

# STRUCTURE GEOTECHNICAL REPORT

## Proposed Retaining Wall

S.N. 043-7010

IL Route 84/U.S. Route 20  
FAP Route 301  
Section 29R-1  
Jo Daviess County

PTB 155 - Item 029  
IDOT Job No. P92-088-92  
Contract No. 64880

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**Date Prepared:** 03/20/2015  
**Date Revised:** 06/10/2020

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**Exhibits:** A) Location Map  
B) Boring Locations  
C) Boring Logs  
D) Rock Depth Probes  
E) Subsurface Data Profile  
F) Slope Stability Output  
G) Approved TSL

## **Project Description and Proposed Structure Information**

The geotechnical study summarized in this report was performed for the proposed structure number 043-7010 along IL Route 84/U.S. Route 20 from station 1217+16 to station 1219+45 in Jo Daviess County, Illinois. The proposed alignment will be used for all stations in the narrative, but the borings and rock depth probes have existing alignment stationing. The retaining wall is part of the reconstruction project for IL Route 84/U.S. Route 20. The purpose of this report is to investigate the subsurface conditions and present design and construction recommendations for the proposed structure. On the USGS Galena quadrangle map, the project site lies in Section 24, Range 1W, Township 28N, in the 4<sup>th</sup> Principal Meridian. A *Location Map* is presented in Exhibit A.

The proposed structure is located approximately 0.5 miles northwest of the Galena River. The retaining wall ranges from 35 to 46 feet left of the centerline of IL Route 84/U.S. Route 20. The wall will be 229'-6" in length and is expected to run between stations 1217+16.85 and 1219+45.03. The proposed wall will retain existing soil to be able to accommodate the reconstruction of IL Route 84/U.S. Route 20. The estimated maximum retained height for the structure is 13.2 feet with an average retained height of 9.1 feet. The slope of the back slope varies from flat to 1:20 (V:H). The proposed structure design will follow the LRFD design specifications. In order to construct the retaining wall, lane closure or shoulder closure may be required. A Type B concrete gutter will be provided to ensure proper drainage for the proposed structure.

The project also requires SGR's to be prepared for S.N. 043-7009 and S.N. 043-7011.

## **Existing Information**

No structure currently exists at the proposed location of structure 043-7010. Stationing increases from south to north.

## **Site Investigation, Subsurface Exploration and Generalized Subsurface Conditions**

This site is located in a historic district in Galena, IL. The combination of residential, commercial, and historic structures in the immediate vicinity may reduce design options in order to limit noise levels and vibrations. Utilities in the vicinity of the proposed retaining wall include, but are not limited to, an underground water main approximately 14 feet east of the proposed wall which runs parallel to IL Route 84/ U.S. Route 20; an underground water main that runs perpendicular to the proposed retaining wall that will intersect the proposed retaining wall at approximately station 1218+13; and an underground sanitary sewer that runs perpendicular to the proposed retaining wall and will intersect the proposed retaining wall approximately at station 1218+21. The subsurface investigation consisted of 3 borings (B-1b, B-2b, and B-3b) drilled by IDOT District 2 personal in June of 2010 and 4 borings (B-6, B-7, B-8, and B-9) drilled by IDOT District 2 personal in March of 2007 along with an additional subsurface investigation in July of 2015 which consisted of rock depth probing at three locations. The borings were drilled west of the centerline of IL Route 84/U.S. Route 20 at offset distances ranging from 15 feet to 49 feet with the exception of Boring B-7 which was drilled 10 feet to the east of the centerline of IL Route 84/U.S. Route 20. A rock core was taken at boring locations B-7 and B-8.

Beginning at the ground surface, standard penetration tests (SPT) were conducted every 2.5 feet according to AASHTO T 206 using a hollow stem auger drill. All borings encountered a thin layer of loam directly below the ground surface of the boring. The loam layer had blow counts ranging from 1 to 16 blows per foot, a  $Q_u$  value ranging from 0.3 to 2.5 tsf, and a moisture content ranging from 4 to 25%. Weathered Limestone was reached at depths ranging from 1.5 to 4 feet located below the surface. Borings were terminated at depths ranging from 3.5 to 12.5 feet below the ground surface. Most borings were terminated when the rock layer caused auger refusal. As previously stated above, borings B-7 and B-8 continued with 10 feet of rock coring into limestone. Because of the varying offsets and rock elevations encountered, it is recommended to assume that the rock elevation and station at the front face of the wall are as shown in Table 1 and linear interpolation is recommended for the stations in between.

Station	Elevation
1217+11.87	658.4
1217+71.11	666.4
1218+94.00	666.4
1219+39.52	659.5

Table 1

Auger refusal was encountered in the elevation range 645.8 to 665.4 with depths to refusal ranging from 2.0 to 11.0 feet. Borings B-7 and B-8 had rock core recoveries of 40% for the first five feet and 80% for the second five feet, but separate rock core logs were not provided.

According to the boring logs provided, no groundwater was encountered at the time the drilling took place or 24 hours after completion.

