STRUCTURE GEOTECHNICAL REPORT

I-39 and US 20 Noise Abatement Walls 8-10,21 (I-39 Reconstruction)

Proposed S.N. 101-N7011

04/04/2024
Exp 11/30/2025

FAI 39 & FAP 301
WINNEBAGO COUNTY, ILLINOIS
JOB NO. D-92-064-19
PTB 193-020
KEG NO. 19-1138.00

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

March 11, 2024
REVISED April 4, 2024

Kaskaskia
Engineering Group, LLC

TABLE OF CONTENTS

EXHIBITS

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 8-10,21 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 placing a noise abatement wall along the east side 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 structure will consist of a noise abatement wall divided into five segments. The wall segments will be 13 ft tall 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 General Plan and Elevation Plan (GP&E) is included in Exhibit C.

Table 1.3.1 – Wall Segments

Segment ID	Start Station	End Station	Length (ft)
1	2665+99.92	2681+50.00	1550.08
2	2680+70.00	2688+80.00	810.00
3	2688+00.00	2704+45.45	1645.45
4	203+60.00	213+40.00	979.85
5	212+50.00	217+86.02	520.64

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

2.0 FIELD EXPLORATION

2.1 Subsurface Exploration and Testing

Twenty-four standard penetration test (SPT) borings were drilled by the Illinois Department of Transportation (IDOT) District 2, nineteen of which were drilled in July and August of 2021, the remaining 5 were drilled in March of 2024. 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 twenty-four (24) boring locations exhibited layers of concrete, loam, clay loam, silty clay loam, silty loam, sandy loam, sandy clay loam, sandy loam till, sand, silty sand, and sandy gravel. No bedrock was encountered on any of the borings. Table 2.2.1 shows a summary depth of drilling, the top of rock, and ground surface elevation (GSE) of the borings. Boring ST-5 has been substituted for Borings B-10 and B-11 per IDOT. A summary of the general condition of the subsurface is described in Table 2.2.2.

Table 2.2.1 – Boring Information Summary

Seg.	Designation	Concrete	Depth (ft)	GSE (ft.)
1	B-1	-	16	784.16
	B-2	-	16	784.98
	B-3	-	16	786.55
	B-4	-	16	787.31
	B-5	-	15	787.06
	B-6	-	16	786.09
2	B-7	-	16	782.50
	B-8	-	16	778.50
	B-9	-	16	795.10
	ST-5	-	26	774.10
3	B-12	-	16	775.92
	B-13	-	16	774.15
	B-14	-	16	770.41
	B-15	-	16	766.14
	B-16	-	16	768.87
	B-17	-	16	759.45
	B-18	-	16	754.44
4	B-19	-	16	760.06
	B-20	-	16	760.95
	B-21	-	16	764.30
	B-22	-	16	769.76
5	B-23	-	16	775.66
	B-24	-	16	781.80
	B-25	-	16	788.14

Table 2.2.2 – Subsurface Profile Summary

Soil Type	N-Values (bpf)	Q_u (tsf)	WC (%)	Boring
Loam	-	0.5 – 0.8	8 – 12	B-16, B-23
Clay Loam	16 – 17	1.7 3.9	17 – 18	B-19, B-20

Soil Type	N-Values (bpf)	Q_u (tsf)	WC (%)	Boring
Silty Clay Loam	4 – 14	0.2 – 2.7	7 – 30	B-1, B-2, B-6, B-7, B-8, B-9, ST-5, B-13, B-14, B-15, B-16, B-17, B-18, B-19, B-20, B-23, B-24
Silty Loam	5	0.2	29	B-15
Sandy Loam	5 – 17	0.1 – 3.8	8 – 21	B-1, B-2, B-3, B-4, B-5, B-6, B-8, B-9, ST-5, B-12, B-13, B-14, B-15, B-17, B-18, B-19, B-21, B-22, B-23, B-24, B-25
Sandy Clay Loam	7 – 21	1.1 – 3.7	11 – 17	B-9, B-19, B-20, B-22, B-24, B-25, B-22, B-24, B-25
Sandy Loam Till	3 – 113	0.2 – 6.6	7 – 18	B-1, B-2, B-3, B-4, B-5, B-6, B-7, B-8, ST-5, B-12, B-13, B-14, B-16, B-20, B-21, B-22, B-23, B-24, B-25
Sand	6 – 100	0.3 – 0.8	3 – 17	B-2, B-8, ST-5, B-12, B-13, B-15, B-17, B-18
Silty Sand	14	-	21	B-17
Sandy Gravel	11 – 34	0.9	18	ST-5, B-15, B-18

2.3 Groundwater

Four (4) borings reached groundwater during drilling. Borings ST-5, B-12, and B-13 are near the first proposed noise abatement wall on the GP&E. Boring B-18 is near the third proposed noise abatement wall on the GP&E. 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)
ST-5	749.6	749.6
B-12	763.92	762.42
B-13	762.15	--
B-18	739.44	739.44

3.0 GEOTECHNICAL EVALUATIONS

3.1 Settlement

Some grading throughout the alignment of the walls is anticipated, with fills ranging between 4 to 14.5 ft. along the wall lengths. A review of the borings indicates that the soils are primarily medium dense to dense cohesionless soils and any cohesive soils present are stiff. Therefore, settlement is not anticipated to be a concern, provided the new fills are properly placed and compacted.

3.3 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 C.

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

Table 3.3.1 - Summary of Seismic Parameters

Parameter	Value
Soil Site Class	C
Spectral Response Acceleration, 0.2 Sec, S_{DS}	0.101 g (Site Class C)
Spectral Response Acceleration, 1.0 Sec, S_{D1}	0.056 g (Site Class C)
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 C, 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 4.1.7 below.

Table 4.1.1 - Summary of Foundation Recommendations

Stationing	Boring	Bottom of NWA Elevation	Top of Rock
2665+99.92 – 2674+00.00	B-1 to B-5	787.92	-
2674+00.00 – 2684+40.00	B-6 to B-9	792.02	-
2684+40.00 – 2693+00.00	ST-5 to B-12	782.62	-
2693+00.00 – 2704+00.00	B-13 to B-18	770.51	-
203+60 – 213+40.00	B-19 to B-22	763.35	-
212+50.00 – 217+86.02	B-23 to B-25	772.60	-

Table 4.1.2 - Estimated Drilled Shaft Axial Capacity for STA 2665+99.92 – 2674+00.00 (Boring B-2)

Diam. 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	26.73	14.70
	10	294.52	147.26	66.27	36.45
	15	294.52	147.26	127.12	69.91
36	5	127.23	63.62	32.07	17.64
	10	424.12	212.06	79.53	43.74
	15	424.12	212.06	152.54	83.90
42	5	173.18	86.59	37.42	20.58
	10	577.27	288.63	92.78	51.03
	15	577.27	288.63	177.97	97.88
48	5	226.19	113.10	42.76	23.52
	10	753.98	376.99	106.04	58.32
	15	753.98	376.99	203.39	111.86

Table 4.1.3 - Estimated Drilled Shaft Axial Capacity for STA 2674+00.00 – 2684+40.00 (Boring B-6)

Diam. 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	15.6	76.58	38.29	13.02
	10	33.6	164.93	82.47	53.85
	15	60	294.52	147.26	115.90
36	5	110.27	55.13	15.62	8.59
	10	237.50	118.75	64.63	35.54
	15	424.12	212.06	139.09	76.50
42	5	150.09	75.04	18.23	10.02
	10	323.27	161.63	75.40	41.47
	15	577.27	288.63	162.27	89.25
48	5	196.04	98.02	20.83	11.46
	10	422.23	211.12	86.17	47.39
	15	753.98	376.99	185.45	102.00

Table 4.1.4 - Estimated Drilled Shaft Axial Capacity for STA 2684+40.00 – 2693+00.00 (Boring B-12)

Diam. 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	14.53	7.99
	10	170.82	85.41	53.07	29.19
	15	294.52	147.26	113.01	62.16
36	5	135.72	67.86	17.43	9.59
	10	245.99	122.99	63.69	35.03
	15	424.12	212.06	135.62	74.59

Diam. 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
42	5	184.73	92.36	20.34	11.18
	10	334.82	167.41	74.30	40.87
	15	577.27	288.63	158.22	87.02
48	5	241.27	120.64	23.24	12.78
	10	437.31	218.65	84.92	46.70
	15	753.98	376.99	180.82	99.45

Table 4.1.5 - Estimated Drilled Shaft Axial Capacity for STA 2693+00.00 – 2704+00.00 (Boring B-15)

Diam. 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	21.38	10.91
	10	29.45	14.73	40.60	21.48
	15	206.17	103.08	88.54	47.85
36	5	101.79	50.89	25.65	13.09
	10	42.41	21.21	48.72	25.78
	15	296.88	148.44	106.24	57.42
42	5	138.54	69.27	29.93	15.27
	10	57.73	28.86	56.84	30.08
	15	404.09	202.04	123.95	66.98
48	5	180.96	90.48	34.20	17.45
	10	75.40	37.70	64.96	34.37
	15	527.79	263.89	141.66	76.55

Table 4.1.6 - Estimated Drilled Shaft Axial Capacity for STA 203+60 – 213+40.00 (Boring B-20)

Diam. 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	22.18	11.09	23.61	12.99
	10	294.52	147.26	52.23	28.72
	15	111.92	55.96	113.17	62.24
36	5	31.93	15.97	28.33	15.58
	10	424.12	212.06	62.67	34.47
	15	161.16	80.58	135.81	74.69
42	5	43.46	21.73	33.06	18.18
	10	577.27	288.63	73.12	40.21
	15	219.36	109.68	158.44	87.14
48	5	56.77	28.38	37.78	20.78
	10	753.98	376.99	83.56	45.96
	15	286.51	143.26	181.07	99.59

Table 4.1.7 - Estimated Drilled Shaft Axial Capacity for STA 212+50.00 – 217+86.02 (Boring B-23)

Diam. 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	76.58	38.29	13.14	7.22
	10	94.25	47.12	53.04	29.17
	15	76.58	38.29	105.77	58.18
36	5	110.27	55.13	15.76	8.67
	10	135.72	67.86	63.65	35.01
	15	110.27	55.13	126.93	69.81

Diam. 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
42	5	150.09	75.04	18.39	10.11
	10	184.73	92.36	74.26	40.84
	15	150.09	75.04	148.08	81.45
48	5	196.04	98.02	21.02	11.56
	10	241.27	120.64	84.87	46.68
	15	196.04	98.02	169.24	93.08

4.2 Lateral Response Parameters

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 is 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 Bott (ft)	γ (pcf)	Short Term		Long Term		N Value (Ave.)	Assumed % Fines < #200	K (pci)	ε50
					c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
Segment 1	B-1	Silty Clay Loam	780.66	120	2450	28	100	28	9	65	1000	0.005
		Sandy Loam	775.66	120	-	31	-	31	16	35	90	-
		Sandy Loam Till	768.16	125	-	39	-	39	39	35	225	-
	B-2	Silty Clay Loam	782.98	120	800	28	100	28	5	65	100	0.01
		Sand	777.98	115	-	29	-	29	8	3	25	-
		Sandy Loam Till	768.98	125	-	49	-	49	79	35	225	-
	B-3	Sandy Loam	784.55	120	-	30	-	30	12	35	90	-
		Sandy Loam Till	771.05	125	-	42	-	42	52	35	225	-
	B-4	Sandy Loam	783.81	120	-	30	-	30	11	35	90	-
		Sandy Loam Till	771.81	125	-	46	-	46	65	35	225	-
	B-5	Sandy Loam	783.56	120	-	31	-	31	14	35	90	-
		Sandy Loam Till	772.06	125	-	48	-	48	76	35	225	-
	B-6	Sandy Loam	782.59	120	-	29	-	29	10	35	90	-

Boring		Soil Description	Depth at Bott (ft)	γ (pcf)	Short Term		Long Term		N Value (Ave.)	Assumed % Fines < #200	K (pci)	ε50
					c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
		Sandy Loam Till	770.09	125	-	44	-	44	56	35	225	-
	B-7	Silty Clay Loam	779.00	120	700	28	100	28	6	65	100	0.01
		Sandy Loam Till	766.50	125	-	39	-	39	40	35	225	-
	B-8	Silty Clay Loam	775.00	120	700	28	100	28	6	65	100	0.01
		Sandy Loam Till	764.50	125	-	31	-	31	16	35	90	-
		Sand	762.50	115	-	44	-	44	59	3	225	-
	B-9	Silty Clay Loam	786.60	120	700	28	100	28	6	65	100	0.01
		Sandy Loam	779.10	120	-	29	-	29	6	35	25	-
Segment 3	ST-5	Silty Clay Loam	770.10	120	550	28	100	28	7	65	100	0.01
		Sandy Gravel	761.10	120	-	34	-	38	29	3	-	-
		Sand	758.10	115	-	49	-	49	100	3	225	-
		Sandy Loam Till	748.10	125	-	40	-	40	52	35	225	-
	B-12	Sand	768.92	115	-	30	-	30	13	3	90	-
		Sandy Loam Till	760.92	125	-	42	-	42	50	35	125	-
	B-13	Sandy Loam	770.65	120	-	29	-	29	8	35	25	-
		Sandy Loam Till	758.15	125	-	39	-	39	39	35	125	-
	B-14	Silty Clay Loam	764.41	120	600	28	100	28	7	65	100	0.01
		Sandy Loam Till	754.41	125	-	31	-	31	11	35	90	-
	B-15	Silty Clay Loam	761.64	120	900	38	100	28	11	65	100	0.01
		Sandy Gravel	761.64	120	-	38	-	38	11	3	-	-
		Fine Sand	759.14	115	-	29	-	29	9	5	25	-
		Silty Loam	754.14	120	-	28	-	28	4	65	25	-
		Fine Sand	752.64	115	-	34	-	34	26	5	90	-
		Sandy Gravel	750.14	120	-	38	-	38	27	3	-	-
	B-16	Silty Clay Loam	765.37	120	500	28	100	28	6	65	30	0.02
		Sandy Loam Till	752.87	125	-	37	-	37	31	35	225	-
	B-17	Silty Clay Loam	757.45	120	1500	28	100	28	6	65	500	0.007
		Fine Sand	752.45	115	-	29	-	29	7	5	25	-
		Sandy Loam	747.45	120	-	30	-	30	11	35	90	-
		Fine Sand	743.45	115	-	31	-	31	11	5	90	-
	B-18	Silty Clay Loam	752.44	120	800	28	100	28	9	65	100	0.01

Boring		Soil Description	Depth at Bott (ft)	γ (pcf)	Short Term		Long Term		N Value (Ave.)	Assumed % Fines < #200	K (pci)	ε50
					c (psf)	Φ (deg.)	c (psf)	Φ (deg.)				
		Sandy Loam	744.94	120	-	29	-	29	9	35	25	-
		Sandy Gravel	738.44	120	-	38	-	38	26	3	-	-
Segment 4	B-19	Silty Clay Loam	758.06	120	1200	28	100	28	5	65	500	0.007
		Sandy Loam	746.56	120	-	30	-	30	11	35	90	-
		Clay Loam	744.06	120	1700	0	100	26	16	65	500	0.007
	B-20	Silty Clay Loam	757.45	120	650	28	100	28	6	65	100	0.01
		Sandy Loam Till	744.95	125	-	34	-	34	22	35	90	-
	B-21	Sandy Loam	748.3	120	-	32	-	32	17	35	90	-
	B-22	Sandy Loam	766.26	120	-	29	-	29	10	35	90	-
		Sandy Clay Loam Till	753.76	125	-	32	-	32	16	45	90	-
Segment 5	B-23	Sandy Loam	762.16	120	-	30	-	30	10	35	90	-
		Sandy Loam Till	759.66	125	-	30	-	30	10	35	90	-
	B-24	Sandy Loam	775.80	120	-	29	-	29	9	35	25	-
		Sandy Loam Till	770.80	125	-	30	-	30	10	35	90	-
		Sandy clay loam	768.30	120	-	31	-	31	15	45	90	-
		Silty Clay Loam	765.80	120	2700	28	100	28	14	65	1000	0.005
	B-25	Sandy Loam	778.64	120	-	33	-	33	20	35	90	-
		Sandy Loam Till	772.14	125	-	34	-	34	21	35	90	-

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 Sheeting 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

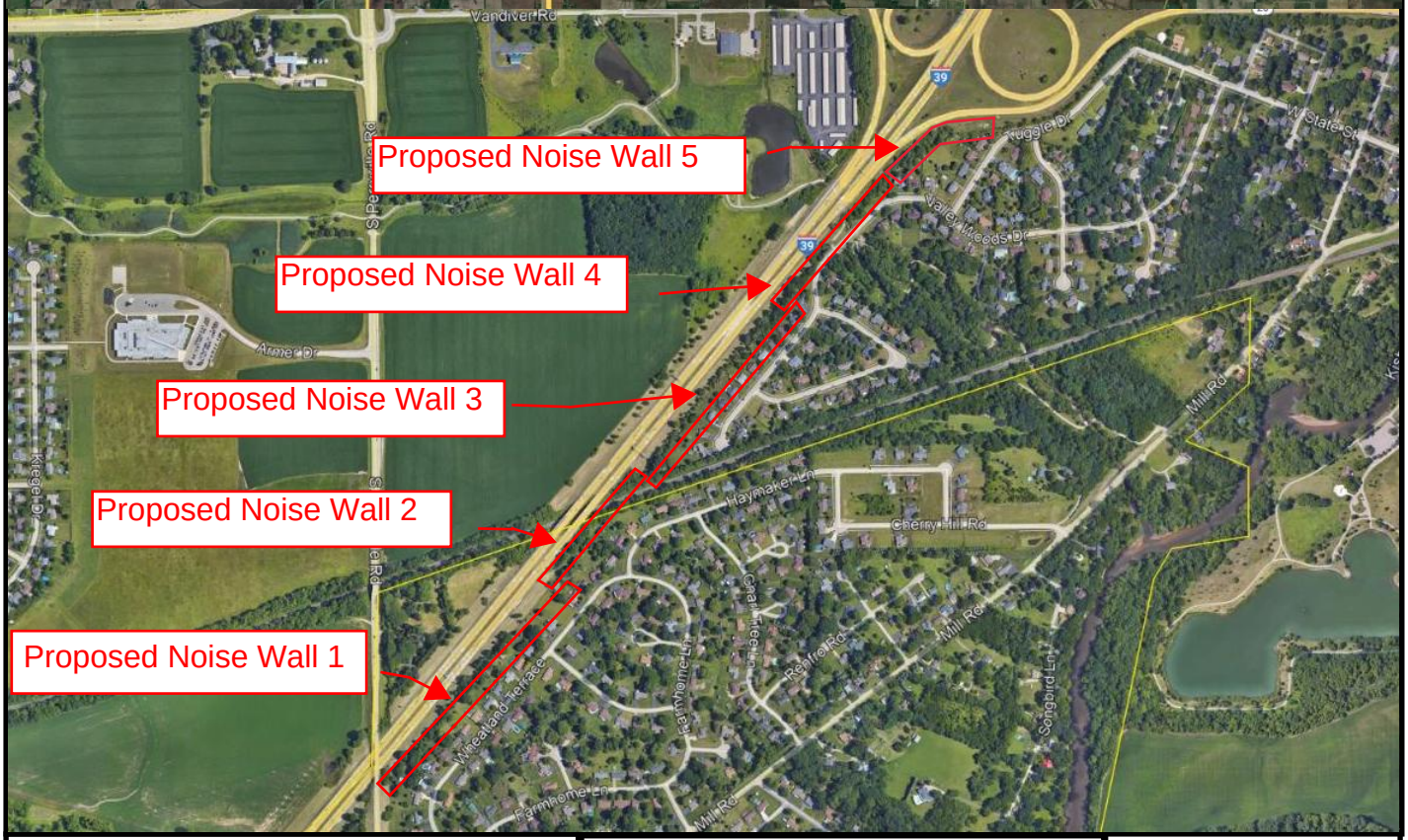
Soil boring logs and subsurface profiles can be found in Exhibit D and Exhibit E. Foundation Design Tables can be found in Exhibit F.

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 twenty-four 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



Kaskaskia Engineering Group, LLC

LOCATION MAP

I-39 Noise
Abatement Wall 1 - 5
Winnebago County,
Illinois

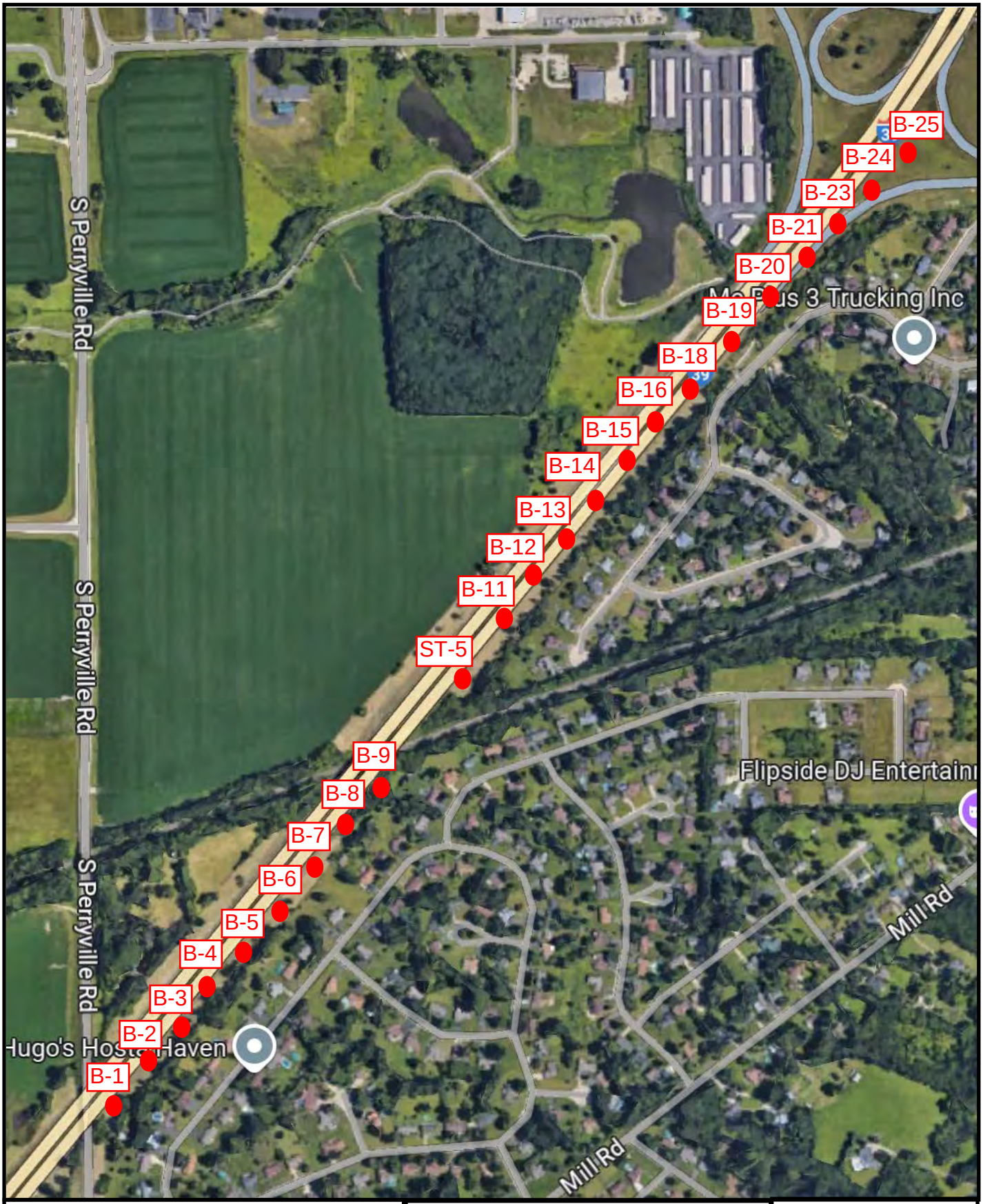
Exhibit No.

A

KEG JOB #19-1138.00

EXHIBIT B

BORING PLAN



Kaskaskia Engineering Group, LLC

BORING LOCATION MAP

I-39 Noise
Abatement Wall 1 - 5
Winnebago County,
Illinois

Exhibit No.

