

06-15-12 LETTING ITEM 073

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

PROJECT BROS-0081(063)
SECTION 09-06122-00-BR
FARRINGTON ROAD DISTRICT
JEFFERSON COUNTY
T.R. 91 / MALECKI ROAD
PROPOSED STRUCTURE NO. 041-3748
PROPOSED STRUCTURE NO. 041-5077
C-99-530-10

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 91	09-06122-00-BR	JEFFERSON	37	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99471		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4.	TYPICAL CROSS SECTIONS
5-7.	PLAN & PROFILE
8-21.	STATION CROSS SECTIONS
22-25.	CULVERT PLANS
26-36.	BRIDGE PLANS
37.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-06	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
BLR 23-4	TRAFFIC BARRIER TERMINAL, TYPE 1
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

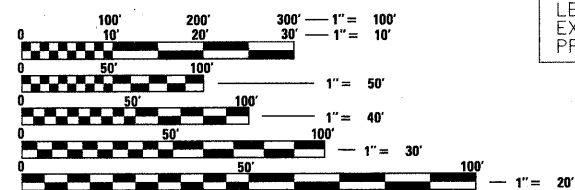
UTILITIES

ELECTRIC:
TRI-COUNTY ELECTRIC COOPERATIVE
3906 BROADWAY
MT. VERNON, IL 62864
ATTN: DENNIS IVERS

TELEPHONE:
AT&T / DISTRIBUTION
210 NORTH LOCUST
FLOOR 2
CENTRALIA, IL 62801

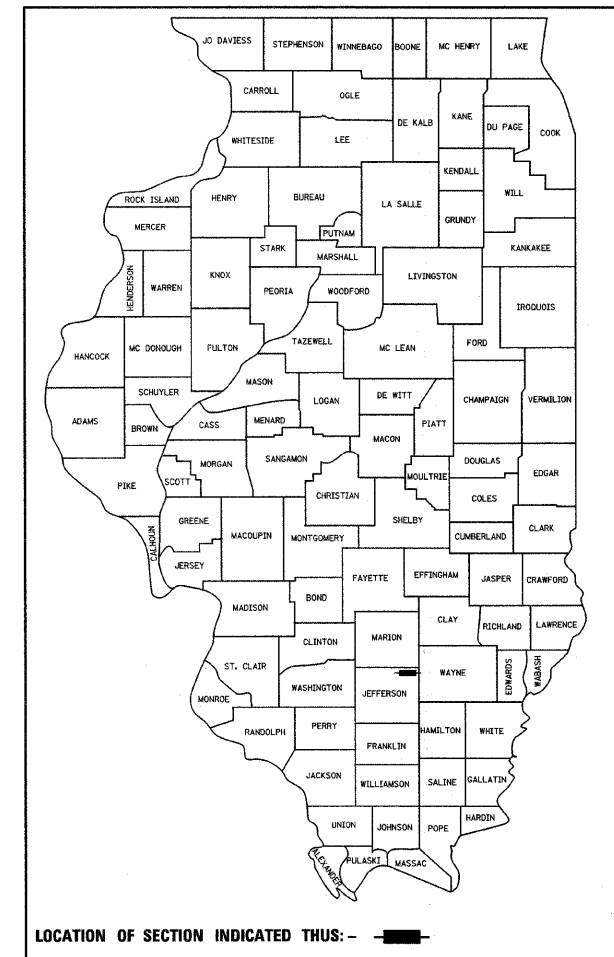
WATER:
NORTHEAST WATER CO.
1018 JORDAN ST.
MT. VERNON, IL 62864
ATTN: THADDEUS STALEY

PETROLEUM:
COUNTY MARK COOPERATIVE
1200 REFINERY ROAD
MT. VERNON, IN 47620
ATTN: JIM CRUISE



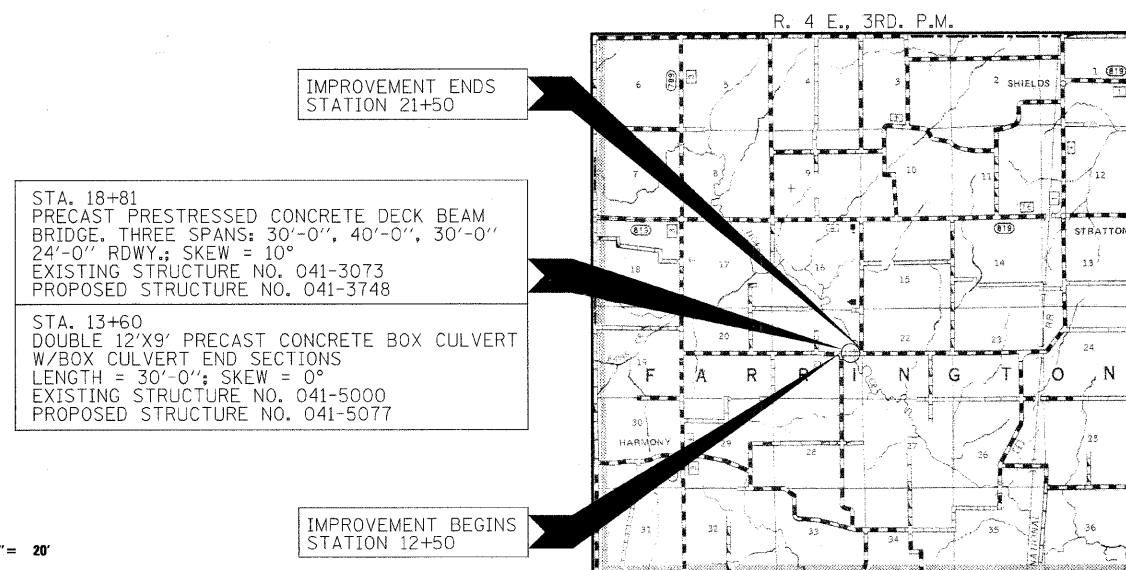
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 99471



FUNCTIONAL CLASSIFICATION: LOCAL ROAD (NON-URBAN)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 150 ADT

ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	3-1 20 12 <i>[Signature]</i> COUNTY ENGINEER
APPROVED	3-8 20 12 <i>[Signature]</i> TOWNSHIP COMMISSIONER
PASSED	3/13 20 12 <i>[Signature]</i> DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	3/13 2012 <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS REGION FIVE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

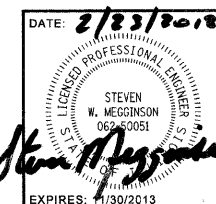


STA. 18+81
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. THREE SPANS: 30'-0", 40'-0", 30'-0" 24'-0" RDWY.; SKEW = 10°
EXISTING STRUCTURE NO. 041-3073
PROPOSED STRUCTURE NO. 041-3748

STA. 13+60
DOUBLE 12'X9' PRECAST CONCRETE BOX CULVERT W/BOX CULVERT END SECTIONS
LENGTH = 30'-0"; SKEW = 0°
EXISTING STRUCTURE NO. 041-5000
PROPOSED STRUCTURE NO. 041-5077

LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 900 FEET = 0.170 MILES



HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS • STRUCTURAL ENGINEERS • LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 11.0266.130 DATE: 02/20/12

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE 0011	
		UNIT	TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	336
20200100	EARTH EXCAVATION	CU YD	535
20300100	CHANNEL EXCAVATION	CU YD	660
20700110	POROUS GRANULAR EMBANKMENT	TON	450
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	1870
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	160
28000305	TEMPORARY DITCH CHECKS	FOOT	70
28000400	PERIMETER EROSION BARRIER	FOOT	1150
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	860
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	795
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	300
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1
50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	42.8
50300280	CONCRETE ENCASEMENT	CU YD	14.8
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	2400
50800105	REINFORCEMENT BARS	POUND	4300
* 50900205	STEEL RAILING, TYPE S1	FOOT	257
51201400	FURNISHING STEEL PILES HP10X42	FOOT	336
51202305	DRIVING PILES	FOOT	160
51500100	NAME PLATES	EACH	2
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	4

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE 0011	
		UNIT	TOTAL
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
67100100	MOBILIZATION	L SUM	1
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	2
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8
* ^ LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.8
^ X5401209	PRECAST CONCRETE BOX CULVERTS 12' X 9' (SPECIAL)	FOOT	52
^ Z0065000	SETTING PILES IN ROCK	EACH	8

^ 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 SURFACE 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 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.
- TREES WITHIN THE RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENT WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

AGGREGATE SURFACE COURSE, TYPE B	2.05 TON/CU YD
STONE DUMPED RIPRAP, CLASS A4	1.75 TON/CU YD
POROUS GRANULAR EMBANKMENT	2.05 TON/CU YD
TEMPORARY EROSION CONTROL SEEDING	100 POUNDS/ACRE
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER
SEEDING, CLASS 2 (SPECIAL) = 0.8 ACRES

EARTHWORK SUMMARY						
LOCATION	EARTH EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100					WASTE (+) / SHORTAGE (-)
	CU YD			CU YD		CU YD
TR 91 (MALECKI ROAD)						
STA. 12+50.00 TO STA. 18+30.24	429	25.00%	100.00%	322	501	-179
STA. 18+30.24 TO STA. 19+31.76	0	25.00%	100.00%	0	0	0
STA. 19+31.76 TO STA. 21+50.00	105	25.00%	100.00%	79	84	-5
CHANNEL EXCAVATION	660	25.00%	70.00%	347		347
TOTAL	534			748	585	163
USE	535					165
				WASTE	165	CU.YD.

SEEDING SCHEDULE		
LOCATION	SEEDING, CLASS 2 (SPECIAL)	*TEMPORARY EROSION CONTROL SEEDING
	25001000	28000250
	ACRE	POUND
TR 91 (MALECKI ROAD)		
STA. 12+50.00 TO STA. 18+30.24	0.62	124
STA. 19+31.76 TO STA. 21+50.00	0.19	38
TOTAL	0.81	162
USE	0.80	160

* 2 APPLICATIONS OF TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 POUNDS / ACRE

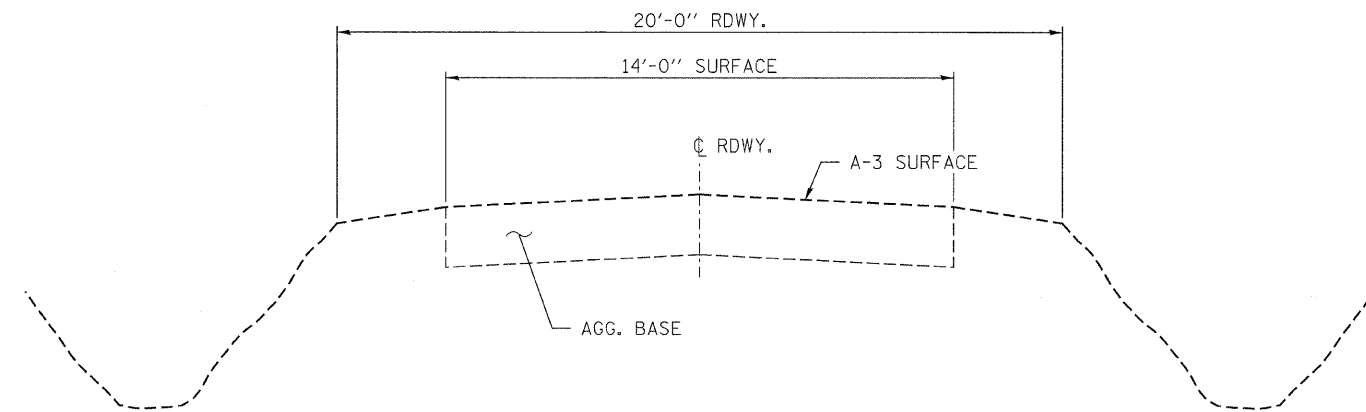
GUARDRAIL TABULATION				
LOCATION	TRAFFIC BARRIER TERMINAL TYPE 5A	TRAFFIC BARRIER TERMINAL, TYPE 1	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL MARKERS TYPE A
	63100075	LR631020	78201000	78200410
	EACH	EACH	EACH	EACH
TR 91 (MALECKI ROAD)				
RT. STA 18+17.20 TO RT. STA 18+30.45	1			
LT. STA 19+31.55 TO LT. STA 19+44.80	1			
RT. STA 17+92.20 TO RT. STA 18+17.20		1	1	1
LT. STA 19+44.80 TO LT. STA 19+69.80		1	1	1
RT. STA 19+32.70			1	
LT. STA 18+29.30			1	
RT. STA 13+37.00			1	
LT. STA 13+37.00			1	
RT. STA 13+67.00			1	
LT. STA 13+67.00			1	
TOTAL	2	2	8	2

TREE REMOVAL	
LOCATION	(6 TO 15)
	20100110
	UNIT
TR 91 (MALECKI ROAD)	
RT. STA 13+05 TO STA 20+31	336
TOTAL	336

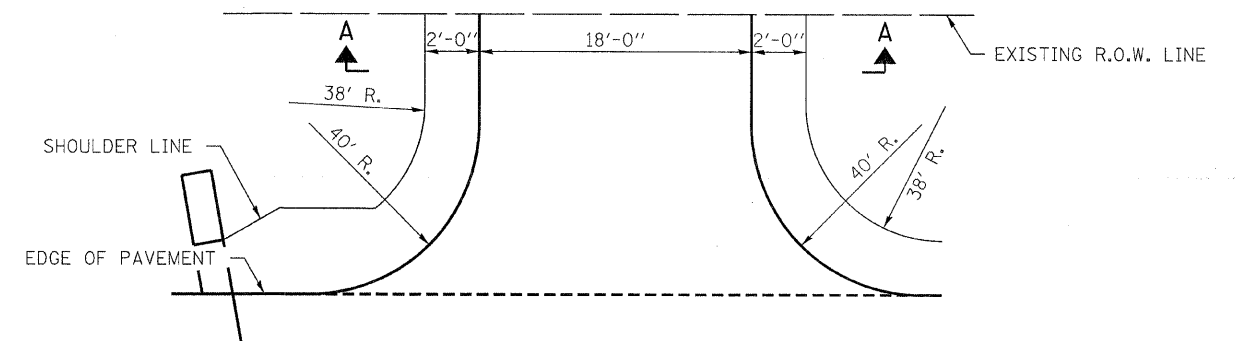
TEMPORARY DITCH CHECKS	
LOCATION	28000305
	FOOT
TR 91 (MALECKI ROAD)	
LT. STA 13+30	15
LT. STA 13+90	15
LT. STA 20+50	10
RT. STA 20+50	10
LT. STA 21+50	10
RT. STA 21+50	10
TOTAL	70

ROADWAY SCHEDULE		
LOCATION	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	AGGREGATE SURFACE COURSE TYPE B
	21001000	40200800
	SQ YD	TON
TR 91 (MALECKI ROAD)		
STA. 12+50.00 TO STA. 18+30.24	1,238	528
STA. 19+31.76 TO STA. 21+50.00	460	193
STA. 99+50.00 TO STA. 100+00.00	170	72
TOTAL	1,868	793
USE	1,870	795

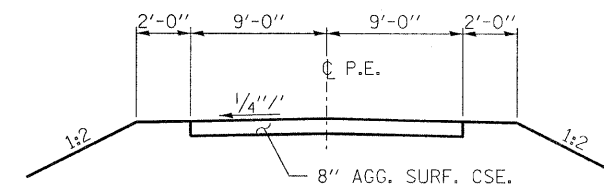
PERIMETER EROSION BARRIER	
LOCATION	28000400
	FOOT
TR 91 (MALECKI ROAD)	
LT. STA 13+85 TO 18+40	455
RT. STA 12+50 TO 13+50	100
RT. STA 13+85 TO 18+40	455
LT. STA 19+30 TO 20+00	70
RT. STA 19+30 TO 20+00	70
TOTAL	1150



EXISTING TYPICAL CROSS SECTION
STA. 12+50 TO 21+50

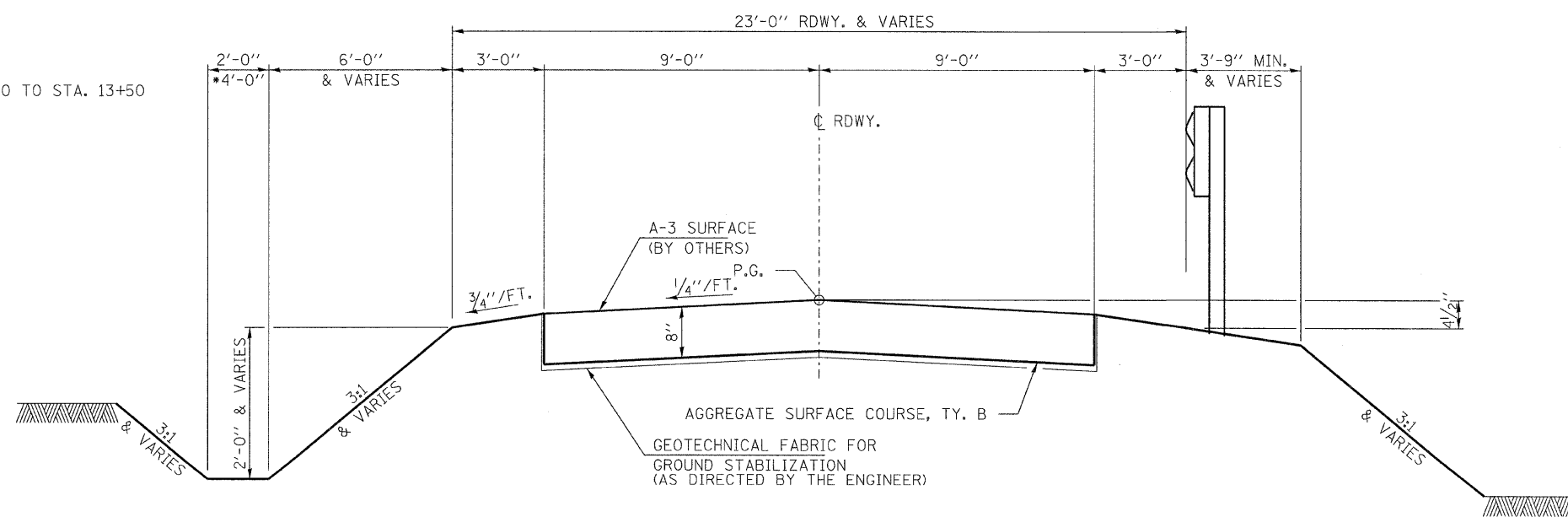


SIDE ROAD DETAIL



SECTION A-A

* WIDTH VARIES
LT. STA. 13+00 TO STA. 13+50



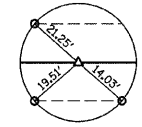
PROPOSED TYPICAL CROSS SECTION
STA. 12+50 TO 21+50

SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

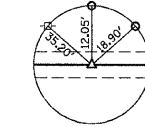
TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 12+50 TO 13+00 AND FROM STA. 20+50 TO 21+50. SEE SHEET 22 FOR TRANSITION AT CULVERT AND SEE SHEET 26 FOR TRANSITION AT BRIDGE.

