

03-08-13 LETTING ITEM 113

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

PROJECT BROS-0183(314)
SECTION 10-15144-00-BR
PILOT ROAD DISTRICT
VERMILION COUNTY

T.R. 143
PROPOSED STRUCTURE NO. 092-3524
JOB NO. C-95-324-12

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 143	10-15144-00-BR	VERMILION	20	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 91472		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-11.	STATION CROSS SECTIONS
12-18.	BRIDGE PLANS
19-20.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-02	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

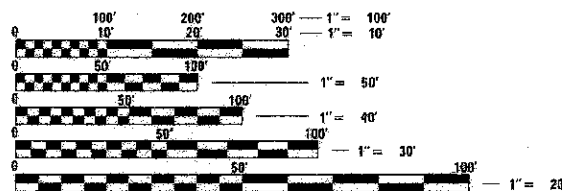
FRONTIER COMMUNICATIONS
104 MULBERRY
NORMAL, IL 61761
217-463-3129
ATTN: MICHELE LEWSADE

EASTERN ILLINI ELECTRIC COOPERATIVE
330 WEST OTTAWA ST. P.O. BOX 96
PAXTON, IL 60957
800-324-5102
ATTN: ALLAN SCHWEIGHART

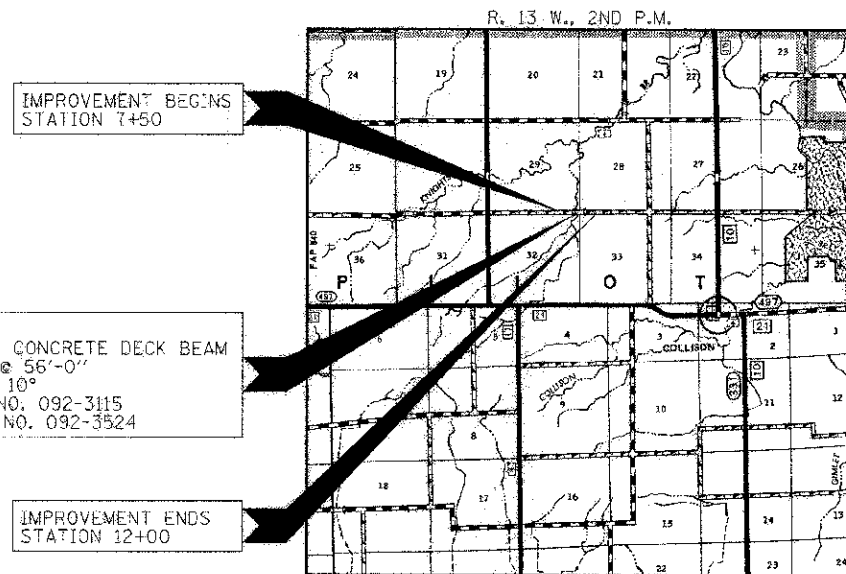


LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

FUNCTIONAL CLASSIFICATION: LOCAL ROAD (0-250 ADT)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 59 ADT



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



LOCATION MAP

APPROXIMATE SCALE: 1" = 1 MILE
NET LENGTH OF SECTION = 450 FEET = 0.085 MILES

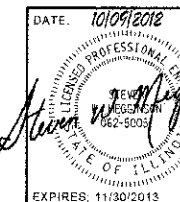
STA. 10+04
PRECAST PRESTRESSED CONCRETE DECK BEAM
BRIDGE, SINGLE SPAN @ 56'-0"
21'-0" ROWWY.; SKEW = 10°
EXISTING STRUCTURE NO. 092-3115
PROPOSED STRUCTURE NO. 092-3524

IMPROVEMENT BEGINS
STATION 7+50

IMPROVEMENT ENDS
STATION 12+00



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	<i>October 17 2012</i> <i>Douglas B. Blaska</i> COUNTY ENGINEER
APPROVED	<i>October 17 2012</i> <i>[Signature]</i> TOWNSHIP COMMISSIONER
PASSED	<i>October 19 2012</i> <i>[Signature]</i> DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	<i>October 19 2012</i> <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS REGION THREE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrenghengineering.com
164 000899
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

EXPIRES: 11/30/2013 PROJECT NUMBER: 11.0286.130 DATE: 10/08/12

CONTRACT NO. 91472

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL CONSTRUCTION TYPE CODE 0011
20200100	EARTH EXCAVATION	CU YD	170
20300100	CHANNEL EXCAVATION	CU YD	140
20400800	FURNISHED EXCAVATION	CU YD	50
28000305	TEMPORARY DITCH CHECKS	FOOT	92
28000400	PERIMETER EROSION BARRIER	FOOT	165
28100207	STONE DUMPED RIPRAP, CLASS A4	TON	275
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	465
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.0
50200100	STRUCTURE EXCAVATION	CU YD	65
50300225	CONCRETE STRUCTURES	CU YD	24.8
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1512
50800105	REINFORCEMENT BARS	POUND	2560
50900205	STEEL RAILING, TYPE S1	FOOT	109
51201400	FURNISHING STEEL PILES HP10X42	FOOT	680
51202305	DRIVING PILES	FOOT	680
51203400	TEST PILE STEEL HP10X42	EACH	2
51204650	PILE SHOES	EACH	10
51500100	NAME PLATES	EACH	1
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	56
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1.0
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.0
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3
XX004566	CONCRETE CUT-OFF WALL	CU YD	6.4

^ SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

PERIMETER EROSION BARRIER	
LOCATION	PERIMETER EROSION BARRIER 28000400 FOOT
TR 143/2600N	
LT. STA 10+35 TO LT. STA 12+00	135
TOTAL	135

GENERAL NOTES

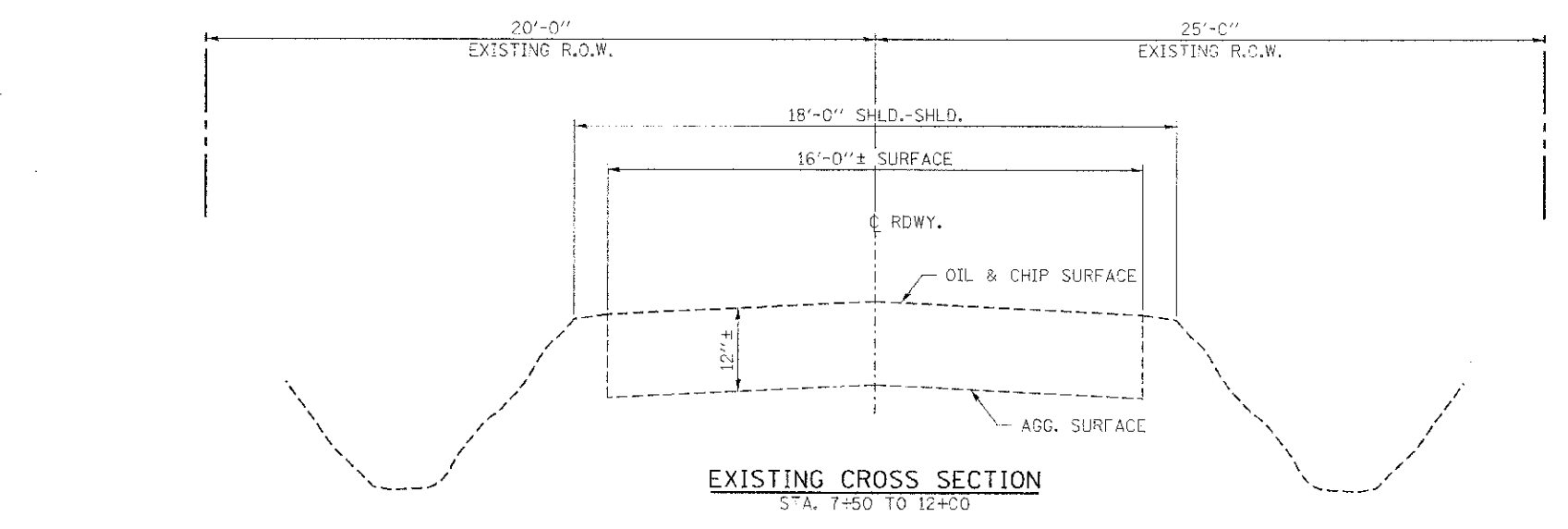
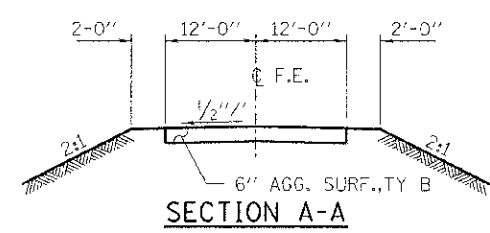
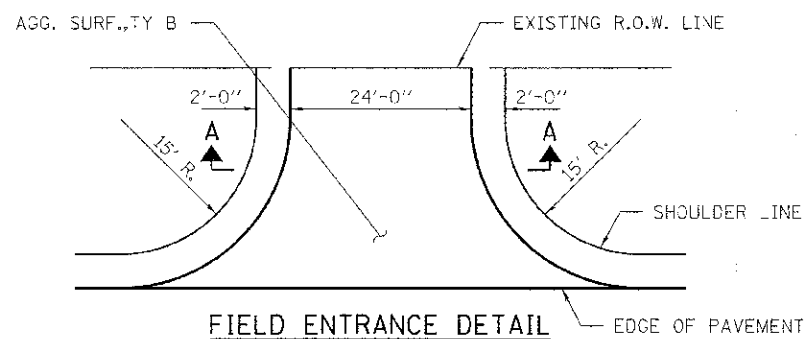
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- THE REVISION NUMBERS OF THE STANDARDS LISTED IN THE PLANS ARE TO BE USED FOR CONSTRUCTING OF THIS SECTION.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL 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.
- 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.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:
AGGREGATE SURFACE COURSE 1.80 TON/CU YD
STONE RIPRAP 1.75 TON/CU YD
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.
ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.3 ACRES

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100 CU.YD.	20300100 CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 143/2600 N							
STA 7+50 TO STA 9+72	91		25.00%	100.00%	68	150	-82
STA 9+75.33 TO STA 10+32.67		140	25.00%	70.00%	74	0	74
STA 10+35 TO STA 12+00	77		25.00%	100.00%	58	100	-42
TOTAL	168	140			200	250	-50
USE	170	140					-50

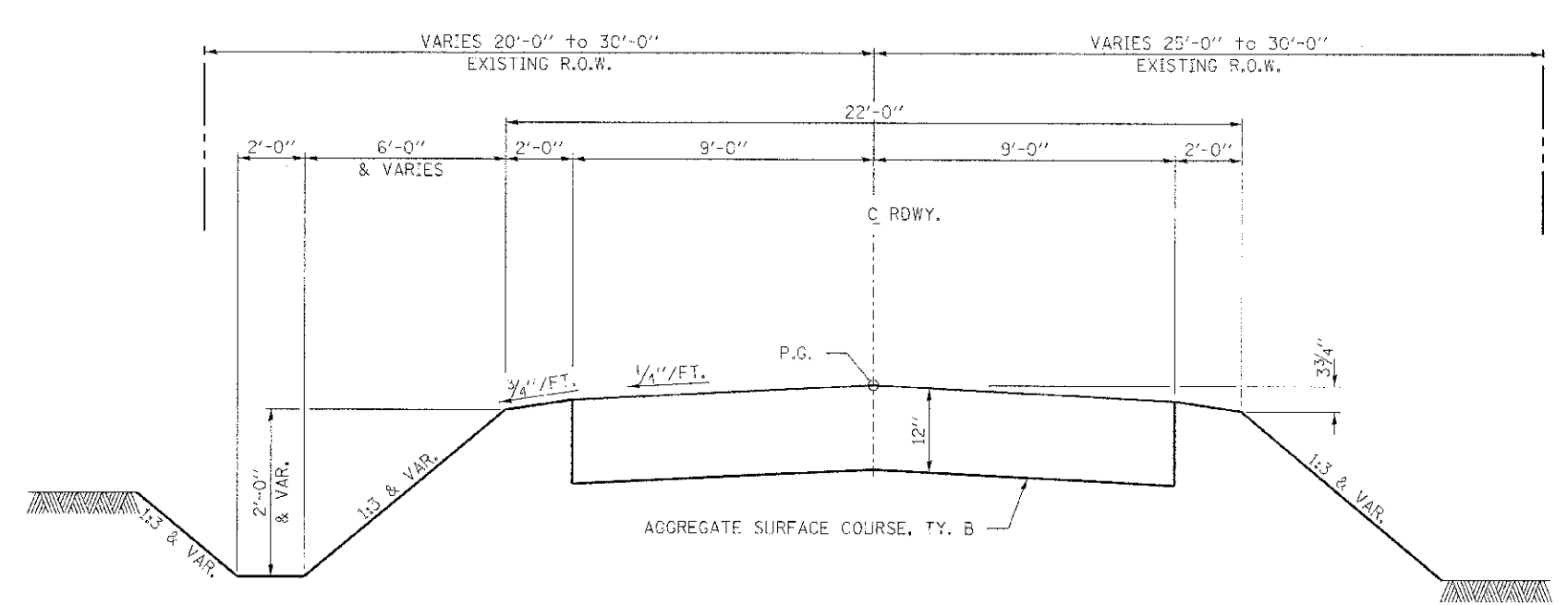
FURNISHED EXCAVATION 50 CU YDS

ROADWAY SCHEDULE	
LOCATION	AGGREGATE SURFACE COURSE TYPE B 12"
	40200800 TON
TR 143/2600N	
STA 7+50 TO STA 8+00	60.00
STA 8+00 TO STA 9+75.33	210.40
STA 10+32.67 TO STA 11+50	140.80
STA 11+50 TO STA 12+00	53.33
TOTAL	464.53
USE	465

