CLAY		3			VERY DENSE light gray WELL CEMENTED SANDY GRAVEL	785.5		100/6"		
	-5	5	2.5	19		-25				8
		6	B		End of Boring	784.5				
	803.0									
LOOSE light brown FINE SAND		2								
		4								
		6								
	800.5									
STIFF gray CLAY LOAM		2								
	-10	4	1.4	22						
		4	B							
	798.0									
MEDIUM tan SILTY CLAY		0								
		1	0.7	30						
		3	B							
	795.5 ▼									
MEDIUM tan MEDIUM SAND		2								
	-15	11								
		18								
	793.0									
STIFF tan SANDY LOAM TILL		2								
		3	1.1	11						
		8	P							
	790.5									
		8								
	-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ 791.2 ft ▼ Upon Completion _____ Dry ft After _____ Hrs. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-29</u> Station <u>76+25</u> Offset <u>43.0 ft LT</u> Ground Surface Elev. <u>805.70</u> ft									
HARD brown LOAM			4.0 P	13	VERY DENSE tan WELL CEMENTED SANDY GRAVEL (continued)	100/7"			
STIFF gray SILTY CLAY LOAM	803.7	4				783.7			
		3	1.8 B	25	VERY DENSE tan WELL CEMENTED SANDY GRAVEL	783.2	100/3"		
		6			End of Boring				
MEDIUM light gray SILTY CLAY LOAM	801.2	2							
	-5	3	0.9 B	29		-25			
		4							
MEDIUM tan SANDY LOAM	798.7	6							
		6	0.8 P	11					
		5							
	796.2								
LOSSE tan DIRTY SAND with MEDIUM GRAVEL	-10	5				-30			
		3		11					
		5							
LOOSE tan DIRTY SAND with MEDIUM GRAVEL	793.7	1							
		4	0.3 P	11					
		5							
MEDIUM tan DIRTY SANDY GRAVEL with LIMESTONE	791.2 ▼	2							
	-15	4				-35			
		15							
VERY DENSE tan WELL CEMENTED SAND AND GRAVEL	788.7	13							
		24							
		100							
	786.2								
	-20	36				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	ft	DEPTH H	BLOW S	UCS Qu	MOIST T
BORING NO. <u>B-30</u> Station <u>78+25</u> Offset <u>46.0 ft LT</u> Ground Surface Elev. <u>803.50</u>	ft	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
HARD brown SILTY CLAY LOAM			4.3 P	14	VERY DENSE tan WELL CEMENTED SANDY GRAVEL wth gray cohesive lenses (<i>continued</i>)	782.5	28 49			
	801.5				End of Boring					
MEDIUM brown SILTY CLAY LOAM		2								
		3	0.8	27						
		5	B							
	799.0									
SOFT brown SILTY CLAY LOAM with SAND LENS		2								
	-5	3	0.4	27			-25			
		7	B							
	796.5									
SOFT brown SANDY LOAM		3								
		5	0.4	13						
		4	P							
	794.0									
VERY SOFT brown SANDY LOAM		1								
	-10	2	0.2	14			-30			
5' Run		3	P							
	789.0									
VERY DENSE tan SANDY GRAVEL (WELL CEMENTED)		18								
	-15	22					-35			
		41								
	786.5									
VERY DENSE tan WELL CEMENTED SANDY GRAVEL		45								
		100/7"								
	784.0									
	-20	22					-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-31</u> Station <u>80+25</u> Offset <u>43.0 ft LT</u> Ground Surface Elev. <u>802.50</u> ft									
MEDIUM brown SILTY CLAY LOAM with organics			0.7 P	26	MEDIUM tan WELL CEMENTED SANDY GRAVEL (<i>continued</i>)	12 14			
800.5		2			781.5				
MEDIUM brown SILTY CLAY LOAM		4 6	0.7 P	24	End of Boring				
798.0									
MEDIUM tan DIRTY FINE-MEDIUM SAND		5 6 7							
795.5									
STIFF tan SANDY LOAM TILL		5 5 6	1.0 P	10					
793.0									
DENSE tan WELL CEMENTED SANDY GRAVEL		10 15 21							
790.5									
DENSE tan WELL CEMENTED SANDY GRAVEL		12 20 22							
788.0									
DENSE tan WELL CEMENTED SANDY GRAVEL		8 14 18							
785.5									
DENSE tan WELL CEMENTED SANDY GRAVEL		11 22 27							
783.0									
-20		12							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

ROUTE I-39 DESCRIPTION P92-111-06 - Noise wall along NB I-39/EB US Bypass 20 LOGGED BY W. Garza