B

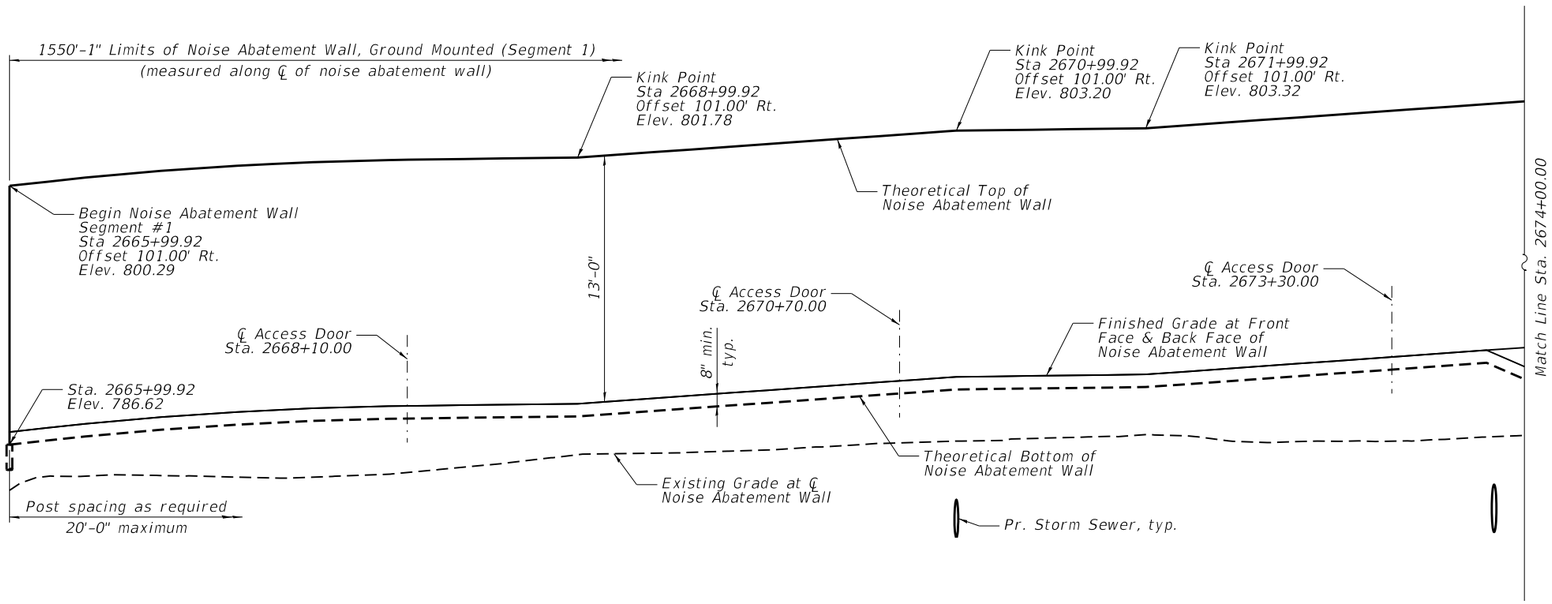
KEG JOB #19-1138.00

EXHBIT C

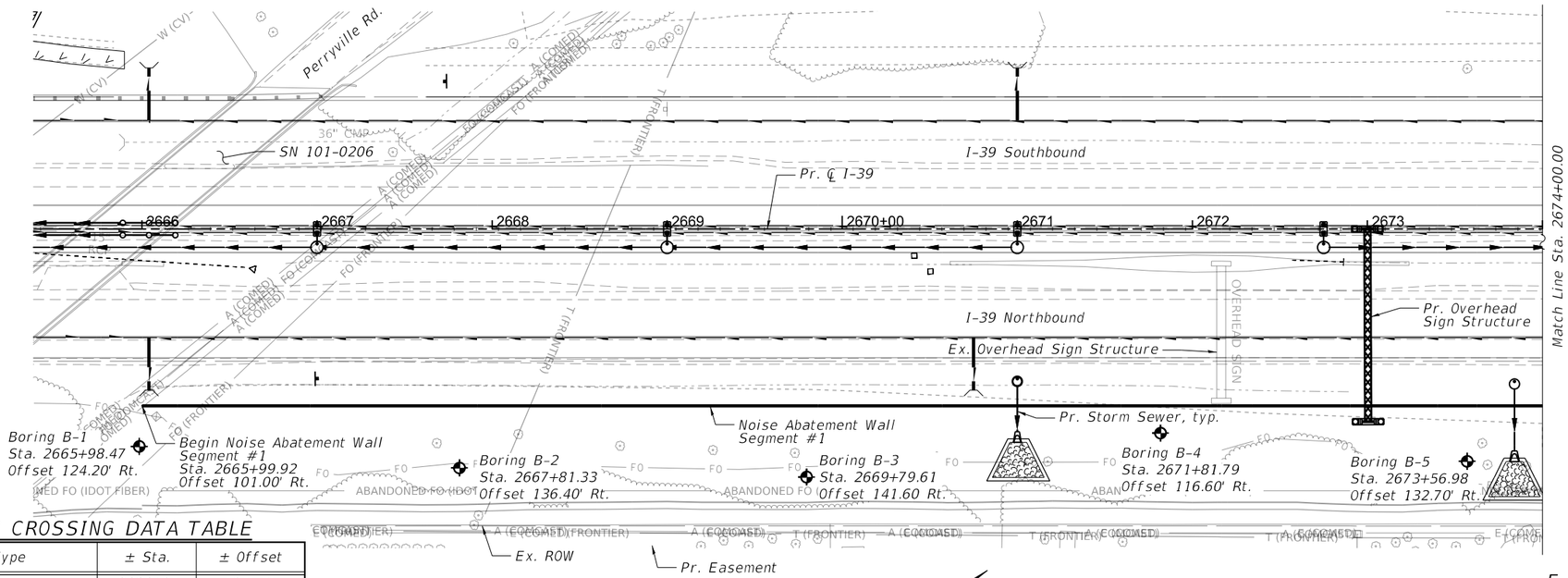
GENERAL PLAN AND ELEVATION PLAN (GP&E)

Bench Mark: BM#402 – Cut square in southeast wingwall of S.N. 101-0070. Elevation 796.69

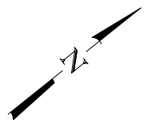
INDEX OF SHEETS



ELEVATION

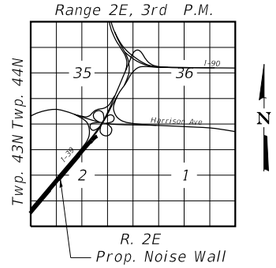


PLAN



UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Aerial Lines	2666+01	101' Rt.
Underground Fiber Optic	2666+36	101' Rt.
Underground Telephone	2668+22	101' Rt.
Storm Sewer	2671+00	101' Rt.
Overhead Sign Structure	2673+00	101' Rt.
Storm Sewer	2673+84	101' Rt.



LOCATION SKETCH

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ I-39 to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

JOHN H. GISLASON
081-006703
LICENSED
STRUCTURAL
ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2024
DATE: _____

GENERAL PLAN & ELEVATION
NOISE ABATEMENT WALL
F.A.I. ROUTE 39 – SECTION (201-3)R & (4-1, 5)R
WINNEBAGO COUNTY
STATION 2665+99.92
STRUCTURE NO. 101-N7011

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

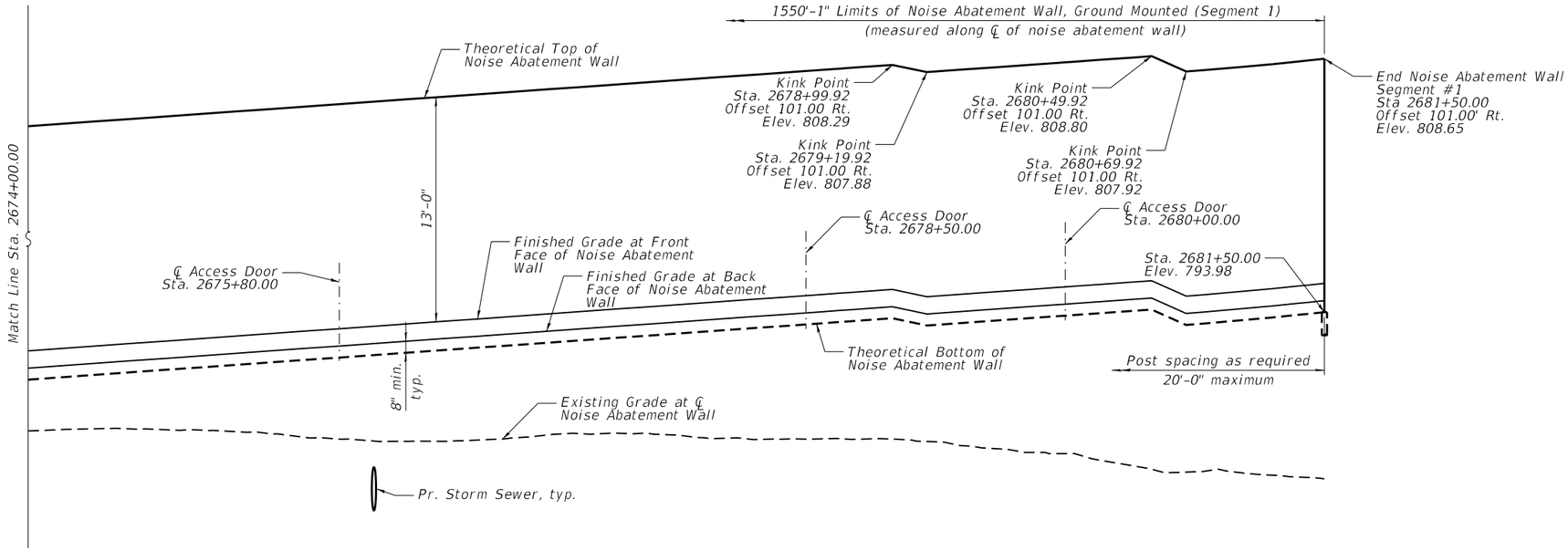
USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

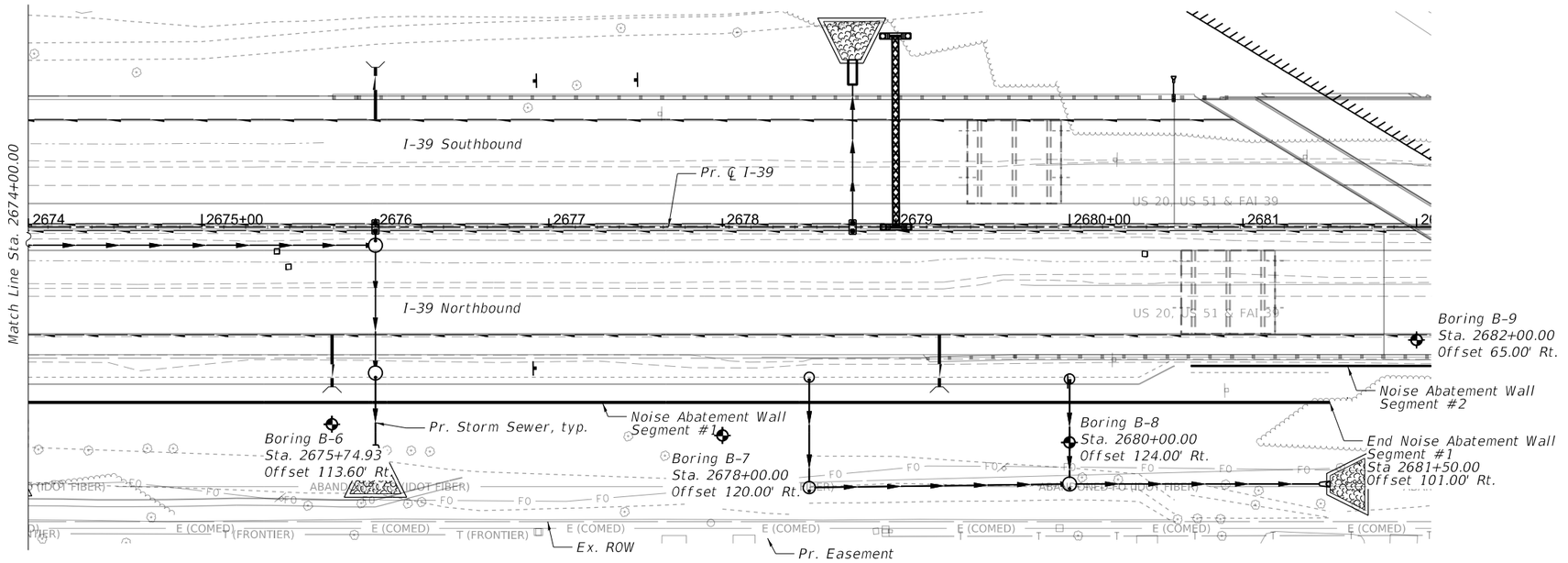
NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (1 OF 7)
STRUCTURE NO. 101-N7011
SHEET 1 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	814
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800s.001Eng_Docs\CAD_Sheets\SN W7011_Wall 8-101\D264C24-101W7011-sht-GPE1.dgn
5/8/2024 8:35:06 AM



ELEVATION



PLAN

UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Storm Sewer	2676+00	101' Rt.
Storm Sewer	2678+50	101' Rt.
Storm Sewer	2680+00	101' Rt.

LEGEND

- Noise Abatement Wall Soil Boring
- F0 — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ I-39 to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

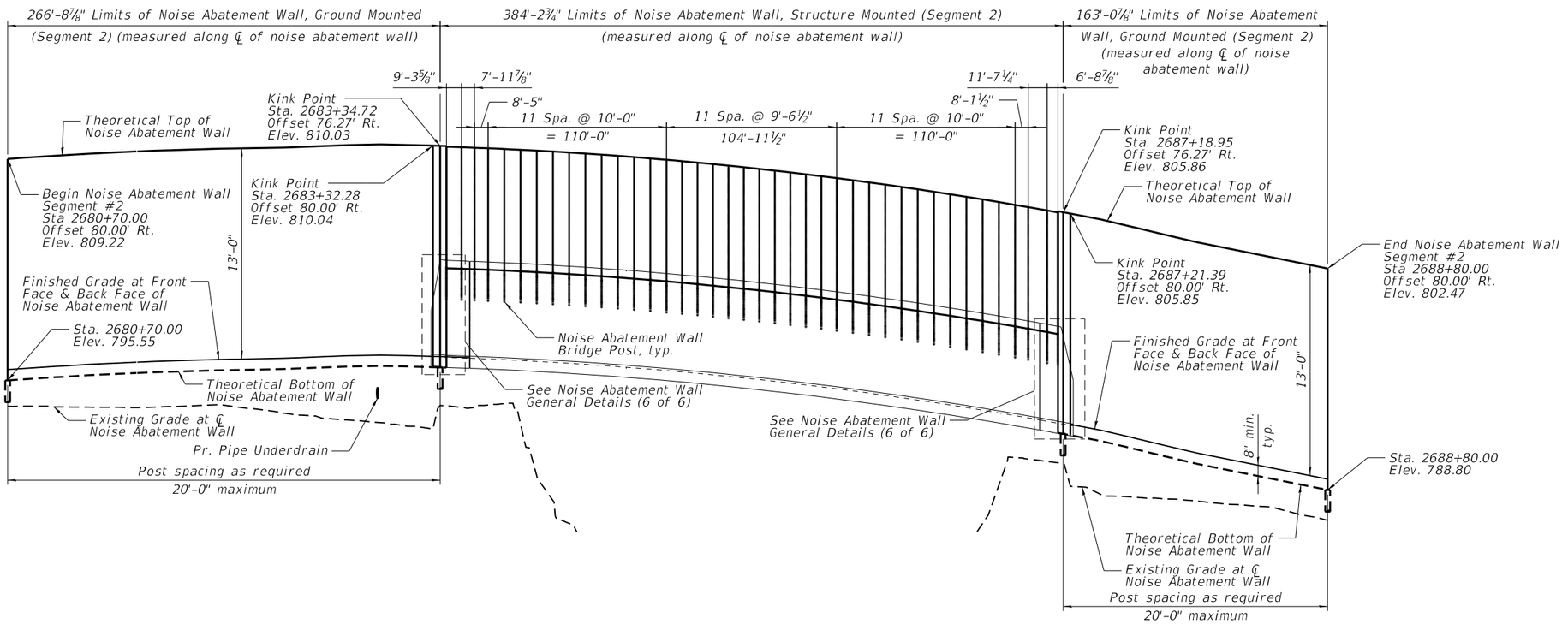
USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

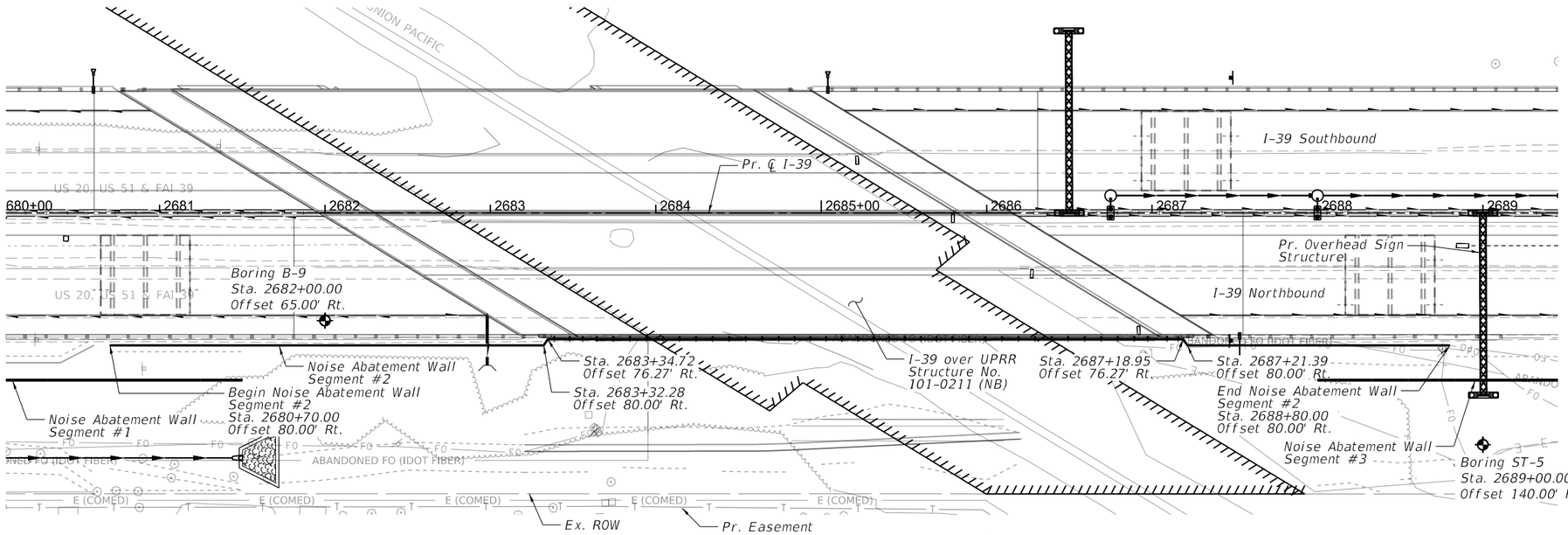
NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (2 OF 7)
STRUCTURE NO. 101-N7011
SHEET 2 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	815
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800\00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-101D264C24-101W7011-sht-GPE2.dgn
5/8/2024 8:35:15 AM



ELEVATION



PLAN

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Pipe Underdrain	2683+00	80' Rt.
Underground Fiber Optic	2687+70	80' Rt.
Underground Fiber Optic	2688+15	80' Rt.

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ I-39 to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

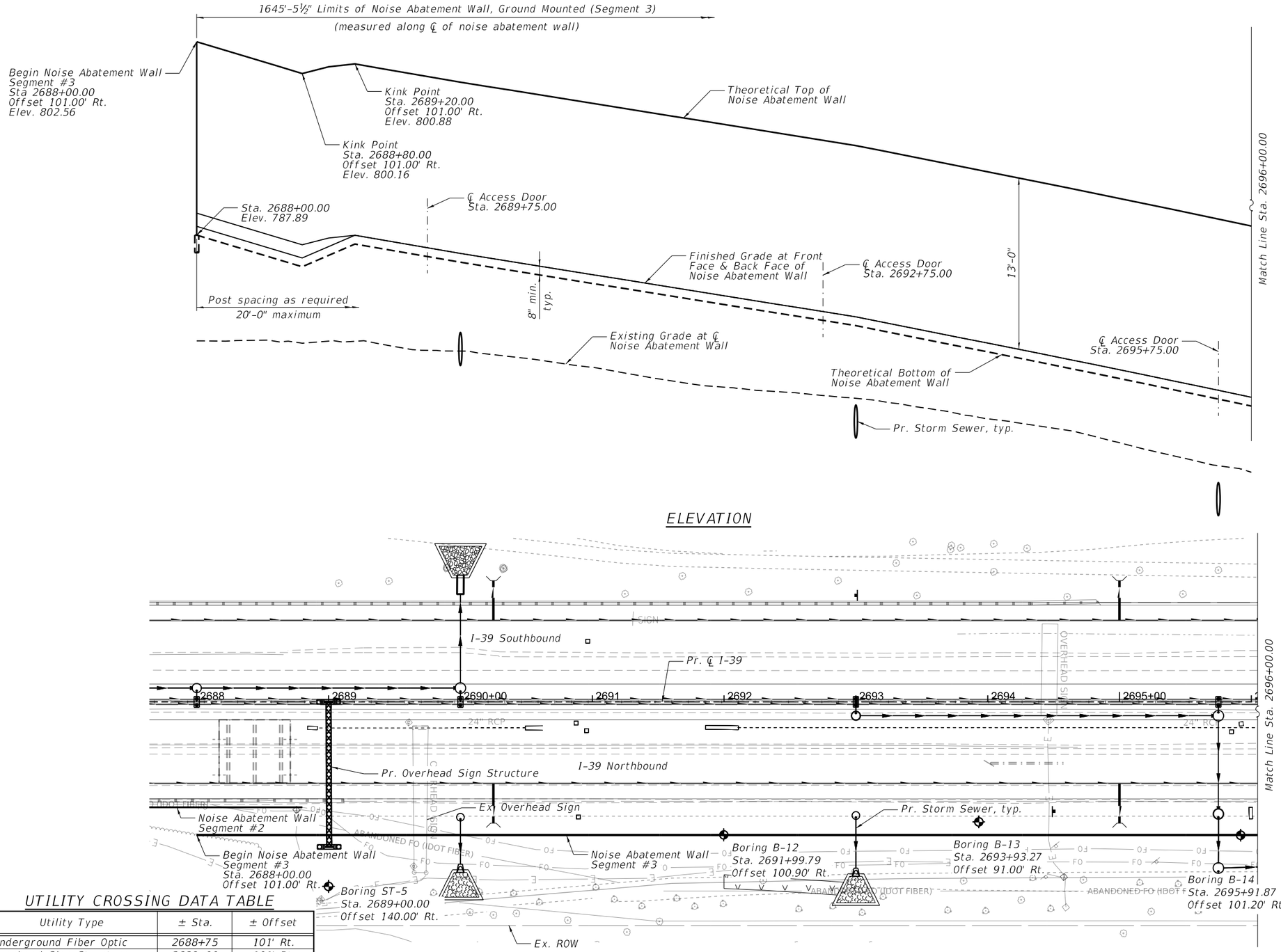
USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (3 OF 7)
STRUCTURE NO. 101-N7011
SHEET 3 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	816
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\108000s\108000.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-GPE3.dgn
5/8/2024 8:35:23 AM



UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Underground Fiber Optic	2688+75	101' Rt.
Overhead Sign Structure	2689+00	101' Rt.
Underground Fiber Optic	2689+17	101' Rt.
Underground Fiber Optic	2690+00	101' Rt.
Storm Sewer	2690+00	101' Rt.
Storm Sewer	2693+00	101' Rt.
Underground Electric	2694+46	101' Rt.
Storm Sewer	2695+75	101' Rt.