TEMPORARY DITCH CHECKS	
LOCATION	TEMPORARY DITCH CHECKS 28000305
	FOOT
TR 143/2600 N	
RT. STA 8+40	11.5
LT. STA 8+70	11.5
RT. STA 9+05	11.5
LT. STA 9+20	11.5
RT. STA 9+70	11.5
LT. STA 9+70	11.5
RT. STA 10+40	11.5
RT. STA 10+90	11.5
TOTAL	92



EXISTING CROSS SECTION
STA. 7+50 TO 12+00



PROPOSED TYPICAL CROSS SECTION
STA. 8+00.00 TO 9+75.32
STA. 10+32.68 TO 11+50.00

SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

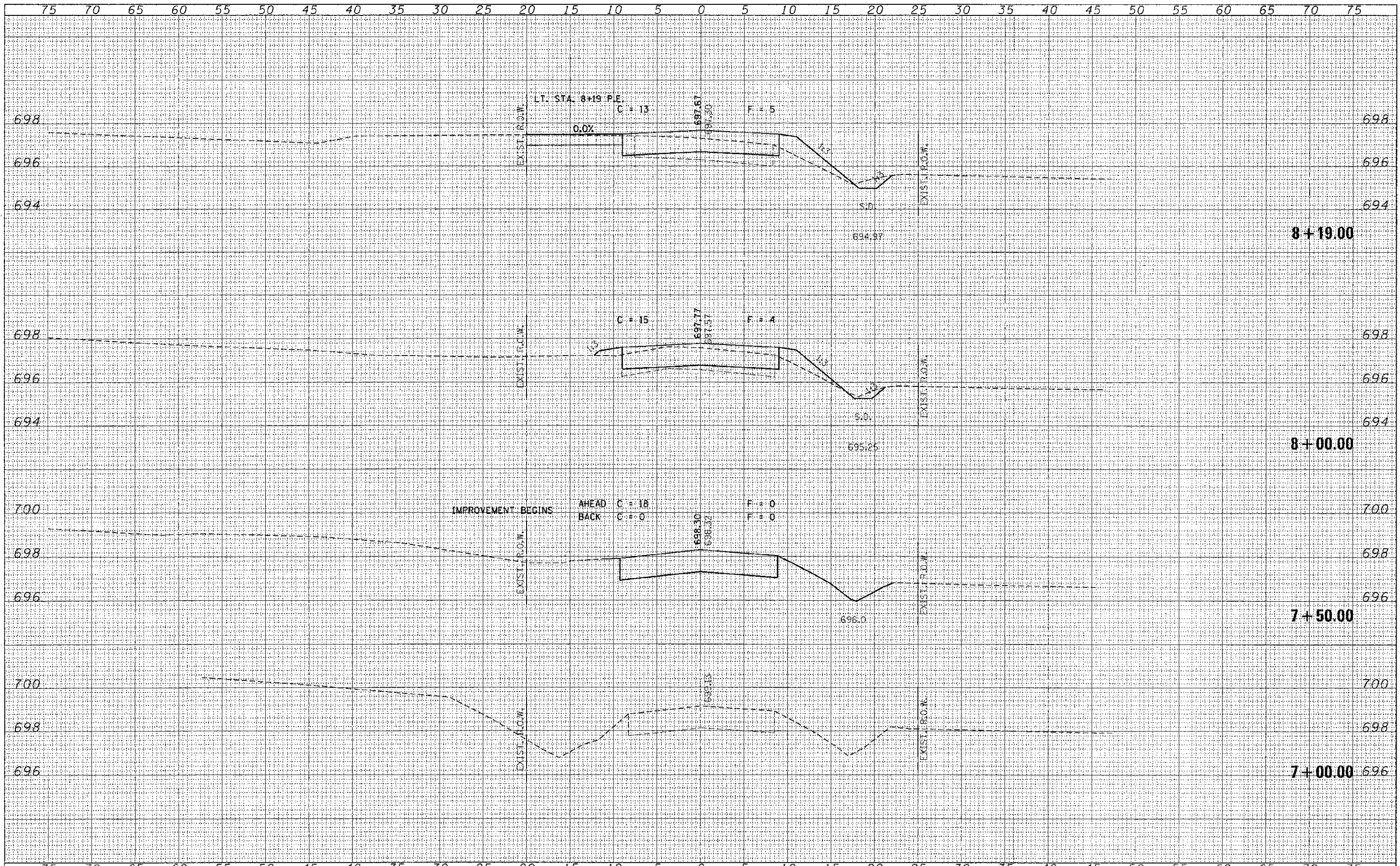
SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING
ROADWAY IS TO BE CONSTRUCTED FROM STA. 7+50 TO 8+00 AND
STA. 11+50 TO 12+00. SEE SHEET 12 FOR TRANSITION AT BRIDGE.

FILE NAME = 110295-shr-typsections.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS 2600N ROAD		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEPHENSON ROAD, SUITE 201 SPRINGFIELD, IL 62707	PLOT SCALE =	DRAWN - D.A.B.	REVISED		143	10-15144-00-BR	VERMILION	20	3		
ILLINOIS PROFESSIONAL DESIGNERS 137 PEPPER CORP. 104.005330	PLOT DATE = 10/9/2012	CHECKED - S.W.M.	REVISED		SCALE: SHEET NO. 1 OF 1 SHEETS		CONTRACT NO. 91472		ILLINOIS FED. AID PROJECT		
		DATE - 10/09/12	REVISED		STA. TO STA.						

FINAL	SURVEYED	DATE
CHECKED	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

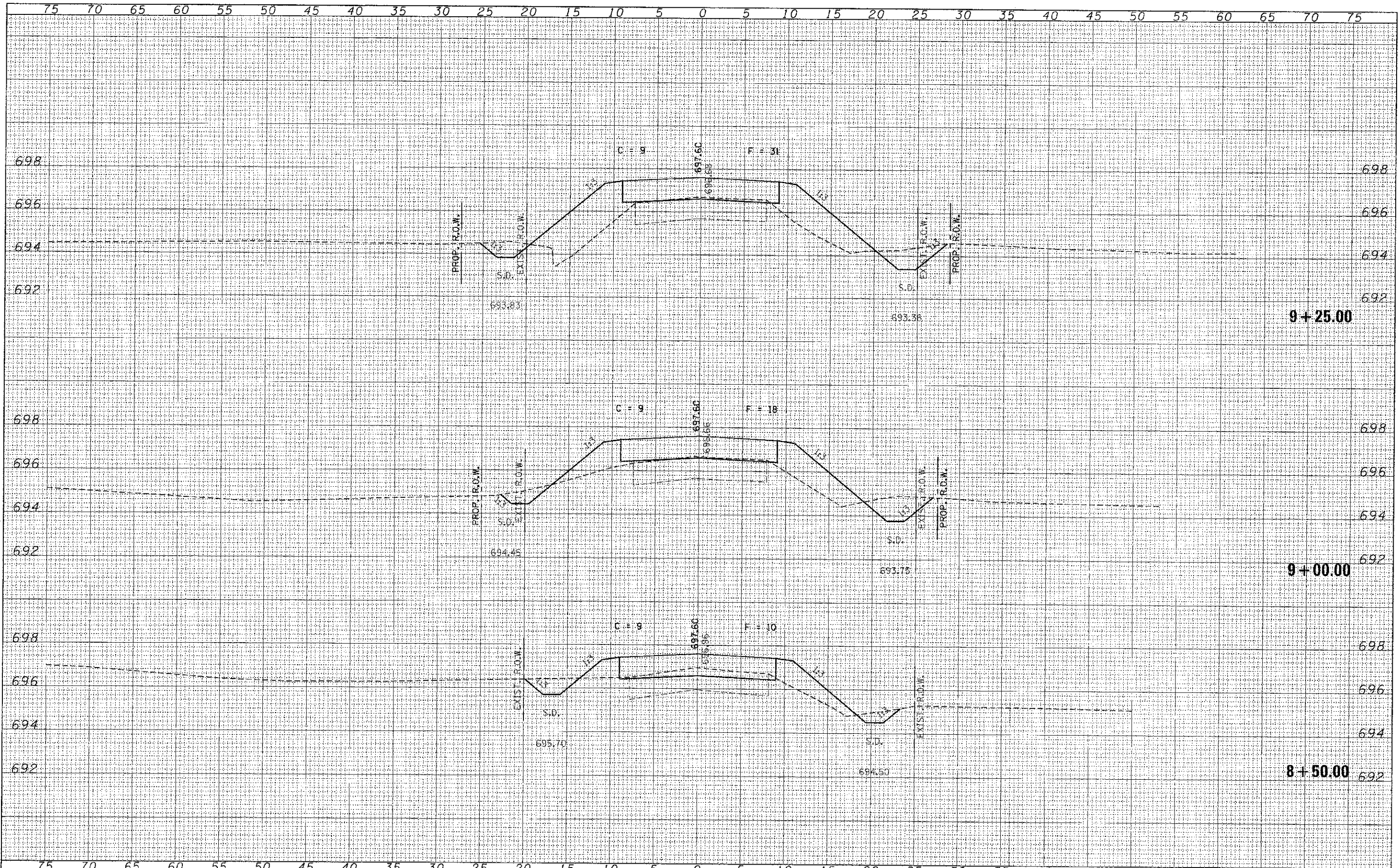
ORIGINAL	SURVEYED	DATE
SUBJECT	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	



FILE NAME = 110296-sh1-ss.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS T.R. 143 / 2600N ROAD		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 2015 SPRINGFIELD DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793	PLLOT SCALE =	DRAWN - D.T.M.	REVISED -		143	10-15144-00-BR	VERMILION	20	5		
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. # 196 0099	PLLOT DATE = 12/19/2012	CHECKED - S.W.M.	REVISED -		SCALE: H5:V2		SHEET NO. 1 OF 7 SHEETS		CONTRACT NO. 91472		
		DATE - 10/09/12	REVISED -		STA. 7+00.00 TO STA. 8+19.00		ILLINOIS FED. AID PROJECT				

