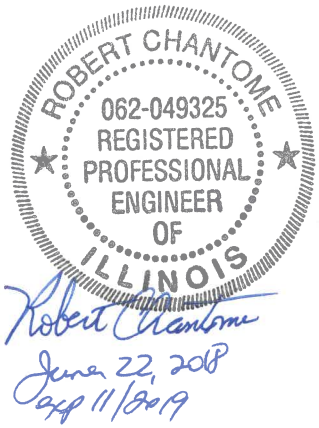


Abbreviated Structure Geotechnical Report

F.A.P. Route 317 (US 150)
Section 15B(BR)
Peoria County
Job No. P-94-018-13
Contract No. 68B46
PTB No. 169-028
Ramp SW over Illinois River Tributary
Structure No. 090-2020
Existing Structure No. 090-2013
Submitted August 2017
Revised June 2018

Prepared for:
Illinois Department of
Transportation, District 4
401 Main
Peoria, Illinois 61602

Prepared By:
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703
(217) 788-2450

rchantome@hanson-inc.com

Structure Designer:
Michael Mendenhall
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703
(217) 788-2450

Illinois Department of Transportation

Abbreviated Structure Geotechnical Report

Original Report Date: 8/24/2017	**Proposed SN:** 090-2020	**Route:**	US 150 - IL 116 SW Ramp
Revised Date: 6/22/18	**Existing SN:** 090-2013	**Section:**	15B(BR)
Geotechnical Engineer: Robert Chantome		**County:**	Tazewell
Structural Engineer: Hanson Professional Services Inc.		**Contract:**	68B46

Indicate the proposed structure type, substructure types, and foundation locations (attach plan and elevation drawing):

The proposed structure will be a 10 ft x 8 ft cast-in-place double barrel box culvert with horizontal cantilevered wing walls. The proposed location is at Ramp SW Sta. 26+80.35. The skew angle to the ramp is approximately 15 degrees. The proposed structure is approximately 90 ft downstream of the current structure, which will be removed. The proposed structure is in the same location as a 10 ft x 6 ft cast-in-place double box culvert that was removed to construct the current structure. The older culvert and an old Ramp SW alignment very similar to the proposed alignment was in place from 1963 to 1993. A plan and profile drawing of the old Ramp SW alignment is attached.

Discuss the existing boring data, existing plans foundation information, new subsurface exploration and need for any additional exploration to be provided with SGR Technical Memo (attach all data and subsurface profile plot):

There is no boring data shown on the existing structure plans. Two 50 ft soil borings were completed at the proposed structure location (SB-44 and SB-45). Additional soil exploration is not necessary.

Provide the location and maximum height of any new soil fill or magnitude of footing bearing pressure. Estimate the amount and time of the expected settlement. Indicate if further testing, analysis, and/or ground improvement/treatment is necessary:

The proposed structure will require approximately 10 ft of fill over the existing stream bed and approximately 3.5 ft of fill over the top slab. Service bearing pressure will be approximately 850 psf. Soil moisture contents and unconfined strengths were used to estimate the expected settlement. The soils at this site are known to be overconsolidated because of the old ramp embankment. It was assumed that cohesive soil settlement would be 10 to 20 percent of that calculated for normally consolidated soils. Estimated cohesive soil settlement is less than 0.5 inches under both the culvert and the tallest fill section.

No removal or treatment is required to remediate the settlement.

Identify any new cuts or fill slope angles and heights. Estimate the factor of safety against slope failure. Indicate if further testing, analysis or ground improvement/treatment is necessary:

The roadway embankment will be approximately 10 ft, maximum, above existing grade and have 1.0V:4.0H side slopes. This is very similar to the embankment that was in place on this site from 1963 to 1993. The proposed slopes are considered to be stable by inspection.

Indicate at each substructure, the 100-year and 200-year total scour depths in the Hydraulics report, the non-granular scour depth reduction, the proposed ground surface, and the recommended foundation design scour elevations:

Scour is not considered for box culvert design.

Determining the seismic soil site class, the seismic performance zone, the 0.2 and 1.0 second design spectral accelerations and indicate if that the soils are liquefiable:

AASHTO does not require seismic analysis for buried structures.

Confirm feasibility of the proposed foundation or wall type and provide design parameters. Attach a pile design table indicating feasible pile types, various nominal required bearings, factored resistances available and corresponding estimated lengths at locations where piles will be used. Provide factored bearing resistance and unit sliding resistance at various elevations and confirm no ground improvement/treatment is necessary where spread footings are proposed. Estimated top of rock elevations as well as preliminary factored unit side and tip resistance values shall be indicated when drilled shafts are proposed:

The proposed culvert is expected to have a factored bearing pressure of approximately 1.6 ksf at Elev. 467.5±. Thin, discontinuous, layers of soft cohesive soils and/or loose granular soils are present below Elev. 465.6 in Boring SB-44 and below Elev. 463.9 in Boring SB-45. At Elev. 467.5, the factored bearing resistance is 2.7 ksf, assuming no ground improvement and including the influence of the softer layers at depth.

Very soft soils may be present at the west end of the structure. This material should be removed and replaced where encountered at the subgrade elevation. For plan limits, the bottom of unsuitable removal should be Elev. 464.4, Removal should start 10 ft from the west end of the culvert and continue 3 ft. past the west end. Width of the removal should extend 3 ft beyond the edges of the culvert. Replacement material should be Rock Fill choked with 6 in. of CA7 or CA11..

Calculate the estimated water surface elevation and determine the need for cofferdams (type 1 or 2), and seal coat:

EWSE = Elev. 472.1

Streamwater flow during construction will be diverted in accordance with the Standard Specifications. A cofferdam is not required.

Assess the need for sheeting or soil retention or temporary construction slope and provide recommendation for other construction concerns:

All excavation will be shallow with room to lay back temporary slopes.

