

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
SURFACE TRANSPORTATION RURAL**

PROJECT BROS-0081(060)  
SECTION 08-00199-00-BR  
F.A.S. 823 / C.H. 5 / LOG CABIN ROAD  
JEFFERSON COUNTY  
PROPOSED STRUCTURE NO. 041-3745  
C-99-523-09

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 823	08-00199-00-BR	JEFFERSON	26	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99522		

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4-5.	TYPICAL CROSS SECTIONS
6.	PLAN & PROFILE
7.	CENTERLINE GUARDRAIL & SHOULDER LAYOUT
8.	PAVEMENT MARKINGS
9-17.	STATION CROSS SECTIONS
18-25.	BRIDGE PLANS
26.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTIONS FOR PIPE CULVERTS
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR & TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKING AND MOUNTING DETAILS
701901-03	TRAFFIC CONTROL DEVICES
780001-04	TYPICAL PAVEMENT MARKINGS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

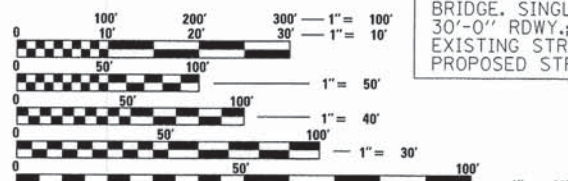


**UTILITIES**

TRI-COUNTY ELECTRIC CO-OP  
3907 BROADWAY  
PO BOX 309  
MT. VERNON, IL 62864  
618-224-5151

REND LAKE CONSERVANCY WATER DISTRICT  
11231 MARCUM BRANCH ROAD  
BENTON, IL 62812

AT&T  
210 N. LOCUST, FLOOR 2  
CENTRALIA, IL 62801



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.

IMPROVEMENT BEGINS  
STATION 172+00

STA. 173+87  
PRECAST PRESTRESSED CONCRETE DECK BEAM  
BRIDGE, SINGLE SPAN @ 54'-0"  
30'-0" RDWY.; SKEW = 0°  
EXISTING STRUCTURE NO. 041-3034  
PROPOSED STRUCTURE NO. 041-3745

IMPROVEMENT ENDS  
STATION 175+75

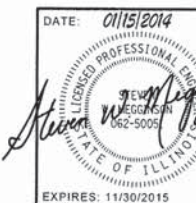


LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 375 FEET = 0.071 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	1-29 20 14 <i>[Signature]</i> COUNTY ENGINEER
PASSED	1/30 20 14 <i>[Signature]</i> DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	1-30 20 14 <i>[Signature]</i> DEPUTY/DIRECTOR OF HIGHWAYS REGION FIVE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



**HAMPTON, LENZINI AND RENWICK, INC.**  
CIVIL ENGINEERS • STRUCTURAL ENGINEERS • LAND SURVEYORS  
**HLR**  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217.546.3400 www.hlrengineering.com  
184.000959  
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE X0011	
		UNIT	TOTAL
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	110
20300100	CHANNEL EXCAVATION	CU YD	120
20400800	FURNISHED EXCAVATION	CU YD	30
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	240
35100100	AGGREGATE BASE COURSE, TYPE A	TON	70
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	215
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	134
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	100
48101200	AGGREGATE SHOULDERS, TYPE B	TON	165
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	28.8
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1620
50800105	REINFORCEMENT BARS	POUND	3360
50900205	STEEL RAILING, TYPE S1	FOOT	116
51201400	FURNISHING STEEL PILES HP10X42	FOOT	160
51202305	DRIVING PILES	FOOT	160
51500100	NAME PLATES	EACH	1
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	344
54215550	METAL END SECTIONS 15"	EACH	2
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	60
63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	125
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR21	LSUM	1

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE X0011	
		UNIT	TOTAL
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1215
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
^ X2830495	AGGREGATE DITCH (SPECIAL)	TON	115

^ SEE SPECIAL PROVISIONS

\* SPECIALTY ITEMS

### 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.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING BITUMINOUS PAVEMENT WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPOSED DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION 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 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 MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

AGGREGATE BASE COURSE	2.05 TON/CU YD
STONE DUMPED RIPRAP, CLASS A4	1.75 TON/CU YD
HOT-MIX ASPHALT	112 LBS/SQ YD/IN
BITUMINOUS MATERIALS (PRIME COAT)	0.10 GAL/SQ YD ON HMA PVT
BITUMINOUS MATERIALS (PRIME COAT)	0.40 GAL/SQ YD ON AGGREGATE
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER  
**SEEDING, CLASS 2 (SPECIAL) = 0.2 ACRES**
- THE EXISTING STRUCTURE WAS INVESTIGATED FOR PRESENCE OF ASBESTOS DURING THE PRELIMINARY DESIGN PHASE AND WAS FOUND TO NOT CONTAIN ASBESTOS. DOCUMENTATION CONFIRMING THIS FINDING WAS PROVIDED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION AT THAT TIME TO CLEAR THIS PROJECT FOR APPROVAL.
- THE CONTRACTOR SHALL CONSULT WITH THE COUNTY ENGINEER REGARDING THE PROPOSED PIPE CULVERTS BEFORE ORDERING THESE ITEM. COUNTY RESERVES THE RIGHT TO MODIFY OR DELETE THIS ITEM.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER. ANY TREES ALREADY FELLED SHALL BE MEASURED AND REMOVED AS PER SPECIAL PROVISIONS.

FILE NAME = 120134-ehd-summary.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>SUMMARY OF QUANTITIES AND GENERAL NOTES LOG CABIN ROAD / C.H. 5</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62799	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	2	
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000899	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -			CONTRACT NO. 99522					
		DATE - 01/15/14	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		

EARTHWORK SUMMARY							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) / SHORTAGE (-)
	20200100	20300100					
	CU YD	CU YD					
F.A.S. 823 / C.H. 5 / LOG CABIN ROAD							
STA 172+00 TO STA 173+59.38	86		25.00%	100.00%	65	66	-1
STA 173+59.38 TO STA 174+14.63		120	25.00%	70.00%	63		63
STA 174+14.63 TO STA 175+75	22		25.00%	100.00%	17	107	-90
TOTAL	108	120			145	173	-28
USE	110	120					-30
			20400800	FURNISHED EXCAVATION	30	CU.YD.	

HMA - MIXTURE REQUIREMENTS	
LOCATION(S):	F.A.S. 823 / C.H. 5 / LOG CABIN ROAD
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE
AC/PG:	PG 64-22
RAP % (MAX):	SEE BDE 80306
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION: (GRADATION MIXTURE):	IL 9.5 OR IL 12.5
FRICTION AGGREGATE	MIXTURE C
MIXTURE WEIGHTS	112 LBS. \ SQ. YD. \ INCH

ROADWAY SCHEDULE						
LOCATION	AGGREGATE BASE COURSE TYPE A	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT BINDER COURSE IL-19.0, N50	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50	AGGREGATE SHOULDERS TYPE, B	AGGREGATE DITCH (SPECIAL)
	35100100	40600100	40603080	40603310	48101200	X2830495
	TON	GAL	TON	TON	TON	TON
F.A.S. 823 / C.H. 5 / LOG CABIN ROAD						
STA 171+50 TO STA 173+59.38	38	119	83	40	79	115
STA 173+59.38 TO STA 174+14.63				21		
STA 174+14.63 TO STA 175+50	32	95	51	35	84	
TOTAL	70	214	134	96	163	115
USE	70	215	134	100	165	115

HMA - MIXTURE REQUIREMENTS	
LOCATION(S):	F.A.S. 823 / C.H. 5 / LOG CABIN ROAD
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE
AC/PG:	PG 64-22
RAP % (MAX):	SEE BDE 80306
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION: (GRADATION MIXTURE):	IL 19.0
FRICTION AGGREGATE	NONE
MIXTURE WEIGHTS	112 LBS. \ SQ. YD. \ INCH

PAVEMENT DESIGN (NON MECHANISTIC)

DESIGN PERIOD 15 YEARS 2022

STRUCTURAL DESIGN TRAFFIC (SDT) = 738 ( 2022 )

PV = 686 SU = 37 MU = 15

ROAD/STREET CLASSIFICATION: Class III

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE

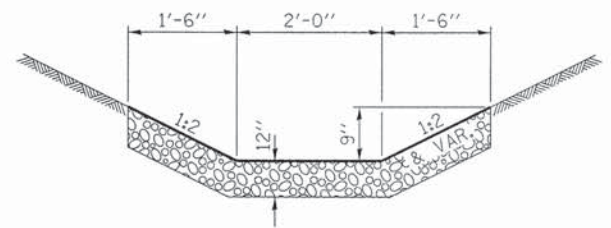
P = 50% S = 50% MU = 50%

TRAFFIC FACTOR ACTUAL TF 0.07 ACTYPE 64-22

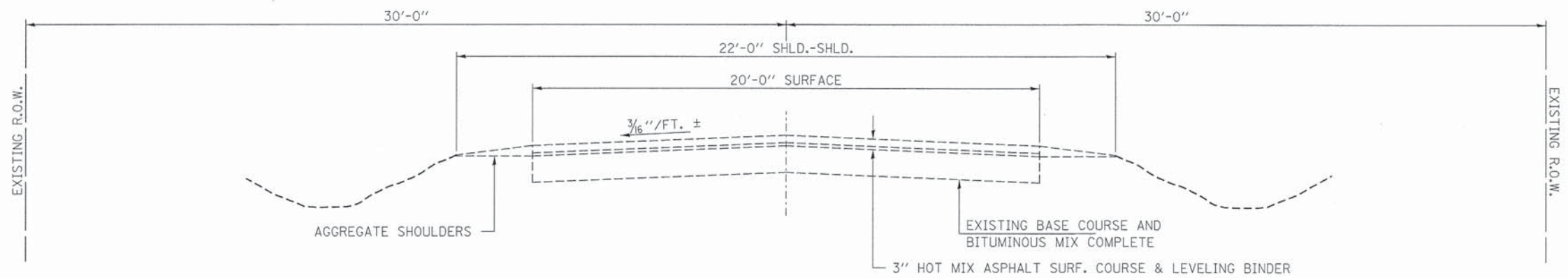
MINIMUM TF NA

PG GRADE: BINDER = 64-22 SURFACE = 64-22

FILE NAME = 120134-sht-schedule.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS</b> <b>JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>SCHEDULE OF QUANTITIES</b> <b>LOG CABIN ROAD / C.H. 5</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62701	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	3	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. / S.G.P.	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -			CONTRACT NO. 99522					
		DATE - 01/15/14	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT BROS-00810601

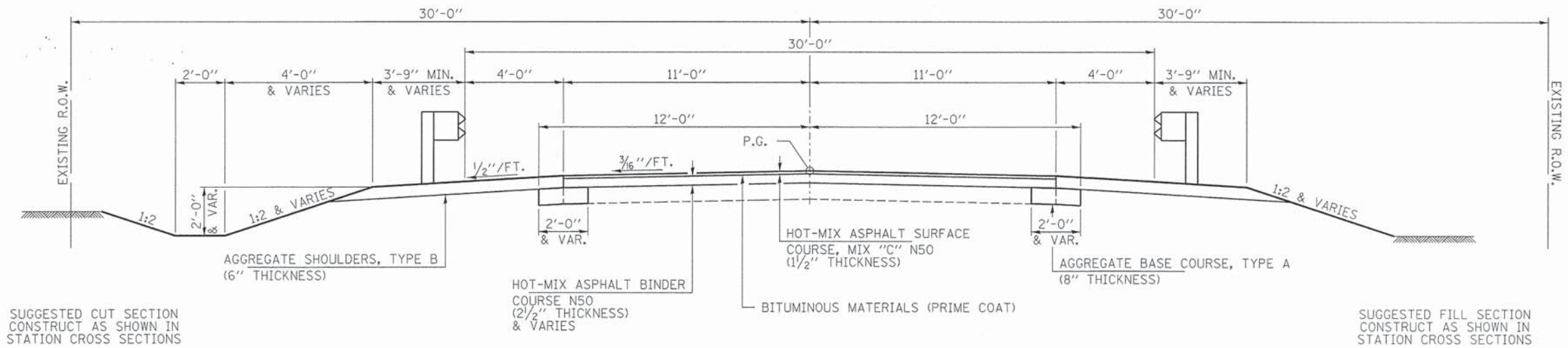


**AGGREGATE DITCH (SPECIAL)**  
RT. & LT. STA. 172+10 TO STA. 173+65



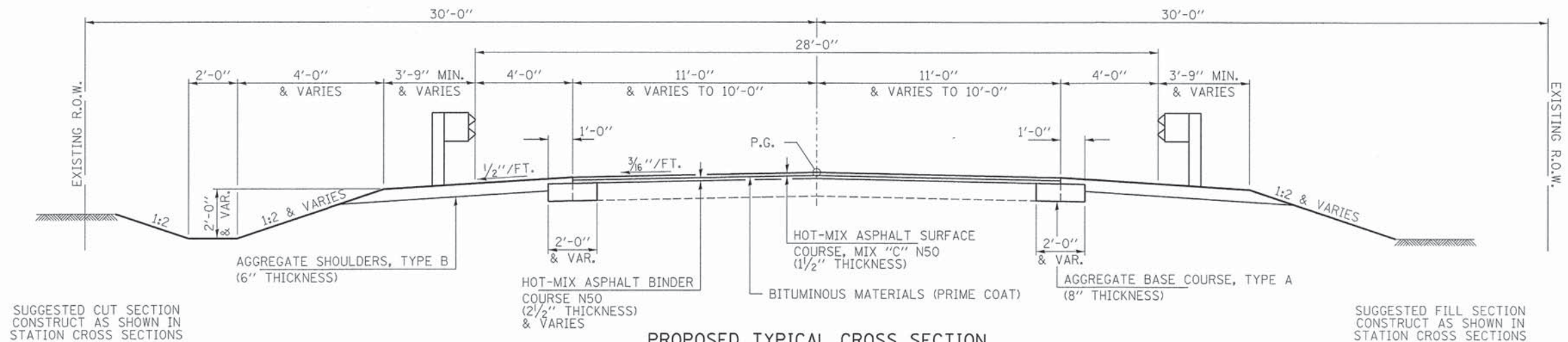
**EXISTING TYPICAL CROSS SECTION**  
STA. 172+00 TO STA. 175+75

FILE NAME = 120134-ah-typcrosssections.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>TYPICAL CROSS SECTIONS LOG CABIN ROAD / C.H. 5</b>		F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763	PLOT SCALE =	DRAWN - R.D.H.	REVISED -				823	08-00199-00-BR	JEFFERSON	26	4
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE COMP. 184.000959	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -		SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.		CONTRACT NO. 99522		ILLINOIS FED. AID PROJECT BR05-00810601		
		DATE - 01/15/14	REVISED -								