DATE	
BY	
REVISIONS	
1. SURVEYED	
2. PLOTTED	
3. TEMPLATE	
4. NOTE BOOK	
5. AREAS CHECKED	

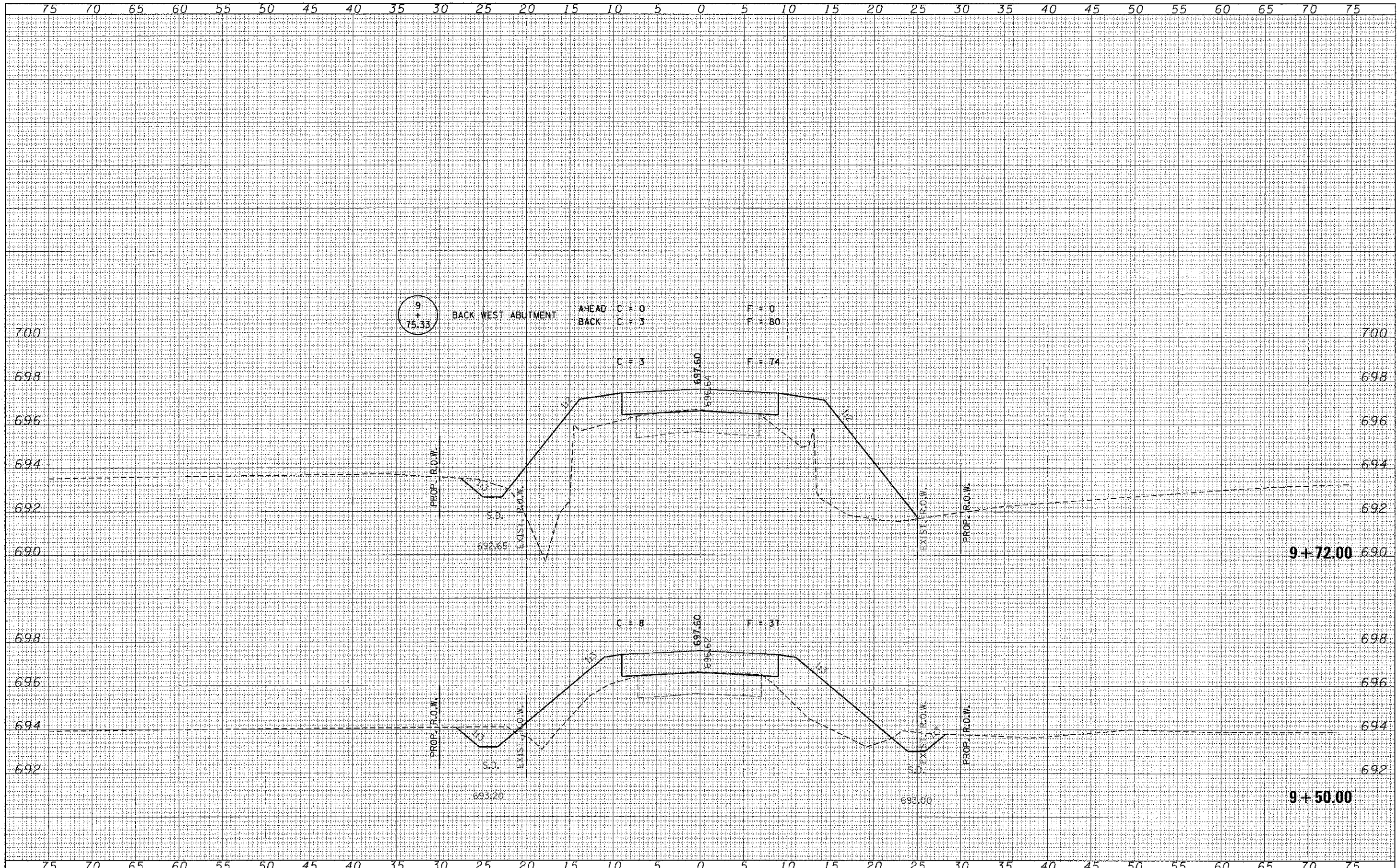
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REVISIONS	
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3. TEMPLATE	
4. NOTE BOOK	
5. AREAS CHECKED	



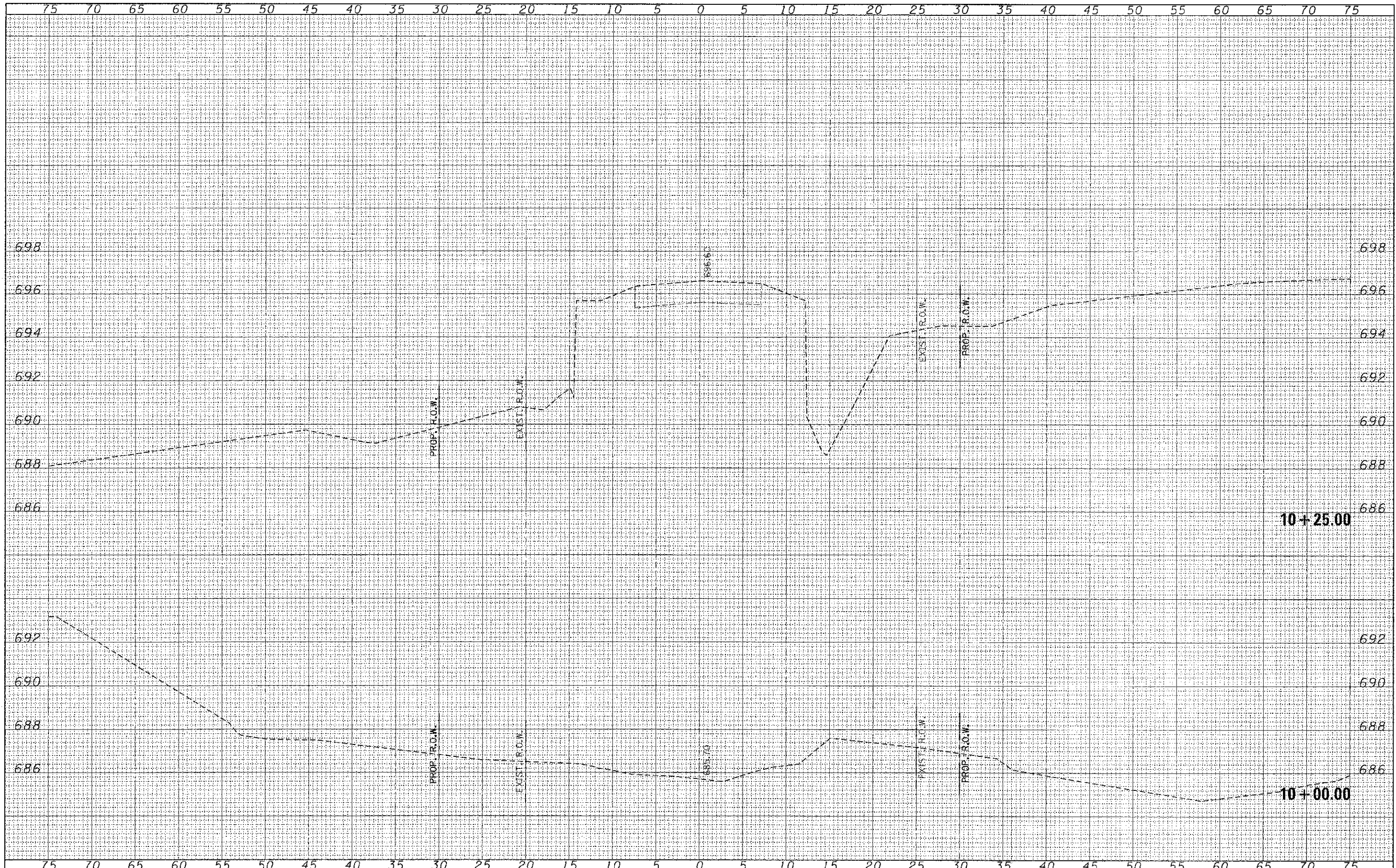
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISIONS -		143	10-15144-00-BR	VERMILION	20	6		
1115 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62702		CHECKED - S.W.M.	REVISIONS -		SCALE: H&V2		SHEET NO. 2 OF 7 SHEETS		STA. 8+50.00 TO STA. 9+25.00	CONTRACT NO. 91472	
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. TM 020003		DATE - 10/09/12	REVISIONS -						ILLINOIS FED. AID PROJECT		

FILE NO.	
DATE	
BY	
SURVEYED	
PLOTTED	
REPLATE	
NOTE BOOK	
AREAS CHECKED	

FILE NO.	
DATE	
BY	
SURVEYED	
PLOTTED	
REPLATE	
NOTE BOOK	
AREAS CHECKED	



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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -		143	10-15144-00-BR	VERMILION	20	7		
308 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, IL 62761-5203		CHECKED - S.W.M.	REVISED -		PILOT ROAD DISTRICT		CONTRACT NO. 91472				
ILLINOIS PROFESSIONAL ENGINEERING FIRM 36 7 7 1/2 DE CEN 184-000919	PLOT SCALE =	DATE - 10/09/12	REVISED -		SCALE: H5:V2	SHEET NO. 3 OF 7 SHEETS	STA. 9+50.00 TO STA. 9+72.00	ILLINOIS FED. AID PROJECT			



FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	

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 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 10/09/12

DESIGNED - A.S.L.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 10/09/12

STATE OF ILLINOIS
 VERMILION COUNTY HIGHWAY DEPARTMENT

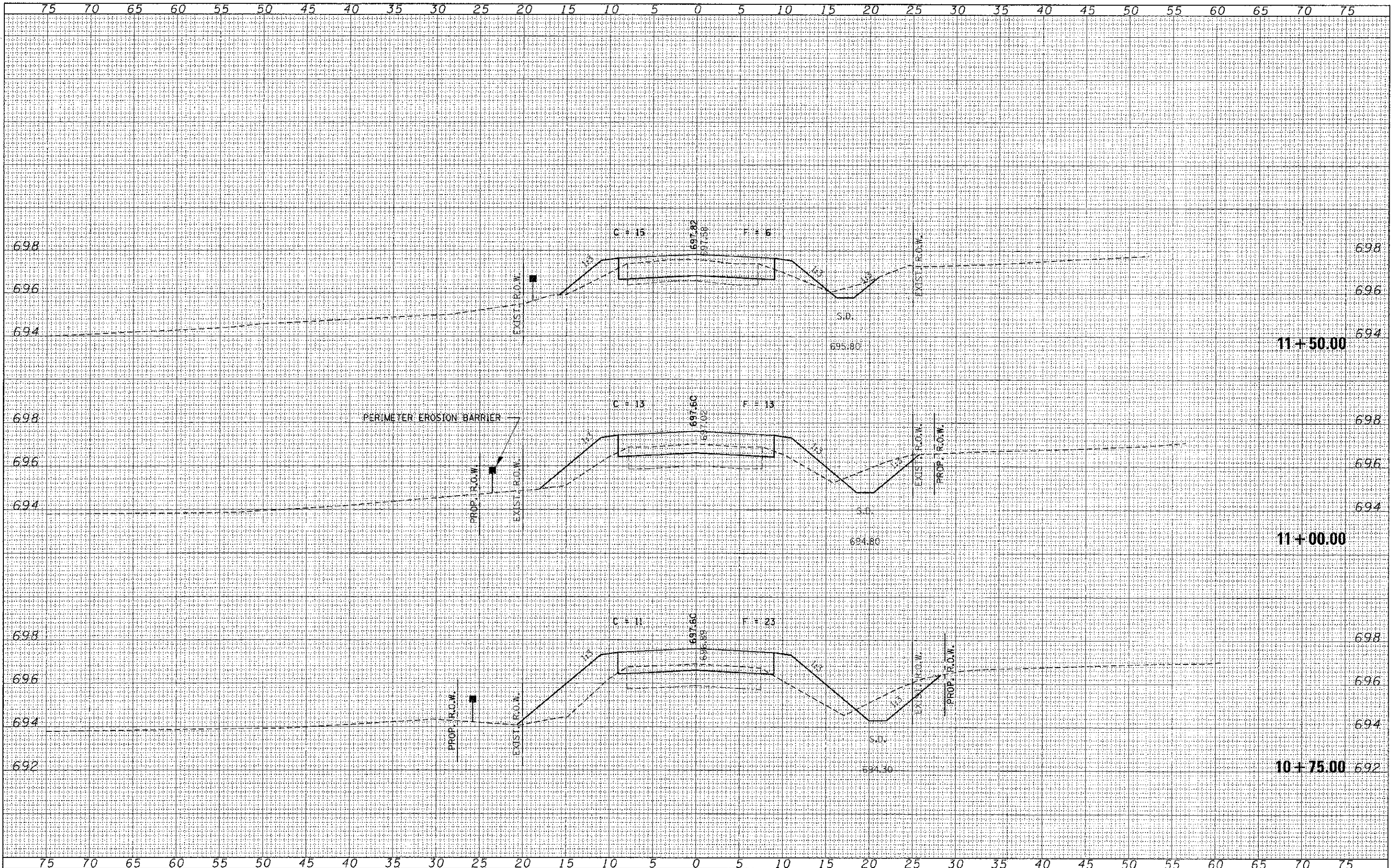
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 SHEET NO. 4 OF 7 SHEETS
 STA. 10+00.00 TO STA. 10+25.00

