# STATE OF ILLINOIS

# **DEPARTMENT OF TRANSPORTATION**

#### SECTION 13-10133 WHITE 22 -00-BR FED. ROAD DIST. NO. ILLINOIS CONTRACT NO. 99844

# PLANS FOR PROPOSED

# SURFACE TRANSPORTATION PROGRAM OFF SYSTEM BRIDGE

**PROJECT XVWR(269)** SECTION 13-10133-00-BR PHILLIPS ROAD DISTRICT WHITE COUNTY T.R. 380 / 1750 E ROAD PROPOSED STRUCTURE NO. 097-3295 C-94-509-14

#### HIGHWAY STANDARDS:

STATION CROSS SECTIONS

**SUMMARY OF QUANTITIES** 

AND GENERAL NOTES TYPICAL CROSS SECTIONS PLAN AND PROFILE

000001-07

**BRIDGE PLANS** 

BORINGS

STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS

515001-04

**INDEX OF SHEETS** 

DESCRIPTION **COVER SHEET** 

SHEET NO.

2.

5-11.

12-13.

14-22.

NAME PLATE FOR BRIDGES TRAFFIC CONTROL DEVICES

701901-08 725001-01

**OBJECT AND TERMINAL MARKERS** 

**BLR 21-9** 

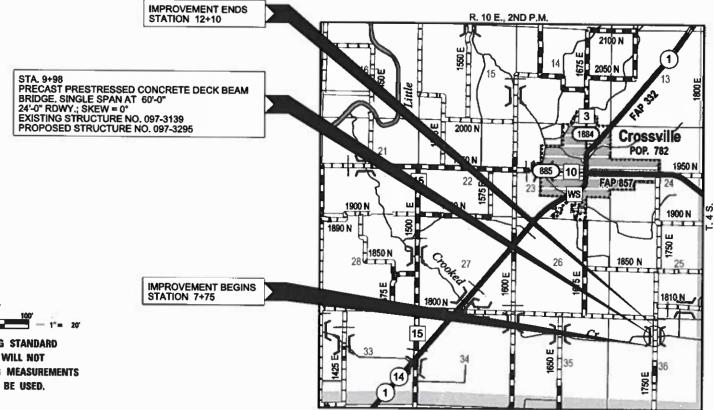
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

#### UTILITIES

CROSSVILLE GAS 107 W. MAIN STREET CROSSVILLE, IL 62827

CROSSVILLE TELEPHONE 302 W. MAIN STREET CROSSVILLE, IL 62827

WAYNE / WHITE ELECTRIC CO-OP 1501 WEST MAIN FAIRFIELD, IL 62837



ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

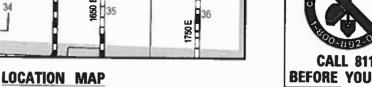
**FUNCTIONAL CLASSIFICATION:** 

DESIGN SPEED:

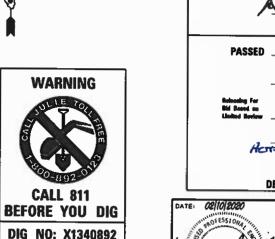
DESIGN TRAFFIC:

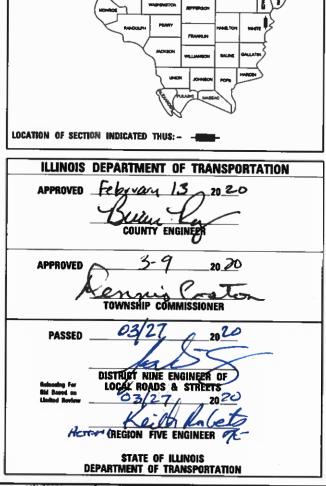
30 MPH 50 ADT

LOCAL ROAD



APPROXIMATE SCALE: NET LENGTH OF SECTION = 435 FEET = 0.082 MILES







HAMPTON, LENZINI AND RENWICK, INC.

3085 STEVENSON DRIVE. SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hirengineering.com

PROJECT NUMBER: 17,0694-130 DATE: 02/10/2020

CONTRACT NO. 99644 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

		SUMMARY OF QUANTITIES		
	CODE NO.	ITEM	TYP	FRUCTION E CODE 1010
			UNIT	TOTAL QUANTITY
^	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	45
^	20200100	EARTH EXCAVATION	CU YD	472
^	20300100	CHANNEL EXCAVATION	CU YD	315
^	28100807	STONE DUMPED RIPRAP, CLASS A4	TON	210
^	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	588
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50300225	CONCRETE STRUCTURES	CU YD	24.2
	50300280	CONCRETE ENCASEMENT	CU YD	2.8
	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,440
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,990
*	50900205	STEEL RAILING, TYPE S1	FOOT	116
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	360
	51202305	DRIVING PILES	FOOT	360
	51500100	NAME PLATES	EACH	1
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	104
	542D0229	PIPE CULVERTS, CLASS D. TYPE 1 24"	FOOT	64
	67100100	MOBILIZATION	L SUM	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3

<sup>^</sup> SEE SPECIAL PROVISIONS

#### \* SPECIALTY ITEMS

	E <i>A</i>	RTHWOR	K SCHED	ULE			
	EARTH	CHANNEL	SHRINKAGE	PERCENT	EXCAVATION	EMBANKMENT	EARTHWORK
I OCATION	EXCAVATION	EXCAVATION	FACTOR	USED	ADJUSTED FOR	REQUIRED	BALANCE
LOCATION					SHRINKAGE		
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
T.R. 380 / 1750E							
STA. 7+75.00 TO STA. 9+67.33	254		25.00%	100.00%	190	234	-44
STA. 9+67.33 TO STA. 10+28.67		315	25.00%	70.00%	165		165
STA. 10+28.67 TO STA. 12+10.00	218		25.00%	100.00%	164	90	74
			:				
ENTRANCES						64	-64
TOTAL	472	315			519	388	131
USE	472	315					131

#### WASTE 131 CU YDS

#### **GENERAL NOTES**

- 1) ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2016", (HERE IN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2020; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- 2) ALL CLEARING, GRUBBING, FENCE REMOVAL, PAVEMENT REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. ALL AGGREGATE AND BITUMINOUS PAVEMENT SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER, REMOVAL AND DISPOSAL OF PAVEMENT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 3) WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- 4) ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE DEPARTMENT.
- 5) THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, TELEPHONE LINES, ELECTRIC LINES, WATER SERVICE LINES, "GAS MAINS, AND OTHER UTILITY FACILITIES AS SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- 6) THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE SURFACE COURSE

2.05 TON/CU YD 1.75 TON/CU YD

STONE DUMPED RIPRAP

- 7) THE FINAL SURFACE OF ALL EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE TOPSOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING TOP SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- 8) THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) =

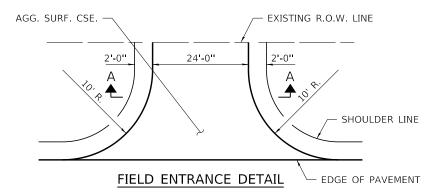
0.3 ACRES

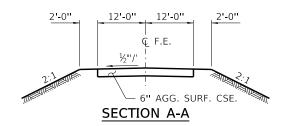
- 9) ALL WASTE MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 10) COMMITMENTS:
  - 1) TREES SHALL NOT BE CLEARED BETWEEN APRIL 1 TO SEPTEMBER 30.
  - 2) A BAT ASSESSMENT SHALL BE CONDUCTED IF WORK OCCURS TO EXISTING STRUCTURE AFTER JANUARY 9, 2021.

