

INDEX OF SHEETS

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 - BLR 21-9 - TRAFFIC
 - BLR 22-7 - TRAFFIC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL-AID HIGHWAY BRIDGE PROGRAM
JASPER COUNTY
SECTION 11-00118-00-BR
COUNTY HIGHWAY 14
STRUCTURE NO. 040-3264
PROJECT NO. BROS-0079 (147)
JOB NO. C-97-073-12

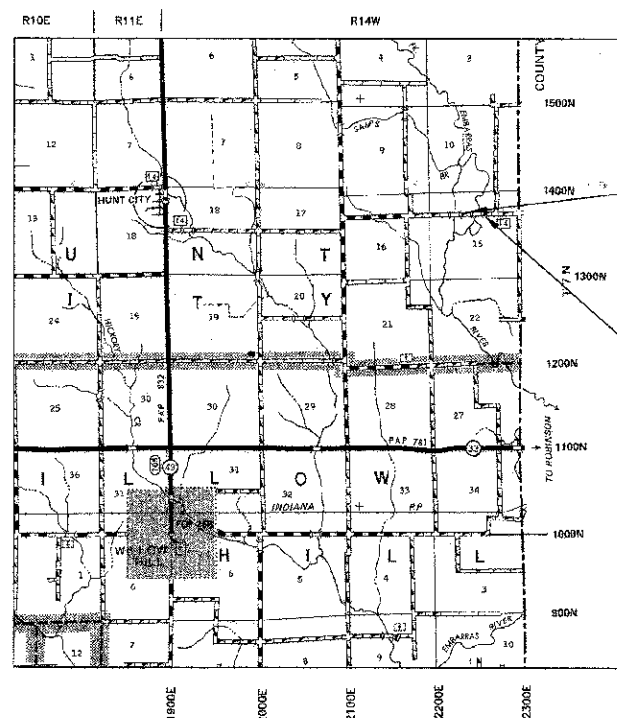
SCALES

- PLAN 1 INCH = 50 FEET
- PROFILE HORZ. 1 INCH = 50 FEET
- PROFILE VERT. 1 INCH = 10 FEET
- CROSS SECTION 1 INCH = 5 FEET

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
1	L SUM	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	X7010216
119	CU YD	EARTH EXCAVATION	20200100
140	CU YD	CHANNEL EXCAVATION	20300100
72	TON	POROUS GRANULAR EMBANKMENT	20700110
60	FOOT	PERIMETER EROSION BARRIER	28000400
100	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
1	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
25.2	CU YD	CONCRETE STRUCTURES	50300225
2.8	CU YD	CONCRETE ENCASEMENT	50300280
1400	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	50400405
2690	POUND	REINFORCEMENT BARS	50800105
99	FOOT	STEEL RAILING, TYPE S1	50900205*
350	FOOT	FURNISHING STEEL PILES HP10X42	51201400
350	FOOT	DRIVING PILES	51202305
1	EACH	TEST PILE STEEL HP10X42	51203400
1	EACH	NAME PLATES	51500100
1	L SUM	MOBILIZATION	67100100
4	EACH	TERMINAL MARKER - DIRECT APPLIED	78201000*

*SPECIALTY ITEM



SECTION 11-00118-00-BR
BEGINS STA. 3+00

STA. 4+15 - SPECIAL BRIDGE DESIGN
PROPOSED PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE.
1 SPAN @ 50', 28' RDWY., SKEW = 0'
PROP. STR. NO. 040-3264
EXIST. STR. NO. 040-6000

SECTION 11-00118-00-BR
ENDS STA. 5+00

FUNCTIONAL CLASS: RURAL MINOR COLLECTOR
ADT = 150
DESIGN SPEED = 40MPH

LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE
NET LENGTH = 200 L.F. = 0.038 MILES



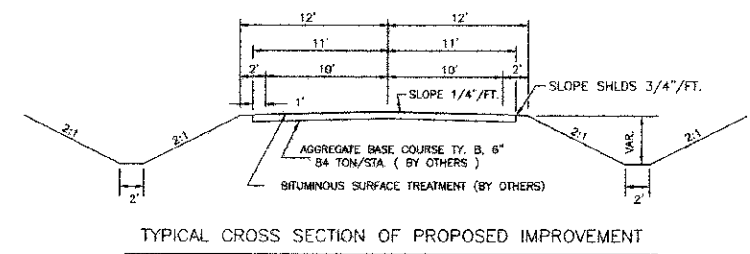
ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55012
LICENSE EXPIRES NOVEMBER 30, 2013

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.L.E.)
TELEPHONE NO. 1-800-992-0123 OR 811

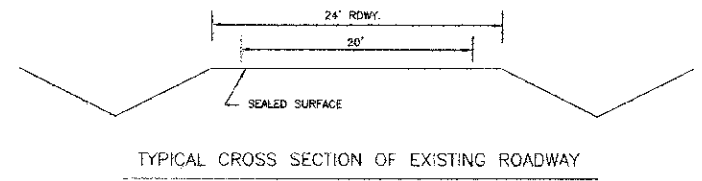
PROFESSIONAL DESIGN FIRM #184-000832

ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED:	4-3 <i>Richard A. Patterson</i> JASPER COUNTY ENGINEER
PASSED:	4/23 <i>Margaret E. Carl</i> DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS
RELEASING FOR BID BASED ON LIMITED REVIEW	4/23, 2012 <i>Roger L. Henshell</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

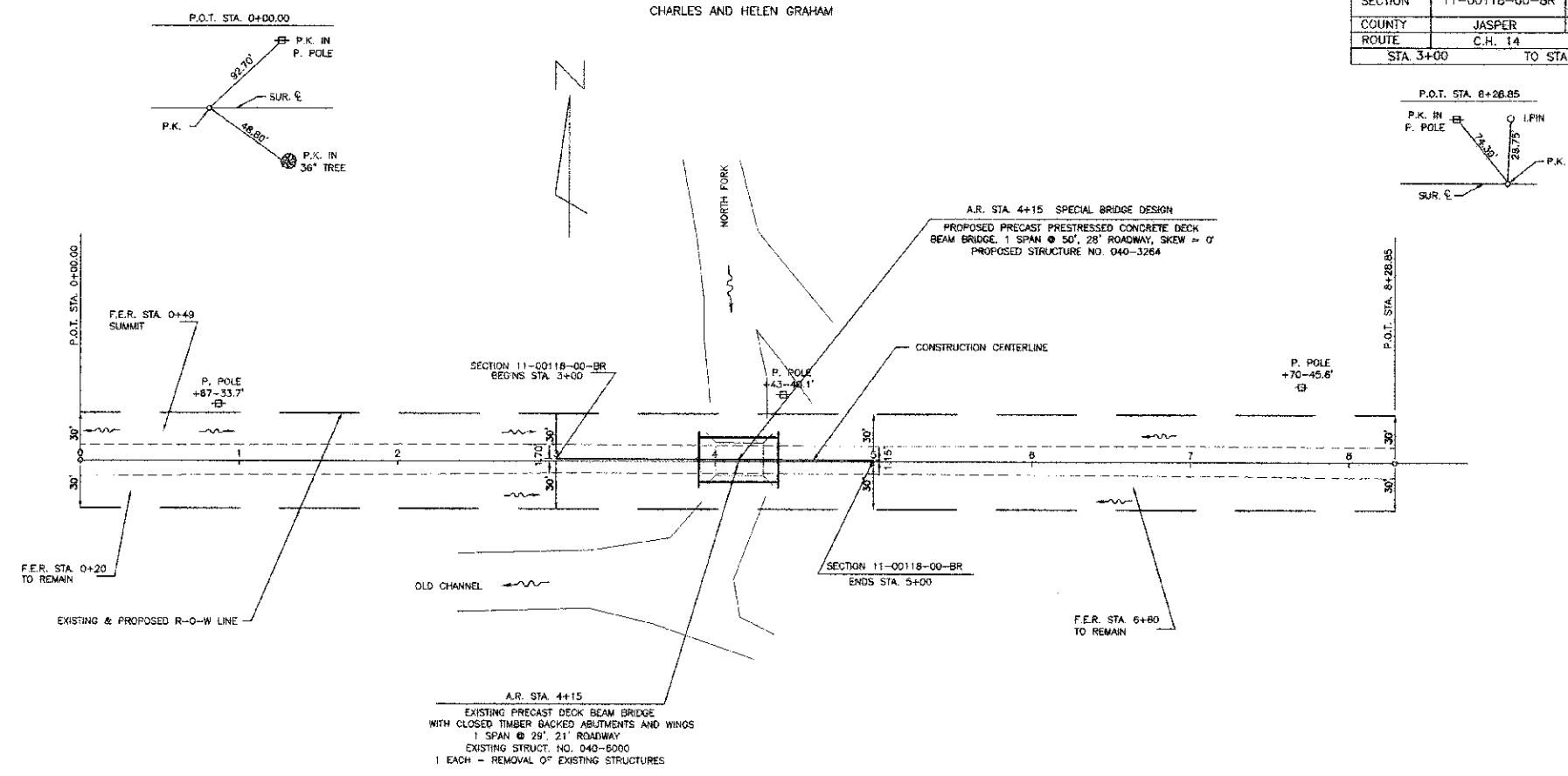
SECTION	11-00118-00-BR	TOTAL SHEETS	12	SHEET NO.	2
COUNTY	JASPER				
ROUTE	C.H. 14				
STA. 3+00		TO STA. 5+00			



TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT

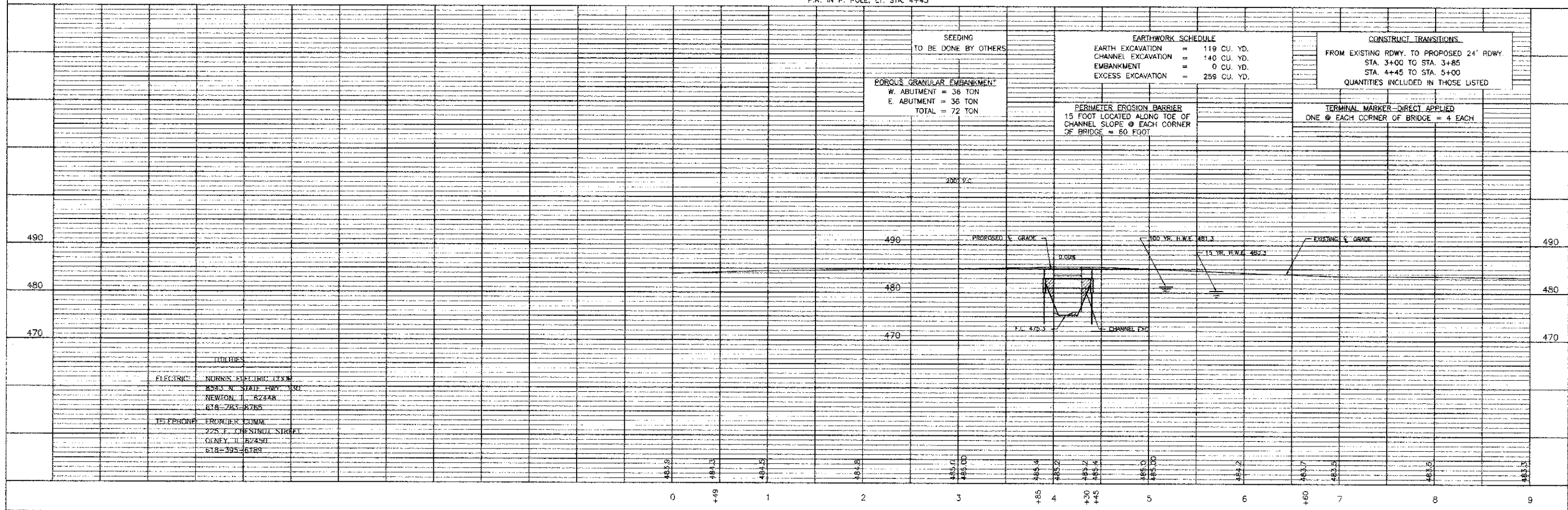


TYPICAL CROSS SECTION OF EXISTING ROADWAY



BENCHMARK #1 ELEVATION 483.55
P.K. IN P. POLE, LT. STA. 4+43

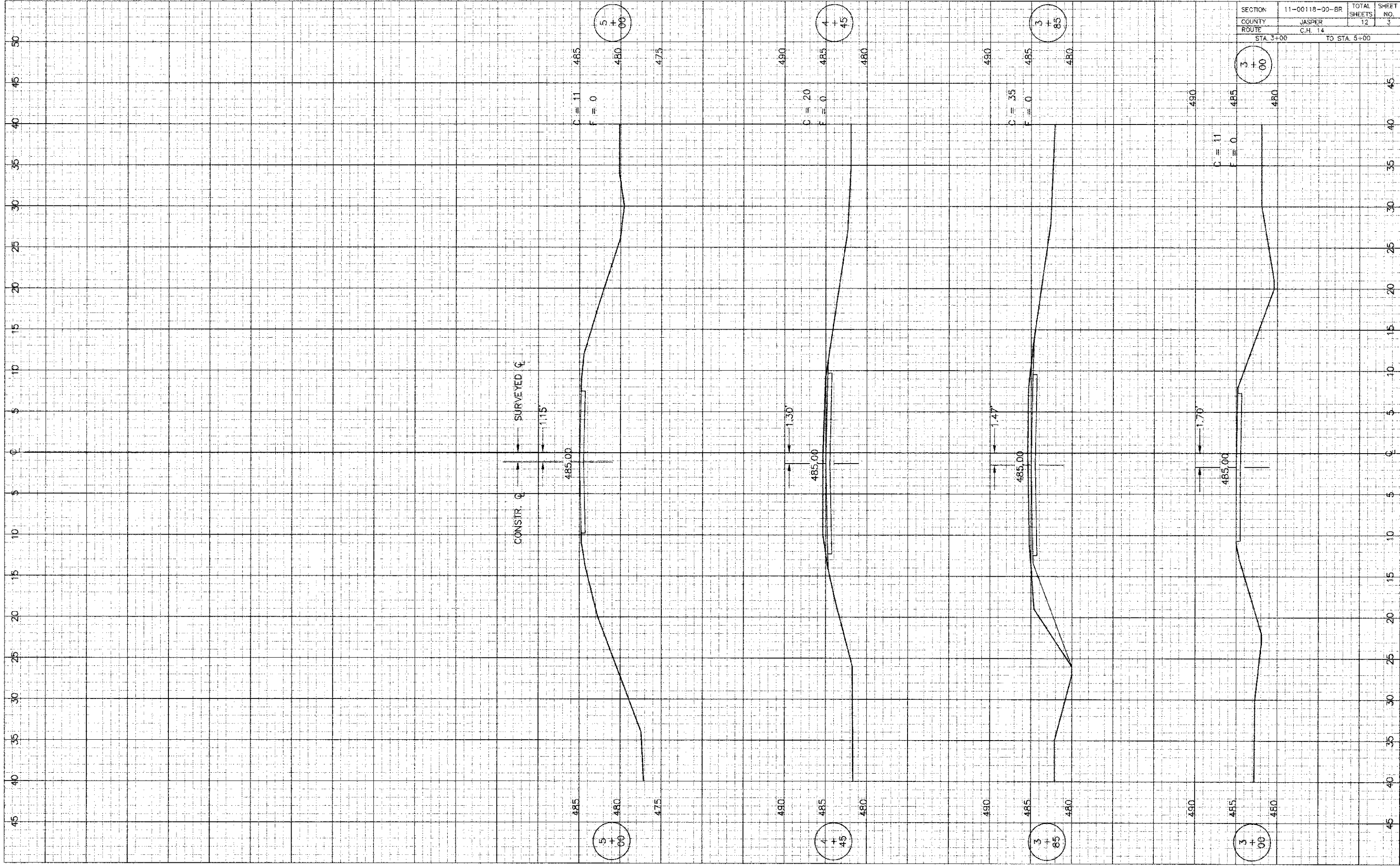
MATHEW RUSSELL



UTILITIES
ELECTRIC: NORRIS ELECTRIC CO.
2593 N. STATE HWY. 130
NEWTON, IL 62448
618-783-8765
TELEPHONE: FRONKOR COMM.
225 F. CHESTNUT STREET
OLNEY, IL 62450
618-395-6189

CONNOR & CONNOR, Inc.
 CONSULTING ENGINEERS
 210 East Locust Street
 ROXBORO, ILLINOIS 62454
 Phone 618-544-8823
 Fax 618-544-3017
 Licensed Surveyors
 Licensed Engineers

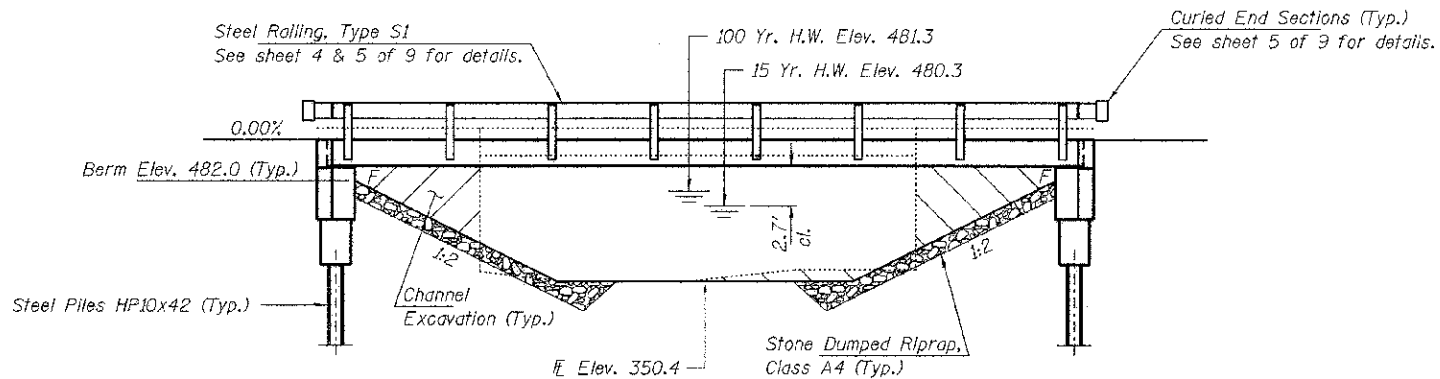
DATE: 02/11/2010
 SCALE: 1" = 50'
 DRAWN BY: DUC
 PROJECT: 0-1541
 SHEET: OF