STATION CROSS SECTIONS
 T.R. 143 / 2600N ROAD

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
143	10-15144-00-BR	VERMILION	20	8
PILOT ROAD DISTRICT			CONTRACT NO. 91472	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
REVISIONS	
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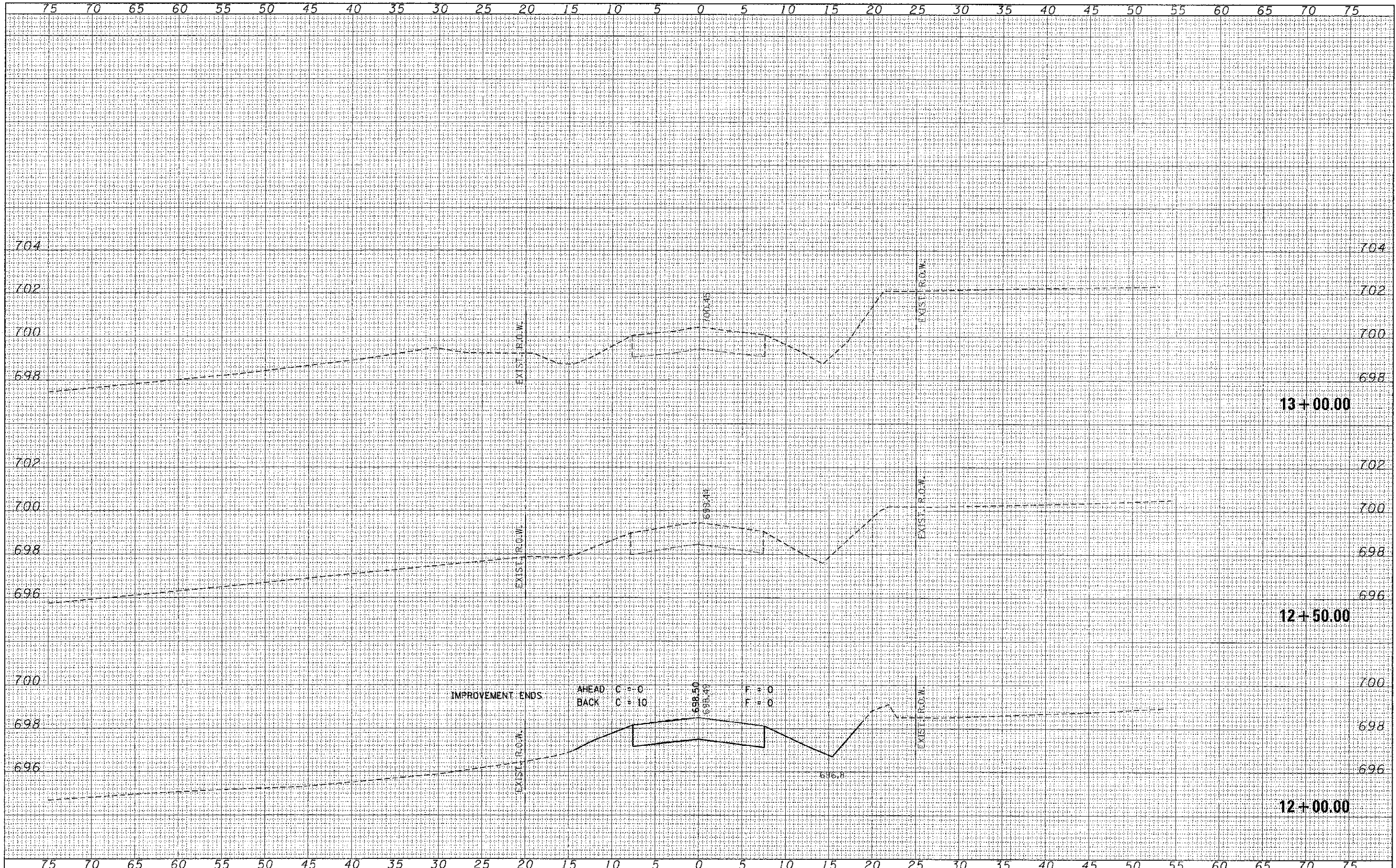
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 CHECKED - S.W.M.
 DATE - 10/09/12
 PLCT SCALE =
 PLCT DATE = 10/9/2012

DESIGNED - A.S.L.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 10/09/12
 REVISIONS -
 REVISIONS -
 REVISIONS -
 REVISIONS -

STATE OF ILLINOIS
 VERMILION COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 T.R. 143 / 2600N ROAD
 SCALE: H5:V2
 SHEET NO. 6 OF 7 SHEETS
 STA. 10+75.00 TO STA. 11+50.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
143	10-15144-00-BR	VERMILION	20	10
PILOT ROAD DISTRICT			CONTRACT NO. 91472	
ILLINOIS FED. AID PROJECT				

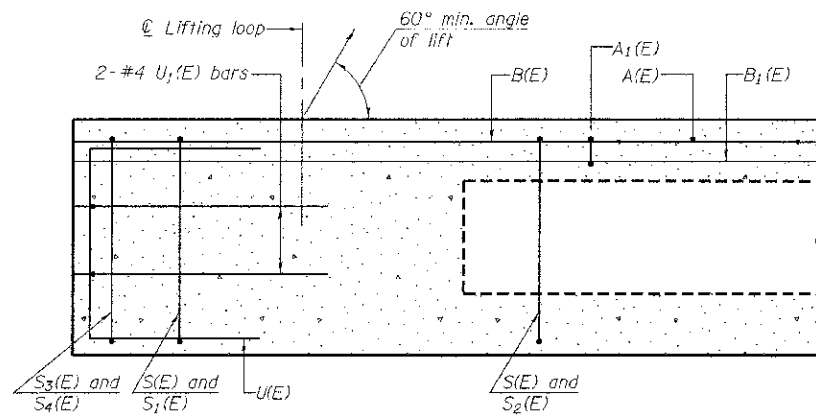


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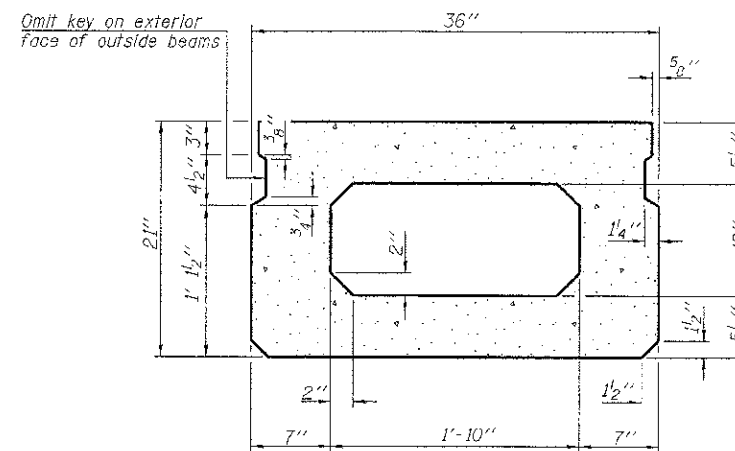
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DATE	

ILLINOIS PROFESSIONAL DESIGN FIRM
 12 APR - 02-0009 - 10/01/2009

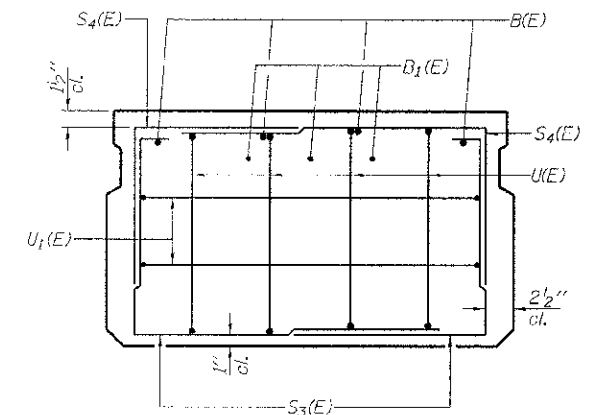
ILLINOIS FED. AID PROJECT



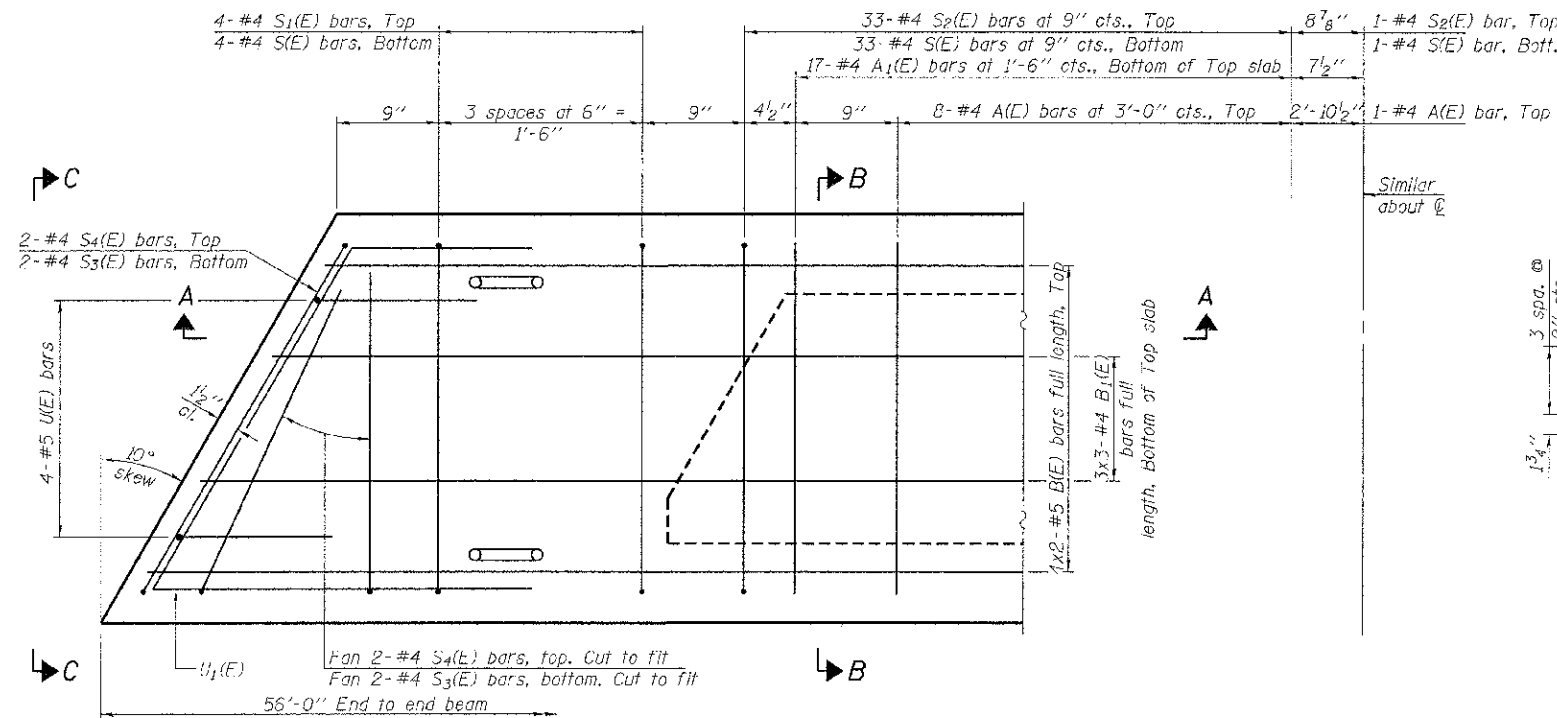
SECTION A-A



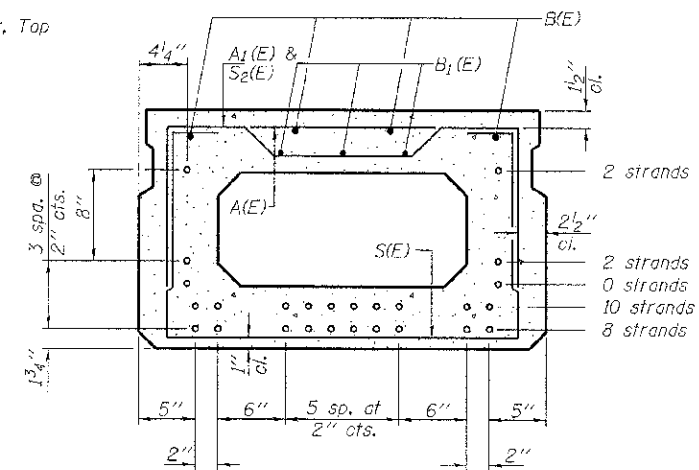
SECTION B-B
(Showing dimensions)