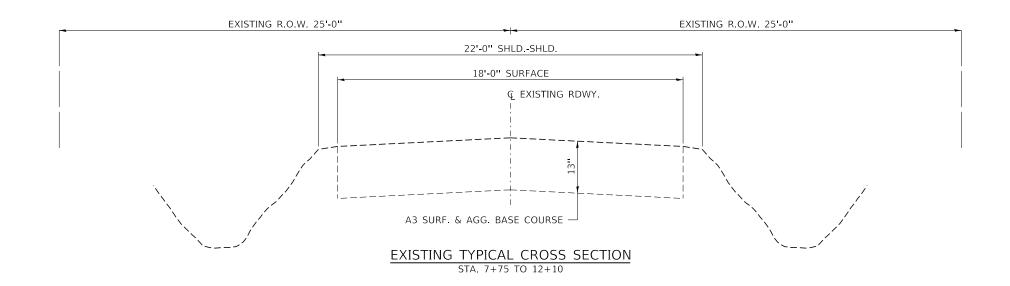
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - M.M.P.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 4/8/2020	DATE - 02/10/2020	REVISED -

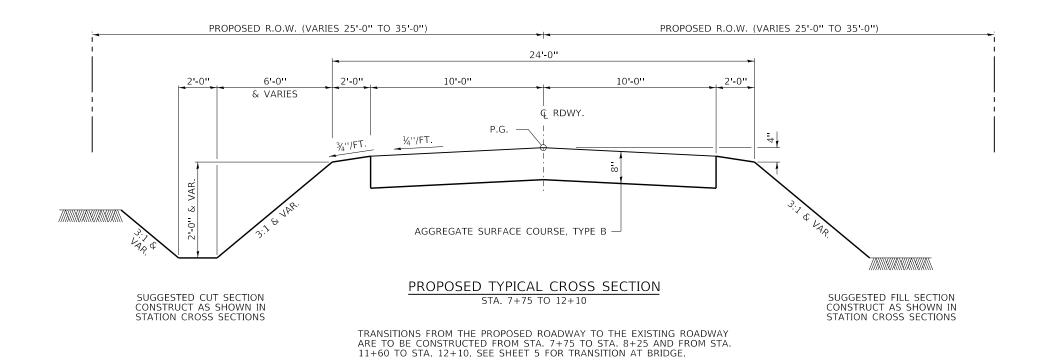
STATE OF ILLINOIS	
WHITE COUNTY HIGHWAY DEPARTMENT	

CUMANA DV OF CUANTITIES AND OFNEDAL NOTES						T.R.	SEC.	TION		COUNTY	SHEETS	
SUMMARY OF QUANTITIES AND GENERAL NOTES							380 13-10133-00-BR WHITE			WHITE	22	
						PHILLI	PS ROAD DISTRI	CT		CONTRACT	VO. 9964	14
	SHEET NO. 1 OF 1 SHEETS	STA.	TO	STA.				ILLINOIS	FED. AID	PROJECT XVWR(2	69)	

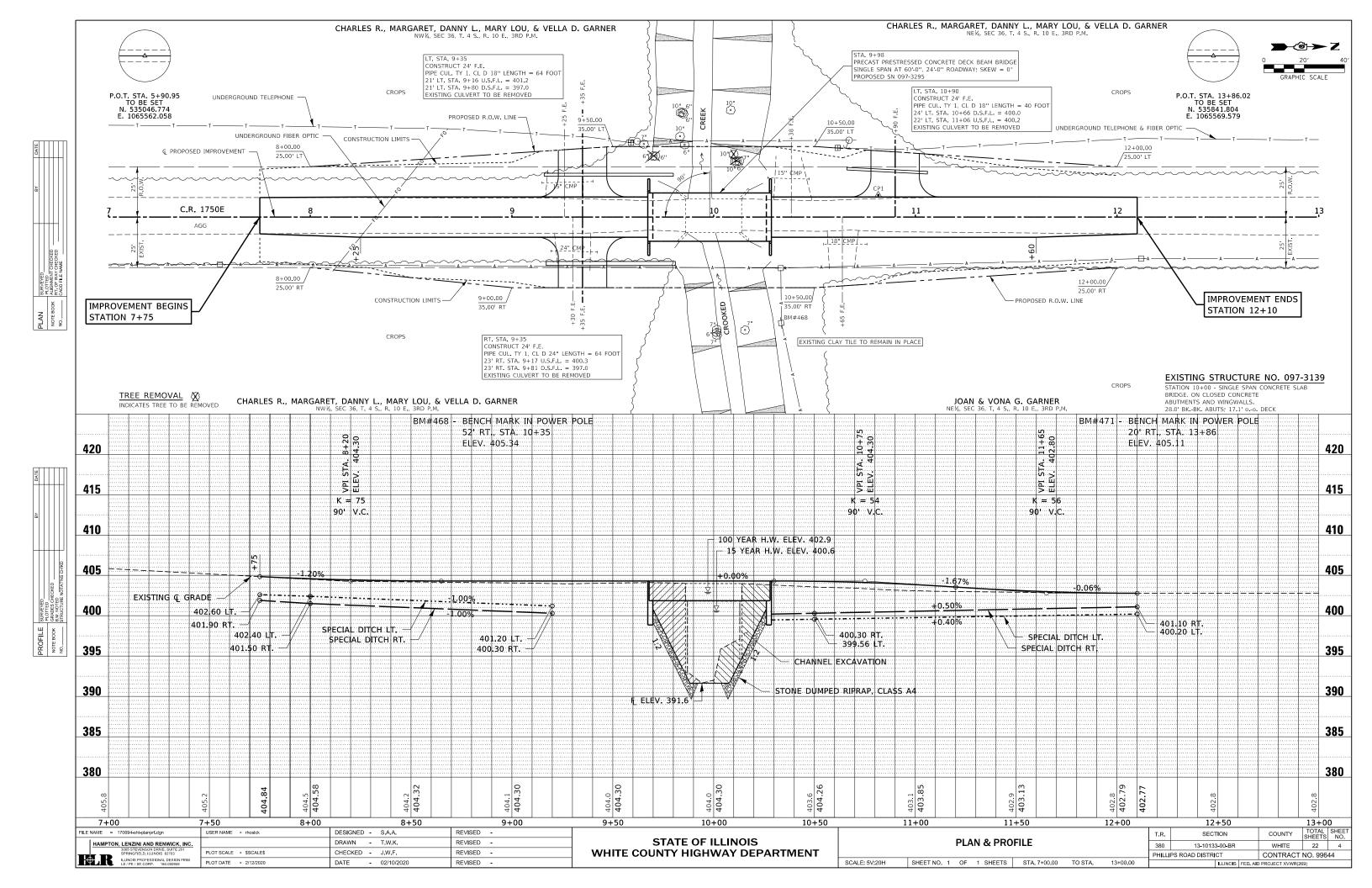








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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - M.M.P.	REVISED -	STATE OF ILLINOIS					380	13-10133-00-BR	WHITE	22 3	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 PL	LOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -	WHITE COUNTY HIGHWAY DEPARTMENT								CONTRACT	NO. 99644
ILLINOIS PROFESSIONAL DESIGN FIRM LS/PE/SE CORP. 184.000959 PL	LOT DATE = 2/12/2020	DATE - 02/10/2020	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO	STA.		ILLINOIS FED. AIC	PROJECT XVWR	R(269)



BENCHMARK: Nail in Power Pole 52' Rt. Sta. 10+35, Elev. 405.34

EXISTING STRUCTURE NO. 097-3139: Sta. 10+00 - Single span concrete slab bridge on closed concrete abutments and wingwalls. 28.0' bk.-bk.; 17.1' o.-o. deck.