FILE NAME = 112266-shr-typsections.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS MALECKI ROAD				T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	4				
ILLINOIS PROFESSIONAL DESIGN FIRM L.P./P.E. / S.E. CORP. 184.000999	PLOT DATE = 2/28/2012	CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT				CONTRACT NO. 99471				
		DATE - 02/20/12	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT BR05-00810631			

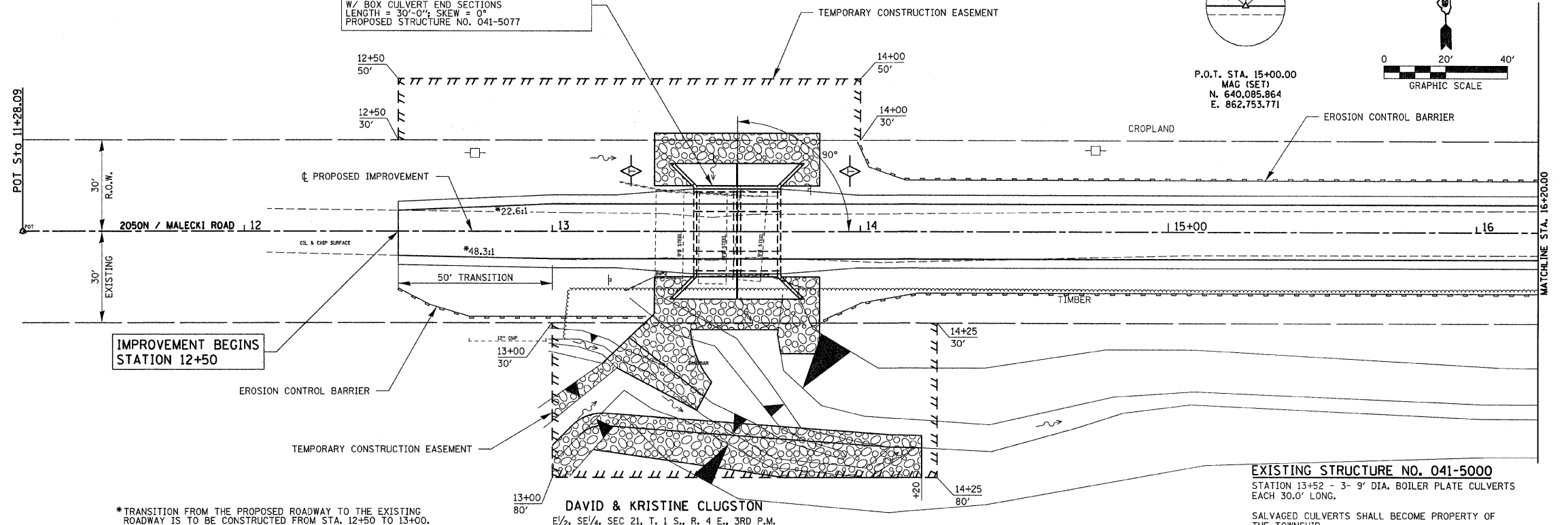
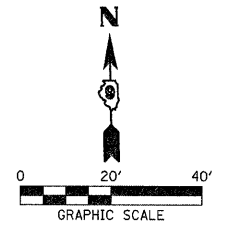


P.O.T. STA. 11+28.09
MAG NAIL (SET)
N. 640,092.459
E. 862,361.934

STATION 13+60
DOUBLE 12 X 9' PRECAST BOX CULVERT (SPECIAL)
W/ BOX CULVERT END SECTIONS
LENGTH = 30'-0" SKEW = 0°
PROPOSED STRUCTURE NO. 041-5077



P.O.T. STA. 15+00.00
MAG (SET)
N. 640,085.864
E. 862,753.771

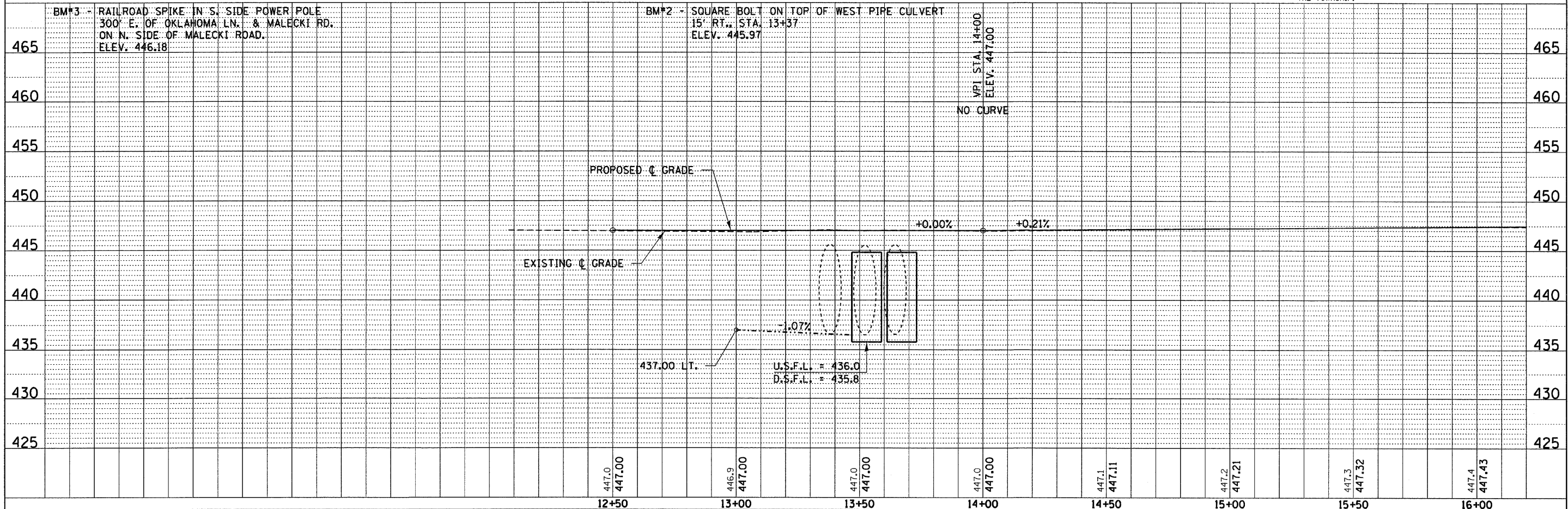


*TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 12+50 TO 13+00.

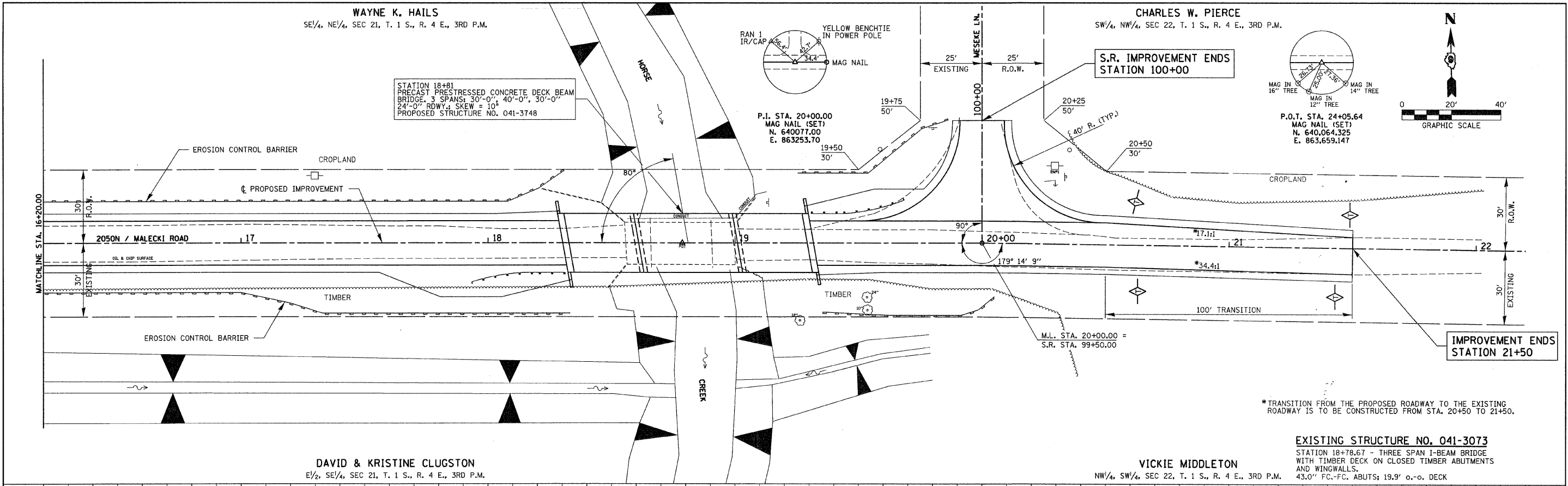
EXISTING STRUCTURE NO. 041-5000
STATION 13+52 - 3- 9' DIA. BOILER PLATE CULVERTS
EACH 30.0' LONG.
SALVAGED CULVERTS SHALL BECOME PROPERTY OF THE TOWNSHIP.

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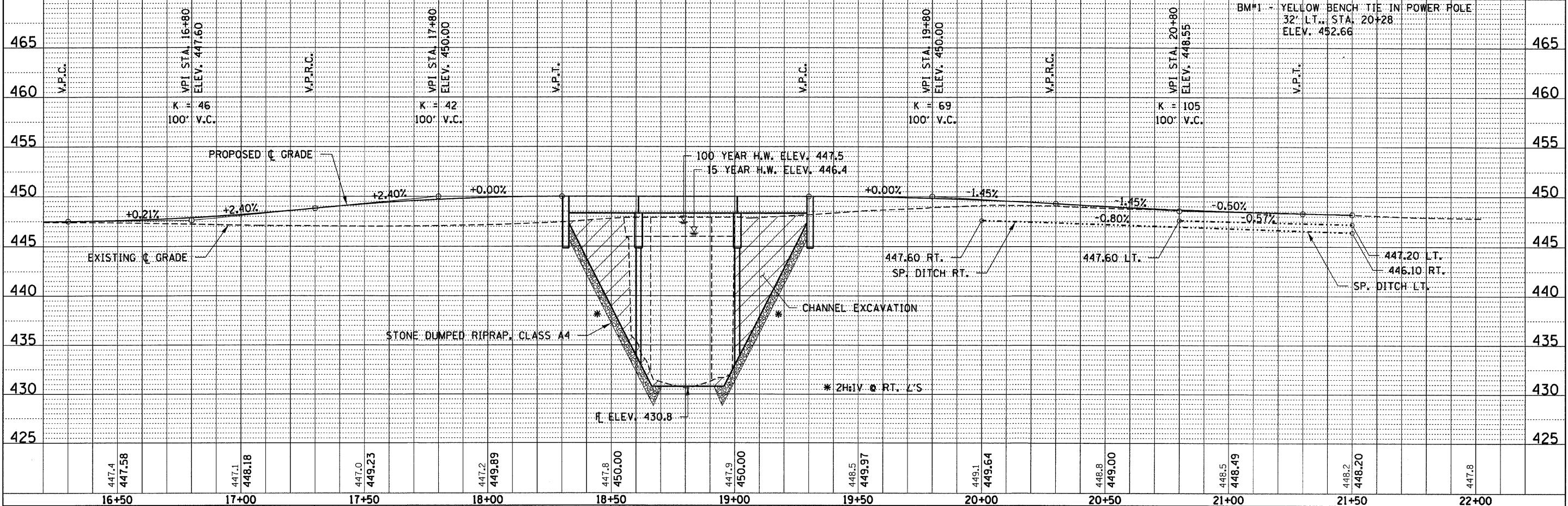


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HAMPTON, LENZINI AND RENWICK, INC. 3068 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.T.M.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	5
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184 003959	PLOT DATE = 2/28/2012	CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
		DATE - 02/20/12	REVISED -		[ILLINOIS] FED. AID PROJECT BR05-0081(063)				



PLAN	SURVEYED	DATE
NO.	BY	
NO.	AS	
NO.	D.T.M.	
NO.	CHECKED	
NO.	DATE	
NO.	FILE NAME	
NO.	PROJECT	
NO.	NO.	

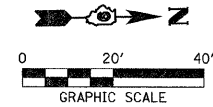
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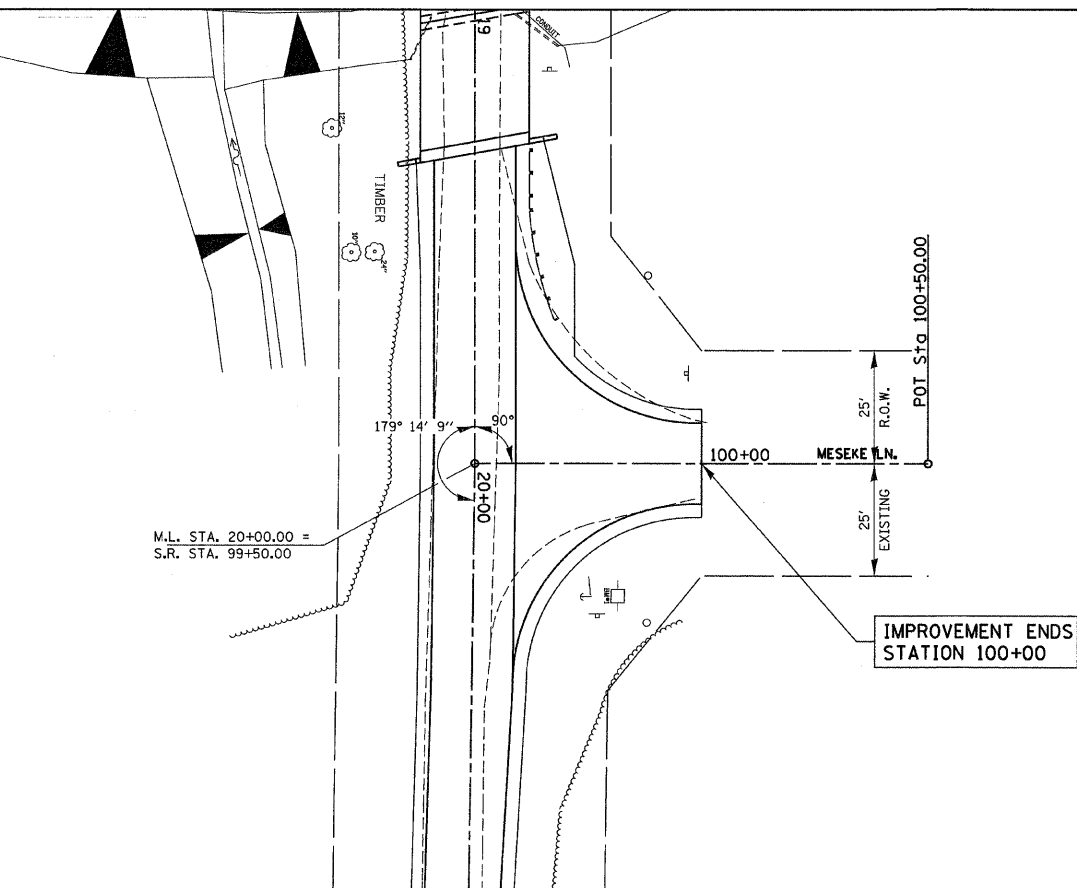
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HAMPTON, LENZINI AND RENWICK, INC. <small>3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703</small>	<small>DRAWN - D.T.M.</small> <small>CHECKED - S.W.M.</small>	<small>REVISED -</small> <small>REVISED -</small>	<small>REVISED -</small> <small>REVISED -</small>		91	09-06122-00-BR	JEFFERSON	37	6	FARRINGTON ROAD DISTRICT	CONTRACT NO. 99471	ILLINOIS FED. AID PROJECT BR05-00810631
<small>PLOT SCALE =</small> <small>PLOT DATE = 2/28/2012</small>	<small>DATE = 02/20/12</small>	<small>REVISED -</small>	<small>REVISED -</small>		<small>SCALE: H20xV5</small>		<small>SHEET NO. 2 OF 3 SHEETS</small>		<small>STA. 16+20.00 TO STA. 22+00.00</small>			

DAVID & KRISTINE CLUGSTON
E1/2, SE1/4, SEC 21, T. 1 S., R. 4 E., 3RD P.M.

WAYNE K. HAILS
SE1/4, NE1/4, SEC 21, T. 1 S., R. 4 E., 3RD P.M.



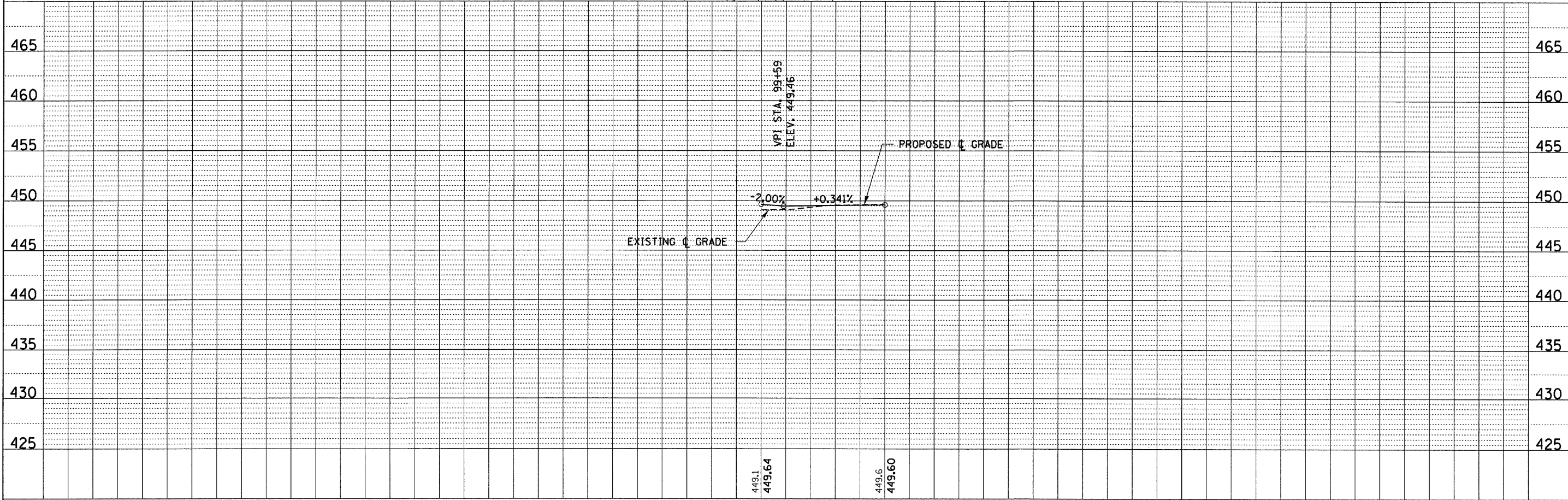
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NOTE BOOK NO.	CHECKED	DATE
	REVISIONS	BY
	DATE	BY



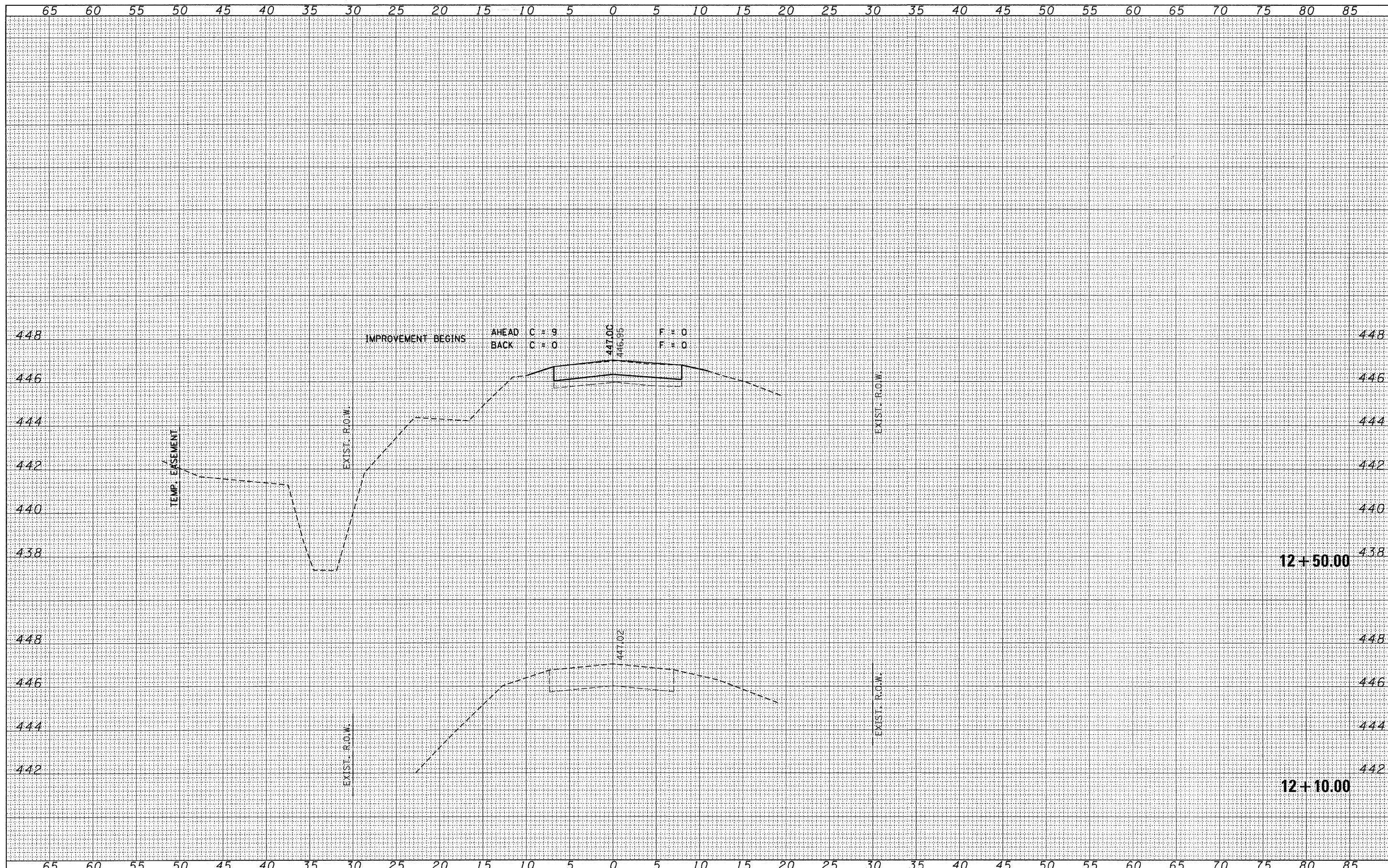
VICKIE MIDDLETON
NW1/4, SW1/4, SEC 22, T. 1 S., R. 4 E., 3RD P.M.