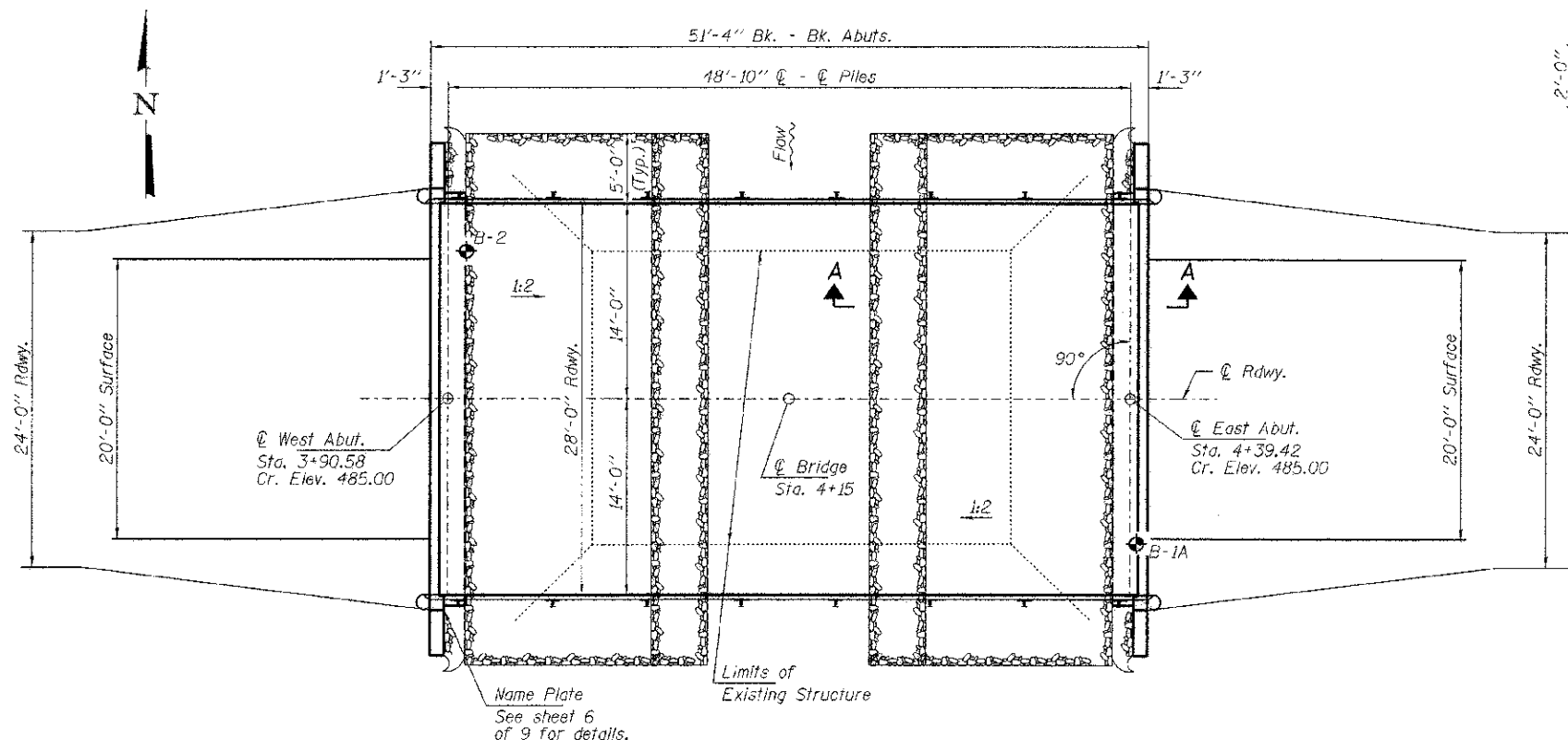
SECTION	11-00118-00-BR	TOTAL SHEETS	12	SHEET NO.	3
COUNTY	JASPER				
ROUTE	C.H. 14				
STA. 3+00		TO STA. 5+00			

EXISTING STRUCTURE: 114" Corrugated Metal Pipe with wood headwalls. 35.5' long.
Structure closed to traffic.

No Salvage



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " low lax. strands)
 $f_{pb} = 201,960$ psi ($\frac{1}{2}$ " low lax. strands)
 $f_y = 60,000$ psi (Reinf.)

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD
with all applicable interims.
50#/Sq. Ft. included in dead load for
future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.208g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.472g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 0.36 Sq. Mi.		Existing Low Grade Elev.		Proposed Low Grade Elev.		Sta.	
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Natural Prop. H.W.E.	Head - Ft. Exist.	Headwater El. Prop.	Sta.
Design	15	215	115	148	480.3	0.0	480.3
Base	100	372	139	187	481.3	0.0	481.3
Max. Calc.	500	572	147	201	481.6	0.1	481.7

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	479.4	479.4

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."

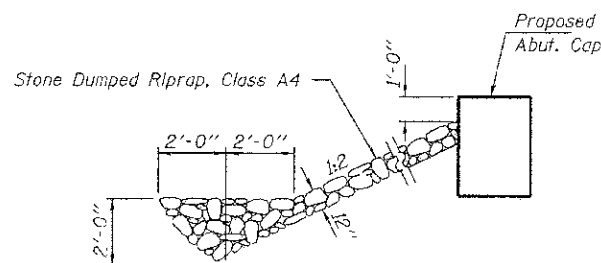
Steven W. Medinson 4/6/2012
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2012

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
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.

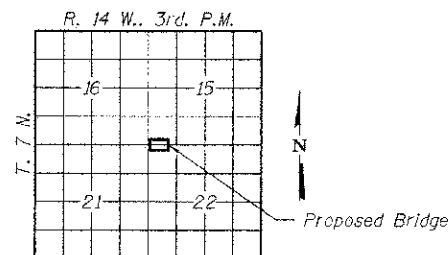


SECTION A-A

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

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 21" x 48" PPC Deck Beam
3. 21" x 48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. HP Pile Details
- 8-9. Borings



LOCATION SKETCH

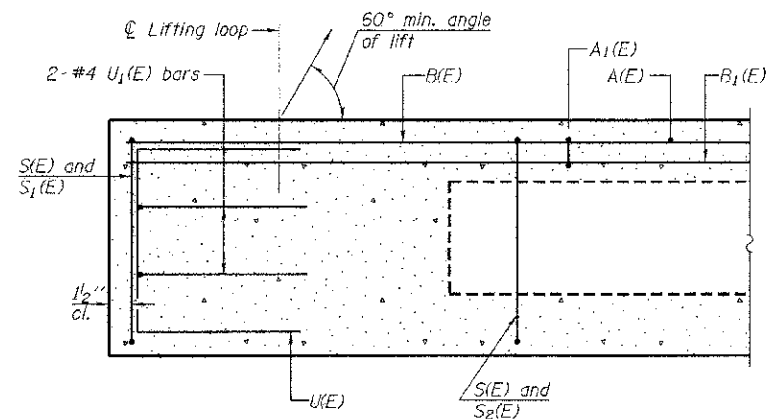
N. FORK OLD CHANNEL
BUILT 20L BY
JASPER COUNTY
SEC. 11-00118-00-BR
C.H. 14
STR. NO. 040-3264
LOADING HL-93

NAME PLATE

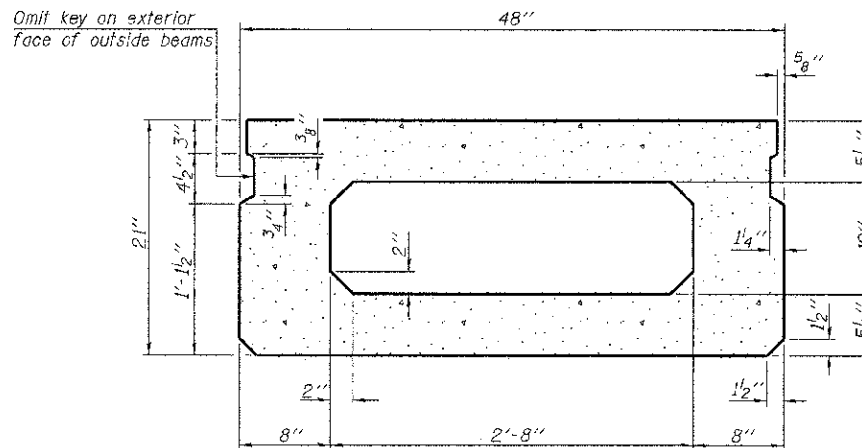
See Std. 515001

TOTAL BILL OF MATERIAL

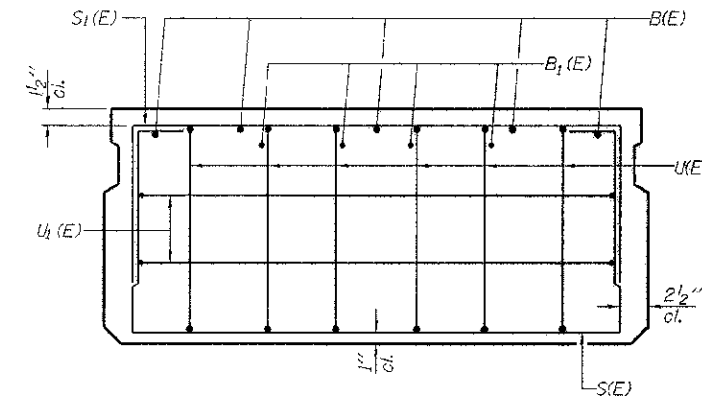
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			140
Stone Dumped Riprap, Class A4	Ton			100
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		25.2	25.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,400		1,400
Reinforcement Bars	Pound		2,590	2,590
Steel Railing, Type S1	Foot	99		99
Furnishing Steel Piles HP10x42	Foot		350	350
Driving Piles	Foot		350	350
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1