**PROPOSED TYPICAL CROSS SECTION**

STA. 172+50.00 TO STA. 173+59.34  
STA. 174+14.67 TO STA. 175+00.00



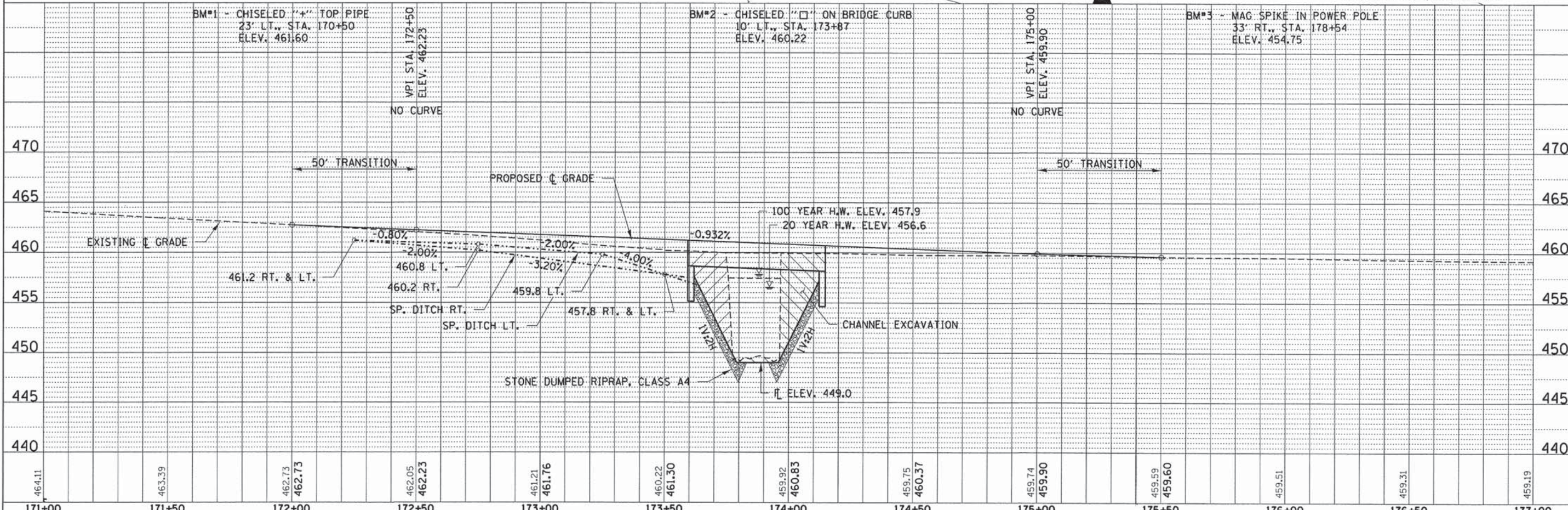
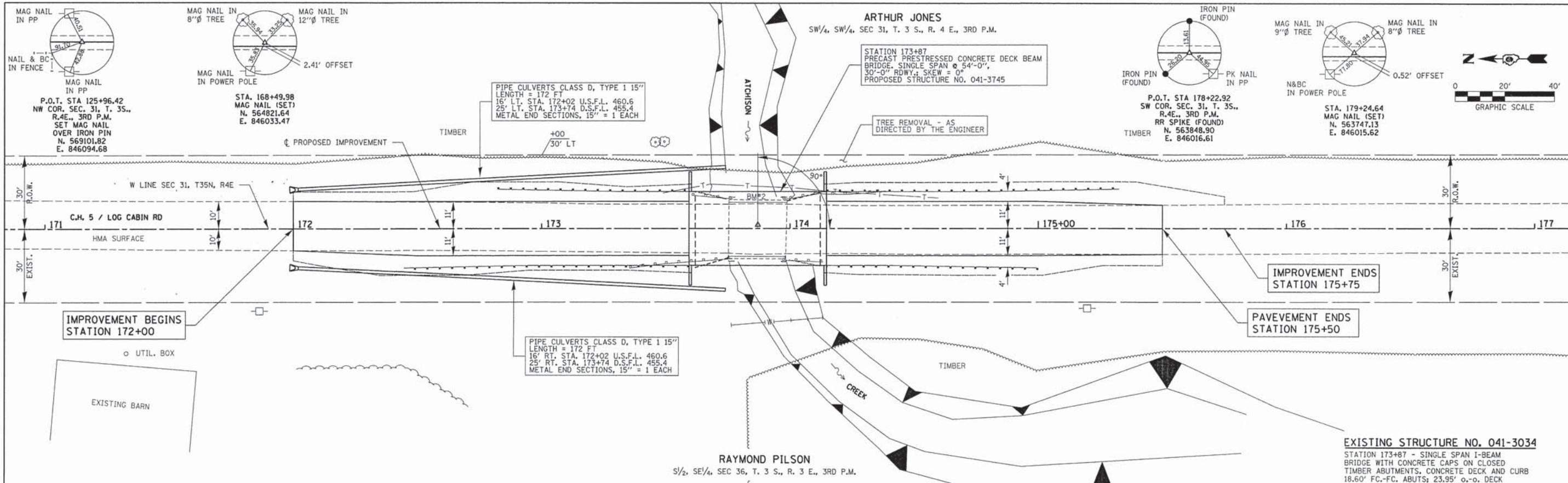
**PROPOSED TYPICAL CROSS SECTION**

STA. 172+00 TO STA. 172+50  
STA. 175+00 TO STA. 175+75\*

TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 172+00 TO 172+50 AND STA. 175+00 TO 175+75. SEE SHEET 18 FOR TRANSITION AT BRIDGE.

\* SHOULDER CONSTRUCTION ONLY FROM LT. STA. 175+50 TO LT. STA. 175+75

FILE NAME = 120134-sht-typsections -2.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>TYPICAL CROSS SECTIONS LOG CABIN ROAD / C.H. 5</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3080 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	5	
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000899	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -			CONTRACT NO. 99522					
		DATE - 01/15/14	REVISED -			ILLINOIS FED. AID PROJECT BROS-00810601					
						SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.		



171+00	171+50	172+00	172+50	173+00	173+50	174+00	174+50	175+00	175+50	176+00	176+50	177+00
464.11	463.39	462.73 462.73	462.05 462.23	461.21 461.76	460.22 461.30	459.92 460.83	459.75 460.37	459.74 459.90	459.59 459.60	459.51	459.31	459.19

FILE NAME = 120134-sht-pp1.dgn  
**HAMPTON, LENZINI AND RENWICK, INC.**  
 3060 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
**ILLINOIS PROFESSIONAL DESIGN FIRM**  
 LS / PE / SE COMP. 184.000889

USER NAME =  
 DESIGNED - J.W.F.  
 DRAWN - L.G.C.  
 CHECKED - S.W.M.  
 DATE - 01/15/14

REVISED -  
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**STATE OF ILLINOIS**  
**JEFFERSON COUNTY HIGHWAY DEPARTMENT**

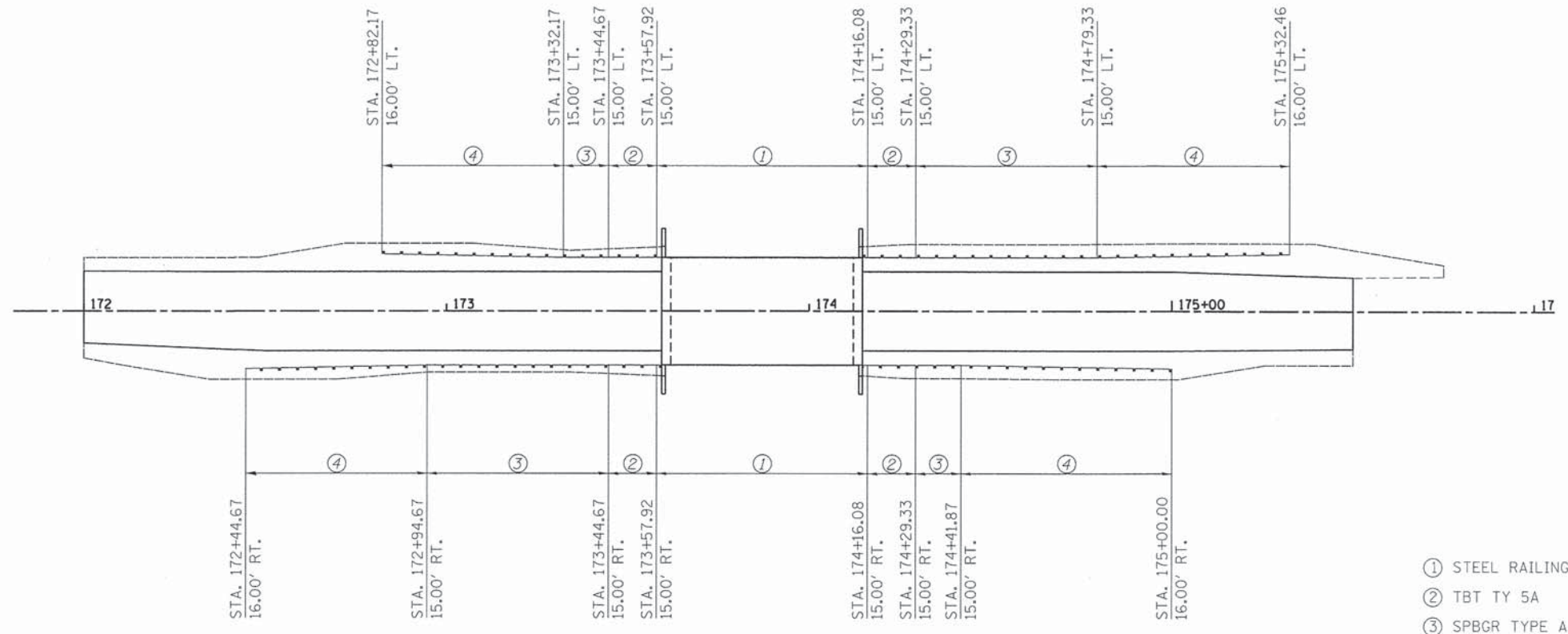
**PLAN & PROFILE**  
**LOG CABIN ROAD / C.H. 5**

SCALE: H20xV5  
 SHEET NO. 1 OF 1 SHEETS  
 STA. 171+00 TO STA. 177+00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS
823	08-00199-00-BR	JEFFERSON	26
			SHEET NO. 6
CONTRACT NO. 99522			
ILLINOIS FED. AID PROJECT BROS-00810601			

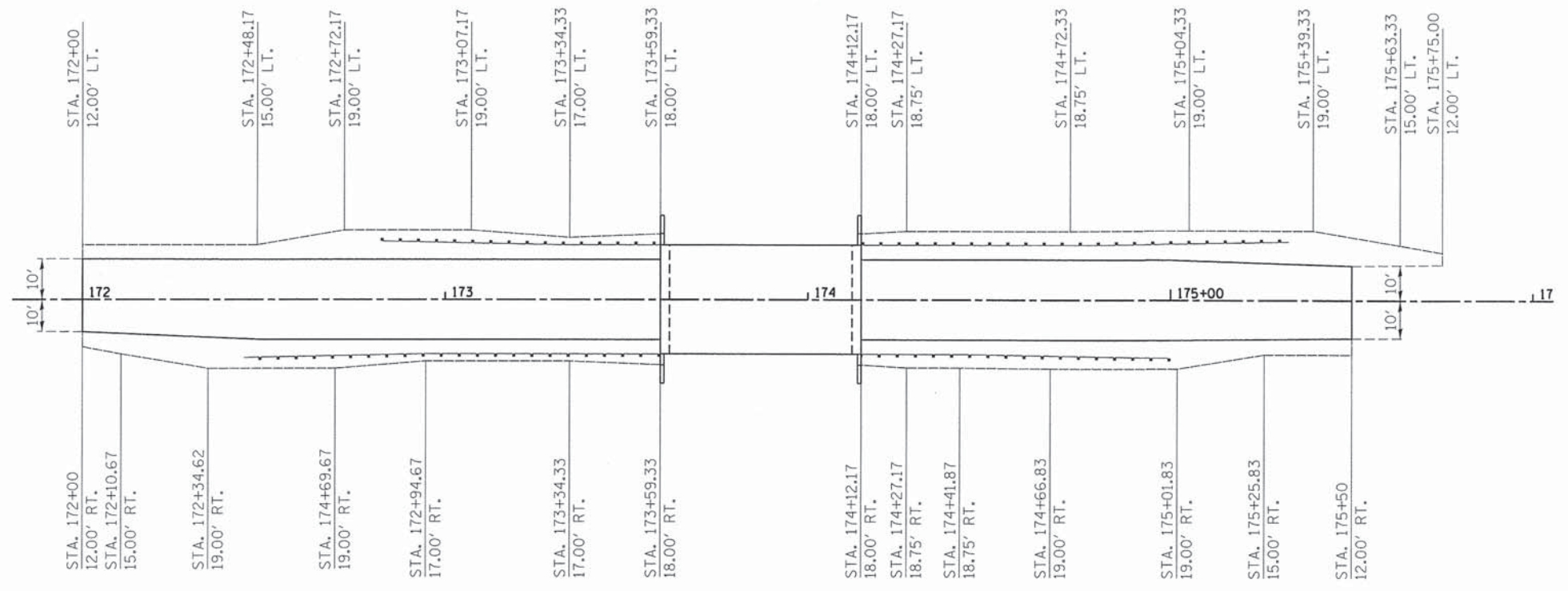
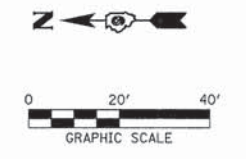
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GUARDRAIL LAYOUT

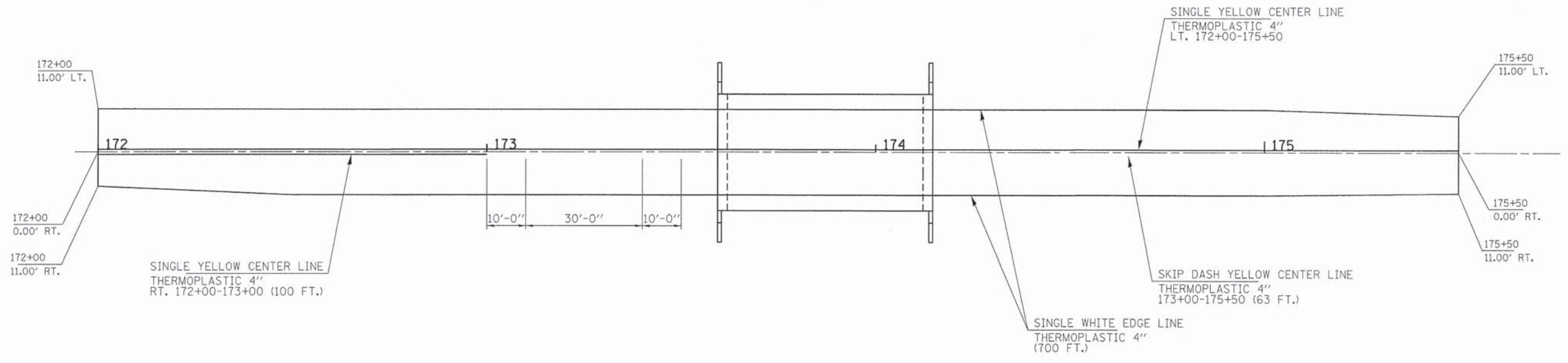
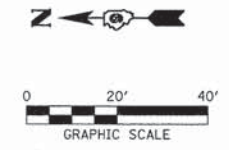
- ① STEEL RAILING, TYPE S-1
- ② TBT TY 5A
- ③ SPBGR TYPE A, 9 FT POSTS
- ④ TBT TY 1 SPL TAN



SHOULDER LAYOUT

NOTE:  
CONSTRUCT VERTICAL TRANSITION  
FOR GUARDRAIL HEIGHT FROM TBT 5A  
TO TBT T1 SPL TAN IN 25 FT.

FILE NAME = 120134-sht-shldr-grdl.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS</b> <b>JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>CENTERLINE, GUARDRAIL AND SHOULDER LAYOUT</b> <b>LOG CABIN ROAD / C.H. 5</b>		F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 206 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS, 62703		DRAWN - R.D.H.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	7	CONTRACT NO. 99522	
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P6 / 88 CORP. 184.002999	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT BR05-00810601	
	PLOT DATE = 1/15/2014	DATE - 01/15/14	REVISED -								



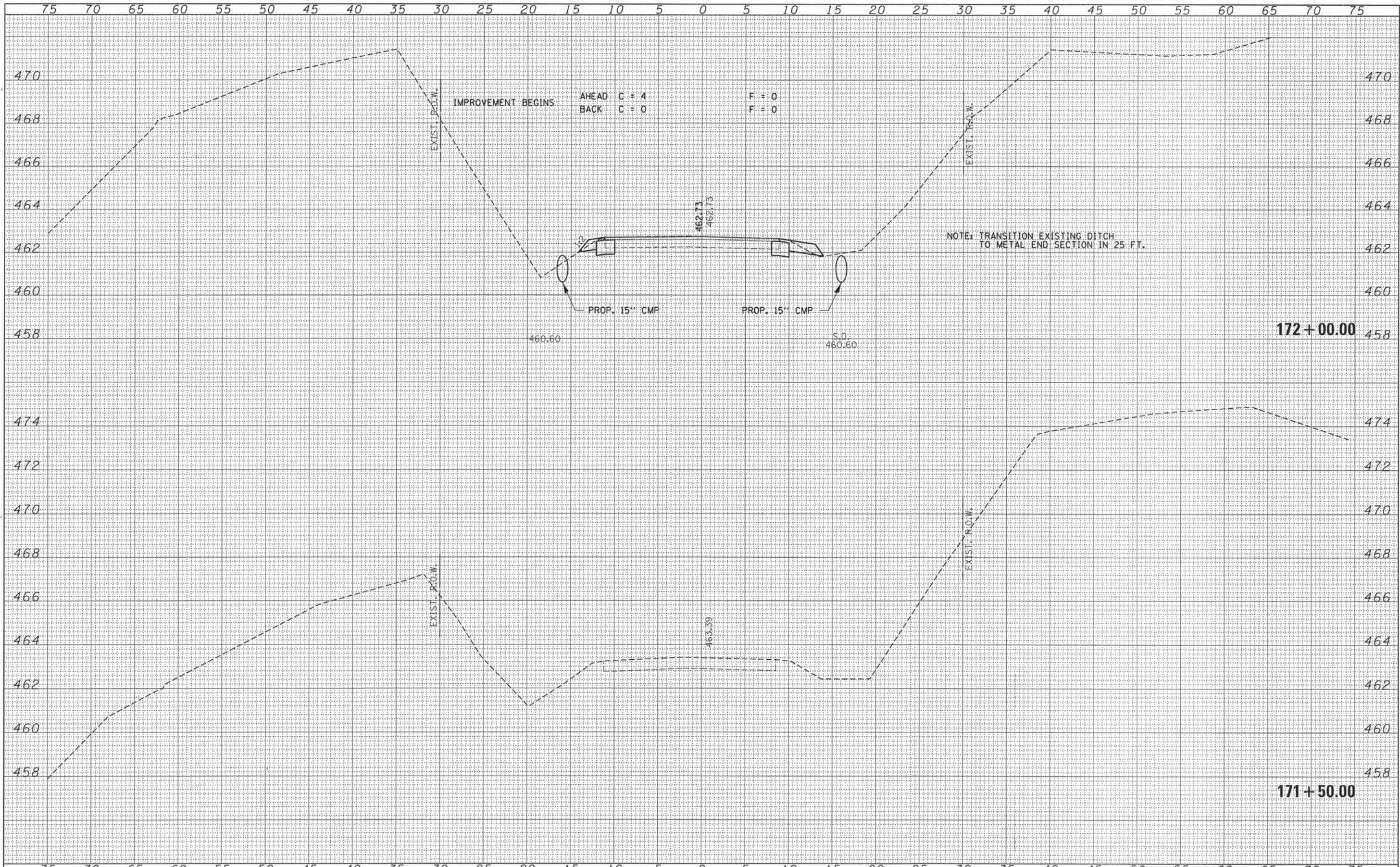
PAVEMENT MARKINGS

FILE NAME = 122134-sht-pvntmrk.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>PAVEMENT MARKINGS LOG CABIN ROAD / C.H. 5</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	8	
<b>ILLINOIS PROFESSIONAL DESIGN FIRM</b> L3 / PE / SE COMP. 184.000958	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -			<b>CONTRACT NO. 99522</b>					
		DATE - 01/15/14	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT BR05-00810601	