Further descriptions of the soil conditions encountered in the borings and a rock core log for Boring B-3e are presented in the *Boring Logs* attached in Exhibit C and the *Subsurface Data Profile* in Exhibit E. The *Rock Depth Probes* can be found in Exhibit D. Rock depth probe and boring locations can be found in Exhibit B.

### Geotechnical Evaluations

**Settlement.** Primary settlement analysis was performed for concrete cantilever and MSE wall types for various boring locations. The estimated settlements were found to be less than a half inch due to similar existing and proposed embankment heights. The analysis was done assuming preliminary footing elevations, 9.5 foot wide footing and 120 pcf back fill for concrete cantilever wall. If the actual dimensions vary from those assumed for this analysis, settlements shall be checked using actual values.

**Slope Stability.** Preliminary stability analyses using Bishop's Method were performed using temporary excavation 1:1 (V:H) slope model at multiple locations along the wall using different borings. According to the IDOT Geotechnical Manual, the required factor of safety is 1.7 for cut slopes. Stability checks were performed at various boring locations and the minimum factor of safety was found to be over 4 at all locations. No slope stability issues are expected for the proposed retaining wall. *Slope Stability Output* is presented in Exhibit F.

*Liquefaction.* Per the IDOT Memo and Design Guide 10.1 (LRFD Liquefaction Analysis), a liquefaction analysis is not required for Seismic Performance Zone 1.

### **Retaining Wall Evaluations and Design Recommendations**

The maximum retained height is to be approximately 13.2 feet (from bottom-of-wall grade to top-of-wall grade). The soil retained will be a cut area to accommodate the widening of IL Route 84/ U.S. Route 20 and maintain the right-of-way limits. Common feasible wall types include a T-type cantilever wall supported on spread footings, mechanically stabilized earth (MSE) wall, and soldier pile wall. The following considers the feasibility of each retaining wall due to construction constraints of the proposed retaining wall. Considering the soil conditions, wall heights, fill situation and that there are existing structures behind the proposed wall, it is expected that the soldier pile wall will be the most appropriate option for construction. However, economic, construction and scheduling factors should be evaluated for the decision of retaining wall design.

*T-type Concrete Cantilever Wall.* A conventional reinforced concrete retaining wall supported on a spread footing appears to be a feasible option for the proposed wall. Preliminary analysis showed that the soil below the footing provided adequate bearing resistance with minimum bearing capacity being approximately 4.9 ksf. Additionally, settlements of less than a half inch are expected for this wall type, so differential settlement is not expected. However, a cantilever T-type wall will require a temporary soil retention system to accommodate the construction of the wall due to the fact that the sloped excavation would extend beyond the limits of the right-of-way at some locations along the wall. The need for a temporary soil retention system will result in increased costs. The bottom of the footings would need to be placed at a minimum depth of 4 feet below final lowest adjacent grade for the frost protection or bear on rock. Rock ranges from depths of 0.5 feet above the proposed ground line to 9.5 feet below the proposed ground line at the front face of wall and the wall is 229'-6" feet in length, the footing could bear on rock or soil as long as there is adequate bearing pressure in the soil beneath the footing. The footing should be sized to provide sufficient weight to resist sliding and overturning.

Lateral loads on the wall may be resisted by the frictional resistance between the footings and supporting soil. A Geocomposite Wall Drain should be placed over the entire length of the back face of the wall and either connected to a perforated drain pipe in accordance with IDOT Bridge Manual or weep holes should be added and spaced at 8 foot centers.

*Mechanically Stabilized Earth (MSE) Wall.* The MSE wall does not appear to be a viable option. The close proximity of historical structures could interfere with the soil reinforcement. Due to the cut situation, an MSE wall will require a temporary soil retention system to accommodate the construction of the wall due to the fact that the sloped excavation would extend beyond the limits of the right-of-way at some locations along the wall. This will result in increased costs.

*Soldier Pile Wall.* A soldier pile wall appears to be the most suitable option because of the cut situation. The soil parameters shown in Table 2 are recommended for the design of the soldier pile wall. The parameters were determined based on the soil conditions encountered in the soil borings. The design of the soldier pile wall should disregard the top 3 feet of soil in front of the wall to account for excavation required for concrete facing

and drainage system. The drainage behind the wall should be designed in accordance with 2012 IDOT Bridge Manual. A Geotechnical Design Memorandum will be required in the design phase if the soldier pile wall option is chosen. If the soldier pile option is chosen, drilled soldier piles are recommended due to the close proximity of historical structures and shallow rock depth.