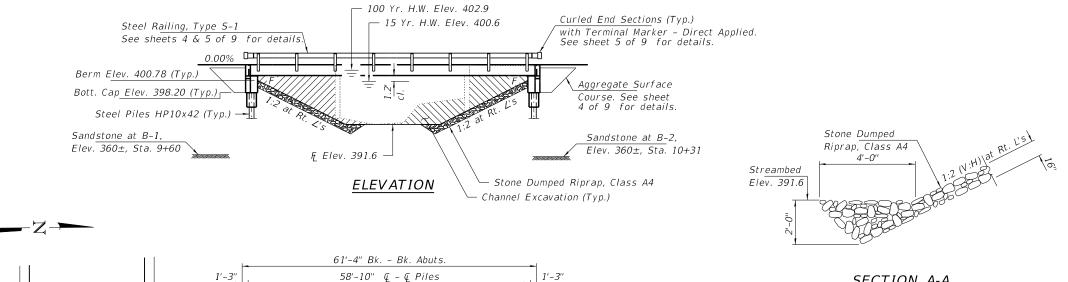
© South Abut.

Sta. 9+68.58

Cr. Elev. 404.30

Structure closed to traffic during construction.

No Salvage.



🖟 North Abut.

Sta. 10+27.42 Cr. Elev. 404.30

25'-0" Transition

Event/Limit

State

Q100

Q500

Design

Check

Limits of

Existing Structure

#### SECTION A-A

Note: See Special Provisions for Stone Dumped Riprap, Class A4.

#### GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

All bars to be epoxy coated.

Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.

All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

#### INDEX OF STRUCTURE SHEETS

- General Plan & Elevation 27"x48" PPC Deck Beam 27"x48" PPC Deck Beam Details
- Superstructure Details
- Steel Railing, Type S-1
- Abutments HP Pile Details
- Borings

# R. 10 E., 2ND. P.M. Proposed Bridge

CROOKED CREEK BUILT 202\_ BY WHITE COUNTY SEC. 13-10133-00-BR PHILLIPS ROAD DISTRICT STR. NO. 097-3295 LOADING HL-93

LOCATION SKETCH

NAME PLATE See Std. 515001

#### DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition with

#### LOADING HL-93

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

#### SEISMIC DATA

+80

23' RT.

Name Plate

See sheet 6 of 9 for details.

Seismic Performance Zone (SPZ) = 2 Design Spectral Acceleration at 1.0 sec.  $(S_{D1})$  = 0.286g Design Spectral Acceleration at 0.2 sec.  $(S_{DS})$  = 0.681g

€ Bridge

Sta. 9+98

#### DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psify = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psif'ci = 5,000 psi

 $fpu = 270,000 \text{ psi } (\frac{1}{2}\text{"Ø low lax. strands})$  $fpbt = 201,960 \ psi (\frac{1}{2}"\emptyset \ low \ lax. \ strands)$ fy = 60,000 psi (Reinf.)

## WATERWAY INFORMATION

PLAN

Α

Existing Low Grade Elev. 402.8 @ Sta. 12+00  Drainage Area = 3.2 Sg. Mi. Existing Low Grade Elev. 402.8 @ Sta. 12+00									
	_								
Flood	Freq.	Q	Opening	Sq. Ft.	Nat.	Head	- Ft.	Headwa	ater El.I
FIOOU	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
	10	1030	140	310	400.07	0.46	0.13	400.53	400.20
Design	15	1190	150	340	400.63	0.53	0.15	401.16	400.78
Base	100	2030	180	410	402.90	0.93	0.36	403.83	403.26
Scour Check	200	2350	180	410	403.43	0.66	0.38	404.09	403.81
Max. Calc.	500	2820	180	410	403.78	0.54	0.45	404.32	404.23
O Year Valacity through Existing Bridge = 7.4 fpc 10 Year Valacity through Bronged Bridge = 2.2 fpc									

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

113

The W. Megainer 02/10/2020 ILLINOIS STRUCTURAL NO. 081-6064

Expires 11-30-2020

#### TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			315
Stone Dumped Riprap, Class A4	Ton			210
Aggregate Surface Course, Type B	Ton			110
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		24.2	24.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Conc. Deck Beams (27" Depth)	Sq. Ft.	1,440		1,440
Reinforcement Bars, Epoxy Coated	Pound		2,990	2,990
Steel Railing, Type S-1	Foot	116		116
Furnishing Steel Piles HP10x42	Foot		360	360
Driving Piles	Foot		360	360
Name Plates	Each		1	1
Terminal Marker - Direct Applied	Each	4		4

REVISED -USER NAME = rhosick DESIGNED - J.W.F HAMPTON, LENZINI AND RENWICK, INC. CHECKED - S.W.M REVISED -DRAWN - M.M.P REVISED -CHECKED - S.W.M PLOT DATE = 2/12/2020 REVISED -

STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT

DESIGN SCOUR ELEVATION TABLE

Design Scour Elev. (ft.)

N. Abut.

398.3

398.3

398.3

398.3

S. Abut.

398.3

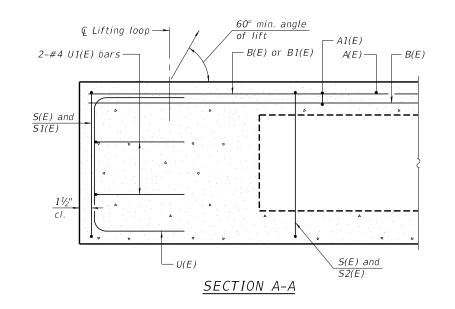
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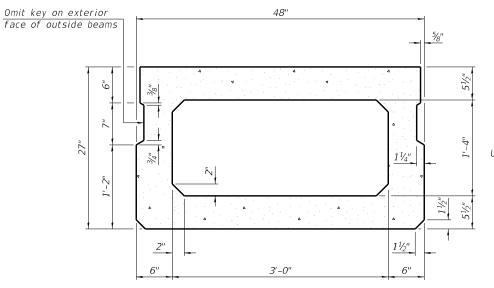
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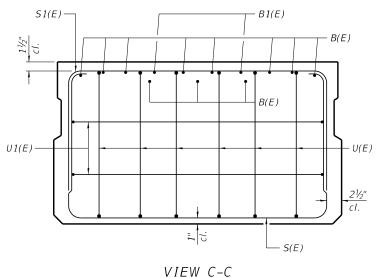
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**GENERAL PLAN & ELEVATION** STRUCTURE NO. 097-3295 SHEET NO. 1 OF 9 SHEETS