Although the soils at the bearing elevation will provide sufficient support for the structure, poor weather and construction disturbance may make them unstable. A working platform may be required to facilitate construction. Per IDOT policy, the need for a working platform should be determined during construction by the field engineer.

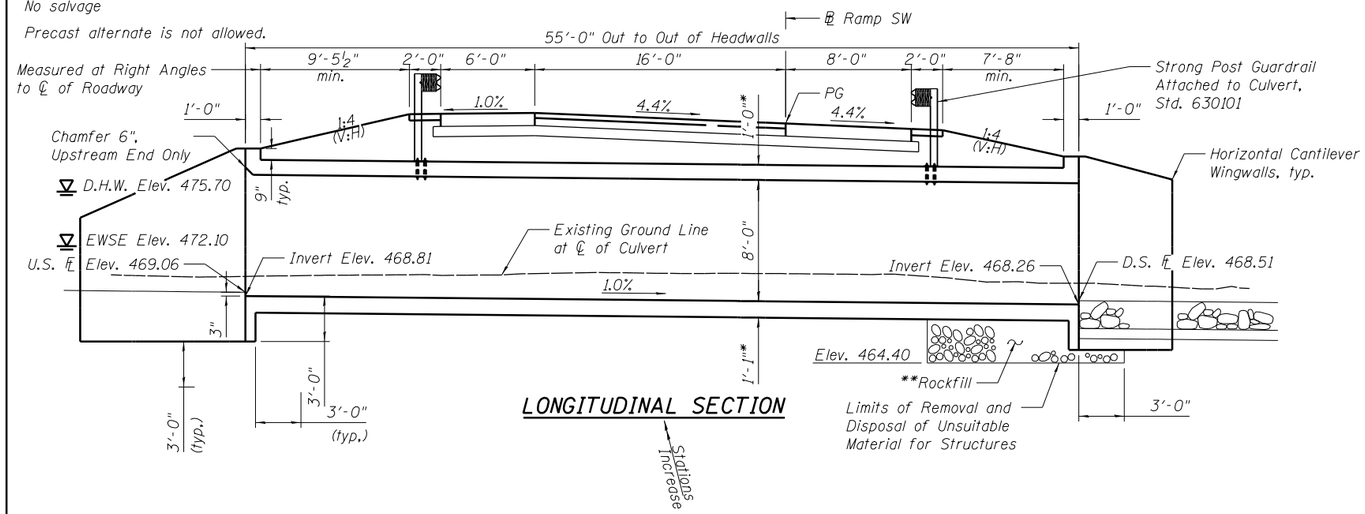
District 4 policy is to include a 6 in. minimum layer of Porous Granular Embankment (CA7 or CA11) below all culverts. District Std 540000-D4, Detail of Excavation and Backfill for Box Culverts, and Special Provision 31100, Rock Fill, should be included in the contract documents.

Bench Mark: BM6257 - Chiseled cross on top of center anchor bolt westerly side of northerly concrete pier for westerly supports of overhead traffic sign northbound N Main Street (IL 116) at ramp to eastbound US 24 (Washington). Elev. 473.99

Existing Structure: SN. 090-2013 built in 1993 as double 10'x6' R.C. box culvert with Culvert length of 80'-7¼".
Traffic to be maintained on existing ramp.