SECTION (201-3)K & (4-1,5)R LOCATION Cherry Valley, 9

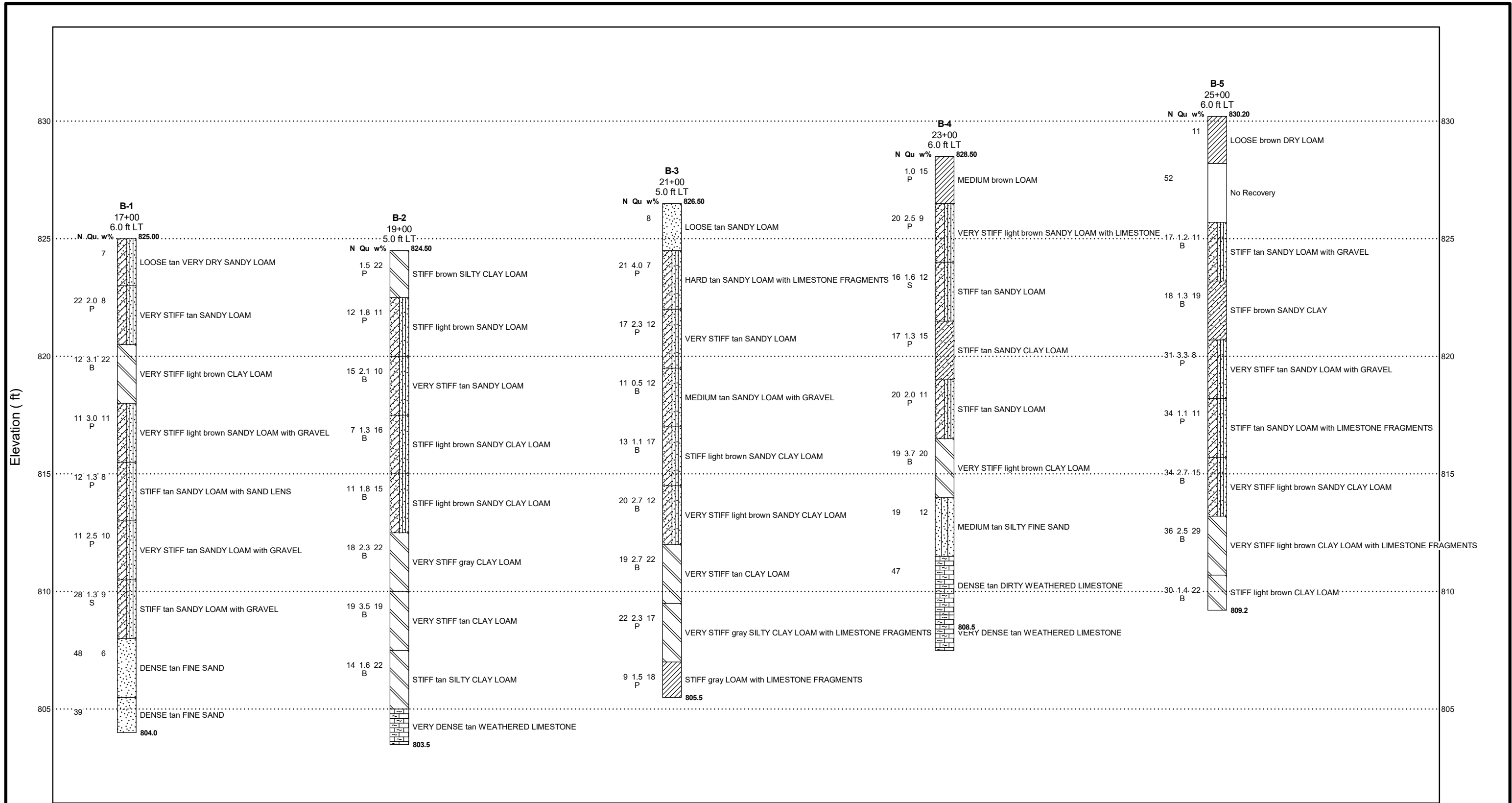
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H ft	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>B-32</u> Station <u>82+25</u> Offset <u>5.0 ft LT</u> Ground Surface Elev. <u>809.50</u>					Stream Bed Elev. _____ ft				
					Groundwater Elev.: First Encounter _____ Dry _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft				
VERY STIFF brown SILTY CLAY LOAM			2.0 P	13	DENSE tan WELL CEMENTED SANDY GRAVEL (<i>continued</i>)	21 17			
807.5		4			788.5				
VEYR STIFF brown SILTY CLAY LOAM		5 5	2.2 P	14	End of Boring				
805.0									
VERY STIFF brown SILTY CLAY LOAM		5 9 7		10					
802.5									
VERY STIFF brown SILTY CLAY LOAM		4 6 7	2.5 P	19					
800.0									
VERY STIFF brown SANDY LOAM TILL		5 8 11		14					
797.5									
LOOSE tan SANDY GRAVEL		2 3 5		10					
795.0									
MEDIUM tan WELL CEMENTED SANDY GRAVEL		2 4 9							
792.5									
DENSE tan WELL CEMENTED SANDY GRAVEL		9 19 27							
790.0									
-20		7							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