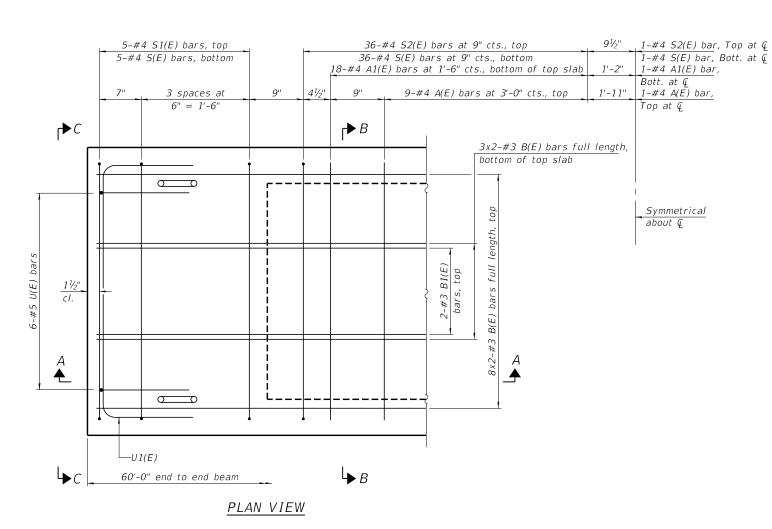
T.R.	SEC	TION		COUNTY	TOTAL SHEETS	SHE
380	13-1013		WHITE	22	5	
PHILLI	PS ROAD DISTRI	CONTRACT	NO. 996	344		
		ILLINOIS	FED. AIC	PROJECT XVWR(26	59)	

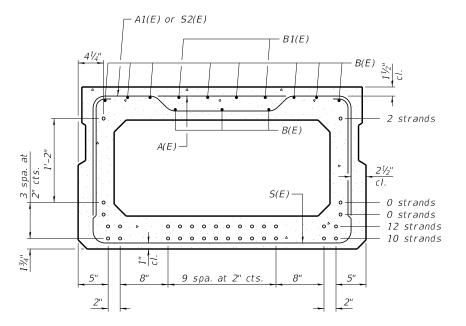






SECTION B-B (Showing dimensions)





#### SECTION B-B

(Showing reinforcement and permissible strand locations) Note:

Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP

 $#3 \ bar = 1'-6"$ 

#### BAR LIST ONE BEAM ONLY (For information only)

Bar	No.	Size	Length	Shape
A(E)	19	#4	3'-7"	
A1(E)	37	#4	3'-10"	~
B(E)	22	#3	30'-8''	
B1(E)	4	#3	10'-0"	
S(E)	83	#4	8'-5"	
S1(E)	10	#4	6'-11"	
S2(E)	73	#4	7'-2"	
U(E)	12	#5	4'-6"	
U1(E)	4	#4	6'-0"	

See sheet 3 & 4 of 9 for additional details and Bill of Material.

Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Bars indicated thus 8x2-#3 etc. indicates 8 lines of bars with 2 lengths per line.

#### PD-2748-0

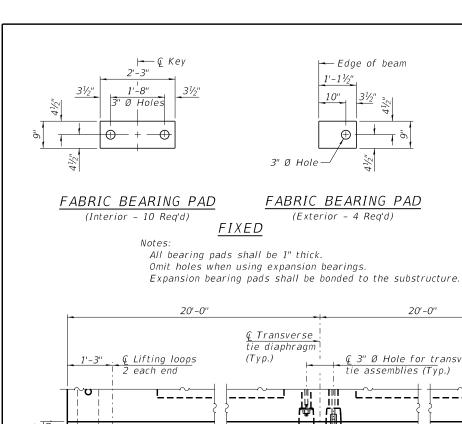
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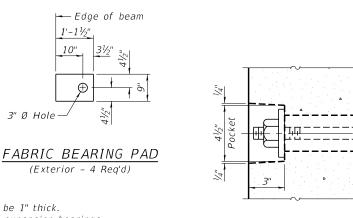
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_	-	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - M.M.P.	REVISED -
		ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 2/12/2020	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT

27" x 48" PPC DECK BEAM STRUCTURE NO. 097-3295
SHEET NO. 2 OF 9 SHEETS

T.R.	SECT	ION		COUNTY TOTAL SHE					
380	13-10133	8-00-BR		WHITE	22	6			
PHILLI	PS ROAD DISTRIC	СТ		CONTRACT	344				
		ILLINOIS	FED. AIC	PROJECT XVWR(26	59)				

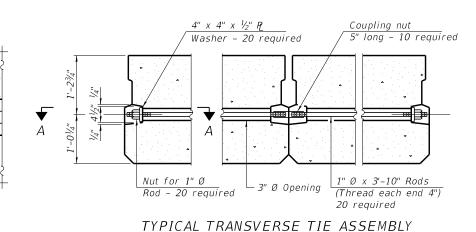


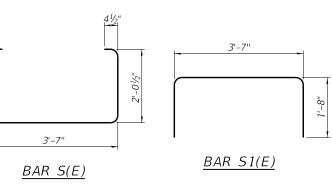


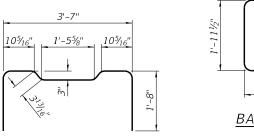
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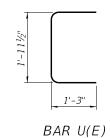
SECTION A-A

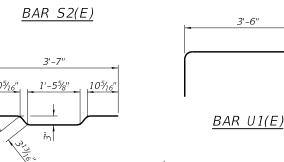
20'-0"



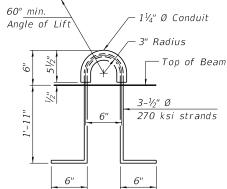








BAR A1(E)



LIFTING LOOP DETAIL

# NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be  $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in. The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two  $\, {\cal V}_{\!\!\! B}^{\prime\prime}$  fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum  $2\frac{1}{2}$ " Ø lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

### BILL OF MATERIAL

Precast Prestressed	Sg. Ft.	1 110
Conc. Deck Bms. (27" depth)	34. Ft.	1,440

USER NAME = rhosick DESIGNED - J.W.F. REVISED -HAMPTON, LENZINI AND RENWICK, INC CHECKED - S.W.M. REVISED -REVISED -

**STATE OF ILLINOIS** WHITE COUNTY HIGHWAY DEPARTMENT

2'-6"

27" x 48" PPC DECK BEAM DETAILS **STRUCTURE NO. 097-3295** SHEET NO. 3 OF 9 SHEETS

T.R.	SEC <sup>-</sup>	TION		COUNTY	TOTAL SHEETS	SHE
380	13-1013	3-00-BR		WHITE	22	7
PHILLI	PS ROAD DISTRI	СТ		CONTRACT	NO. 996	344
		ILLINOIS	FED. AIC	PROJECT XVWR(26	69)	

<u>© Transverse</u> tie diaphragm (Typ.)**Q** 3" Ø Hole for transverse tie assemblies (Typ.) IIII 1111 0 0 iiii IIII IIII i o i i o i Ш 0 ! -0 ¾" Ø Drain, 1/4" Ø Vent holes bott. holes top -0 i o i : ርገ ነ Exterior <u>|</u>\_\_! typ. beam € 2" Ø Holes for dowel rods at fixed ends only 71/2" 71/2"

18'-0"

2'-0"

16'-6"

Connect beams in pairs with the transverse tie configuration shown.