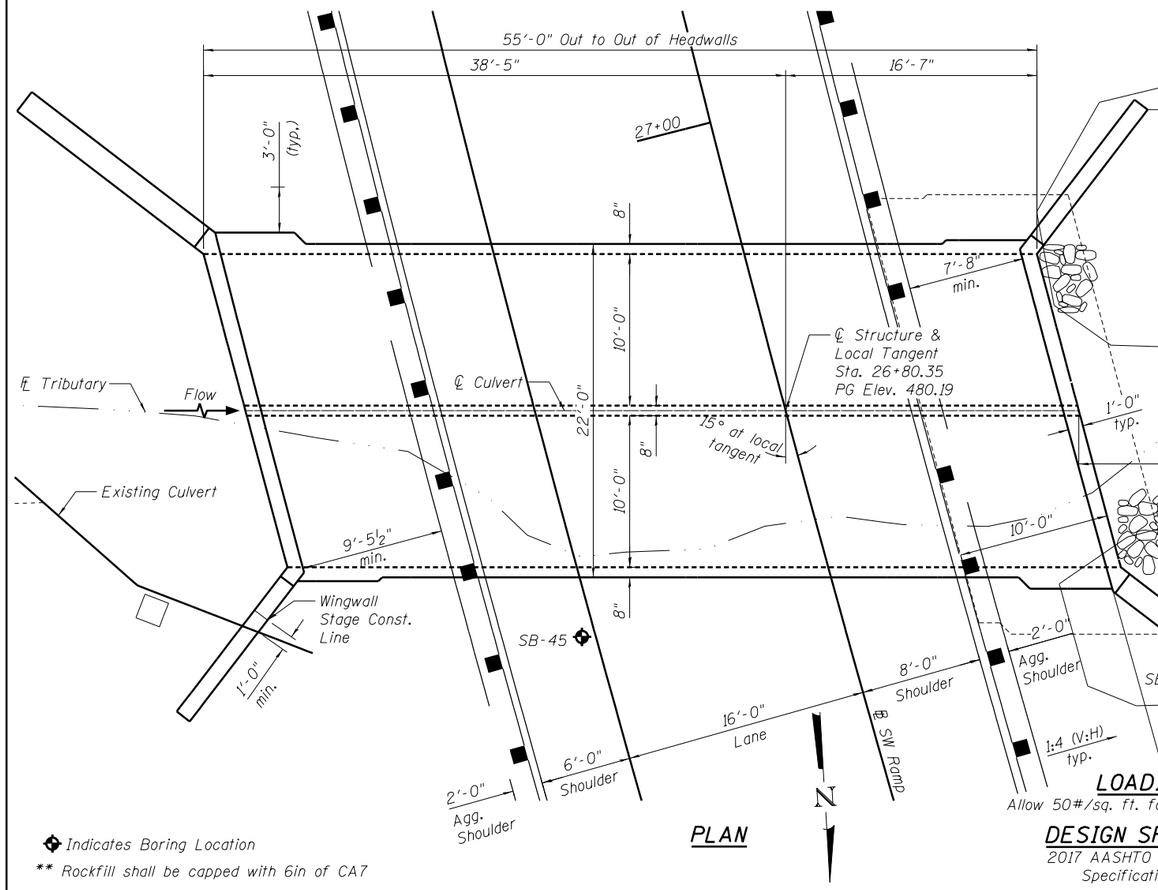
No salvage

Precast alternate is not allowed.



LONGITUDINAL SECTION

Stations Increase



◆ Indicates Boring Location

** Rockfill shall be capped with 6in of CA7

PLAN

CURVE DATA

P.I. Sta. = 23+52.44
Δ = 41°49'02.25" RT
D = 3°38'16.18"
R = 1,575.00'
T = 601.71'
L = 1,149.51'
E = 111.02'
e = 4.4%
T.R. = NONE
S.E. Run = 47.4'
P.C. Sta. = 17+50.74
P.T. Sta. = 29+00.25

WATERWAY INFORMATION

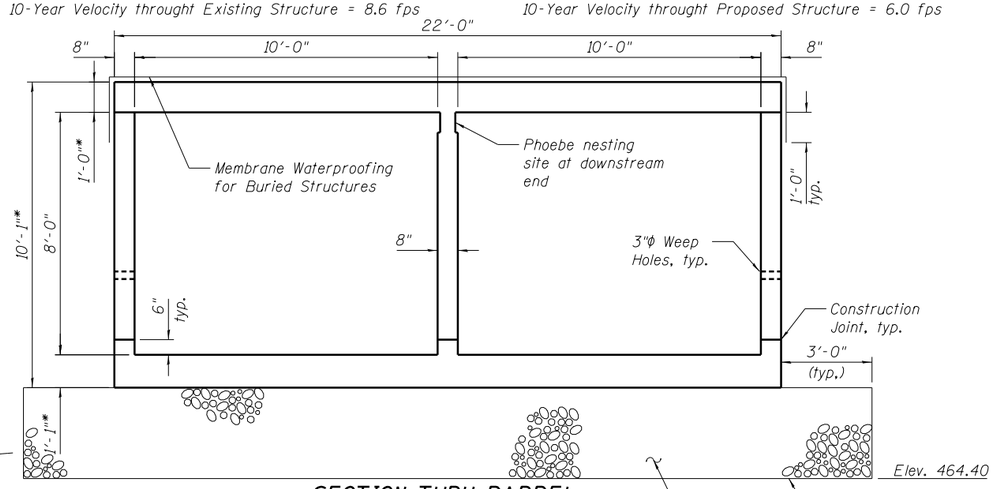
Drainage Area = 0.96 Sq.Mi.

Existing Low Grade Elev. 480.71 @ Sta. 28+00.00
Proposed Low Grade Elev. 480.77 @

Flood	Freq. Yr.	Q C.F.S. Exist.	Q C.F.S. Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	660	660	77	110	474.6	1.0	0.5	475.6	475.1
Design	50	1,170	1,170	100	133	475.7	3.3	1.6	479.0	477.3
Base	100	1,420	1,420	109	142	476.2	4.8	2.5	481.0	478.7
Ex. Overtop.	150	1,575	N/A	114	N/A	476.4	4.6	N/A	481.0	N/A
Prop. Overtop.	290	N/A	1,800	N/A	153	476.7	N/A	4.0	N/A	480.7

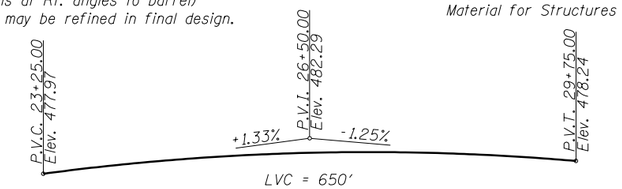
10-Year Velocity throught Existing Structure = 8.6 fps

10-Year Velocity throught Proposed Structure = 6.0 fps



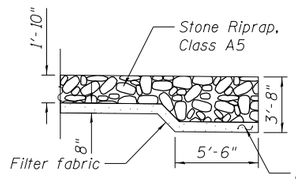
SECTION THRU BARREL

(Dimensions at Rt. angles to barrel)
*Slab thickness may be refined in final design.



PROFILE GRADE

(along ℄ Ramp SW)



SECTION A-A

HIGHWAY CLASSIFICATION

F.A.P. Rte. 317 - Ramp SW
Functional Class: Other Principal Arterial
ADT: 4350 (2014); 4728 (2040)
ADTT: 282 (2014); 306 (2040)
DHV: 438 (2040)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

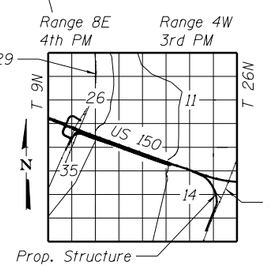
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
RAMP SW OVER IL RIVER TRIBUTARY
F.A.P. 317 - SECTION 15B(BR)
TAZEWELL COUNTY
STATION 26+80.35
STRUCTURE NO. 090-2020