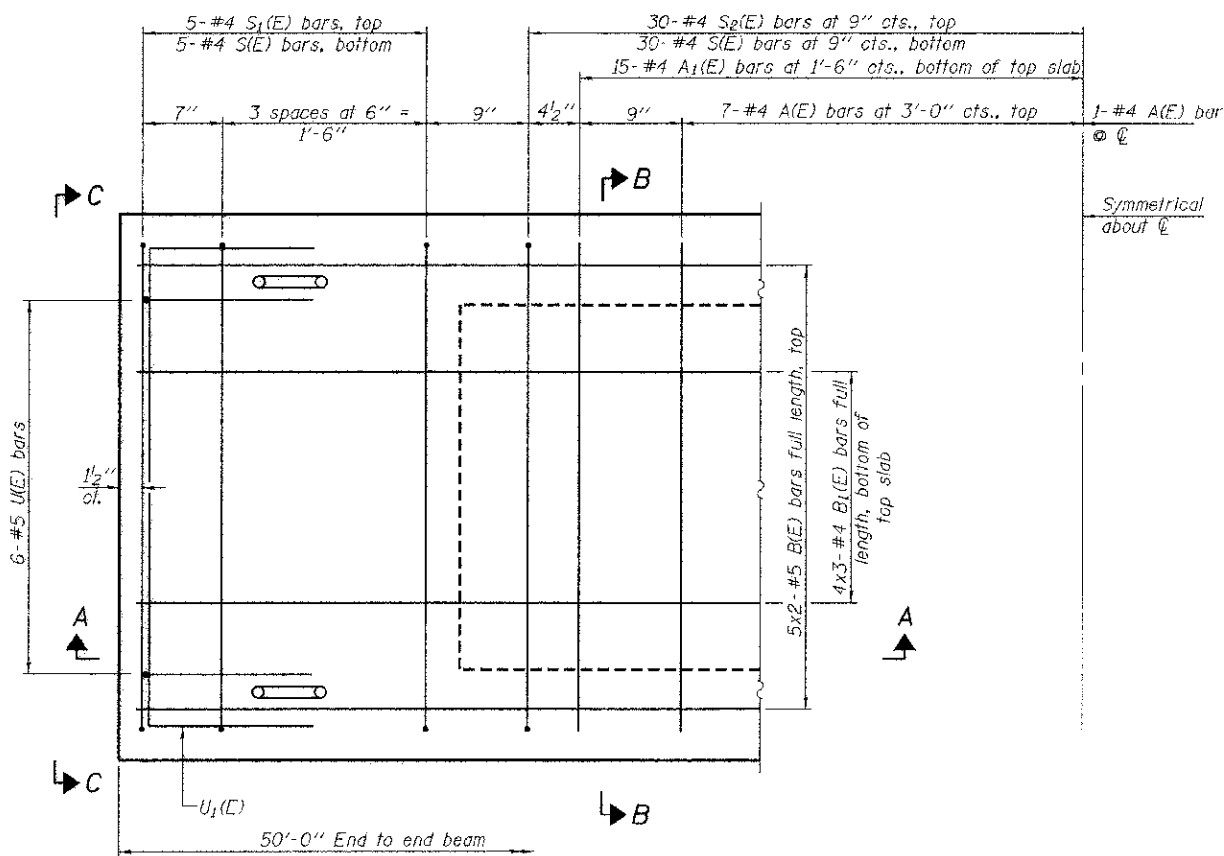
SECTION A-A



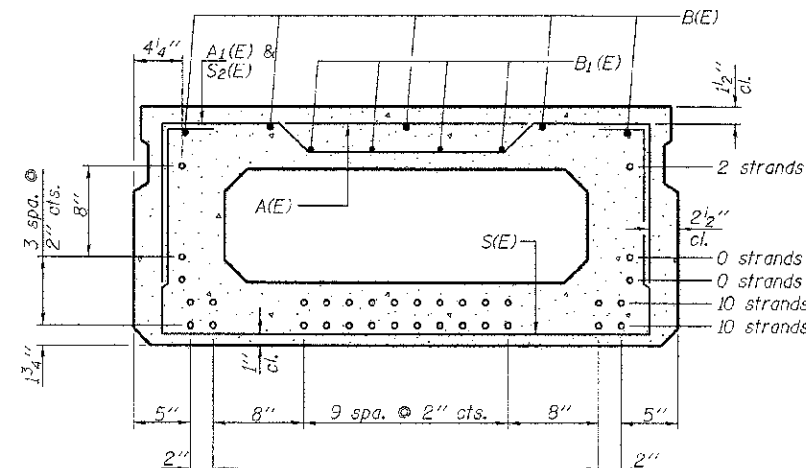
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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.

BAR LIST
ONE BEAM ONLY
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	15	#4	3'-7"	—
A1(E)	30	#4	3'-10"	—
B(E)	10	#5	26'-2"	—
B1(E)	12	#4	17'-11"	—
S1(E)	70	#4	7'-5"	□
S2(E)	10	#4	5'-11"	□
S2(E)	60	#4	6'-2"	□
U(E)	12	#5	4'-0"	□
U1(E)	4	#4	6'-0"	□

Note: See sheets 3 & 4 of 9 for additional details and Bill of Material.

Note:
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 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2148-0

7-1-10

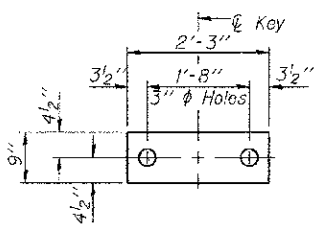
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HAMPTON, LENZINI AND BERNICK, INC. 3001 REVOLUTION DRIVE, SUITE 101 SPRINGFIELD, ILLINOIS 62783		CHECKED - A.S.L.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM 16-1 P.E. REG. NO. 134-010850	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/4/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
JASPER COUNTY HIGHWAY DEPARTMENT

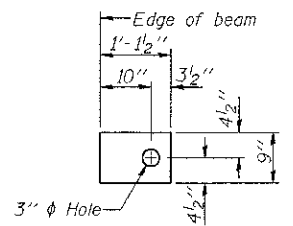
21" x 48" PPC DECK BEAM
STRUCTURE NO. 040-3264

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	11-00118-00-BR	JASPER	12	5
				CONTRACT NO. 95685
ILLINOIS FED. AID PROJECT				

SHEET NO. 2 OF 9 SHEETS



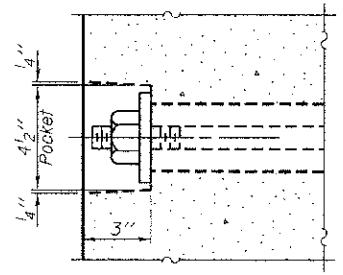
FABRIC BEARING PAD
(Interior - 12 Req'd.)



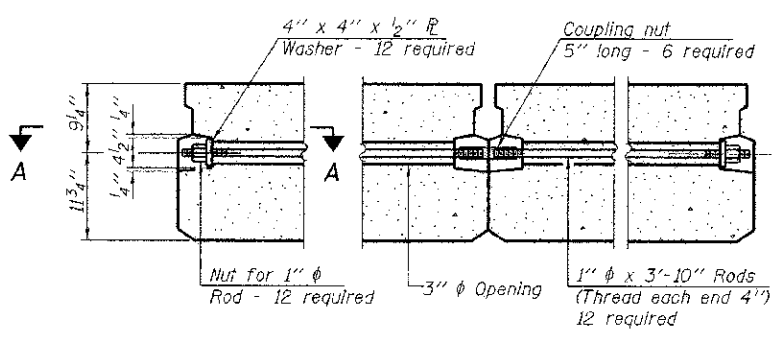
FABRIC BEARING PAD
(Exterior - 4 Req'd.)

FIXED

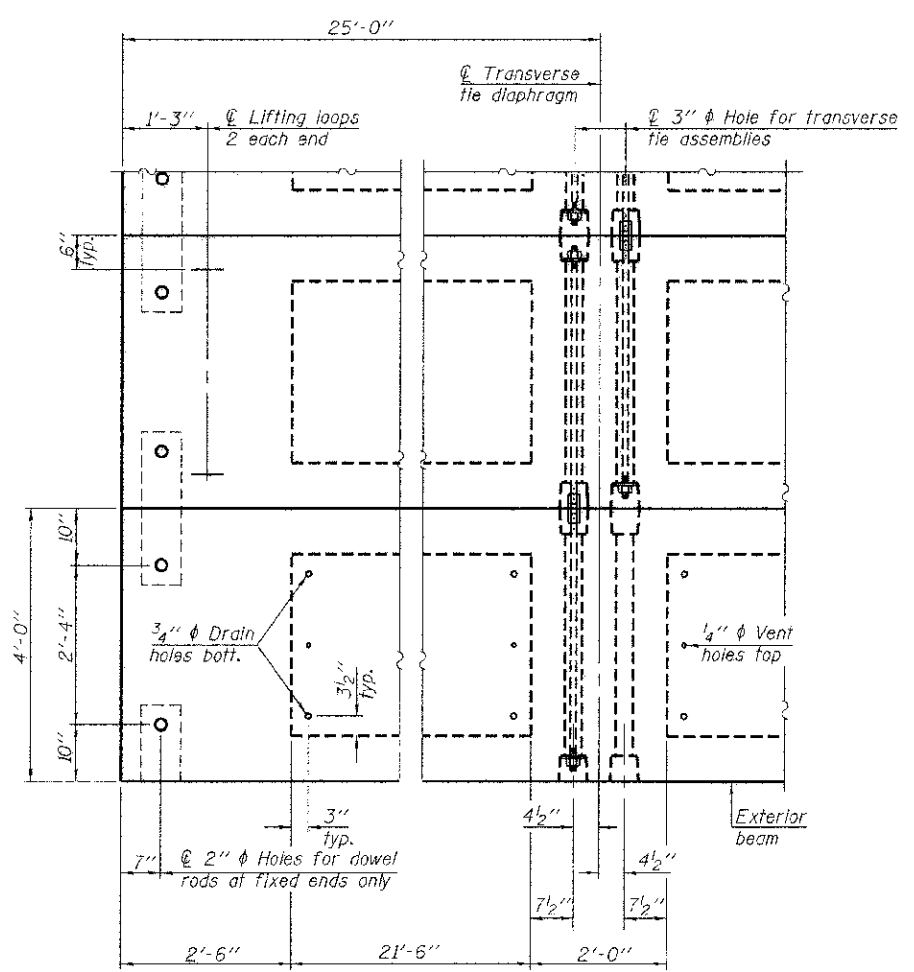
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