CHARLES W. PIERCE
SW1/4, NW1/4, SEC 22, T. 1 S., R. 4 E., 3RD P.M.

PROFILE	SURVEYED	DATE
	PLOTTED	BY
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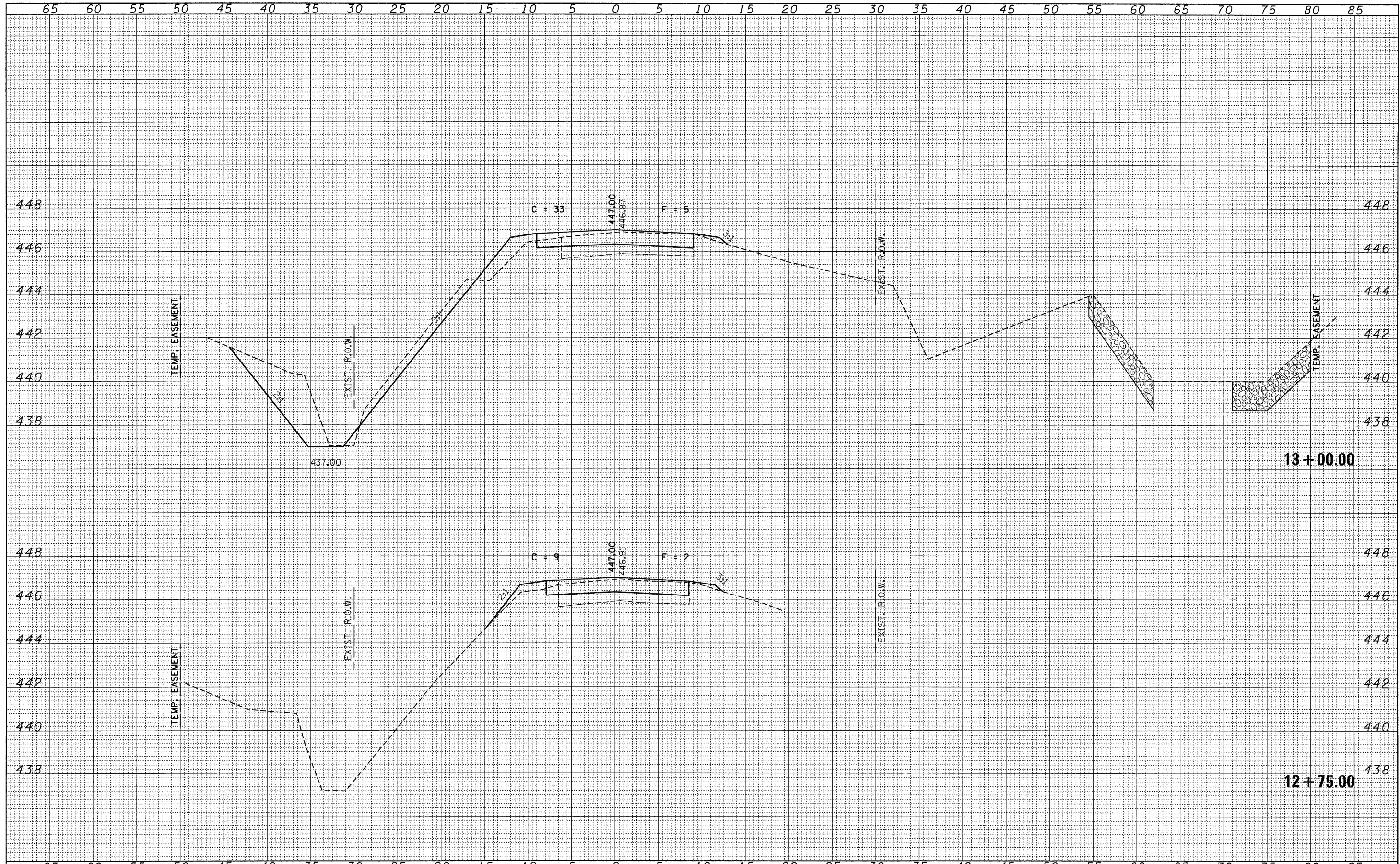
FILE NAME = 118266-eh-tr-pp3.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	PLAN & PROFILE MESEKE LANE	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	DESIGNED - D.T.M.	REVISED -	91			09-06122-00-BR	JEFFERSON	37	7	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.009859	CHECKED - S.W.M.	REVISED -	FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471				
PLOT SCALE =	DATE - 02/20/12	REVISED -	ILLINOIS FED. AID PROJECT BR05-00810631							
PLOT DATE = 2/28/2012				SCALE: H20xV5	SHEET NO. 3 OF 3 SHEETS	STA. 99+50.00 TO STA. 100+50.00				



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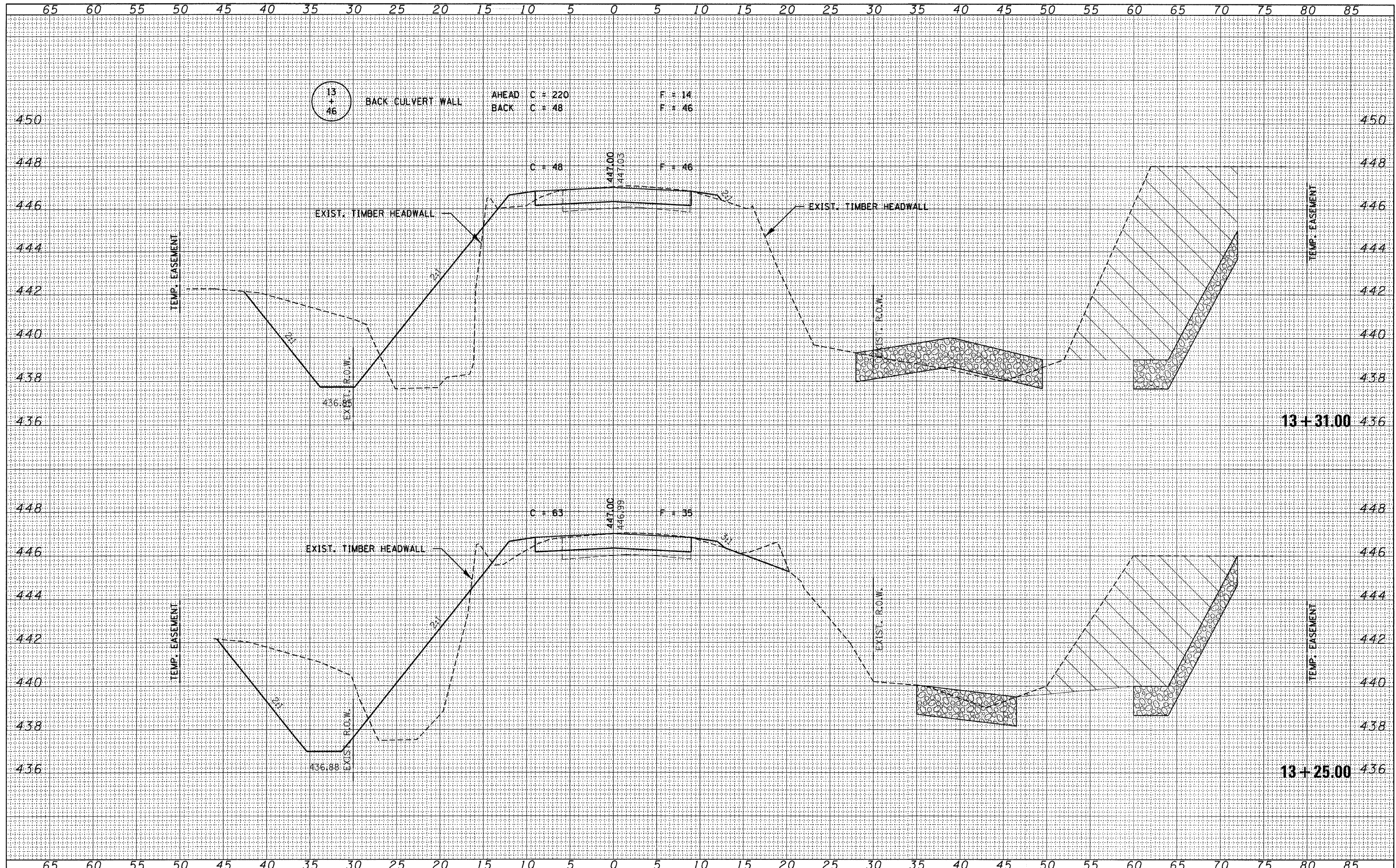
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HAMPTON, LENZINI AND RENWICK, INC. 306 STEVENSON DRIVE SUITE 301 SPRINGFIELD, ILLINOIS 62703	DRAWN - D.T.M.	REVISED -	91					09-06122-00-BR	JEFFERSON	37	8	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000000	CHECKED - S.W.M.	REVISED -	FARRINGTON ROAD DISTRICT					CONTRACT NO. 99471				
PLOT SCALE =	DATE - 02/20/12	REVISED -	[ILLINOIS] PROJECT BROS-00810631 BROS-00810631									
PLOT DATE = 2/20/2012					SCALE: H5:V2	SHEET NO.	OF	SHEETS	STA. 12+10.00	TO STA. 12+50.00		



FINAL SURVEY	SURVEYED	DATE
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ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	9			
3800 STEVENSON DRIVE SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT				CONTRACT NO. 99471			
ILLINOIS PROFESSIONAL DESIGN FIRM LS 1 PE 7 6P CORP. 184-008959		DATE - 02/20/12	REVISED -		[ILLINOIS] FED. AID PROJECT BR05-00810631							
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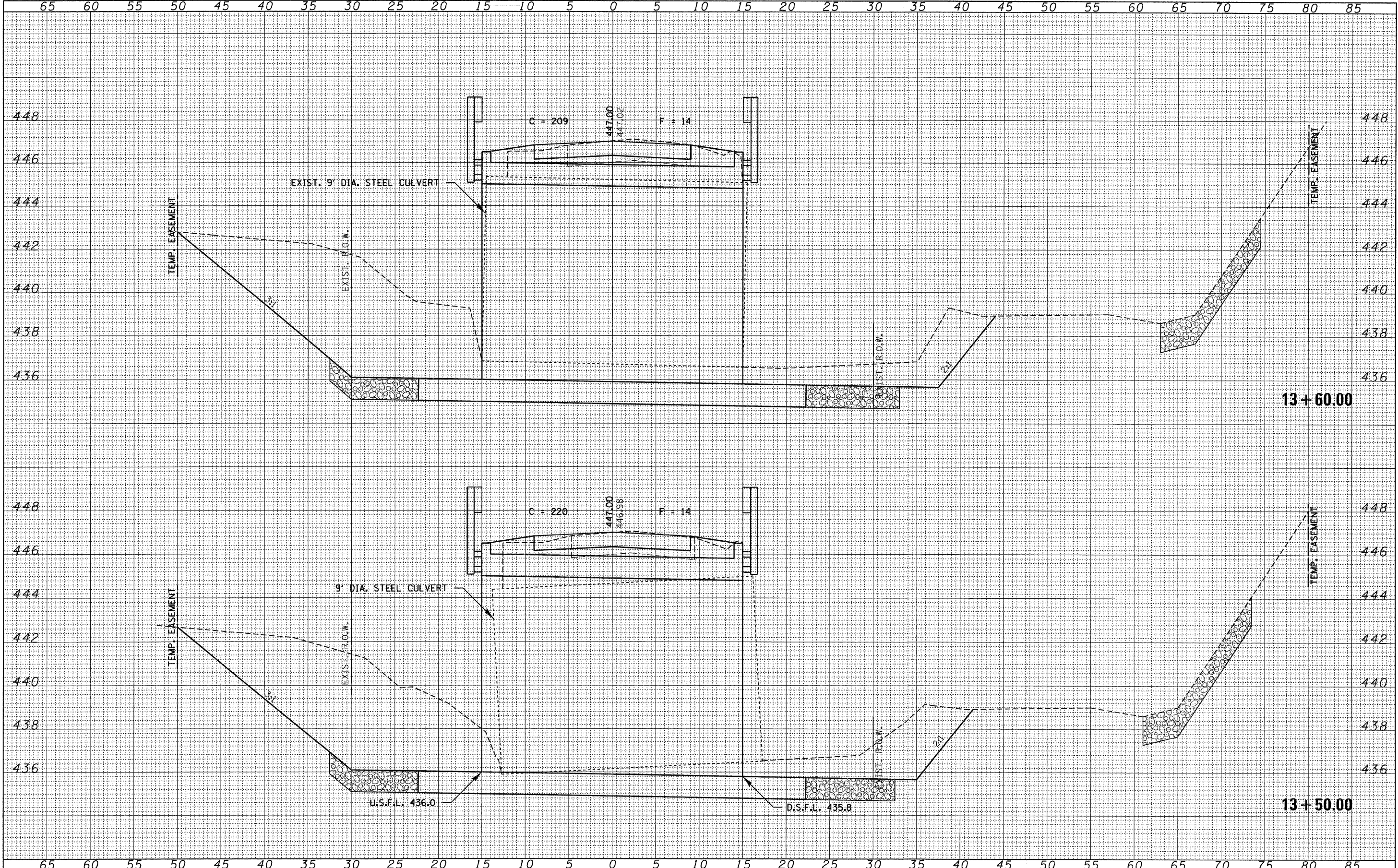
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	10			
3005 STE. KENNEDY DRIVE SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471				
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184-000859	PLLOT DATE = 2/20/2012	DATE - 02/20/12	REVISED -		SCALE: H5:V2	SHEET NO.	OF	SHEETS	STA. 13+25.00 TO STA. 13+31.00	[ILLINOIS] FED. AID PROJECT BR05-00810631		

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



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 3086 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62709
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / P / E / C / R / P / 184.009859

USER NAME =
 PLOT SCALE =
 PLOT DATE = 2/28/2012

DESIGNED - J.W.F.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 02/20/12

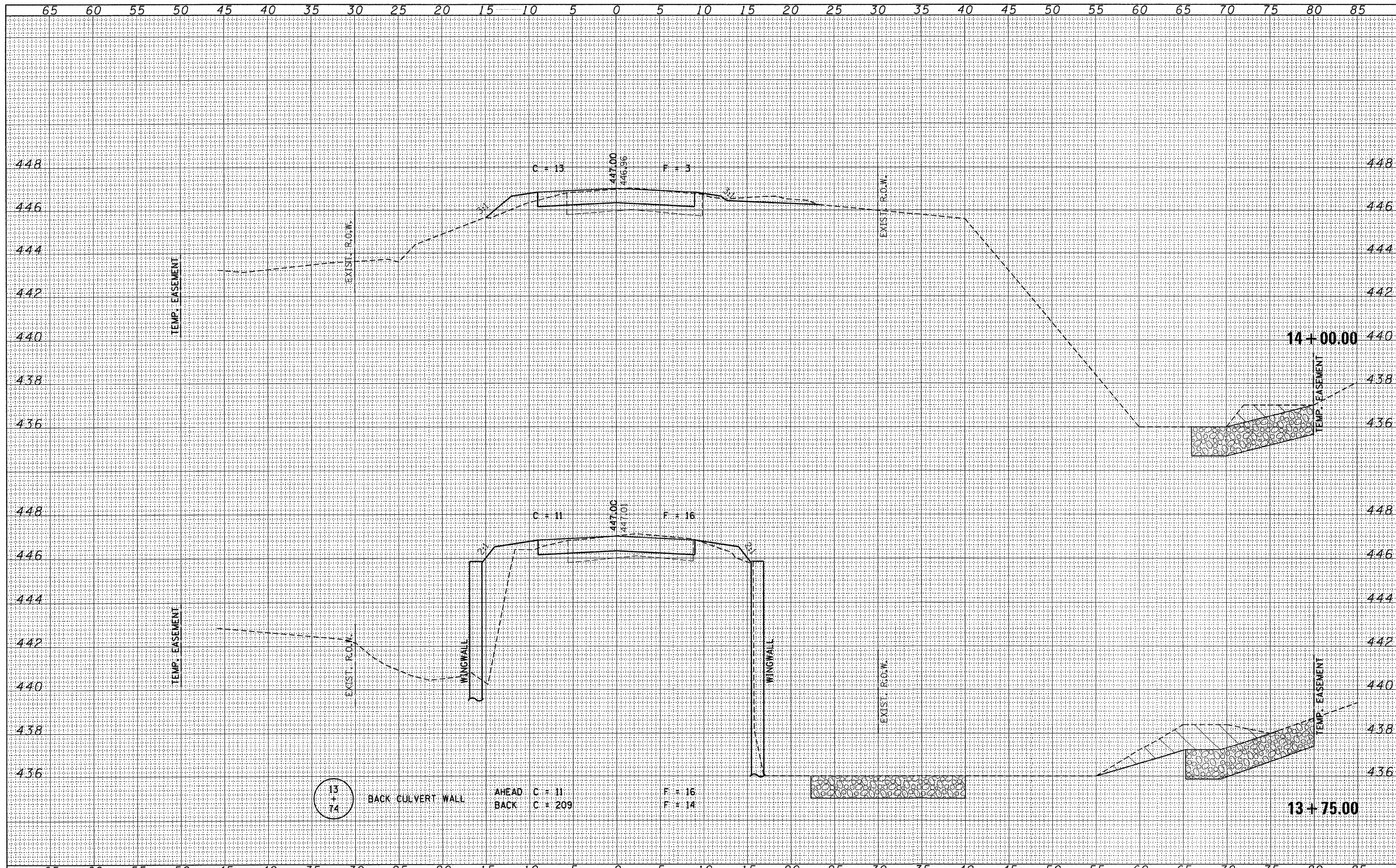
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STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

SCALE: H5:V2
 SHEET NO. OF SHEETS
 STA. 13+50.00 TO STA. 13+60.00

STATION CROSS SECTIONS
 MALECKI ROAD

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471	
[ILLINOIS] FED. AID PROJECT BR05-00810631				