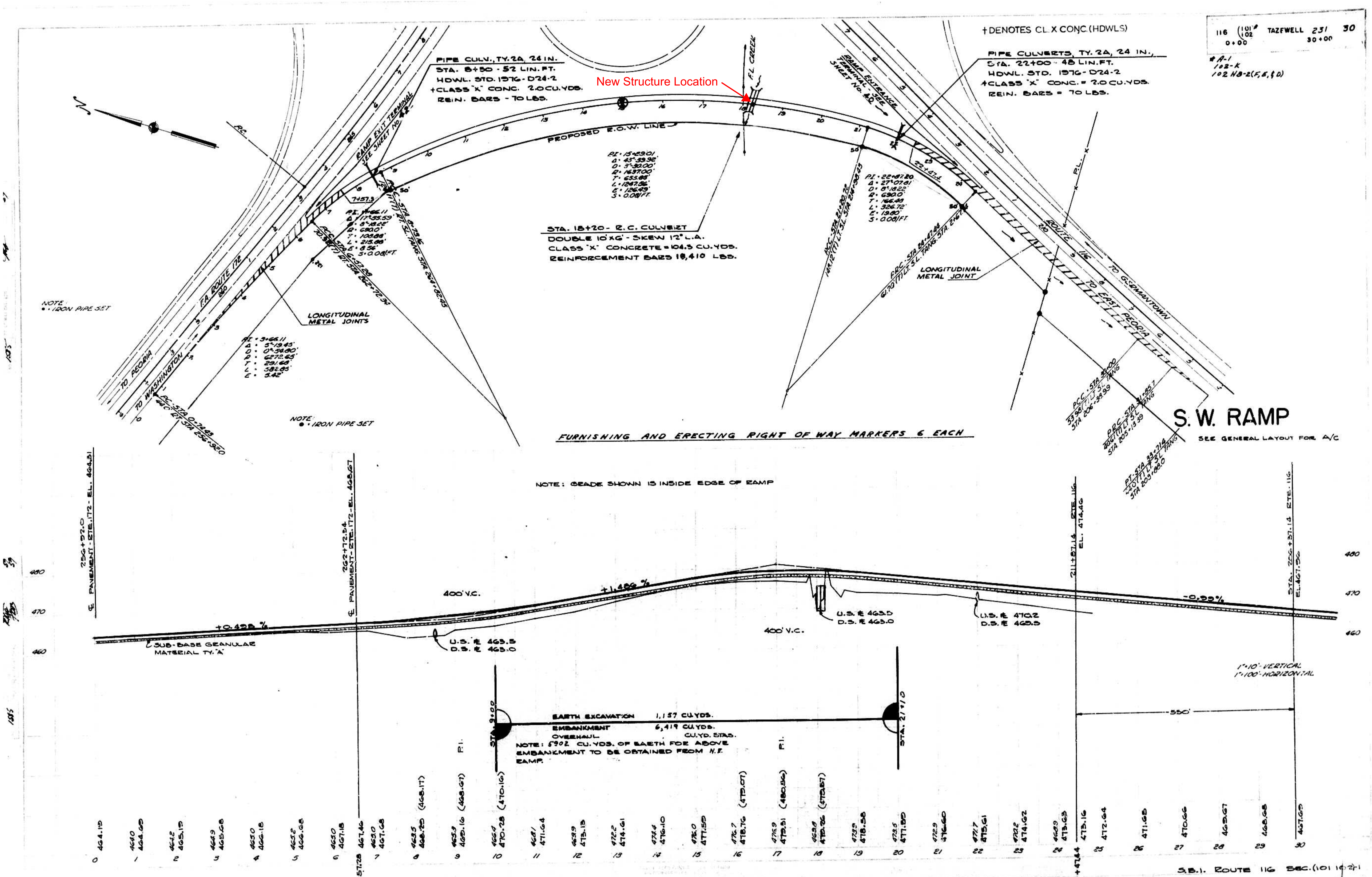
HANSON

USER NAME =	DESIGNED - MNM	REVISED -	
	CHECKED - NAM	REVISED -	
PLOT SCALE =	DRAWN - KMS	REVISED -	
PLOT DATE = 6/22/2018	CHECKED - MNM	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