Soil Type	Moist Unit Weight (pcf)	Cohesion Cu (psf)	Friction Angle, $\phi$ (deg)	Estimated Soil Modulus k (pci)	Estimated Soil Strain Parameter, E50
Loose Sandy Loam	105	-	24.6	25	-
Medium Sandy Loam	129	-	34.0	90	-
Soft Silty Loam	108	300	24.6	30	0.02
Medium Silty Loam	113	500	24.6	30	0.02
Soft Silty Clay Loam	111	400	24.6	30	0.02
Stiff Silty Clay Loam	124	1300	24.6	500	0.007
Stiff Loam	124	1300	33.2	500	0.007
Weathered Limestone	144	-	44.0	-	-
Medium Weathered Limestone	130	-	34.7	-	-
Dense Weathered Limestone	135	-	37.6	-	-
Very Dense Weathered Limestone	144	-	44.0	-	-

Table 2

### Construction Considerations

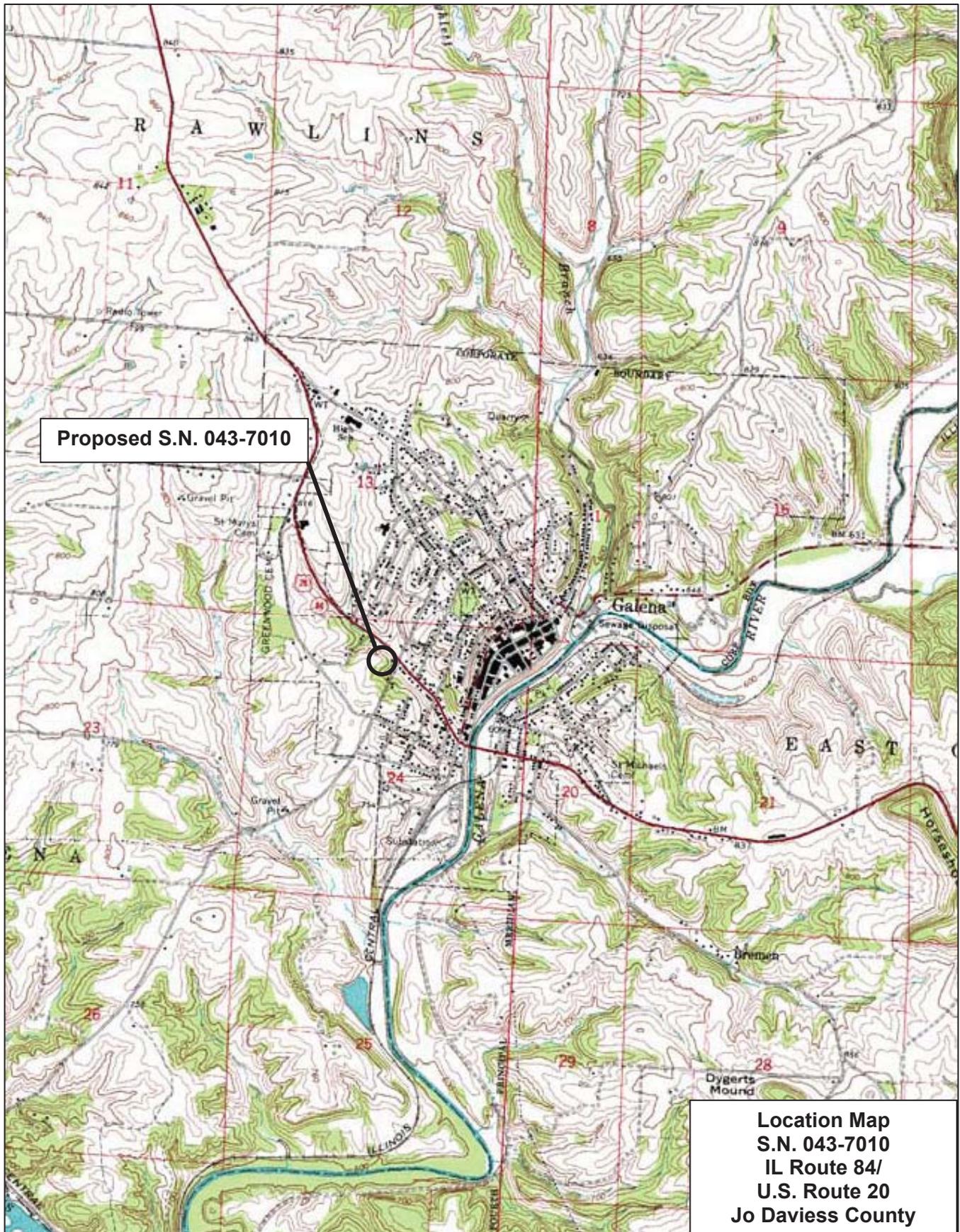
**Excavation.** If excavation for the proposed improvements is in excess of 4 feet, a 1:1 (V:H) temporary excavation slope has an adequate factor of safety. A steeper slope should not be used. If there is not enough room to provide a 1:1 (V:H) due to the close proximity of the right-of-way, a temporary soil retention system would be required. Movement of adjacent soils near the edge of and into excavation areas should be prevented. All excavations should be performed in accordance with the latest Occupational Safety and Health Administration (OSHA) requirements. If precipitation or perched water is allowed to enter the excavated area, it should be immediately removed via sump-pump. Any soil allowed to soften in standing water should be removed and replaced with structural fill material.