EXHIBIT E
SUBSURFACE PROFILE

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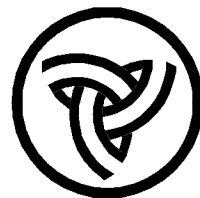
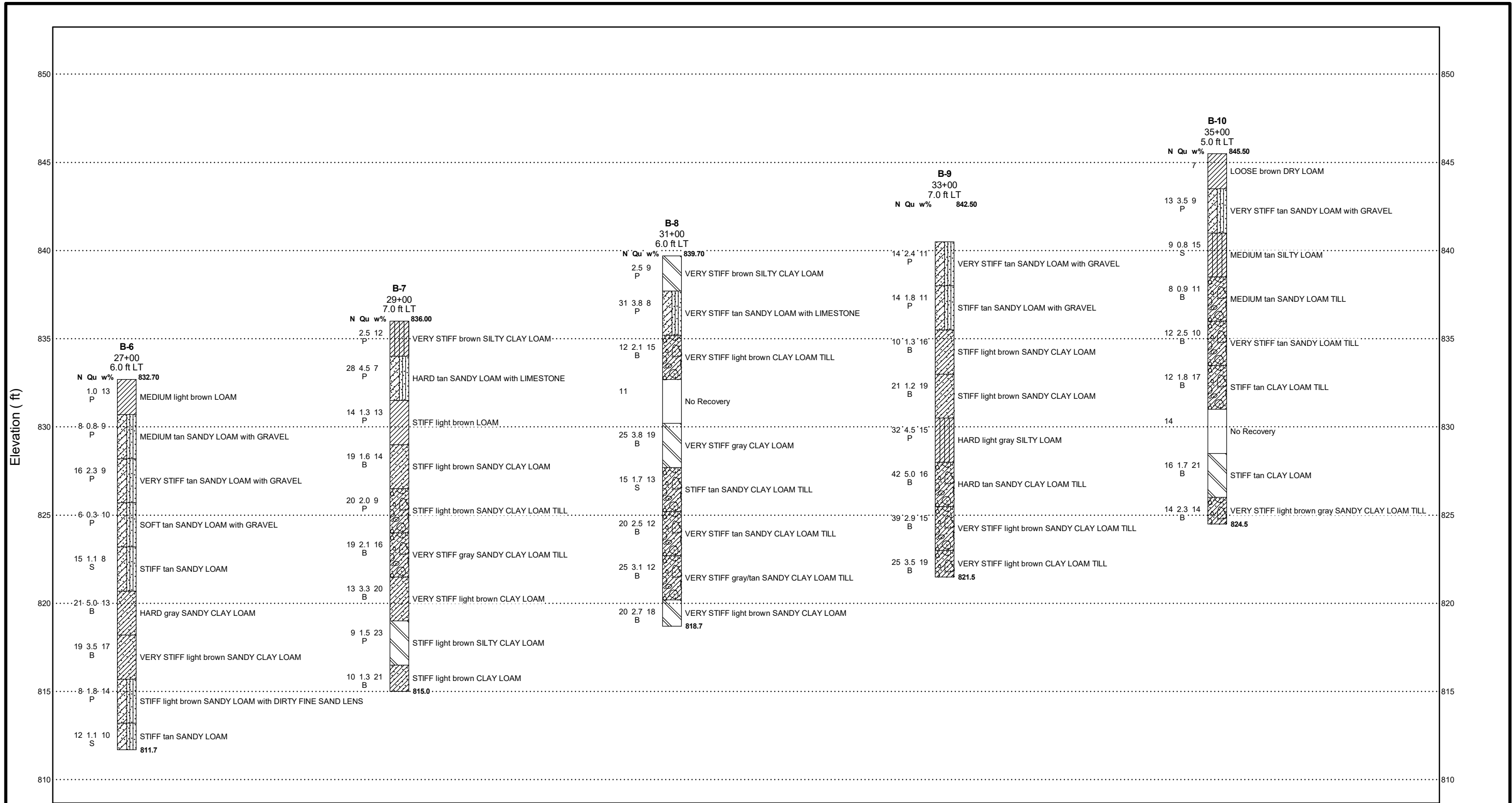


NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11x17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24



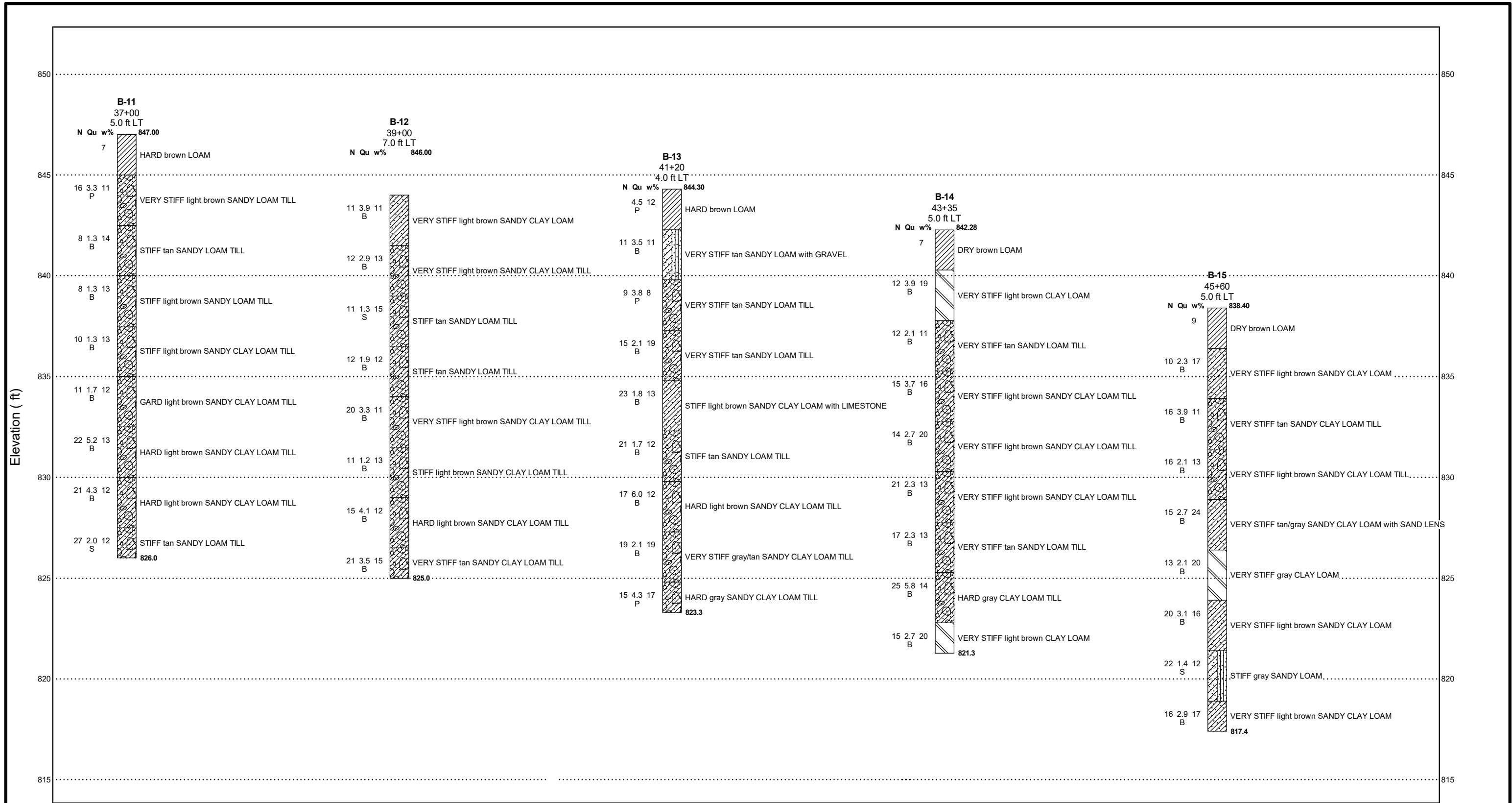
**Illinois Department
of Transportation**
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11X17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24