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ I-39 to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800\00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-GPE4.dgn

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

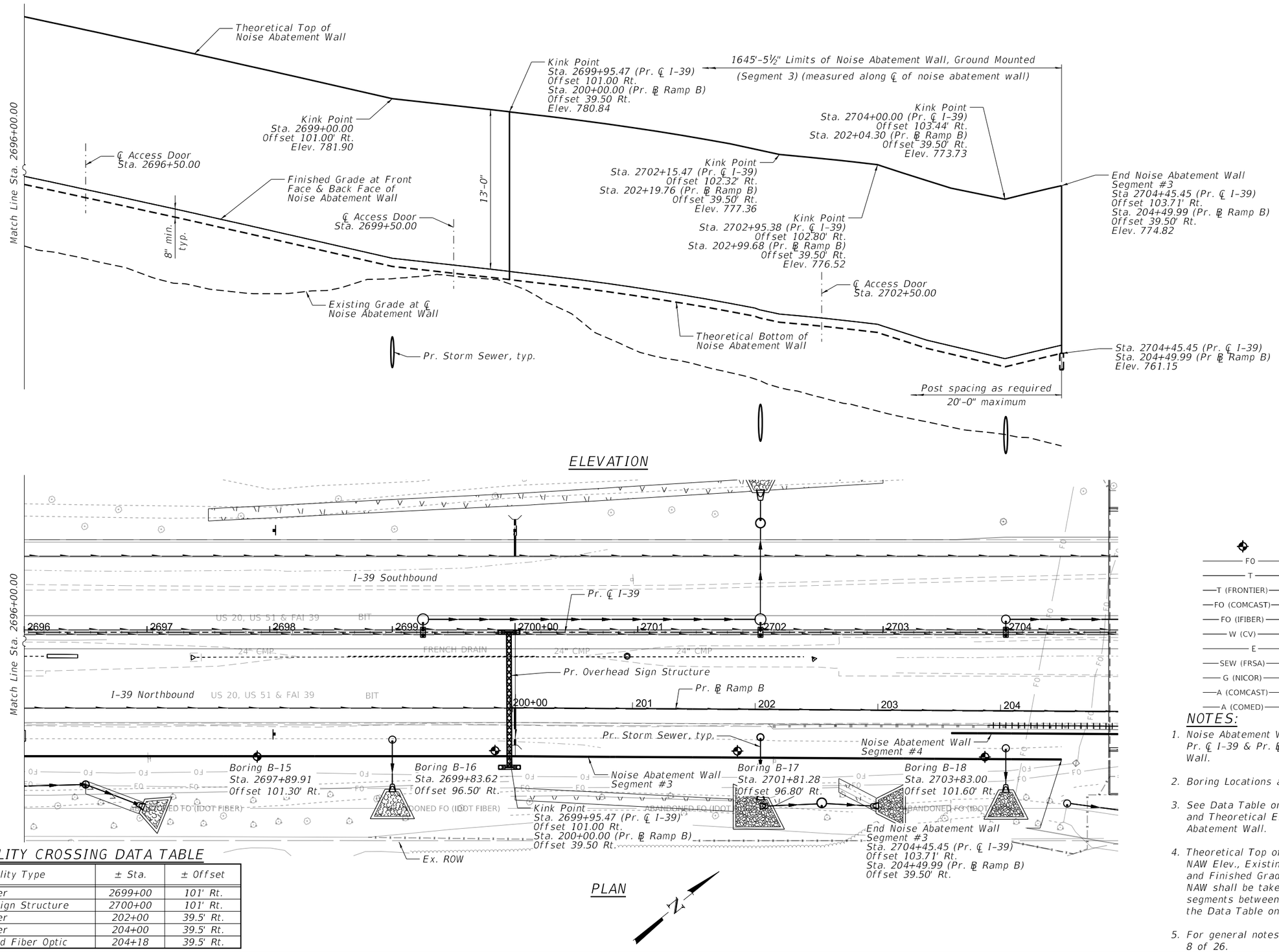
5/8/2024 8:35:31 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (4 OF 7)
STRUCTURE NO. 101-N7011

SHEET 4 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	817
			CONTRACT NO. 64C24	
		ILLINOIS	FED. AID PROJECT	



UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Storm Sewer	2699+00	101' Rt.
Overhead Sign Structure	2700+00	101' Rt.
Storm Sewer	202+00	39.5' Rt.
Storm Sewer	204+00	39.5' Rt.
Underground Fiber Optic	204+18	39.5' Rt.

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ I-39 & Pr. ℄ Ramp B to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

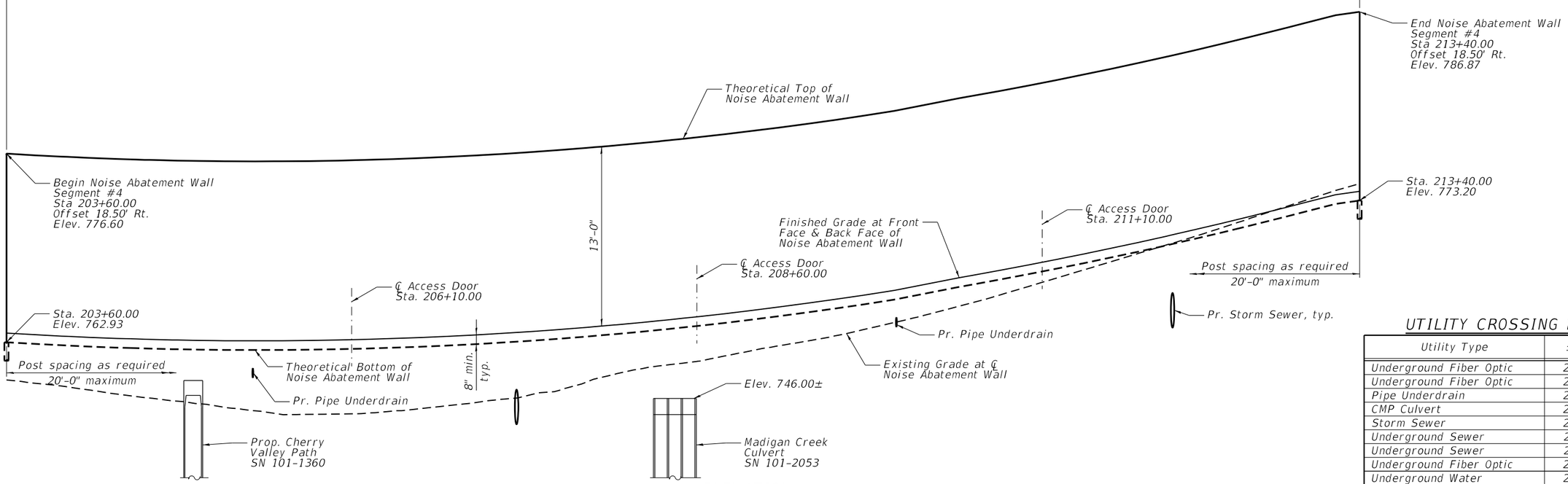
USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

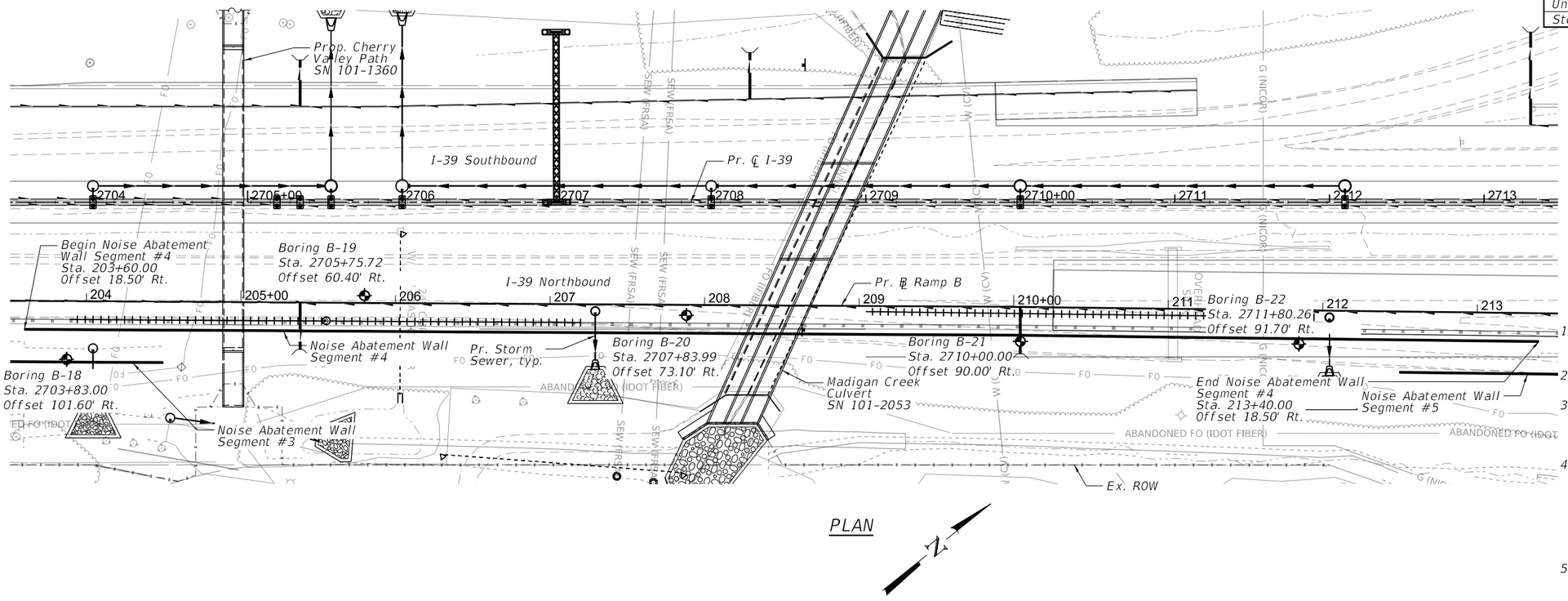
NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (5 OF 7)
STRUCTURE NO. 101-N7011
SHEET 5 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	818
			CONTRACT NO. 64C24	
		ILLINOIS	FED. AID PROJECT	

979'-10⅝" Limits of Noise Abatement Wall, Ground Mounted (Segment 4)
(measured along ℄ of noise abatement wall)



ELEVATION



PLAN

UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Underground Fiber Optic	204+22	18.50' Rt.
Underground Fiber Optic	204+68	18.50' Rt.
Pipe Underdrain	205+38	18.50' Rt.
CMP Culvert	206+03	18.50' Rt.
Storm Sewer	207+29	18.50' Rt.
Underground Sewer	207+51	18.50' Rt.
Underground Sewer	207+71	18.50' Rt.
Underground Fiber Optic	208+22	18.50' Rt.
Underground Water	209+85	18.50' Rt.
Pipe Underdrain	210+04	18.50' Rt.
Underground Gas	211+62	18.50' Rt.
Storm Sewer	212+04	18.50' Rt.

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ Ramp B to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

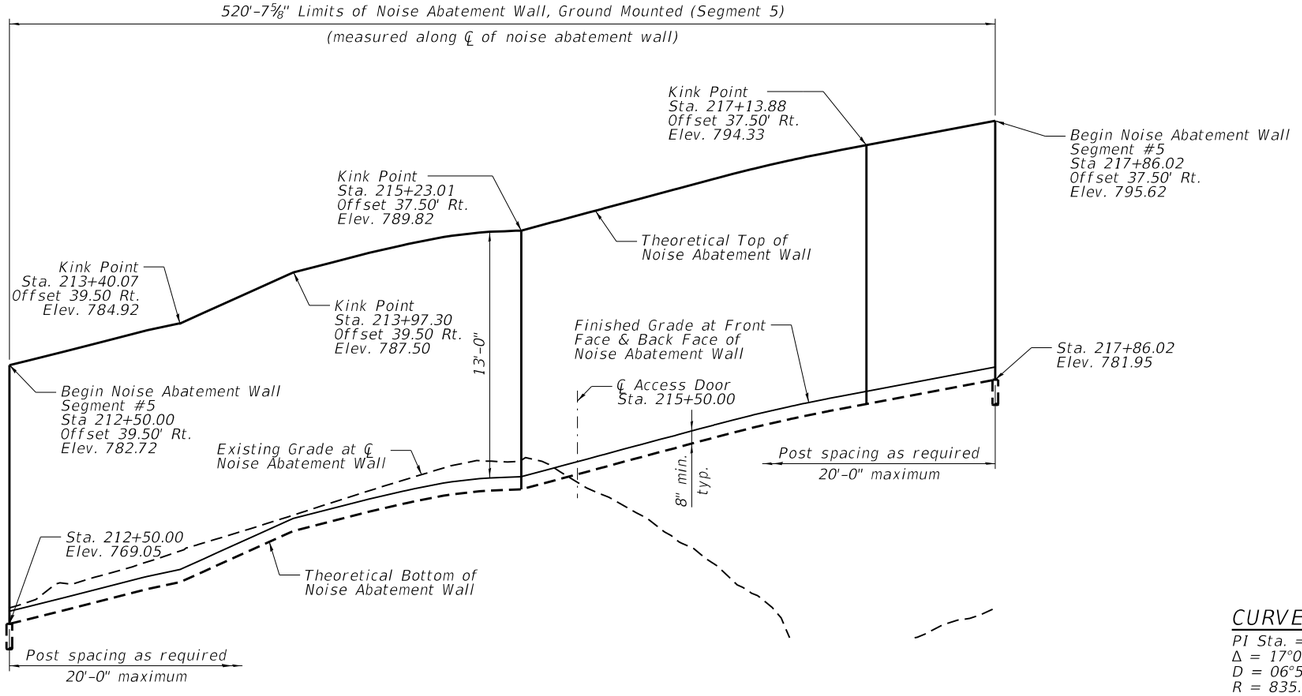
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (6 OF 7)
STRUCTURE NO. 101-N7011
SHEET 6 OF 26 SHEETS

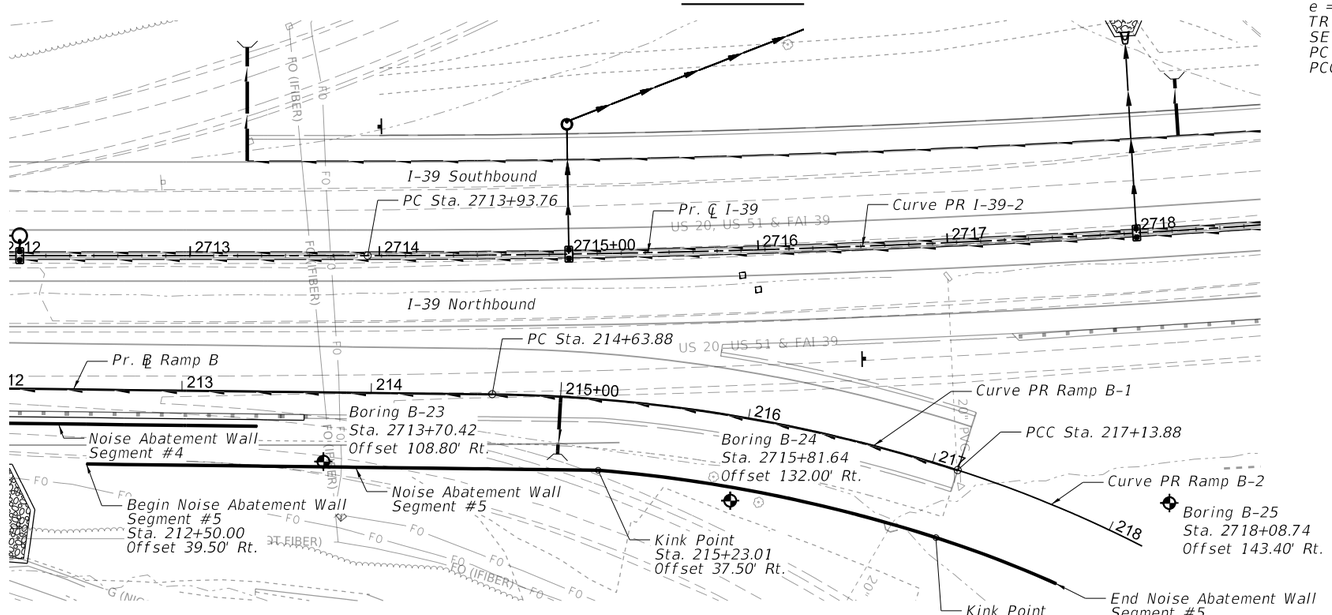
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	819
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800\s10800\s10800.001Eng_Docs\CAD_Sheets\SN W7011_Wall 8-101D264C24-101W7011-sht-GPE6.dgn

5/8/2024 8:35:50 AM



ELEVATION



PLAN

CURVE PR I-39-2

PI Sta. = 2724+62.27
Δ = 17°40'00" (Lt)
D = 00°50'00"
R = 6,875.65
T = 1,068.50
L = 2120.05
E = 82.53
e = 3.0%
TR = 84.00'
SE Run = 180.0'
PC Sta. = 2713+93.76
PT Sta. = 2735+13.81

CURVE PR RAMP B-1

PI Sta. = 215+89.82
Δ = 17°09'16" (Rt)
D = 06°51'42"
R = 835.00
T = 125.94
L = 250.00
E = 9.44
e = 6.0%
TR = N/A
SE Run = 162.0'
PC Sta. = 214+63.88
PCC Sta. = 217+13.88

CURVE PR RAMP B-2

PI Sta. = 218+11.86
Δ = 16°53'16" (Rt)
D = 08°40'52"
R = 660.00
T = 97.98
L = 194.53
E = 7.23
e = 6.0%
TR = 49.98'
SE Run = 200.0'
PCC Sta. = 217+13.88
PT Sta. = 219+08.41

LEGEND

- Noise Abatement Wall Soil Boring
- FO — Fiber Optic
- T — Underground Telephone
- T (FRONTIER) — Underground Telephone
- FO (COMCAST) — Underground Fiber Optic
- FO (IFIBER) — Underground Fiber Optic
- W (CV) — Underground Water
- E — Underground Electric
- SEW (FRSA) — Underground Sewer
- G (NICOR) — Underground Gas
- A (COMCAST) — Aerial Lines
- A (COMED) — Aerial Lines

UTILITY CROSSING DATA TABLE

Utility Type	± Sta.	± Offset
Underground Fiber Optic	213+79	39.50 Rt.
Underground Fiber Optic	213+85	39.50 Rt.
CMP Culvert	216+88	37.50 Rt.

NOTES:

1. Noise Abatement Wall offsets are measured from Pr. ℄ Ramp B to ℄ Noise Abatement Wall.
2. Boring Locations are measured from Pr. ℄ I-39.
3. See Data Table on sheets 9 to 11 of 26 for Offsets and Theoretical Elevations along the ℄ of Noise Abatement Wall.
4. Theoretical Top of NAW Elev., Theoretical Bottom of NAW Elev., Existing Grade Elev. at centerline of NAW and Finished Grade Elev. at front and back face of NAW shall be taken as straight lines in the segments between each pair of stations shown in the Data Table on sheet 9 to 11 of 26.
5. For general notes and name plate details, see sheet 8 of 26.

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\108000s\108000\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-GPE7.dgn
5/9/2024 2:04:35 PM

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -
	CHECKED - JHG	REVISED -
PLOT SCALE = NA	DRAWN - KMS	REVISED -
PLOT DATE = 5/9/2024	CHECKED - JHG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL PLAN AND ELEVATION (7 OF 7)
STRUCTURE NO. 101-N7011
SHEET 7 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1552	828
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES:

1. Contractor shall follow requirements of Special Provision for "Noise Abatement Wall, Structure Mounted" and Guide Bridge Special Provision "Noise Abatement Wall, Ground Mounted" for material, design, fabrication, construction and erection requirements of the proposed Noise Abatement Wall.

2. 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.

3. Noise Abatement Wall drilled shaft foundation diameter, depth and spacing to be determined by the Contractor.

4. Transparent panels shall be used for Structure Mounted Noise Abatement wall. See Special Provision for "Noise Abatement Wall, Structure Mounted" for further details.

5. 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:

6. 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.

7. 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.

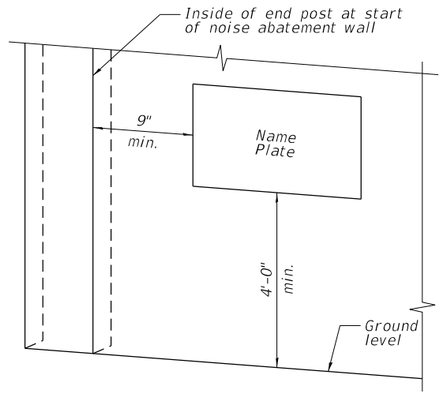
8. Form liners shall be used in accordance with the manufacturer's recommendations, including, but not limited to, installation and removal methods, form release agents, cleaning procedures, inspection procedures, repair procedures, curing methods, concrete slump requirements, and consolidation methods 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.

9. 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.

10. 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.

11. 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.

12. All excavation and grading below the finished grade elevation required for installaton of the Noise Abatment Wall elements shall be included in the cost of Noise Abatement Wall, Ground Mounted.



NAME PLATE LOCATION DETAIL

Noise Abatement Wall
Built 202_ by
State of Illinois
F.A.I. RT. 39
Sec. (201-3)R & (4-1, 5)R
From Sta. 2665+99.92 to Sta. 2699+95.47 (I-39)
Sta. 200+00.00 to Sta. 217+86.02 (Ramp B)
Structure No. 101-N7011

NAME PLATE - SN 101-N7011 NAW
(See Std. 515001)

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN LOADS

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

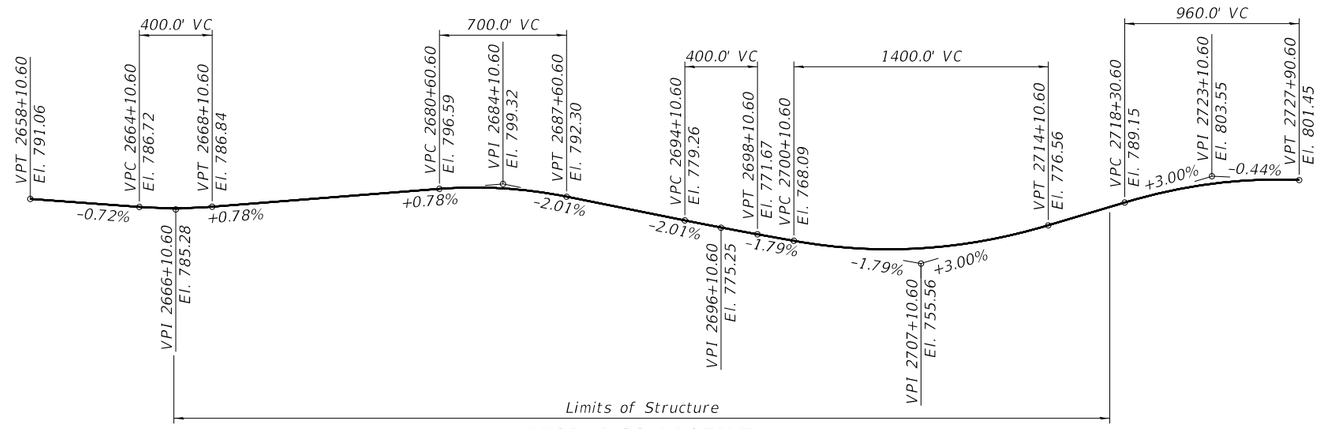
DESIGN STRESSES

FIELD UNITS

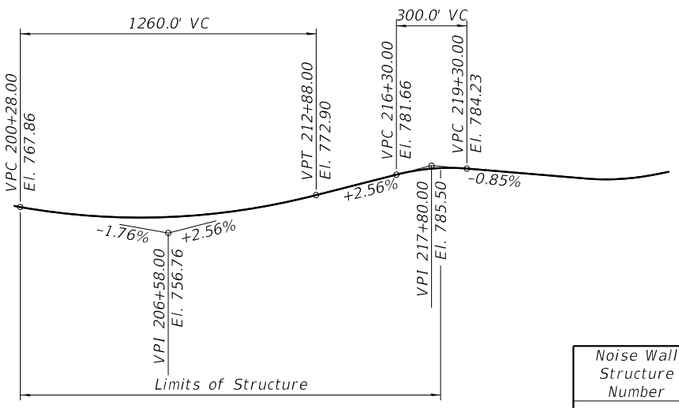
f'c = 4,000 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Struct. Steel, M270 Grade 50, posts)
fy = 36,000 psi (Struct. Steel, M270 Grade 36, all other structural steel)

PRECAST UNITS

f'c = 4,500 psi
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Reinforcement)



PROP. I-39 PROFILE



PROP. RAMP B PROFILE

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Name Plates	Each	1
Noise Abatement Wall, Ground Mounted	Sq. Ft.	70,937
Noise Abatement Wall, Structure Mounted	Sq. Ft.	2,882

NOISE REDUCTION DATA TABLE

Noise Wall Structure Number	Face	From Sta.	To Sta.	Noise Reduction Coefficient	Comments
101-N7011	I-39 Face	2665+99.92	2699+95.47	Reflective	
	Residential Face	2665+99.92	2699+95.47	Reflective	
	Ramp B Face	200+00.00	217+86.02	Reflective	
	Residential Face	200+00.00	217+86.02	Reflective	

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\108000s\108000.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-GenDtls1.dgn
5/8/2024 8:36:10 AM