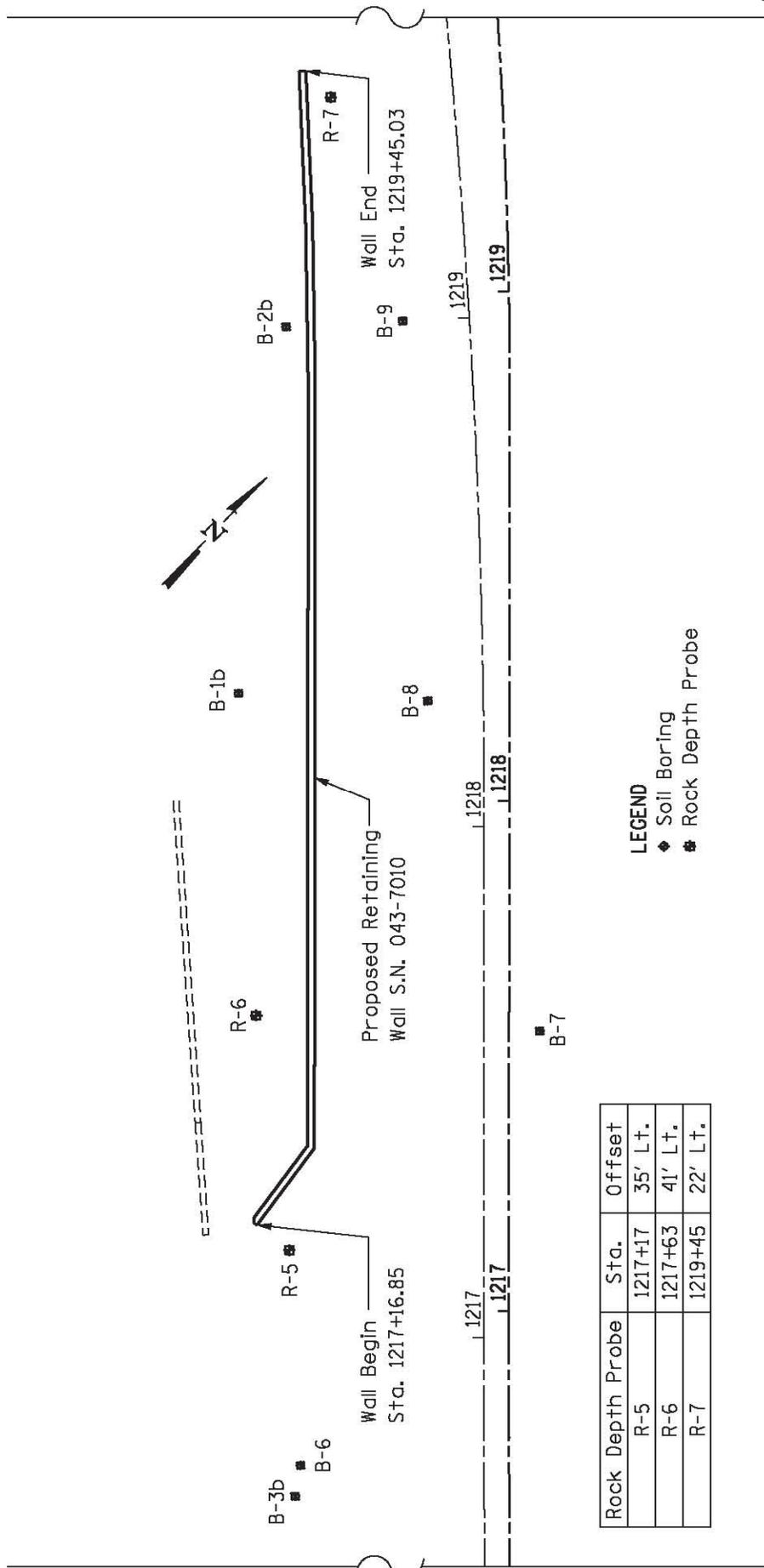
**Backfill.** If backfill materials are required, they must be pre-approved by the Resident Engineer. To backfill the retaining walls, we recommend Porous Granular Embankment in accordance with the IDOT Standard Specifications Section 207. Back fill material should be placed and compacted in accordance with the specification.

*Ground Improvement.* No ground improvement is anticipated at this location.

### **Limitations**

The recommendations provided herein are for the exclusive use of IDOT and Lin Engineering, Ltd. They are specific only to the project described, and are based on subsurface information obtained at boring locations within the retaining wall area, our understanding of the project as described herein, and geotechnical engineering practice consistent with the standard of care. No other warranty is expressed or implied. Lin Engineering, Ltd. should be contacted if conditions encountered during construction are not consistent with those described.





**LEGEND**  
 ◆ Soil Boring  
 ■ Rock Depth Probe

Rock Depth Probe	Sta.	Offset
R-5	1217+17	35' L.T.
R-6	1217+63	41' L.T.
R-7	1219+45	22' L.T.