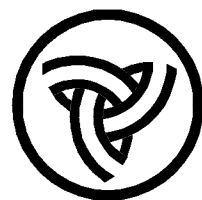
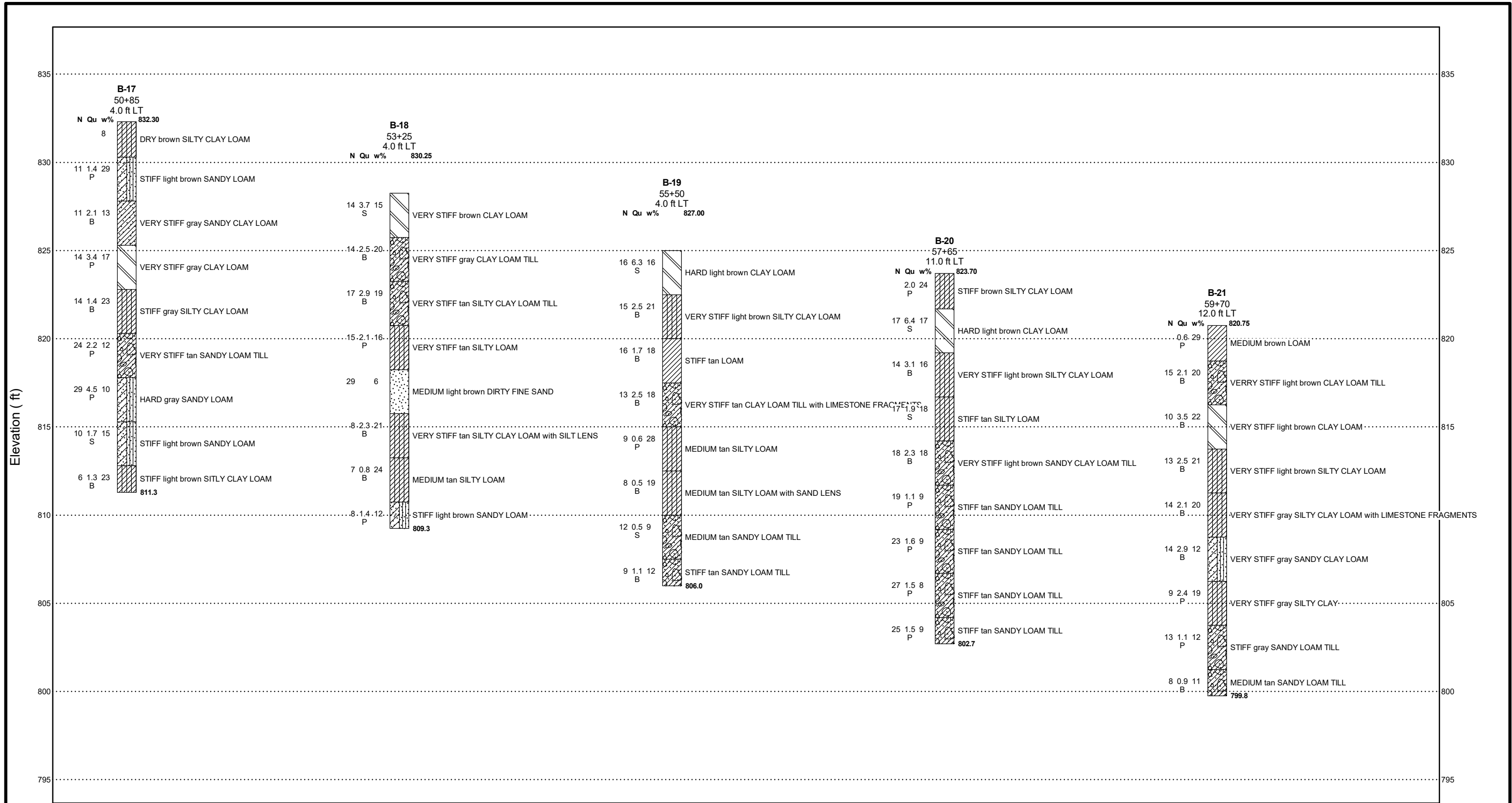


NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11x17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24