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider | DESIGNED - KMS | REVISED -
CHECKED - JHG | REVISED -
PLOT SCALE = NA | DRAWN - KMS | REVISED -
PLOT DATE = 5/8/2024 | CHECKED - JHG | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL DETAILS (1 OF 6)
STRUCTURE NO. 101-N7011
SHEET 8 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	821
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #1 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
	2665+99.92	101.00 Rt.	800.29	784.20	787.29	787.29	786.62	13.67
	2666+19.92	101.00 Rt.	800.50	784.94	787.50	787.50	786.84	13.67
	2666+39.92	101.00 Rt.	800.72	784.95	787.72	787.72	787.05	13.67
	2666+59.92	101.00 Rt.	800.89	785.02	787.89	787.89	787.23	13.67
	2666+79.92	101.00 Rt.	801.07	784.99	788.07	788.07	787.40	13.67
	2666+99.92	101.00 Rt.	801.21	784.95	788.21	788.21	787.54	13.67
	2667+19.92	101.00 Rt.	801.34	784.91	788.34	788.34	787.68	13.67
	2667+39.92	101.00 Rt.	801.44	784.85	788.44	788.44	787.77	13.67
	2667+59.92	101.00 Rt.	801.54	784.90	788.54	788.54	787.87	13.67
	2667+79.92	101.00 Rt.	801.59	784.98	788.59	788.59	787.92	13.67
	2667+99.92	101.00 Rt.	801.65	785.05	788.65	788.65	787.98	13.67
	2668+19.92	101.00 Rt.	801.68	785.24	788.68	788.68	788.01	13.67
	2668+39.92	101.00 Rt.	801.70	785.43	788.70	788.70	788.03	13.67
	2668+59.92	101.00 Rt.	801.73	785.62	788.73	788.73	788.06	13.67
	2668+79.92	101.00 Rt.	801.75	785.85	788.75	788.75	788.08	13.67
**	2668+99.92	101.00 Rt.	801.78	786.09	788.78	788.78	788.11	13.67
	2669+19.92	101.00 Rt.	801.92	786.14	788.92	788.92	788.25	13.67
	2669+39.92	101.00 Rt.	802.06	786.17	789.06	789.06	788.39	13.67
	2669+59.92	101.00 Rt.	802.20	786.21	789.20	789.20	788.54	13.67
	2669+79.92	101.00 Rt.	802.34	786.27	789.34	789.34	788.68	13.67
	2669+99.92	101.00 Rt.	802.49	786.34	789.49	789.49	788.82	13.67
	2670+19.92	101.00 Rt.	802.63	786.45	789.63	789.63	788.96	13.67
	2670+39.92	101.00 Rt.	802.77	786.56	789.77	789.77	789.10	13.67
	2670+59.92	101.00 Rt.	802.91	786.68	789.91	789.91	789.25	13.67
	2670+79.92	101.00 Rt.	803.05	786.74	790.05	790.05	789.39	13.67
**	2670+99.92	101.00 Rt.	803.20	786.80	790.20	790.20	789.53	13.67
	2671+19.92	101.00 Rt.	803.22	786.83	790.22	790.22	789.56	13.67
	2671+39.92	101.00 Rt.	803.25	786.94	790.25	790.25	789.58	13.67
	2671+59.92	101.00 Rt.	803.27	786.99	790.27	790.27	789.61	13.67
	2671+79.92	101.00 Rt.	803.30	787.05	790.30	790.30	789.63	13.67
**	2671+99.92	101.00 Rt.	803.32	787.15	790.32	790.32	789.66	13.67
	2672+19.92	101.00 Rt.	803.47	787.08	790.47	790.47	789.80	13.67
	2672+39.92	101.00 Rt.	803.61	786.86	790.61	790.61	789.94	13.67
	2672+59.92	101.00 Rt.	803.75	786.74	790.75	790.75	790.08	13.67
	2672+79.92	101.00 Rt.	803.89	786.78	790.89	790.89	790.22	13.67
	2672+99.92	101.00 Rt.	804.03	786.80	791.03	791.03	790.37	13.67
	2673+19.92	101.00 Rt.	804.18	786.78	791.18	791.18	790.51	13.67
	2673+39.92	101.00 Rt.	804.32	786.81	791.32	791.32	790.65	13.67
	2673+59.92	101.00 Rt.	804.46	786.91	791.46	791.46	790.79	13.67
	2673+79.92	101.00 Rt.	804.60	787.02	791.60	791.60	790.93	13.67
	2673+99.92	101.00 Rt.	804.74	787.10	791.74	790.75	790.08	14.66
	2674+19.92	101.00 Rt.	804.89	787.19	791.89	790.89	790.22	14.67
	2674+39.92	101.00 Rt.	805.03	787.23	792.03	791.03	790.36	14.67
	2674+59.92	101.00 Rt.	805.17	787.21	792.17	791.17	790.50	14.67
	2674+79.92	101.00 Rt.	805.31	787.17	792.31	791.31	790.64	14.67
	2674+99.92	101.00 Rt.	805.45	787.15	792.45	791.45	790.79	14.67
	2675+19.92	101.00 Rt.	805.60	787.06	792.60	791.60	790.93	14.67
	2675+39.92	101.00 Rt.	805.74	786.95	792.74	791.74	791.07	14.67
	2675+59.92	101.00 Rt.	805.88	786.74	792.88	791.88	791.21	14.67
	2675+79.92	101.00 Rt.	806.02	786.63	793.02	792.02	791.35	14.67
	2675+99.92	101.00 Rt.	806.16	786.52	793.16	792.16	791.50	14.67
	2676+19.92	101.00 Rt.	806.31	786.50	793.31	792.31	791.64	14.67
	2676+39.92	101.00 Rt.	806.45	786.51	793.45	792.45	791.78	14.67
	2676+59.92	101.00 Rt.	806.59	786.57	793.59	792.59	791.92	14.67
	2676+79.92	101.00 Rt.	806.73	786.70	793.73	792.73	792.06	14.67
	2676+99.92	101.00 Rt.	806.87	786.87	793.87	792.87	792.21	14.67
	2677+19.92	101.00 Rt.	807.02	786.95	794.02	793.02	792.35	14.67
	2677+39.92	101.00 Rt.	807.16	786.98	794.16	793.16	792.49	14.67
	2677+59.92	101.00 Rt.	807.30	786.94	794.30	793.30	792.63	14.67
	2677+79.92	101.00 Rt.	807.44	786.82	794.44	793.44	792.77	14.67
	2677+99.92	101.00 Rt.	807.58	786.68	794.58	793.58	792.92	14.67
	2678+19.92	101.00 Rt.	807.73	786.61	794.73	793.73	793.06	14.67
	2678+39.92	101.00 Rt.	807.87	786.64	794.87	793.87	793.20	14.67
	2678+59.92	101.00 Rt.	808.01	786.65	795.01	794.01	793.34	14.67
	2678+79.92	101.00 Rt.	808.15	786.63	795.15	794.15	793.48	14.67
**	2678+99.92	101.00 Rt.	808.29	786.64	795.29	794.29	793.63	14.67
**	2679+19.92	101.00 Rt.	807.88	786.50	794.88	793.88	793.21	14.67
	2679+39.92	101.00 Rt.	808.02	786.25	795.02	794.02	793.35	14.67
	2679+59.92	101.00 Rt.	808.16	786.08	795.16	794.16	793.49	14.67
	2679+79.92	101.00 Rt.	808.30	785.86	795.30	794.30	793.63	14.67
	2679+99.92	101.00 Rt.	808.44	785.80	795.44	794.44	793.78	14.67
	2680+19.92	101.00 Rt.	808.59	785.42	795.59	794.59	793.92	14.67
	2680+39.92	101.00 Rt.	808.73	785.07	795.73	794.73	794.06	14.67
**	2680+49.92	101.00 Rt.	808.80	784.89	795.80	794.80	794.13	14.67
	2680+59.92	101.00 Rt.	808.21	784.69	795.21	794.21	793.54	14.67
**	2680+69.92	101.00 Rt.	807.91	784.73	794.91	793.91	793.24	14.67
	2680+79.92	101.00 Rt.	807.99	784.76	794.99	793.99	793.32	14.67
	2680+99.92	101.00 Rt.	808.16	784.71	795.16	794.16	793.49	14.67
	2681+19.92	101.00 Rt.	808.34	784.54	795.34	794.34	793.67	14.67
	2681+39.92	101.00 Rt.	808.54	784.42	795.54	794.54	793.88	14.67
	2681+50.00	101.00 Rt.	808.65	784.33	795.65	794.65	793.98	14.67

** Kink Point

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #2 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
	2680+70.00	80.00 Rt.	809.22	793.95	796.22	796.22	795.55	13.67
	2680+90.00	80.00 Rt.	809.36	793.97	796.36	796.36	795.69	13.67
	2681+10.00	80.00 Rt.	809.48	793.92	796.48	796.48	795.81	13.67
	2681+30.00	80.00 Rt.	809.59	793.90	796.59	796.59	795.92	13.67
	2681+50.00	80.00 Rt.	809.68	793.88	796.68	796.68	796.02	13.67
	2681+70.00	80.00 Rt.	809.76	793.95	796.76	796.76	796.09	13.67
	2681+90.00	80.00 Rt.	809.82	794.02	796.82	796.82	796.15	13.67
	2682+10.00	80.00 Rt.	809.87	793.94	796.87	796.87	796.20	13.67
	2682+30.00	80.00 Rt.	809.90	793.70	796.90	796.90	796.23	13.67
	2682+50.00	80.00 Rt.	809.96	793.42	796.96	796.96	796.29	13.67
	2682+70.00	80.00 Rt.	810.04	793.18	797.04	797.04	796.37	13.67
	2682+90.00	80.00 Rt.	810.10	793.04	797.10	797.10	796.43	13.67
	2683+10.00	80.00 Rt.	810.10	792.83	797.10	797.10	796.43	13.67
	2683+30.00	80.00 Rt.	810.05	792.59	797.05	797.05	796.38	13.67
**	2683+32.28	80.00 Rt.	810.04	792.55	797.04	797.04	796.37	13.67
	2683+34.72	76.27 Rt.	810.03	794.02	797.03	797.03	796.36	13.67

** Kink Point

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #2 (STRUCTURE MOUNTED)

Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Elev. at Toe of Barrier	Theor. Bottom of NAW Elev.	Theor. Wall Height
2683+34.72	76.27 Rt.	809.99	796.99	802.49	7.50
2683+54.72	76.27 Rt.	809.92	796.92	802.42	7.50
2683+74.72	76.27 Rt.	809.83	796.83	802.33	7.50
2683+94.72	76.27 Rt.	809.73	796.73	802.23	7.50
2684+14.72	76.27 Rt.	809.61	796.61	802.11	7.50
2684+34.72	76.27 Rt.	809.48	796.48	801.98	7.50
2684+54.72	76.27 Rt.	809.33	796.33	801.83	7.50
2684+74.72	76.27 Rt.	809.16	796.16	801.66	7.50
2684+94.72	76.27 Rt.	808.98	795.98	801.48	7.50
2685+14.72	76.27 Rt.	808.78	795.78	801.28	7.50
2685+34.72	76.27 Rt.	808.57	795.57	801.07	7.50
2685+54.72	76.27 Rt.	808.34	795.34	800.84	7.50
2685+74.72	76.27 Rt.	808.10	795.10	800.60	7.50
2685+94.72	76.27 Rt.	807.83	794.83	800.33	7.50
2686+14.72	76.27 Rt.	807.56	794.56	800.06	7.50
2686+34.72	76.27 Rt.	807.26	794.26	799.76	7.50
2686+54.72	76.27 Rt.	806.96	793.96	799.46	7.50
2686+74.72	76.27 Rt.	806.63	793.63	799.13	7.50
2686+94.72	76.27 Rt.	806.29	793.29	798.79	7.50
2687+14.72	76.27 Rt.	805.93	792.93	798.43	7.50
2687+18.95	76.27 Rt.	805.85	792.85	798.35	7.50

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #2 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
	2687+18.95	76.27 Rt.	805.85	790.43	792.93	792.93	792.18	13.67
**	2687+21.39	80.00 Rt.	805.85	789.02	792.85	795.85	792.18	13.67
	2687+39.93	80.00 Rt.	805.55	788.68	792.55	792.55	791.88	13.67
	2687+56.93	80.00 Rt.	805.09	788.38	792.09	792.09	791.42	13.67
	2687+76.93	80.00 Rt.	804.61	788.27	791.61	791.61	790.94	13.67
	2687+96.93	80.00 Rt.	804.14	788.14	791.14	791.14	790.47	13.67
	2688+16.93	80.00 Rt.	803.73	787.94	790.73	790.73	790.06	13.67
	2688+36.93	80.00 Rt.	803.33	787.79	790.33	790.33	789.66	13.67
	2688+56.93	80.00 Rt.	802.93	787.44	789.93	789.93	789.26	13.67
	2688+76.93	80.00 Rt.	802.53	787.01	789.53	789.53	788.86	13.67
	2688+80.00	80.00 Rt.	802.47	786.93	789.47	789.47	788.80	13.67

** Kink Point

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #3 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
	2688+00.00	101.00 Rt.	802.56	779.87	789.56	788.56	787.89	14.67
	2688+20.00	101.00 Rt.	801.96	779.84	788.96	787.96	787.29	14.67
	2688+40.00	101.00 Rt.	801.36	779.91	788.36	787.36	786.69	14.67
	2688+60.00	101.00 Rt.	800.76	779.83	787.76	786.76	786.09	14.67
**	2688+80.00	101.00 Rt.	800.16	779.69	787.16	786.16	785.49	14.67
	2689+00.00	101.00 Rt.	800.66	779.85	787.66	786.66	786.00	14.67
**	2689+20.00	101.00 Rt.	800.88	779.83	787.88	787.88	787.21	13.67
	2689+40.00	101.00 Rt.	800.53	779.62	787.53	787.53	786.87	13.67
	2689+60.00	101.00 Rt.	800.19	779.26	787.19	787.19	786.52	13.67
	2689+80.00	101.00 Rt.	799.84	779.14	786.84	786.84	786.18	13.67
	2690+00.00	101.00 Rt.	799.50	779.09	786.50	786.50	785.83	13.67
	2690+20.00	101.00 Rt.	799.18	778.87	786.18	786.18	785.51	13.67
	2690+40.00	101.00 Rt.	798.86	778.65	785.86	785.86	785.19	13.67
	2690+60.00	101.00 Rt.	798.53	778.41	785.53	785.53	784.87	13.67
	2690+80.00	101.00 Rt.	798.21	778.11	785.21	785.21	784.55	13.67
	2691+00.00	101.00 Rt.	797.89	777.85	784.89	784.89	784.23	13.67
	2691+20.00	101.00 Rt.	797.57	777.51	784.57	784.57	783.91	13.67
	2691+40.00	101.00 Rt.	797.25	777.16	784.25	784.25	783.59	13.67
	2691+60.00	101.00 Rt.	796.93	776.84	783.93	783.93	783.26	13.67
	2691+80.00	101.00 Rt.	796.61	776.53	783.61	783.61	782.94	13.67
	2692+00.00	101.00 Rt.	796.29	776.35	783.29	783.29	782.62	13.67
	2692+20.00	101.00 Rt.	795.97	776.16	782.97	782.97	782.30	13.67
	2692+40.00	101.00 Rt.	795.65	776.02	782.65	782.65	781.98	13.67
	2692+60.00	101.00 Rt.	795.33	775.87	782.33	782.33	781.66	13.67
	2692+80.00	101.00 Rt.	795.01	775.68	782.01	782.01	781.34	13.67
	2693+00.00	101.00 Rt.	794.69	775.50	781.69	781.69	781.02	13.67
	2693+20.00	101.00 Rt.	794.29	775.27	781.29	781.29	780.62	13.67
	2693+40.00	101.00 Rt.	793.89	774.97	780.89	780.89	780.22	13.67
	2693+60.00	101.00 Rt.	793.49	774.65	780.49	780.49	779.82	13.67
	2693+80.00	101.00 Rt.	793.09	774.29	780.09	780.09	779.43	13.67
	2694+00.00	101.00 Rt.	792.69	773.95	779.69	779.69	779.03	13.67
	2694+20.00	101.00 Rt.	792.30	773.69	779.30	779.30	778.63	13.67
	2694+40.00	101.00 Rt.	791.89	773.39	778.89	778.89	778.23	13.67
	2694+60.00	101.00 Rt.	791.49	773.09	778.49	778.49	777.82	13.67
	2694+80.00	101.00 Rt.	791.08	772.64	778.08	778.08	777.42	13.67
	2695+00.00	101.00 Rt.	790.67	772.13	777.67	777.67	777.01	13.67
	2695+20.00	101.00 Rt.	790.26	771.62	777.26	777.26	776.59	13.67
	2695+40.00	101.00 Rt.	789.84	771.17	776.84	776.84	776.18	13.67
	2695+60.00	101.00 Rt.	789.43	770.70	776.43	776.43	775.76	13.67
	2695+80.00	101.00 Rt.	789.00	770.32	776.00	776.00	775.34	13.67
	2696+00.00	101.00 Rt.	788.58	769.90	775.58	775.58	774.91	13.67
	2696+20.00	101.00 Rt.	788.15	769.45	775.15	775.15	774.49	13.67
	2696+40.00	101.00 Rt.	787.72	769.08	774.72	774.72	774.06	13.67
	2696+60.00	101.00 Rt.	787.29	768.61	774.29	774.29	773.62	13.67
	2696+80.00	101.00 Rt.	786.86	768.19	773.86	773.86	773.19	13.67
	2697+00.00	101.00 Rt.	786.42	767.49	773.42	773.42	772.75	13.67
	2697+20.00	101.00 Rt.	785.98	766.90	772.98	772.98	772.31	13.67
	2697+40.00	101.00 Rt.	785.53	766.63	772.53	772.53	771.86	13.67
	2697+60.00	101.00 Rt.	785.08	766.28	772.08	772.08	771.42	13.67
	2697+80.00	101.00 Rt.	784.63	766.06	771.63	771.63	770.97	13.67
	2698+00.00	101.00 Rt.	784.18	766.01	771.18	771.18	770.51	13.67
	2698+20.00	101.00 Rt.	783.72	766.09	770.72	770.72	770.06	13.67
	2698+40.00	101.00 Rt.	783.27	766.26	770.27	770.27	769.60	13.67
	2698+60.00	101.00 Rt.	782.81	766.55	769.81	769.81	769.15	13.67
	2698+80.00	101.00 Rt.	782.36	767.18	769.36	769.36	768.69	13.67
**	2699+00.00	101.00 Rt.	781.90	767.24	768.90	768.90	768.23	13.67
	2699+20.00	101.00 Rt.	781.68	767.40	768.68	768.68	768.01	13.67
	2699+40.00	101.00 Rt.	781.46	767.56	768.46	768.46	767.79	13.67
	2699+60.00	101.00 Rt.	781.23	767.35	768.23	768.23	767.57	13.67
	2699+80.00	101.00 Rt.	781.01	767.20	768.01	768.01	767.34	13.67

** Kink Point

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #3 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
**	2699+95.47	101.00 Rt.	780.84	766.82	767.84	767.84	767.17	13.67
*	200+00.00	39.50 Rt						
	2700+00.00	101.03 Rt.	780.77	766.66	767.77	767.77	767.10	13.67
*	200+04.53	39.50 Rt.						
	2700+20.00	101.15 Rt.	780.54	765.69	767.54	767.54	766.87	13.67
*	200+24.53	39.50 Rt.						
	2700+40.00	101.27 Rt.	780.30	764.67	767.30	767.30	766.64	13.67
*	200+44.53	39.50 Rt.						
	2700+60.00	101.39 Rt.	780.05	763.26	767.05	767.05	766.38	13.67
*	200+64.53	39.50 Rt.						
	2700+80.00	101.51 Rt.	779.78	762.21	766.78	766.78	766.11	13.67
*	200+84.53	39.50 Rt.						
	2701+00.00	101.63 Rt.	779.48	761.30	766.48	766.48	765.82	13.67
*	201+04.53	39.50 Rt.						
	2701+20.00	101.75 Rt.	779.17	760.79	766.17	766.17	765.51	13.67
*	201+24.53	39.50 Rt.						
	2701+40.00	101.87 Rt.	778.85	760.44	765.85	765.85	765.18	13.67
*	201+44.53	39.50 Rt.						
	2701+60.00	101.99 Rt.	778.50	759.92	765.50	765.50	764.83	13.67
*	201+64.53	39.50 Rt.						
	2701+80.00	102.11 Rt.	778.14	759.47	765.14	765.14	764.47	13.67
*	201+84.53	39.50 Rt.						
	2702+00.00	102.23 Rt.	777.69	758.91	764.69	764.69	764.02	13.67
*	202+04.53	39.50 Rt.						
**	2702+15.47	102.32 Rt.	777.36	758.36	764.36	764.36	763.69	13.67
*	202+19.76	39.50 Rt.						
	2702+20.00	102.35 Rt.	777.31	758.26	764.31	764.31	763.65	13.67
*	202+24.53	39.50 Rt.						
	2702+40.00	102.47 Rt.	777.13	757.81	764.13	764.13	763.46	13.67
*	202+44.53	39.50 Rt.						
	2702+60.00	102.59 Rt.	776.92	757.28	763.92	763.92	763.26	13.67
*	202+64.53	39.50 Rt.						
	2702+80.00	102.71 Rt.	776.70	756.86	763.70	763.70	763.04	13.67
*	202+84.53	39.50 Rt.						
**	2702+95.38	102.80 Rt.	776.52	756.45	763.52	763.52	762.85	13.67
*	202+99.68	39.50 Rt.						
	2703+00.00	102.83 Rt.	776.37	756.33	763.37	763.37	762.70	13.67
*	203+04.53	39.50 Rt.						
	2703+20.00	102.95 Rt.	775.73	755.89	762.73	762.73	762.06	13.67
*	203+24.53	39.50 Rt.						
	2703+40.00	103.07 Rt.	775.09	755.48	762.09	762.09	761.42	13.67
*	203+44.53	39.50 Rt.						
	2703+60.00	103.20 Rt.	774.52	755.04	761.52	761.52	760.85	13.67
*	203+64.53	39.50 Rt.						
	2703+80.00	103.32 Rt.	774.11	754.77	761.11	761.11	760.44	13.67
*	203+84.53	39.50 Rt.						
**	2704+00.00	103.44 Rt.	773.73	754.53	760.73	760.73	760.06	13.67
*	204+04.30	39.50 Rt.						
	2704+20.00	103.56 Rt.	774.22	754.25	761.22	761.22	760.55	13.67
*	204+24.53	39.50 Rt.						
	2704+40.00	103.67 Rt.	774.69	753.75	761.69	761.69	761.02	13.67
*	204+44.53	39.50 Rt.						
	2704+45.45	103.71 Rt.	774.82	753.61	761.82	761.82	761.15	13.67
*	204+49.99	39.50 Rt.						