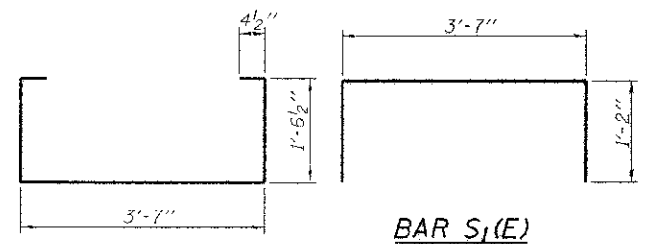


TYPICAL TRANSVERSE TIE ASSEMBLY

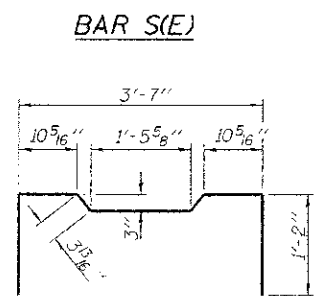


PLAN VIEW

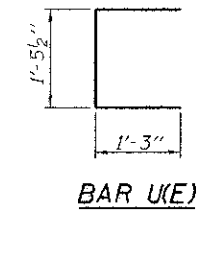
Note: Connect beams in pairs with the transverse tie configuration shown.



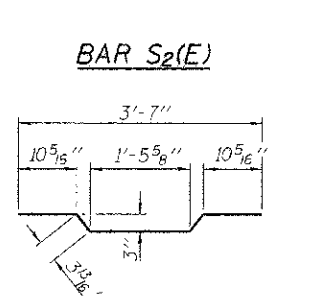
BAR S₁(E)



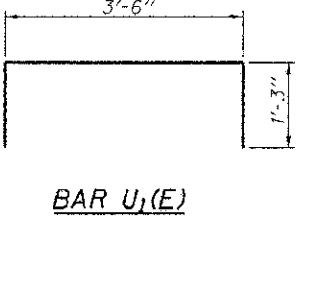
BAR S(E)



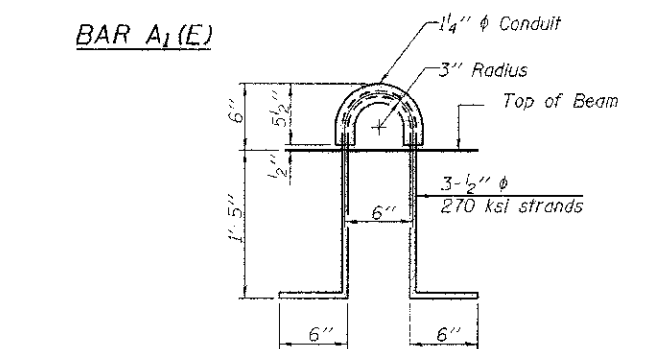
BAR U(E)



BAR S₂(E)



BAR U₁(E)



LIFTING LOOP DETAIL

NOTES

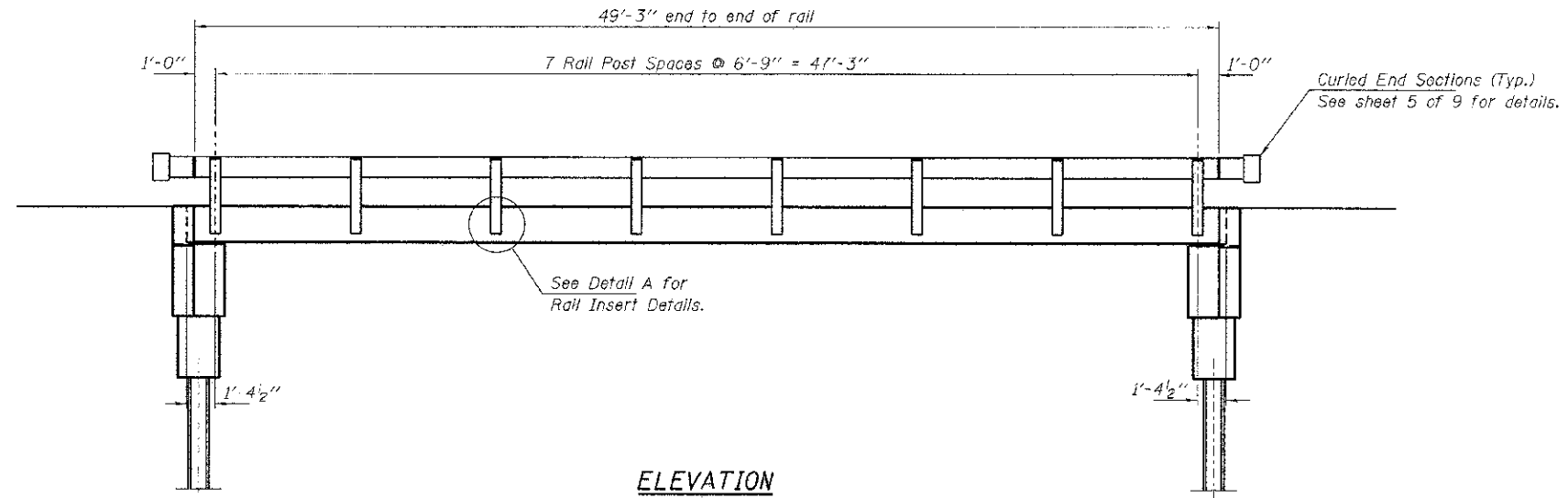
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 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. All bars shall be epoxy coated.

BILL OF MATERIAL

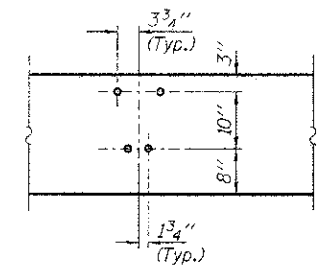
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,400
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PD-2148-OD 7-1-10

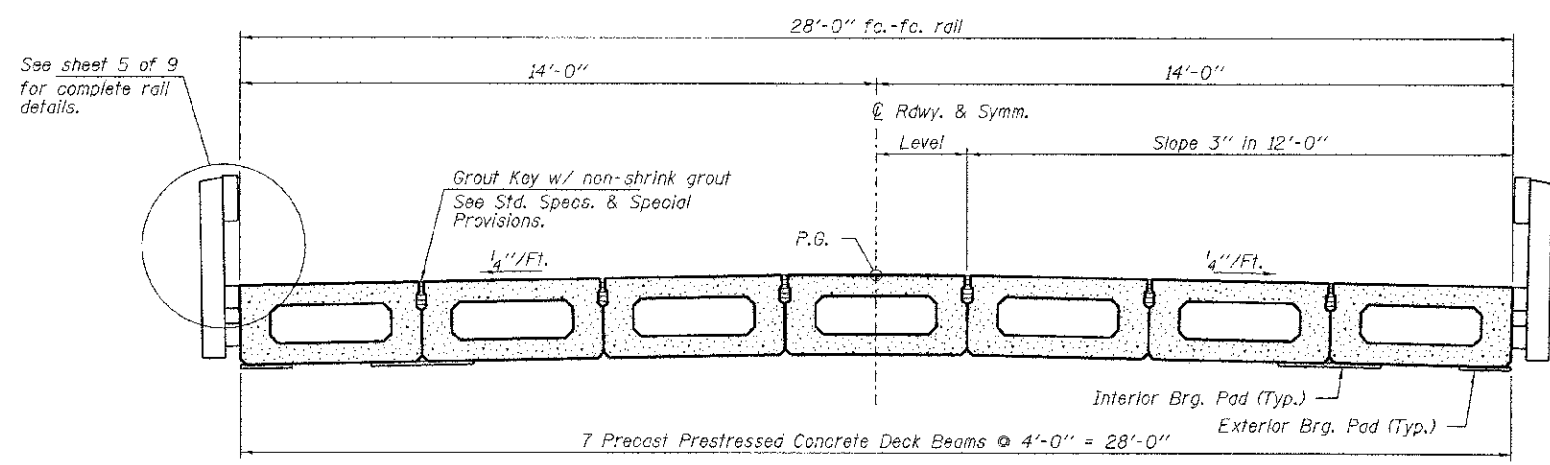
FILE NAME = 110293-shs-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS JASPER COUNTY HIGHWAY DEPARTMENT	21" x 48" PPC DECK BEAM DETAILS STRUCTURE NO. 040-3264	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - A.S.L.	REVISED -			14	11-00118-00-BR	JASPER	12	6	
300 FIVEFIVESEVEN DRIVE SUITE 207 OFFSPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 95685					
ILLINOIS PROFESSIONAL DESIGNER'S SEAL 161 P.B. 1582 CORP. 191-00089	PLOT DATE = 4/4/2012	CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					



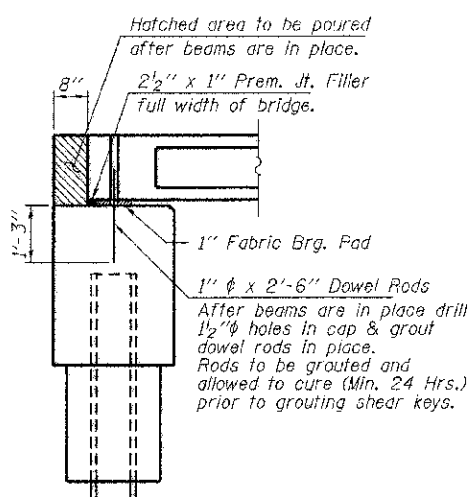
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 9 for Railing Details.