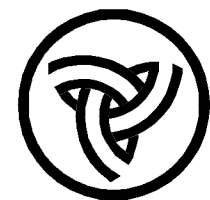
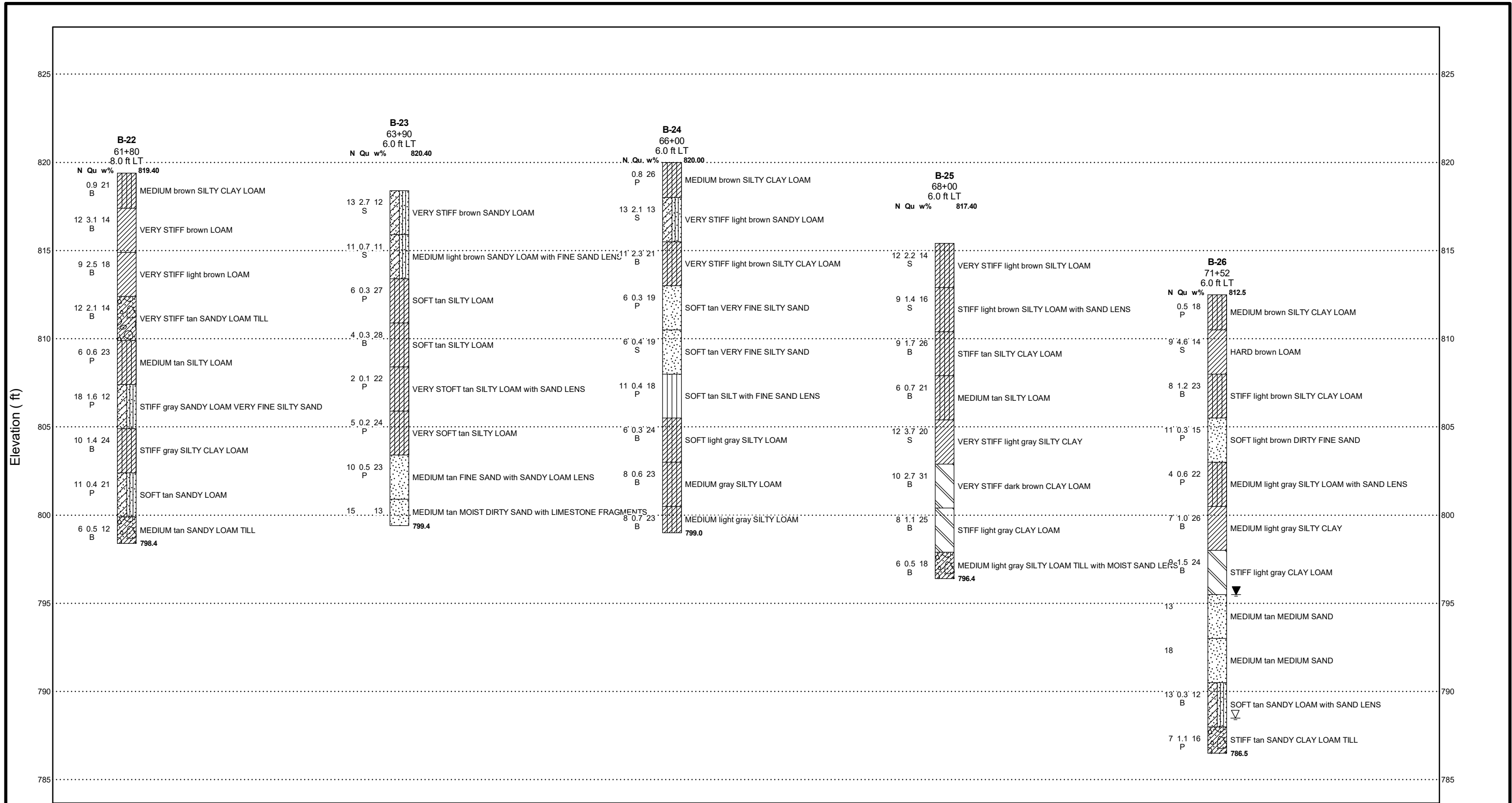
**Illinois Department
of Transportation**
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11X17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24