1-1-2020

16'-6"

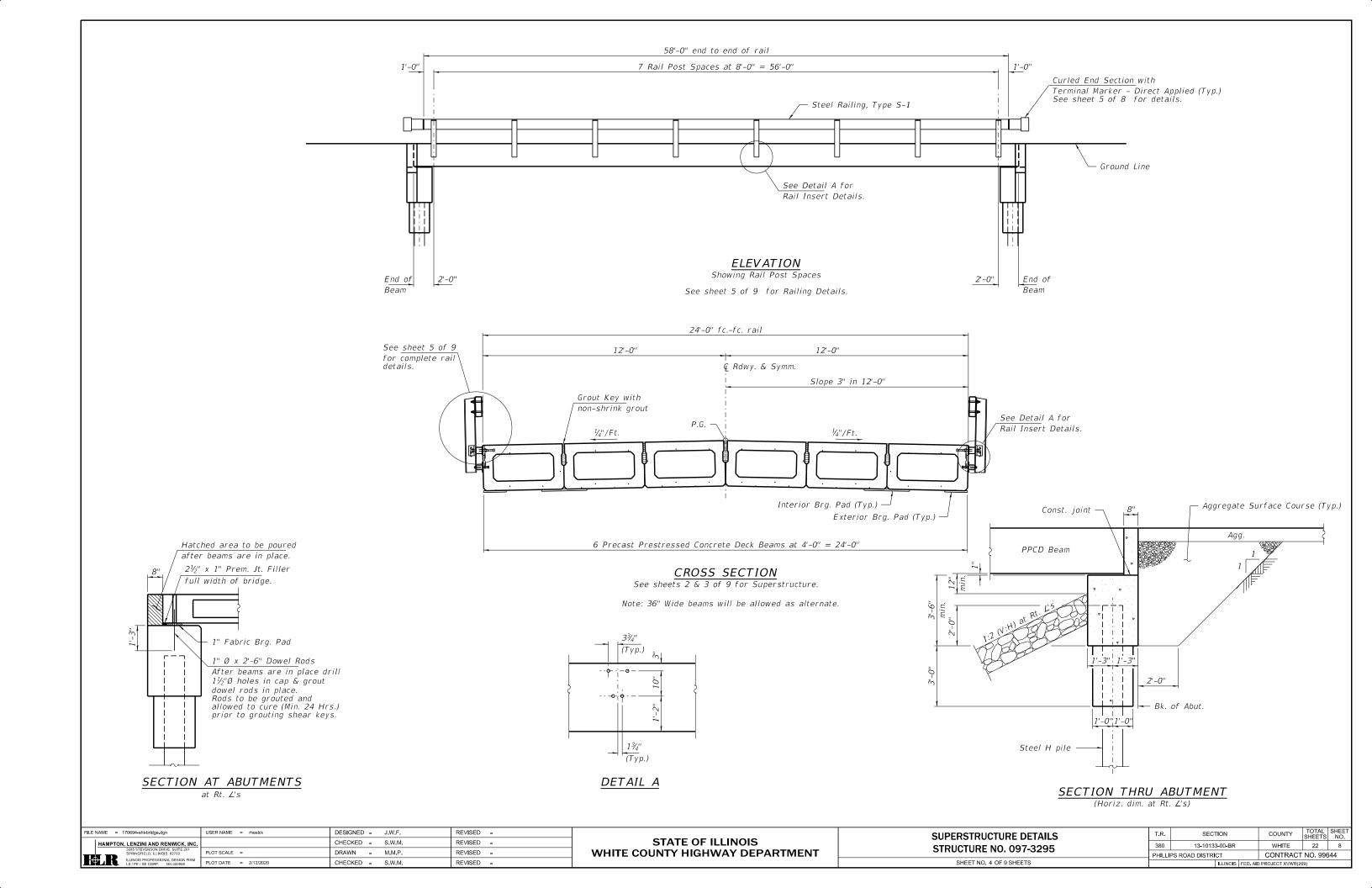
2'-6"