* ℄ Ramp B

** Kink Point

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #4 (GROUND MOUNTED)

Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
203+60.00	18.50 Rt.	776.50	760.21	763.50	763.50	762.84	13.67
203+80.00	18.50 Rt.	776.49	759.97	763.49	763.49	762.82	13.67
204+00.00	18.50 Rt.	776.38	759.76	763.38	763.38	762.72	13.67
204+20.00	18.50 Rt.	776.29	759.47	763.29	763.29	762.63	13.67
204+40.00	18.50 Rt.	776.22	759.18	763.22	763.22	762.55	13.67
204+60.00	18.50 Rt.	776.15	758.93	763.15	763.15	762.49	13.67
204+80.00	18.50 Rt.	776.10	758.69	763.10	763.10	762.44	13.67
205+00.00	18.50 Rt.	776.07	758.48	763.07	763.07	762.40	13.67
205+20.00	18.50 Rt.	776.05	758.19	763.05	763.05	762.38	13.67
205+40.00	18.50 Rt.	776.04	757.97	763.04	763.04	762.37	13.67
205+60.00	18.50 Rt.	776.04	757.70	763.04	763.04	762.38	13.67
205+80.00	18.50 Rt.	776.06	757.71	763.06	763.06	762.40	13.67
206+00.00	18.50 Rt.	776.10	757.74	763.10	763.10	762.43	13.67
206+20.00	18.50 Rt.	776.14	757.79	763.14	763.14	762.48	13.67
206+40.00	18.50 Rt.	776.20	757.95	763.20	763.20	762.54	13.67
206+60.00	18.50 Rt.	776.28	758.13	763.28	763.28	762.61	13.67
206+80.00	18.50 Rt.	776.37	758.34	763.37	763.37	762.70	13.67
207+00.00	18.50 Rt.	776.47	758.57	763.47	763.47	762.80	13.67
207+20.00	18.50 Rt.	776.58	758.81	763.58	763.58	762.92	13.67
207+40.00	18.50 Rt.	776.71	759.14	763.71	763.71	763.05	13.67
207+60.00	18.50 Rt.	776.86	759.44	763.86	763.86	763.19	13.67
207+80.00	18.50 Rt.	777.01	760.05	764.01	764.01	763.35	13.67
208+00.00	18.50 Rt.	777.18	760.60	764.18	764.18	763.52	13.67
208+20.00	18.50 Rt.	777.37	761.01	764.37	764.37	763.70	13.67
208+40.00	18.50 Rt.	777.57	761.31	764.57	764.57	763.90	13.67
208+60.00	18.50 Rt.	777.78	761.55	764.78	764.78	764.11	13.67
208+80.00	18.50 Rt.	778.00	761.94	765.00	765.00	764.34	13.67
209+00.00	18.50 Rt.	778.24	762.34	765.24	765.24	764.58	13.67
209+20.00	18.50 Rt.	778.50	762.69	765.50	765.50	764.83	13.67
209+40.00	18.50 Rt.	778.76	763.03	765.76	765.76	765.10	13.67
209+60.00	18.50 Rt.	779.04	763.40	766.04	766.04	765.38	13.67
209+80.00	18.50 Rt.	779.34	763.84	766.34	766.34	765.67	13.67
210+00.00	18.50 Rt.	779.65	764.30	766.65	766.65	765.98	13.67
210+20.00	18.50 Rt.	779.97	764.77	766.97	766.97	766.30	13.67
210+40.00	18.50 Rt.	780.44	765.29	767.44	767.44	766.78	13.67
210+60.00	18.50 Rt.	780.79	765.81	767.79	767.79	767.13	13.67
210+80.00	18.50 Rt.	781.16	766.38	768.16	768.16	767.49	13.67
211+00.00	18.50 Rt.	781.53	766.98	768.53	768.53	767.86	13.67
211+20.00	18.50 Rt.	781.92	767.57	768.92	768.92	768.25	13.67
211+40.00	18.50 Rt.	782.33	768.17	769.33	769.33	768.66	13.67
211+60.00	18.50 Rt.	782.74	768.78	769.74	769.74	769.08	13.67
211+80.00	18.50 Rt.	783.17	769.38	770.17	770.17	769.51	13.67
212+00.00	18.50 Rt.	783.62	769.98	770.62	770.62	769.95	13.67
212+20.00	18.50 Rt.	784.08	770.59	771.08	771.08	770.41	13.67
212+40.00	18.50 Rt.	784.55	771.23	771.55	771.55	770.88	13.67
212+60.00	18.50 Rt.	785.04	771.89	772.04	772.04	771.37	13.67
212+80.00	18.50 Rt.	785.54	772.55	772.54	772.54	771.87	13.67
213+00.00	18.50 Rt.	786.05	773.20	773.05	773.05	772.38	13.67
213+20.00	18.50 Rt.	786.56	773.85	773.56	773.56	772.89	13.67
213+40.00	18.50 Rt.	786.87	774.42	773.87	773.87	773.20	13.67

NOISE ABATEMENT WALL DATA TABLE – SEGMENT #5 (GROUND MOUNTED)

	Station	Offset to ℄ Wall (ft.)	Theor. Top of NAW Elev.	Exist. Grade Elev. at ℄ of NAW	Finished Grade Elev. at Front Face NAW	Finished Grade Elev. at Back Face NAW	Theor. Bottom of NAW Elev.	Theor. Wall Height
	212+50.00	39.50 Rt.	782.72	769.90	769.72	769.72	769.05	13.67
	212+70.00	39.50 Rt.	783.21	770.81	770.21	770.21	769.55	13.67
	212+90.00	39.50 Rt.	784.00	771.36	771.00	771.00	770.33	13.67
	213+10.00	39.50 Rt.	784.23	771.92	771.23	771.23	770.56	13.67
	213+30.00	39.50 Rt.	784.71	772.56	771.71	771.71	771.04	13.67
**	213+40.07	39.50 Rt.	784.92	772.90	771.92	771.92	771.25	13.67
	213+50.00	39.50 Rt.	785.37	773.25	772.37	772.37	771.70	13.67
	213+70.00	39.50 Rt.	786.27	773.85	773.27	773.27	772.60	13.67
	213+90.00	39.50 Rt.	787.17	774.48	774.17	774.17	773.50	13.67
**	213+97.30	39.50 Rt.	787.50	774.71	774.50	774.50	773.83	13.67
	214+10.00	39.50 Rt.	787.88	775.12	774.88	774.88	774.21	13.67
	214+30.00	39.50 Rt.	788.39	775.76	775.39	775.39	774.72	13.67
	214+50.00	39.50 Rt.	788.87	776.39	775.87	775.87	775.21	13.67
	214+63.88	39.50 Rt.	789.18	776.82	776.18	776.18	775.51	13.67
	214+70.00	39.47 Rt.	789.30	777.00	776.30	776.30	775.64	13.67
	214+91.30	39.09 Rt.	789.63	777.53	776.63	776.63	775.96	13.67
	215+12.25	38.16 Rt.	789.78	777.61	776.78	776.78	776.12	13.67
**	215+23.01	37.50' Rt.	789.82	777.69	776.82	776.82	776.15	13.67
	215+33.17	37.50 Rt.	790.08	777.67	777.08	777.08	776.42	13.67
	215+54.11	37.50 Rt.	790.62	776.53	777.62	777.62	776.95	13.67
	215+75.05	37.50 Rt.	791.16	775.55	778.16	778.16	777.49	13.67
	215+95.99	37.50 Rt.	791.69	774.37	778.69	778.69	778.03	13.67
	216+16.93	37.50 Rt.	792.23	773.10	779.23	779.23	778.56	13.67
	216+37.87	37.50 Rt.	792.76	771.53	779.76	779.76	779.10	13.67
	216+58.81	37.50 Rt.	793.26	770.15	780.26	780.26	779.59	13.67
	216+79.75	37.50 Rt.	793.70	766.76	780.70	780.70	780.03	13.67
	217+00.69	37.50 Rt.	794.09	766.56	781.09	781.09	780.43	13.67
**	217+13.88	37.50 Rt.	794.33	767.53	781.33	781.33	780.66	13.67
	217+21.73	37.50 Rt.	794.47	767.62	781.47	781.47	780.80	13.67
	217+42.94	37.50 Rt.	794.85	768.37	781.85	781.85	781.18	13.67
	217+64.14	37.50 Rt.	795.23	769.22	782.23	782.23	781.56	13.67
	217+85.35	37.50 Rt.	795.60	769.86	782.60	782.60	781.94	13.67
	217+86.02	37.50 Rt.	795.62	769.89	782.62	782.62	781.95	13.67

** Kink Point

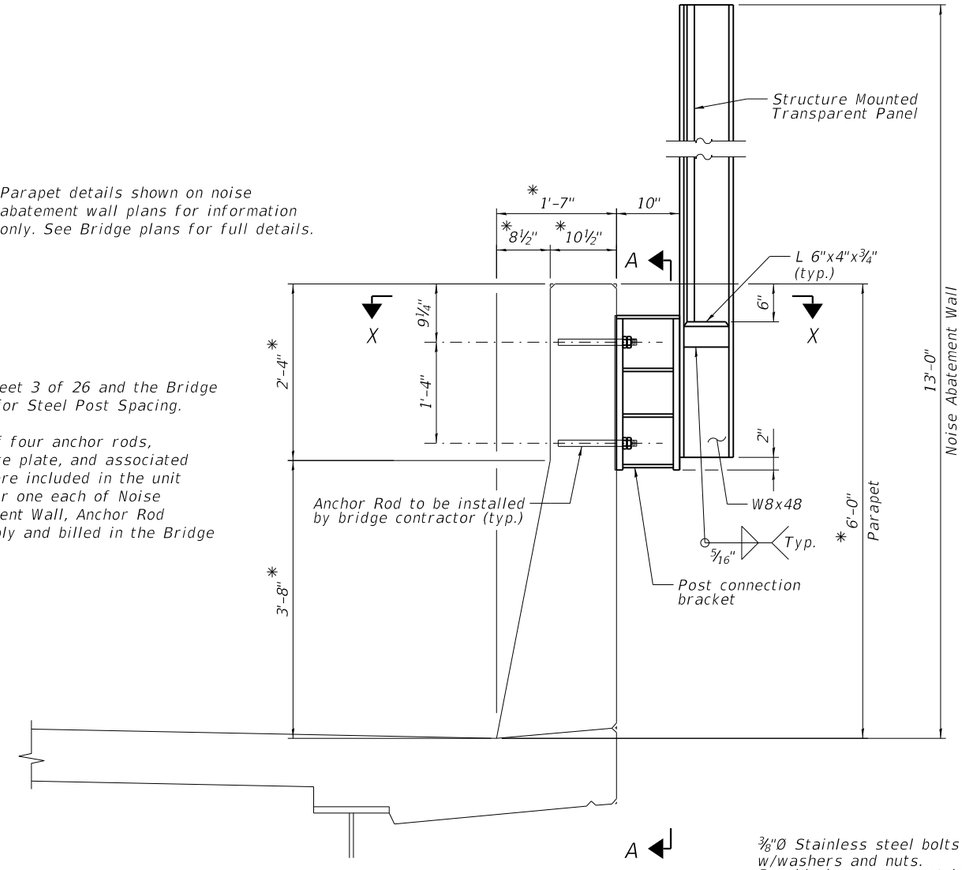
benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450
Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL GENERAL DETAILS (4 OF 6)
STRUCTURE NO. 101-N7011
SHEET 11 OF 26 SHEETS

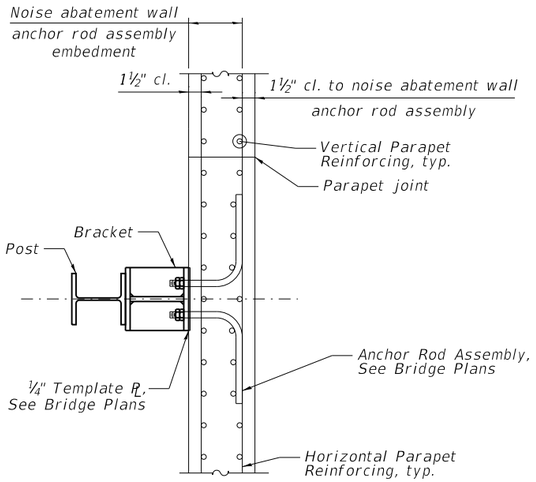
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	824
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		



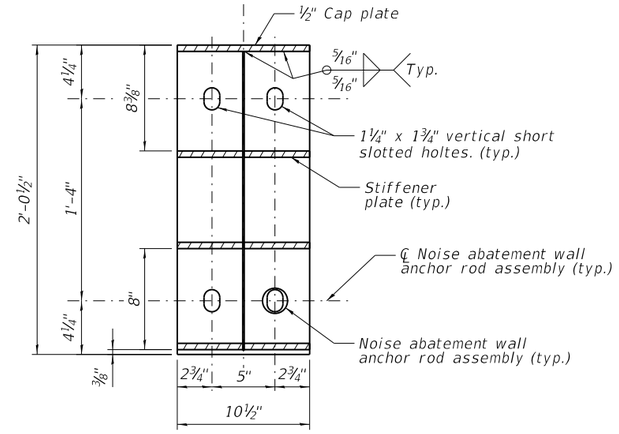
SECTION THRU
EAST PARAPET SN 101-0211 (NB)

NOTES:

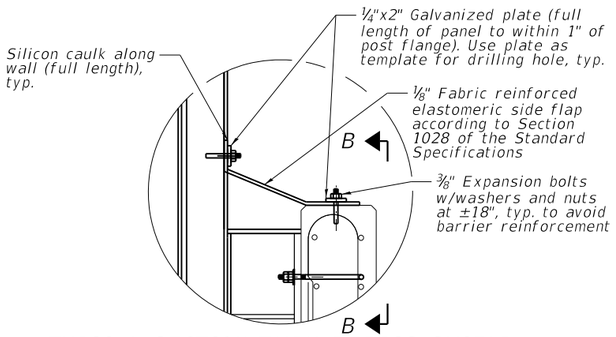
1. See sheet 3 of 26 and the Bridge Plans for Steel Post Spacing.
2. Cost of four anchor rods, template plate, and associated hardware included in the unit cost for one each of Noise Abatement Wall, Anchor Rod Assembly and billed in the Bridge Plans.



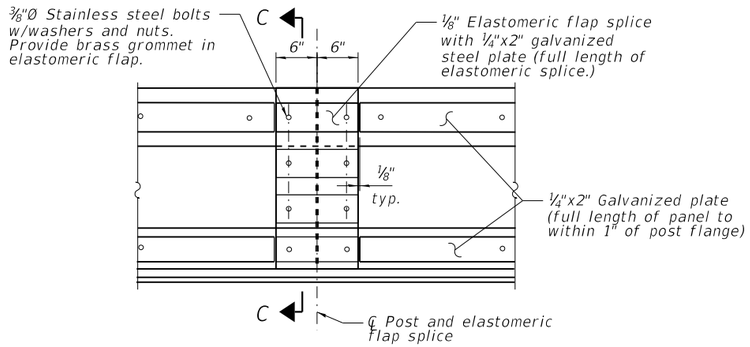
SECTION X-X



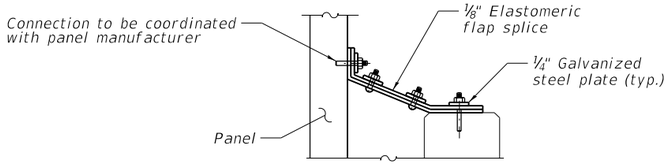
SECTION A-A
(Showing post connection bracket)



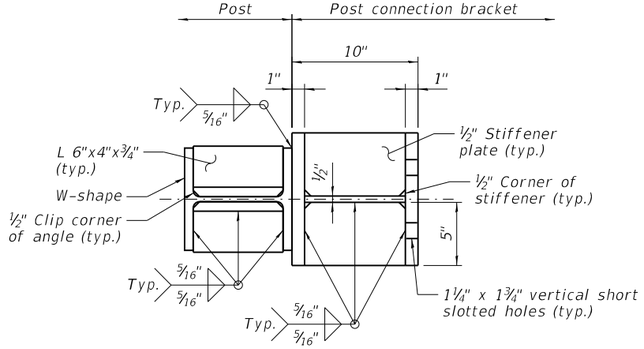
TYPICAL SECTION THRU DEBRIS SHIELD



SECTION B-B



SECTION C-C



SECTION THRU POST AND
POST CONNECTION BRACKET
(Template ℄ not shown for clarity)

NOTES:

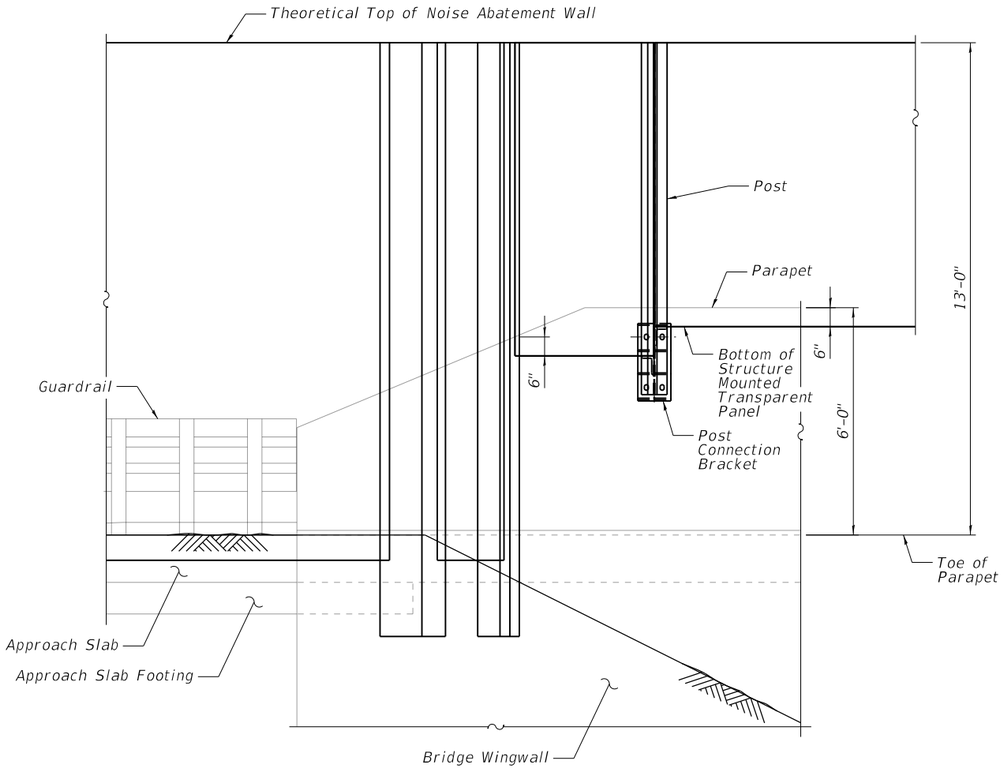
1. All post, post connection bracket, and anchor rod assembly details are shown for information only and shall be coordinated with panel manufacturer. See Special Provision for "Noise Abatement Wall, Structure Mounted" for more information.
2. Debris Shield is included in the unit cost for Noise Abatement Wall, Structure Mounted.

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\108000s\108000.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-101\D264C24-101W7011-sht-GenDtls5.dgn
5/8/2024 8:36:30 AM

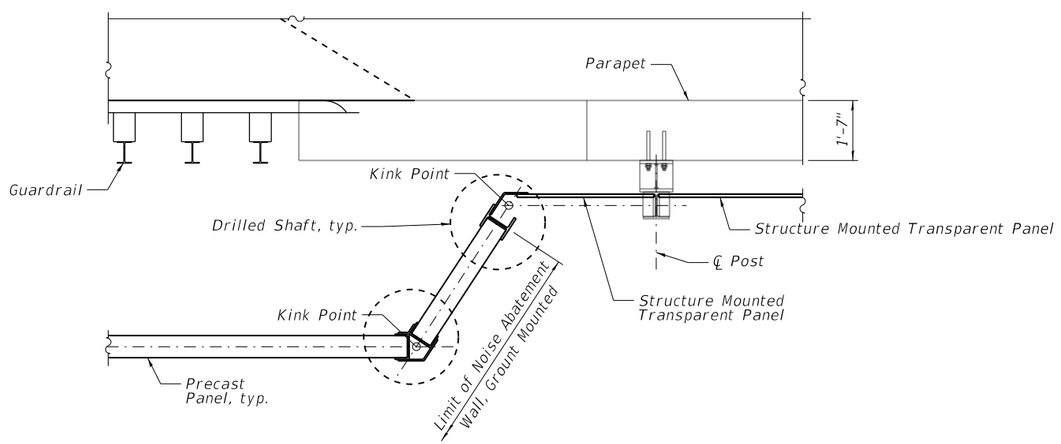
benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NOISE ABATEMENT WALL GENERAL DETAILS (5 OF 6) STRUCTURE NO. 101-N7011
	CHECKED - JHG	REVISED -		
PLOT SCALE = NA	DRAWN - KMS	REVISED -		SHEET 12 OF 26 SHEETS
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	825
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			



ELEVATION



NOISE ABATEMENT WALL TRANSITION PLAN

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-GenDtls6.dgn

5/8/2024 8:36:38 AM

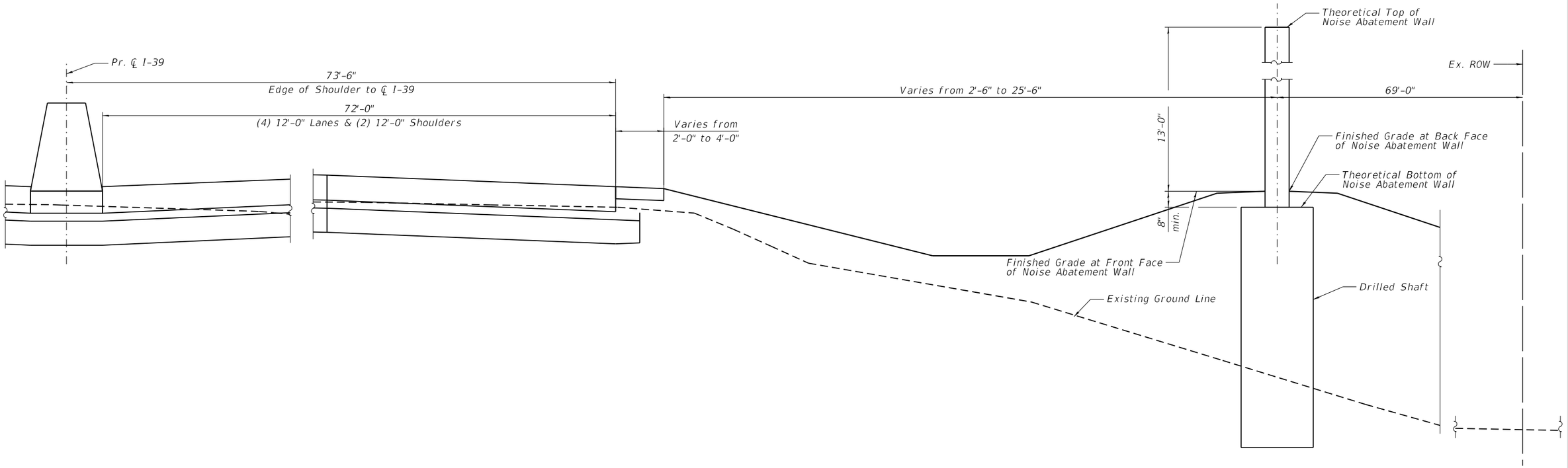
benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

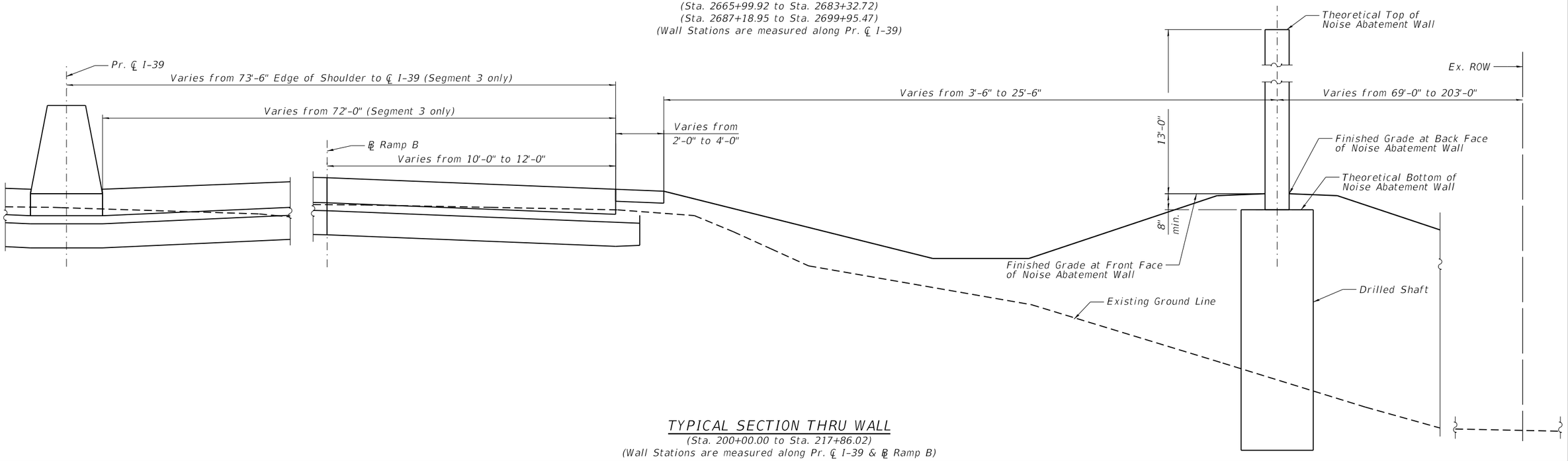
NOISE ABATEMENT WALL GENERAL DETAILS (6 OF 6)
STRUCTURE NO. 101-N7011
SHEET 13 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	826
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			



TYPICAL SECTION THRU WALL

(Sta. 2665+99.92 to Sta. 2683+32.72)
(Sta. 2687+18.95 to Sta. 2699+95.47)
(Wall Stations are measured along Pr. ℄ I-39)



TYPICAL SECTION THRU WALL

(Sta. 200+00.00 to Sta. 217+86.02)
(Wall Stations are measured along Pr. ℄ I-39 & ℄ Ramp B)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOISE ABATEMENT WALL TYPICAL SECTIONS
STRUCTURE NO. 101-N7011

SHEET 14 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	827
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: pw:\benesch-pw.bentley.com:benesch-pw-01\Documents\108000s\108000.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-typsections.dgn