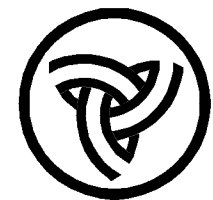
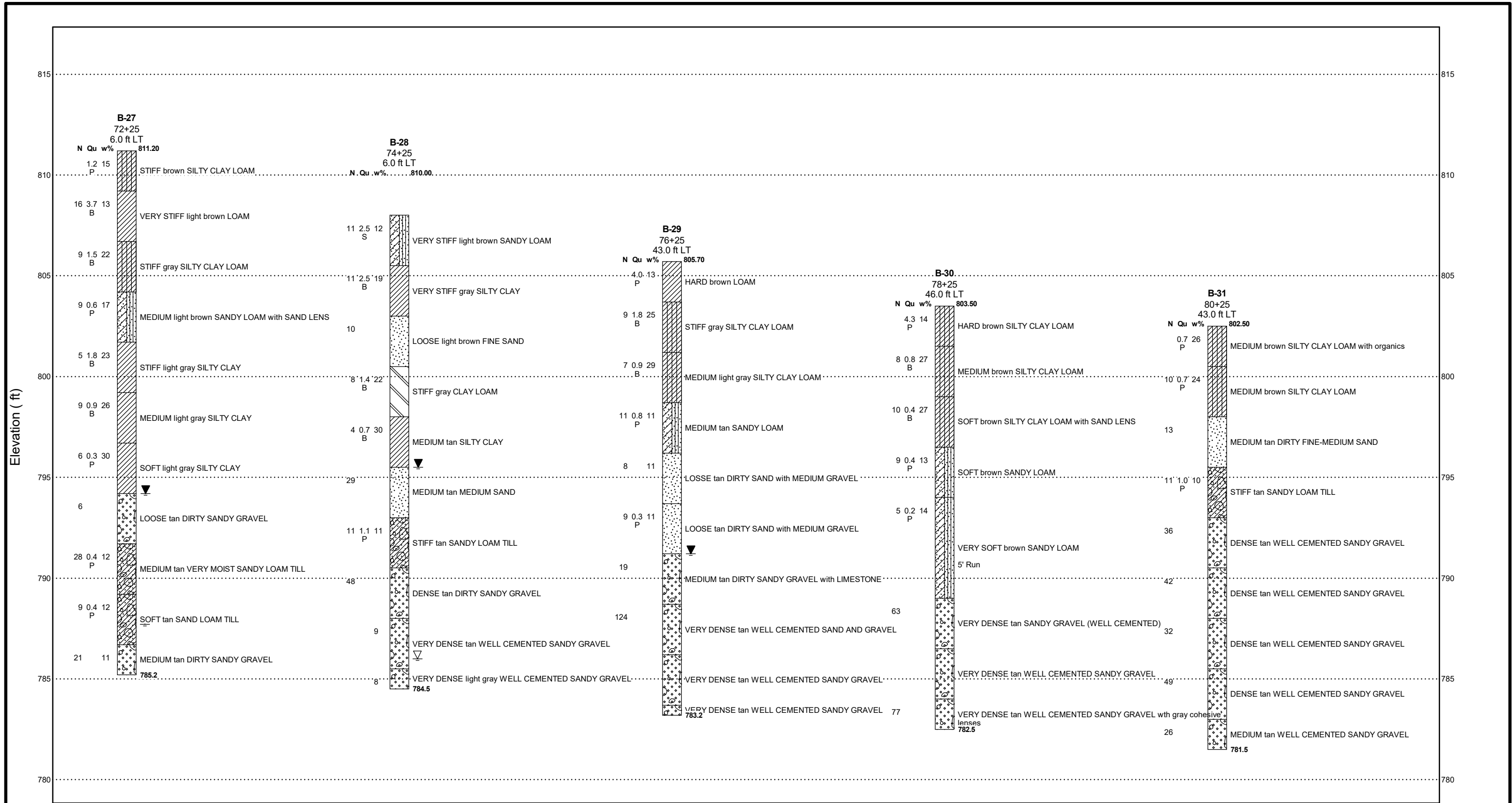
**Illinois Department
of Transportation**
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11x17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24