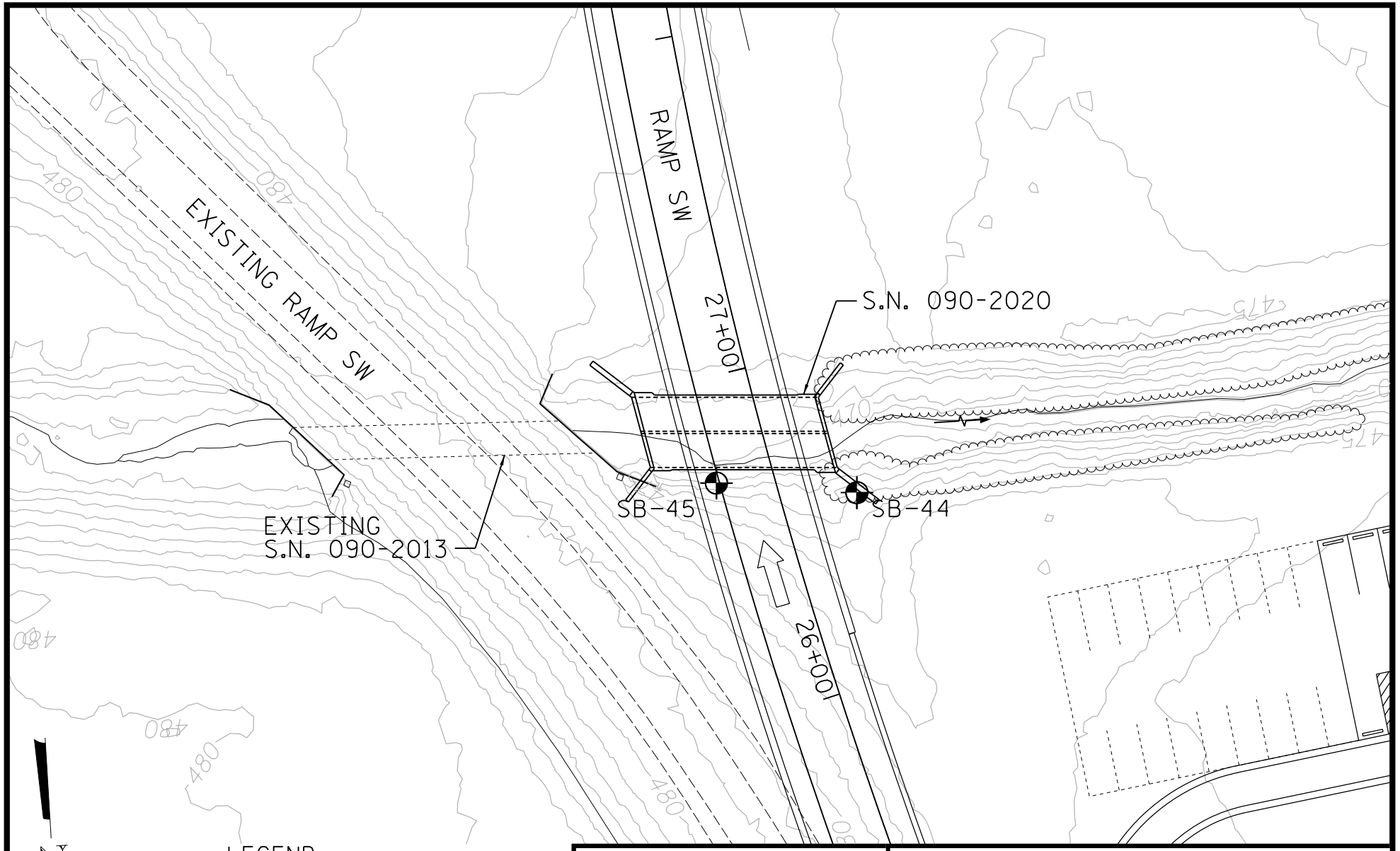
SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	15B(BR)	TAZEWELL		
		CONTRACT NO. 68B46		
		ILLINOIS FED. AID PROJECT		



Old Ramp SW - in place 1963 to 1993

c:\pwise_work\%username%\d0243188\D413H0106-sht-soil003.dgn 8/18/2017 chant00843



N

LEGEND

SB-44 SOIL BORING LOCATION

0 40 80 120

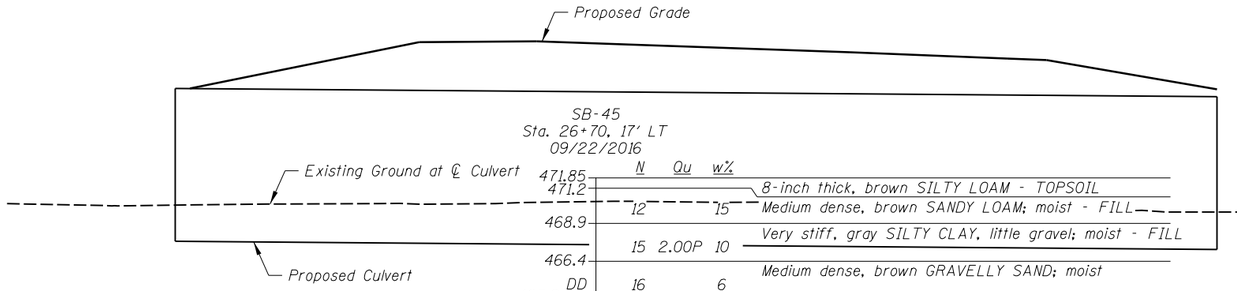
SCALE IN FEET

HANSON

BORING LOCATION PLAN

RAMP SW OVER TRIBUTARY TO ILLINOIS RIVER
S.N. 090-2020
PEORIA COUNTY, ILLINOIS

13H0106 08/18/17



SB-45
Sta. 26+70, 17' LT
09/22/2016

	N	Qu	w%	
471.85				
471.2				8-inch thick, brown SILTY LOAM - TOPSOIL
	12		15	Medium dense, brown SANDY LOAM; moist - FILL
468.9				
	15	2.00P	10	Very stiff, gray SILTY CLAY, little gravel; moist - FILL
466.4				
DD	16		6	Medium dense, brown GRAVELLY SAND; moist
463.9				
463.4	1		19	Very loose, brown SILTY LOAM to LOAM; wet to saturated
461.4				
	6	1.07B	17	Soft to very stiff, brown to gray SILTY CLAY to SILTY CLAY LOAM; moist
	3	0.33B	28	
	6	1.48B	25	-trace plant debris- -silt lenses; moist-
	6	2.71B	24	
	6	1.39B	25	-silt and sand lenses; moist-
	7	1.31B	36	-trace plant debris-
446.4				
	11	0.74B	20	Soft to medium stiff, gray SILTY LOAM; moist -silt lenses; wet-
	10	0.41B	22	
438.9				
Oh	10		29	Medium dense, gray and brown, fine SAND; saturated
436.9				
	11		16	-heaving sand-
	17		18	-light rig chatter- -possible gravel-
421.9	12		23	

Bottom of Hole = 50.0 feet

SB-44
Sta. 26+56, 22' RT
09/23/2016

	N	Qu	w%	
472.38				
471.7				8-inch thick, brown SILTY LOAM - TOPSOIL
	6	1.25P	15	Soft to stiff, brown CLAY LOAM, trace gravel, trace organic debris; moist to wet
	3	0.75P	16	
DD				
465.6	4	0.33B	17	Very soft, brown SANDY LOAM; saturated
465.4				
464.4	4	0.90B	21	Medium stiff, brown SILTY CLAY; moist
461.9				
	3	0.25B	20	Soft, brown CLAY LOAM to LOAM; wet
459.4				
	4	0.75B	21	Medium stiff to stiff, brown to gray SILTY CLAY to SILTY CLAY LOAM; moist
	5	0.98B	26	-sand lenses; wet-
	6	1.23B	24	-silt lenses; moist-
	5	1.07B	30	-trace plant debris-
	6	1.15B	31	
	7	0.82B	26	-sand lenses; wet-
444.4				
443.4				
Oh	14		25	Medium dense, gray SILTY LOAM to SILT; wet
440.6				
	12		22	Medium dense, brown, medium SAND, little gravel; saturated
	14		23	
	13		16	
422.4	10		21	