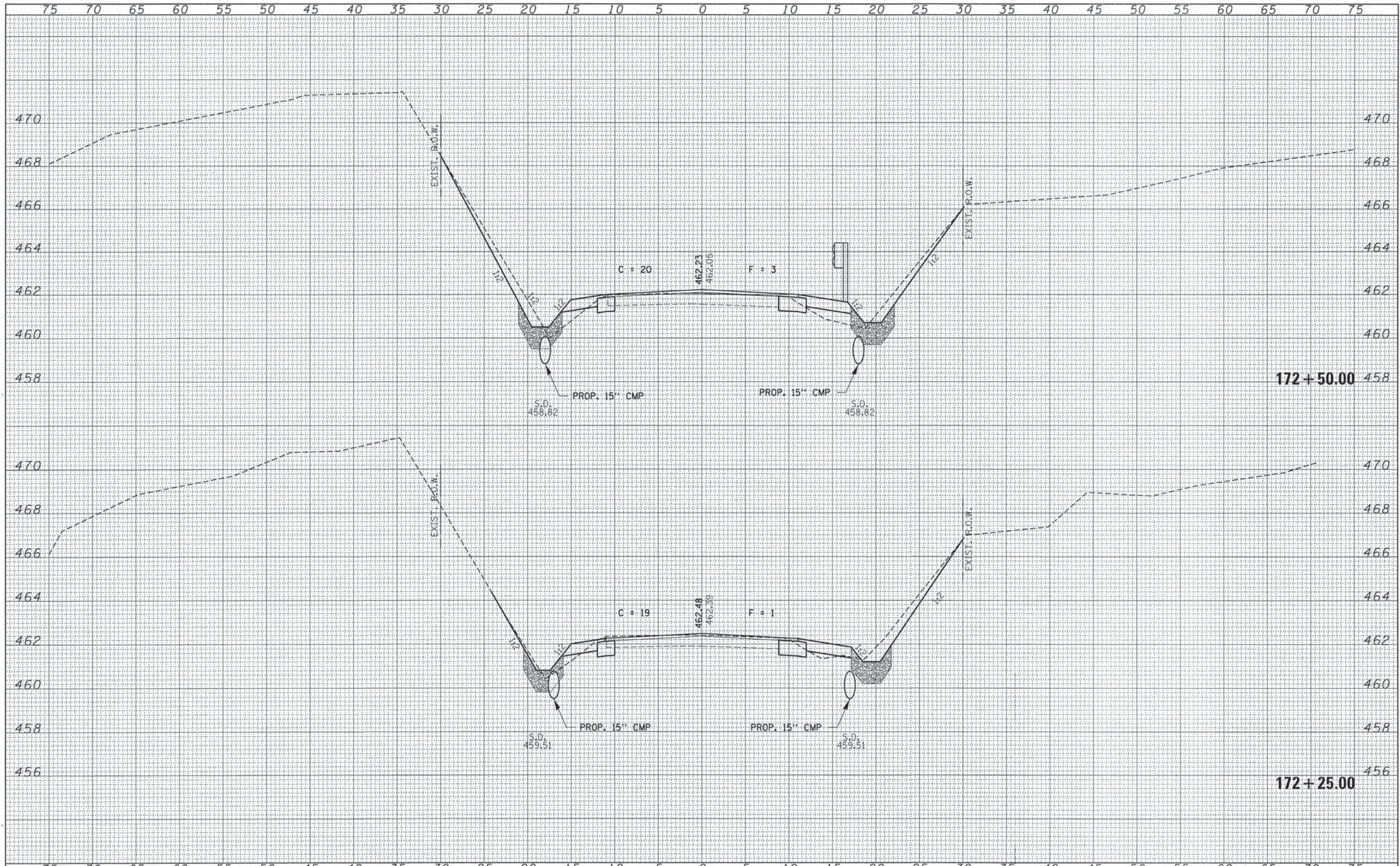


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SURVEY	
NOTE BOOK	
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<b>HAMPTON, LENZINI AND RENWICK, INC.</b>	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	9		
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM 13 / PG. / DE CORP. 184-00089	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -		SCALE:	SHEET NO. 1 OF 9 SHEETS	STA. 172+00.00 TO STA. 172+00.00	CONTRACT NO. 99522			
		DATE - 01/15/14	REVISED -				ILLINOIS FED. AID PROJECT BROS-0081060				



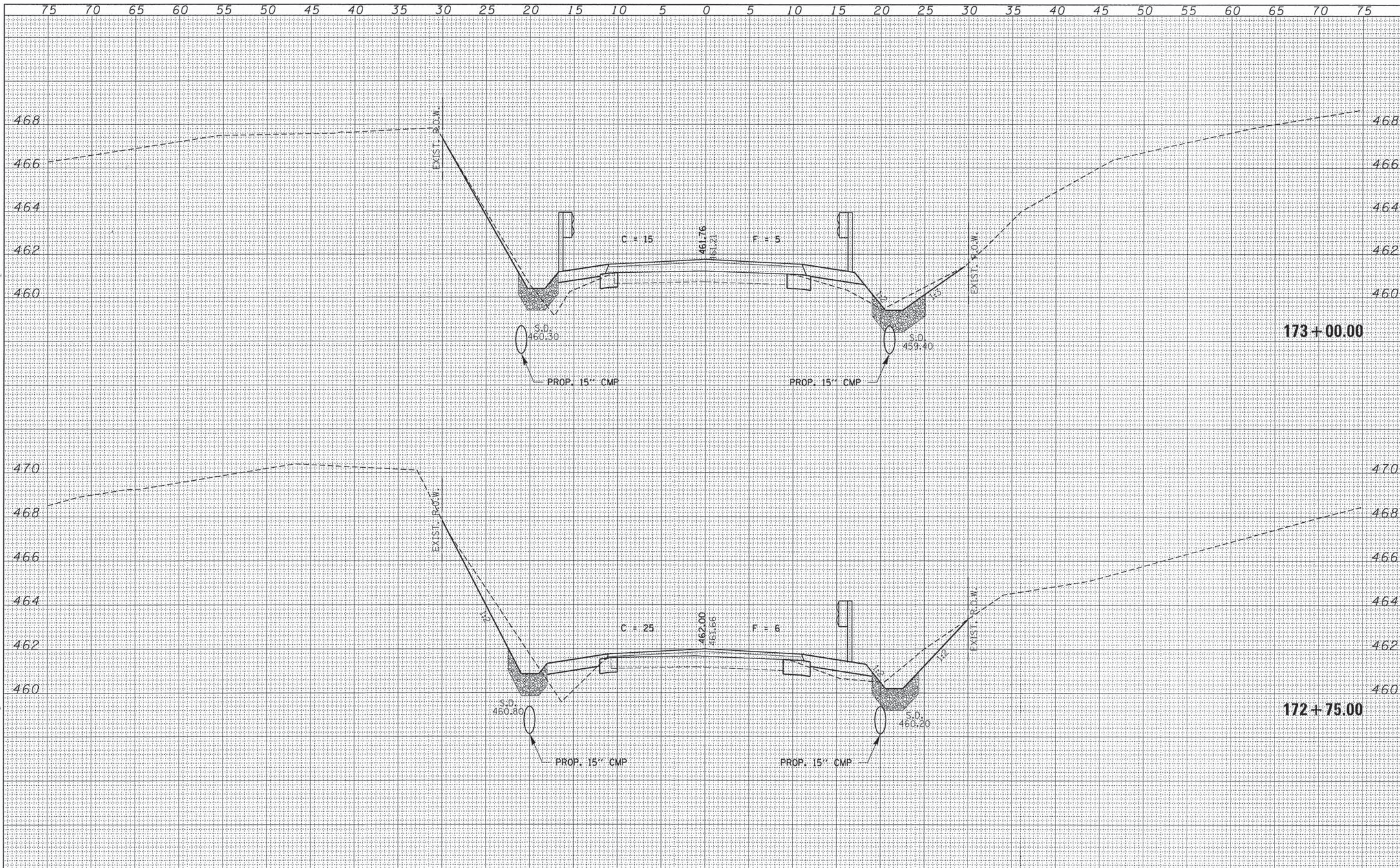
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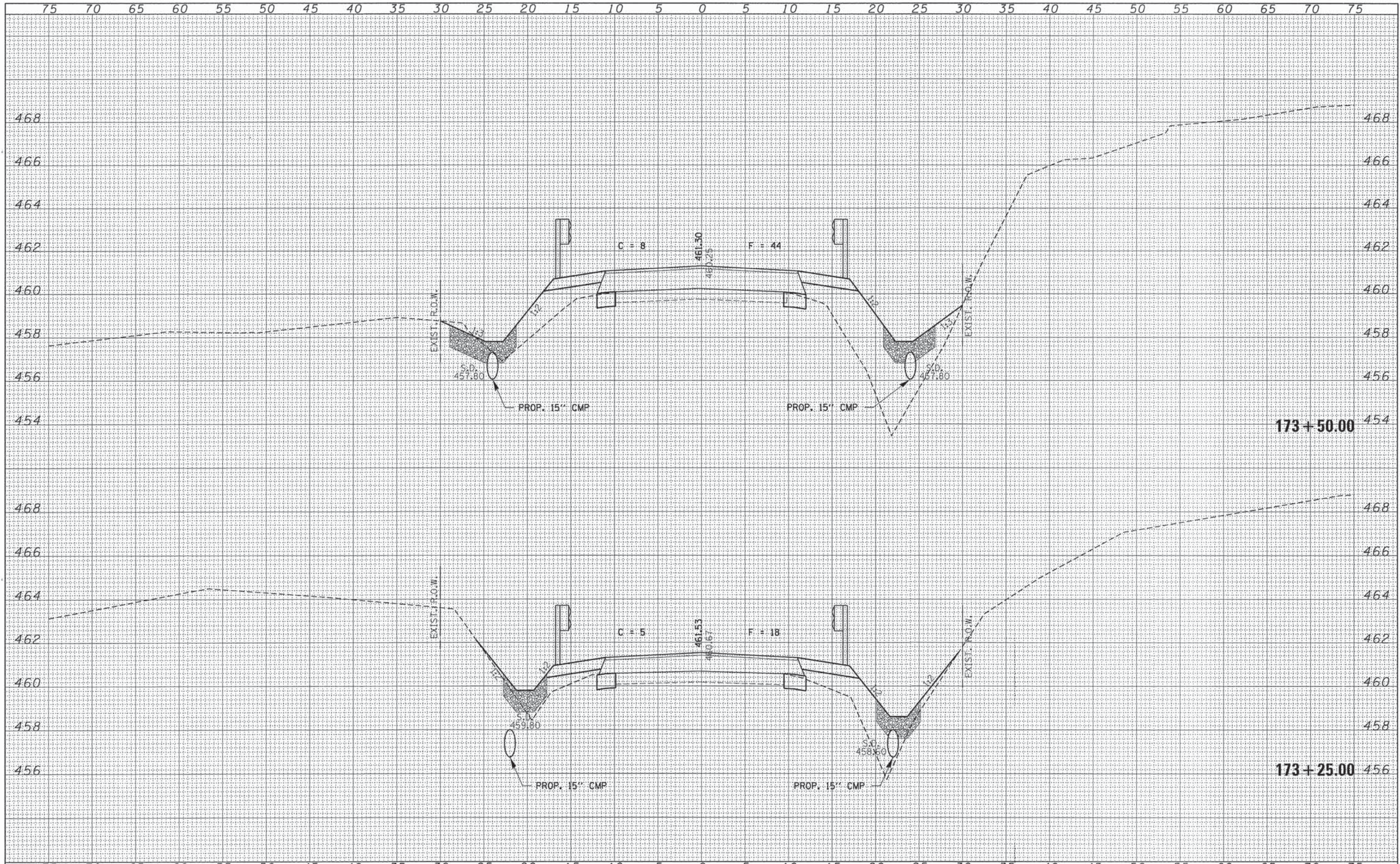
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<b>HAMPTON, LENZINI AND RENWICK, INC.</b>	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	10	CONTRACT NO. 99522	
<b>ILR</b>	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -		SCALE:	SHEET NO. 2 OF 9 SHEETS	STA. 172+25.00 TO STA. 172+50.00	ILLINOIS FED. AID PROJECT BROS-0081060			
1805 SEVEN DRIVE SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000099	DATE - 01/15/14	REVISED -									

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<b>HAMPTON, LENZINI AND REHWICK, INC.</b>		DRAWN - L.G.C.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	11	CONTRACT NO. 99522		
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM 1817 W. ILLINOIS ST. / CHICAGO, IL 60609	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE:	SHEET NO. 3 OF 9 SHEETS	STA. 172+75.00 TO STA. 173+00.00	ILLINOIS FED. AID PROJECT BROS-00810601				
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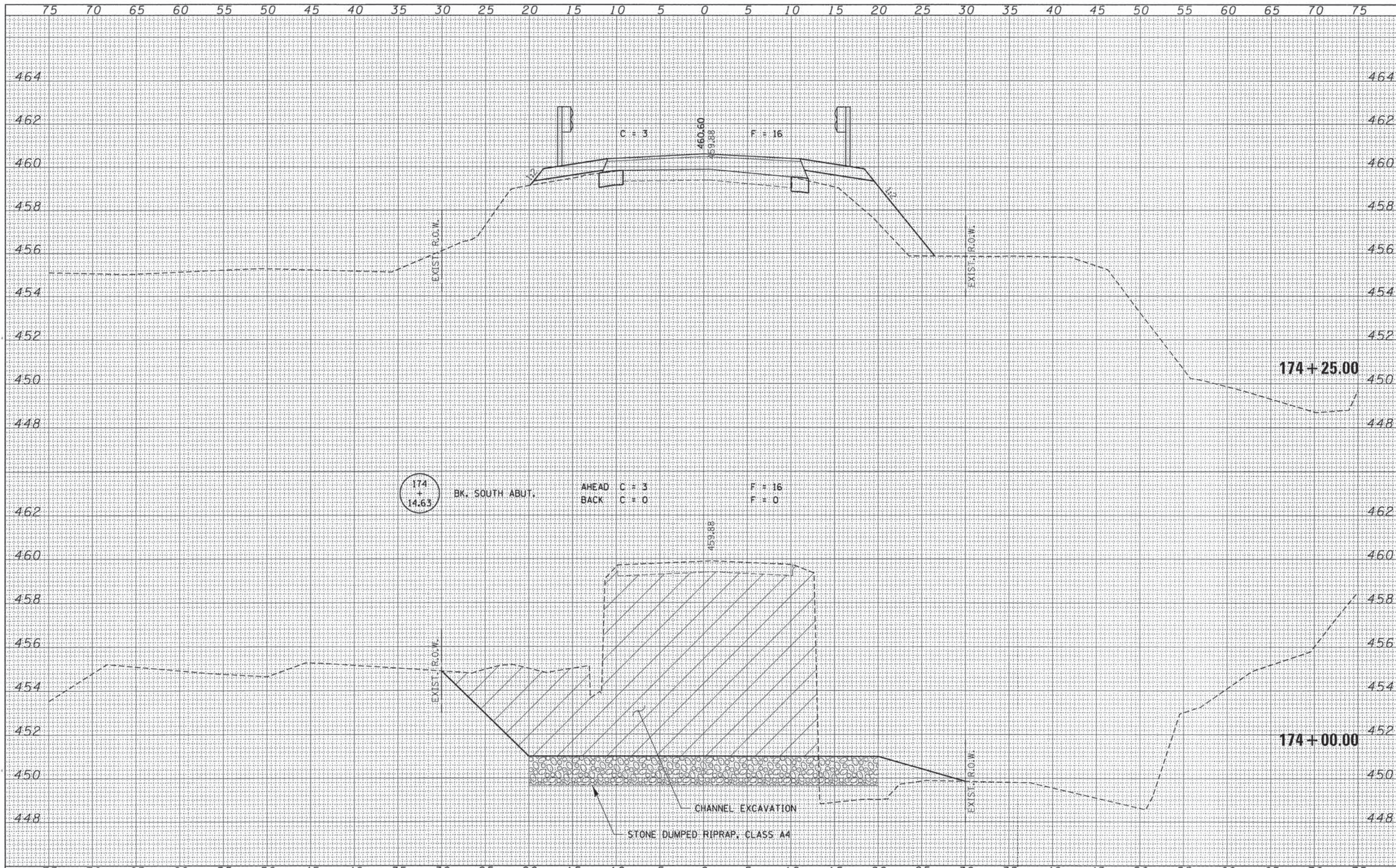


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ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 194.00999	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -		SCALE:		SHEET NO. 4 OF 9 SHEETS		STA. 173+25.00 TO STA. 173+50.00		ILLINOIS FED. AID PROJECT BROS-00810601
		DATE - 01/15/14	REVISED -								