5/8/2024 8:36:47 AM

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/1/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-1
Station 2665+98.47
Offset 124.2 ft RT
Ground Surface Elev. 784.16 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
VERY STIFF brown SILTY CLAY LOAM			2.5 P	19
	782.2			
VERYSTIFF light brown SILTY CLAY LOAM		3		
		3 6	2.4 P	23
	779.7			
SOFT brown SANDY LOAM	-5	3		
		3 5	0.3 B	14
	777.2			
No Recovery		5		
		10 14		
	774.7			
HARD tan SANDY LOAM TILL	-10	11		
		14 17	4.5 P	7
	772.2			
HARD tan SANDY LOAM TILL		9		
		12 18	4.5 P	7
	769.7			
VERY DENSE tan SANDY LOAM TILL	-15	17		
		28 28		
	768.2			
End of Boring				
	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/1/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-2
Station 2667+81.33
Offset 136.4 ft RT
Ground Surface Elev. 784.98 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.8 P	16
	783.0			
VERY SOFT light brown SANDY LOAM		2		
		2 3	0.2 B	17
	780.5			
MEDIUM tan DIRTY SAND with FINE SAND LENS	-5	5		
		5 6	0.8 P	9
	778.0			
HARD tan SANDY LOAM TILL		3		
		24 21	4.5	8
Hard Drilling				
	775.5			
HARD tan SANDY LOAM TILL	-10	30		
		29 44	5.9 S	7
Hard Drilling				
	773.0			
VERY DENSE tan SANDY LOAM TILL		43		
		57/4" -		
Hard Drilling				
	770.5			
VERY DENSE tan SANDY LOAM TILL	-15	31		
		60 40/4"		
	769.0			
End of Boring				
	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-3
Station 2669+79.61
Offset 141.6 ft RT
Ground Surface Elev. 786.55 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SANDY LOAM				0.8 P	13
	784.6				
VERY STIFF tan SANDY LOAM TILL			4		
			4 8	2.7 P	11
	782.1				
DENSE tan SANDY LOAM TILL with SAND LENS		-5	13		
			22 23		7
	779.6				
VERY DENSE tan SANDY LOAM TILL			51		
			49/4" -		
	777.1				
VERY DENSE tan SANDY LOAM TILL		-10	21		
			100/9" -		
	774.6				
VERY DENSE tan SANDY LOAM TILL			100/5.75" - -		
	772.1				
VERY DENSE tan SANDY LOAM TILL		-15	100/8" - -		
	770.6				
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-4
Station 2671+81.79
Offset 116.6 ft RT
Ground Surface Elev. 787.31 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light brown SANDY LOAM				0.8 P	9
	785.3				
STIFF tan SANDY LOAM with SAND LENS			5		
			4 7	1.3 P	9
	782.8				
VERY STIFF tan SANDY LOAM TILL		-5	6		
			9 17	2.1 P	9
Hard Drilling					
	780.3				
VERY DENSE tan SANDY LOAM TILL			24		
			33 37		7
Hard Drilling					
	777.8				
VERY DENSE tan SANDY LOAM TILL		-10	100/10" - -		
	775.3				
VERY DENSE tan SANDY LOAM TILL			100/6" - -		
	772.8				
VERY DENSE tan SANDY LOAM TILL		-15	100/9" - -		
	771.3				
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS (2 OF 12) STRUCTURE NO. 101-N7011	
	CHECKED - JHG	REVISED -			
PLOT SCALE = NA	DRAWN - KMS	REVISED -			
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -		SHEET 16 OF 26 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	829
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/6/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-5
Station 2673+56.98
Offset 132.7 ft RT
Ground Surface Elev. 787.06 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
LOOSE Light brown SANDY LOAM				8
	785.1			
STIFF tan SANDY LOAM		4		
		5	1.6	10
		9	P	
	782.6			
STIFF tan SANDY LOAM TILL	-5	6		
		9	1.3	8
		12	P	
	780.1			
VERY DENSE tan SANDY LOAM TILL with SAND LENS		28		
		26		
		26		
	777.6			
VERY DENSE tan SANDY LOAM TILL	-10	100/7"		
		-		
		-		
	775.1			
VERY DENSE tan SANDY LOAM TILL		100/7"		
		-		
		-		
	772.6			
VERY DENSE tan SANDY LOAM TILL	772.1 -15	100/4"		
		-		
End of Boring		-		
	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/1/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-6
Station 2675+74.93
Offset 113.6 ft RT
Ground Surface Elev. 786.09 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.8	15
			P	
	784.1			
VERY SOFT light brown SANDY LOAM		3		
		3	0.1	15
		7	P	
	781.6			
STIFF tan SANDY LOAM TILL	-5	2		
		5	1.0	11
		5	P	
	779.1			
VERY STIFF tan SANDY LOAM TILL		9		
		12	2.8	7
		20	S	
Hard Drilling				
	776.6			
VERY DENSE tan SANDY LOAM TILL	-10	12		
		28		
		56		
Hard Drilling				
	774.1			
VERY DENSE tan SANDY LOAM TILL		46		
		54/4"		
		-		
Hard Drilling				
	771.6			
VERY DENSE tan SANDY LOAM TILL	-15	39		
		63		
	770.1	37/2"		
End of Boring				
	-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -
	CHECKED - JHG	REVISED -
PLOT SCALE = NA	DRAWN - KMS	REVISED -
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (3 OF 12)
STRUCTURE NO. 101-N7011
SHEET 17 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	830
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

5/8/2024 8:37:07 AM

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/13/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 44.84" **Longitude** -88° 58' 34.62"
Northing 2,028,267.6270 **Easting** 2,618,973.4950

BORING NO. B-7
Station 2678+00
Offset 120.00ft Rt
Ground Surface Elev. 782.50 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.6 P	28.5
	780.50			
MEDIUM brown SILTY CLAY LOAM		1 2 4	0.8 B	30.4
	779.00			
SOFT brown SANDY LOAM TILL	-5	3 4 5	0.4 P	17.6
	776.50			
VERY SOFT light brown SANDY LOAM TILL		0 1 2	0.2 P	16.3
	774.00			
STIFF tan SANDY LOAM TILL	-10	4 5 9	1.1 S	8.5
	771.50			
VERY DENSE tan SANDY LOAM TILL		23 27 38	4.5 P	7.7
	769.00			
VERY DENSE tan SANDY LOAM TILL	-15	18 29 84		6.8
	766.50			
End of Boring	-20			

Northing and Easting 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)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/13/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 46.38" **Longitude** -88° 58' 32.87"
Northing 2,028,424.7025 **Easting** 2,619,102.6796

BORING NO. B-8
Station 2680+00
Offset 124.00ft Rt
Ground Surface Elev. 778.50 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.5 P	23.6
	776.50			
MEDIUM brown SILTY CLAY LOAM		2 2 4	0.9 B	27.8
	775.00			
SOFT light brown SANDY LOAM	-5	1 2 3	0.4 B	19.9
	772.50			
MEDIUM tan SANDY LOAM TILL		1 1 4	0.5 B	12.5
	770.00			
VERY STIFF tan SANDY LOAM TILL	-10	15 7 15	2.2 S	8.9
	767.50			
HARD/VERY DENSE tan SANDY LOAM TILL		17 27 38	6.3 S	7.6
	764.50			
VERY DENSE tan DRY FINE SAND	-15	25 28 31		3.4
	762.50			
End of Boring	-20			

Northing and Easting 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)

BBS, from 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (4 OF 12)
STRUCTURE NO. 101-N7011
SHEET 18 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	831
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/12/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 48.24" **Northing** 2,028,614.2326
Longitude -88° 58' 31.80" **Easting** 2,619,180.7540

BORING NO. B-9
Station 2682+00
Offset 65.00ft Rt
Ground Surface Elev. 795.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt	794.10		0.8 P	18.8
MEDIUM gray SILTY CLAY LOAM	793.10			
STIFF gray SILTY CLAY LOAM		2 3 4	1.0 B	22.3
	791.60			
MEDIUM gray SILTY CLAY LOAM	-5	2 3 4	0.6 B	25.6
	789.10			
SOFT gray SILTY CLAY LOAM		0 1 3	0.3 B	26.4
	786.60			
SOFT gray/tan SANDY LOAM	-10	0 2 3	0.4 P	19.2
	784.10			
SOFT light brown SANDY LOAM		1 2 3	0.4 B	18.3
	781.60			
STIFF light brown SANDY CLAY LOAM	-15	2 3 4	1.1 B	16.0
	779.10			
End of Boring				
	-20			

Northing and Easting 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)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 1/5/24

ROUTE FAI 39 **DESCRIPTION** P92-111-06 - Various sign trusses, Mulford Rd. and Harrison Ave. **LOGGED BY** W. Garza

SECTION (201-3)K **LOCATION** Cherry Valley, NE 1/4 10, SE 1/4 3, SW 1/4, N 1/2 2, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 53.37" **Northing** 2,029,140.9638
Longitude -88° 58' 25.07" **Easting** 2,619,679.3870

BORING NO. ST-5
Station 2689+00
Offset 140.00ft Rt of CL
Ground Surface Elev. 774.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 749.6 ft ▼
Upon Completion 749.6 ft ▽
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM	772.10		0.8 P	21.0
SOFT brown SANDY LOAM with SAND LENS		2 3 4	0.3 B	19.0
	770.10			
MEDIUM tan SANDY GRAVEL	-5	7 5 8		
5' Run	768.10			
DENSE tan MEDIUM SAND	-10	10 16 30		11.0
5' Run	761.10			
VERY DENSE tan MEDIUM SAND with SANDY LOAM LENS	-15	26 100 for 9"		4.0
5' Run	758.10			
	-20	12		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
HARD tan SANDY LOAM TILL with SAND LENS	753.10	28 34	6.6 S	7.0
5' Run *(continued)*				
STIFF tan SANDY LOAM TILL with SAND LENS	-25	15 19 23	2.1 S	9.0
	748.10			
End of Boring				
	-30			
	-35			
	-40			

Northing and Easting 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)

BBS, from 137 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800.001Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-soilbrg5.dgn

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (5 OF 12)
STRUCTURE NO. 101-N7011
SHEET 19 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	832
		CONTRACT NO. 64C24		
	ILLINOIS	FED. AID PROJECT		

5/8/2024 8:37:22 AM

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO.
Station

BORING NO. B-12
Station 2691+99.79
Offset 100.9 ft RT
Ground Surface Elev. 775.92 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 763.9 ft
Upon Completion 762.4 ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Broken Concrete				
SOFT brown DIRTY SAND	773.9	4		
		6	0.4	12
		6	P	
MEDIUM tan SAND with MEDIUM GRAVEL	771.4 -5	5		
		7		
		8		
VERY STIFF tan SANDY LOAM TILL	768.9	7		
		11	2.1	9
		11	P	
DENSE tan SANDY LOAM TILL	766.4 -10	15		
		20		
		22		
HARD light gray SANDY LOAM TILL with MEDIUM SAND LENS	763.9 ▼	15		
		13	4.5	10
	▽	25	P	
VERY DENSE tan SANDY LOAM TILL	761.4 -15	30		
		100/11"		
	759.9	-		
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO.
Station

BORING NO. B-13
Station 2693+93.27
Offset 91.0 ft RT
Ground Surface Elev. 774.15 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 762.2 ft
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM broWN SILTY CLAY LOAM			0.5	18
			P	
SOFT brown SANDY LOAM	772.2	3		
		4	0.3	20
		4	P	
MEDIUM tan SANDY LOAM TILL	769.7 -5	3		
		4	0.9	12
		6	P	
VERY STIFF tan SANDY LOAM TILL with SAND LENS	767.2	7		
		8	2.8	9
		10	P	
STIFF tan SANDY LOAM TILL with MEDIUM SAND LENS	764.7 -10	4		
		6	1.1	9
		12	B	
VERY DENSE tan MOIST FINE SAND	762.2 ▼	17		
		27		
		38		
VERY DENSE tan SANDY LOAM TILL with MOIST SAND LENS	759.7 -15	25		
		37		
	758.2	51		
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (6 OF 12)
STRUCTURE NO. 101-N7011
SHEET 20 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	833
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/7/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-14
Station 2695+91.87
Offset 101.2 ft RT
Ground Surface Elev. 770.41 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SANDY LOAM			0.5 P	18
	768.4			
VERY STIFF tan SANDY LOAM TILL		2 3 4	0.6 P	17
	765.9			
DENSE tan SANDY LOAM TILL with SAND LENS	-5	2 3 5	0.7 B	24
	763.4			
VERY DENSE tan SANDY LOAM TILL		3 4 8	0.8 S	9
	760.9			
VERY DENSE tan SANDY LOAM TILL	-10	8 6 7	0.8 B	13
	758.4			
VERY DENSE tan SANDY LOAM TILL		5 4 9	1.0 B	13
	755.9			
VERY DENSE tan SANDY LOAM TILL	-15	2 3 6	1.1 B	13
	754.4			
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/7/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-15
Station 2697+89.81
Offset 101.3 ft RT
Ground Surface Elev. 766.14 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
DRY brown SILTY CLAY LOAM				14
	764.1			
MEDIUM brown SANDY GRAVEL		3 4 7	0.9 B	18
	761.6			
SOFT light brown DIRTY FINE SAND	-5	3 5 4	0.3 P	16
	759.1			
MEDIUM tan/brown SILTY CLAY LOAM		2 1 3	0.6 B	27
	756.6			
VERY SOFT tan SILTY LOAM	-10	1 2 3	0.2 B	29
	754.1			
MEDIUM brown/tan MOIST FINE SAND BOTTON 4" WITH GRAVEL		3 12 14		
	751.6			
MEDIUM tan DIRTY SANDY GRAVEL	-15	15 19 8		
	750.1			
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -
	CHECKED - JHG	REVISED -
PLOT SCALE = NA	DRAWN - KMS	REVISED -
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (7 OF 12)
STRUCTURE NO. 101-N7011
SHEET 21 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	834
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/7/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-16
Station 2699+83.62
Offset 96.5 ft RT
Ground Surface Elev. 768.87 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown LOAM			0.8 P	12
	766.9			
VERY SOFT brown SILTY CLAY LOAM		2		
		2 3	0.2 B	23
	764.4			
MEDIUM tan SANDY LOAM TILL	-5	1		
		3 5	0.8 B	10
	761.9			
VERY STIFF tan SANDY LOAM TILL		7		
		7 9	2.3 P	8
	759.4			
VERY STIFF tan SANDY LOAM TILL with FINE SAND LENS	-10	7		
		8 8	3.1 P	8
	756.9			
DENSE tan SANDY LOAM TILL with SAND LENS		18		
		17 24		7
	754.4			
VERY DENSE tan SANDY LOAM TILL with SAND LENS	-15	18		
		23 30		
	752.9			
End of Boring				
	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/7/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-17
Station 2701+81.28
Offset 96.8 ft RT
Ground Surface Elev. 759.45 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
STIFF brown SILTY CLAY LOAM			1.5 P	7
	757.5			
LOOSE brown FINE SAND		2		
		2 4		
	755.0			
LOOSE brown DIRTY FINE SAND	-5	3		
		3 5	0.3 P	17
	752.5			
MEDIUM brown SANDY LOAM		2		
		2 6	0.5 B	21
	750.0			
VERY SOFT brown SANDY LOAM with FINE SAND LENS	-10	7		
		7 8	0.2 P	17
	747.5			
MEDIUM tan VERY FINE SILTY SAND		5		
		7 7		21
	745.0			
LOOSE tan FINE SAND	-15	3		
		4 4		
	743.5			
End of Boring				
	-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	
	CHECKED - JHG	REVISED -	
PLOT SCALE = NA	DRAWN - KMS	REVISED -	
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (8 OF 12)
STRUCTURE NO. 101-N7011
SHEET 22 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	835
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/13/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-18
Station 2703+83.00
Offset 101.6 ft RT
Ground Surface Elev. 754.44 ft

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

Groundwater Elev.:
First Encounter 739.4 ft ▼
Upon Completion 739.4 ft ▽
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.8 P	19
	752.4			
MEDIUM tan SANDY LOAM		3		
		4 5	0.8 P	17
	749.9			
STIFF tan/light gray SANDY LOAM with SAND LENS	-5	5		
		6 5	1.0 P	15
	747.4			
MEDIUM tan SANDY LOAM with SAND LENS		3		
		3 5	0.8 B	16
	744.9			
MEDIUM tan FINE SAND DRY	-10	5		
		8 11		
	742.4			
DENSE tan SANDY GRAVEL		10		
		16 18		
	739.9			
MEDIUM tan SANDY GRAVEL with FINE SAND LENS	▼-15	6		
		10 16		
	738.4			
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-19
Station 2705+75.72
Offset 60.4 ft RT
Ground Surface Elev. 760.06 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
STIFF gray SILTY CLAY LOAM			1.2 P	16
	758.1			
SOFT brown SANDY LOAM		2		
		2 3	0.4 P	20
	755.6			
MEDIUM gray SANDY LOAM	-5	2		
		3 4	0.7 B	18
	753.1			
VERY STIFF tan SANDY LOAM		8		
		7 8	3.1 P	10
	750.6			
VERY STIFF tan SANDY LOAM	-10	5		
		7 9	2.8 P	8
	748.1			
STIFF light brown SANDY CLAY LOAM		3		
		6 9	1.3 B	16
	745.6			
STIFF gray CLAY LOAM	-15	3		
		6 10	1.7 B	18
	744.1			
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -
	CHECKED - JHG	REVISED -
PLOT SCALE = NA	DRAWN - KMS	REVISED -
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (9 OF 12)
STRUCTURE NO. 101-N7011
SHEET 23 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	836
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-20
Station 2707+83.99
Offset 73.1 ft RT
Ground Surface Elev. 760.95 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After ____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				0.5 P	16
	759.0				
MEDIUM tan/gray SILTY CLAY LOAM			2		
			3 3	0.8 P	
	756.5	-5	4		
VERYR STIFF tan SANDY LOAM TILL			8 8	2.8 P	7
	754.0		6		
VERY STIFF gray CLAY LOAM			6 11	3.9 B	17
	751.5	-10	30/3"		
VERY DENSE tan SANDY LOAM TILL			- -		7
Hard drilling					
	749.0		7		
STIFF gray SANDY LOAM TILL			6 8	1.8 B	15
	746.5	-15	4		
VERY STIFF gray SANDY CLAY LOAM			6 9	3.1 B	11
	745.0				
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/12/24

ROUTE FAI 39 (I-39) DESCRIPTION P92-111-06 - Noise wall LOGGED BY W. Garza

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

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-75 Automatic

STRUCT. NO. _____
Station _____

Latitude 42° 14' 09.42"
Longitude -88° 58' 07.97"

Northing 2,030,783.5684
Easting 2,620,942.9599

BORING NO. B-21
Station 2710+00
Offset 90.00ft Rt
Ground Surface Elev. 764.30 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion Dry ft
After ____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt shoulder					
	763.30			0.2 P	9.0
VERY SOFT tan SANDY LOAM					
	762.30		6		
MEDIUM light brown SANDY LOAM			8 9	0.8 S	11.5
	760.80				
VERY STIFF tan SANDY LOAM TILL Fill		-5	9		
			13 14	2.3 S	7.5
	758.30				
STIFF tan SANDY LOAM TILL Fill			2		
			5 6	1.3 B	7.9
	755.80				
STIFF tan SANDY LOAM TILL Fill		-10	4		
			6 8	1.3 P	10.4
	753.30				
STIFF gray SANDY LOAM			6		
			5 10	1.7 B	10.0
	750.80				
No Recovery		-15	9		
			10 12		
	748.30				
End of Boring		-20			

Northing and Easting 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)

BBS, from 137 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com:benesch-pw-01\Documents\10800s\10800.00\Eng_Docs\CAD_Sheets\SN W7011_Wall 8-10\D264C24-101W7011-sht-soilbrg10.dgn

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider		DESIGNED - KMS		REVISED -	
		CHECKED - JHG		REVISED -	
PLOT SCALE = NA		DRAWN - KMS		REVISED -	
PLOT DATE = 5/8/2024		CHECKED - JHG		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (10 OF 12)
STRUCTURE NO. 101-N7011
SHEET 24 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	837
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

5/8/2024 8:37:59 AM

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-22
Station 2711+80.26
Offset 91.7 ft RT
Ground Surface Elev. 769.76 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SOFT tan SANDY LAOM				0.4 P	10
	767.8				
VERY STIFF tan SADNY LOAM			2		
			4 6	3.8 P	10
	765.3	-5			
MEDIUM tan SANDY LOAM TILL with SANDY GRAVEL LENS			6		
			7 11	0.7 B	10
	762.8				
VERY STIFF tan SANDY LOAM TILL			8		
			7 9	2.2 S	8
	760.3	-10			
VERY STIFF tan SANDY LOAM TILL			7		
			8 8	3.0 P	7
	757.8				
STIFF tan SANDY LOAM TILL			3		
			8 13	1.7 S	11
	755.3	-15			
VERY STIFF gray SANDY CLAY LOAM with SAND LENS			3		
	753.8		4 5	2.5 B	15
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-23
Station 2713+70.42
Offset 108.8 ft RT
Ground Surface Elev. 775.66 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light brown LOAM				0.5 P	8
	773.7				
VERY STIFF tan SANDY LOAM			5		
TILL			5 6	2.3 S	8
	771.2	-5			
MEDIUM tan SANDY LOAM			3		
			3 7	0.6 B	11
	768.7				
STIFF tan SANDY LOAM			5		
			4 7	1.1 S	9
	766.2	-10			
VERY STIFF light brown SANDY CLAY LOAM			3		
			5 7	2.1 B	11
	763.7				
VERY STIFF gray SANDY CLAY LOAM			2		
			4 6	2.1 B	15
	761.2	-15			
STIFF tan SANDY LOAM TILL			3		
	759.7		4 6	1.7 S	8
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS (11 OF 12) STRUCTURE NO. 101-N7011	
	CHECKED - JHG	REVISED -			
PLOT SCALE = NA	DRAWN - KMS	REVISED -			
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -		SHEET 25 OF 26 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	838
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-24
Station 2715+81.64
Offset 132.0 ft RT
Ground Surface Elev. 781.80 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDUIM brown SANDY LOAM				0.8 P	9
	779.8				
VERY STIFF taN SANDY LOAM TILL			7		
			6 4	3.6 P	9
	777.3	-5			
VERY STIFF gray SANDY CLAY LOAM			3		
			4 4	2.3 P	17
	774.8				
MEDIUM tan SANDY LOAM TILL			5		
			5 8	0.6 B	10
	772.3	-10			
STIFF tan SANDY LOAM TILL			4		
			6 5	1.8 S	9
	769.8				
VERY STIFF brown SANDY CLAY LOAM			6		
			7 8	2.7 B	12
	767.3	-15			
VERY STIFF gray SILTY CLAY LOAM			4		
	765.8		6 8	2.7 B	18
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Page 1 of 1

Date 6/14/23

ROUTE FAI 39 DESCRIPTION P92-111-06- Noise wall from Perryville Road to Harrison Avenue LOGGED BY W.Garza

SECTION (201-3)K LOCATION Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-25
Station 2718+08.74
Offset 143.4 ft RT
Ground Surface Elev. 788.14 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM tan SANDY LOAM				0.5 P	9
	786.1				
STIFF tan SANDY LOAM TILL			8		
			10 13	1.5 S	9
	783.6	-5			
VERY STIFF tan/gray SANDY CLAY LOAM			8		
			10 11	3.7 B	14
	781.1				
VERY STIFF brown SANDY CLAY LOAM			4		
			6 11	2.7 B	13
	778.6	-10			
STIFF tan SANDY LOAM TILL			5		
			4 5	1.7 S	8
	776.1				
VERY STIFF tan SANDY LOAM TILL			15		
			14 12	2.9 P	7
	773.6	-15			
VERY STIFF tan SANDY LOAM TILL			12		
	772.1		12 16	2.8 P	7
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

benesch
Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME = ksnider	DESIGNED - KMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS (12 OF 12) STRUCTURE NO. 101-N7011	
	CHECKED - JHG	REVISED -			
PLOT SCALE = NA	DRAWN - KMS	REVISED -			
PLOT DATE = 5/8/2024	CHECKED - JHG	REVISED -		SHEET 26 OF 26 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)R & (4-1, 5)R	WINNEBAGO	1544	839
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

EXHIBIT D

BORING LOGS

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/1/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO.
Station 2666+00