Bottom of Hole = 50.0 feet

LEGEND

N	Standard Penetration Test N (blows/ft)
Qu	Unconfined Strength (tsf)
w%	Natural Moisture Content (%)
DD ▽ 558.10	Water Surface Elevation Encountered in Boring DD = during drilling Oh = at completion 24h = 24 hours after completion

USER NAME =	DESIGNED - EJM	REVISED -	
	CHECKED - RGC	REVISED -	
PLOT SCALE =	DRAWN - EJM	REVISED -	
PLOT DATE = 8/18/2017	CHECKED - RGC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DATA PROFILE
STRUCTURE NO. 090-2020
SHEET NO. 1 OF 1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	15B(BR)	TAZEWELL		
		CONTRACT NO. 68B46		
	ILLINOIS	FED. AID PROJECT		

Wang Engineering
wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB-44

WEI Job No.: 414-09-01

Client **TYLin/Hanson**
Project **US 150 over Illinois River - McClugage**
Location **Peoria and Tazewell Counties, IL**

Datum: NAVD 88
Elevation: 472.38 ft
North: 1474477.74 ft
East: 2472726.90 ft
Station: 26+56
Offset: 22.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	471.7	8-inch thick, brown SILTY LOAM --TOPSOIL--						
		Soft to stiff, brown CLAY LOAM, trace gravel; trace organic debris; moist to wet --RDR 2--			1	3 2 4	1.25 P	15
			5		2	2 1 2	0.75 P	16
	465.6				3	2 2 2	0.33 B	17
		Very soft, brown SANDY LOAM; saturated --RDR 2--						
	464.4	Medium stiff, brown SILTY CLAY; moist --RDR 2--	10		4	2 2 2	0.90 B	21
	461.9	Soft, brown CLAY LOAM to LOAM; wet --RDR 2--			5	1 1 2	0.25 B	20
	459.4	Medium stiff to stiff, brown to gray SILTY CLAY to SILTY CLAY LOAM; moist --RDR 2 to 3--	15		6	2 2 2	0.75 B	21
		--sand lenses; wet--			7	2 2 3	0.98 B	26
		--silt lenses; moist--	20		8	3 2 4	1.23 B	24
		--trace plant debris--			9	2 2 3	1.07 B	30
			25		10	3 3 3	1.15 B	31
		--sand lenses; wet--			11	3 3 4	0.82 B	26
	444.4	Medium dense, gray SILTY LOAM to SILT; wet --RDR 3--	30		12	4 4 10	NP	25
	440.6	Medium dense, brown, medium SAND, little gravel; saturated --RDR 3--			13	7 4 8	NP	22
			35					
			40		14	3 4 10	NP	23

GENERAL NOTES

Begin Drilling **09-23-2016** Complete Drilling **09-23-2016**
Drilling Contractor **Wang Testing Service** Drill Rig **D50 ATV [88%]**
Driller **K&N** Logger **J. Foote** Checked by **C. Marin**
Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ▽ **7.00 ft**
At Completion of Drilling ▼ **29.00 ft**
Time After Drilling **NA**
Depth to Water ▽ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140901.GPJ WANGENG.GDT 4/3/17

Wang Engineering
wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB-44

WEI Job No.: 414-09-01

Client **TYLin/Hanson**
Project **US 150 over Illinois River - McClugage**
Location **Peoria and Tazewell Counties, IL**

Datum: NAVD 88
Elevation: 472.38 ft
North: 1474477.74 ft
East: 2472726.90 ft
Station: 26+56
Offset: 22.0 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	3 4 9	NP	16
					16	3 4 6	NP	21
	422.4	Boring terminated at 50.00 ft	50					
			55					
			60					

GENERAL NOTES

Begin Drilling **09-23-2016** Complete Drilling **09-23-2016**
Drilling Contractor **Wang Testing Service** Drill Rig **D50 ATV [88%]**
Driller **K&N** Logger **J. Foote** Checked by **C. Marin**
Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ▽ **7.00 ft**
At Completion of Drilling ▼ **29.00 ft**
Time After Drilling **NA**
Depth to Water ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG SB-45

WEI Job No.: 414-09-01

Client: **TYLin/Hanson**
Project: **US 150 over Illinois River - McClugage**
Location: **Peoria and Tazewell Counties, IL**

Datum: NAVD 88
Elevation: 471.85 ft
North: 1474472.52 ft
East: 2472768.00 ft
Station: 26+70
Offset: 17.0 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	471.2	8-inch thick, brown SILTY LOAM --TOPSOIL--						
		Medium dense, brown SANDY LOAM; moist --FILL-- --RDR 4--			1	2 6 6	NP	15
	468.9	Very stiff, gray SILTY CLAY, little gravel; moist --FILL-- --RDR 4--	5		2	4 7 8	2.00 P	10
	466.4	Medium dense, brown GRAVELLY SAND; moist --RDR 4--			3	10 8 8	NP	6
	463.9	Very loose, brown SILTY LOAM to LOAM; wet to saturated --RDR 2--	10		4	0 0 1	NP	19
	461.4	Soft to very stiff, brown to gray SILTY CLAY to SILTY CLAY LOAM; moist --RDR 3--			5	2 3 3	1.07 B	17
			15		6	1 1 2	0.33 B	28
		--trace plant debris-- --silt lenses; moist--			7	3 2 4	1.48 B	25
			20		8	3 3 3	2.71 B	24
		--silt and sand lenses; moist--			9	2 3 3	1.39 B	25
		--trace plant debris--	25		10	2 3 4	1.31 B	36
	446.4	Soft to medium stiff, gray SILTY LOAM; moist --RDR 3-- --silt lenses; wet--			11	5 5 6	0.74 B	20
			30		12	2 5 5	0.41 B	22
	438.9	Medium dense, gray and brown, fine SAND; saturated --RDR 3--	35		13	2 5 5	NP	29
		--heaving sand--						
			40		14	3 4 7	NP	16