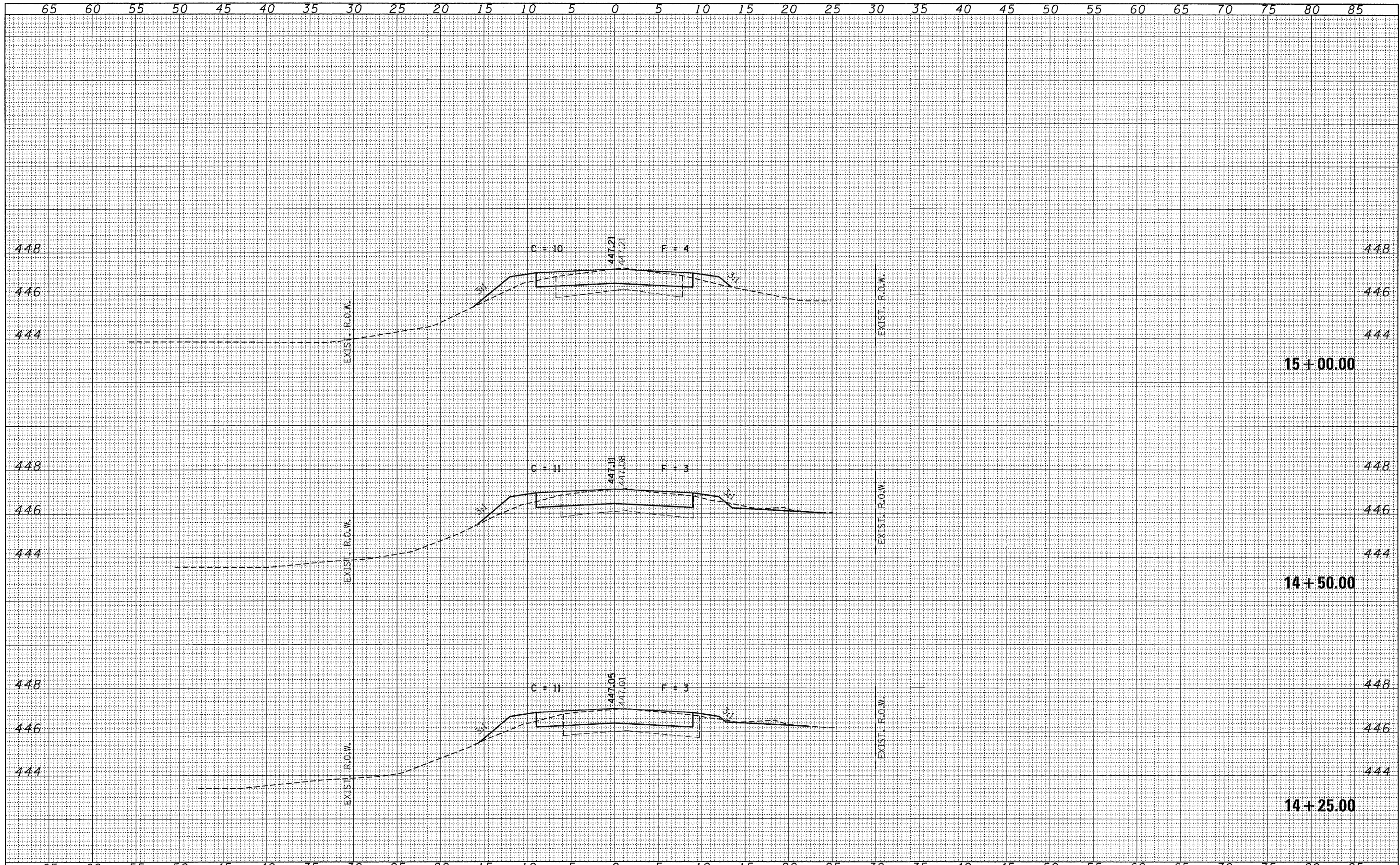
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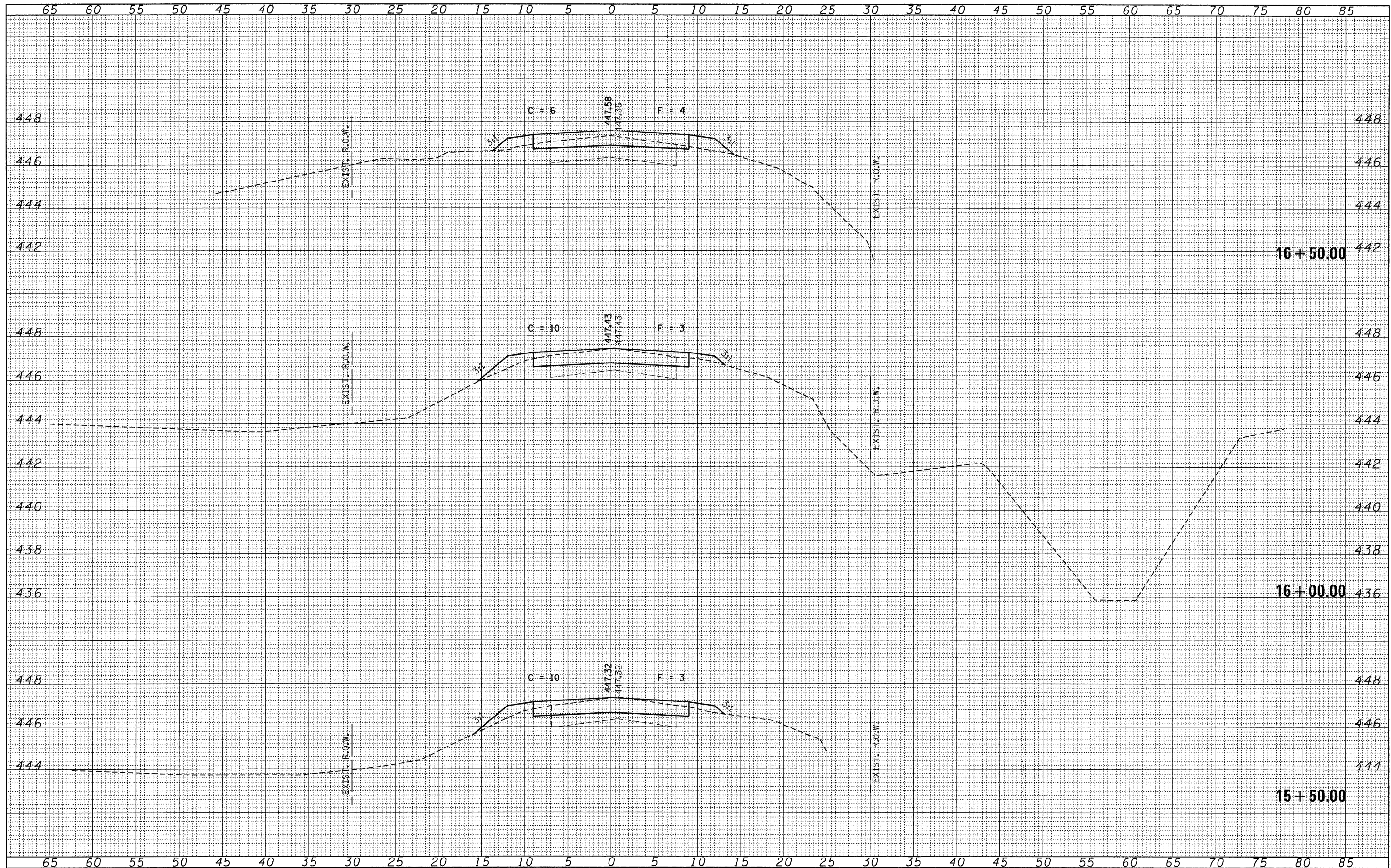
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	12			
1805 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471				
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CCRP - 184-000999	PLOT DATE = 2/20/2012	DATE - 02/20/12	REVISED -		SCALE: H5:V2			SHEET NO. OF SHEETS	STA. 13+75.00 TO STA. 14+00.00	(ILLINOIS) FED. AID PROJECT 695-00810631		

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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -						91	09-06122-00-BR	JEFFERSON	37	13
200 S. STEUBEN DRIVE SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE: H5:V2 SHEET NO. OF SHEETS STA. 14+25.00 TO STA. 15+00.00				FARRINGTON ROAD DISTRICT CONTRACT NO. 99471				
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CDIP 184-003995	PLOT DATE = 2/20/2012	DATE - 02/20/12	REVISED -						[ILLINOIS] FED. AID PROJECT BROS-0081063J				



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NOTE BOOK NO.	PLOTTED		
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 350 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000859

USER NAME =
 PLOT SCALE =
 PLOT DATE = 2/20/2012

DESIGNED - J.W.F.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
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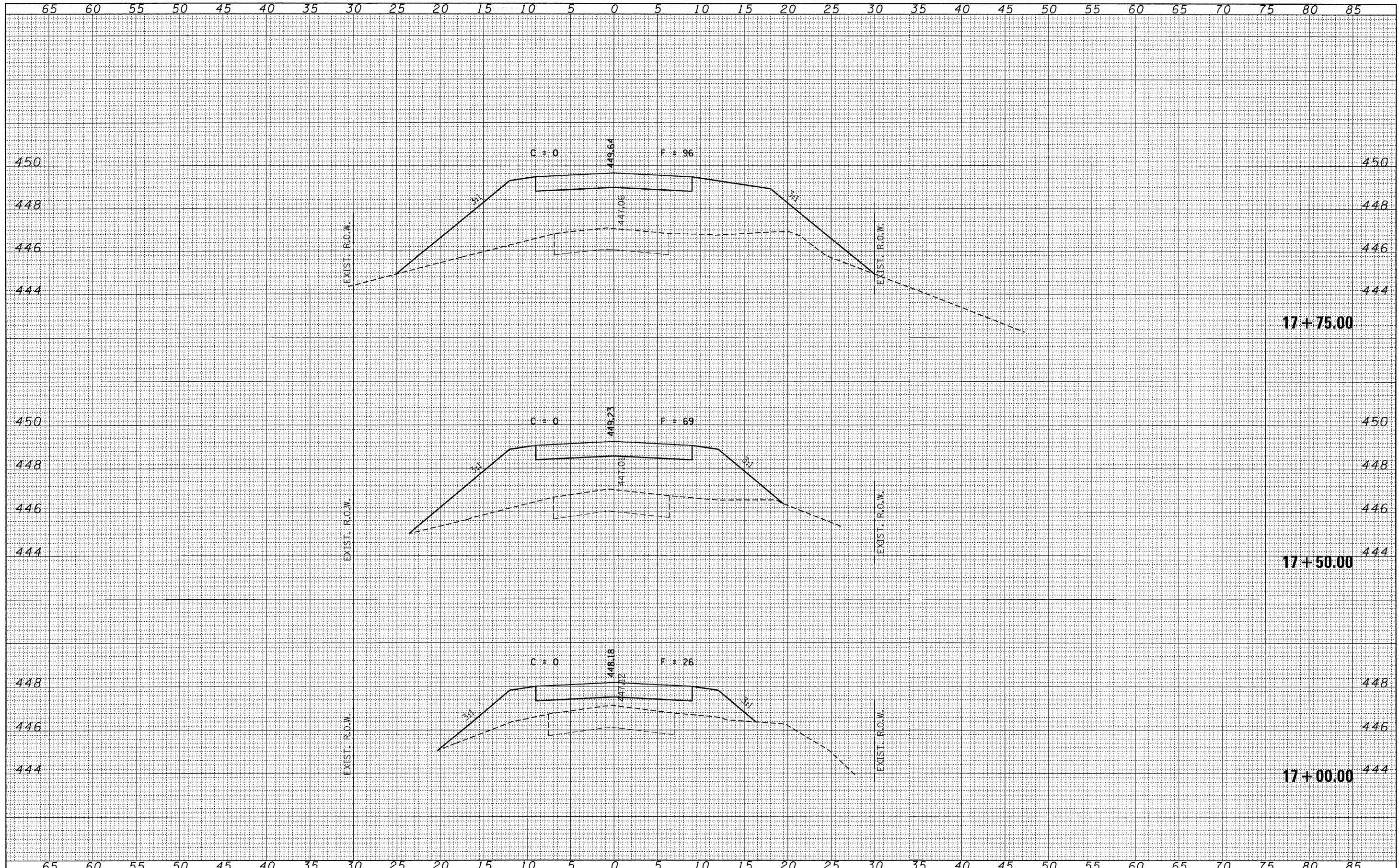
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STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
MALECKI ROAD

SCALE: H5:V2 SHEET NO. OF SHEETS STA. 15+50.00 TO STA. 16+50.00

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FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471		
ILLINOIS FED. AID PROJECT BR05-00810631				



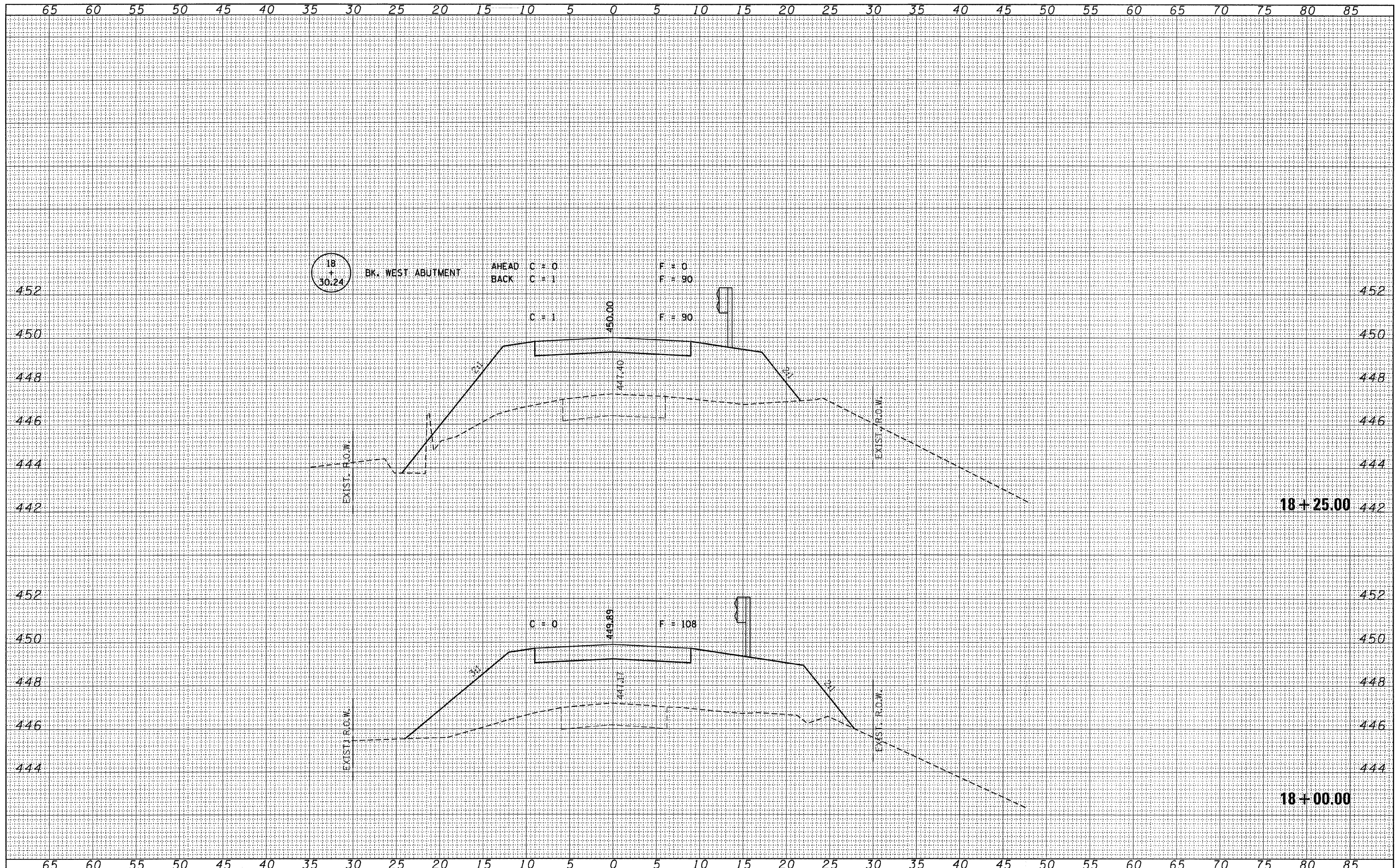
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3805 FARRINGTON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -		FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471			
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184100018		DATE - 02/20/12	REVISED -		SCALE: H5:V2		SHEET NO. OF SHEETS		STA. 17+00.00 TO STA. 17+75.00		
							[ILLINOIS] FED. AID PROJECT BR05-00810631				

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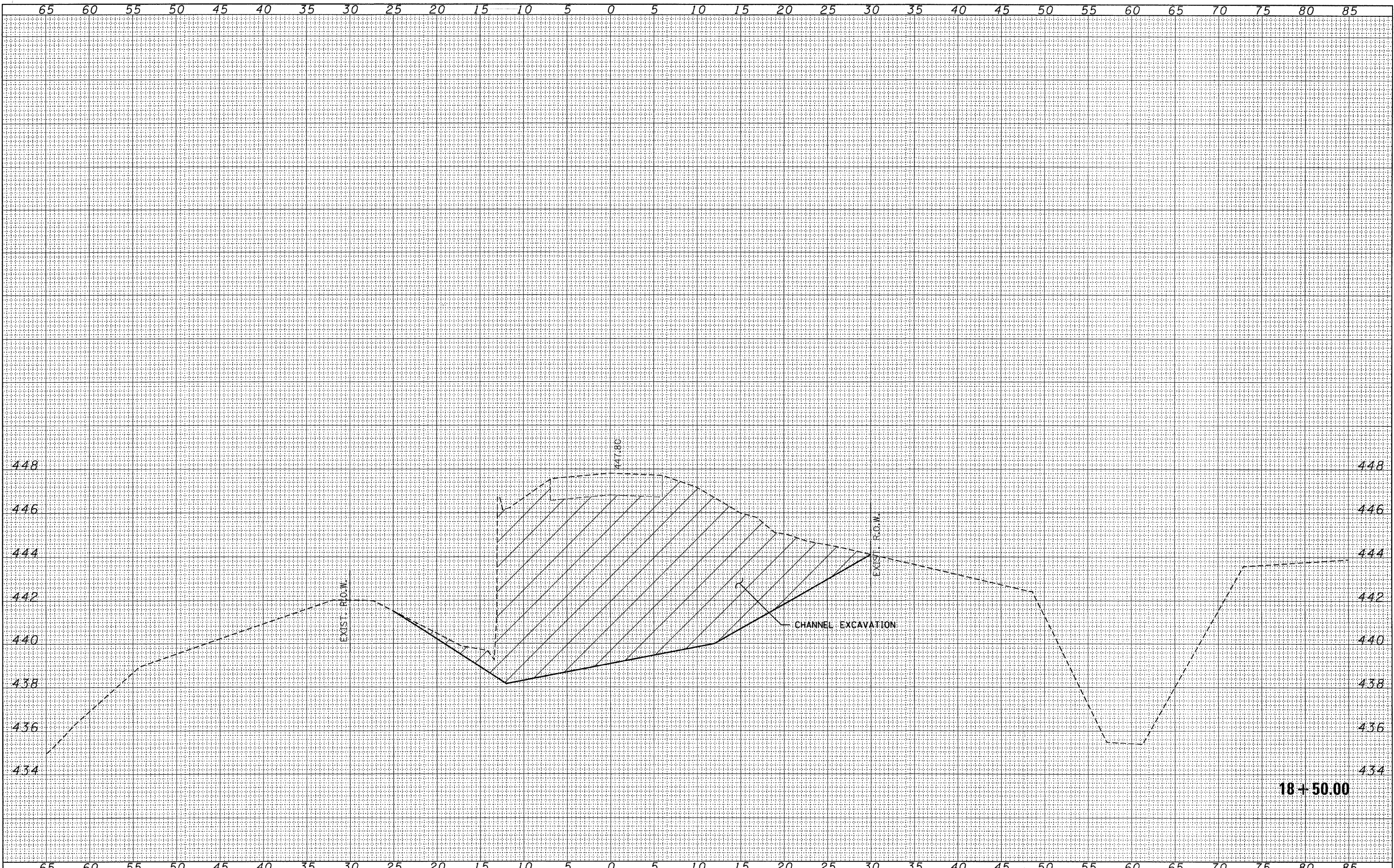


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PLOT DATE = 2/20/2012	DATE = 02/20/12	CHECKED - S.W.M.	REVISED -							FARRINGTON ROAD DISTRICT	CONTRACT NO. 99471			
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ILLINOIS FED. AID PROJECT BR05-0081063J