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)	17	#4	2'-7"	—
A1(E)	34	#4	2'-10"	—
B(E)	8	#5	29'-2"	—
B1(E)	9	#4	19'-11"	—
S(E)	75	#4	6'-5"	—
S1(E)	8	#1	4'-11"	⌊
S2(E)	67	#4	5'-2"	⌊
S3(E)	8	#4	4'-2"	⌊
S4(E)	8	#4	3'-5"	⌊
U(E)	8	#5	4'-0"	⌊
U1(E)	4	#4	5'-6"	⌊

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

Notes:

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 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

MINIMUM BAR LAP

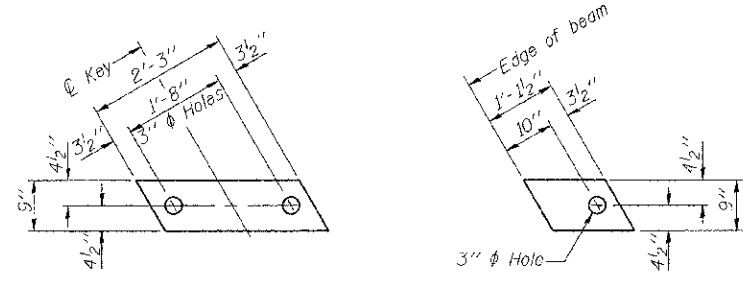
#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2136-L

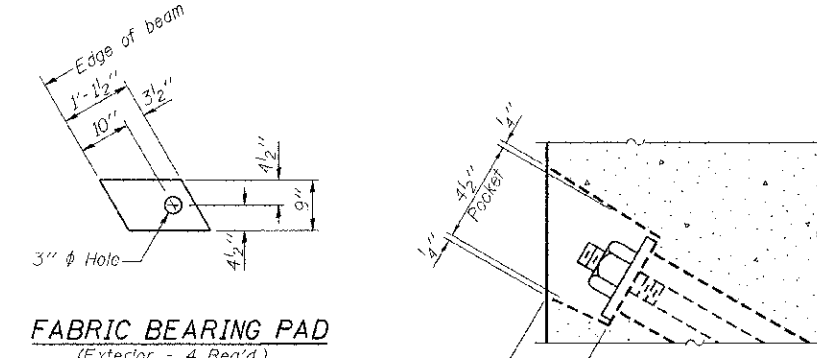
7-1-10

FILE NAME = 110296-sh4-brdgedgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	21" x 36" PPC DECK BEAM STRUCTURE NO. 092-3523	T.R.	SECTION	COUNTY	TOTAL SHEET	
HAMPTON, LENZINI AND RENWICK, INC. 1305 STEVENSON DRIVE, SUITE 201 BIRMINGHAM, AL 35203-4725	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			143	10-15144-00-DR	VERMILION	20	13
ILLINOIS PROFESSIONAL DESIGN FIRM LS 192186 02/91 92-001659	PLOT DATE = 10/9/2012	DRAWN - D.A.B.	REVISED -			PILOT ROAD DISTRICT		CONTRACT NO. 91472		
		CHECKED - S.W.M.	REVISED -					ILLINOIS FED. AID PROJECT		

SHEET NO. 2 OF 9 SHEETS



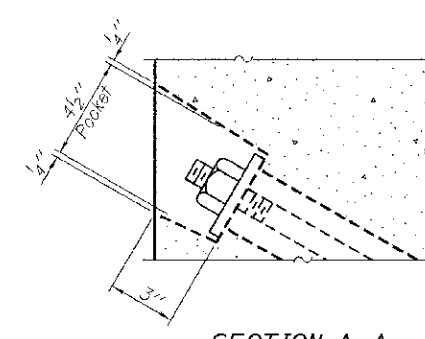
FABRIC BEARING PAD
(Interior - 16 Req'd.)



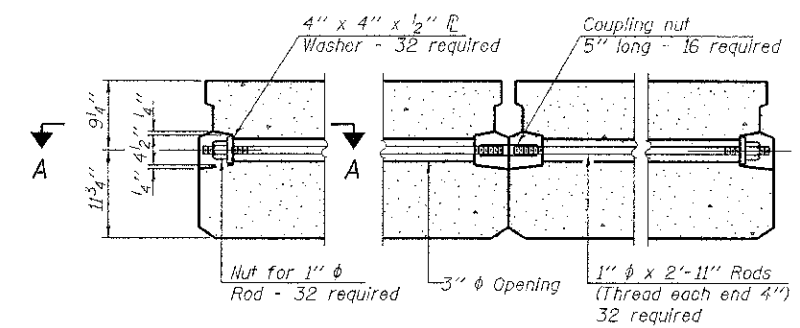
FABRIC BEARING PAD
(Exterior - 4 Req'd.)

FIXED

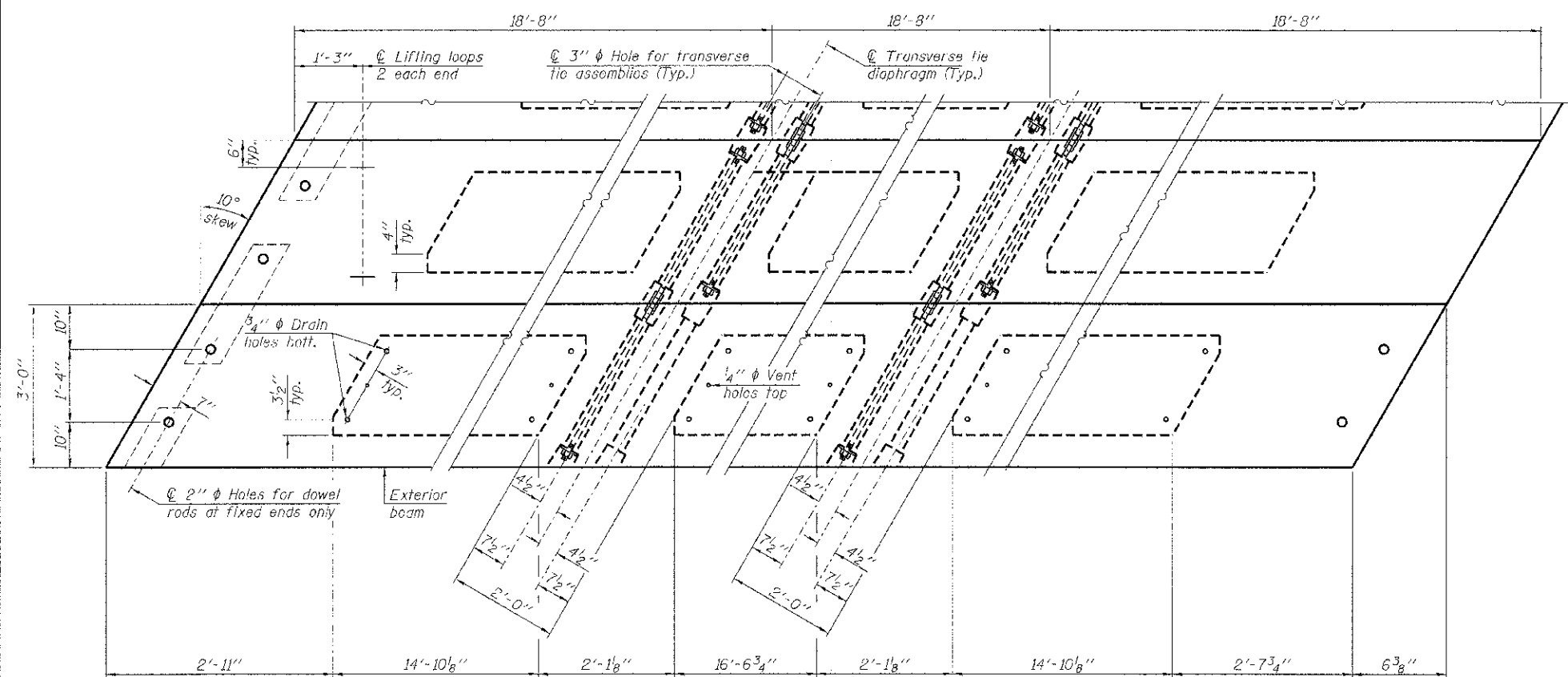
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



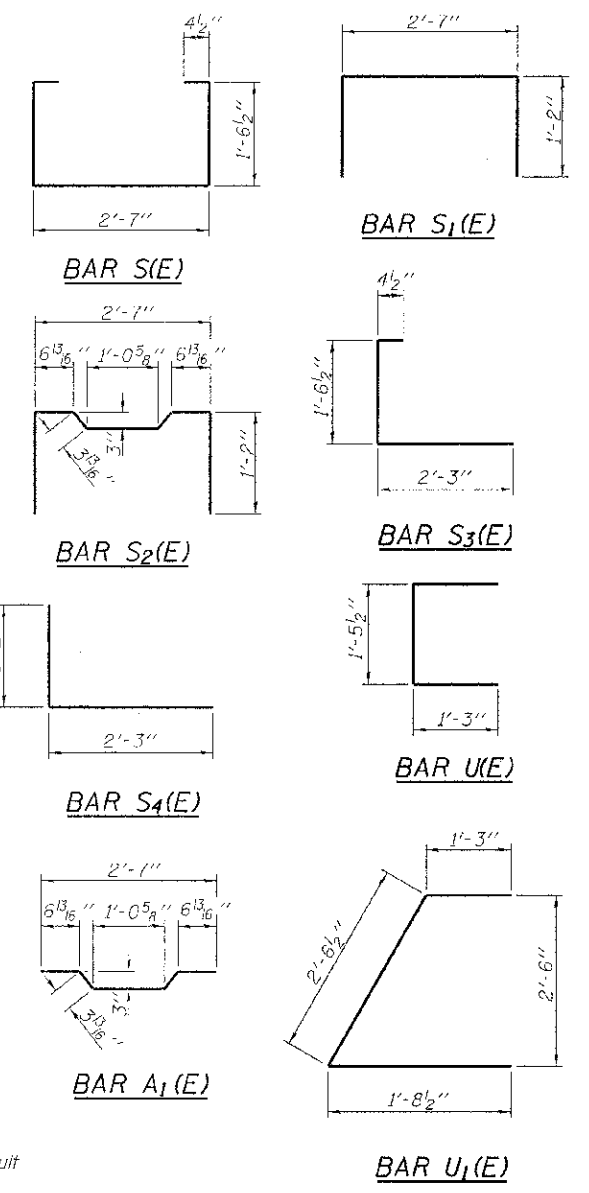
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

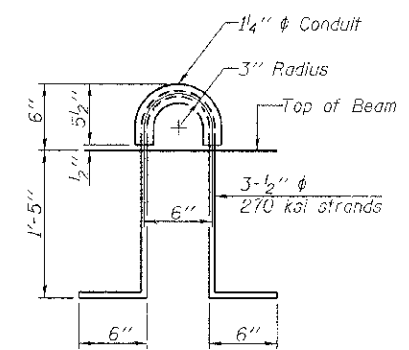


PLAN VIEW



BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,512
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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" diameter 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 1021.07 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.

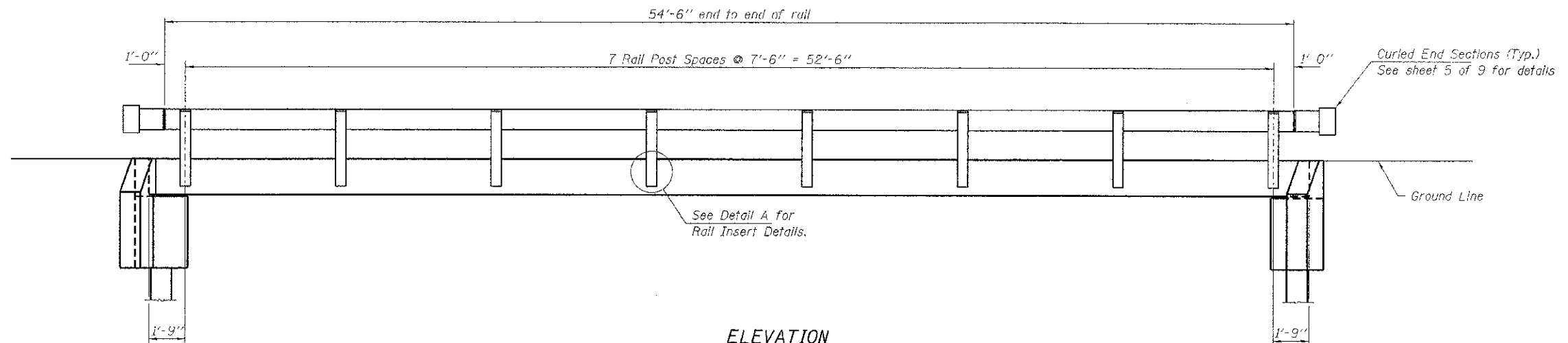
Compressive strength of prestressed concrete at release, f'cl, shall be 5000 psi.