GENERAL NOTES

Begin Drilling: **09-22-2016** Complete Drilling: **09-22-2016**
Drilling Contractor: **Wang Testing Service** Drill Rig: **D50 ATV [88%]**
Driller: **K&N** Logger: **J. Foote** Checked by: **C. Marin**
Drilling Method: **3.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **8.50 ft**
At Completion of Drilling: **35.00 ft**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140901.GPJ WANGENG.GDT 4/3/17

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Lombard, IL 60148
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Fax: 630 953-9938

BORING LOG SB-45

WEI Job No.: 414-09-01

Client **TYLin/Hanson**
Project **US 150 over Illinois River - McClugage**
Location **Peoria and Tazewell Counties, IL**

Datum: NAVD 88
Elevation: 471.85 ft
North: 1474472.52 ft
East: 2472768.00 ft
Station: 26+70
Offset: 17.0 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--light rig chatter-- --possible gravel--						
			45		15	7 8 9	NP	18
					16	3 5 7	NP	23
	421.9		50					
		Boring terminated at 50.00 ft						
			55					
			60					

GENERAL NOTES

Begin Drilling **09-22-2016** Complete Drilling **09-22-2016**
Drilling Contractor **Wang Testing Service** Drill Rig **D50 ATV [88%]**
Driller **K&N** Logger **J. Foote** Checked by **C. Marin**
Drilling Method **3.25" IDA HSA; boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ▽ **8.50 ft**
At Completion of Drilling ▼ **35.00 ft**
Time After Drilling **NA**
Depth to Water ▼ **NA**

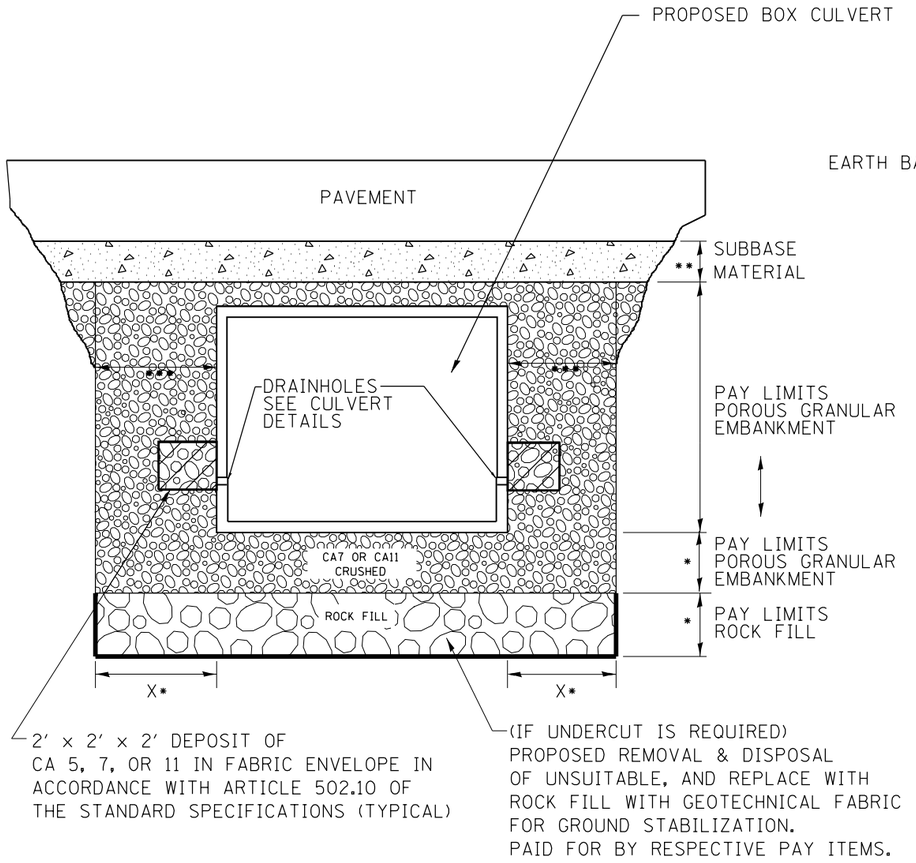
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 4140901.GPJ WANGENG.GDT 4/3/17

DESIGNER NOTES:

1. IF DESIGN FILL IS < 2 FEET, CONTINUE PGE UP TO THE SUBBASE.
2. IF DESIGN FILL IS ≥ 2 FEET AND ≤ 8 FEET OR DEPTH OF FILL ≤ SPAN OF LARGEST BOX IN CONFIGURATION, CONTINUE BACKFILLING WITH PGE.