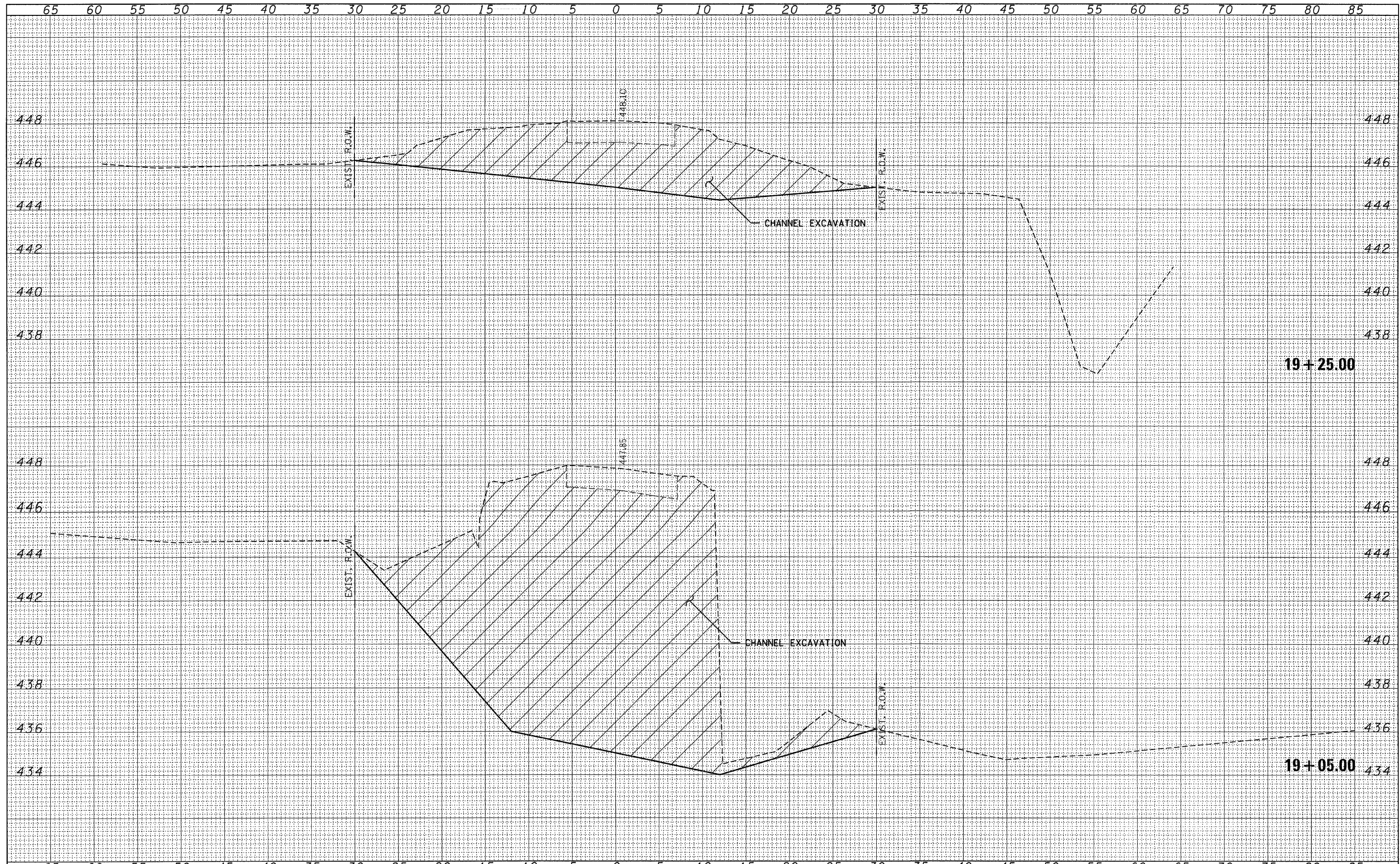
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NOTE BOOK NO.	PLOTTED		
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	AREAS CHECKED		



18+50.00

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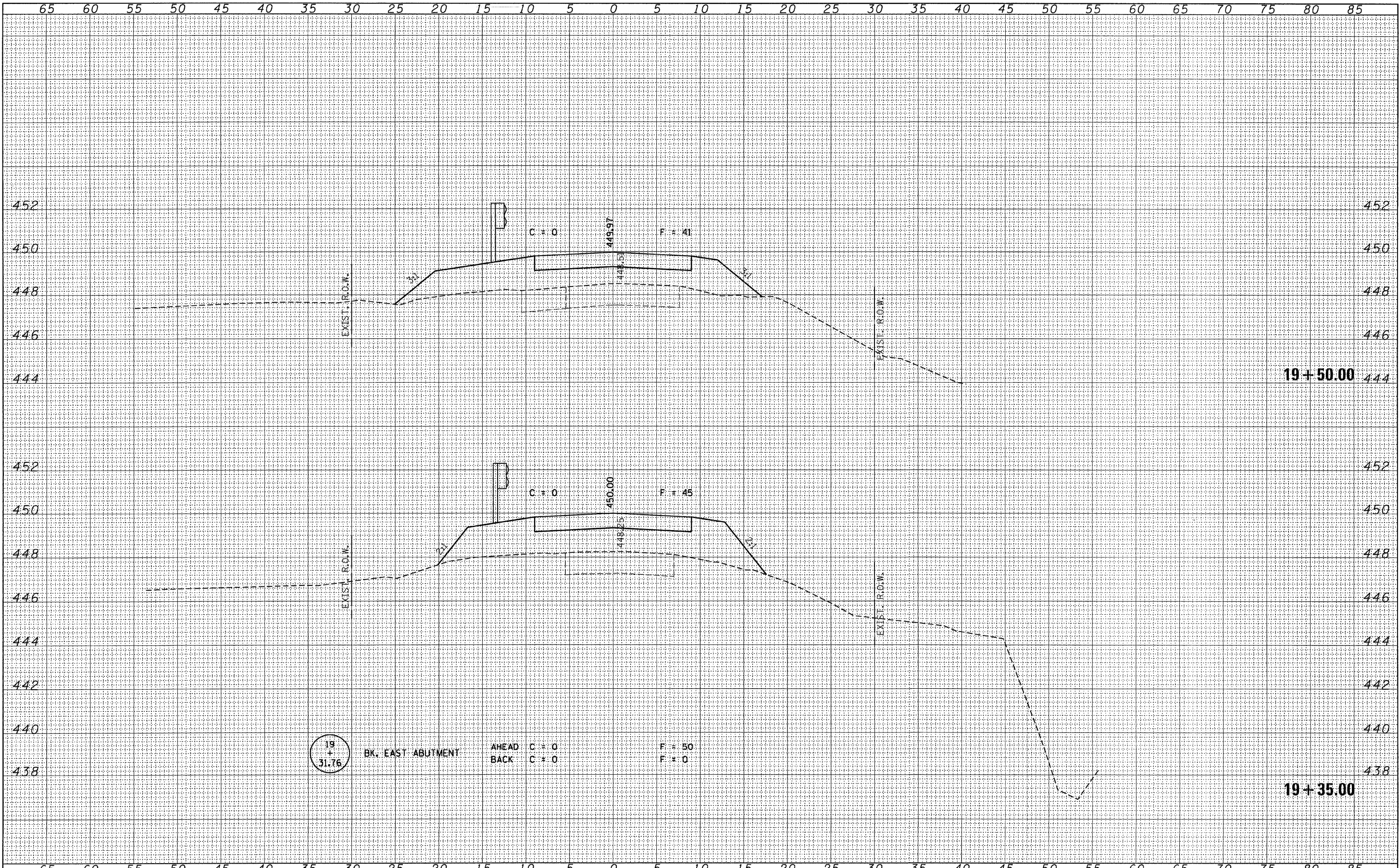
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HAMPTON, LENZINI AND RENWICK, INC. 3985 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	DRAWN - D.T.M.	REVISED -						91	09-06122-00-BR	JEFFERSON	37	18
ILR ILLINOIS PROFESSIONAL DESIGN FIRM 15 / PE / SE CORP. 184.00959	PLLOT DATE = 2/28/2012	CHECKED - S.W.M.	REVISED -		SCALE: H5:V2 SHEET NO. OF SHEETS STA. 19+05.00 TO STA. 19+25.00				FARRINGTON ROAD DISTRICT CONTRACT NO. 99471				
		DATE - 02/20/12	REVISED -						ILLINOIS FED. AID PROJECT BROS-00810631				

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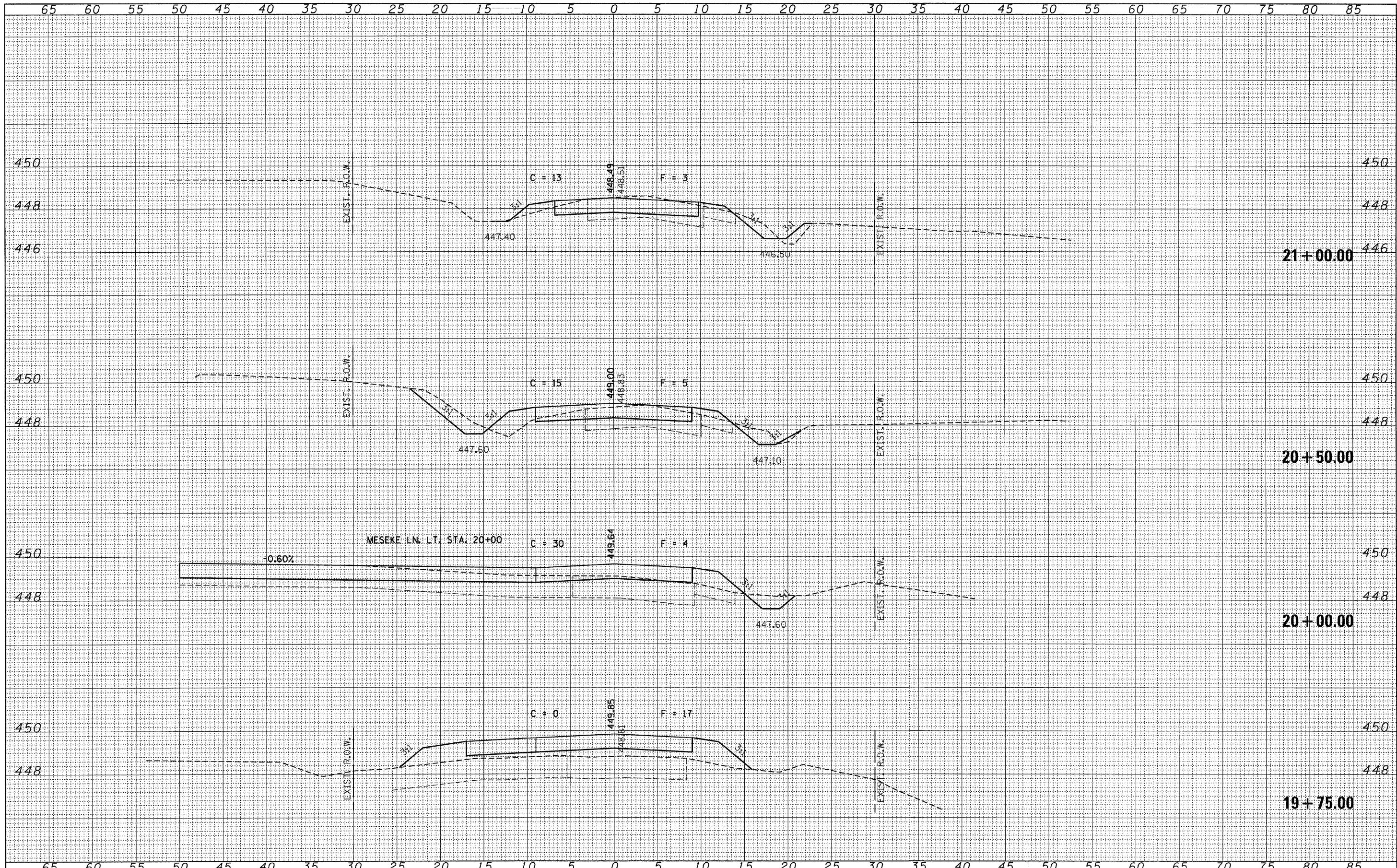
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -					91	09-06122-00-BR	JEFFERSON	37	19
300 STEVENSON DRIVE, SUITE 201		CHECKED - S.W.M.	REVISED -					FARRINGTON ROAD DISTRICT				CONTRACT NO. 99471
SPRINGFIELD, ILLINOIS 62703		DATE - 02/20/12	REVISED -					ILLINOIS FED. AID PROJECT BROS-00R10631				
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LE / PE / SE / CS / DP / SA / 000000				SCALE: H5:V2	SHEET NO.	OF	SHEETS	STA. 19+35.00	TO STA. 19+50.00			

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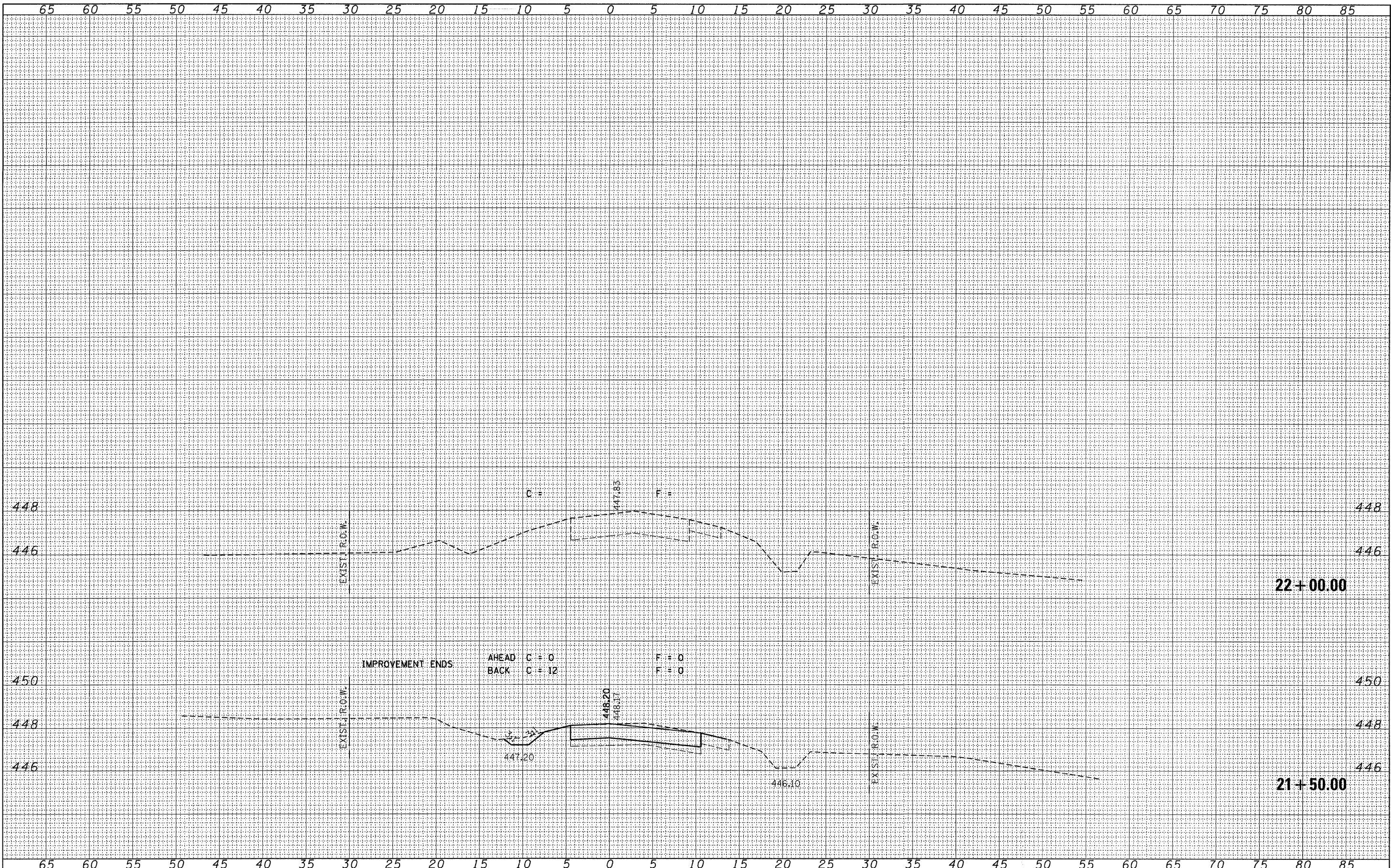
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HAMPTON, LENZINI AND RENWICK, INC. 204 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - D.T.M.	REVISED -		91	09-06122-00-BR	JEFFERSON	37	20			
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NOTE BOOK NO.	PLOTTED	
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ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	
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	AREAS CHECKED	



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 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LE / PE / SE CORP. 184-000099

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 DRAWN - D.T.M.
 CHECKED - S.W.M.
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 PLOT SCALE =
 PLOT DATE = 2/20/2012

DESIGNED - J.W.F.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 02/20/12	REVISED -

STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 MALECKI ROAD
 SCALE: H5:V2
 SHEET NO. OF SHEETS STA. 21+50.00 TO STA. 22+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
ILLINOIS FED. AID PROJECT BROS-00810631				

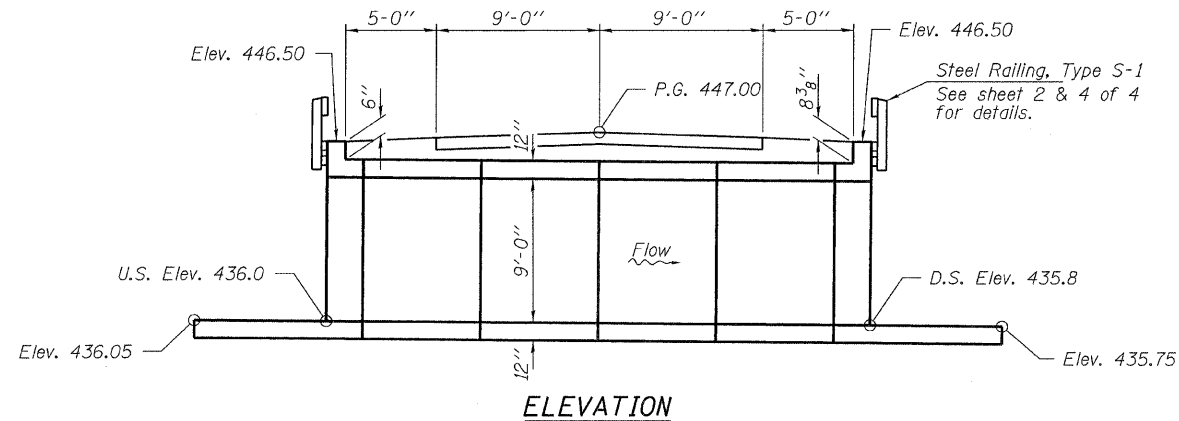
BENCHMARK: Square bolt on top of west pipe culvert. 15.0' Rt., Sta. 13+37, Elev. 445.97

EXISTING STRUCTURE: Sta. 13+52 - 3-9" boiler plate culverts. 30.0' long.
Structure closed to traffic during construction.

Saivaged culverts shall become property of the Township.