All reinforcement shall be epoxy coated.

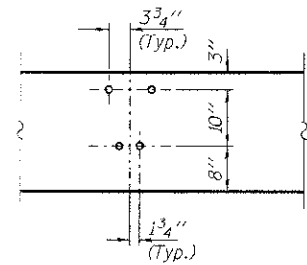
Note:
Connect beams in pairs with the transverse tie configuration shown.

PD-2136-LD 7-1-10

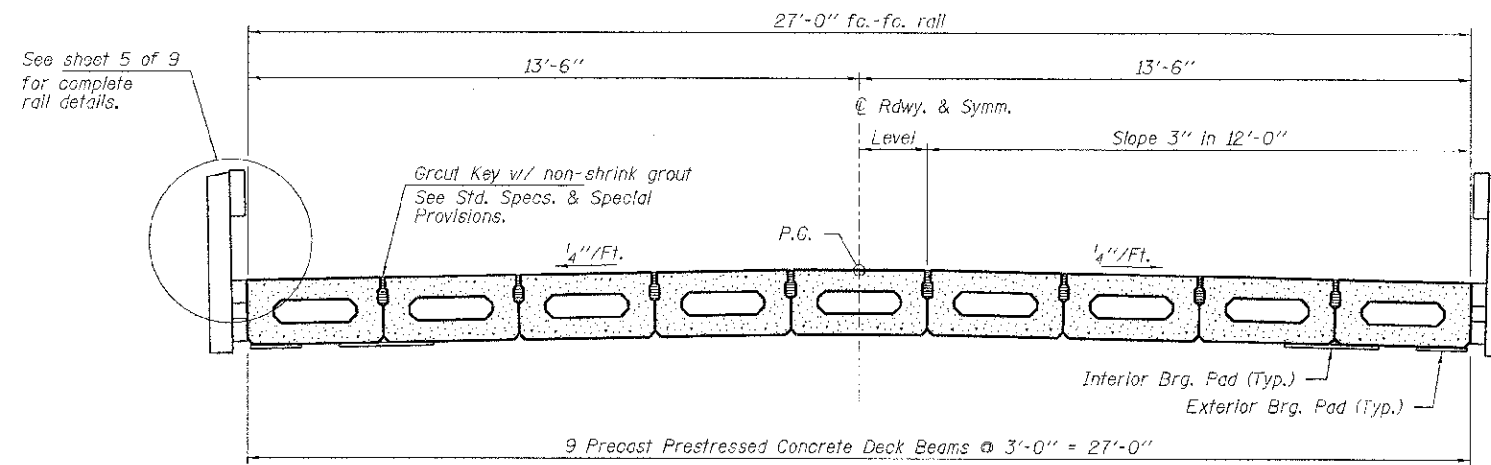
FILE NAME = 118276-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	21" x 36" PPC DECK BEAM DETAILS STRUCTURE NO. 092-3523	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -			143	10-15144-00-BR	VERMILION	20	14	
PLLOT SCALE =		DRAWN - D.A.B.	REVISED -			PILOT ROAD DISTRICT		CONTRACT NO. 91472			
PLLOT DATE = 10/9/2012		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					
ILLINOIS PROFESSIONAL ENGINEERING FIRM 187 PE / 186 CE / 186 CS						SHEET NO. 3 OF 9 SHEETS					



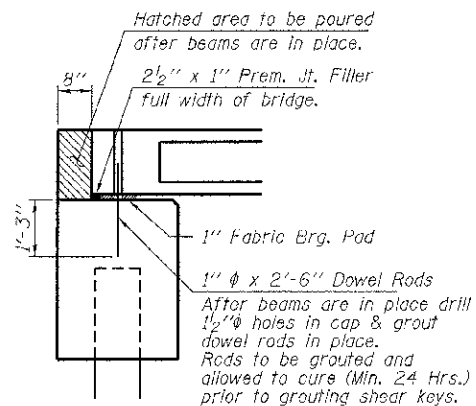
ELEVATION
Showing Rail Post Spacing
See sheet 5 of 9 for Railing Details.



DETAIL A

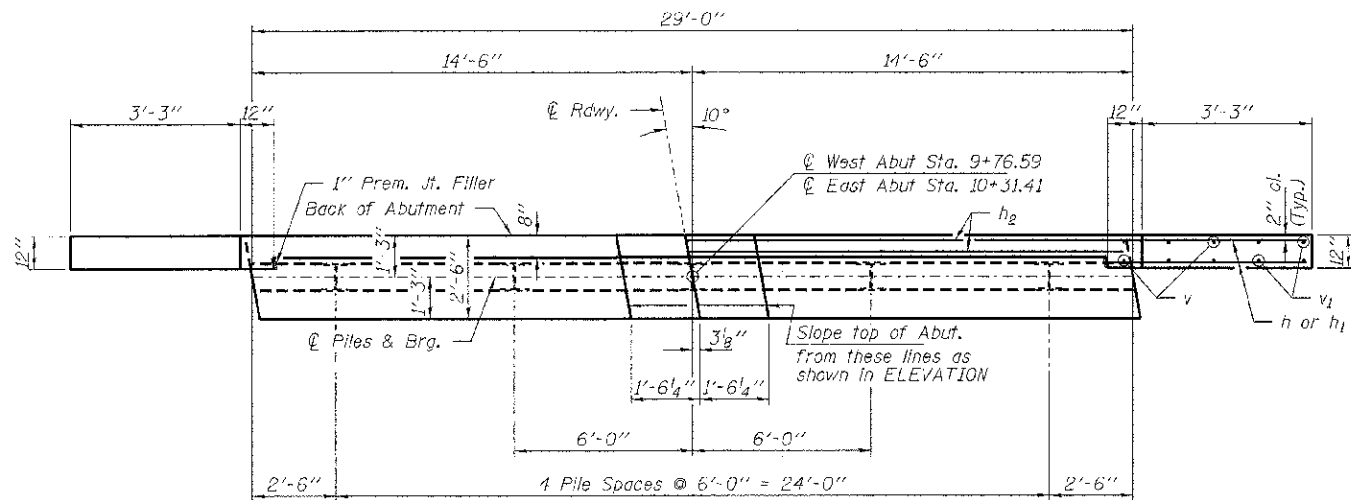


CROSS SECTION
See sheets 2 & 3 of 9 for Superstructure.

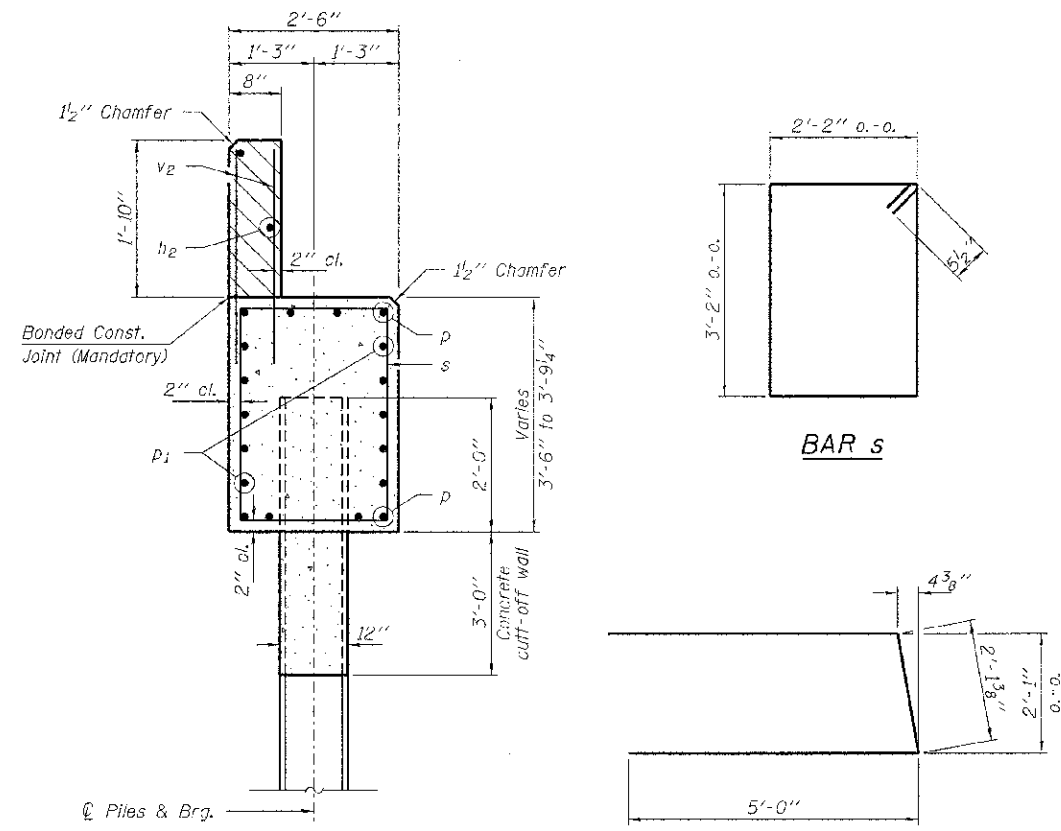


SECTION AT ABUTMENTS
@ Rt. L's

FILE NAME = 118296-ah-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 092-3523	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 200 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			143	10-15144-00-BR	VERMILION	20	15	
ILR ILLINOIS PROFESSIONAL DESIGN FIRM 1517 E. 76th ST. CHICAGO, IL 60649	PLOT DATE = 10/9/2012	DRAWN - G.A.B.	REVISED -			PILOT ROAD DISTRICT		CONTRACT NO. 91472			
		CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 9 SHEETS		ILLINOIS FED. AID PROJECT			

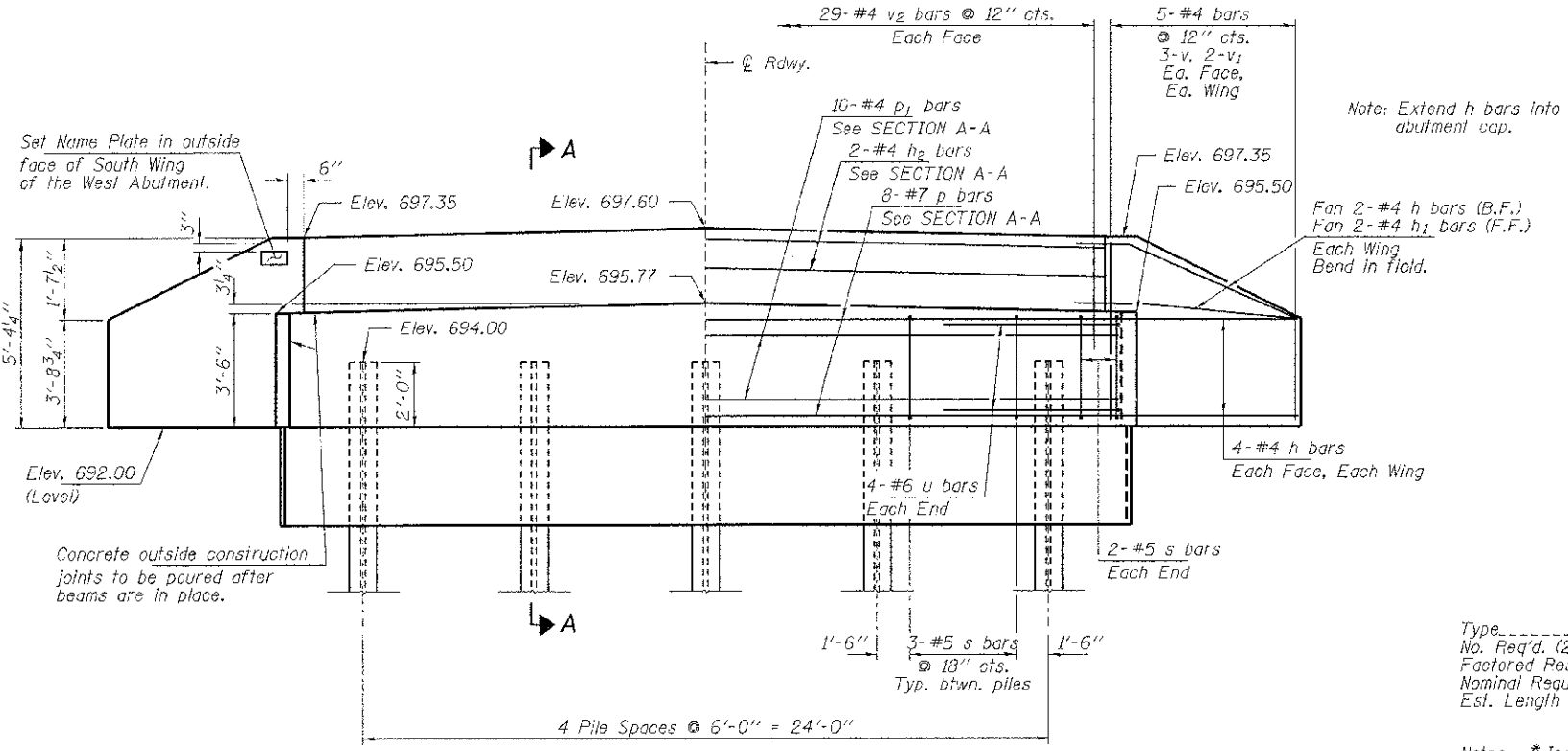


PLAN



SECTION A-A

BAR U



ELEVATION

Note: Extend h bars into abutment cap.