ROADWAY PROFILE VIEW

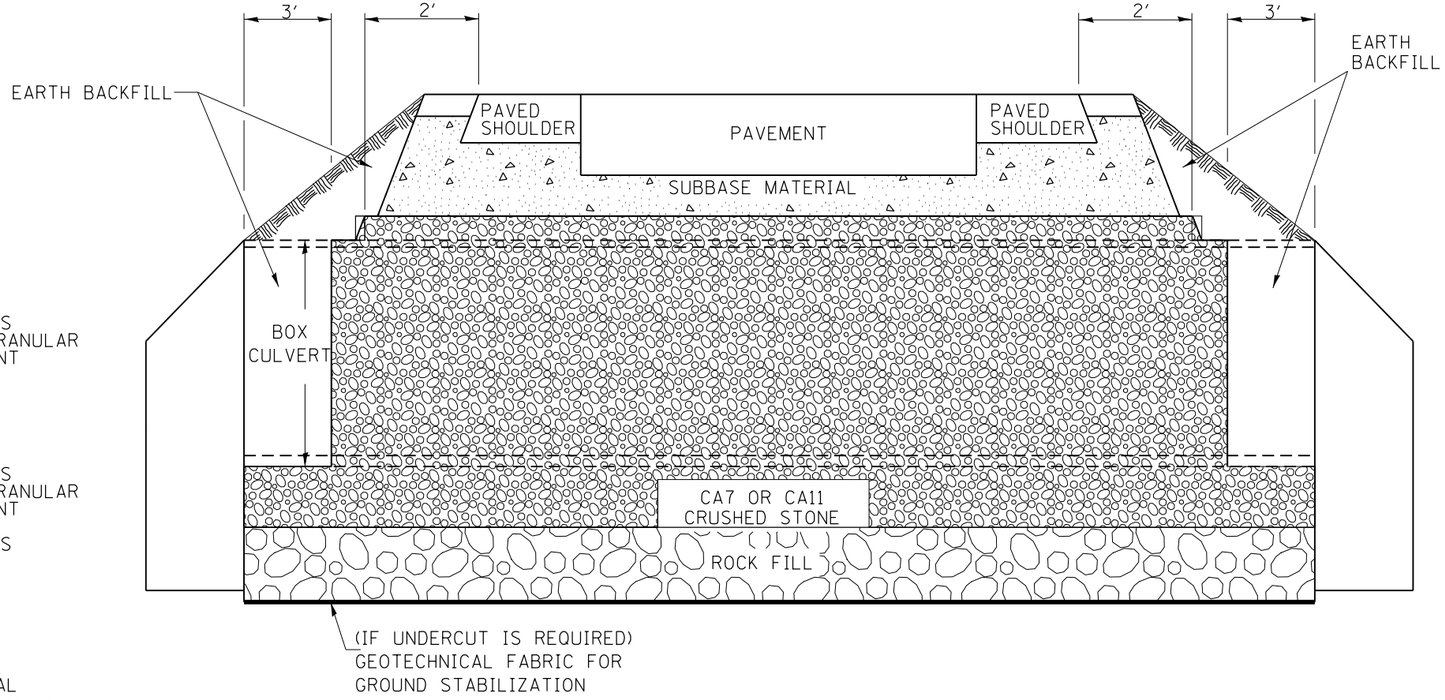


* IF APPLICABLE, SEE UNDERCUT DETAIL FOR DEPTHS AND WIDTHS. IF THERE IS NO UNDERCUT, X = 2 FEET AND SEE NOTE 3 THIS SHEET.

** SUBBASE SHALL BE 6″ MINIMUM LAYER OF CA6 CRUSHED STONE OR OTHER MATERIAL AS SPECIFIED IN THE PLANS.

*** PAY LIMITS OF POROUS GRANULAR EMBARKMENT SHALL BE 2 FEET UNLESS OTHERWISE SHOWN IN THE PLANS.

ROADWAY CROSS SECTION VIEW



NOTES:

1. EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
2. POROUS GRANULAR EMBARKMENT SHALL BE PLACED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS.
3. IF NO UNDERCUT IS REQUIRED, A 6″ MINIMUM LAYER OF POROUS GRANULAR EMBANKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF BOX CULVERT.

All dimensions are in inches (millimeters) unless otherwise noted.

6-12-12	CREATED NEW STD.	R.D.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS

NOT TO SCALE — CADD STD. 540000-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Designer Note: Check with Materials before using this special provision. Can be used District-wide since this is the lowest quality (B) rock. This special provision is intended to be used when rock fill is recommended for ground stabilization or undercuts. This material may need to be capped with 6" CA 7 or CA 11, crushed stone depending upon situation and modify this special provision. Remember when using precast box culverts, a 6" bedding layer is included in the box culvert pay item.

A filter fabric (or bedding material) may be required - discuss with the Geotechnical Engineer. He may want you to provide a pay item/quantity for "Geotechnical Fabric for Ground Stabilization".

ROCK FILL

Effective October 15, 1995 Revised April 26, 2013

This work shall consist of furnishing, transporting and placing rock fill for ground stabilization.

For Rock Fill depths ≤18", the material shall meet Quality Designation "B" as required in Article 1004.01 of the Standard Specifications for Road and Bridge Construction. The material shall be crushed stone and meet the gradation of CA 7 or CA 11 per Article 1004.01 of the Standard Specifications for Road and Bridge Construction.

The aggregate shall be placed in 6 in. (150 mm) lifts, loose measurements, and compacted in a manner approved by the Engineer, except that if the desired results are being obtained, the compacted thickness of any lift may be increased to a maximum of 8 in. (200 mm).

For Rock Fill depths > 18", the top 6" shall meet the requirements listed above for depths ≤18" and the remaining depth shall meet Quality Designation "B" as required in Article 1005.01 of the Standard Specifications for Road and Bridge Construction and may be shot rock or primary crusher run. It shall not contain objectionable quantities of dirt, sand, clay or rock fines. The material shall be well graded with a maximum stone dimension of 8 inches (200 mm). No more than 35% shall have a dimension less than 2 inches (50 mm).

Rock fill will be measured for payment in tons (metric tons), in accordance with Article 311.08 except that all references to cubic yard (cubic meter) measurement and payment shall be deleted.

This work will be paid for at the contract unit price per Ton (Metric Ton) for ROCK FILL.