**Illinois Department of Transportation**  
Division of Highways  
Illinois Department of Transportation/D-2

# SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE FA 301 DESCRIPTION P92-088-92 Retaining Wall, West Street going N. 300' LOGGED BY W. Garza  
SECTION 29X-T LOCATION W. Galena Twp. - 24 NE, SEC. , TWP. 28N, RNG. 1W  
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	Station	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
		(ft)	(/6")	(tsf)	(%)						Hrs.
	1218+00										
BORING NO.	B-1b										
Station	1218+27										
Offset	44.00ft Lt CL										
Ground Surface Elev.	670.40										
STIFF tan LOAM with LIMESTONE fragments	668.40		4								
			7	1.3	18.0						
			9	P							
	666.40										
DENSE tan weathered LIMESTONE		-5	64								
			17								
	664.40		21								
VERY DENSE tan weathered LIMESTONE			100/6"								
End of Boring	661.90										
		-10									
		-15									
		-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, from 137 (Rev. 8-99)



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ROUTE FA 301 DESCRIPTION P92-088-92 Retaining Wall, West Street going N. 300' LOGGED BY W. Garza  
SECTION 29X-T LOCATION W. Galena Twp. - 24NE, SEC., TWP. 28N, RNG. 1W  
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After
	(ft)	(/6")	(tsf)	(%)						Hrs.
1219+00										
B-2b										
1219+00										
33.00ft Lt CL										
668.40 ft										
STIFF light brown SILTY CLAY LOAM			1.3	24.0						
			P							
666.40										
1st weathered LIMESTONE at 2'										
Refusal at 3.5'										
664.90										
End of Boring										
	-5									
	-10									
	-15									
	-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrator)  
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)



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# SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE FA 301 DESCRIPTION P92-088-92 Retaining Wall, West Street going N. 300' LOGGED BY W. Garza

SECTION 29X-T LOCATION W. Galena Twp. - 24NE, SEC., TWP. 28N, RNG. 1W

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

STRUCT. NO. \_\_\_\_\_  
Station 1217+00

BORING NO. B-3b  
Station 1216+69  
Offset 34.00ft Lt CL  
Ground Surface Elev. 656.80 ft

DEPT H (ft) BLOWS (6") UCS Qu (tsf) MOIST (%)

Surface Water Elev. \_\_\_\_\_ ft  
Stream Bed Elev. \_\_\_\_\_ ft

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

SOIL DESCRIPTION	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
SOFT brown SILTY CLAY LOAM	655.30		0.4 P	25.0
MEDIUM tan weathered LIMESTONE	653.30	4, 6, 8		
MEDIUM tan weathered LIMESTONE	650.80	-5, 6, 12, 17		
MEDIUM tan weathered LIMESTONE	648.30	11, 9, 8		
VERY DENSE tan weathered LIMESTONE	645.80	-10, 7, 100/7"		
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, from 137 (Rev. 8-99)





**Illinois Department of Transportation**  
Division of Highways  
Illinois Department of Transportation/D-2

# SOIL BORING LOG

Page 1 of 1

Date 3/22/07

ROUTE FA 301 DESCRIPTION P92-088-92 Retaining Wall, IL 84 in Galena LOGGED BY J. Straling  
SECTION 29X-T LOCATION W. Galena Twp. - 13 NW, SEC. , TWP. 28N, RNG. 1W  
COUNTY JoDavless DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev.	D E P T H (ft)	B L O W S (lb")	U C S Qu (tsf)	M O I S T (%)
					ft				
BORING NO. <u>B-7</u> Station <u>1217+60</u> Offset <u>10.00ft RI CL</u> Ground Surface Elev. <u>656.10</u> ft									
Asphalt Widening			0.5 P	12.0					
MEDIUM tan/brown SILTY LOAM									
653.60						633.60			
SOFT tan/brown SILTY LOAM			0.3 P	23.0					
652.10									
weathered LIMESTONE									
649.60									
weathered LIMESTONE									
647.10									
weathered LIMESTONE									
643.60									
Run 1 Box 17 tan weathered LIMESTONE 40% Recovery 8 minute run									
638.60									
Run 2 Box 17 tan weathered LIMESTONE 80% Recovery									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrator)  
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)

FIGURE 2



**Illinois Department of Transportation**  
Division of Highways  
Illinois Department of Transportation/D-2

# SOIL BORING LOG

Page 1 of 1

Date 3/20/07

ROUTE FA 301 DESCRIPTION P92-088-92 Retaining Wall, IL 84 in Galena LOGGED BY J. Strating  
SECTION 29X-T LOCATION W. Galena Twp. - 13 NW, SEC. , TWP. 28N, RNG. 1W  
COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev.
					ft
BORING NO. <u>B-8</u> Station <u>1218+25</u> Offset <u>10.00ft LL CL</u> Ground Surface Elev. <u>657.90</u> ft	(ft)	(/6")	(tsf)	(%)	Stream Bed Elev.
					ft
					Groundwater Elev.:
					First Encounter
					Upon Completion
					After _____ Hrs.
					ft
Asphalt Widening					
LOOSE brown SANDY LOAM					
	655.90				
MEDIUM tan weathered LIMESTONE with SILTY LOAM lens		13			
	654.40	10			
		10			
		-5	13		
			12		
DENSE tan weathered LIMESTONE	651.90		26		
VERY DENSE tan weathered LIMESTONE			100/9'		
	648.40				
Box 8, Run 1 tan weathered LIMESTONE 40% Recovery 8 min. run		-10	100/1'		
	643.40				
Box 8, Run 2 tan weathered LIMESTONE 80% Recovery 10 min. run		-15			
	638.40				
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, from 137 (Rev. 8-99)  
ENCLOSURE 7