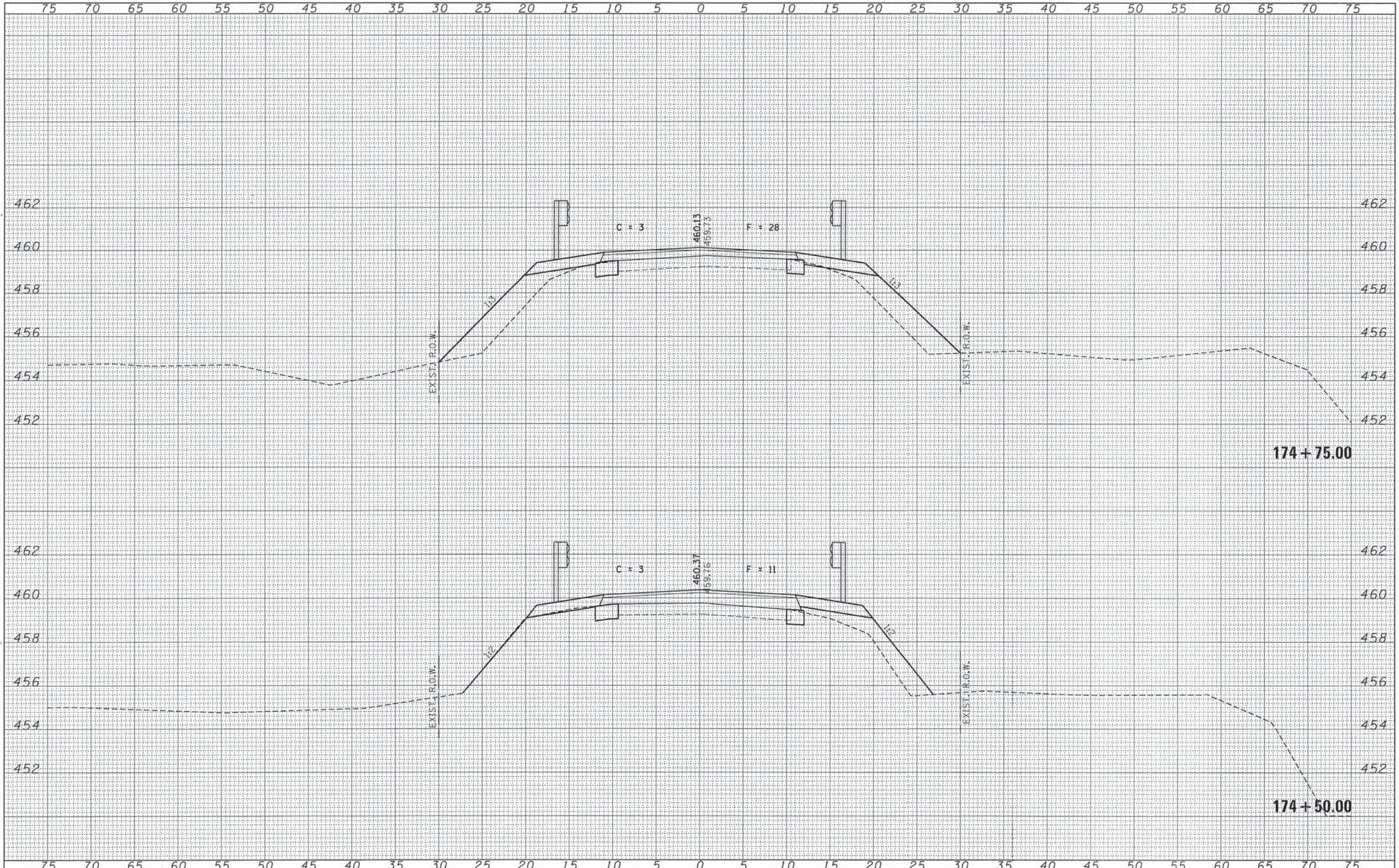




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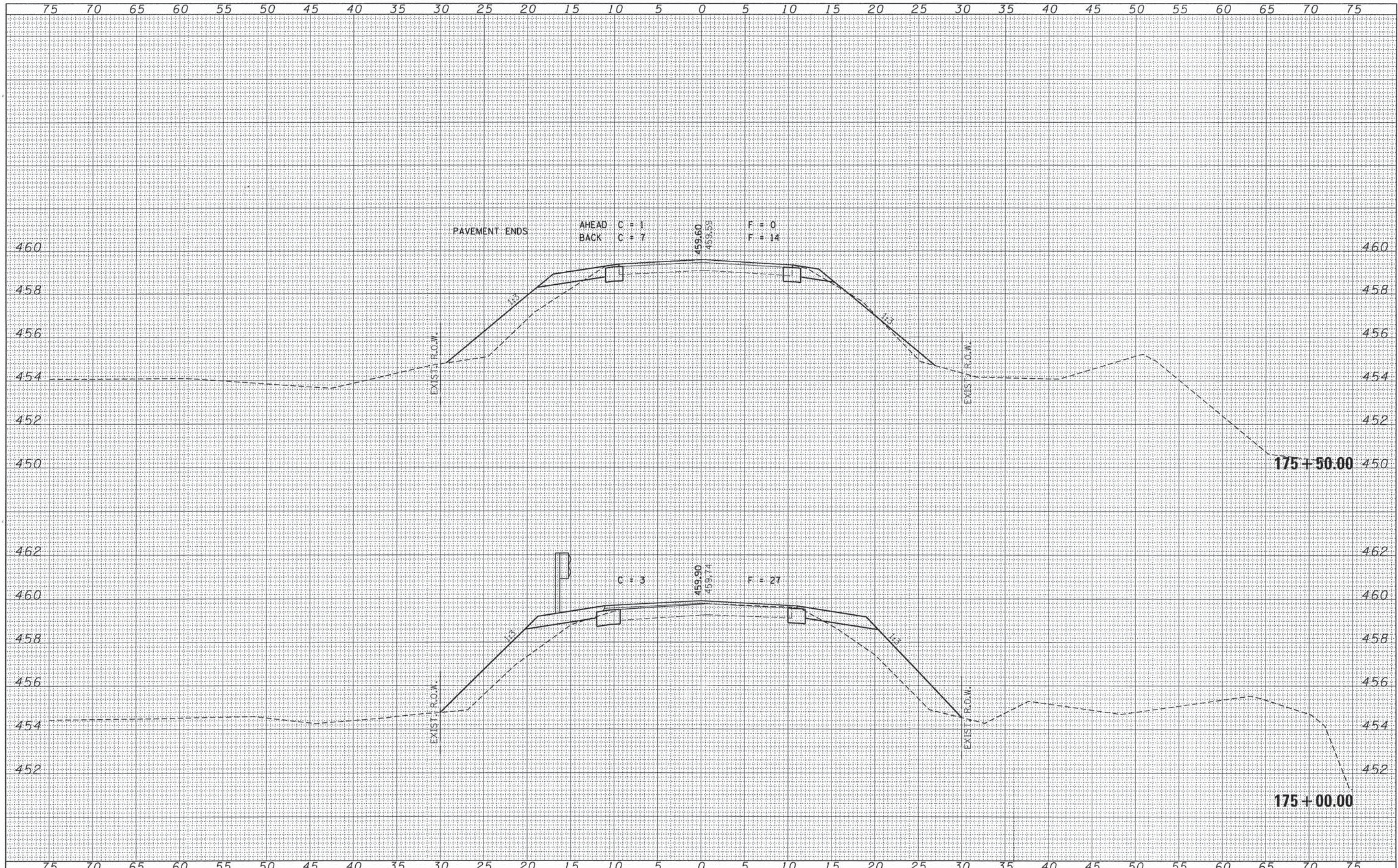
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ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00999	PLOT SCALE =	CHECKED - S.W.M.	REVISED -	CONTRACT NO. 99522				
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<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>				<b>STATION CROSS SECTIONS LOG CABIN ROAD / C.H. 5</b>				
SCALE:				SHEET NO. 6 OF 9 SHEETS				STA. 174+00.00 TO STA. 174+00.00



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<b>HAMPTON, LENZINI AND RENWICK, INC.</b> <small>4801 GILBERTSON DRIVE, SUITE 201          SPRINGFIELD, ILLINOIS 62703</small>	DRAWN - L.G.C. CHECKED - S.W.M. PLOT DATE = 1/15/2014	REVISED - REVISED - REVISED -	SCALE:		SHEET NO. 7 OF 9 SHEETS	STA. 174+50.00 TO STA. 174+75.00	823	08-00199-00-BR	JEFFERSON	26	15
<b>ILR</b> <small>ILLINOIS PROFESSIONAL DESIGN FIRM          L5 / PE / SE CORP. 184-000889</small>		DATE - 01/15/14 REVISED -									
											CONTRACT NO. 99522 <small>ILLINOIS FED. AID PROJECT BR05-00810601</small>

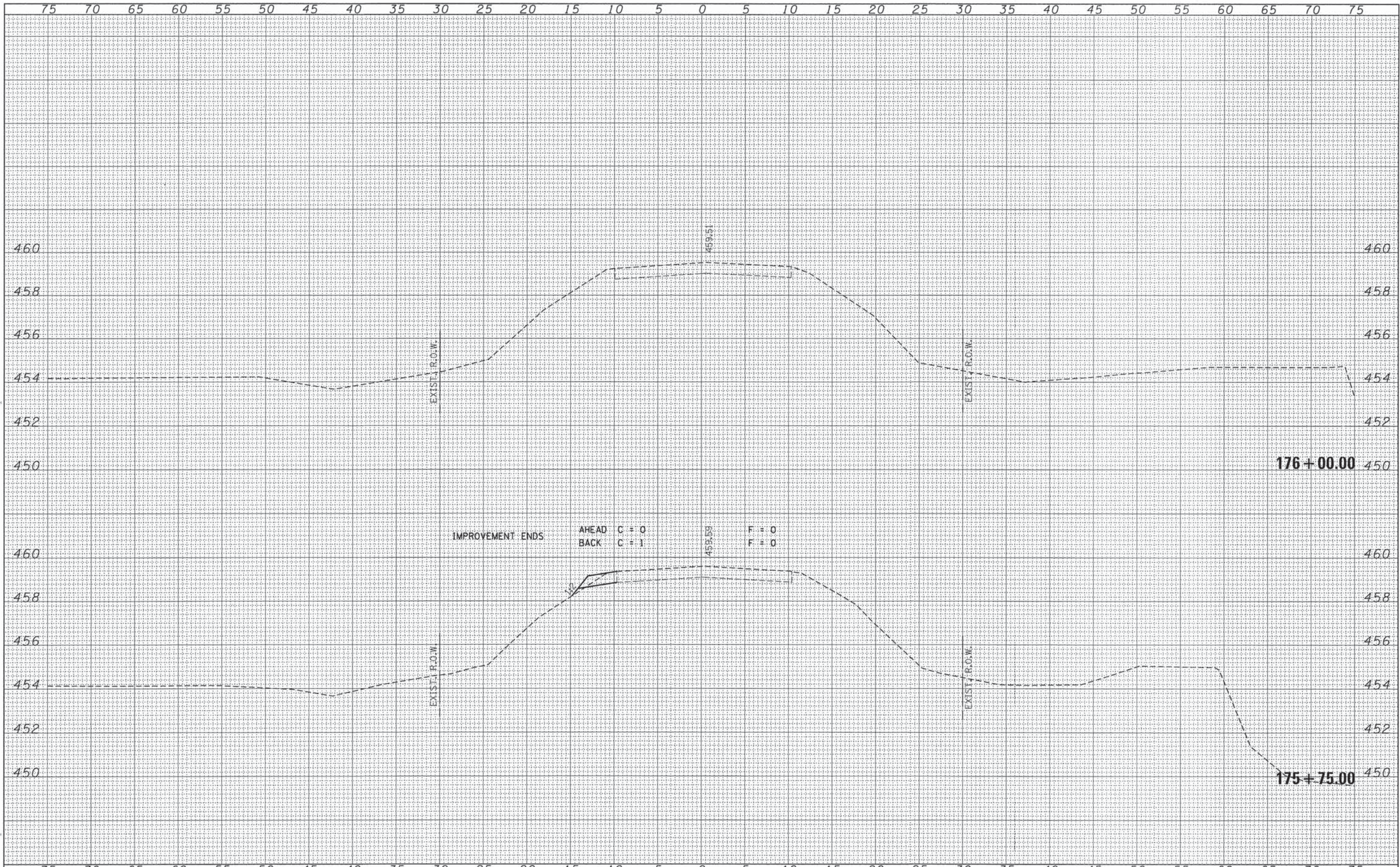


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HAMPTON, LENZINI AND RENWICK, INC. 3555 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	16		
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-000899	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -		SCALE: SHEET NO. 8 OF 9 SHEETS STA. 175+00.00 TO STA. 175+50.00		CONTRACT NO. 99522		ILLINOIS FED. AID PROJECT BR05-00810601		
		DATE - 01/15/14	REVISED -								





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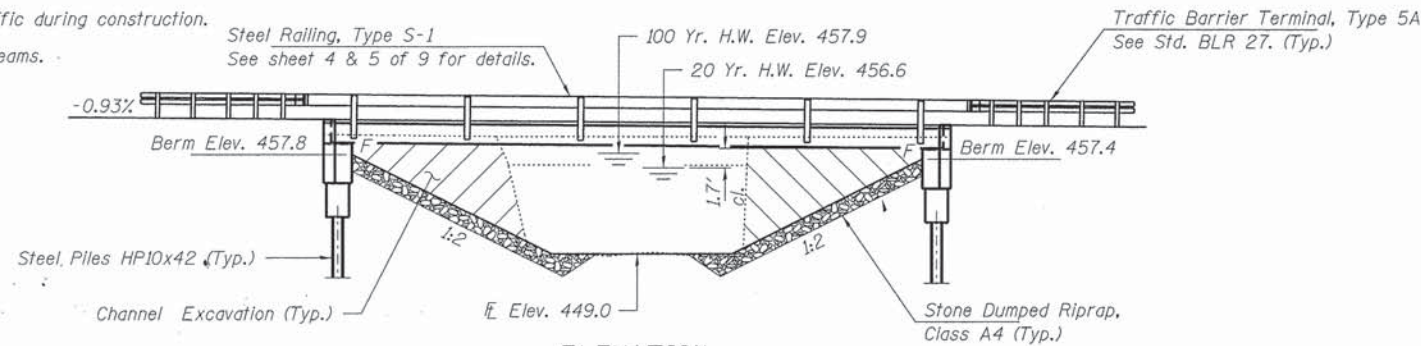
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<b>HAMPTON, LENZINI AND RENWICK, INC.</b> <small>205 S. GARDNER DRIVE, SUITE 201          SPRINGFIELD, ILLINOIS 62703</small>		DRAWN - L.G.C.	REVISED -		823	08-00199-00-BR	JEFFERSON	26	17		
<b>ILR</b> <small>ILLINOIS PROFESSIONAL DESIGN FIRM          L.S. / P.E. / S.E. CORP. 184-000889</small>		CHECKED - S.W.M.	REVISED -		SCALE: SHEET NO. 9 OF 9 SHEETS STA. 175+75.00 TO STA. 176+00.00			CONTRACT NO. 99522 <small>ILLINOIS FED. AID PROJECT BROS-0081060</small>			
PLOT SCALE =		DATE - 01/15/14	REVISED -								

BENCHMARK: Chiseled "□" on bridge curb, 10' LT., STA. 173+87 Elev. 460.22

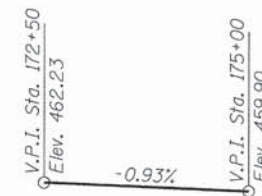
EXISTING STRUCTURE NO. 041-3034: Single span I-beam bridge with concrete caps on closed timber abutments. Concrete deck and curb 18.60' Fc.-Fc. Abuts: 23.95' o.-o. deck.

Structure closed to traffic during construction.