PILE DATA

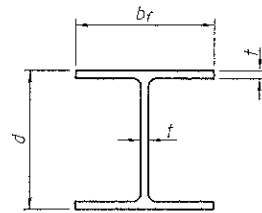
Type ----- Steel HPI0x42 w/Pile Shoes
 No. Req'd. (2 Abuts.) ----- *10
 Factored Resistance Available (Rf) ----- 137 Kips/Pile
 Nominal Required Bearing (Rn) ----- 249 Kips/Pile
 Est. Length ----- 90 Ft/Pile - W. Abut.
 80 Ft/Pile - E. Abut.

Notes: * Includes two test piles to be driven in permanent locations, one at the West and East Abutments.

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

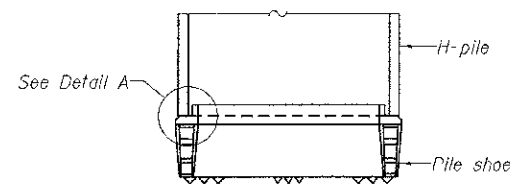
BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	5'-6"	—
h1	8	#4	4'-0"	—
h2	4	#4	28'-8"	—
p	16	#7	28'-8"	—
p1	20	#4	28'-8"	—
s	32	#5	11'-7"	□
u	16	#6	12'-2"	—
v	24	#4	4'-5"	—
v1	16	#4	3'-5"	—
v2	116	#4	2'-8"	—
Concrete Structures			Cu. Yd.	24.8
Reinforcement Bars			Pound	2,560
Steel Piles HPI0x42			Foot	680
Test Pile Steel HPI0x42			Each	2
Name Plates			Each	1
Pile Shoes			Each	10
Concrete Cut-Off Wall			Cu. Yd.	6.4

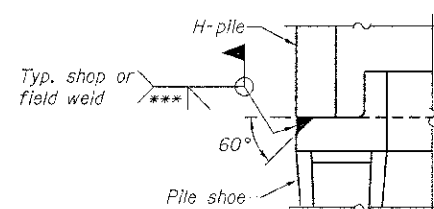


STEEL PILE TABLE

Designation	Depth d	Flange width bf	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"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 5/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

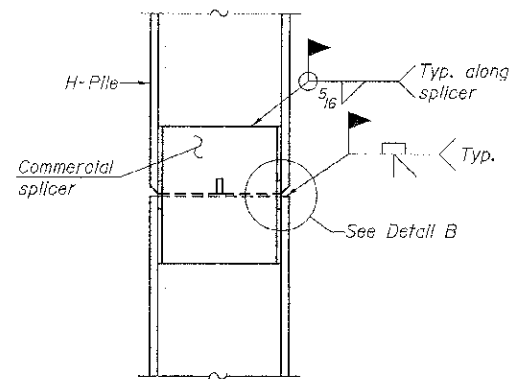


ELEVATION

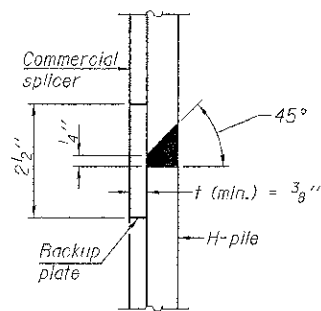


DETAIL A

H-PILE SHOE ATTACHMENT

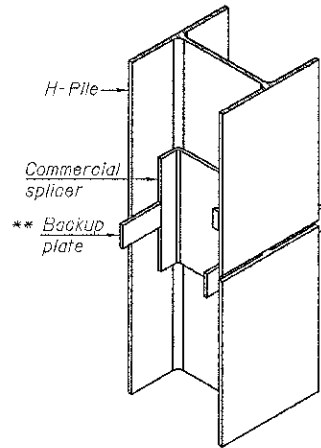


ELEVATION

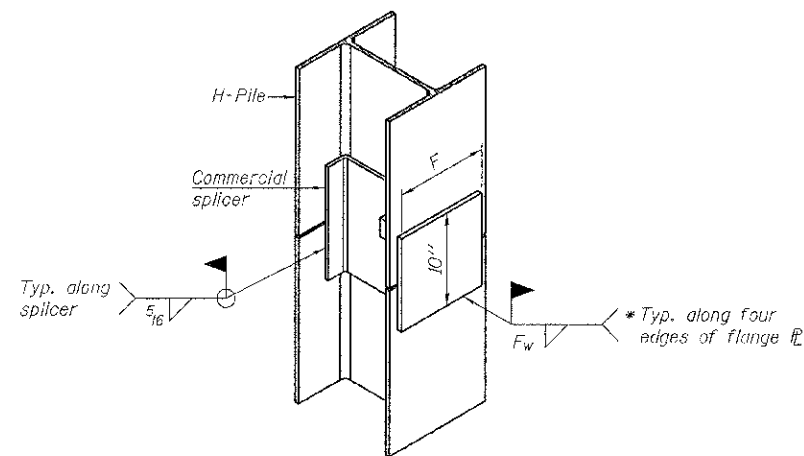


DETAIL "B"

WELDED COMMERCIAL SPLICE



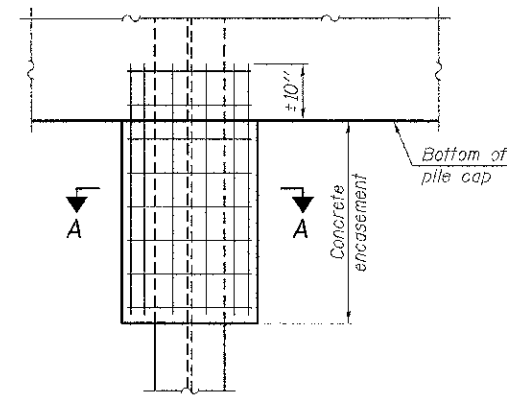
ISOMETRIC VIEW



ISOMETRIC VIEW

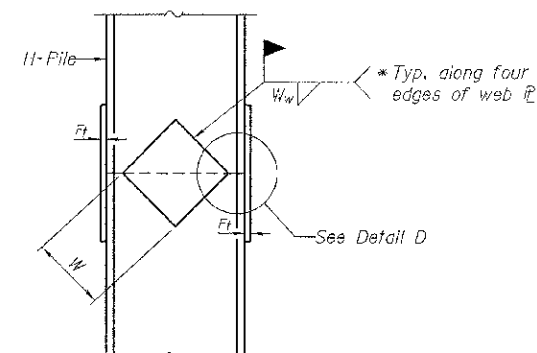
WELDED COMMERCIAL SPLICE ALTERNATE

- * 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 shoes manufacturer (5/16" min.).

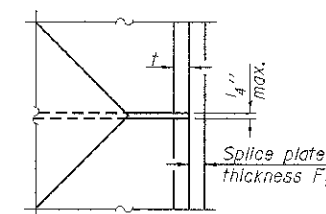


ELEVATION

PILE ENCASEMENT

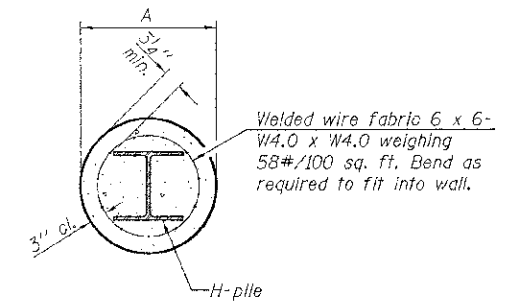


ELEVATION



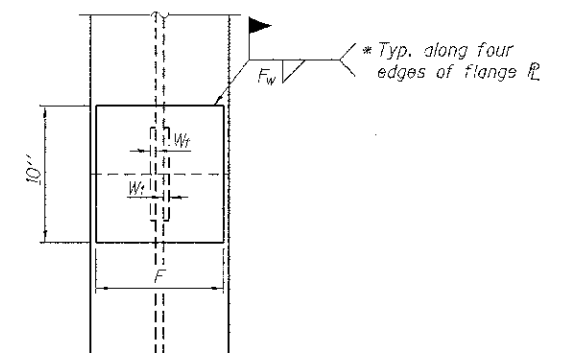
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