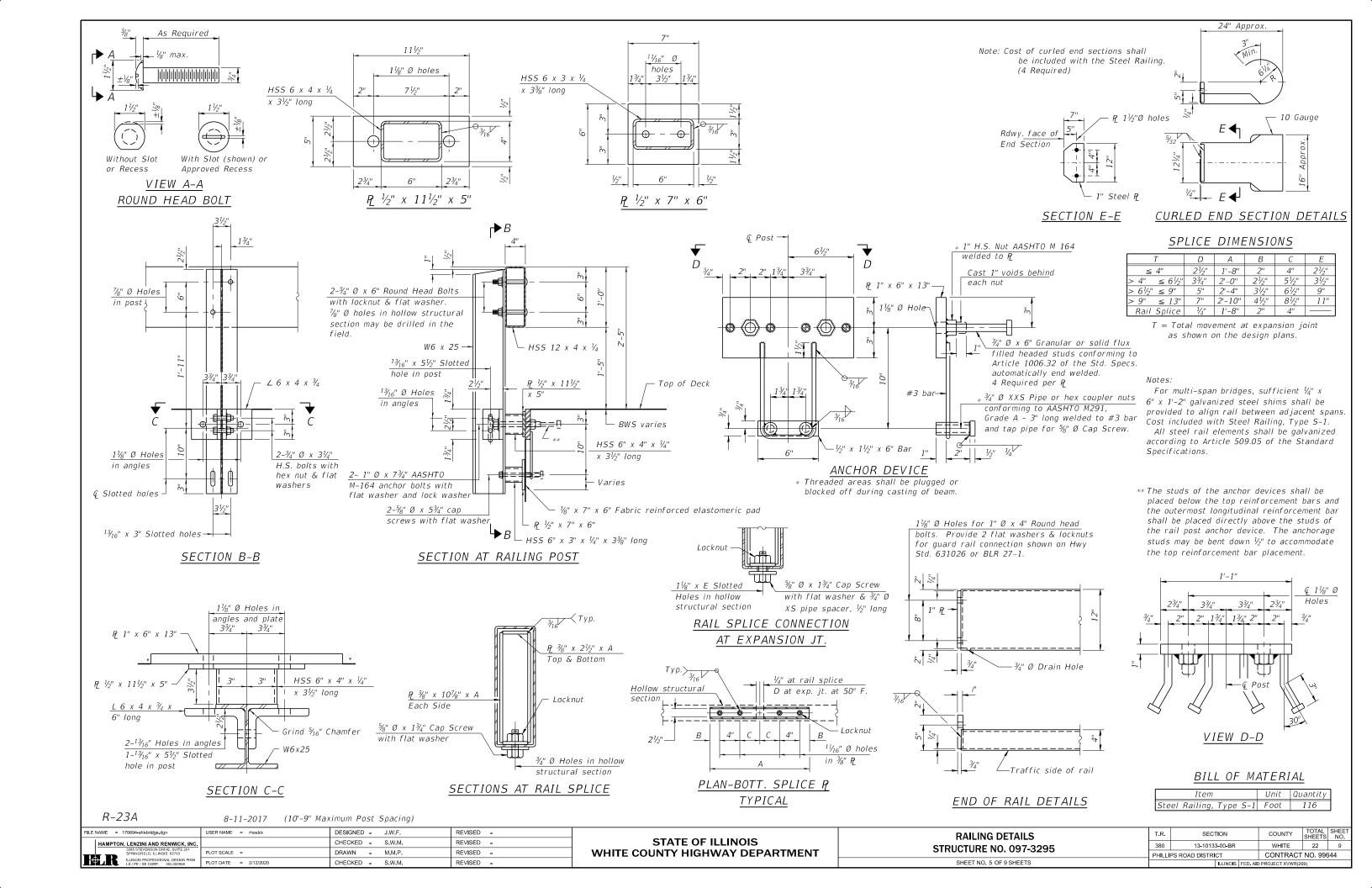
PDD-2748-0

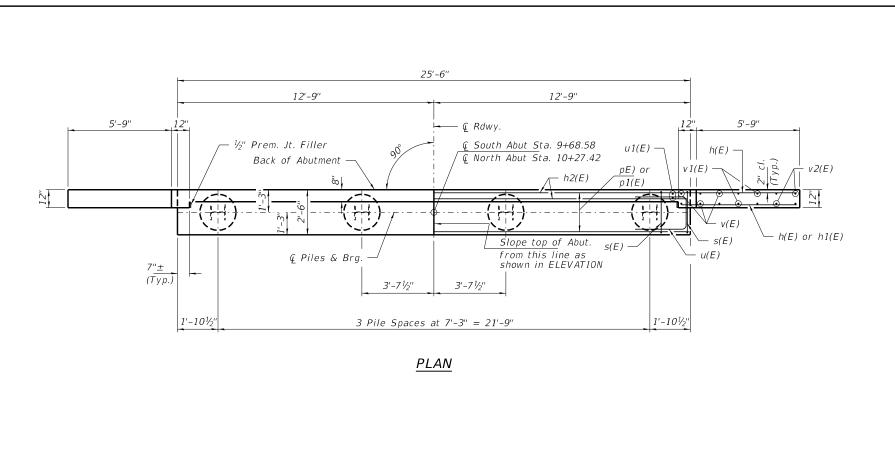
ILLINOIS PROFESSIONAL DESIGN FIRM PLOT DATE = 2/12/2020 CHECKED - S.W.M. REVISED -

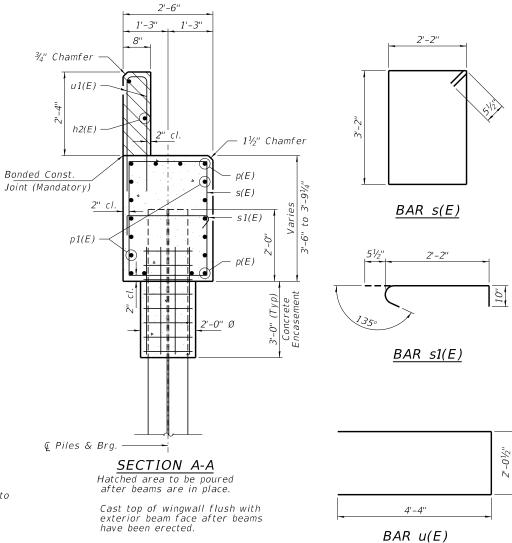
2'-0"

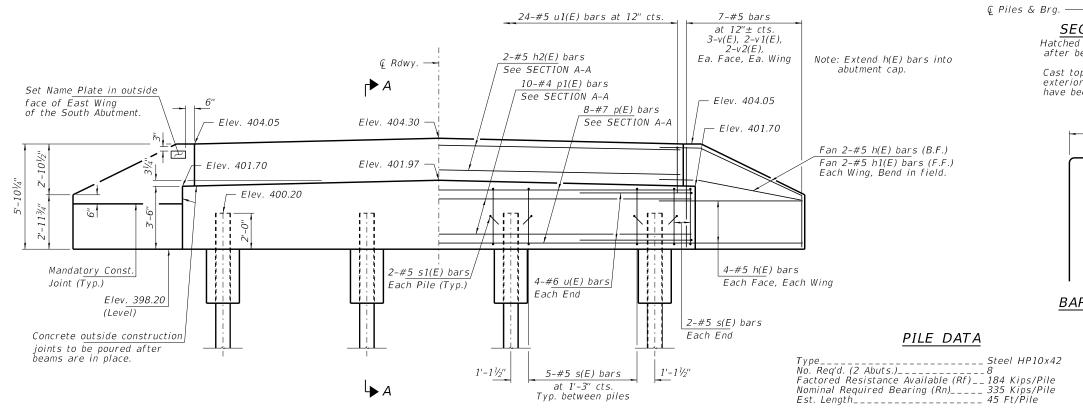
Reinforcement bars designated (E) shall be epoxy coated.

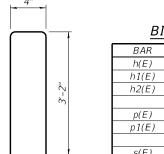












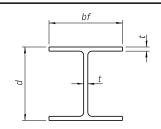
# BAR u1(E)

#### RILL OF MATERIAL - 2 ARIJTS

BIL	L OF MA	ALEKIAL	- 2 ABU	<u> 115.</u>		
BAR	NO.	SIZE	LENGTH	SHAPE		
h(E)	40	#5	8'-0''			
h1(E)	8	#5	6'-6''			
h2(E)	4	#5	25'-2"			
p(E)	16	#7	25'-2"			
p1(E)	20	#4	25'-2"			
s(E)	38	#5	11'-7''			
s1(E)	16	#5	3'-6''			
u(E)	16 #6		10'-9''			
u1(E)	48	#5	6'-8''			
v(E)	24	#5	4'-10''			
v1(E)	16	#5	3'-9''			
v2(E)	16	#5	2'-8''			
Concrete S	tructures		Cu. Yd.	24.2		
Concrete E	ncasement		Cu. Yd.	2.8		
Reinf. Bars	s, Epoxy Coa	ated	Pound	2,990		
Steel Piles	HP10x42		Foot	360		
Name Plate	25		Each	1		

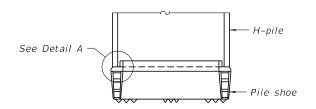
#### ELEVATION

FILE NAME = 170694-sht-bridge.dgn	USER NAME = rhosick	DESIGNED - J.W.F.	REVISED -		ABUTMENTS	T.R.	SECTION	COUNTY TOTAL SHE	EET
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -	STATE OF ILLINOIS		380	13-10133-00-BR	WHITE 22 10	10
3086 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - M.M.P.	REVISED -	WHITE COUNTY HIGHWAY DEPARTMENT	STRUCTURE NO. 097-3295	PHILLIPS	ROAD DISTRICT	CONTRACT NO. 99644	
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 2/12/2020	CHECKED - SWM	REVISED -	]	SHEET NO. 6 OF 9 SHEETS	1	ILLINOIS EED	AID PRO IECT YVWP(260)	_