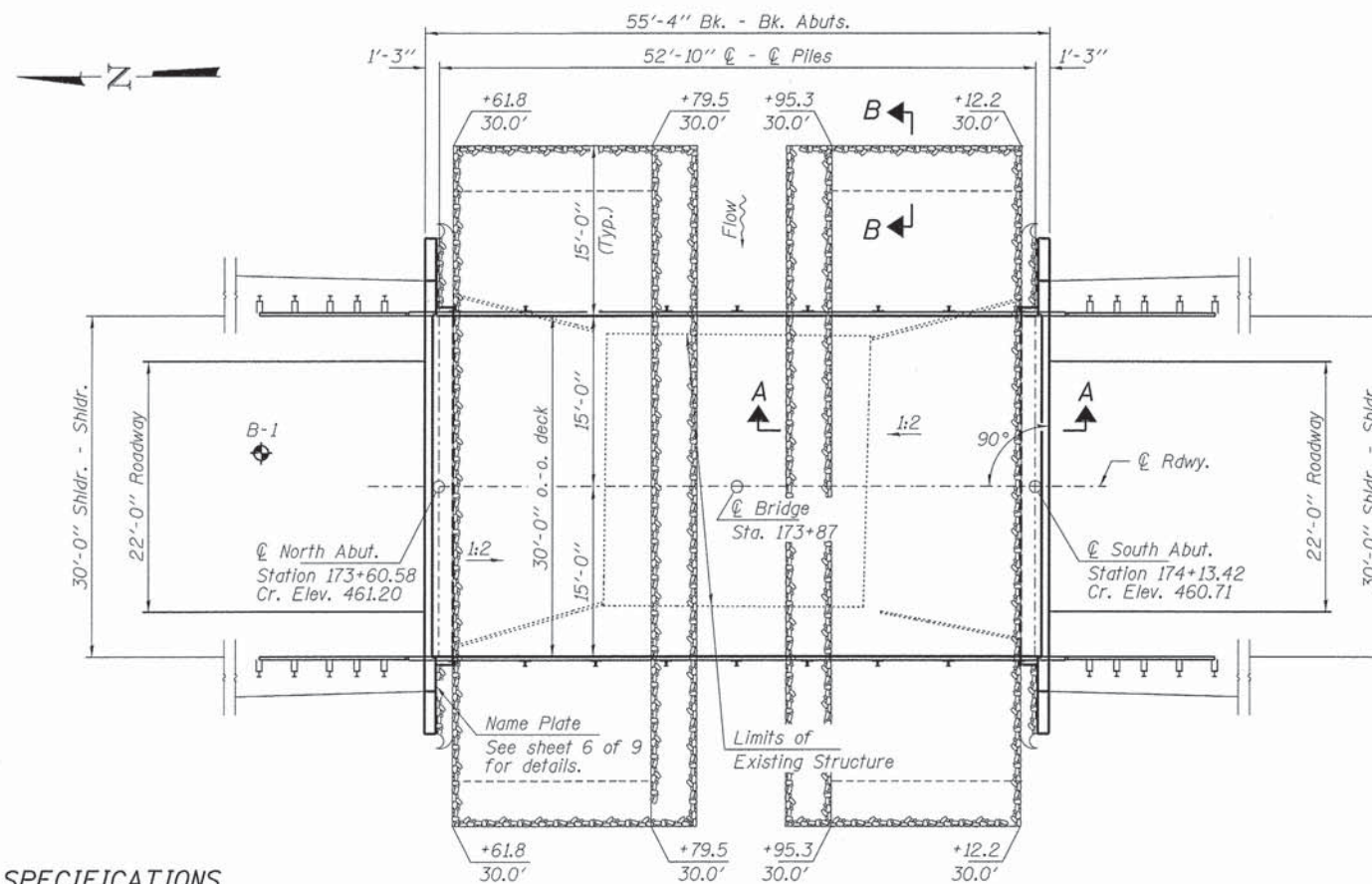
Salvage existing steel beams.



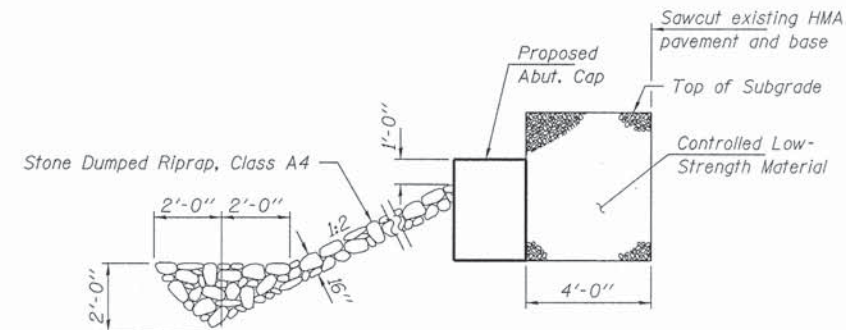
ELEVATION



PROFILE GRADE

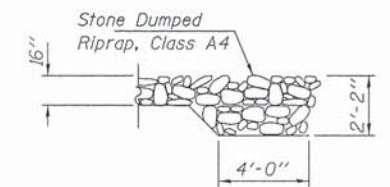


PLAN



SECTION A-A

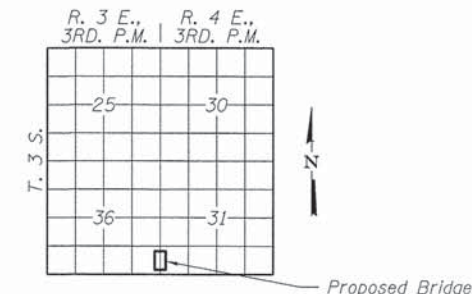
Note: See Special Provisions for Stone Dumped Riprap, Class A4.



SECTION B-B

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 21"x36" PPC Deck Beam
3. 21"x36" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. North Abutment
7. South Abutment
8. HP Pile Details
9. Borings



LOCATION SKETCH

ATCHISON CREEK  
BUILT 2011 BY  
JEFFERSON COUNTY  
SEC. 08-00199-00-BR  
F.A.S. 823  
STR. NO. 041-3745  
LOADING HL-93

NAME PLATE  
See Std. 515001

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with all applicable interims.

LOADING HL-93

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

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 ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f_{pbt} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f_y = 60,000$  psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.304g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.721g  
Soil Site Class = D

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	455.3	454.9

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	10	990	120	220	456.1	0.9	0.6	457.0	456.7
Base	20	1240	130	250	456.6	2.3	0.7	458.9	457.4
Max. Calc.	100	1890	150	310	457.9	2.4	1.0	460.2	458.9
	500	2610	150	320	459.0	1.9	1.2	461.0	460.3

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. Megginson 01/15/2014  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2014

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			120
Stone Dumped Riprap, Class A4	Ton			240
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	21		21
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		28.8	28.8
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,620		1,620
Reinforcement Bars	Pound		3,360	3,360
Steel Railing, Type S-1	Foot	116		116
Furnishing Steel Piles HP10x42	Foot		160	160
Driving Piles	Foot		160	160
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Controlled Low-Strength Material	Cu. Yd.			60

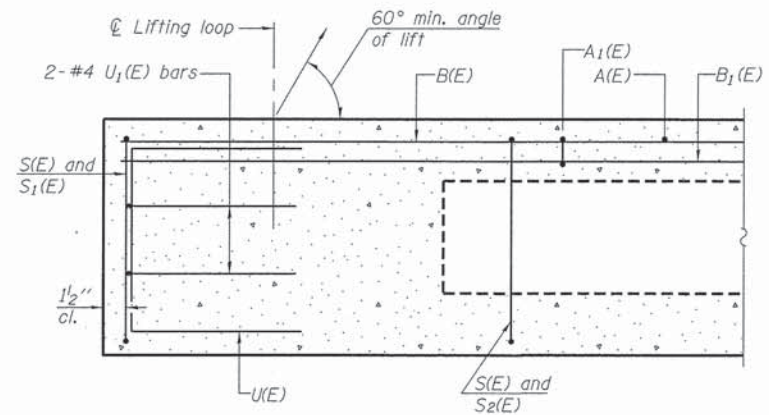
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		S.W.M.	
		R.D.H.	
		S.W.M.	

STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

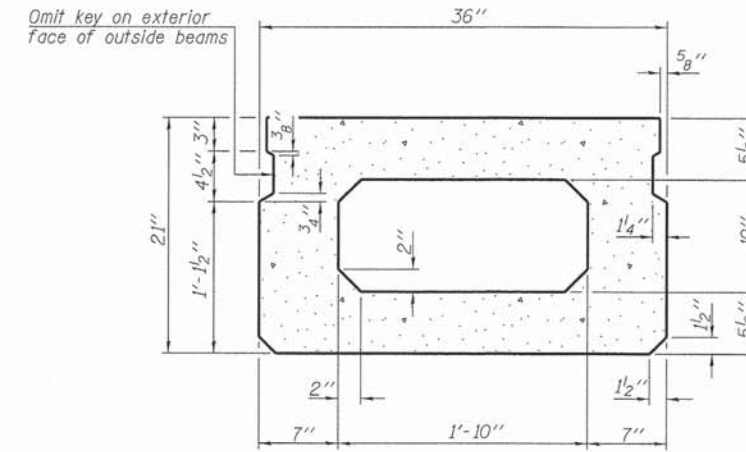
GENERAL PLAN & ELEVATION  
STRUCTURE NO. 041-3745

SHEET NO. 1 OF 9 SHEETS

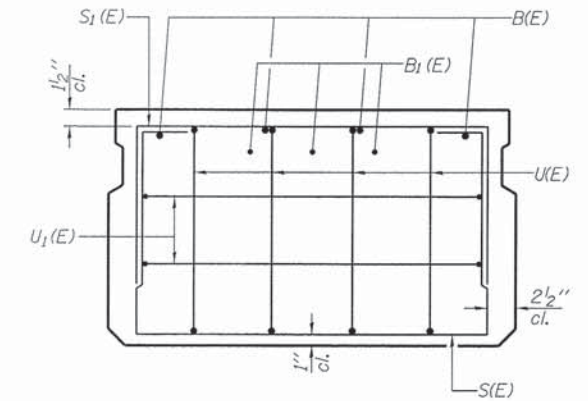
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LOG CABIN ROAD			CONTRACT NO. 99522	
ILLINOIS FED. AID PROJECT BR05-0081(060)				



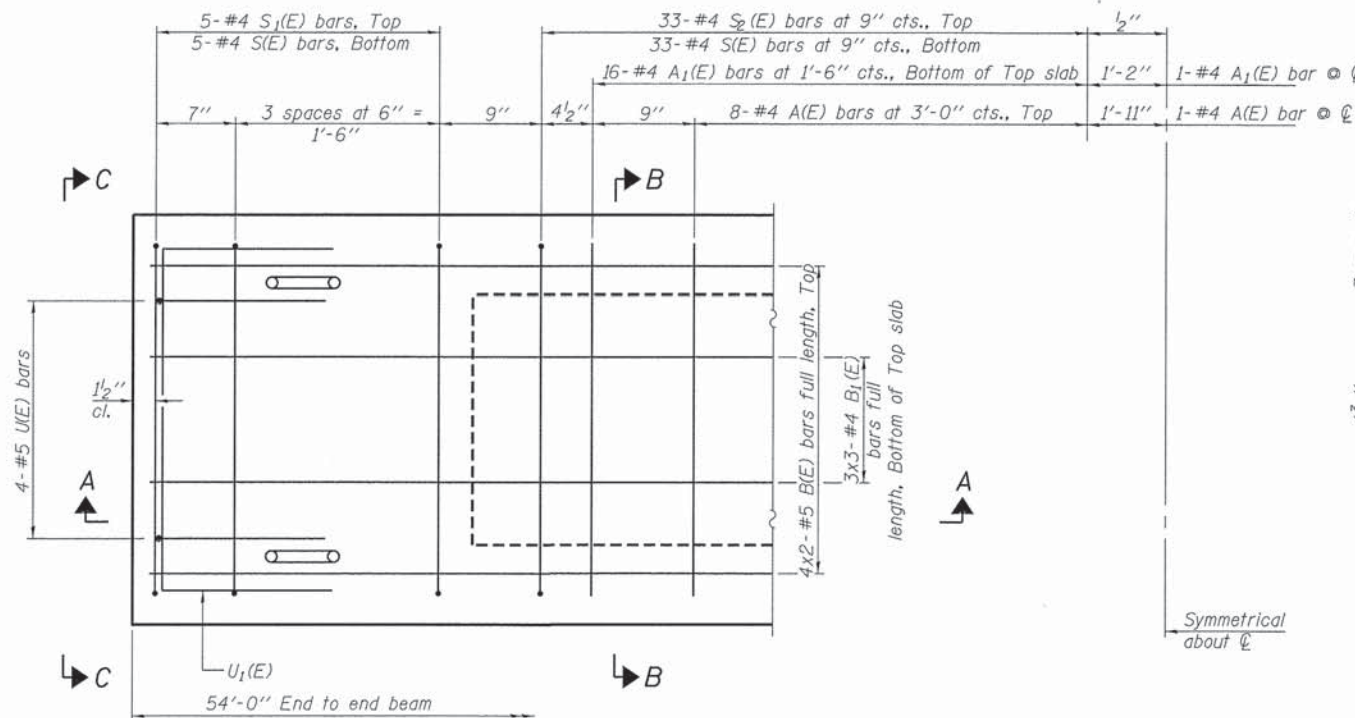
SECTION A-A



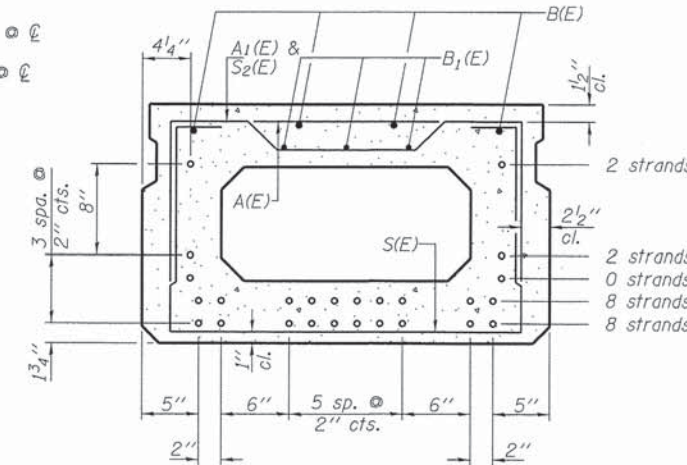
SECTION B-B  
(Showing dimensions)



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)	33	#4	2'-10"	~
B(E)	8	#5	28'-2"	—
B1(E)	9	#4	19'-3"	—
S(E)	76	#4	6'-5"	□
S1(E)	10	#4	4'-11"	□
S2(E)	66	#4	5'-2"	□
U1(E)	8	#5	4'-0"	□
U1(E)	4	#4	5'-0"	□

Note: See sheets 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-2136-0 7-1-10

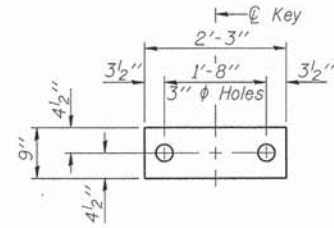
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ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00889	PLOT DATE = 1/15/2014	DRAWN - R.D.H.	REVISED -
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STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT

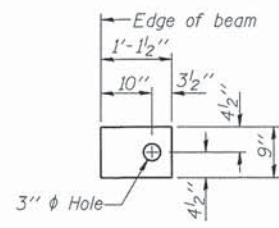
21" x 36" PPC DECK BEAM  
STRUCTURE NO. 041-3745

SHEET NO. 2 OF 9 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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LOG CABIN ROAD		CONTRACT NO. 99522		
ILLINOIS FED. AID PROJECT BROS-00810601				



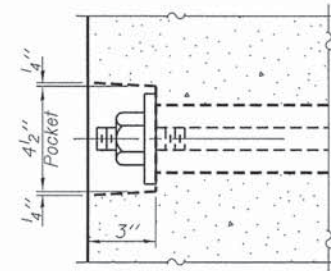
**FABRIC BEARING PAD**  
(Interior - 18 Req'd.)



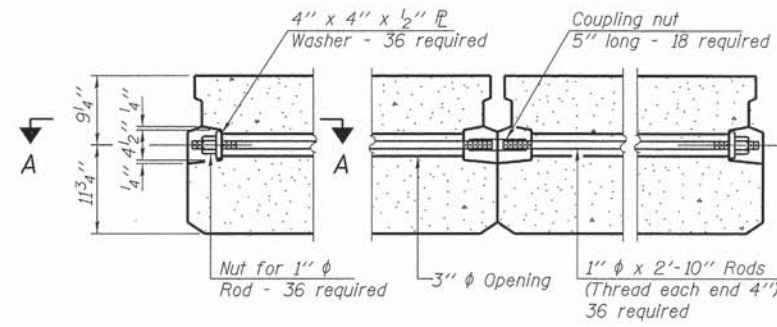
**FABRIC BEARING PAD**  
(Exterior - 4 Req'd.)