Soil Survey Data

Project: \_\_\_\_\_ Logged By: Wally Garza  
 Route: US 20  
 Section: 29R-1  
 County: Jo Daviess

Date: 7/30/15		Sta.: 1202+53 (@1202+50) Elev. 618.1			Offset: 57' Rt	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						1 <sup>st</sup> Encounter – 617.1
3						
4						Auger Refusal @ 617.1
5						
6						
7						
8						
9						
10						

Date: 7/30/15		Sta.: 1217+17 (@1217+05) Elev. 660.9			Offset: 35' Lt of CL	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						
3						1 <sup>st</sup> Encounter @ 658.4
4						
5						Auger Refusal @ 649.9
6						
7						
8						
9						
10						

Date: 7/29/15		Sta.: 1217+63 (@ 1217+67) Elev. 669.9			Offset: 41' Lt of CL	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						
3						1 <sup>st</sup> Encounter @ 668.9
4						
5						Auger Refusal @ 665.4
6						
7						
8						
9						
10						

Qu: 0-.25 Very Soft; .25-.5 Soft; .5-1.0 Medium; 1.0-2.0 Stiff; 2.0-4.0 Very Stiff; >4.0 Hard      jt9-1-15-1



Soil Survey Data

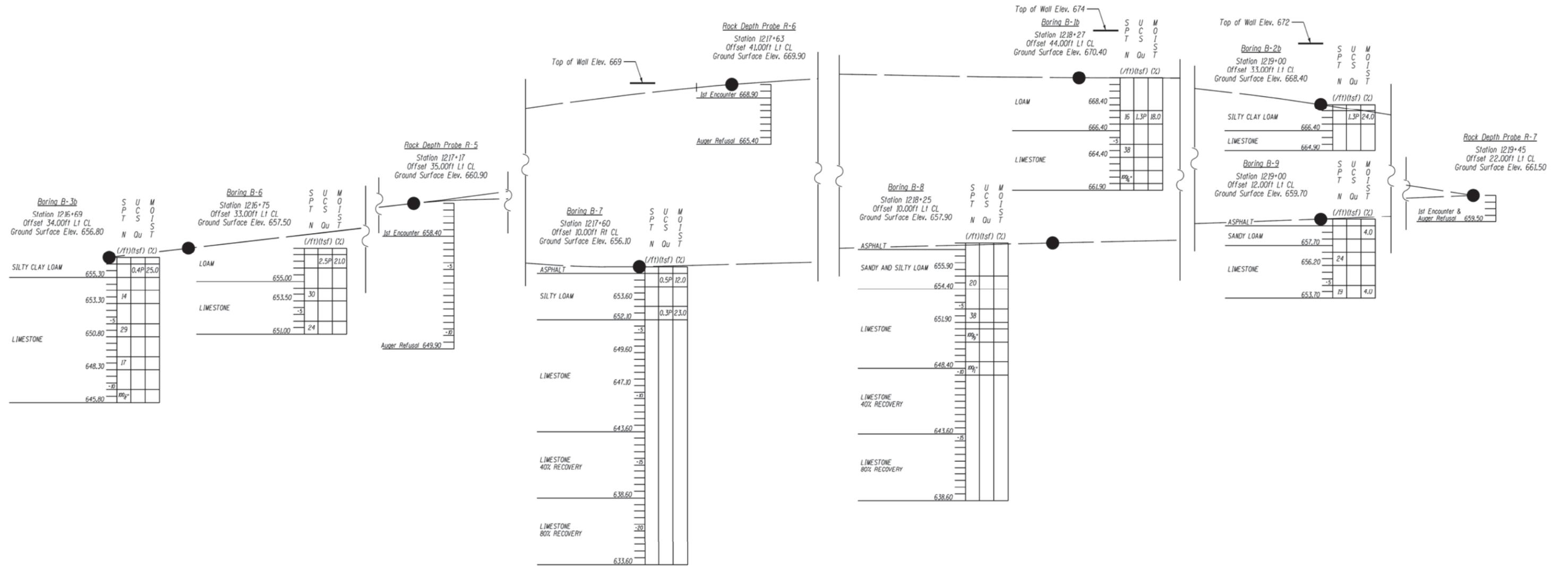
Project: \_\_\_\_\_ Logged By: Wally Garza  
 Route: US 20  
 Section: 29R-1  
 County: Jo Daviess