BORING NO. B-1
Station 2665+98.47
Offset 124.2 ft RT
Ground Surface Elev. 784.16 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
VERY STIFF brown SILTY CLAY LOAM					
				2.5 P	19
	782.2				
VERYSTIFF light brown SILTY CLAY LOAM			3		
			3 6	2.4 P	23
	779.7				
SOFT brown SANDY LOAM		-5	3		
			3 5	0.3 B	14
	777.2				
No Recovery			5		
			10 14		
	774.7				
HARD tan SANDY LOAM TILL		-10	11		
			14 17	4.5 P	7
	772.2				
HARD tan SANDY LOAM TILL			9		
			12 18	4.5 P	7
	769.7				
VERY DENSE tan SANDY LOAM TILL		-15	17		
			28 28		
	768.2				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/1/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-2
Station 2667+81.33
Offset 136.4 ft RT
Ground Surface Elev. 784.98 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				
			0.8 P	16
783.0				
VERY SOFT light brown SANDY LOAM		2		
		2 3	0.2 B	17
780.5				
MEDIUM tan DIRTY SAND with FINE SAND LENS	-5	5		
		5 6	0.8 P	9
778.0				
HARD tan SANDY LOAM TILL		3		
Hard Drilling		24 21	4.5	8
775.5				
HARD tan SANDY LOAM TILL	-10	30		
Hard Drilling		29 44	5.9 S	7
773.0				
VERY DENSE tan SANDY LOAM TILL		43		
		57/4" -		
Hard Drilling				
770.5				
VERY DENSE tan SANDY LOAM TILL	-15	31		
		60 40/4"		
769.0				
End of Boring	-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-3
Station 2669+79.61
Offset 141.6 ft RT
Ground Surface Elev. 786.55 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SANDY LOAM					
				0.8 P	13
	784.6				
VERY STIFF tan SANDY LOAM TILL			4		
			4 8	2.7 P	11
	782.1				
DENSE tan SANDY LOAM TILL with SAND LENS		-5	13		
			22 23		7
	779.6				
VERY DENSE tan SANDY LOAM TILL			51		
			49/4" -		
	777.1				
VERY DENSE tan SANDY LOAM TILL		-10	21		
			100/9" -		
	774.6				
VERY DENSE tan SANDY LOAM TILL			100/5.75" - -		
	772.1				
VERY DENSE tan SANDY LOAM TILL		-15	100/8" - -		
	770.6				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-4
Station 2671+81.79
Offset 116.6 ft RT
Ground Surface Elev. 787.31 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light brown SANDY LOAM				0.8 P	9
	785.3		5		
STIFF tan SANDY LOAM with SAND LENS			4 7	1.3 P	9
	782.8	-5	6		
VERY STIFF tan SANDY LOAM TILL Hard Drilling			9 17	2.1 P	9
	780.3		24		
VERY DENSE tan SANDY LOAM TILL Hard Drilling			33 37		7
	777.8	-10	100/10"		
VERY DENSE tan SANDY LOAM TILL			- -		
	775.3		100/6"		
VERY DENSE tan SANDY LOAM TILL			- -		
	772.8	-15	100/9"		
VERY DENSE tan SANDY LOAM TILL			- -		
	771.3				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-5
Station 2673+56.98
Offset 132.7 ft RT
Ground Surface Elev. 787.06 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
LOOSE Light brown SANDY LOAM					8
STIFF tan SANDY LOAM	785.1		4		
			5 9	1.6 P	10
STIFF tan SANDY LOAM TILL	782.6	-5	6		
			9 12	1.3 P	8
VERY DENSE tan SANDY LOAM TILL with SAND LENS	780.1		28		
			26 26		
VERY DENSE tan SANDY LOAM TILL	777.6	-10	100/7"		
			- -		
VERY DENSE tan SANDY LOAM TILL	775.1		100/7"		
			- -		
VERY DENSE tan SANDY LOAM TILL	772.6 772.1	-15	100/4"		
			- -		
End of Boring		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/1/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-6
Station 2675+74.93
Offset 113.6 ft RT
Ground Surface Elev. 786.09 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				0.8 P	15
	784.1		3		
VERY SOFT light brown SANDY LOAM			3 7	0.1 P	15
	781.6	-5	2		
STIFF tan SANDY LOAM TILL			5 5	1.0 P	11
	779.1		9		
VERY STIFF tan SANDY LOAM TILL Hard Drilling			12 20	2.8 S	7
	776.6	-10	12		
VERY DENSE tan SANDY LOAM TILL Hard Drilling			28 56		
	774.1		46		
VERY DENSE tan SANDY LOAM TILL Hard Drilling			54/4" -		
	771.6	-15	39		
VERY DENSE tan SANDY LOAM TILL			63 37/2"		
	770.1				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 3/13/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 44.84" **Northing** 2,028,267.6270
Longitude -88° 58' 34.62" **Easting** 2,618,973.4950

BORING NO. B-7
Station 2678+00
Offset 120.00ft Rt
Ground Surface Elev. 782.50 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				0.6 P	28.5
	780.50				
MEDIUM brown SILTY CLAY LOAM			1 2 4	0.8 B	30.4
	779.00				
SOFT brown SANDY LOAM TILL		-5	3 4 5	0.4 P	17.6
	776.50				
VERY SOFT light brown SANDY LOAM TILL			0 1 2	0.2 P	16.3
	774.00				
STIFF tan SANDY LOAM TILL		-10	4 5 9	1.1 S	8.5
	771.50				
VERY DENSE tan SANDY LOAM TILL			23 27 38	4.5 P	7.7
	769.00				
VERY DENSE tan SANDY LOAM TILL		-15	18 29 84		6.8
	766.50				
End of Boring					
		-20			

Northing and Easting 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)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 3/13/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 46.38" **Northing** 2,028,424.7025
Longitude -88° 58' 32.87" **Easting** 2,619,102.6796

BORING NO. B-8
Station 2680+00
Offset 124.00ft Rt
Ground Surface Elev. 778.50 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				0.5 P	23.6
	776.50				
MEDIUM brown SILTY CLAY LOAM			2 2 4	0.9 B	27.8
	775.00				
SOFT light brown SANDY LOAM		-5	1 2 3	0.4 B	19.9
	772.50				
MEDIUM tan SANDY LOAM TILL			1 1 4	0.5 B	12.5
	770.00				
VERY STIFF tan SANDY LOAM TILL		-10	15 7 15	2.2 S	8.9
	767.50				
HARD/VERY DENSE tan SANDY LOAM TILL			17 27 38	6.3 S	7.6
	764.50				
VERY DENSE tan DRY FINE SAND		-15	25 28 31		3.4
	762.50				
End of Boring					
		-20			

Northing and Easting 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)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 3/12/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 48.24" **Northing** 2,028,614.2326
Longitude -88° 58' 31.80" **Easting** 2,619,180.7540

BORING NO. B-9
Station 2682+00
Offset 65.00ft Rt
Ground Surface Elev. 795.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt					
	794.10			0.8	18.8
MEDIUM gray SILTY CLAY LOAM				P	
	793.10				
STIFF gray SILTY CLAY LOAM			2 3 4	1.0 B	22.3
	791.60				
MEDIUM gray SILTY CLAY LOAM		-5	2 3 4	0.6 B	25.6
	789.10				
SOFT gray SILTY CLAY LOAM			0 1 3	0.3 B	26.4
	786.60				
SOFT gray/tan SANDY LOAM		-10	0 2 3	0.4 P	19.2
	784.10				
SOFT light brown SANDY LOAM			1 2 3	0.4 B	18.3
	781.60				
STIFF light brown SANDY CLAY LOAM		-15	2 3 4	1.1 B	16.0
	779.10				
End of Boring					
		-20			

Northing and Easting 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)

Illinois Department of Transportation

Division of Highways
IDOT

SOIL BORING LOG

Date 1/5/24

ROUTE FAI 39 **DESCRIPTION** P92-111-06 - Various sign trusses, Mulford Rd. and Harrison Ave. **LOGGED BY** W. Garza

SECTION (201-3)K **LOCATION** Cherry Valley, NE 1/4 10, SE 1/4 3, SW 1/4, N 1/2 2, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 13' 53.37" **Longitude** -88° 58' 25.07"
Northing 2,029,140.9638 **Easting** 2,619,679.3870

BORING NO. ST-5
Station 2689+00
Offset 140.00ft Rt of CL
Ground Surface Elev. 774.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 749.6 ft ▼
Upon Completion 749.6 ft ▽
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM			0.8 P	21.0
772.10				
SOFT brown SANDY LOAM with SAND LENS		2 3 4	0.3 B	19.0
770.10				
MEDIUM tan SANDY GRAVEL	-5	7 5 8		
5' Run				
768.10				
DENSE tan MEDIUM SAND	-10	10 16 30		11.0
5' Run				
761.10				
VERY DENSE tan MEDIUM SAND with SANDY LOAM LENS	-15	26 100 for 9"		4.0
5' Run				
758.10				
	-20	12		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
HARD tan SANDY LOAM TILL with SAND LENS		28 34	6.6 S	7.0
753.10				
5' Run *(continued)*				
▼				
STIFF tan SANDY LOAM TILL with SAND LENS	-25	15 19 23	2.1 S	9.0
748.10				
End of Boring				
	-30			
	-35			
	-40			

Northing and Easting 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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/6/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-12
Station 2691+99.79
Offset 100.9 ft RT
Ground Surface Elev. 775.92 ft

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

Groundwater Elev.:
First Encounter 763.9 ft ▼
Upon Completion 762.4 ft ▽
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Broken Concrete					
	773.9				
SOFT brown DIRTY SAND			4		
			6	0.4	12
			6	P	
	771.4	-5			
MEDIUM tan SAND with MEDIUM GRAVEL			5		
			7		
			8		
	768.9				
VERY STIFF tan SANDY LOAM TILL			7		
			11	2.1	9
			11	P	
	766.4	-10			
DENSE tan SANDY LOAM TILL			15		
			20		
			22		
	763.9 ▼				
HARD light gray SANDY LOAM TILL with MEDIUM SAND LENS			15		
			13	4.5	10
	▽		25	P	
	761.4	-15			
VERY DENSE tan SANDY LOAM TILL			30		
			100/11"		
	759.9		-		
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-13
Station 2693+93.27
Offset 91.0 ft RT
Ground Surface Elev. 774.15 ft

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

Groundwater Elev.:
First Encounter 762.2 ft ▼
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM broWN SILTY CLAY LOAM				0.5 P	18
	772.2		3		
SOFT brown SANDY LOAM			4 4	0.3 P	20
	769.7	-5	3		
MEDIUM tan SANDY LOAM TILL			4 6	0.9 P	12
	767.2		7		
VERY STIFF tan SANDY LOAM TILL with SAND LENS			8 10	2.8 P	9
	764.7	-10	4		
STIFF tan SANDY LOAM TILL with MEDIUM SAND LENS			6 12	1.1 B	9
	762.2 ▼		17		
VERY DENSE tan MOIST FINE SAND			27 38		
	759.7	-15	25		
VERY DENSE tan SANDY LOAM TILL with MOIST SAND LENS			37 51		
	758.2				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-14
Station 2695+91.87
Offset 101.2 ft RT
Ground Surface Elev. 770.41 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SANDY LOAM					
				0.5 P	18
	768.4				
VERY STIFF tan SANDY LOAM TILL			2		
			3 4	0.6 P	17
	765.9				
DENSE tan SANDY LOAM TILL with SAND LENS		-5	2		
			3 5	0.7 B	24
	763.4				
VERY DENSE tan SANDY LOAM TILL			3		
			4 8	0.8 S	9
	760.9				
VERY DENSE tan SANDY LOAM TILL		-10	8		
			6 7	0.8 B	13
	758.4				
VERY DENSE tan SANDY LOAM TILL			5		
			4 9	1.0 B	13
	755.9				
VERY DENSE tan SANDY LOAM TILL		-15	2		
			3 6	1.1 B	13
	754.4				
End of Boring					
		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-15
Station 2697+89.81
Offset 101.3 ft RT
Ground Surface Elev. 766.14 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
DRY brown SILTY CLAY LOAM				
				14
764.1				
MEDIUM brown SANDY GRAVEL		3		
		4 7	0.9 B	18
761.6				
SOFT light brown DIRTY FINE SAND	-5	3		
		5 4	0.3 P	16
759.1				
MEDIUM tan/brown SILTY CLAY LOAM		2		
		1 3	0.6 B	27
756.6				
VERY SOFT tan SILTY LOAM	-10	1		
		2 3	0.2 B	29
754.1				
MEDIUM brown/tan MOIST FINE SAND BOTTON 4" WITH GRAVEL		3		
		12 14		
751.6				
MEDIUM tan DIRTY SANDY GRAVEL	-15	15		
		19 8		
750.1				
End of Boring				
	-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-16
Station 2699+83.62
Offset 96.5 ft RT
Ground Surface Elev. 768.87 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown LOAM					
				0.8 P	12
	766.9				
VERY SOFT brown SILTY CLAY LOAM			2		
			2 3	0.2 B	23
	764.4				
MEDIUM tan SANDY LOAM TILL		-5	1		
			3 5	0.8 B	10
	761.9				
VERY STIFF tan SANDY LOAM TILL			7		
			7 9	2.3 P	8
	759.4				
VERY STIFF tan SANDY LOAM TILL with FINE SAND LENS		-10	7		
			8 8	3.1 P	8
	756.9				
DENSE tan SANDY LOAM TILL with SAND LENS			18		
			17 24		7
	754.4				
VERY DENSE tan SANDY LOAM TILL with SAND LENS		-15	18		
			23 30		
	752.9				
End of Boring					
		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/7/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-17
Station 2701+81.28
Offset 96.8 ft RT
Ground Surface Elev. 759.45 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
STIFF brown SILTY CLAY LOAM				
			1.5 P	7
757.5				
LOOSE brown FINE SAND		2		
		2 4		
755.0				
LOOSE brown DIRTY FINE SAND	-5	3		
		3 5	0.3 P	17
752.5				
MEDIUM brown SANDY LOAM		2		
		2 6	0.5 B	21
750.0				
VERY SOFT brown SANDY LOAM with FINE SAND LENS	-10	7		
		7 8	0.2 P	17
747.5				
MEDIUM tan VERY FINE SILTY SAND		5		
		7 7		21
745.0				
LOOSE tan FINE SAND	-15	3		
		4 4		
743.5				
End of Boring				
	-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/13/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-18
Station 2703+83.00
Offset 101.6 ft RT
Ground Surface Elev. 754.44 ft

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

Groundwater Elev.:
First Encounter 739.4 ft ▼
Upon Completion 739.4 ft ▽
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM					
				0.8 P	19
	752.4				
MEDIUM tan SANDY LOAM			3		
			4 5	0.8 P	17
	749.9				
STIFF tan/light gray SANDY LOAM with SAND LENS		-5	5		
			6 5	1.0 P	15
	747.4				
MEDIUM tan SANDY LOAM with SAND LENS			3		
			3 5	0.8 B	16
	744.9				
MEDIUM tan FINE SAND DRY		-10	5		
			8 11		
	742.4				
DENSE tan SANDY GRAVEL			10		
			16 18		
	739.9				
MEDIUM tan SANDY GRAVEL with FINE SAND LENS		▼-15	6		
			10 16		
	738.4				
End of Boring					
		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-19
Station 2705+75.72
Offset 60.4 ft RT
Ground Surface Elev. 760.06 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
STIFF gray SILTY CLAY LOAM					
				1.2 P	16
	758.1				
SOFT brown SANDY LOAM			2		
			2 3	0.4 P	20
	755.6				
MEDIUM gray SANDY LOAM		-5	2		
			3 4	0.7 B	18
	753.1				
VERY STIFF tan SANDY LOAM			8		
			7 8	3.1 P	10
	750.6				
VERY STIFF tan SANDY LOAM		-10	5		
			7 9	2.8 P	8
	748.1				
STIFF light brown SANDY CLAY LOAM			3		
			6 9	1.3 B	16
	745.6				
STIFF gray CLAY LOAM		-15	3		
			6 10	1.7 B	18
	744.1				
End of Boring					
		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-20
Station 2707+83.99
Offset 73.1 ft RT
Ground Surface Elev. 760.95 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM brown SILTY CLAY LOAM				0.5 P	16
	759.0		2		
MEDIUM tan/gray SILTY CLAY LOAM			3 3	0.8 P	
	756.5	-5	4		
VERYR STIFF tan SANDY LOAM TILL			8 8	2.8 P	7
	754.0		6		
VERY STIFF gray CLAY LOAM			6 11	3.9 B	17
	751.5	-10	30/3"		
VERY DENSE tan SANDY LOAM TILL			- -		7
Hard drilling					
	749.0		7		
STIFF gray SANDY LOAM TILL			6 8	1.8 B	15
	746.5	-15	4		
VERY STIFF gray SANDY CLAY LOAM			6 9	3.1 B	11
	745.0				
End of Boring		-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)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 3/12/24

ROUTE FAI 39 (I-39) **DESCRIPTION** P92-111-06 - Noise wall **LOGGED BY** W. Garza

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

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-75 Automatic

STRUCT. NO.
Station

Latitude 42° 14' 09.42" **Northing** 2,030,783.5684
Longitude -88° 58' 07.97" **Easting** 2,620,942.9599

BORING NO. B-21
Station 2710+00
Offset 90.00ft Rt
Ground Surface Elev. 764.30 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion Dry ft
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt shoulder					
	763.30			0.2 P	9.0
VERY SOFT tan SANDY LOAM					
	762.30				
MEDIUM light brown SANDY LOAM			6 8 9	0.8 S	11.5
	760.80				
VERY STIFF tan SANDY LOAM TILL Fill		-5	9 13 14	2.3 S	7.5
	758.30				
STIFF tan SANDY LOAM TILL Fill			2 5 6	1.3 B	7.9
	755.80				
STIFF tan SANDY LOAM TILL Fill		-10	4 6 8	1.3 P	10.4
	753.30				
STIFF gray SANDY LOAM			6 5 10	1.7 B	10.0
	750.80				
No Recovery		-15	9 10 12		
	748.30				
End of Boring					
		-20			

Northing and Easting 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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-22
Station 2711+80.26
Offset 91.7 ft RT
Ground Surface Elev. 769.76 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SOFT tan SANDY LAOM				
			0.4 P	10
767.8				
VERY STIFF tan SADNY LOAM		2		
		4 6	3.8 P	10
765.3				
MEDIUM tan SANDY LOAM TILL with SANDY GRAVEL LENS	-5	6		
		7 11	0.7 B	10
762.8				
VERY STIFF tan SANDY LOAM TILL		8		
		7 9	2.2 S	8
760.3				
VERY STIFF tan SANDY LOAM TILL	-10	7		
		8 8	3.0 P	7
757.8				
STIFF tan SANDY LOAM TILL		3		
		8 13	1.7 S	11
755.3				
VERY STIFF gray SANDY CLAY LOAM with SAND LENS	-15	3		
		4 5	2.5 B	15
753.8				
End of Boring	-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-23
Station 2713+70.42
Offset 108.8 ft RT
Ground Surface Elev. 775.66 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light brown LOAM					
				0.5 P	8
	773.7				
VERY STIFF tan SANDY LOAM TILL			5		
			5 6	2.3 S	8
	771.2	-5			
MEDIUM tan SANDY LOAM			3		
			3 7	0.6 B	11
	768.7				
STIFF tan SANDY LOAM			5		
			4 7	1.1 S	9
	766.2	-10			
VERY STIFF light brown SANDY CLAY LOAM			3		
			5 7	2.1 B	11
	763.7				
VERY STIFF gray SANDY CLAY LOAM			2		
			4 6	2.1 B	15
	761.2	-15			
STIFF tan SANDY LOAM TILL			3		
			4 6	1.7 S	8
	759.7				
End of Boring		-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)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-24
Station 2715+81.64
Offset 132.0 ft RT
Ground Surface Elev. 781.80 ft

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

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDUIM brown SANDY LOAM					
				0.8 P	9
	779.8				
VERY STIFF taN SANDY LOAM TILL			7		
			6 4	3.6 P	9
	777.3				
VERY STIFF gray SANDY CLAY LOAM		-5	3		
			4 4	2.3 P	17
	774.8				
MEDIUM tan SANDY LOAM TILL			5		
			5 8	0.6 B	10
	772.3				
STIFF tan SANDY LOAM TILL		-10	4		
			6 5	1.8 S	9
	769.8				
VERY STIFF brown SANDY CLAY LOAM			6		
			7 8	2.7 B	12
	767.3				
VERY STIFF gray SILTY CLAY LOAM		-15	4		
			6 8	2.7 B	18
	765.8				
End of Boring					
		-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)

Illinois Department of Transportation
Division of Highways

SOIL BORING LOG

Date 6/14/23

ROUTE FAI 39 **DESCRIPTION** P92-111-06- Noise wall from Perryville Road to Harrison Avenue **LOGGED BY** W.Garza

SECTION (201-3)K **LOCATION** Cherry Valley, SW 1/4 2, N 1/2 2,

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

STRUCT. NO. _____
Station _____

BORING NO. B-25
Station 2718+08.74
Offset 143.4 ft RT
Ground Surface Elev. 788.14 ft

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

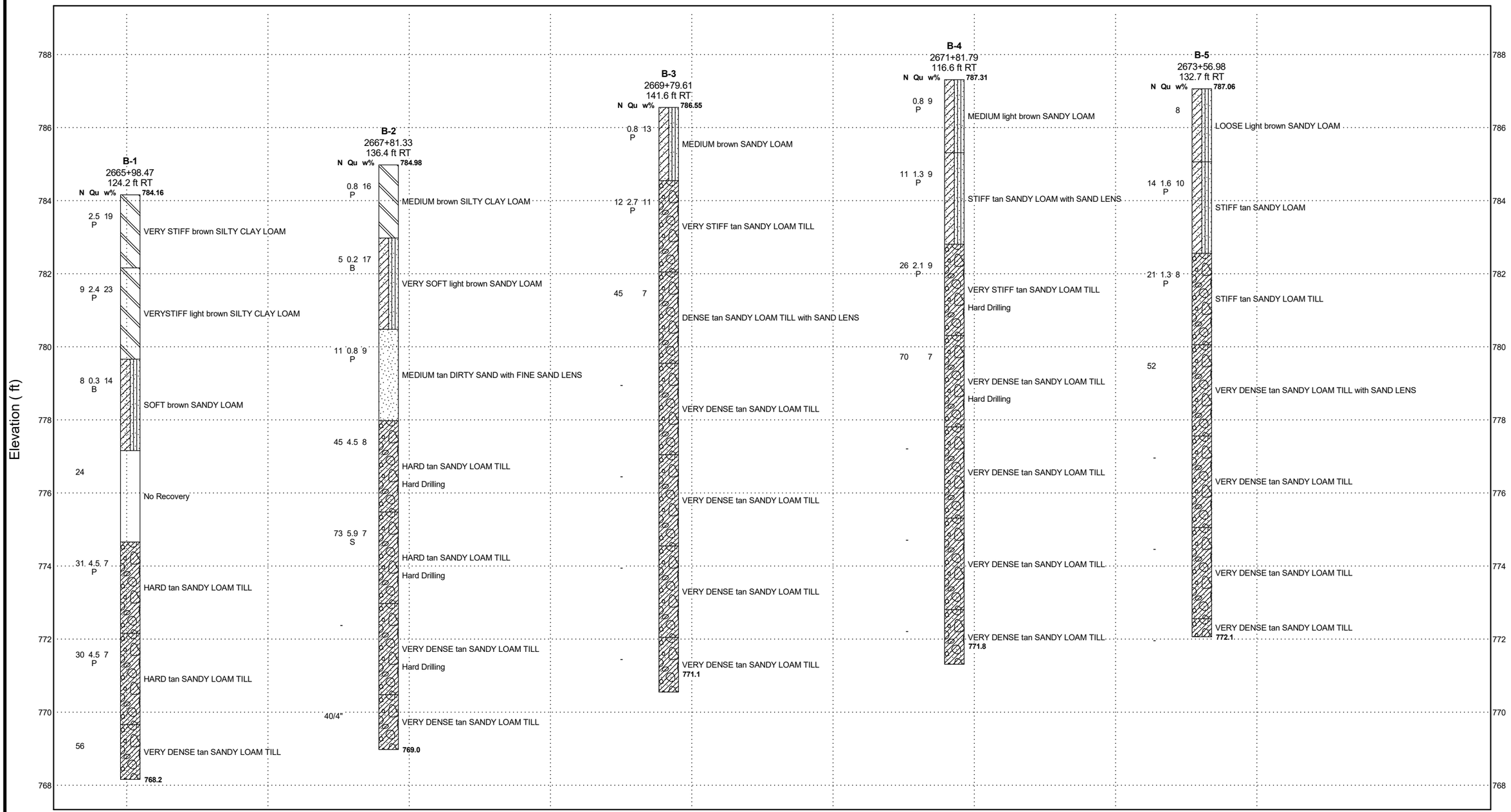
Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ **Hrs.** _____ ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM tan SANDY LOAM					
				0.5 P	9
	786.1				
STIFF tan SANDY LOAM TILL			8		
			10 13	1.5 S	9
	783.6				
VERY STIFF tan/gray SANDY CLAY LOAM		-5	8		
			10 11	3.7 B	14
	781.1				
VERY STIFF brown SANDY CLAY LOAM			4		
			6 11	2.7 B	13
	778.6				
STIFF tan SANDY LOAM TILL		-10	5		
			4 5	1.7 S	8
	776.1				
VERY STIFF tan SANDY LOAM TILL			15		
			14 12	2.9 P	7
	773.6				
VERY STIFF tan SANDY LOAM TILL		-15	12		
			12 16	2.8 P	7
	772.1				
End of Boring					
		-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)