**FIXED**

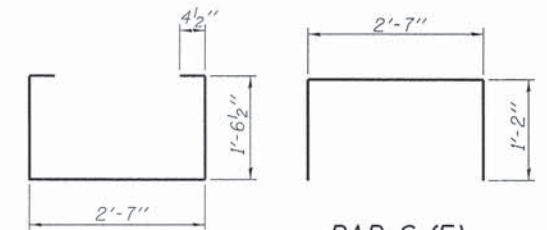
Notes:  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



**SECTION A-A**

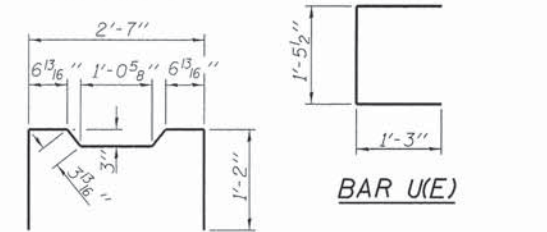


**TYPICAL TRANSVERSE TIE ASSEMBLY**



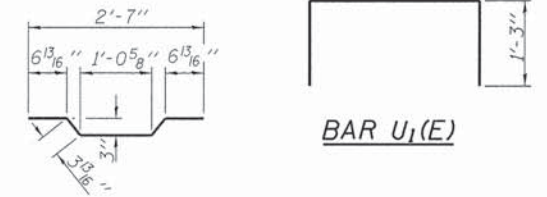
**BAR S(E)**

**BAR S1(E)**



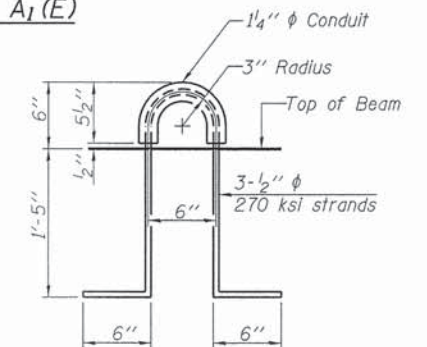
**BAR U(E)**

**BAR S2(E)**

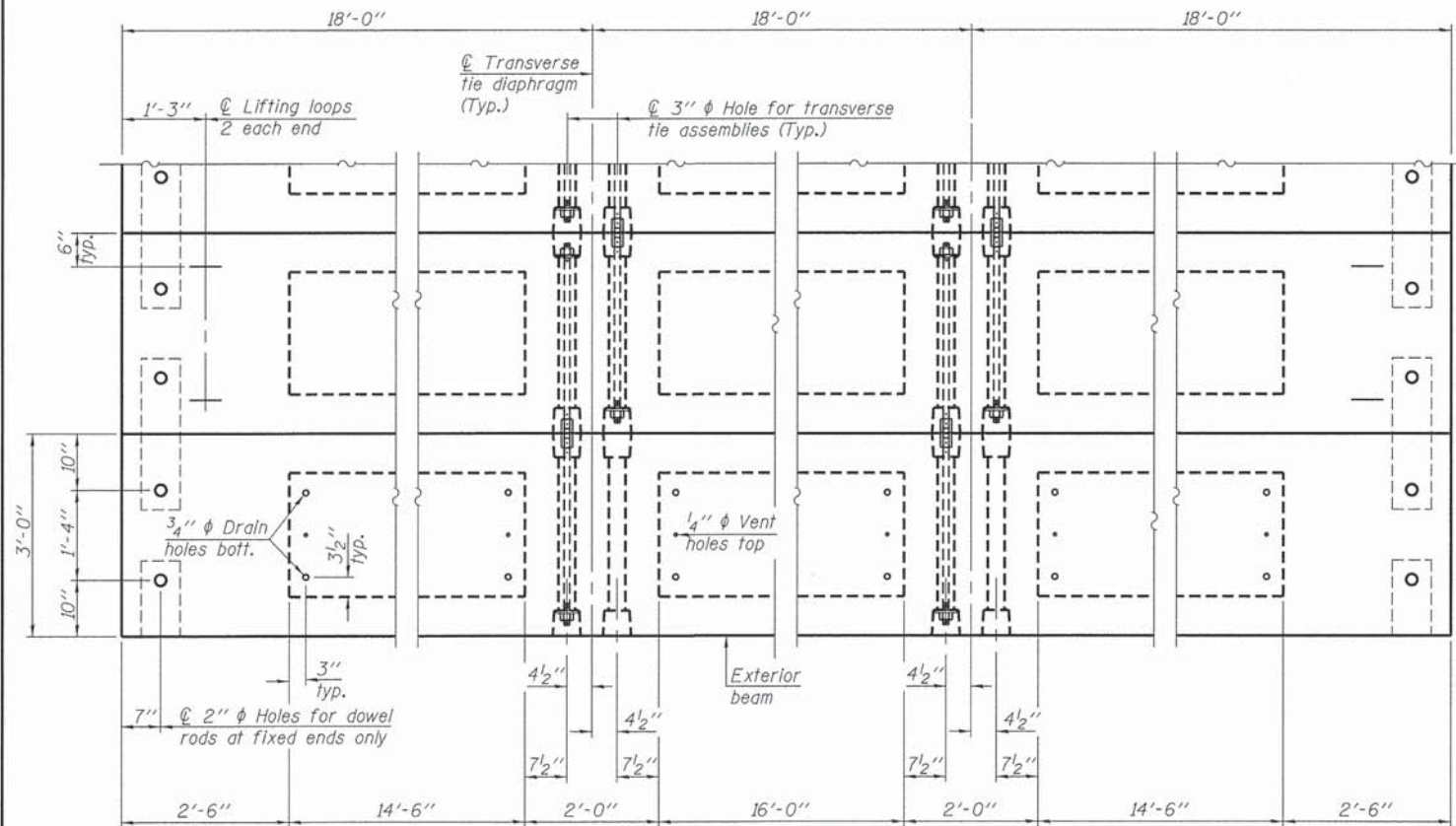


**BAR A1(E)**

**BAR U1(E)**



**LIFTING LOOP DETAIL**



**PLAN VIEW**

**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.  
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'ci, shall be 5000 psi.  
Reinforcement bars designated (E) shall be epoxy coated.

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

PD-2136-0D 7-1-10

FILE NAME = 128134-shr-brjdgedgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE COMP. 184.000999	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS**  
**JEFFERSON COUNTY HIGHWAY DEPARTMENT**

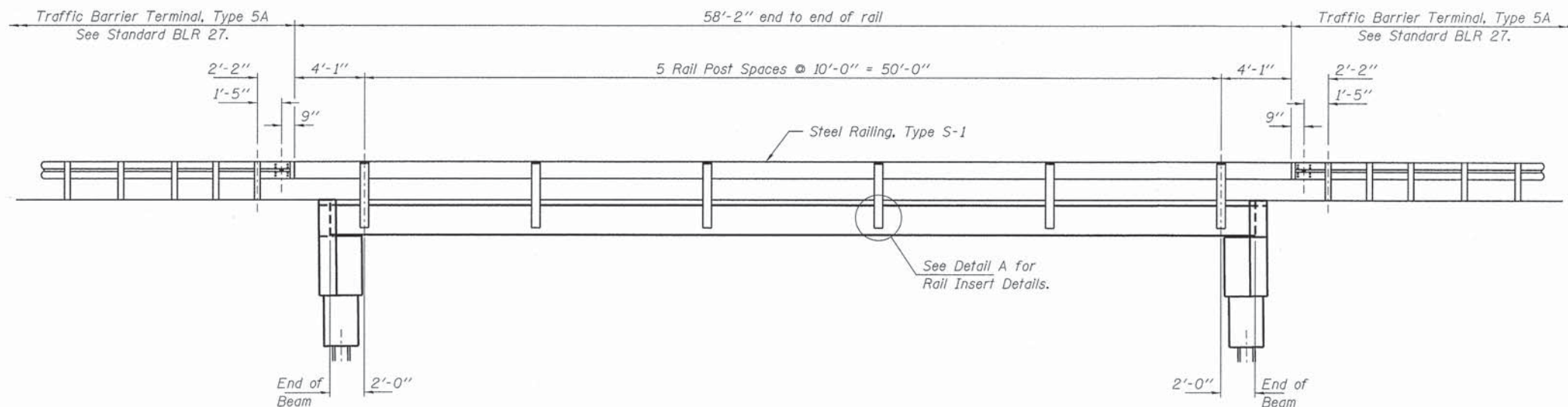
**21" x 36" PPC DECK BEAM DETAILS**  
**STRUCTURE NO. 041-3745**

SHEET NO. 3 OF 9 SHEETS

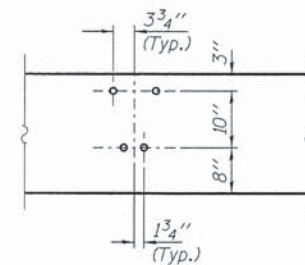
**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,620
---	---------	-------

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
823	08-00199-00-BR	JEFFERSON	26	20
LOG CABIN ROAD			CONTRACT NO. 99522	
ILLINOIS FED. AID PROJECT BR05-00810601				

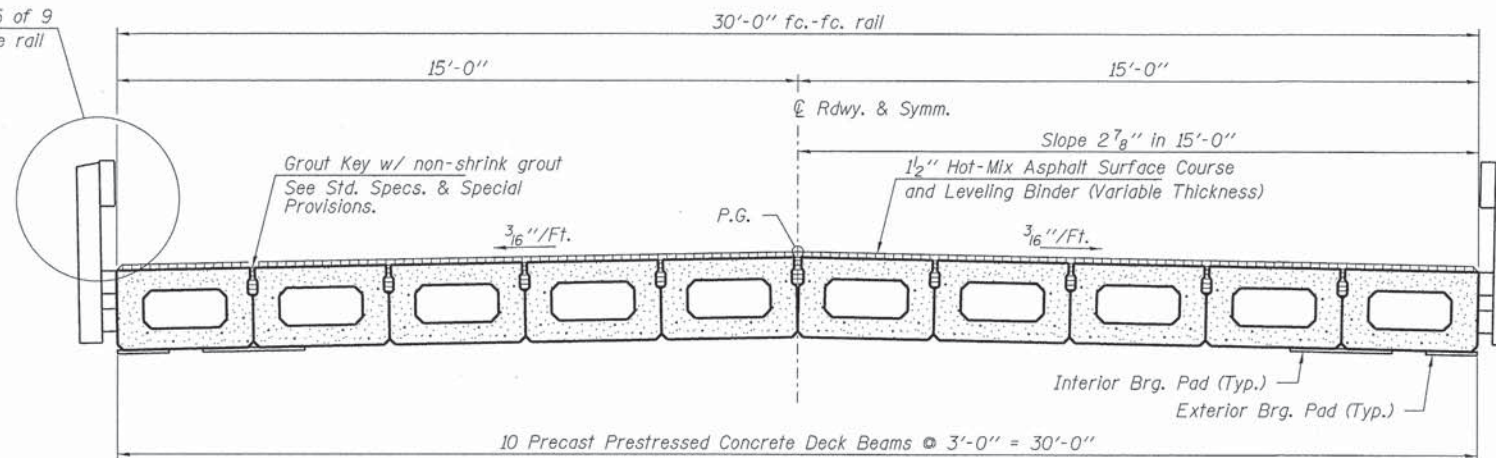


**ELEVATION**  
Showing Rail Post Spaces  
See sheet 5 of 9 for Railing Details.

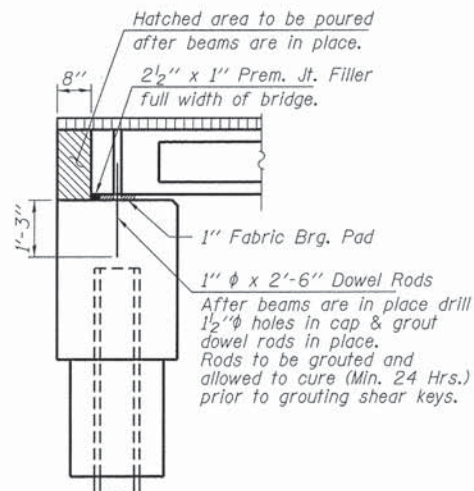


**DETAIL A**

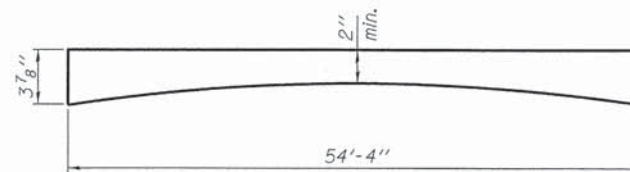
See sheet 5 of 9 for complete rail details.



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

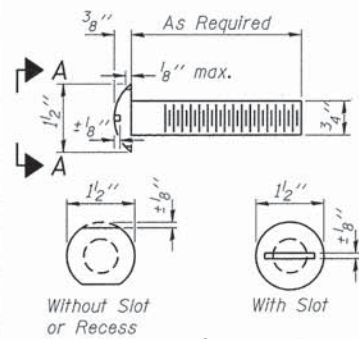


**SECTION AT ABUTMENTS**  
@ Rt. L's

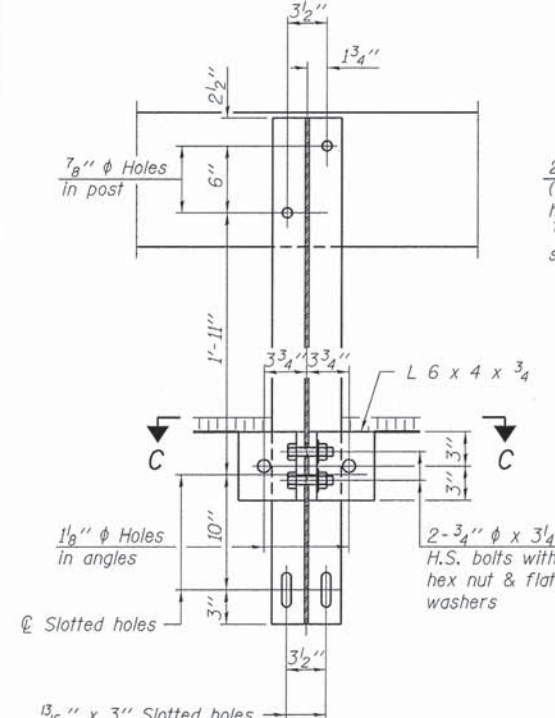
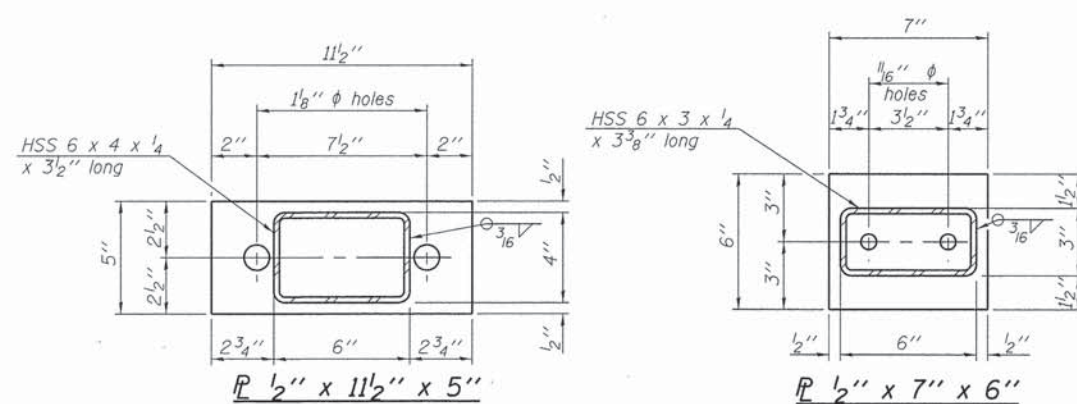


**ANTICIPATED HMA WEARING SURFACE PROFILE**  
(For information only - beam camber may vary in field.)

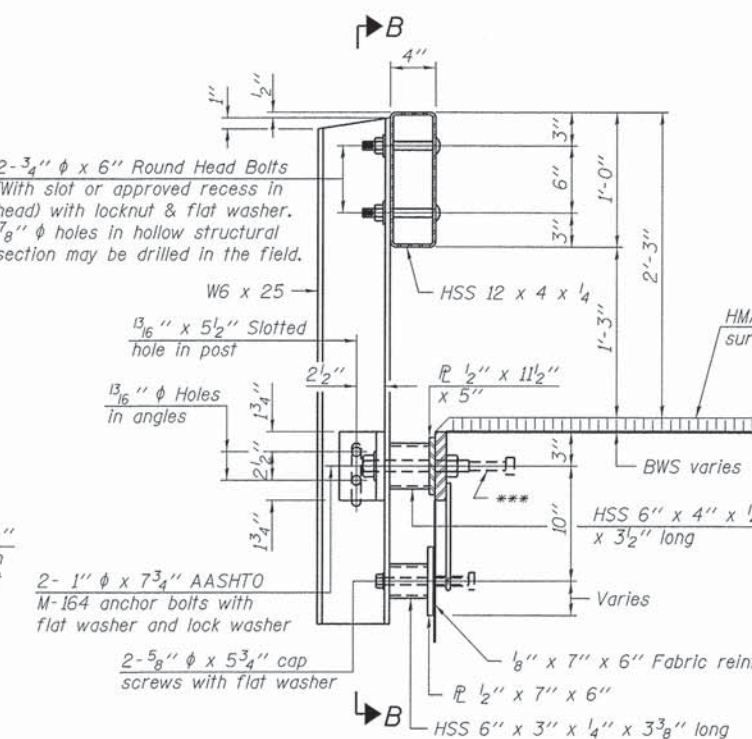
FILE NAME = 120134-shr-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>SUPERSTRUCTURE DETAILS STRUCTURE NO. 041-3745</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2003 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62759	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	21	
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.002059	PLOT DATE = 1/15/2014	DRAWN - R.D.H.	REVISED -			LOG CABIN ROAD					
						CONTRACT NO. 99522					
				SHEET NO. 4 OF 9 SHEETS							
				ILLINOIS FED. AID PROJECT BROS-00810601							