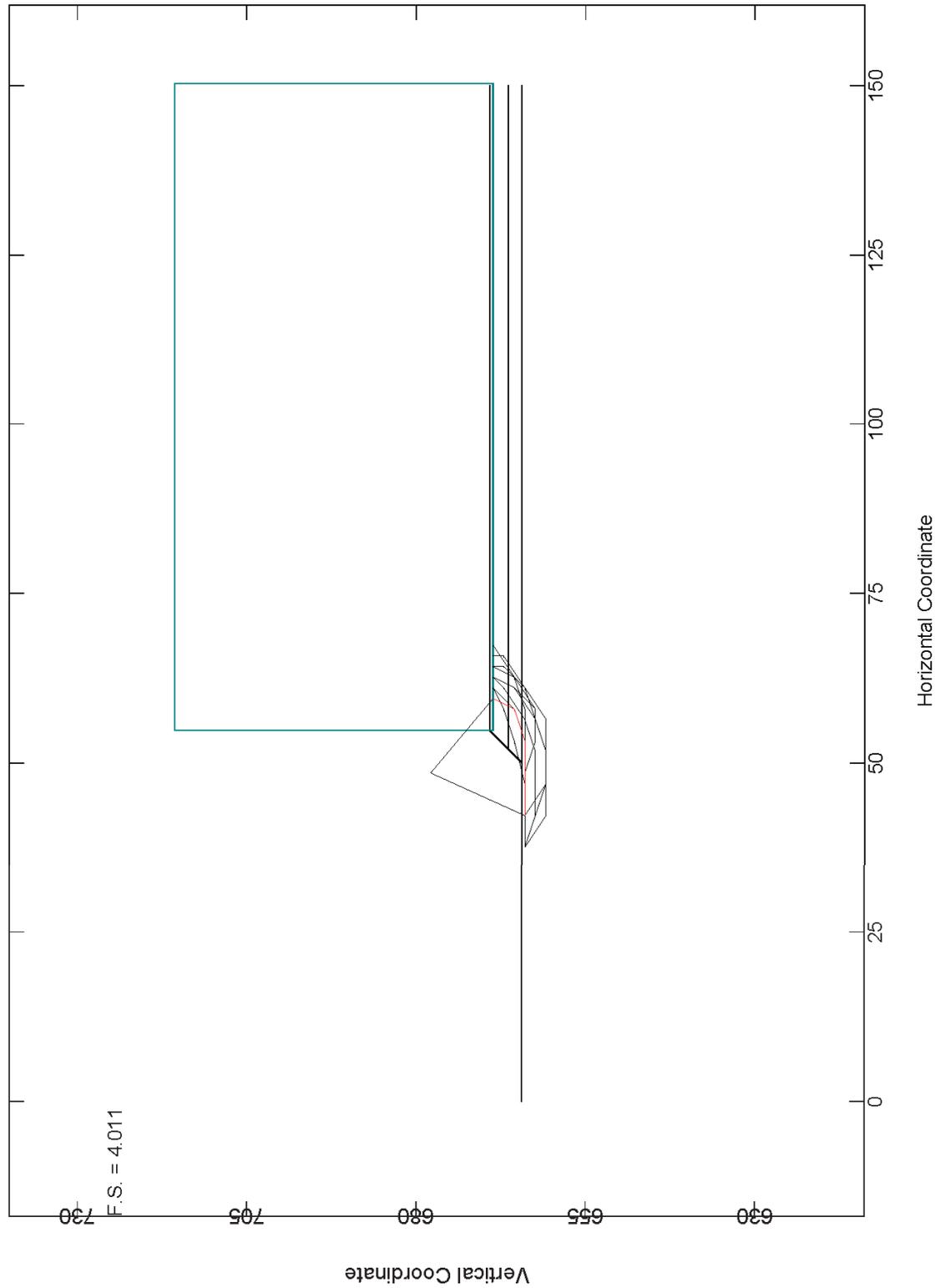
Date: 7/30/15		Sta.: 1219+45 (Elev. 661.5)			Offset: 22' Lt of CL	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						1 <sup>st</sup> Encounter – 659.5
3						
4						Auger Refusal @ 659.5
5						
6						
7						
8						
9						
10						

Date: 7/31/15 B-1e		Sta.: B-1e (Elev. 685.6)			Offset: Same Hole	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						1 <sup>st</sup> Encounter – 674.1
3						
4						Auger Refusal @ 673.6
5						
6						
7						
8						
9						
10						