EXHIBIT E

SUBSURFACE PROFILE



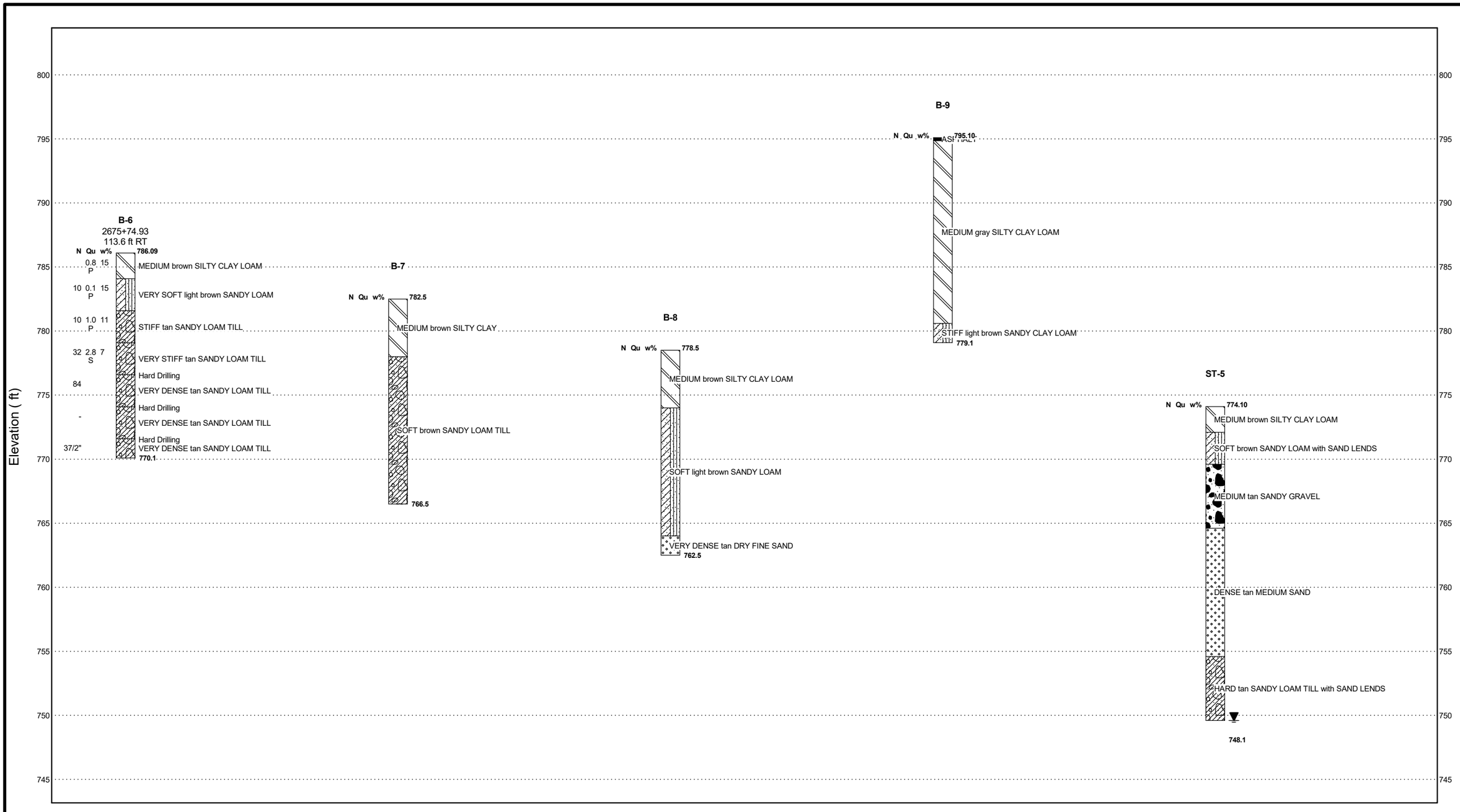
PRINTERMOD2 11X17 19-1138.00 NOISE WALL 8-10-21.GPJ IL_DOT.GDT 4/1/24

Illinois Department of Transportation
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: FAI 39
Section: (201-3)K
County: Winnebago



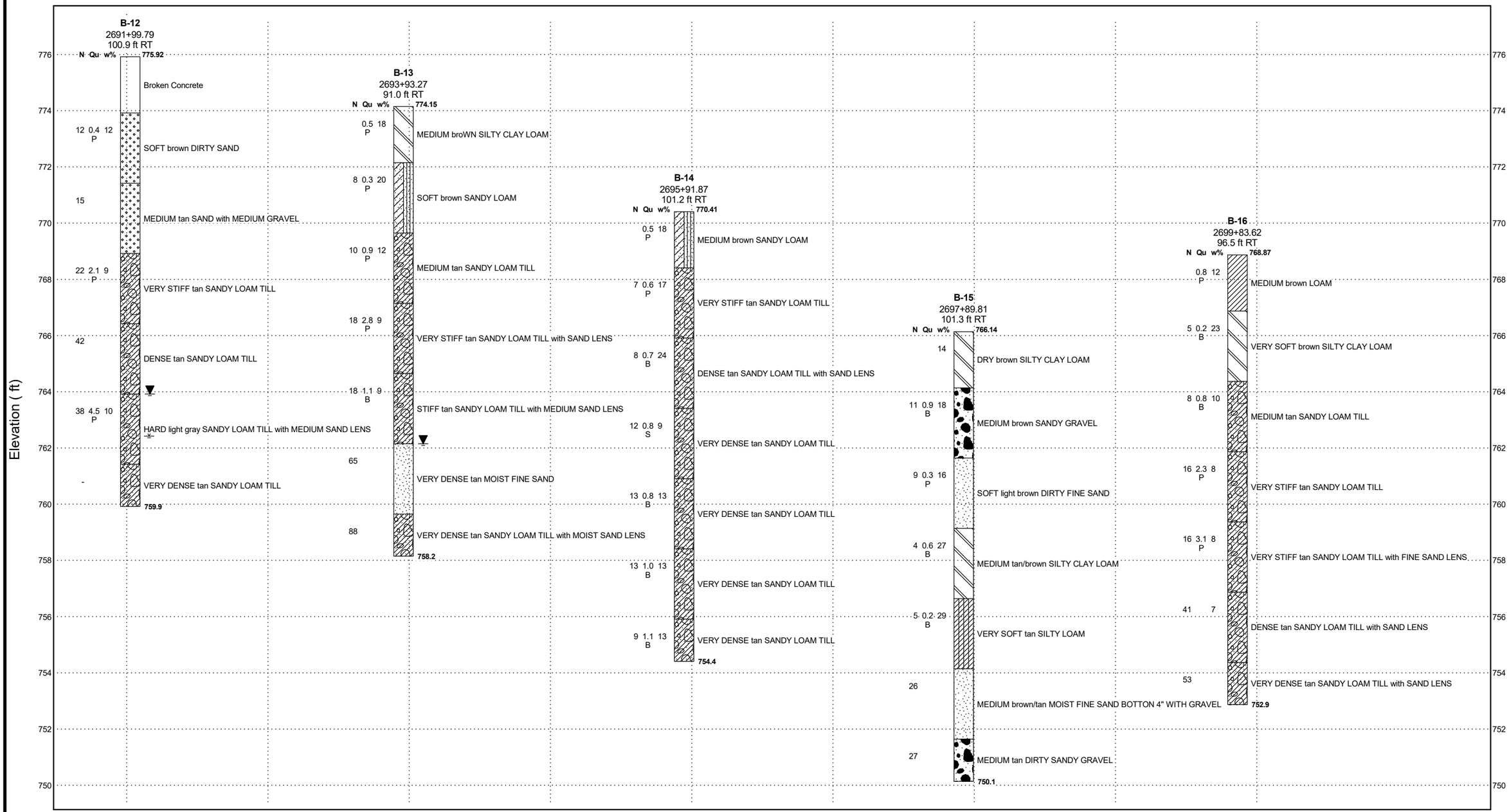
PRINTERMOD2 11X17 19-1138.00 NOISE WALL 8-10-21.GPJ IL_DOT.GDT 4/1/24

Illinois Department of Transportation
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: FAI 39
Section: (201-3)K
County: Winnebago



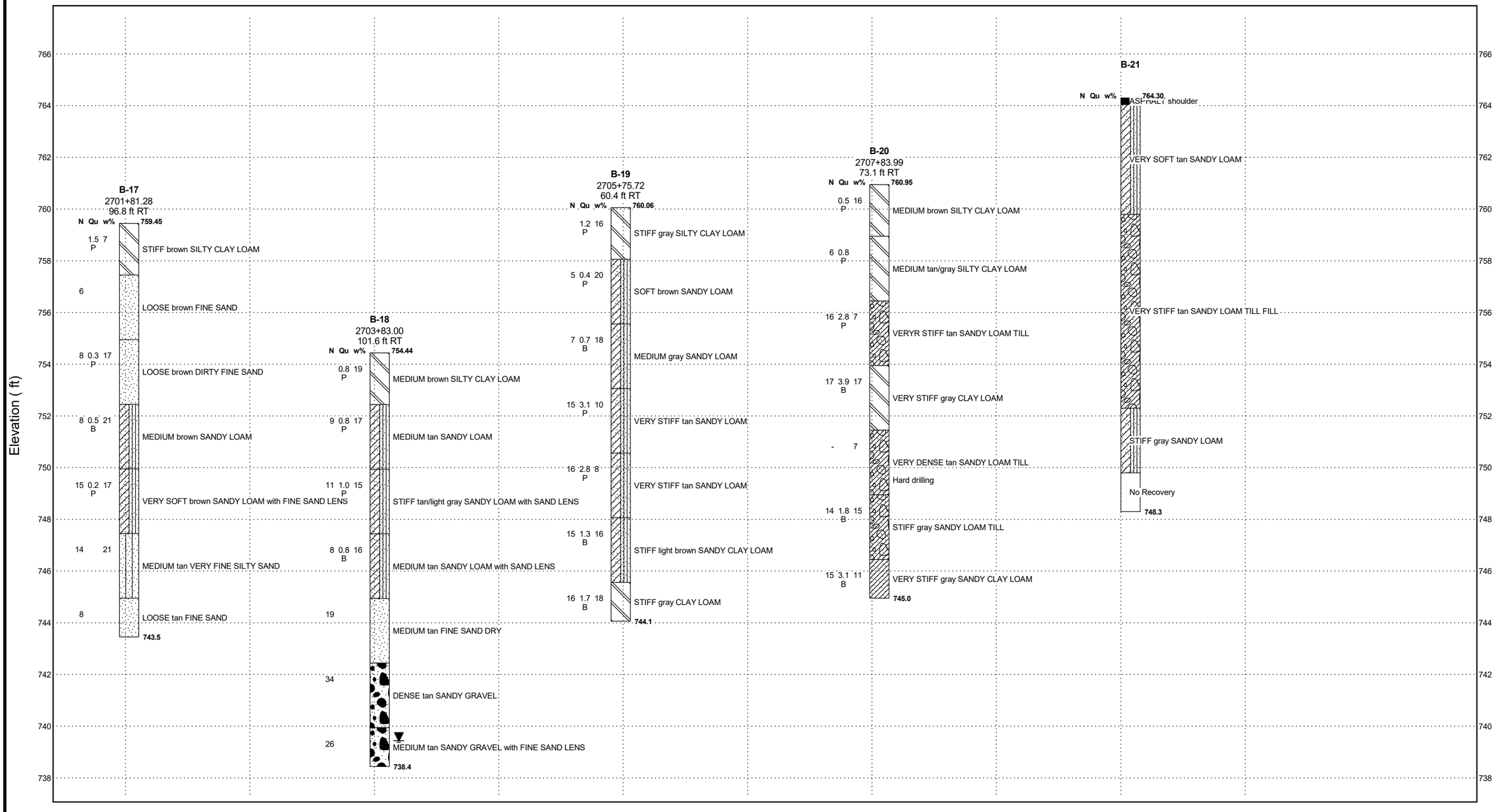
PRINTERMOD2 11X17 19-1138.00 NOISE WALL 8-10-21.GPJ IL_DOT.GDT 4/1/24

Illinois Department of Transportation
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: FAI 39
Section: (201-3)K
County: Winnebago



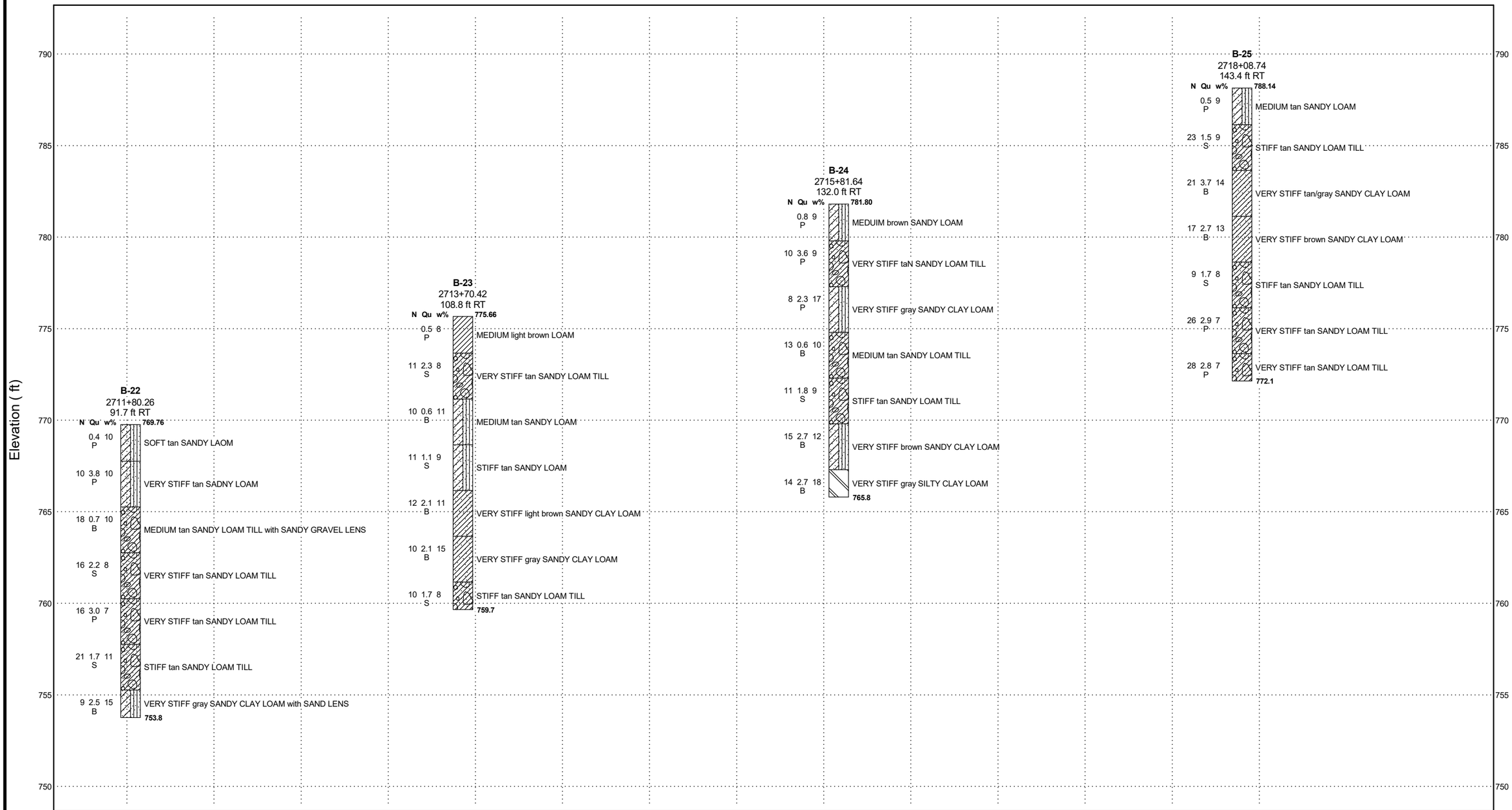
PRINTERMOD2 11X17 19-1138.00 NOISE WALL 8-10-21.GPJ IL_DOT.GDT 4/1/24

Illinois Department of Transportation
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: FAI 39
Section: (201-3)K
County: Winnebago



Illinois Department of Transportation
Division of Highways

NOT TO HORIZONTAL SCALE

SUBSURFACE PROFILE

Route: FAI 39
Section: (201-3)K
County: Winnebago

EXHIBIT F

FOUNDATION ANALYSIS

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-2

GWT:	-
elev. Top of Drilled Shaft (ft):	787.92
Diameter(in)	30.00
At(ft²)	**4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	**Description**	**Thickness (ft)**	**z(ft)**	**γ(pcf)**	**Su (psf)**	**N**	**N60**	**σ'(psf)**	**α**	**β**	**As(ft²)**	**fs (ksf)**	**Nc***	**q't (ksf))**				
1	Silty Clay Loam	4.50	4.50	120.00	800.0	5.0	7	270	0.85	0.61	35.34	0.68	7.4	5.92	29.06	14.53	24.03	13.22
2	Sand	0.50	5.00	115.00		11.0	15	569		1.21	3.93	0.69		18	88.36	44.18	26.73	14.70
3	Sand	2.00	7.00	115.00		11.0	15	713		1.17	15.71	0.83		18	88.36	44.18	39.81	21.90
4	Sandy Loam Till	3.00	10.00	125.00		45.0	60	1015		1.11	23.56	1.12		60	294.52	147.26	66.27	36.45
5	Sandy Loam Till	5.00	15.00	125.00		86.0	115	1515		1.02	39.27	1.55		60	294.52	147.26	127.12	69.91
6	**Sandy Loam Till**	1.00	16.00	125.00		100.0	133	1890		0.97	7.85	1.83		60	294.52	147.26		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-6

GWT: -
elev. Top of Drilled Shaft (ft): 792.02
Diameter(in) 30.00
At(ft²) **4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	Description	Thickness (ft)	z(ft)	γ(pcf)	Su (psf)	N	N60	σ'(psf)	α	β	As(ft²)	fs (ksf)	Nc*	q't (ksf))				
1	Sandy Loam	3.50	3.50	120.00		10.0	13	210		1.15	27.49	0.24		15.6	76.58	38.29	6.61	3.64
2	Sandy Loam Till	1.50	5.00	125.00		10.0	13	514		1.06	11.78	0.54		15.6	76.58	38.29	13.02	7.16
3	Sandy Loam Till	5.00	10.00	125.00		21.0	28	920		1.13	39.27	1.04		33.6	164.93	82.47	53.85	29.62
4	Sandy Loam Till	5.00	15.00	125.00		92.0	123	1545		1.02	39.27	1.58		60	294.52	147.26	115.90	63.75
5	Sandy Loam Till	1.00	16.00	125.00		100.0	133	1920		0.97	7.85	1.86		60	294.52	147.26	130.51	71.78
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-12

GWT: -
elev. Top of Drilled Shaft (ft): 782.62
Diameter(in) 30.00
At(ft²) **4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	Description	Thickness (ft)	z(ft)	γ(pcf)	Su (psf)	N	N60	σ'(psf)	α	β	As(ft²)	fs (ksf)	Nc*	q't (ksf))				
1	Sand	5.00	5.00	115.00		12.0	16	288		1.29	39.27	0.37		19.2	94.25	47.12	14.53	7.99
2	Sand	2.00	7.00	115.00		15.0	20	690		1.17	15.71	0.81		24	117.81	58.90	27.20	14.96
3	Sandy Loam Till	3.00	10.00	125.00		22.0	29	993		1.11	23.56	1.10		34.8	170.82	85.41	53.07	29.19
4	Sandy Loam Till	5.00	15.00	125.00		40.0	53	1493		1.02	39.27	1.53		60	294.52	147.26	113.01	62.16
5	Sandy Loam Till	1.00	16.00	125.00		100.0	133	1868		0.97	7.85	1.81		60	294.52	147.26	127.22	69.97
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-15

GWT:	-
elev. Top of Drilled Shaft (ft):	770.51
Diameter(in)	30.00
At(ft²)	**4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	Description	Thickness (ft)	z(ft)	γ(pcf)	Su (psf)	N	N60	σ'(psf)	α	β	As(ft²)	fs (ksf)	Nc*	q't (ksf))				
1	Silty Clay Loam	1.50	1.50	120.00	900.0			90	0.80		11.78	0.72	7.7	6.93	34.02	13.61	8.48	3.82
2	Sandy Gravel	3.00	4.50	120.00		11.0	15	360		1.27	23.56	0.46		18	88.36	44.18	19.22	9.72
3	Fine Sand	0.50	5.00	115.00		9.0	12	569		0.96	3.93	0.55		14.4	70.69	35.34	21.38	10.91
4	Fine Sand	2.00	7.00	115.00		9.0	12	713		0.94	15.71	0.67		14.4	70.69	35.34	31.85	16.67
5	Silty Clay Loam	3.00	10.00	120.00		4.0	5	1008		0.37	23.56	0.37		6	29.45	14.73	40.60	21.48
6	**Silty Clay Loam**	2.00	12.00	120.00		5.0	7	1308		0.49	15.71	0.64		8.4	41.23	20.62	50.69	27.03
7	**Fine Sand**	3.00	15.00	115.00		26.0	35	1600		1.00	23.56	1.61		42	206.17	103.08	88.54	47.85
8	**Sandy Gravel**	1.00	16.00	120.00		27.0	36	1833		0.97	7.85	1.77		43.2	212.06	106.03	102.47	55.51
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-20

GWT:	-
elev. Top of Drilled Shaft (ft):	763.35
Diameter(in)	30.00
At(ft²)	**4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	Description	Thickness (ft)	z(ft)	γ(pcf)	Su (psf)	N	N60	σ'(psf)	α	β	As(ft²)	fs (ksf)	Nc*	q't (ksf))				
1	Silty Clay Loam	5.00	5.00	120.00	650.0	7.0	9	300	0.93	0.77	39.27	0.60	6.95	4.5175	22.18	11.09	23.61	12.99
2	Silty Clay Loam	4.00	9.00	120.00	650.0	17.0	23	840	0.93	1.14	31.42	0.60	6.95	4.5175	22.18	11.09	42.50	23.37
3	Sandy Loam Till	1.00	10.00	125.00		100.0	133	1143		1.08	7.85	1.24		60	294.52	147.26	52.23	28.72
4	Sandy Loam Till	5.00	15.00	125.00		14.0	19	1518		1.02	39.27	1.55		22.8	111.92	55.96	113.17	62.24
5	Sandy Loam Till	1.00	16.00	125.00		15.0	20	1893		0.97	7.85	1.83		24	117.81	58.90	127.57	70.16
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Drilled Shafts Side and Toe Resistance

Kaskaskia Engineering Group, LLC

Project: NAW 8-12, 21 (W7011)
Project Number: 19-1138.00

Substructure: Noise Wall
Boring Number: B-23

GWT:	-
elev. Top of Drilled Shaft (ft):	772.6
Diameter(in)	30.00
At(ft²)	**4.91**

Soil Parameters								Side Friction					Tip Resistance		Qt (kips)	Factored Qt (kips)	Cumulative Qs (kips)	Cumulative Factored Qs (kips)
Layer	Description	Thickness (ft)	z(ft)	γ(pcf)	Su (psf)	N	N60	σ'(psf)	α	β	As(ft²)	fs (ksf)	Nc*	q't (ksf))				
1	Sandy Loam	5.00	5.00	120.00		10.0	13	300		1.12	39.27	0.33		15.6	76.58	38.29	13.14	7.22
2	Sandy Loam	4.50	9.50	120.00		11.0	15	870		1.14	35.34	0.99		18	88.36	44.18	48.08	26.44
3	Sandy Loam Till	0.50	10.00	125.00		12.0	16	1171		1.08	3.93	1.26		19.2	94.25	47.12	53.04	29.17
4	Sandy Loam Till	5.00	15.00	125.00		10.0	13	1515		0.89	39.27	1.34		15.6	76.58	38.29	105.77	58.18
5	Sandy Loam Till	1.00	16.00	125.00		10.0	13	1890		0.84	7.85	1.59		15.6	76.58	38.29	118.23	65.03
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		