DETAIL A

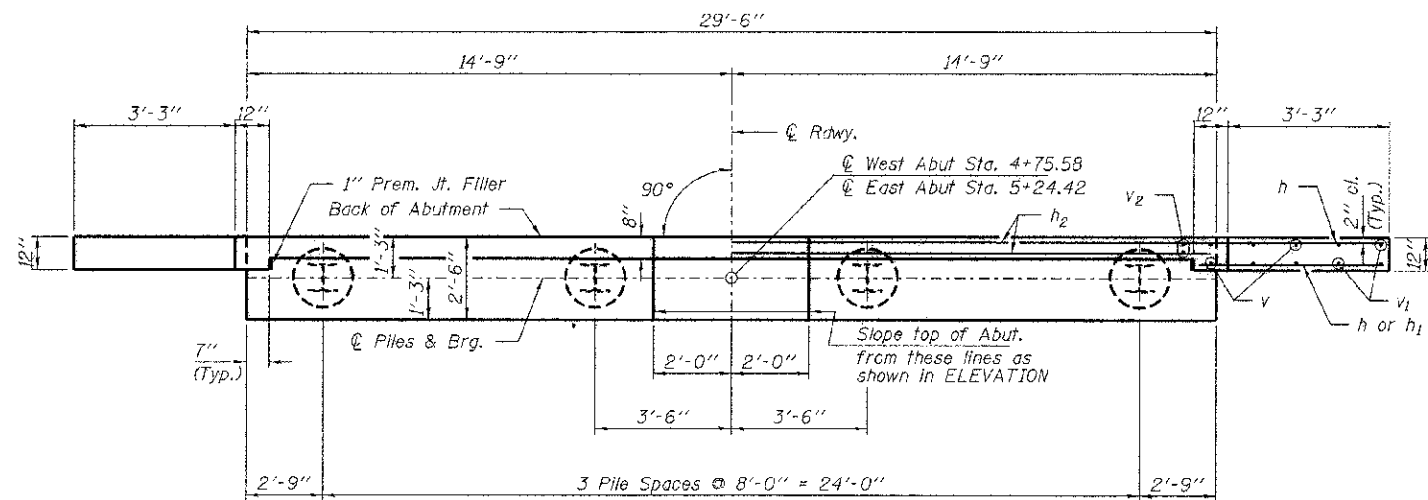


CROSS SECTION
See sheets 2 & 3 of 9 for Superstructure.

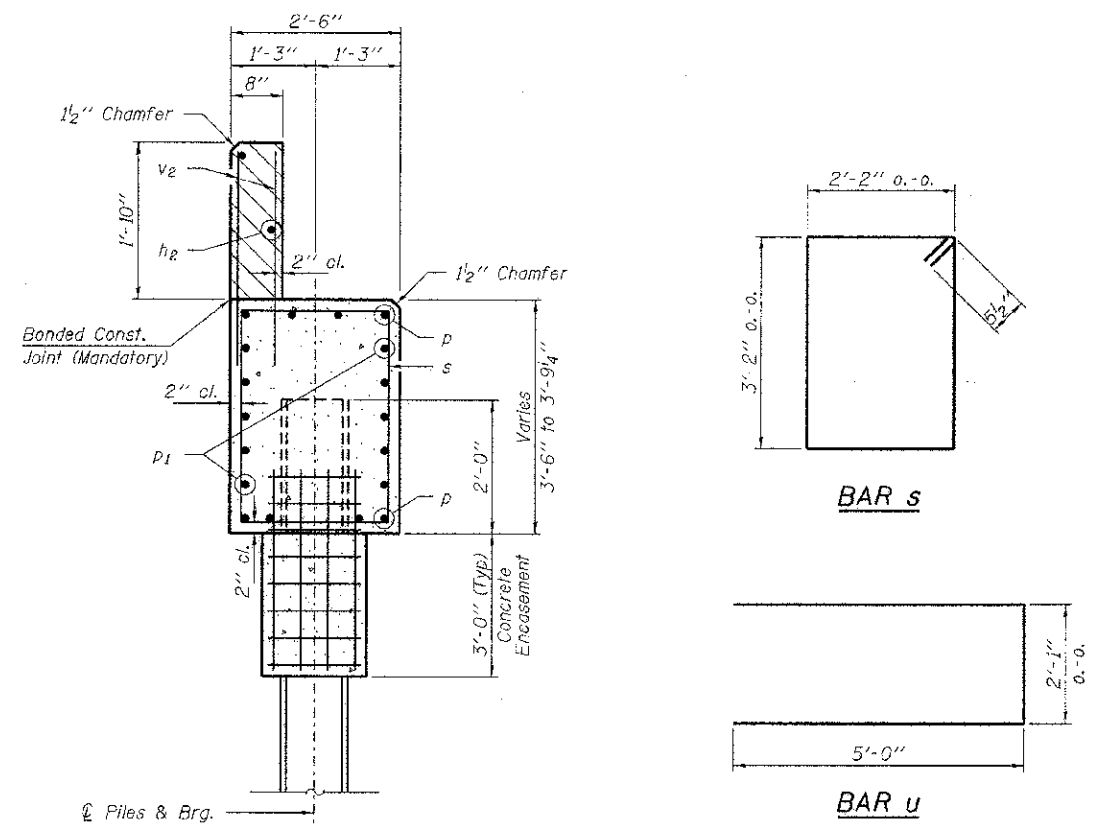


SECTION AT ABUTMENTS
@ Rt. L's

FILE NAME = 110290-ahb-bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS JASPER COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 040-3264	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. SOUTH BROADWAY 201 SPRINGFIELD, ILLINOIS 62701	PLDT SCALE =	CHECKED - A.S.L.	REVISED -			14	11-00118-00-0R	JASPER	12	7	
ILLINOIS PROFESSIONAL GEOTECHNICAL FIRM 1517 E. 75th ST. CHICAGO, IL 60649	PLDT DATE = 4/14/2012	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 95685					
		CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 9 SHEETS					

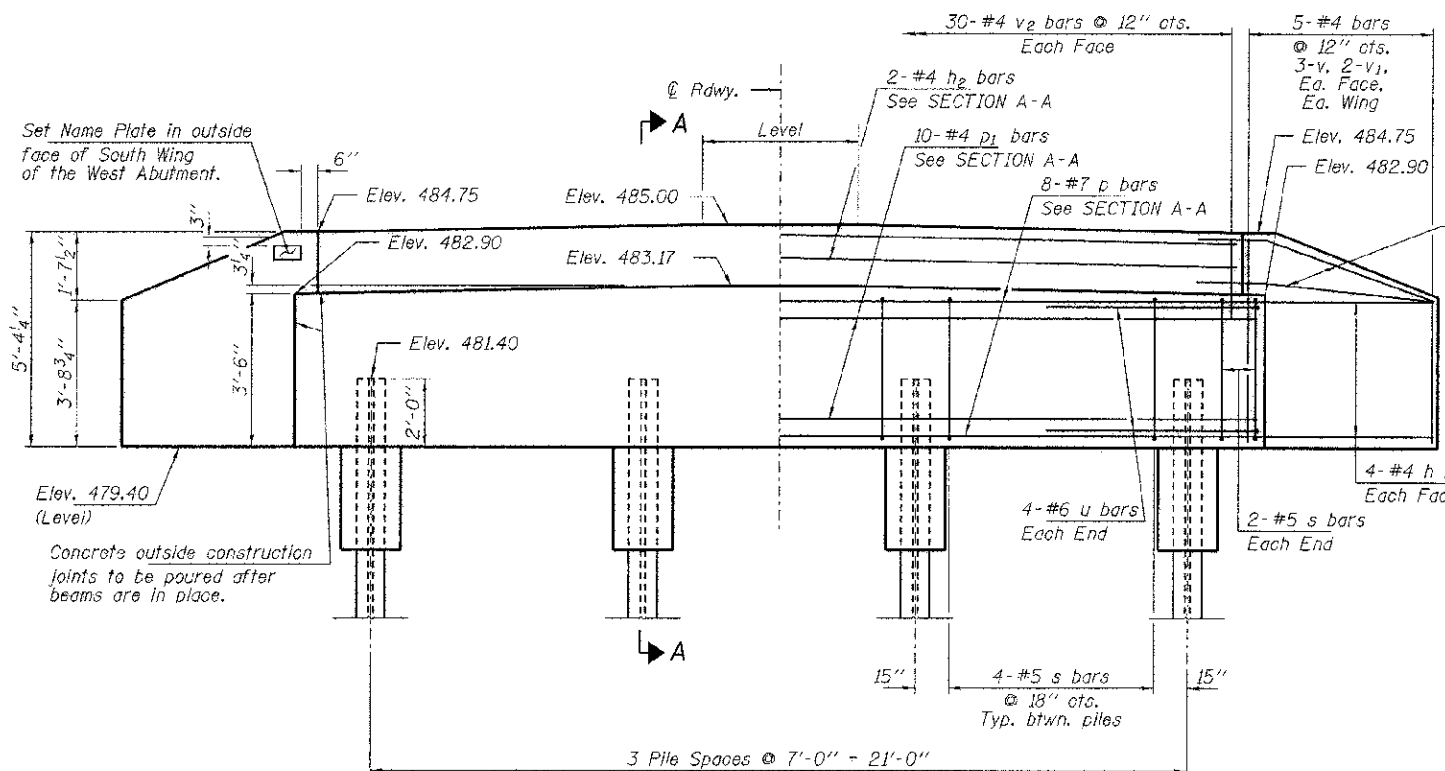


PLAN



SECTION A-A

Hatched area to be poured after beams are in place.