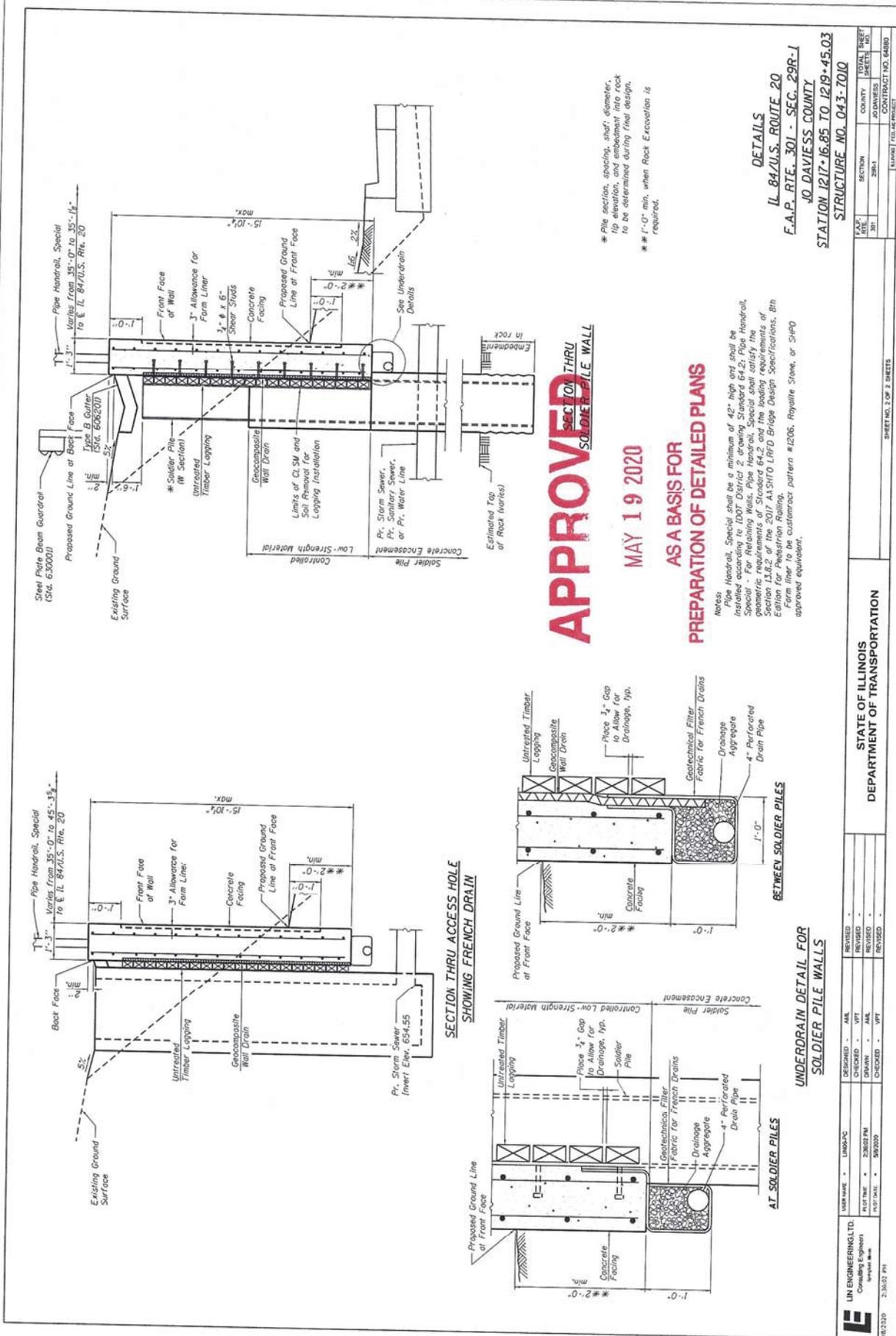
Date: 7/30/15		Sta.: 111+15 (Elev. 696.7)			Offset: 9.5' Lt	
Depth	Sample No.	Soil Type	Water	Can No.	Qu	Description of Soil Layer (Color, Moisture, Strength, Etc.)
1						
2						1 <sup>st</sup> Encounter @ 695.2
3						
4						Auger Refusal @ 694.2
5						
6						
7						8" Asphalt
8						
9						
10						

Qu: 0-.25 Very Soft; .25-.5 Soft; .5-1.0 Medium; 1.0-2.0 Stiff; 2.0-4.0 Very Stiff; >4.0 Hard      jt9-1-15-1









**APPROVED**  
SECTION THRU  
SOLDIER PILE WALL

MAY 19 2020

AS A BASIS FOR  
PREPARATION OF DETAILED PLANS

Note: Pipe Handrail, Special shall be a minimum of 42" high and shall be installed according to IDOT District 2. For Retaining Walls, Pipe Handrail, Special shall be installed according to the geometric requirements of Standard 64.2 and the loading requirements of Section 13.6.2 of the 2017 AASHTO LRFD Bridge Design Specifications, 8th Edition for Pedestrian Loading. The form liner to be customrock pattern #1206, Royale Stone, or Syra approved equivalent.

\* Pile section, spacing, sheet diameter, tip elevation, and embedment into rock to be determined during final design.  
\*\* 1'-0" min. when Rock Excavation is required.

DETAILS  
IL 84/U.S. ROUTE 20  
F.A.P. RTE. 301 - SEC. 299-1  
JO DAVIESS COUNTY  
STATION 1217+16.85 TO 1219+45.03  
STRUCTURE NO. 043-7010

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SHEET NO. 2 OF 2 SHEETS	
DESIGNED - ANK	CHECKED - VPT	DATE - 2/20/20	PROJECT - 1217+16.85 TO 1219+45.03
DRAWN - ANK	CHECKED - VPT	DATE - 2/20/20	PROJECT - 1217+16.85 TO 1219+45.03
IN CHARGE - ANK	CHECKED - VPT	DATE - 2/20/20	PROJECT - 1217+16.85 TO 1219+45.03
PROJECT NO. 1217+16.85 TO 1219+45.03	SECTION NO. 043-7010	COUNTY JO DAVIESS	CONTRACT NO. 6480
DATE 2/20/20	SCALE 1/2" = 1'-0"		