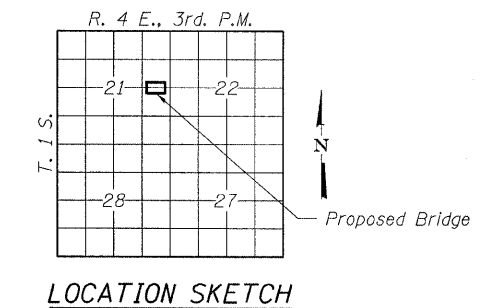
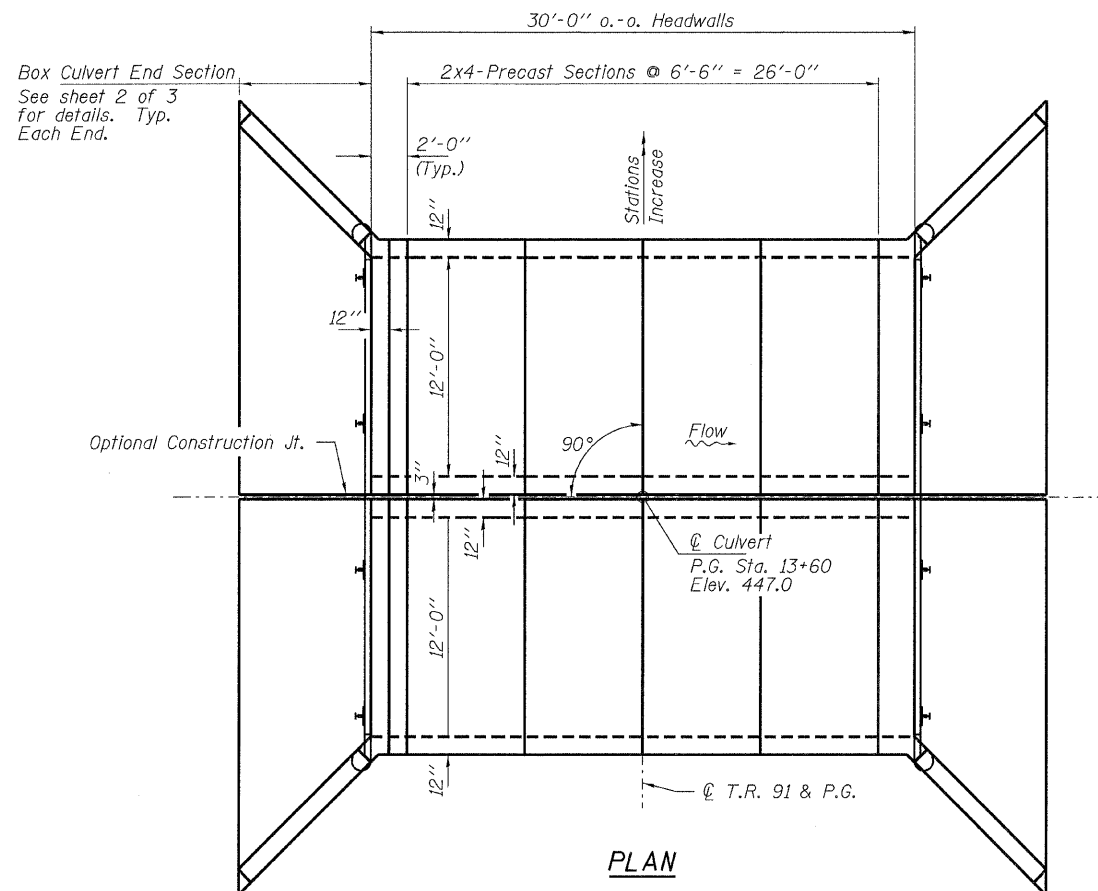
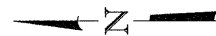
GENERAL NOTES

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Precast Concrete Box Culvert Sections and Box Culvert End Sections shall conform to the requirements of ASTM C1577 and design loading shown.
Alternate Cast-in-place headwalls to be approved by Engineer.
It shall be the responsibility of the Contractor to divert flow during construction in order to keep construction area free of water. The method of water diversion shall be subject to the approval of the Engineer and shall be considered included in the cost of Precast Concrete Box Culverts 12'x9' (Special).



INDEX OF STRUCTURE SHEETS

1. Culvert Plans
2. Culvert Plan Details
3. Riprap Layout
4. Steel Railing, Type S-1



LOADING HL93

Allow 50#/Sq. Ft. for future wearing surface.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Standard Specifications

DESIGN STRESSES

PRECAST UNITS

f'c = 5,000 psi
fy = 65,000 psi (Welded Wire Fabric)

WATERWAY INFORMATION

See bridge plans, sheet 27 of 37.

I certify that to the best of my knowledge, information and belief, this culvert 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 LFD Specifications."

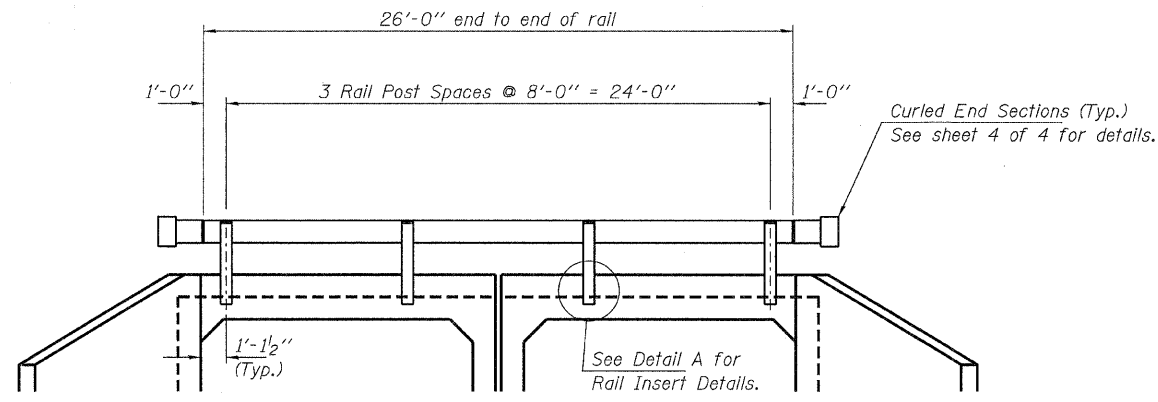
Steven W. Megginson 2/23/2012
ILLINOIS STRUCTURAL No. 081-6064 Expires 11-30-2012



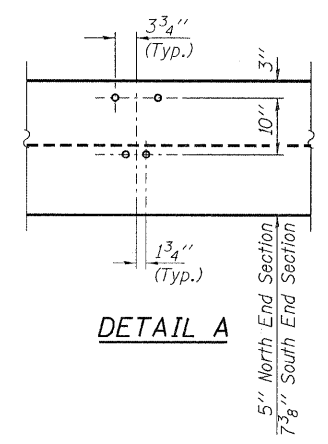
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Channel Excavation	Cu. Yd.	200
Porous Granular Embankment	Ton	450
Stone Dumped Riprap, Class A4	Ton	500
Removal of Existing Structures No. 1	Each	1
Structure Excavation	Cu. Yd.	300
Steel Railing, Type S1	Foot	52
Name Plates	Each	1
Box Culvert End Sections, Culvert No. 1	Each	4
Precast Concrete Box Culverts 12'x9' (Special)	Foot	52

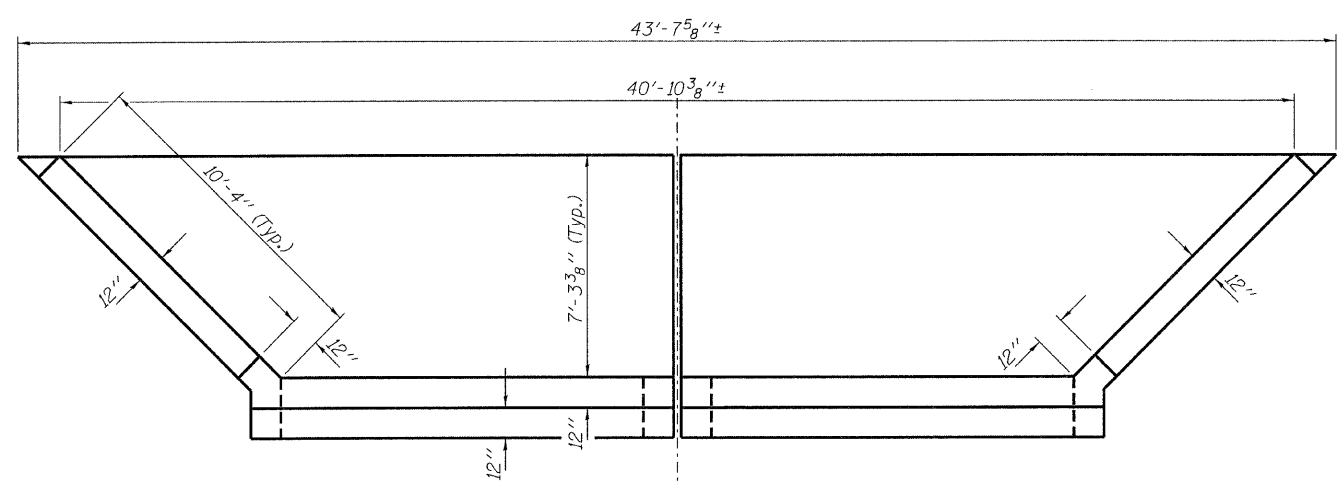
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HAMPTON, LENZINI AND RENWICK, INC. 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62765	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			91	09-06122-00-BR	JEFFERSON	37	22
ILLINOIS PROFESSIONAL DESIGN FIRM L81 PE / SE CORP. 184 000999	PLOT DATE = 2/20/2012	DRAWN - D.A.B.	REVISED -			FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471		
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT BR05-00810631				



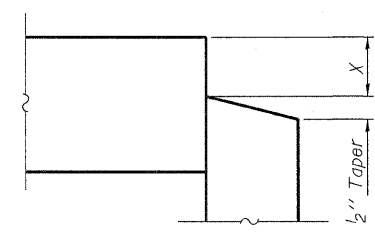
ELEVATION
Showing Rail Post Spaces
See sheet 4 of 4 for Railing Details.



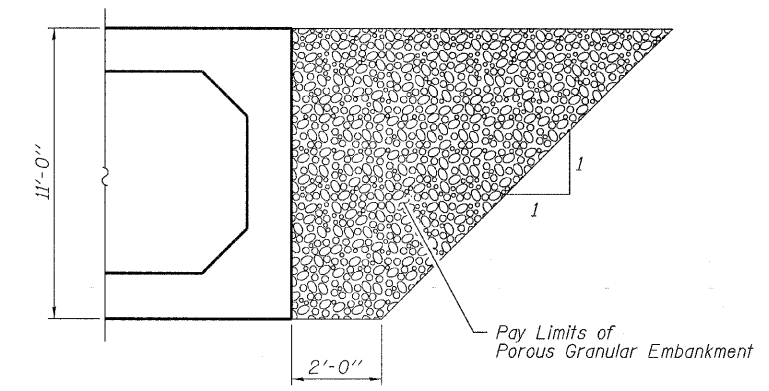
DETAIL A



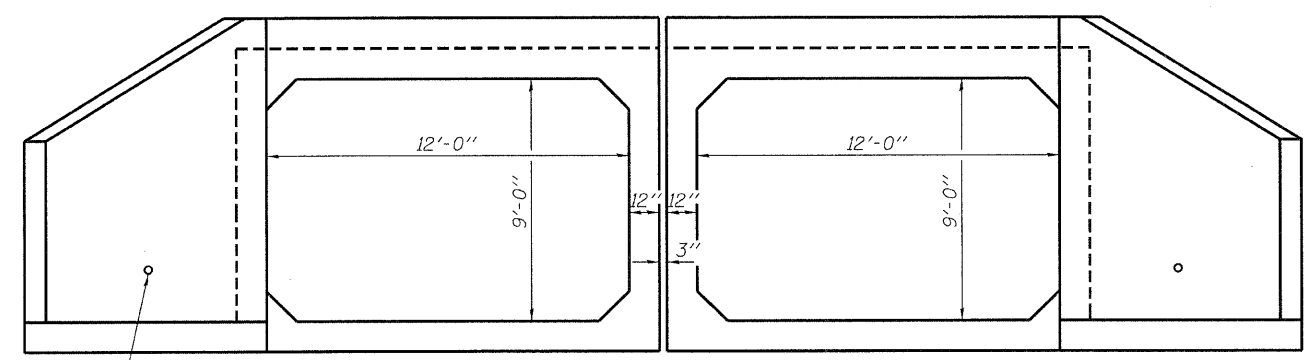
PLAN - END SECTION



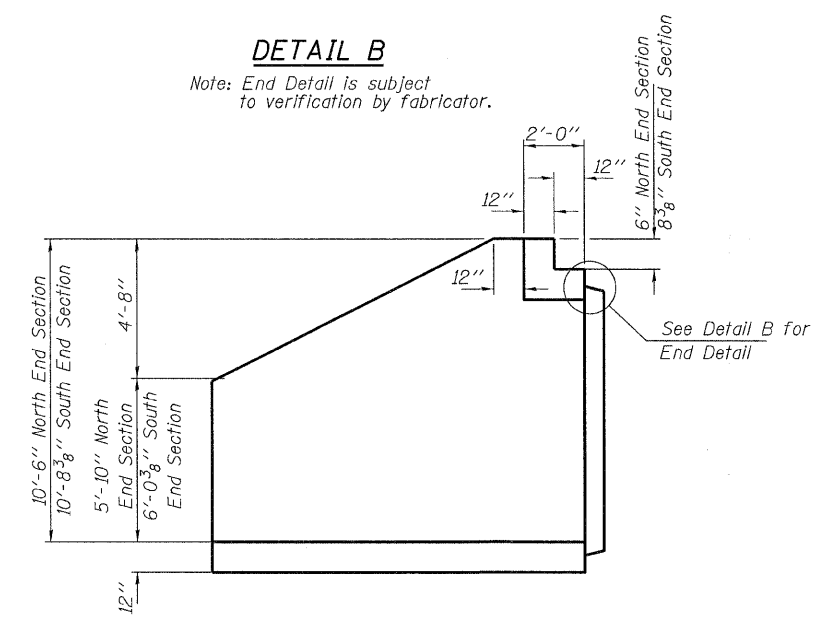
DETAIL B
Note: End Detail is subject to verification by fabricator.



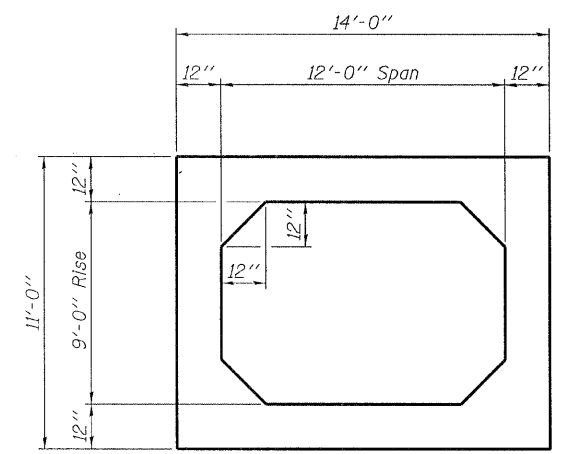
POROUS GRANULAR EMBANKMENT DETAIL



ELEVATION - END SECTION

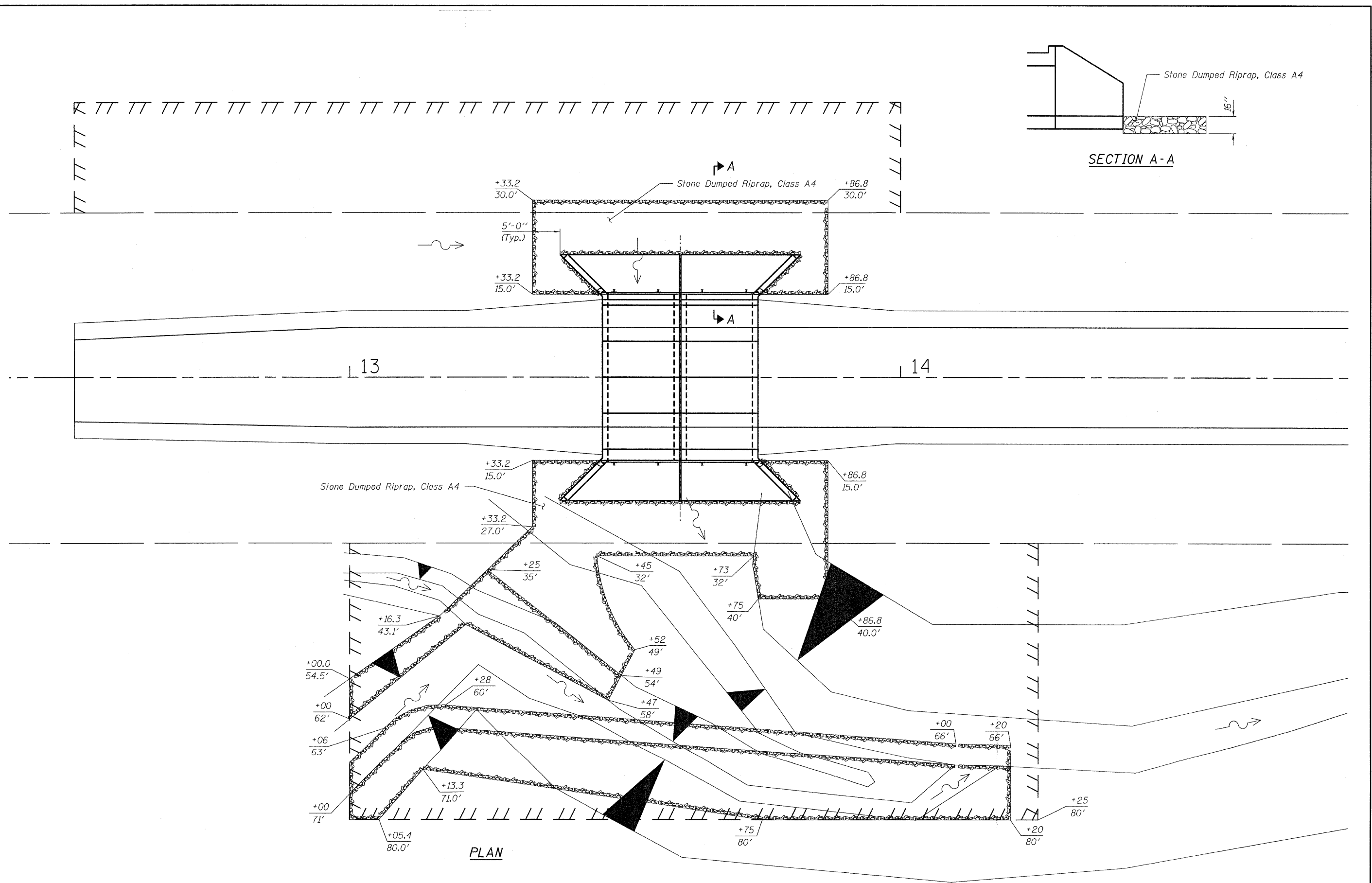


CROSS SECTION - END SECTION

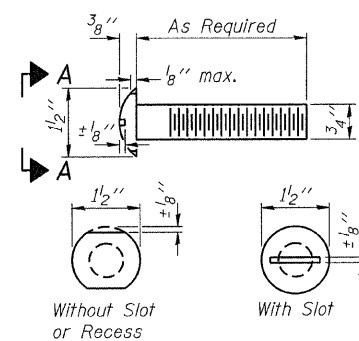


SECTION THRU PRECAST BOX

FILE NAME = 110266-shr-culvert.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	CULVERT PLAN DETAILS STRUCTURE NO. 041-5077	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3889 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			91	09-06122-00-BR	JEFFERSON	37	23
HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 2/28/2012	DRAWN - D.A.B.	REVISED -			FARRINGTON ROAD DISTRICT	CONTRACT NO. 99471			
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT BROS-00810631				
						SHEET NO. 2 OF 4 SHEETS				

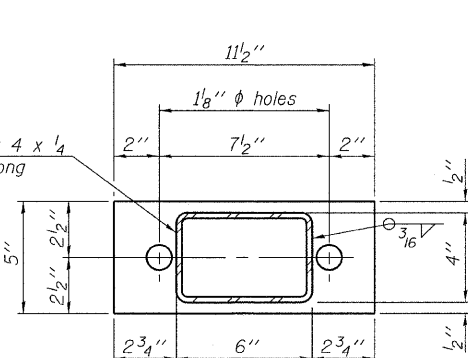


FILE NAME = 110266-sht-ou-vert.dgn		USER NAME =		DESIGNED - A.S.L.		REVISED -		STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT				RIPRAP LAYOUT STRUCTURE NO. 041-5077					
HAMPSON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763		PLOT SCALE =		CHECKED - S.W.M.		REVISED -										T.R.	
HAMPTON, LENZINI AND RENWICK, INC. ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 194.000989		PLOT DATE = 2/28/2012		DRAWN - D.A.B.		REVISED -		91		09-06122-00-BR		JEFFERSON		37		24	
								SHEET NO. 3 OF 4 SHEETS				FARRINGTON ROAD DISTRICT CONTRACT NO. 99471 ILLINOIS FED. AID PROJECT BROS-0081063					