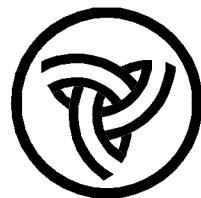
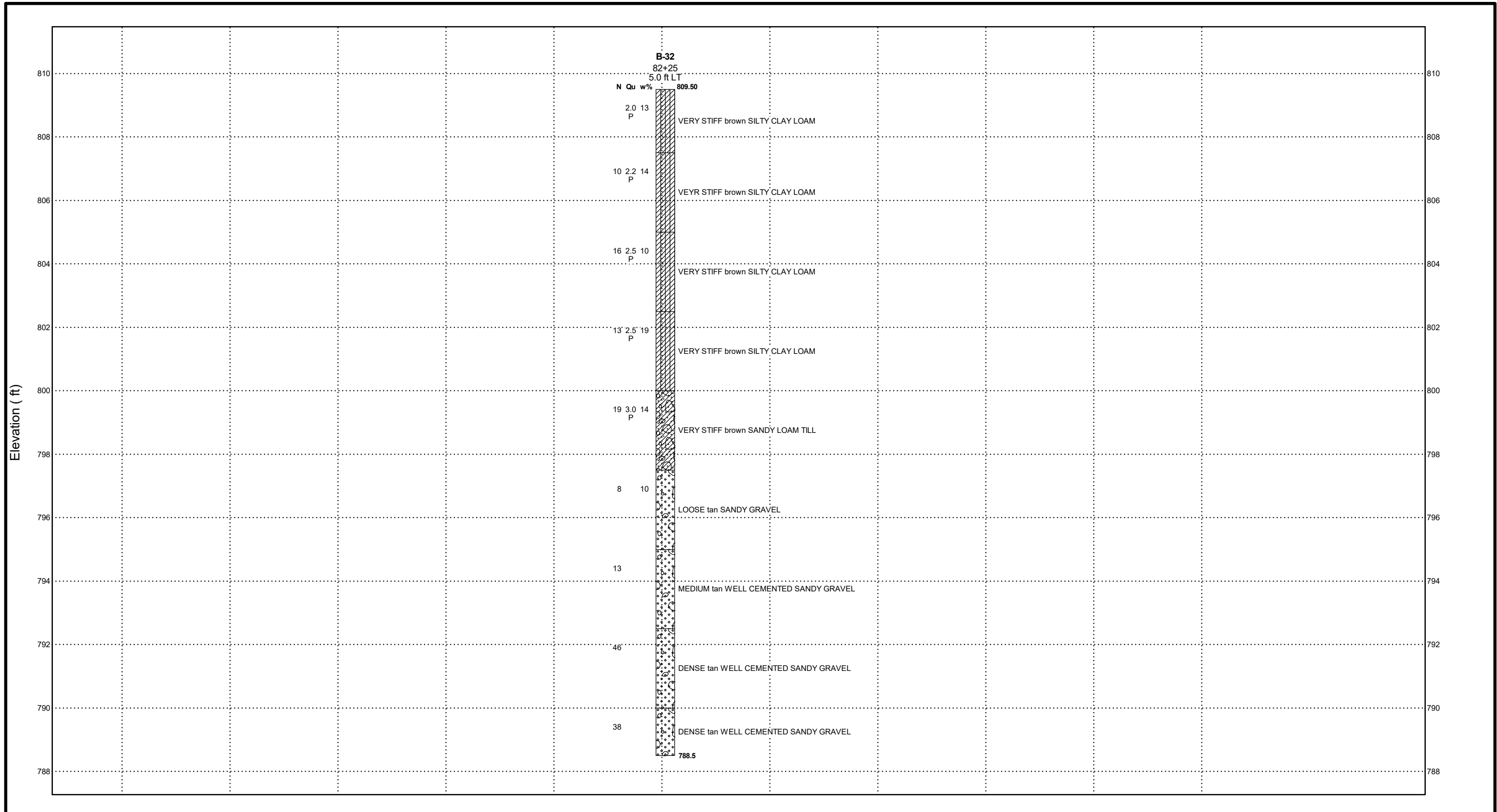
**Illinois Department
of Transportation**
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

PRINTERMOD2 11X17 19-1138.00 NOISE WALL 16-18.GPJ IL_DOT.GDT 3/8/24



**Illinois Department
of Transportation**
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: I-39
Section: (201-3)K & (4-1,5)R
County: Winnebago

EXHIBIT F
FOUNDATION ANALYSIS

Kaskaskia Engineering Group, LLC

GWT:	-
elev. Top of Drilled Shaft (ft):	825.9
Diameter(in)	30.00
At(ft²)	4.91

[illegible]

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW-16-18 (W7010)
Project Number: 19-1138.00

Substructure:	Noise Wall
Boring Number:	B-10

GWT	-
elev. Top of Drilled Shaft (ft):	844.99
Diameter(in)	30.00
At(ft ²)	4.91

[illegible]

Kaskaskia Engineering Group, LLC

GWT	-
elev. Top of Drilled Shaft (ft):	843.99
Diameter(in)	30.00
At(ft²)	4.91

[illegible]

Kaskaskia Engineering Group, LLC

GWT	-
elev. Top of Drilled Shaft (ft):	826.46
Diameter(in)	30.00
At(ft²)	4.91

[illegible]

Kaskaskia Engineering Group, LLC

GWT	-
elev. Top of Drilled Shaft (ft):	819.96
Diameter(in)	30.00
At(ft²)	4.91

[illegible]

Kaskaskia Engineering Group, LLC

GWT	-
elev. Top of Drilled Shaft (ft):	811.22
Diameter(in)	30.00
At(ft²)	4.91

[illegible]

Kaskaskia Engineering Group, LLC

GWT	-
elev. Top of Drilled Shaft (ft):	809.33
Diameter(in)	30.00
At(ft²)	4.91

[illegible]