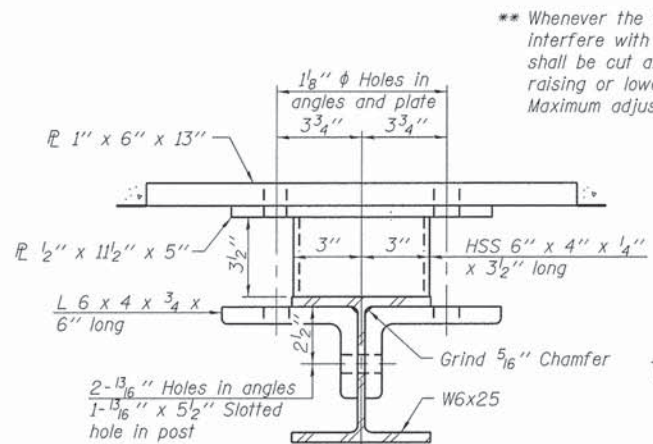
**VIEW A-A  
ROUND HEAD BOLT**



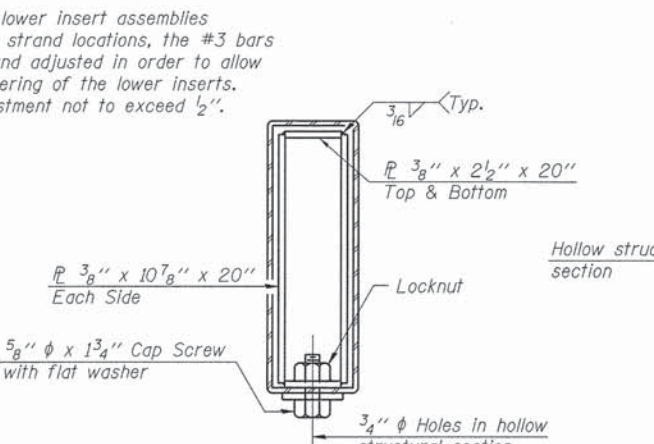
**SECTION B-B**



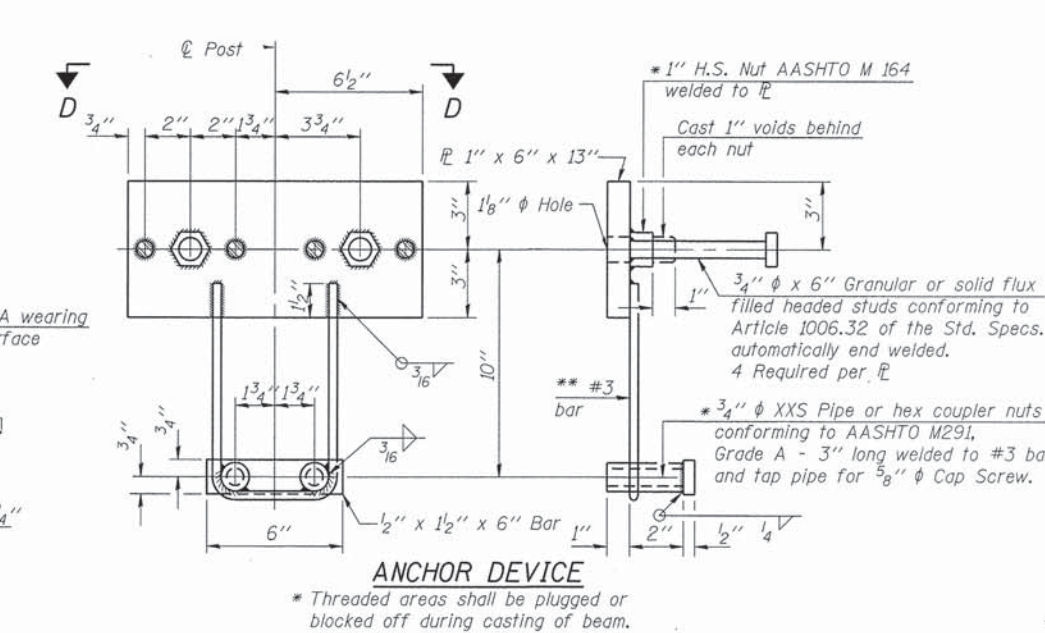
**SECTION AT RAILING POST**



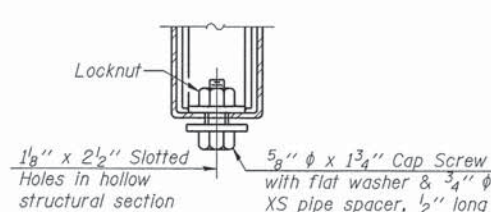
**SECTION C-C**



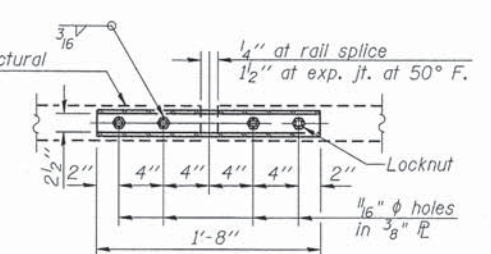
**SECTIONS AT RAIL SPLICE**



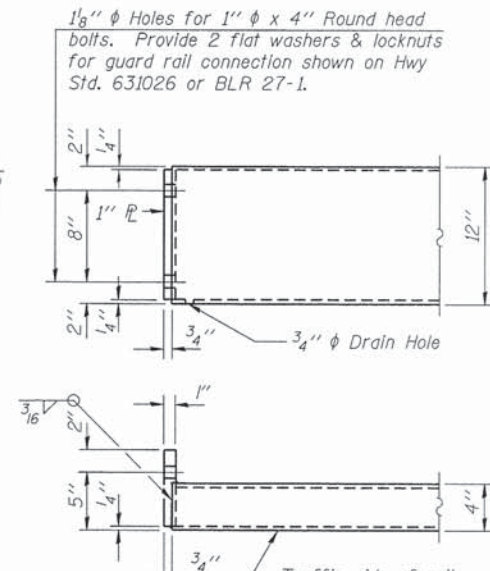
**ANCHOR DEVICE**



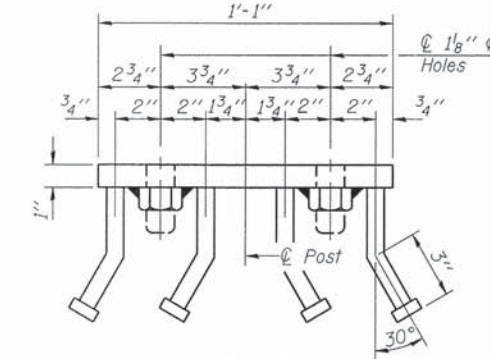
**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE  
TYPICAL**



**END OF RAIL DETAILS**



**VIEW D-D**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	116

**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection. For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1. All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.  
 \*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

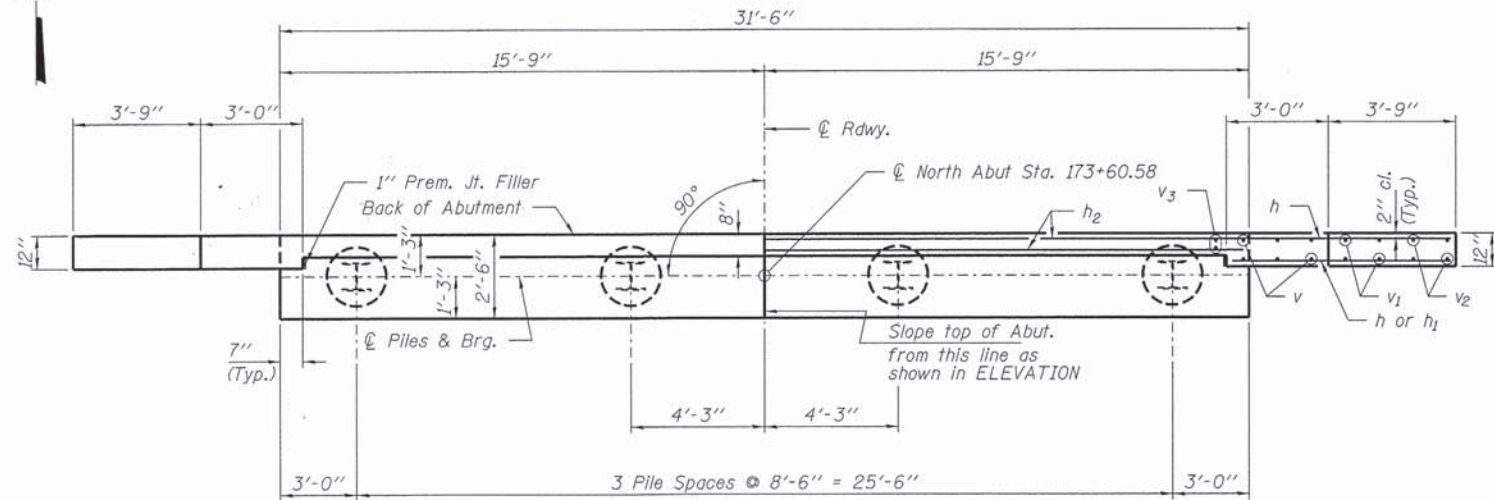
FILE NAME = 128134-shr-brsdge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000989	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS  
JEFFERSON COUNTY HIGHWAY DEPARTMENT**

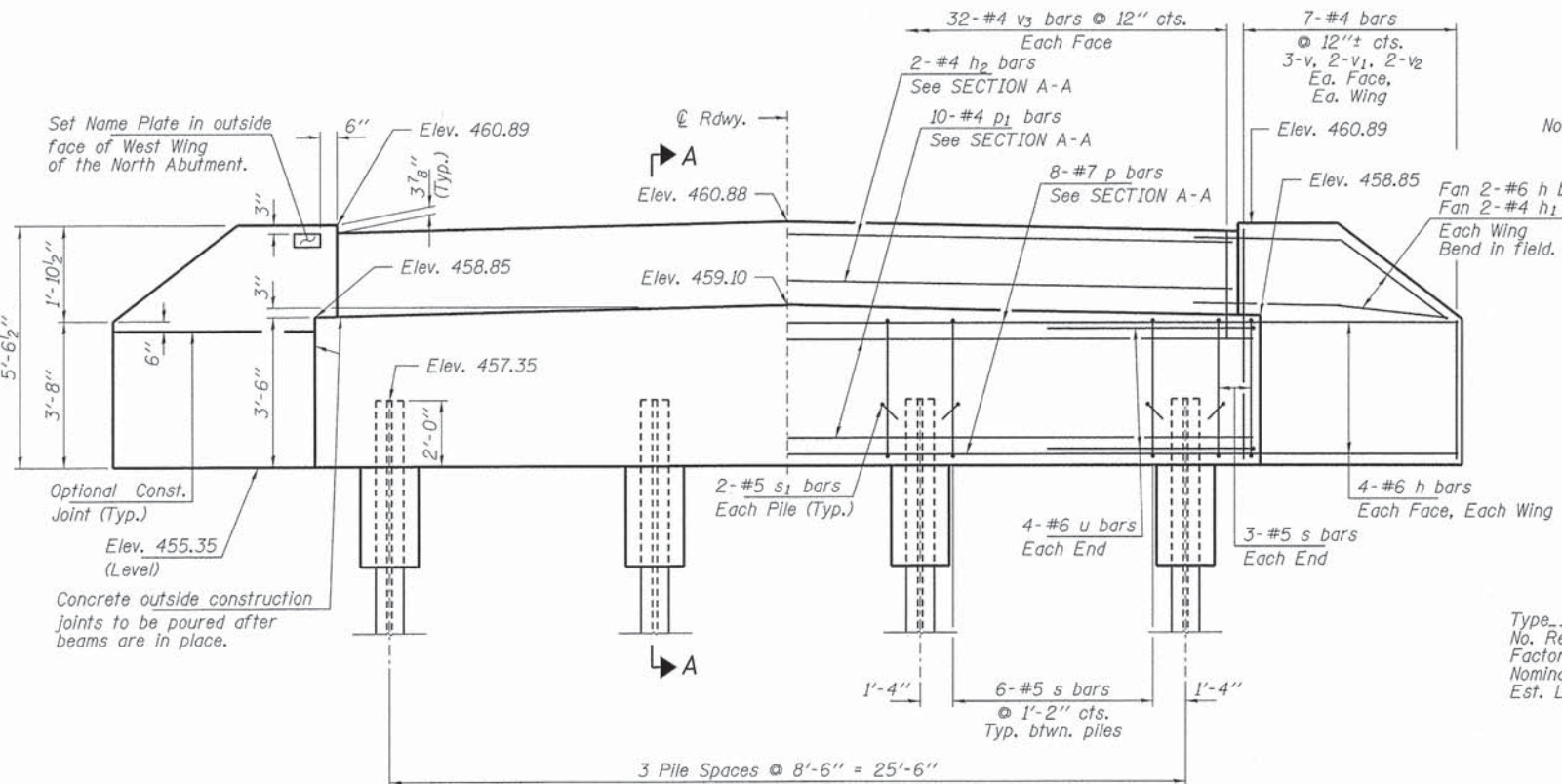
**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 041-3745**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
823	08-00199-00-BR	JEFFERSON	26	22
LOG CABIN ROAD			CONTRACT NO. 99522	
ILLINOIS FED. AID PROJECT BROS-00810601				

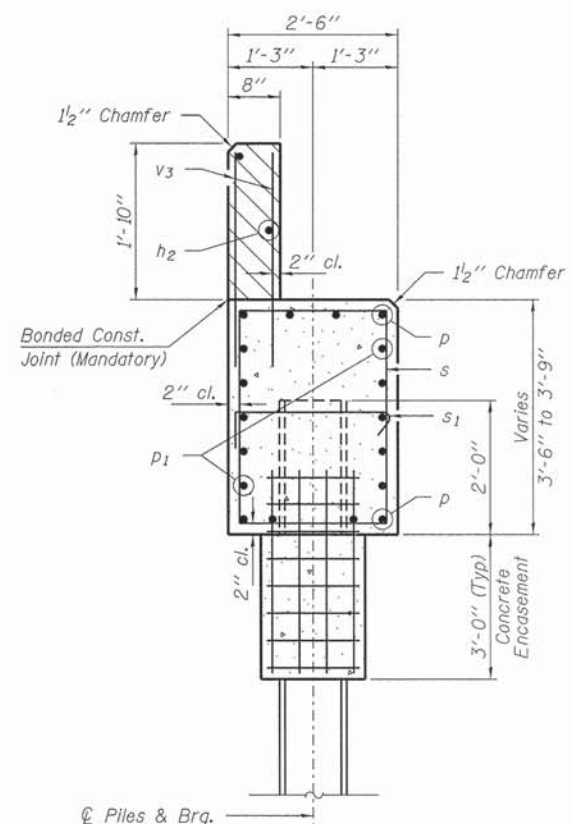
SHEET NO. 5 OF 9 SHEETS



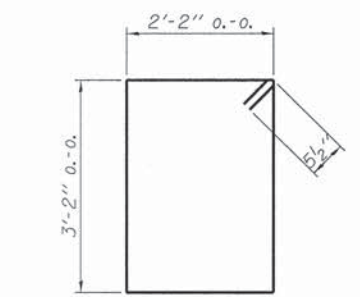
**PLAN**



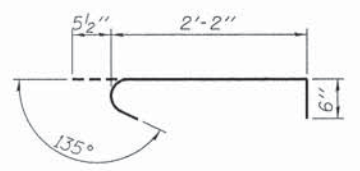
**ELEVATION**  
(Looking North)



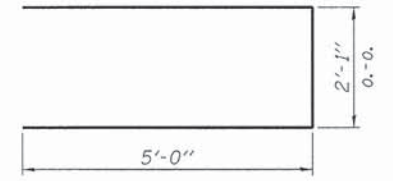
**SECTION A-A**



**BAR s**



**BAR s1**



**BAR u**

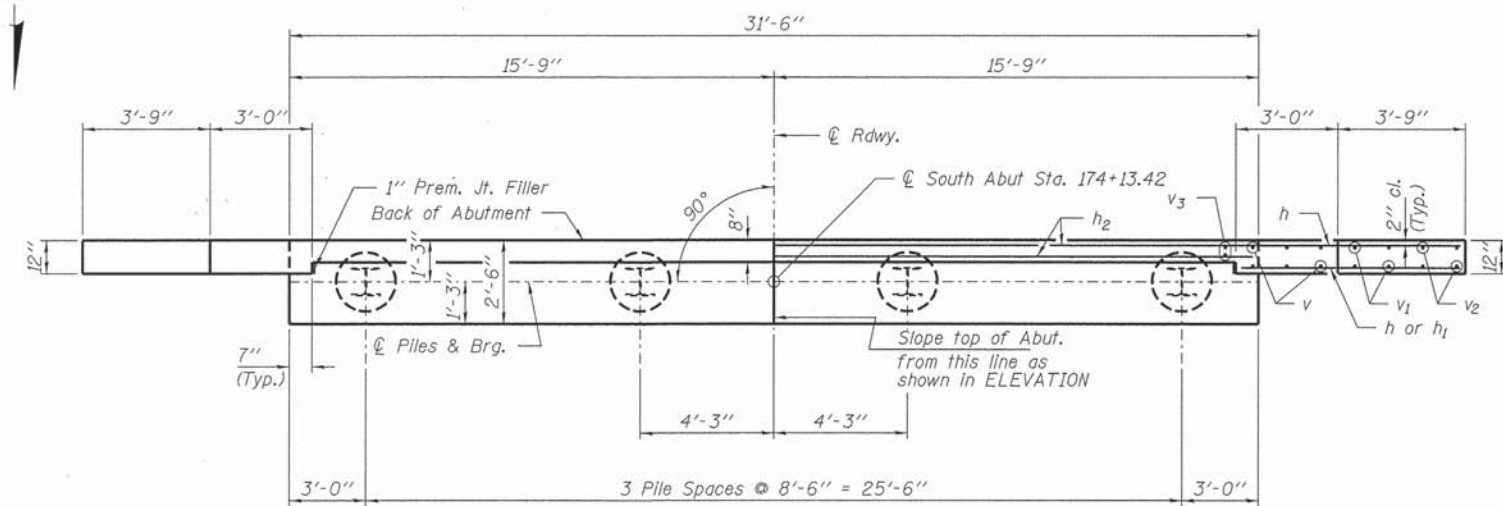
Note: Extend h bars into abutment cap.