ELEVATION

Note: Extend h bars into abutment cap.

Fan 2-#4 h bars (B.F.)
Fan 2-#4 h1 bars (F.F.)
Each Wing Bend in field.

PILE DATA

Type ----- Steel HP10x42
No. Req'd. (2 Abuts.) ----- 8
Factored Resistance Available (Rf) ----- 184 Kips/Pile
Nominal Required Bearing (Rn) ----- 335 Kips/Pile
Est. Length ----- 50 Ft./Pile

Notes: * Includes one test pile to be driven in permanent locations at the West Abutment.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE	
h	40	#4	5'-6"	—	
h1	8	#4	4'-0"	—	
h2	4	#4	29'-2"	—	
p	16	#7	29'-2"	—	
p1	20	#4	29'-2"	—	
s	32	#5	11'-7"	□	
u	16	#6	12'-1"	—	
v	24	#4	4'-5"	—	
v1	16	#4	3'-5"	—	
v2	120	#4	2'-8"	—	
Concrete Structures				Cu. Yd.	25.2
Concrete Encasement				Cu. Yd.	2.8
Reinforcement Bars				Pound	2,590
Steel Piles HP10x42				Foot	350
Test Pile Steel HP10x42				Each	1
Name Plates				Each	1

FILE NAME = 112293-svt-brs.dgn
 USER NAME =
 DESIGNED - D.W.T.
 CHECKED - A.S.L.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 PLOT SCALE =
 PLOT DATE = 4/4/2012

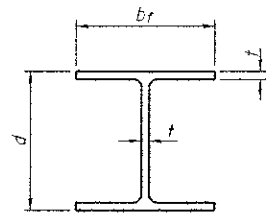
DESIGNED - D.W.T.
 CHECKED - A.S.L.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 JASPER COUNTY HIGHWAY DEPARTMENT

ABUTMENTS
 STRUCTURE NO. 040-3264

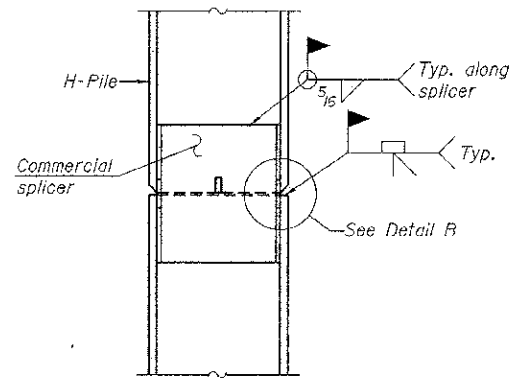
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	11-00118-00-BR	JASPER	12	9

CONTRACT NO. 95685
 SHEET NO. 6 OF 9 SHEETS
 ILLINOIS FED. AID PROJECT

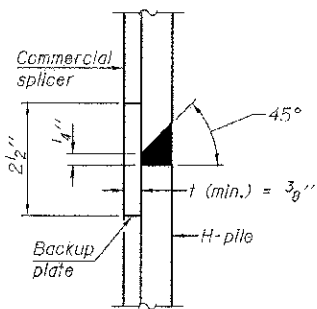


STEEL PILE TABLE

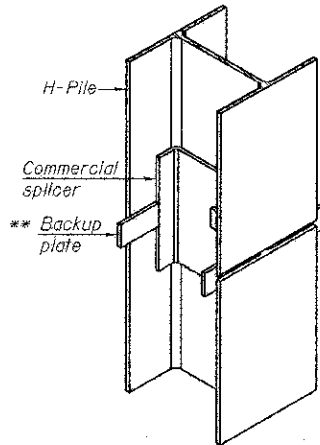
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 ¹ / ₄ "	14 ⁷ / ₈ "	1 ⁵ / ₁₆ "	30"
x102	14"	14 ³ / ₄ "	1 ¹ / ₁₆ "	30"
x89	13 ⁷ / ₈ "	14 ³ / ₄ "	5 ⁵ / ₈ "	30"
x73	13 ⁵ / ₈ "	14 ⁵ / ₈ "	1 ¹ / ₂ "	30"
HP 12x84	12 ¹ / ₄ "	12 ¹ / ₄ "	1 ¹ / ₁₆ "	24"
x74	12 ⁵ / ₈ "	12 ¹ / ₄ "	5 ⁵ / ₈ "	24"
x63	12"	12 ¹ / ₂ "	1 ¹ / ₂ "	24"
x53	11 ³ / ₄ "	12"	7 ¹ / ₁₆ "	24"
HP 10x57	10"	10 ¹ / ₄ "	9 ⁹ / ₁₆ "	24"
x42	9 ³ / ₄ "	10 ¹ / ₈ "	7 ¹ / ₁₆ "	24"
HP 8x36	8"	8 ⁵ / ₈ "	7 ¹ / ₁₆ "	18"



ELEVATION

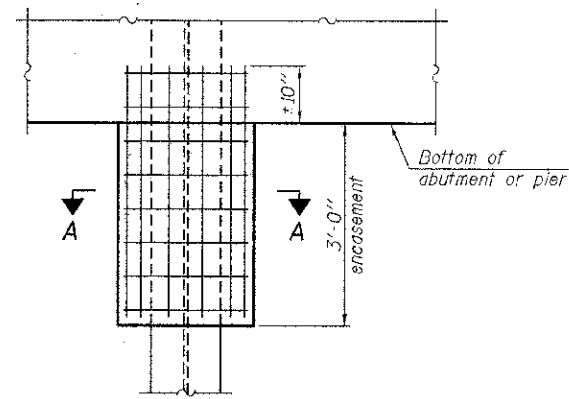


DETAIL "B"



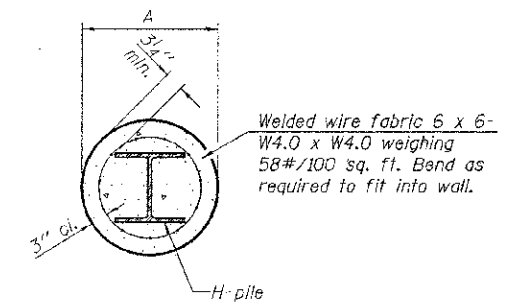
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



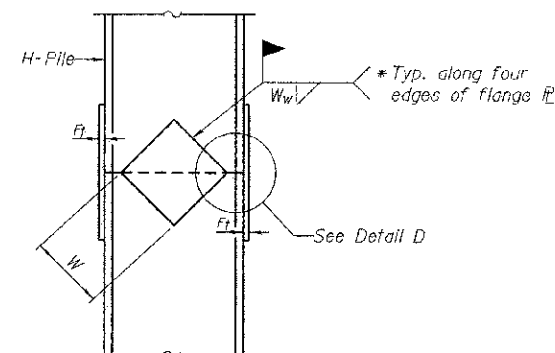
ELEVATION

PILE ENCASEMENT

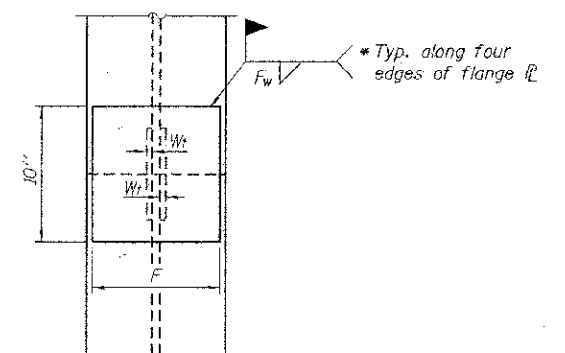


SECTION A-A

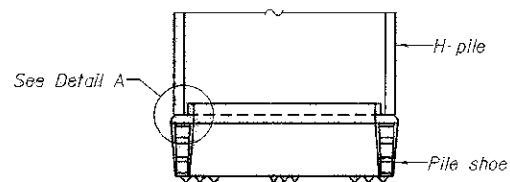
Note: Forms for encasement may be omitted when soil conditions permit.