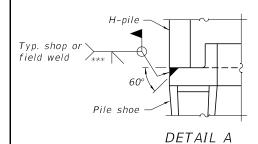


#### STEEL PILE TABLE

Designation	Designation Depth d		Web and Flange thickness t	Encasement diameter A
HP 14x117	141/4"	14 <sup>7</sup> /8"	13/ <sub>16</sub> "	30"
x102	14"	14¾"	11/ <sub>16</sub> "	30"
x89	13%"	14¾"	5/8"	30"
x73	13%"	145/8"	1/2"	30"
HP 12x84	121/4"	121/4"	11/ <sub>16</sub> "	24"
x74	12½"	121/4"	5/8"	24"
x63	12"	121/8"	1/2"	24"
x53	1 1 3/4"	12"	<sup>7</sup> / <sub>16</sub> "	24"
HP 10x57	10"	101/4"	%16"	24"
x42	9¾"	101/8"	<sup>7</sup> / <sub>16</sub> "	24"
HP 8x36	8"	8½"	7/ <sub>16</sub> "	18"



#### ELEVATION



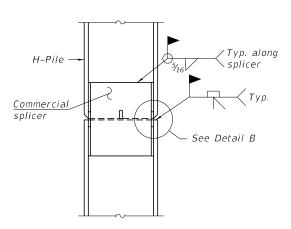
#### SHOE ATTACHMENT

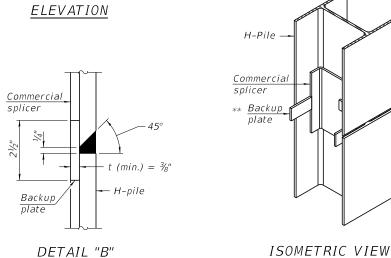
1-1-2020

Note

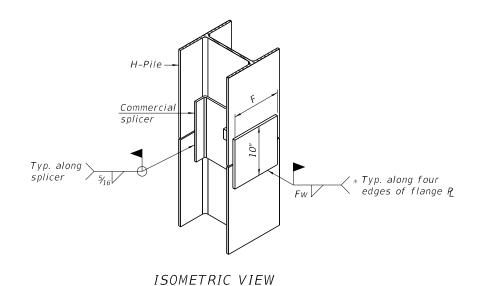
F-HP

The steel H-piles shall be according to AASHTO M270 Grade 50.



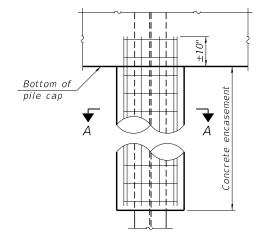


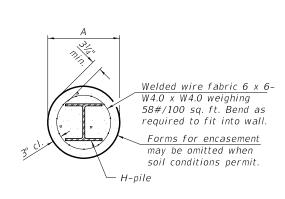
# WELDED COMMERCIAL SPLICE



#### WELDED COMMERCIAL SPLICE ALTERNATE

- $_*$  Interrupt welds  $\frac{1}{4}$ " from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer ( $\frac{5}{16}$ " min.).



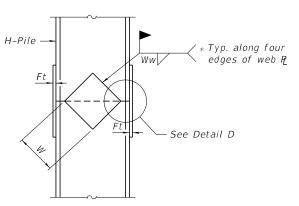


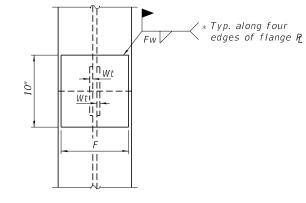
ELEVATION

SECTION A-A

### INDIVIDUAL PILE CONCRETE ENCASEMENT

(when specified)



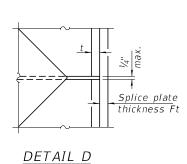


Fw

7/<sub>16</sub>"

ELEVATION

END VIEW



HP 14×117	12½"	1"	7/8"
x102	12½"	7/8"	3/4"
x89	12½"	3/4"	<sup>1</sup> ½ <sub>16</sub> "
x73	12½"	5/8"	%16"
HP 12x84	10"	7/8"	1½ <sub>16</sub> "
x74	10"	7/8"	<sup>1</sup> ½16"
x63	10"	5/8"	1/2"
x53	10"	5/8"	1/2"
HP 10x57	8"	3/4"	%16"
x42	8"	5/8"	%16"

HP	8x36	7"
IFID	SPLI	CF

Designation

#### WELDED PLATE FIELD SPLICE

FILE NAME = 170694-sht-bridge.dgn		USER NAME = rhoslck	DESIGNED - J.W.F.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.			CHECKED - S.W.M.	REVISED -
	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - M.M.P.	REVISED -
HR	ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 2/12/2020	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT HP PILE DETAILS
STRUCTURE NO. 097-3295
SHEET NO. 7 OF 9 SHEETS

 T.R.
 SECTION
 COUNTY
 TOTAL SHEETS NO.

 380
 13-10133-00-BR
 WHITE
 22
 11

 PHILLIPS ROAD DISTRICT

 CONTRACT NO. 99644

Wt

5/8"

5/8"

5/8"

5/8"

5/8"

5/8"

1/2"

1/2"

1/2"

1/2"

1/2"

7¾"

73/4"

73/4"

7¾"

6½"

6½"

6½"

61/2"

51/4"

51/4"

41/4"

Ww

1/2"

1/2"

1/2"

1/2"

1/2"

1/2"

3/8"

3/8"

3/8"

3/8"

3/8"

Carbondale, II. 62901	618-	-45	7-8	399	1 fax	Pa	ge	1 (	of 2	2
Bridge	F	οu	nd	at	ion Boring Log					
Project: <u>H-17172</u> Bridge	Со	Roc	id 1	750	E over Crooked Creek	Date:	9/5	5/20	017	_
Section: <u>13-10133-00-</u> BR Station Structure:	)				Bored	by:	.В. 5	Schw	artz	
County: White					 Checked					
Boring No: 1	L.		<b>_</b>		Surface Water Elev		C C		<b></b>	
Station:	Elevation		tsf	1%	Ground Water Elev. During Drilling 397.8 93.9		evation		tsf	8
Offset:	Ele	z	ð	3		- 1	Ë	z	ð	*
Ground Surface   403.8 99.9 13" Crushed Stone	0				Brown Mottled Gray Sandy CLAY (A—6) with gravel					
Gray Mottled Brown Sandy CLAY		1.5	1.5S	17			$\overline{}$	9 (	2 0 0	1.0
(A-6)	_	15	1.55	13			-25	9 10	0.8B	16
Brown Mottled Gray Silty							=			
CLAY (A-6)	-5	4	1.9B	26			$\dashv$	3 (	D.5B	17
					375.3 <sub>7</sub>	1 4		$\top$		
397.3 <sub>93.4</sub> Gray Mottled Brown Silty		_			Gray Clayey SILT (A-4)					
CLAY (A-6)		3	0.7B	30	with sand		_30	29		16
	_						_			
	-10	2	0.8B	28			-35			
392.8 88.9		-					=			
Gray Clayey SILT (A-4)	_							_		
	_	1	1.0B	29			-35	36	1.85	22
	- 1 <del>5</del>	2	0.7B	27						
387.8 83.9										
Gray Silty CLAY (A-6) with sand	_			-			_			
		0	0.7B	22			-40	44	2.15	21
385.3 <sub>81.4</sub> Gray Sandy CLAY (A-6)							=			
ordy Suridy CLAT (A-0)		4	0.9B	21						
		-			360.3 <sub>5</sub>	6.4	$\dashv$			
381.8 77.9	_	15	2.25	17	Gray SANDSTONE	J.T		100		5
N = Standard Penetration Tes		Q	2.2S u-Ur	nco	Infined Compressive B =	Bulge	Fail	lure		=
Blows per foot to drive 2" ( Split Spoon Sampler 12" with a 140 lbs. hammer falling 30		S <sup>1</sup>	−Wai	ter	in tons/sq.ft. S = 1 Content-percentage E = 1 ven dry weight-% P =	Sheai Estim	r Fai ated	lure Va	lue	