**PILE DATA**

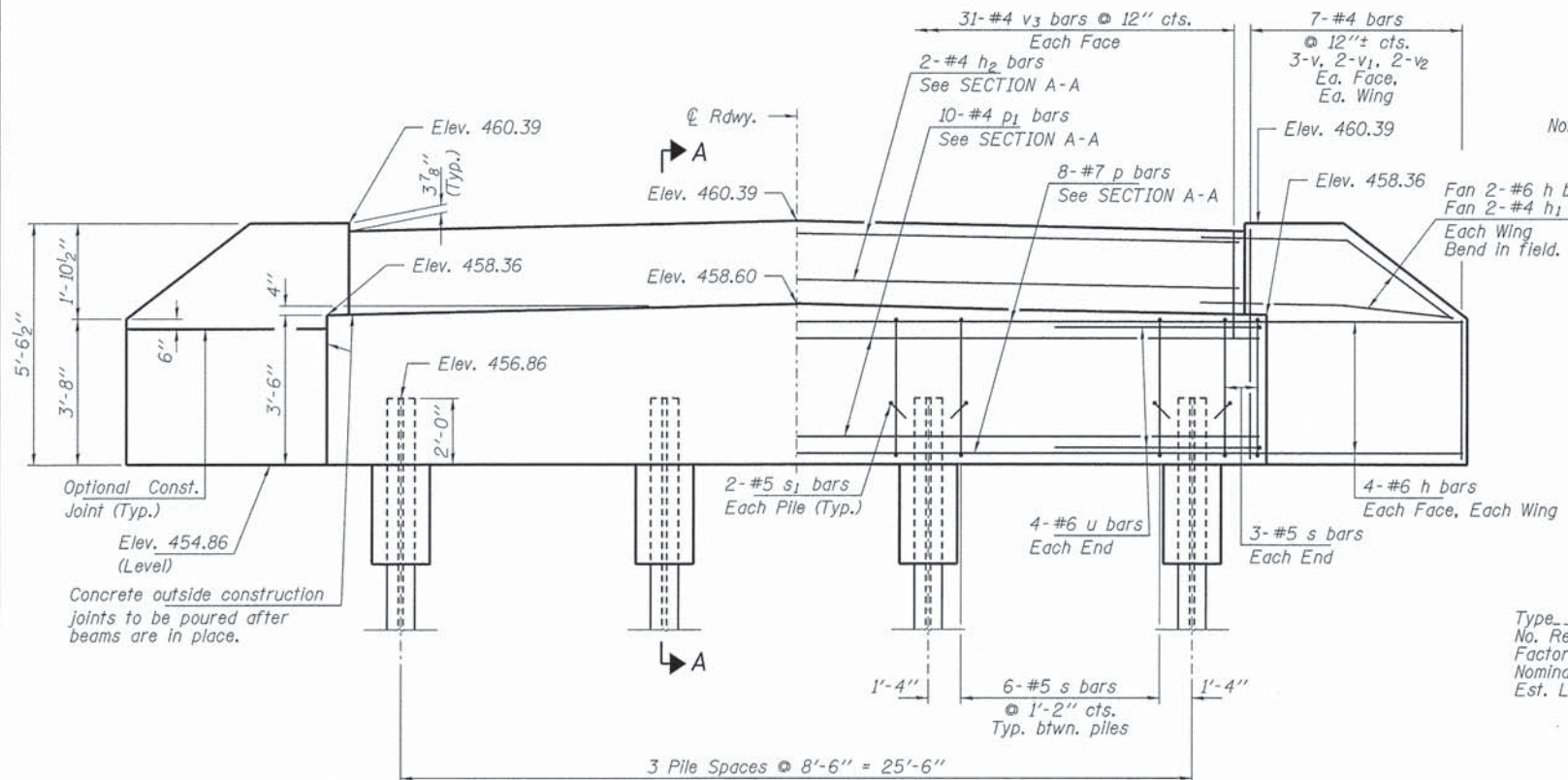
Type ----- Steel HP10x42  
 No. Req'd. (N. Abut.) ----- 4  
 Factored Resistance Available (Rf) ----- 184 Kips/Pile  
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile  
 Est. Length ----- 20 Ft./Pile

**BILL OF MATERIAL - N. ABUT.**

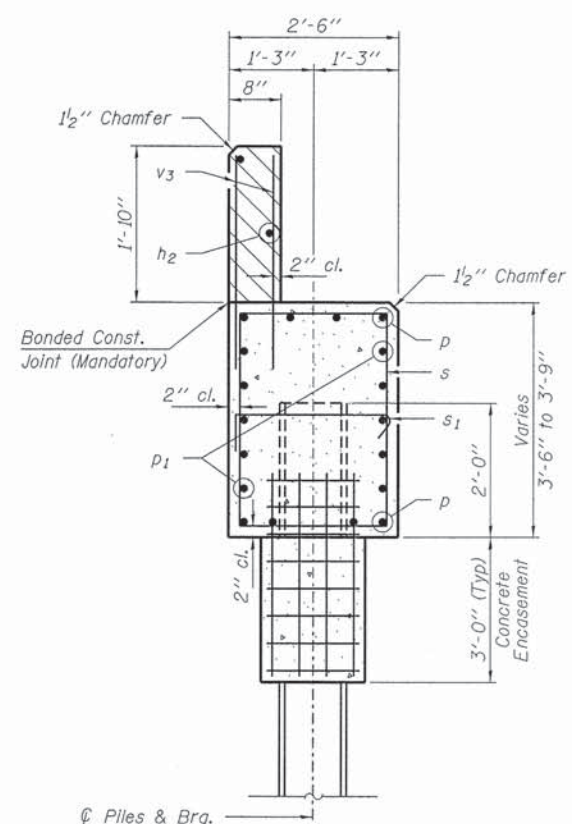
BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#6	8'-0"	—
h1	4	#4	6'-6"	—
h2	2	#4	31'-2"	—
p	8	#7	31'-2"	—
p1	10	#4	31'-2"	—
s	24	#5	11'-7"	□
s1	8	#5	3'-2"	U
u	8	#6	12'-1"	—
v	12	#4	5'-3"	—
v1	8	#4	4'-6"	—
v2	8	#4	3'-6"	—
v3	64	#4	3'-2"	—
Concrete Structures			Cu. Yd.	14.4
Concrete Encasement			Cu. Yd.	1.4
Reinforcement Bars			Pound	1,680
Furnishing Steel Piles HP10x42			Foot	80
Name Plates			Each	1



**PLAN**

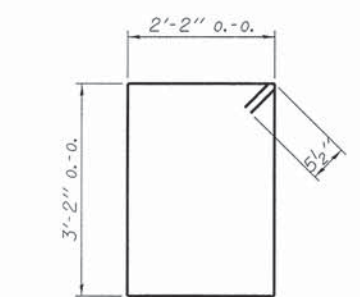


**ELEVATION**  
(Looking South)

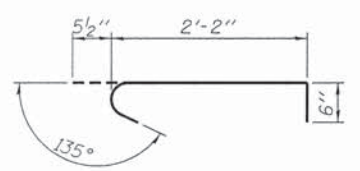


**SECTION A-A**

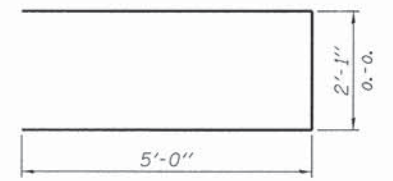
Hatched area to be poured after beams are in place.



**BAR s**



**BAR s1**



**BAR u**

Note: Extend h bars into abutment cap.

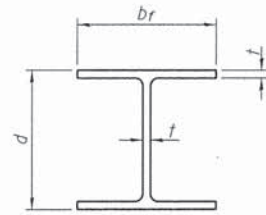
**PILE DATA**

Type ----- Steel HP10x42  
 No. Req'd. (S. Abut.) ----- 4  
 Factored Resistance Available (Rf) ----- 184 Kips/Pile  
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile  
 Est. Length ----- 20 Ft/Pile

**BILL OF MATERIAL - S. ABUT.**

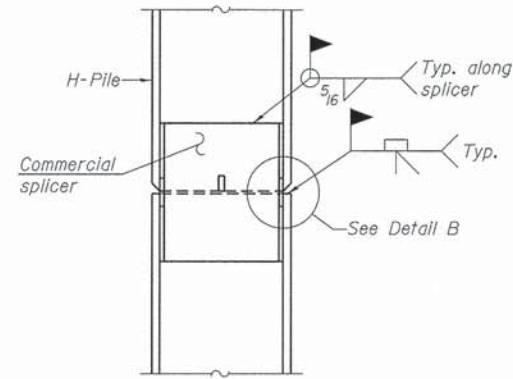
BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#6	8'-0"	—
h1	4	#4	6'-6"	—
h2	2	#4	3'-2"	—
p	8	#7	3'-2"	—
p1	10	#4	3'-2"	—
s	24	#5	11'-7"	□
s1	8	#5	3'-2"	┌
u	8	#6	12'-1"	—
v	12	#4	5'-3"	—
v1	8	#4	4'-6"	—
v2	8	#4	3'-6"	—
v3	64	#4	3'-2"	—
Concrete Structures			Cu. Yd.	14.4
Concrete Encasement			Cu. Yd.	1.4
Reinforcement Bars			Pound	1,680
Furnishing Steel Piles HP10x42			Foot	80



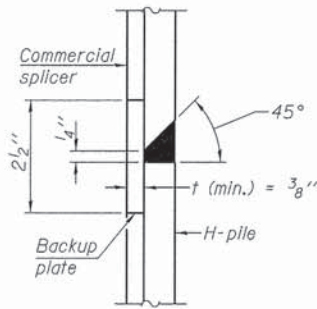


**STEEL PILE TABLE**

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 1/16"	30"
x102	14"	14 3/4"	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"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	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"

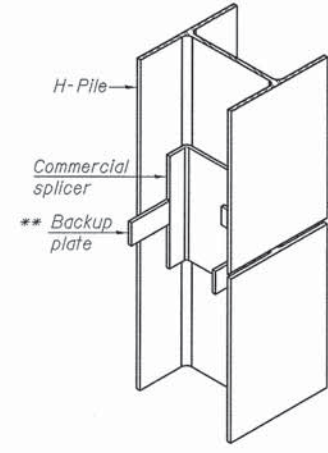


**ELEVATION**

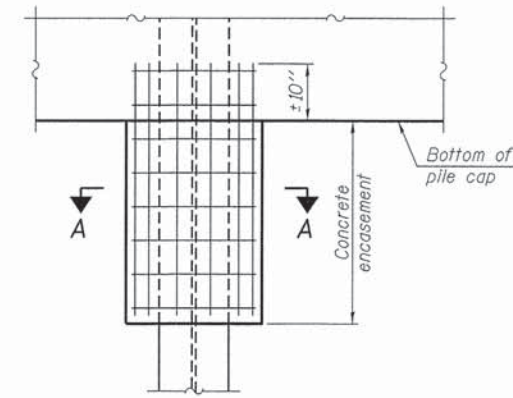


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**

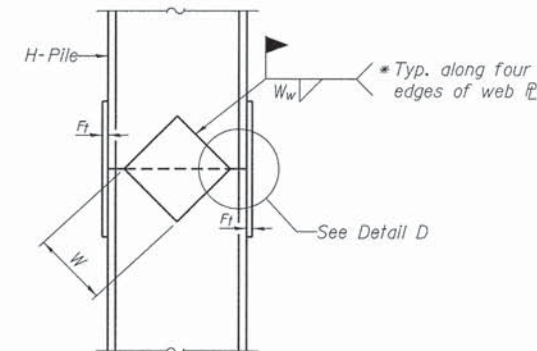


**ISOMETRIC VIEW**

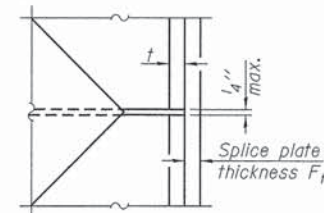


**ELEVATION**

**PILE ENCASEMENT**

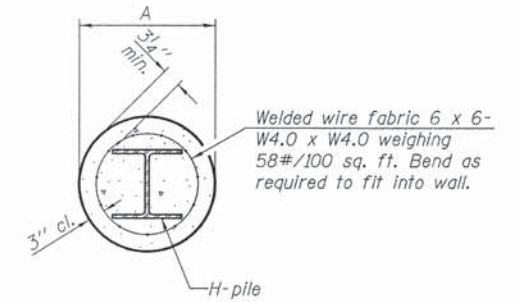


**ELEVATION**



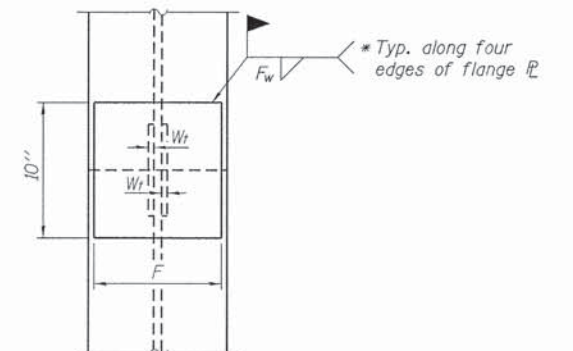
**DETAIL D**

**WELDED PLATE FIELD SPLICE**



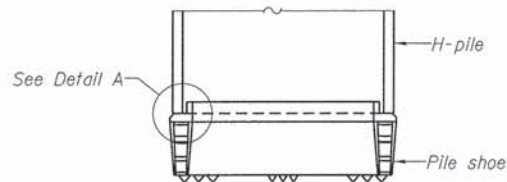
Note:  
Forms for encasement may be omitted when soil conditions permit.

**SECTION A-A**

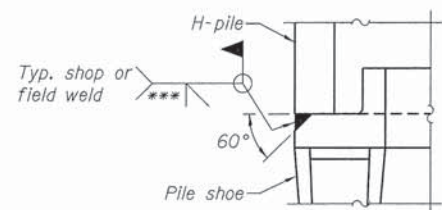


**END VIEW**

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

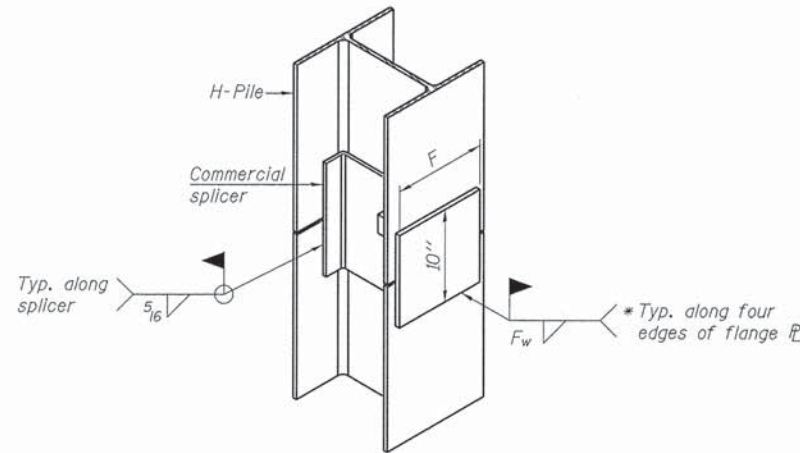


**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**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 shoe manufacturer (5/16" min.).

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

F-HP

1-27-12

FILE NAME = 120134-sht-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	<b>STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT</b>	<b>HP PILE DETAILS STRUCTURE NO. 041-3745</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763		CHECKED - S.W.M.	REVISED -			823	08-00199-00-BR	JEFFERSON	26	25
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184.000999	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			LOG CABIN ROAD		CONTRACT NO. 99522		
	PLOT DATE = 1/15/2014	CHECKED - S.W.M.	REVISED -			SHEET NO. 8 OF 9 SHEETS		ILLINOIS FED. AID PROJECT BROS-00810601		

HOLCOMB FOUNDATION ENGINEERING INC.  
P.O. Box 88 618-529-5262  
Carbondale, Il. 62903 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: H-12102 Bridge Log Cabin Road Date: 6/7/2012  
Section: 08-00199-00-BR Station \_\_\_\_\_ Bored by: B. Schwartz  
Structure: 041-3034 \_\_\_\_\_ Checked By: T. Holcomb  
County: Jefferson

Boring No: <u>1</u> Station: <u>173+44.82</u> Offset: <u>2.95' LT.</u>	Elevation	N	Qu	tsf	w %	Surface Water Elev.		Elevation	N	Qu	tsf	w %	
						Ground Water Elev. During Drilling	Upon Completion						
Ground Surface	(459.14) 99.2	0											
4" Crushed Stone and Clay													
Brown Mottled Gray Silty CLAY (A-6)		5	1.7B	19				-25					
(455.14) 95.2													
Brown Sandy CLAY (A-6)		5	3	0.9B	19								
(452.64) 92.7													
Brown Clayey SAND (SC)		3	0.4S	20				-30					
(450.14) 90.2													
Brown Mottled Gray Clayey SAND (A-2-4)		2	--	21									
(447.64) 87.7													
Brown Mottled Gray Weathered SHALE		8	2.3S	21				-35					
(445.14) 85.2													
Gray Mottled Brown Weathered SHALE		15	34	4.2S	13								
(442.64) 82.7													
Gray Mottled Brown SHALE		100	--	8				-40					
(440.64) 80.7													
Gray SHALE		100	--	6									
(437.14)													
End of Boring @ -22.0'	77.2	100	--	6									

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
Qu - Unconfined Compressive Strength in tons/sq.ft.  
w - Water Content - percentage of oven dry weight-%  
B = Bulge Failure  
S = Shear Failure  
E = Estimated Value  
P = Penetrometer

BORING 1