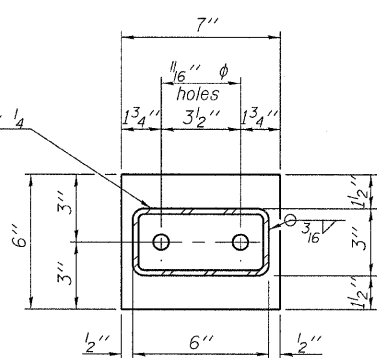
**VIEW A-A
ROUND HEAD BOLT**

HSS 6 x 4 x 1/4
x 3 1/2" long



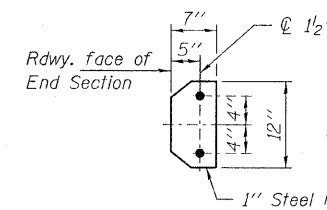
R 1/2" x 11 1/2" x 5"

HSS 6 x 3 x 1/4
x 3 3/8" long

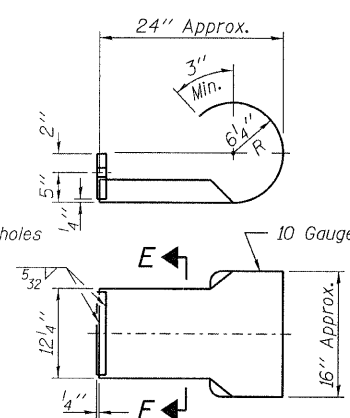


R 1/2" x 7" x 6"

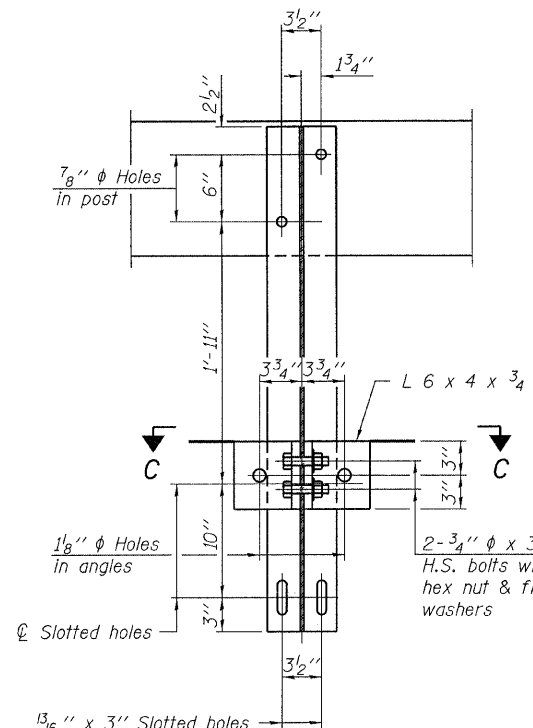
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



SECTION E-E

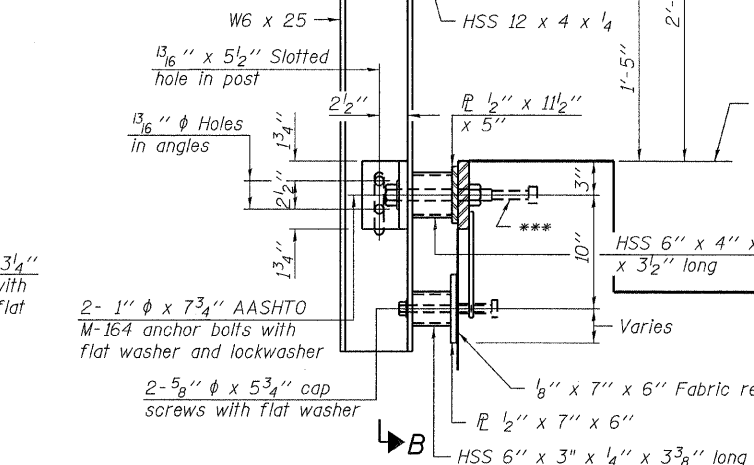


CURLED END SECTION DETAILS

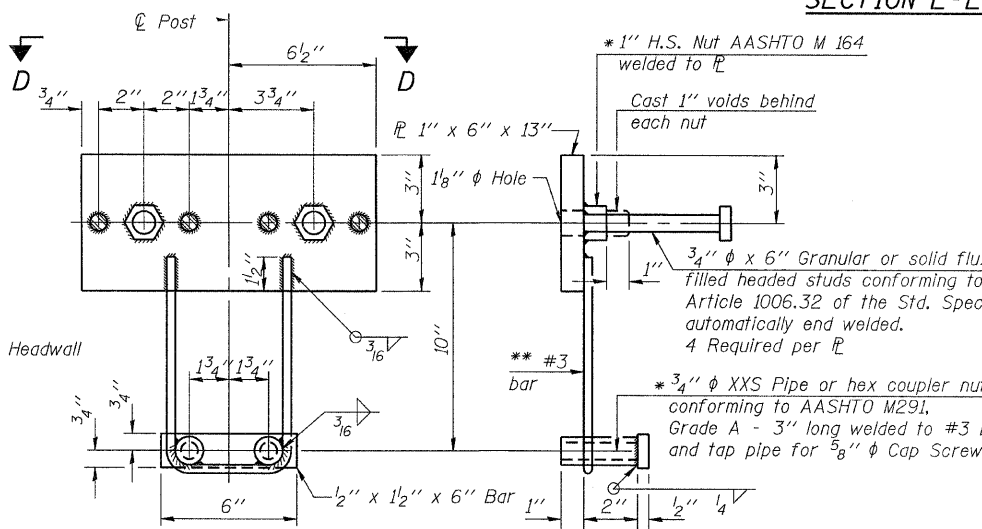


SECTION B-B

2-3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.



SECTION AT RAILING POST

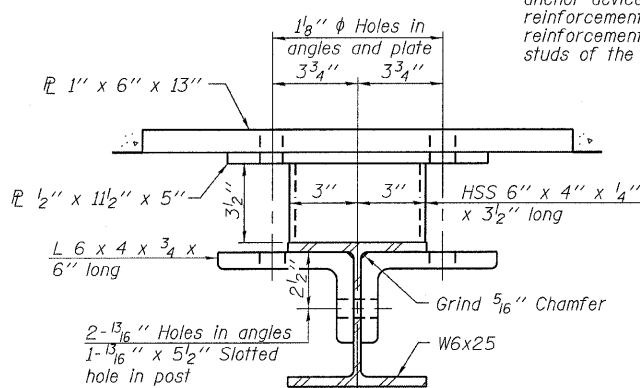


ANCHOR DEVICE

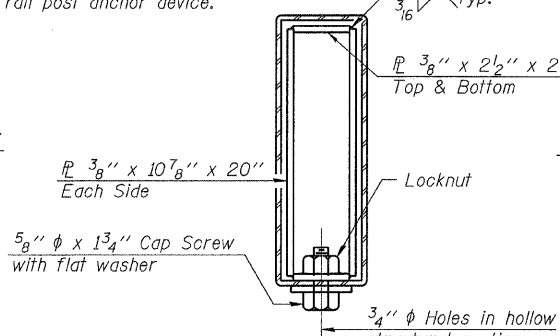
* Threaded areas shall be plugged or blocked off during casting of beam.

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection. For multi-span bridges, sufficient 1/4" x 6" x 1'-2" 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.

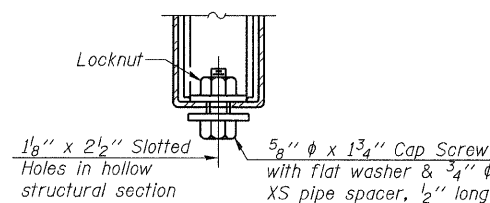
** Reinforcement bars in the top of the headwall may be placed with a 1/2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



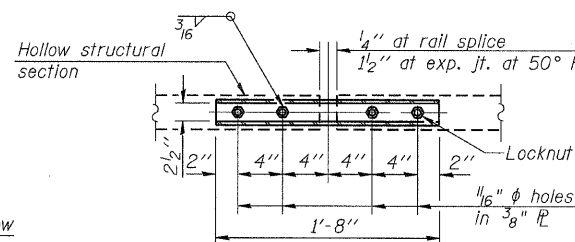
SECTION C-C



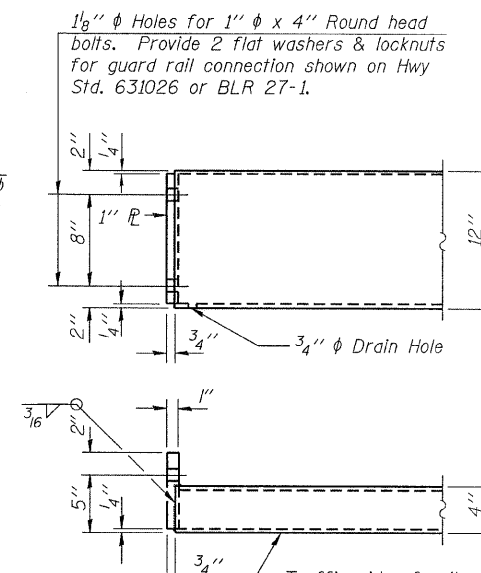
SECTIONS AT RAIL SPLICE



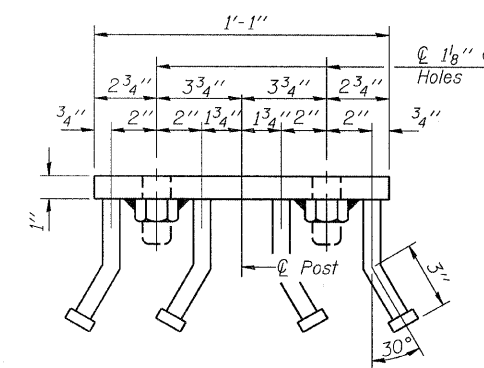
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	52

R-23A

7-1-10

(10'-9" Maximum Post Spacing)

HAMPTON, LENZINI AND RENWICK, INC.
308 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62761
ILLINOIS PROFESSIONAL DESIGN FIRM
LSD / PE / SE CORP. 184.000959

USER NAME =
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
PLOT SCALE =
PLOT DATE = 2/28/2012

DESIGNED - A.S.L.
CHECKED - S.W.M.
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 041-5077**

SHEET NO. 4 OF 4 SHEETS

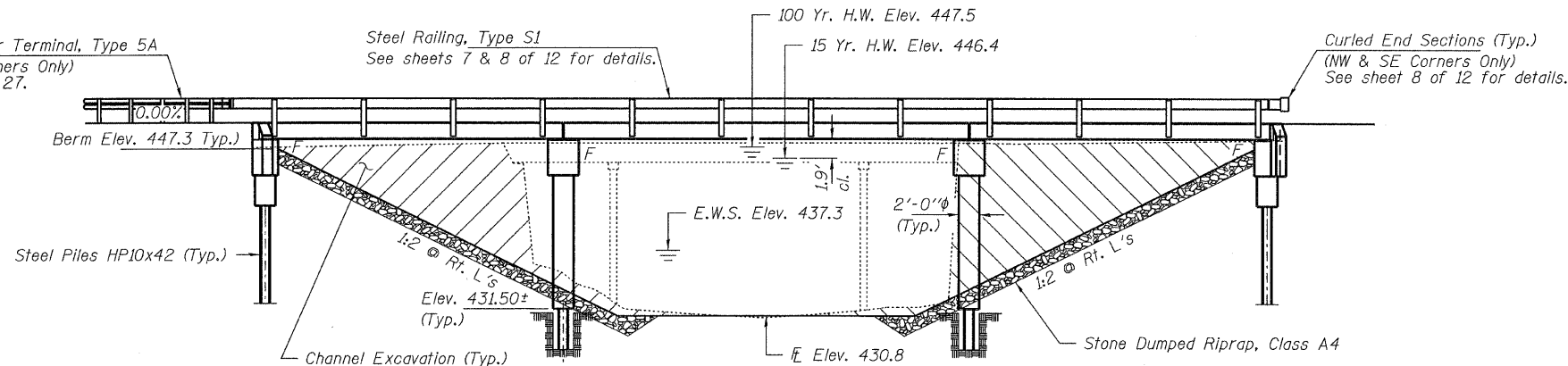
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	25
FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
[ILLINOIS] FED. AID PROJECT BR05-0081(063)				

BENCHMARK: Yellow bench tie in power pole. 32' Lt., Sta. 20+28, Elev. 452.66

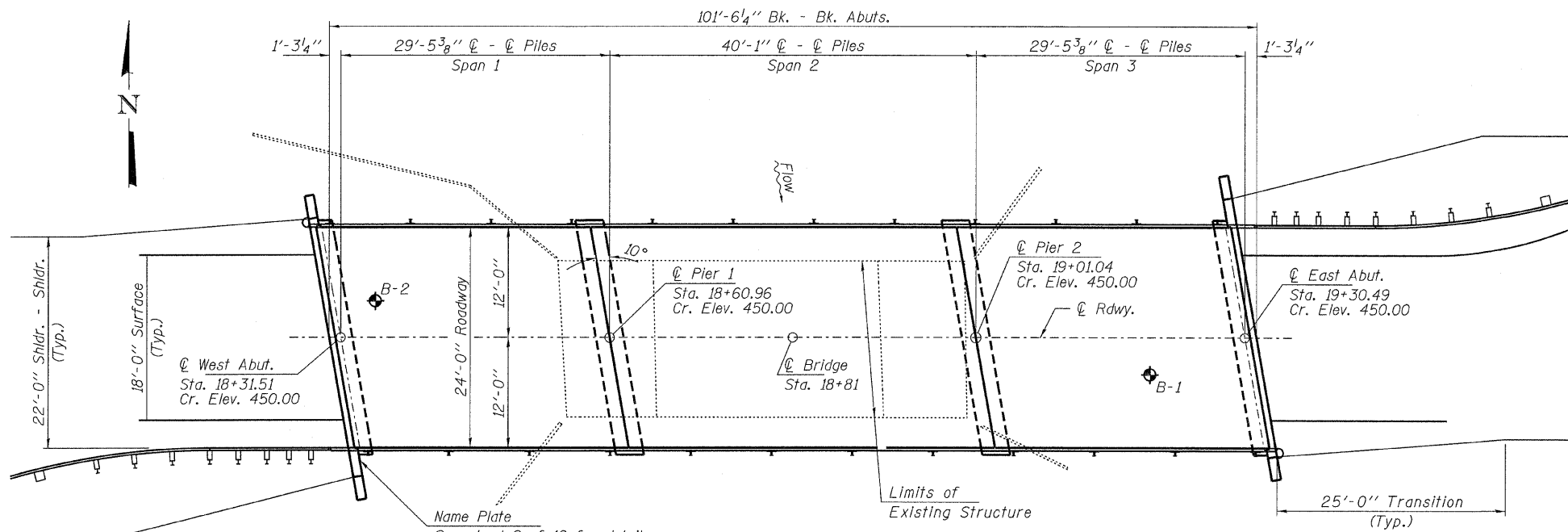
EXISTING STRUCTURE: Three span I-beam bridge with timber deck on closed timber abutments and wingwalls. 43.0' fc.-fc. abuts., 19.9' o.-o. deck. Str. No. 041-3073
Structure closed to traffic during construction.

No Salvage

Traffic Barrier Terminal, Type 5A
(SW & NE Corners Only)
See Std. BLR-27.



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2"φ low lax. strands)
fpbt = 201,960 psi (1/2"φ low lax. strands)
fy = 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

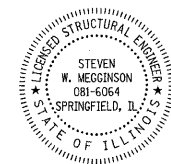
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.284g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.680g
Soil Site Class = D

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	444.7	429.0	429.0	444.7

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 Meggison 2/23/2012
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.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Excavation required to construct the Abutments and Piers shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

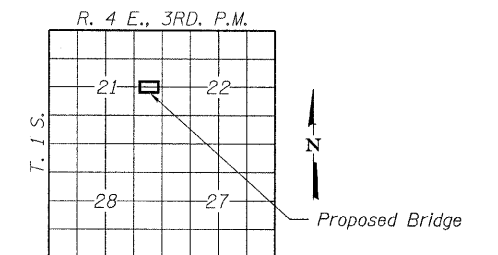
INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. Riprap Details
3. 17"x48" PPC Deck Beam - Spans 1 & 3
4. 17"x48" PPC Deck Beam Details - Spans 1 & 3
5. 17"x48" PPC Deck Beam - Span 2
6. 17"x48" PPC Deck Beam Details - Span 2
7. Superstructure Details
8. Steel Railing, Type S1
9. Abutments
10. Piers
11. HP Pile Details
12. Borings

HORSE CREEK
BUILT 2011 BY
JEFFERSON COUNTY
SEC. 09-06122-00-BR
FARRINGTON ROAD DISTRICT
STR. NO. 041-3748
LOADING HL-93

NAME PLATE

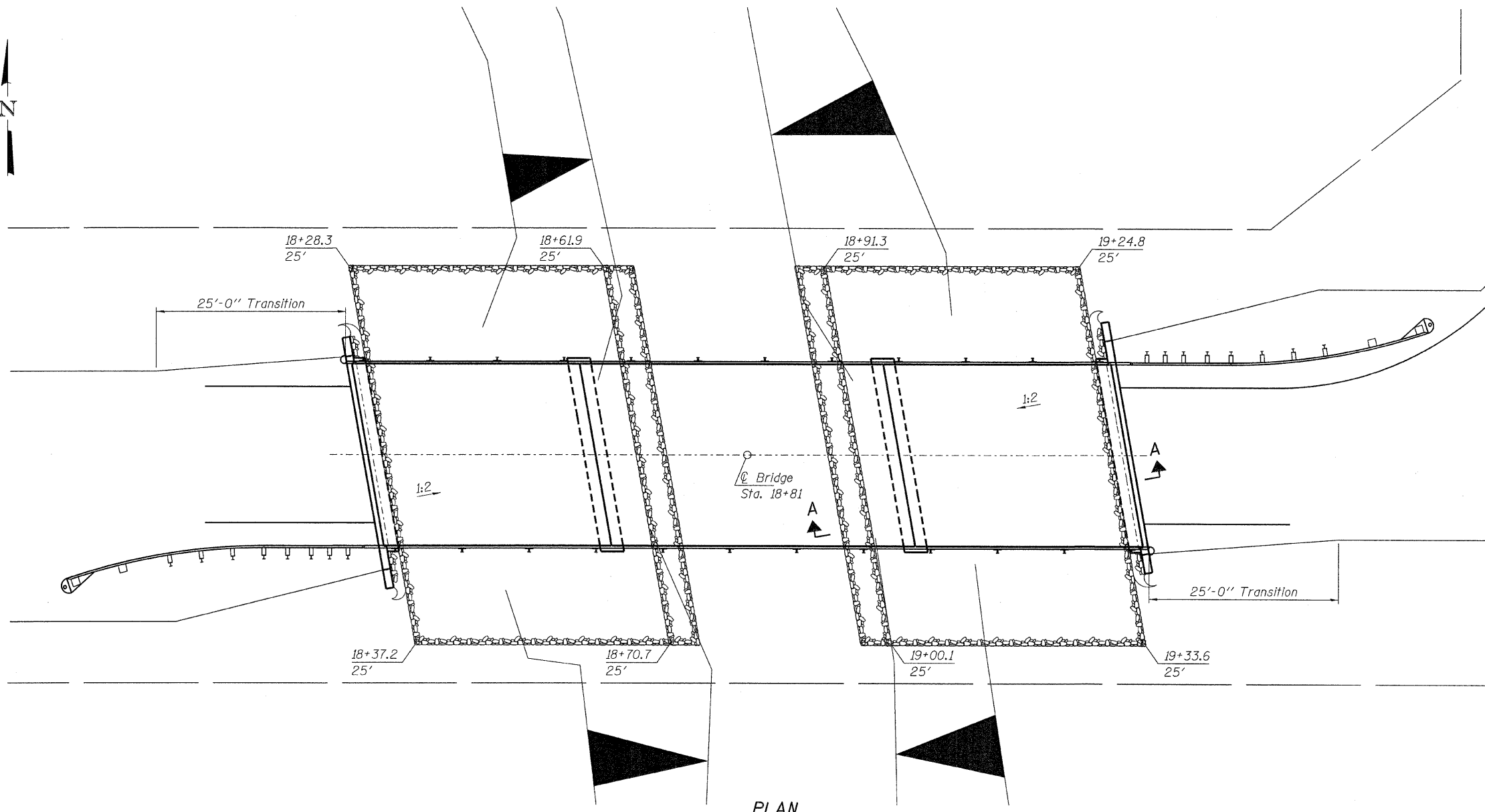
See Std. 515001



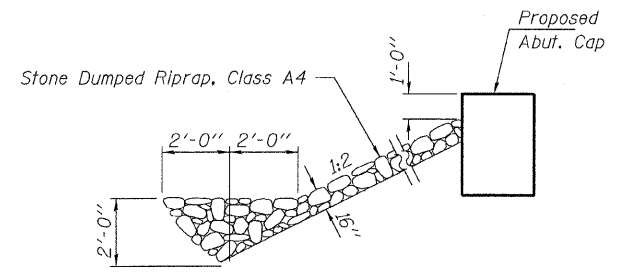
LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			460
Stone Dumped Riprap, Class A4	Ton			360
Removal of Existing Structures No. 2	Each			1
Cofferdam (Type 1) (Location 1)	Each			1
Cofferdam (Type 1) (Location 2)	Each			1
Concrete Structures	Cu. Yd.		42.8	42.8
Concrete Encasement	Cu. Yd.		14.8	14.8
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,400		2,400
Reinforcement Bars	Pound		4,300	4,300
Steel Railing, Type S1	Foot	205		205
Furnishing Steel Piles HP10x42	Foot		336	336
Driving Piles	Foot		160	160
Name Plates	Each		1	1
Setting Piles in Rock	Each		8	8