Bri	dge Foun	dation Boring	g Log	
Project: <u>H-17172</u> Br	ridge <u>Co Road</u>	1750 E over Crooke	d Creek Date: 9/5/2	2017
Section: 13-10133-00-BR Structure:	tation		Bored by: B. Sch	
County: White			Checked By: <u>T. Hol</u>	
Boring No: 1		Surface Water	Elev.	4
Station:	Elevation	Ground Water During Drilling	Elev. 5 397.8 93.9 5	tsf
Offset:		y   > Upon Completi	0 384.8 80 9	0 ×
sandstone (continued)	45	- I I		
	100			
	/2"	- 12		
255.2			<u>-70</u>	
355.3 Gray Sandy SHALE 354.8	51.4 100 50.9 /2" -	- 9		
End of Boring @ -49.0'	<u>-50</u>			
			<u>-75</u>	
			<u>-80</u>	
	<u>-60</u>			
			- <u>-85</u> 	
	<u>-65</u>			
N = Standard Penetration Blows per foot to drive	on Test Qu- e 2" O.D. Stre	Unconfined Compres ngth in tons/sq.ft.	S = Shear Failui	e e
Blows per foot to drive Split Spoon Sampler 12" a 140 lbs. hammer falli	'with w−V	Vater Content-percer of oven dry weight-	itage E = Estimated V	'alue

## BORING 1

FILE NAME	= 170694-sht-bridge.dgn	USER NAME = rhosick	DESIGNED - J.W.F.	REVISED -	CTATE OF ILLINIOIS	BORINGS	T.R.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -	STATE OF ILLINOIS		380	13-10133-00-BR	WHITE	22 12	
	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - M.M.P.	REVISED -	WHITE COUNTY HIGHWAY DEPARTMENT	STRUCTURE NO. 097-3295		S ROAD DISTRICT	CONTRAC	CT NO. 99644
$\mathbb{R}_{\Phi}$	ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 2/12/2020	CHECKED - S.W.M.	REVISED -		SHEET NO. 8 OF 9 SHEETS		ILLINOIS FED. AI	ID PROJECT XVWR(	R(269)

393 Wood Road Carbondale, II. 62901	618- 618-					Pag	ge	1 of	
Bridge	e F	ou	nd	at	ion Boring Log				_
Project: <u>H-17172</u> Bridge	Со	Roo	id 17	750	E over Crooked Creek	Date:	9/5	/2017	7
Section: <u>13-10133-00-</u> BR Station Structure:	າ				Bore	d by:	B. S	chwart	z
County: White					Checke	d By:	Т. Н	olcomb	)
Boring No: 2	no		tsf		Surface Water Elev		no	tsf	-
Station:	Elevation			1%	Ground Water Elev. During Drilling 394.9 91.	,	Elevation		
Offset.	Ele	z	Qu	>	Upon Completio 385.4 81.	- 1		z	
Ground Surface 403.4 99.5 3" Asphalt over 13" Crushed St	One				Gray Sandy CLAY (A-6)		-		_
Gray Mottled Brown Silty CLAY (A—6)		5	1.5B	20			-25	6 0.59	5
					403.8	73.5			_
		_		0.4	Gray Sandy SILT (A-4)		7	47 0 50	_
	-5	4	1.2B	21			_	17 0.59	<u>,</u>
Gray Mottled Brown Silty									
CLAY (A-6)	_	4	1.2B	18			-30	33 1.59	;
									_
		-					_		
	-10	3	1.7B	24			_		
Gray Mottled Brown SILT					Grave Mathlad Brawn Silter				
(A-4)	_	2	1.5B	29	Gray Mottled Brown Silty (A-6) with pebbles	CLAT	-35	41	-
				Т					_
		_					$\exists$		
	-15	2	0.7B	27					
387.4 83.5 Gray Sandy CLAY (A-6)					364.9	61.0			
Gray Sariay CLAT (A=0)		0	0.48	22	Gray Silty CLAY (A-6) with pebbles		-40	33	_
		-		T					-
	_			_					
	-20	0	0.2B	23					
382.4 78.5					359.9	56.0		00	
Gray Mottled Brown Sandy CLAY (A-6)		7	1.9B	19	Brown SANDSTONE			/3" -	=
N = Standard Penetration Te Blows per foot to drive 2" Split Spoon Sampler 12" with	st O.D.	S	treng	jth	in tons/sq.ft. $S =$	Bulge Shea	r Fail	ure	
Split Spoon Sampler 12" with a 140 lbs. hammer falling 30	)"	W			Content-percentage E = ven dry weight-% P =	Estim Pene			è

Brida	e Foundation Boring L	
	e <u>Co Road 1750 E over Crooked Cro</u> on	eek Date: 9/5/2017  Bored by: B. Schwartz hecked By: T. Holcomb
oring No: 2 tation:	Surface Water Elev Surface Water Elev Ground Water Flev During Drilling 394 > Upon Completio 388	
ay Sandy SHALE  354.4 50.5  ad of Boring © -49.0'	72" 7	-70 -70 -75 -75 -80 -85 

# BORING 2

FILE NAME	= 170694-sht-bridge.dgn	i-shi-bridge.dgn USER NAME = rhosick		REVISED -	CTATE OF HILINOIS	BORINGS		SECTION	COUNTY	TOTAL SHEET SHEETS NO.
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED	CHECKED - S.W.N	I. REVISED -	STATE OF ILLINOIS	STRUCTURE NO. 097-3295	380	13-10133-00-BR	WHITE	22 13
	SPRINGFIELD, ILLINOIS 62703	LOT SCALE = DRAWN -	DRAWN - M.M.P	. REVISED -	WHITE COUNTY HIGHWAY DEPARTMENT	31NOCIONE NO. 091-3293		S ROAD DISTRICT	CONTRACT NO. 99644	
H	LS/PE/SE CORP. 184.000959	PLOT DATE = 2/12/2020	CHECKED - S.W.N	I. REVISED -		SHEET NO. 9 OF 9 SHEETS		ILLINOIS FED. A	ID PROJECT XVWR	R(269)