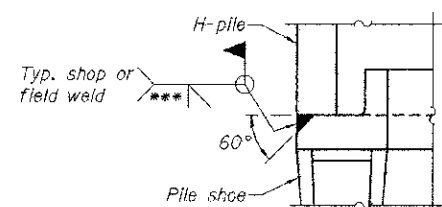
ELEVATION



END VIEW

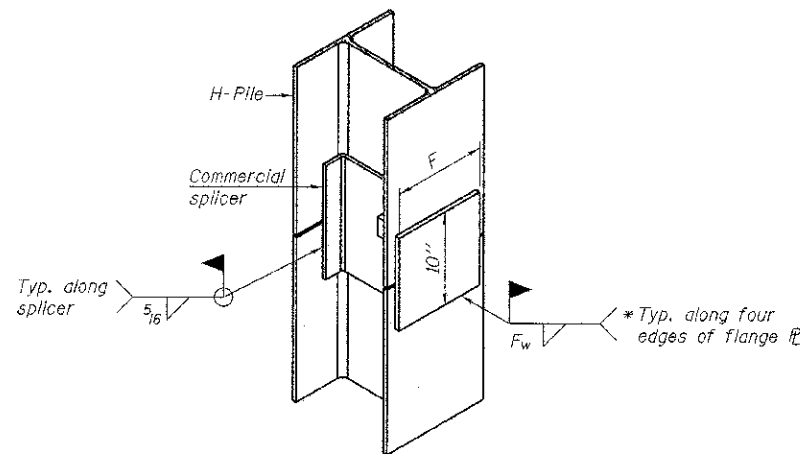


ELEVATION

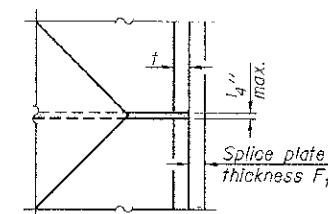


DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 ¹ / ₂ "	1"	7 ⁸ / ₈ "	7 ³ / ₄ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
x102	12 ¹ / ₂ "	7 ⁸ / ₈ "	3 ⁴ / ₄ "	7 ³ / ₄ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
x89	12 ¹ / ₂ "	3 ⁴ / ₄ "	11 ¹⁶ / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
x73	12 ¹ / ₂ "	5 ⁸ / ₈ "	9 ¹⁶ / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
HP 12x84	10"	7 ⁸ / ₈ "	11 ¹⁶ / ₁₆ "	6 ¹ / ₂ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
x74	10"	7 ⁸ / ₈ "	11 ¹⁶ / ₁₆ "	6 ¹ / ₂ "	5 ⁸ / ₈ "	1 ¹ / ₂ "
x63	10"	5 ⁸ / ₈ "	1 ² / ₂ "	6 ¹ / ₂ "	1 ² / ₂ "	3 ⁸ / ₈ "
x53	10"	5 ⁸ / ₈ "	1 ² / ₂ "	6 ¹ / ₂ "	1 ² / ₂ "	3 ⁸ / ₈ "
HP 10x57	8"	3 ⁴ / ₄ "	9 ¹⁶ / ₁₆ "	5 ¹ / ₄ "	1 ² / ₂ "	3 ⁸ / ₈ "
x42	8"	5 ⁸ / ₈ "	9 ¹⁶ / ₁₆ "	5 ¹ / ₄ "	1 ² / ₂ "	3 ⁸ / ₈ "
HP 8x36	7"	5 ⁸ / ₈ "	7 ¹⁶ / ₁₆ "	4 ¹ / ₄ "	1 ² / ₂ "	3 ⁸ / ₈ "

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 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 (5/16" min.).

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

F-HP

7-1-10

FILE NAME * 110293-shr-bridge.dgn	USER NAME *	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS JASPER COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 040-3264	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2003 STEVENSON AVENUE, SUITE 201 SPRINGFIELD, ILLINOIS 62705	PLLOT SCALE =	CHECKED - A.S.L.	REVISED -			14	11-00118-00-BR	JASPER	12	10	
ILLINOIS PROFESSIONAL DESIGN FIRM 137 PE 156 CORP. 164301238	PLLOT DATE = 4/1/2012	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 95685					
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					

SHEET NO. 7 OF 9 SHEETS

NOBLE		BORING No. B-1A		water level reading						
ENGINEERING CONSULTANTS		County: Jasper, IL	Sheet No. 1 of 2	1st encounter: 14'						
Client: Jasper County Highway Dept.		Weather: overcast	Temperature: low 50's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 11-23-11	Surface Elevation: 485**	@completion	wet cave 12'					
Location: Structure #040-6000		Date Finished: 11-23-11	Driller: Eric Seals	Backfill:	Soil cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class	Elev.**
1										484
2										483
3										482
4										481
5										479
6										479
7										478
8										477
9							BLANK DRILLED TO 43.5'			476
10										475
11										473
12										473
13										472
14							Heaving sands encountered at 14'			471
15										470
16										469
17										468
18										467
19										466
20										465
21										464
22										463
23										462
24										461
25										460
26										459
27										458
28										457
29										456
30										455
Drilling Method: HSA (2-1/4" ID)		Depth: 0' to 45.0'		Drill Rig: Mobile B-47		Sampling: split-spoon (SS)		comments: * Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder. ** ground surface elevation at boring location is estimated and is not surveyed and is based on bridge deck elevation of 485.23		

B-1A

NOBLE		BORING No. B-1A		water level reading						
ENGINEERING CONSULTANTS		County: Jasper, IL	Sheet No. 2 of 2	1st encounter: 14'						
Client: Jasper County Highway Dept.		Weather: Overcast	Temperature: low 50's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 11-23-11	Surface Elevation: Bridge Deck**	@completion	wet cave 12'					
Location: Structure #040-6000		Date Finished: 11-23-11	Driller: Eric Seals	Backfill:	Soil Cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class	Elev.**
31										454
32										53
33										52
34										51
35										50
36										449
37										448
38										447
39										446
40										445
42										444
43										443
44										442
45	SS-L	43.5'-45.0'	100+	70-89-102/5	100	1.5*	CLAYEY SILT (FI), trace to some sand, trace gravel, hard, gray			441
46							TOP 43.5'			440
										439
										438
										437
										436
										435
Drilling Method: HSA (2-1/4" ID)		Depth: 0' to 45.0'		Drill Rig: Mobile B-47		Sampling: split-spoon (SS)		comments: * Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder. ** ground surface elevation at boring location is estimated and is not surveyed and is based on bridge deck elevation of 485.23		

NOBLE		BORING No. B-2		water level reading						
ENGINEERING CONSULTANTS		County: Jasper, IL	Sheet No. 1 of 2	1st encounter: 18'						
Client: Jasper County Highway Dept.		Weather: overcast	Temperature: low 50's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 4-20-11	Surface Elevation: 485**	@completion	wet cave 12'					
Location: Structure #040-6000		Date Finished: 4-20-11	Driller: Eric Seals	Backfill:	Soil Cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
1										484
2	SS-1	1.0'-2.5'	5	4-2-3	100		0.0'-6.5' silt, clay, sand, etc FILL	11.0	FILL	483
3										482
4	SS-2	3.5'-5.0'	5	3-3-2	100			18.8	FILL	481
5										480
6	SS-3	6.0'-7.5'	2	1-1-1	100		6.5'-13.0' SILT, and sand, saturated, very loose, gray	18.0	ML	479
7										478
8										477
9	SS-4	8.5'-10.0'	2	1-1-1	100			22.0	ML	476
10										475
11										474
12										473
13										472
14	SS-5	13.5'-15.0'	4	3-2-2	100		13.0'-23.0' SILTY FINE TO COARSE SAND, trace to some gravel, very loose to medium dense, saturated, gray	18.2	SP	471
15										470
16										469
17							Heaving sands encountered at 18'			468
18										467
19	SS-6	18.5'-20.0'	14	7-6-8	10				SP	465
20										465
21										464
22										463
23										462
24	SS-7	23.5'-25.0'	15	7-7-8	90		23.0'-36.0' SANDY SILT, trace gravel, medium dense to dense, saturated, gray	18.8	SM	461
25										460
26										459
27										458
28										457
29										456
30	SS-8	28.5'-30.0'	17	5-7-12	100			19.2	SM	455
Drilling Method: HSA (2-1/4" IS)		Depth: 0' to 33.5'		Drill Rig: Mobile B-47		Sampling: split-spoon (SS)		comments: * Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder ** ground surface elevation at boring location is estimated and is not surveyed and is based on bridge deck elevation of 485.23		

B-2

NOBLE		BORING No. B-2		water level reading						
ENGINEERING CONSULTANTS		County: Jasper, IL	Sheet No. 2 of 2	1st encounter: 18'						
Client: Jasper County Highway Dept.		Weather: Overcast	Temperature: low 50's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 4-20-11	Surface Elevation: 485**	@completion	wet cave 12'					
Location: Structure #040-6000		Date Finished: 4-20-11	Driller: Eric Seals	Backfill:	Soil Cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
21										454
22										453
23										452
24	SS-9	33.5'-35.0'	37	10-15-22	20		23.0'-36.0' SANDY SILT, trace gravel, medium dense to dense, saturated, gray	12.4	SM	451
25										450
26										449
27										448
28										447
29	SS-10	38.5'-40.0'	100+	26-32-100/5	100	4.51	38.0'-39.5' VERY SILTY SILT (CL) trace to some sand, trace gravel, hard, gray	12.3	CL-ML	446
30										445
Drilling Method: HSA (2-1/4" IS)		Depth: 0' to 39.5'		Drill Rig: Mobile B-47		Sampling: split-spoon (SS)		comments: * Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder ** ground surface elevation at boring location is estimated and is not surveyed and is based on bridge deck elevation of 485.23		