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



END VIEW

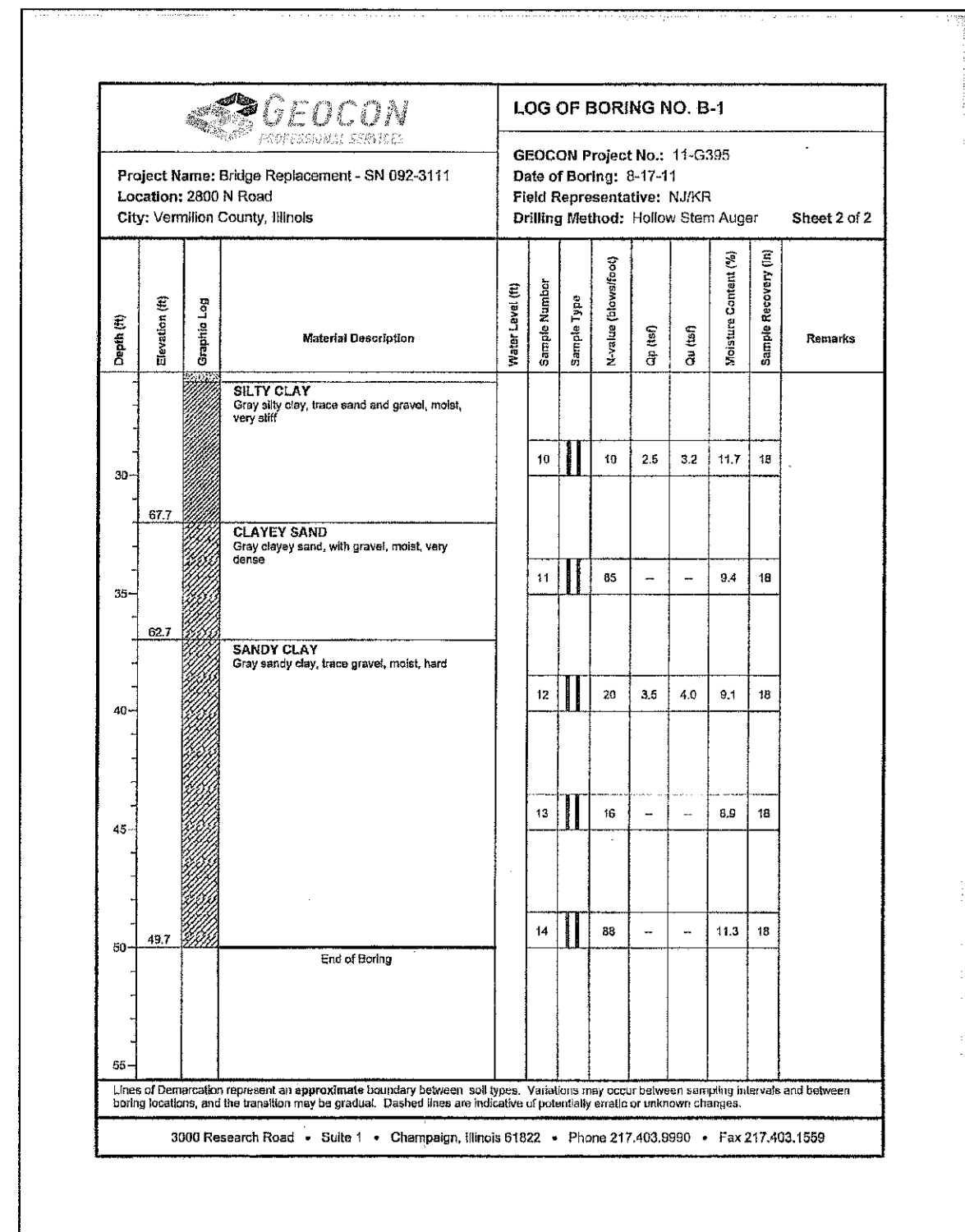
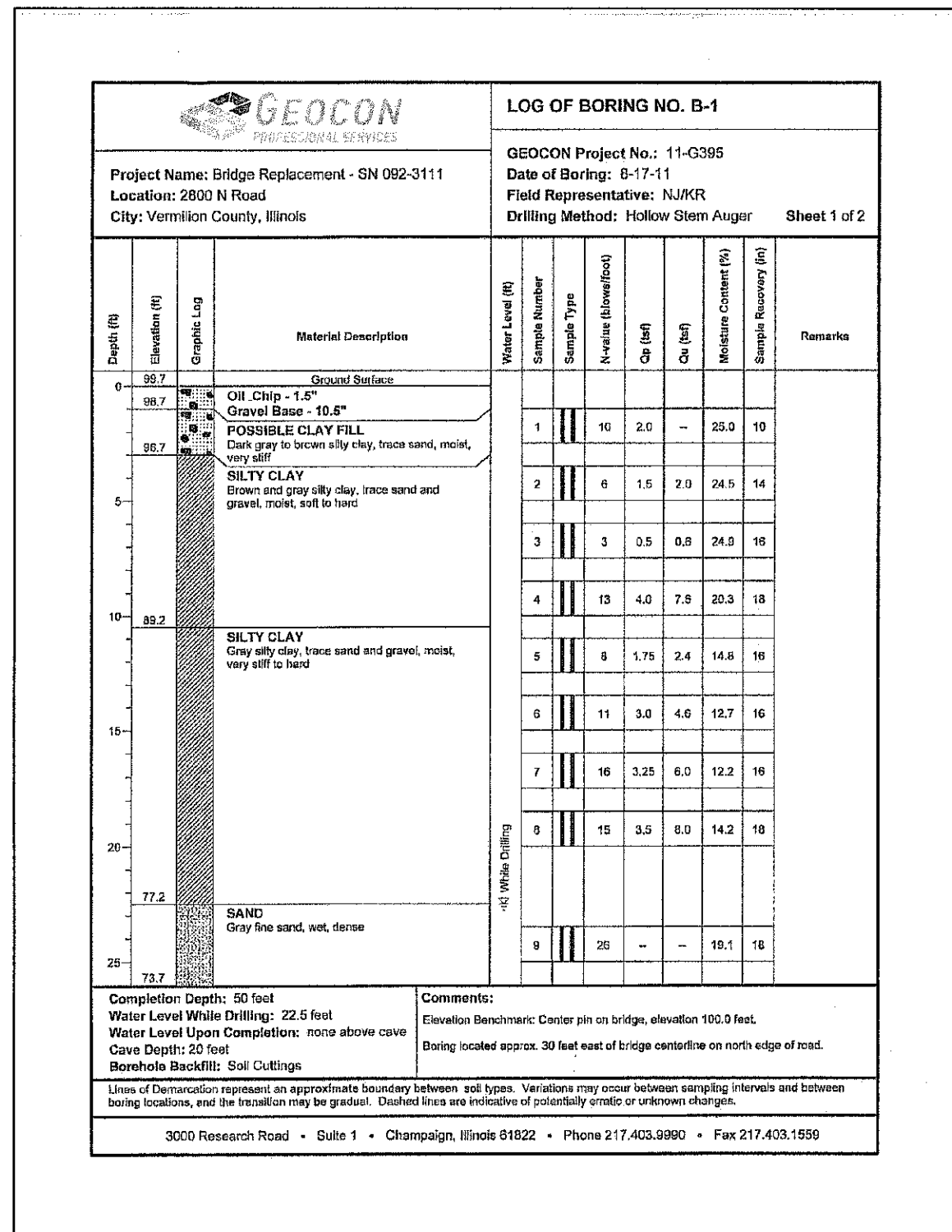
Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 5/8"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5 5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 5/8"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5 5/8"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5 5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"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

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

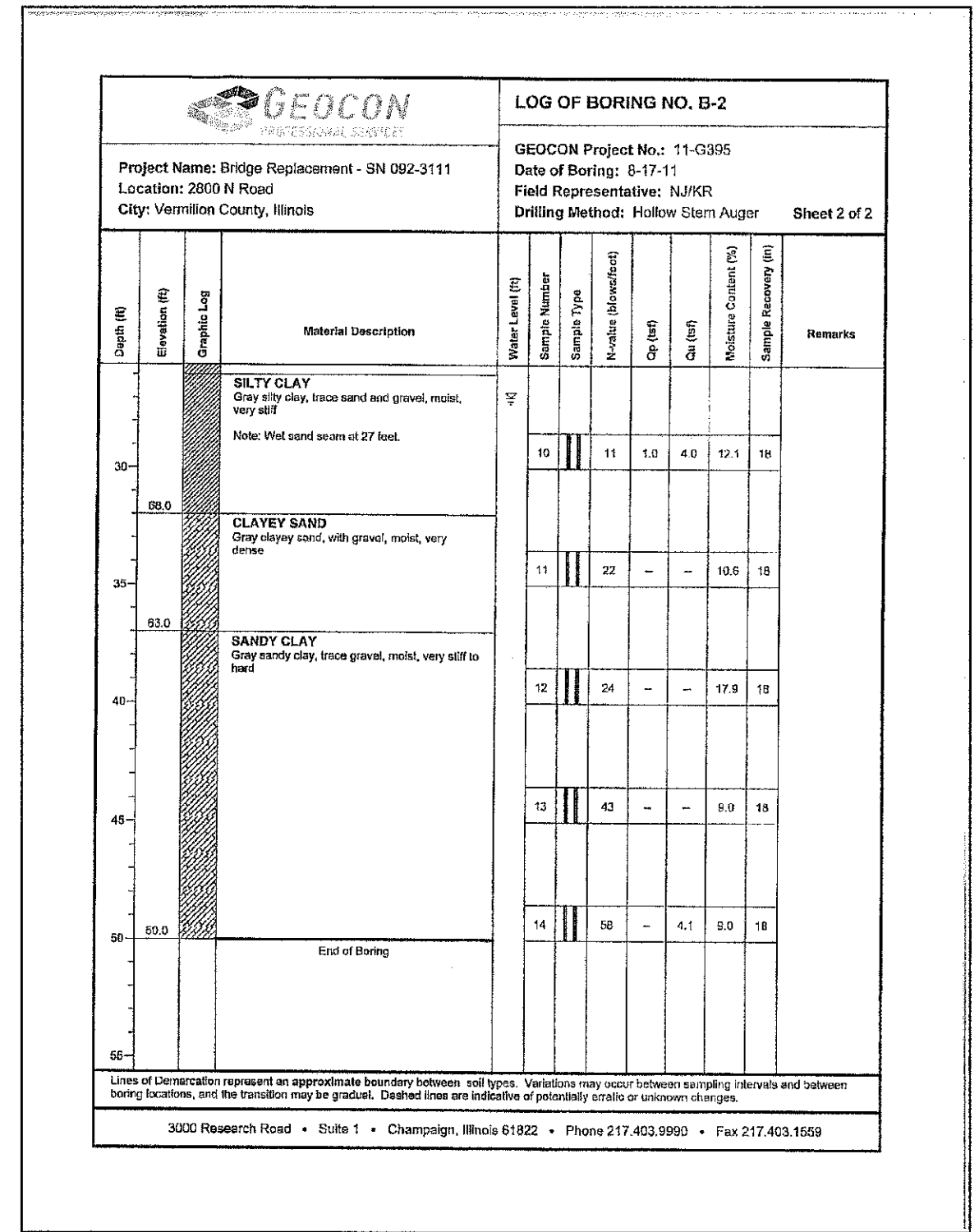
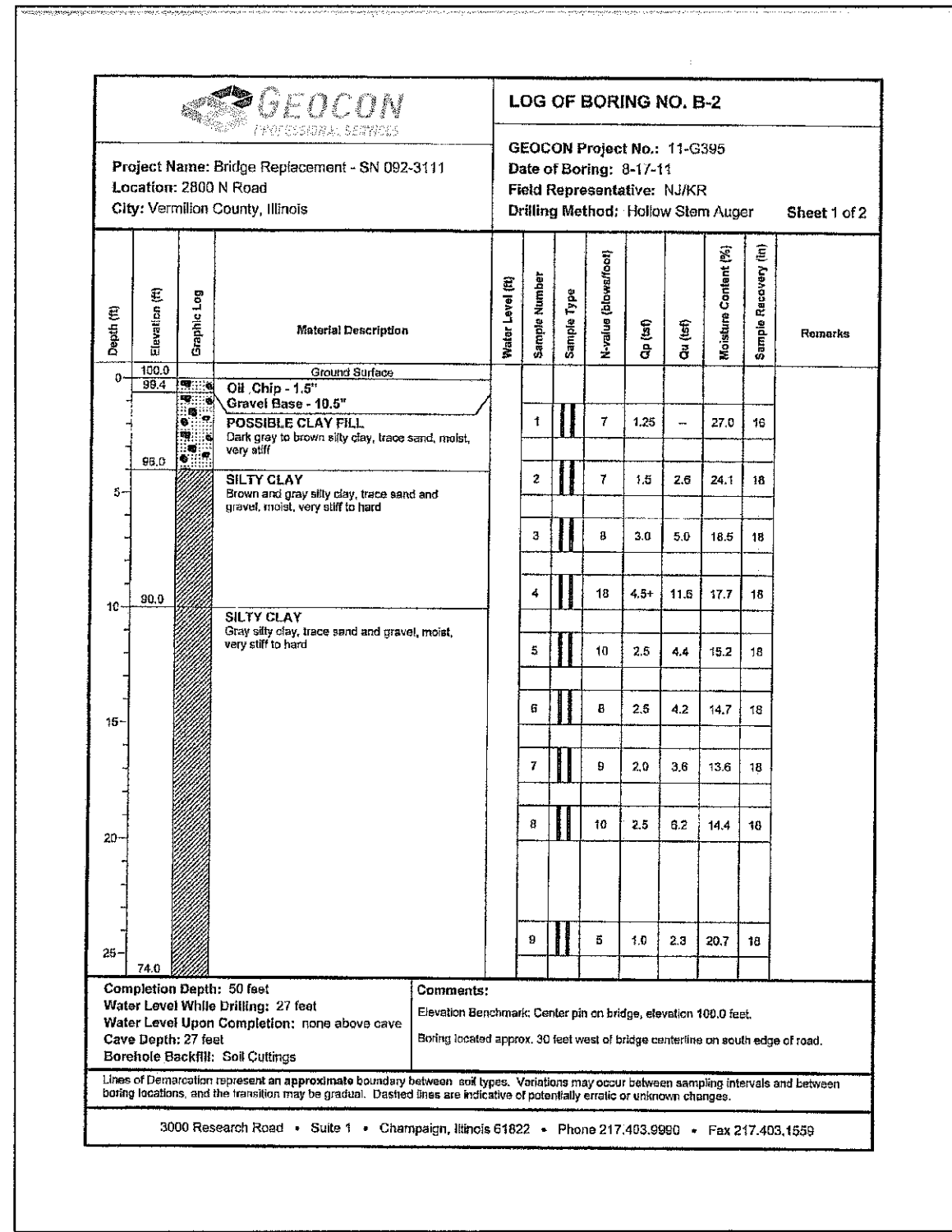
F-HP

1-27-12

FILE NAME = 112295-ehf-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS VERMILION COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 092-3523	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3645 STEVENSON DRIVE, SUITE 200 SPRINGFIELD, IL 62777	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			143	10-15144-00-BR	VERMILION	20	18	
ILLINOIS PROFESSIONAL DESIGN FIRM L27 PEY & COOP. 184.000289	PLOT DATE = 12/9/2012	DRAWN - D.A.B.	REVISED -			PILOT ROAD DISTRICT		CONTRACT NO. 91472			
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					
						SHEET NO. 7 OF 9 SHEETS					



BORING B-1



BORING B-2