PLAN

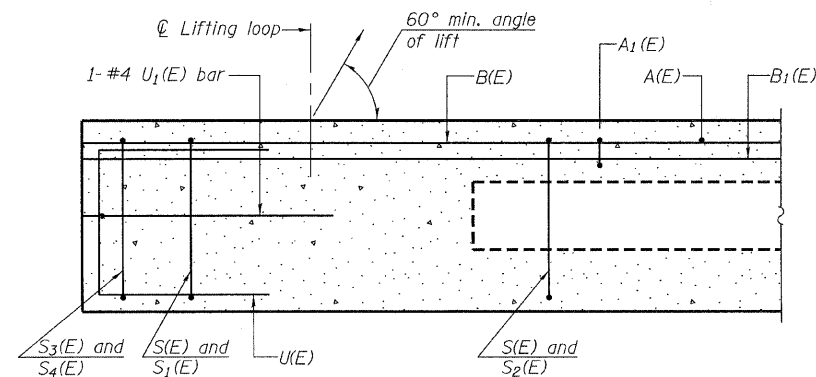


SECTION A-A
Note: See Special Provisions for Stone Dumped Riprap, Class A4

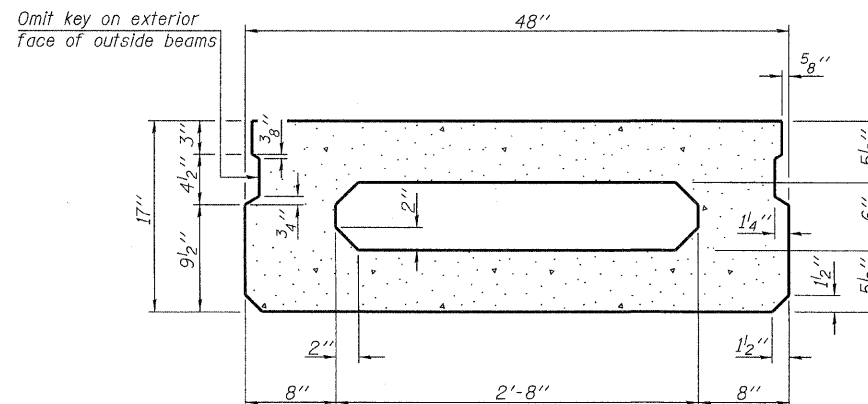
WATERWAY INFORMATION

		Waterway Opening (sq. ft.)		Natural H.W.E	Head (ft.)		Headwater Elev.	
		Existing	Proposed		Existing	Proposed	Existing	Proposed
Drainage Area = 43.2 sq. mi.				Existing Low Grade Elevation = 446.9 ft. at Sta. 13+00				
				Proposed Low Grade Elevation = 447.0 ft. at Sta. 13+00				
10 yr	Bridge - Main Channel	530	690	446.2	1.19	0.79	447.3	446.9
	Culvert - Overflow	190	200					
	Total	4880	720					
30 yr	Bridge - Main Channel	530	710	446.4	1.12	0.72	447.5	447.1
	Culvert - Overflow	190	200					
	Total	5540	720					
100 yr	Bridge - Main Channel	530	800	447.5	0.80	0.36	448.1	447.8
	Culvert - Overflow	190	200					
	Total	8870	720					
500 yr	Bridge - Main Channel	530	860	448.3	0.39	0.41	448.7	448.7
	Culvert - Overflow	190	200					
	Total	12000	720					

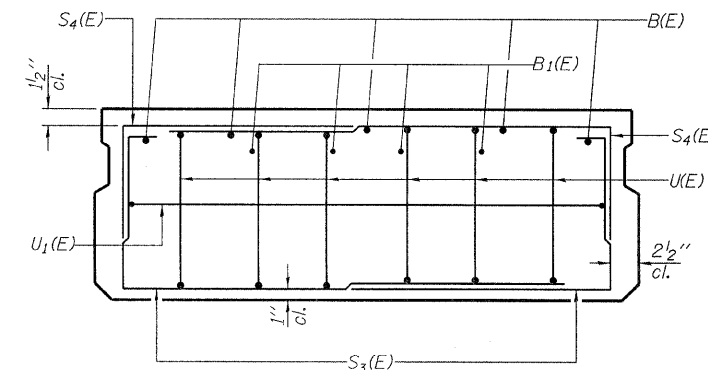
10 Year Velocity Through Existing Bridge (fps) = 6.8 10 Year Velocity Through Proposed Bridge (fps) = 5.9



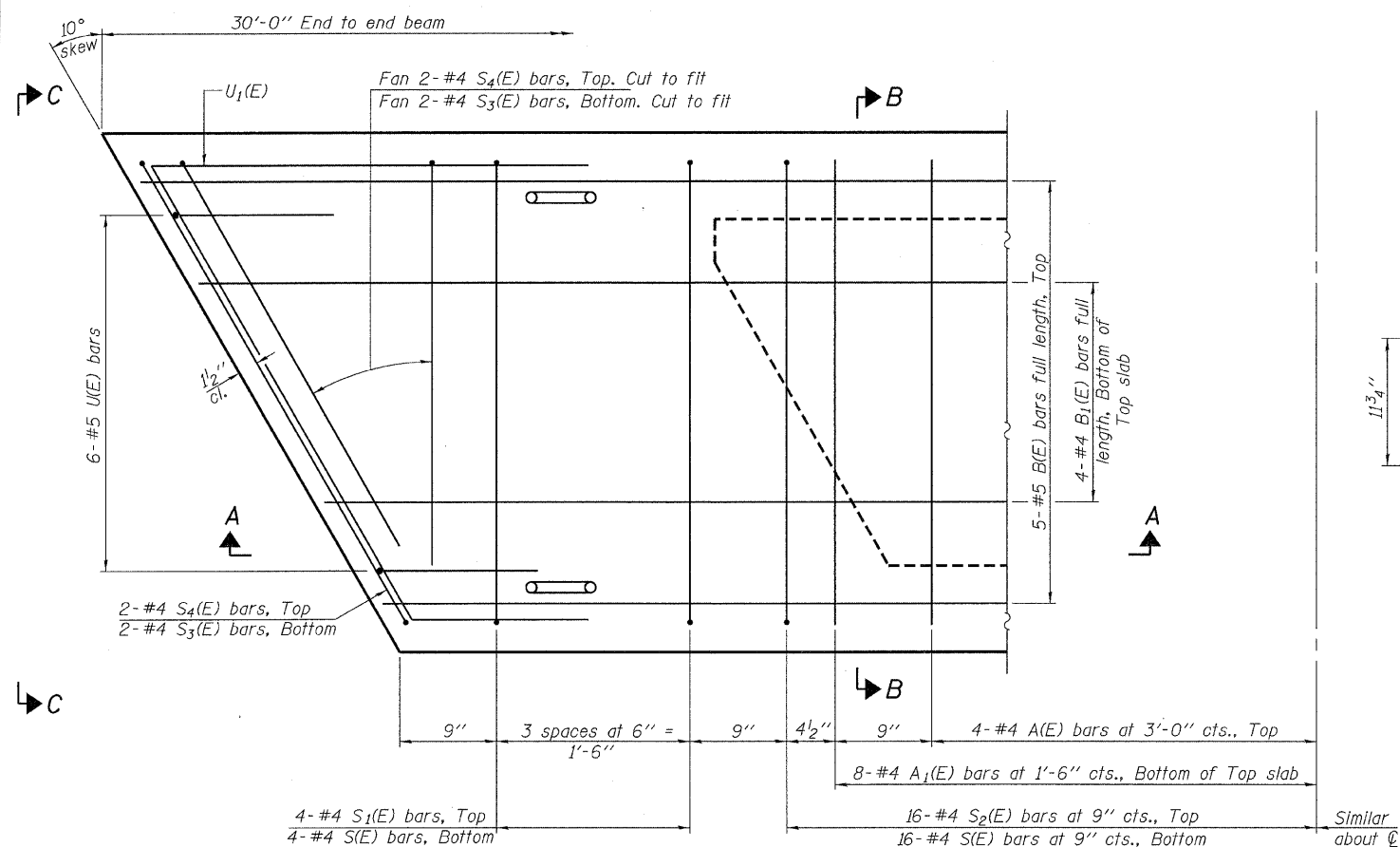
SECTION A-A



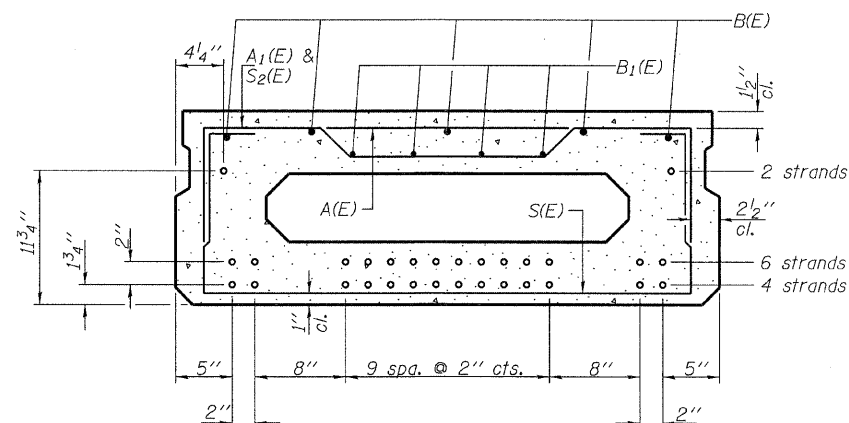
SECTION B-B
(Showing dimensions)



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)	8	#4	3'-7"	—
A1(E)	16	#4	3'-10"	—
B(E)	5	#5	29'-8"	—
B1(E)	4	#4	29'-8"	—
S(E)	40	#4	6'-9"	⌈
S1(E)	8	#4	5'-3"	⌈
S2(E)	32	#4	5'-6"	⌈
S3(E)	8	#4	4'-4"	⌈
S4(E)	8	#4	3'-7"	⌈
U(E)	12	#5	3'-8"	⌈
U1(E)	2	#4	6'-8"	⌈

Note: See sheets 4 & 7 of 12 for additional details and Bill of Material.

MINIMUM BAR LAP

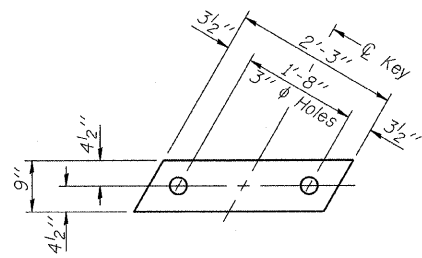
#4 bar = 2'-0"
#5 bar = 2'-6"

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.

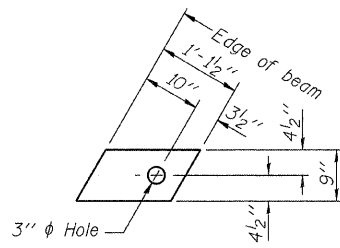
PD-1748-R

7-1-10

FILE NAME = 118266-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM - SPANS 1 & 3 STRUCTURE NO. 041-3748	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3285 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			91	09-06122-00-BR	JEFFERSON	37	28
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000989	PLOT DATE = 2/28/2012	DRAWN - D.A.B.	REVISED -			FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471		
		CHECKED - S.W.M.	REVISED -			SHEET NO. 3 OF 12 SHEETS		ILLINOIS FED. AID PROJECT BROS-00810631		



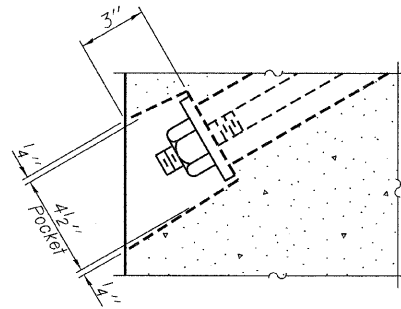
FABRIC BEARING PAD
(Interior - 20 Req'd)



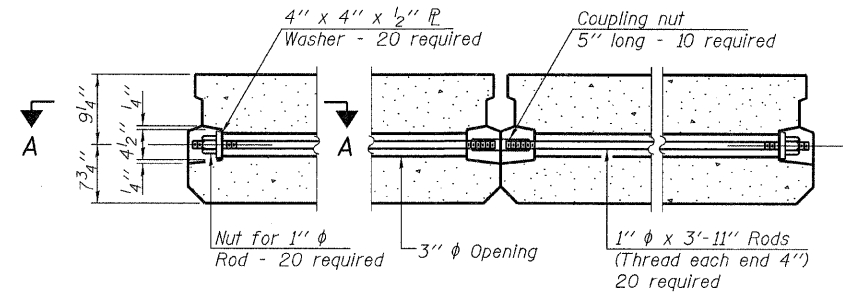
FABRIC BEARING PAD
(Exterior - 8 Req'd)

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

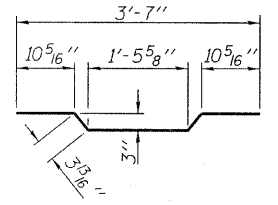
FIXED



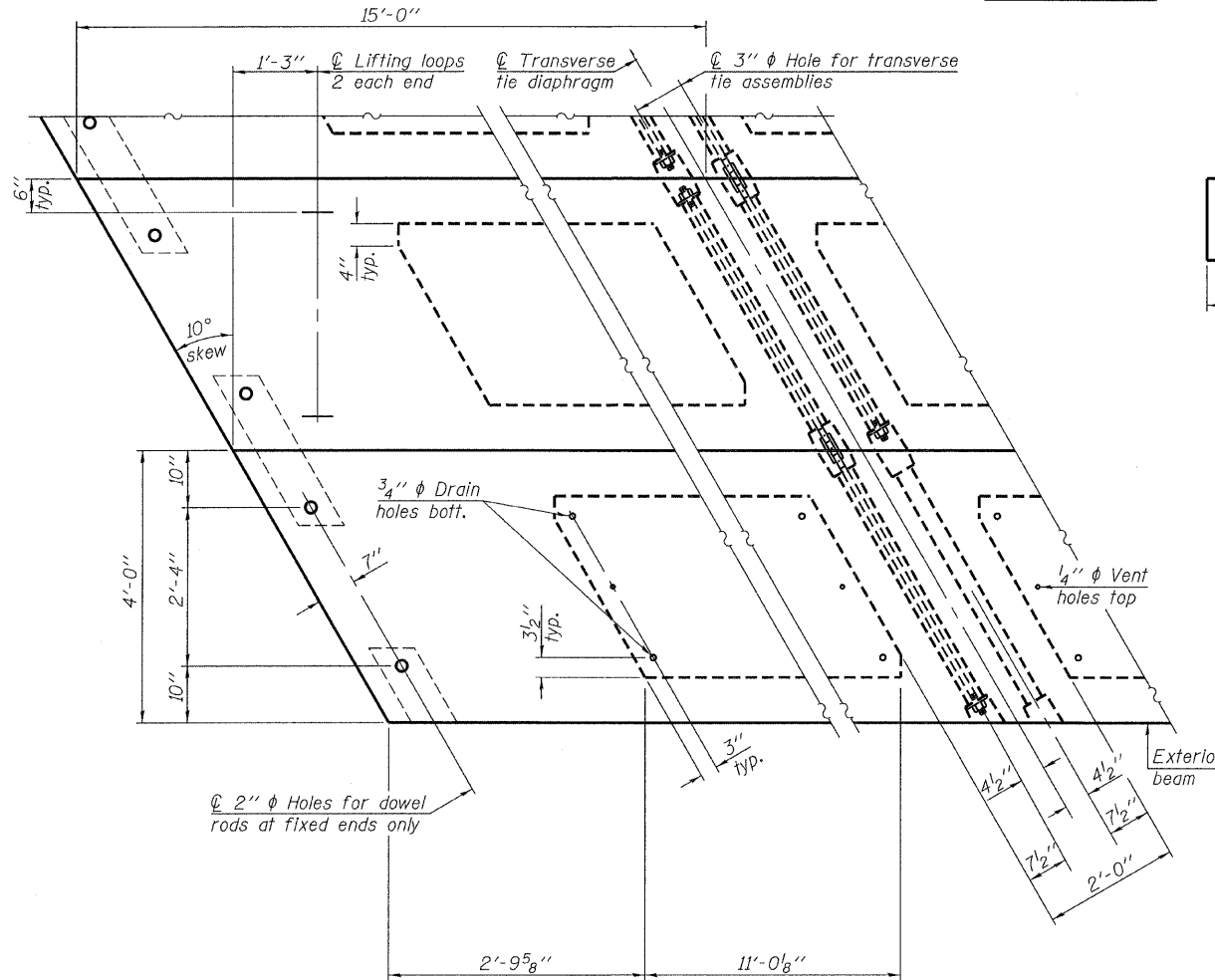
SECTION A-A



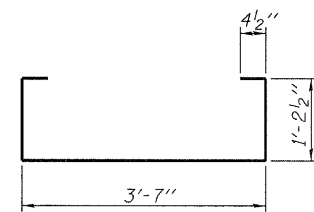
TYPICAL TRANSVERSE TIE ASSEMBLY



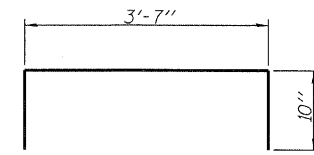
BAR A1(E)



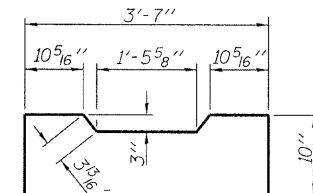
PLAN VIEW



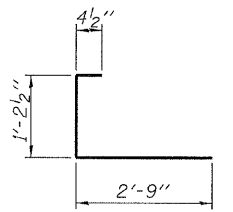
BAR S(E)



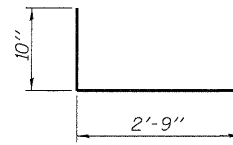
BAR S1(E)



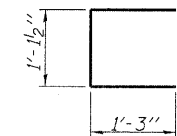
BAR S2(E)



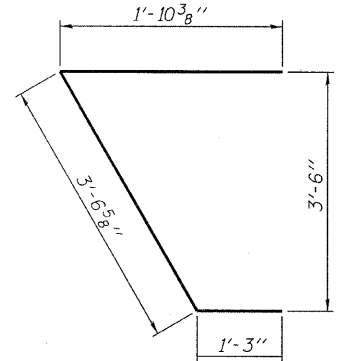
BAR S3(E)



BAR S4(E)



BAR U(E)

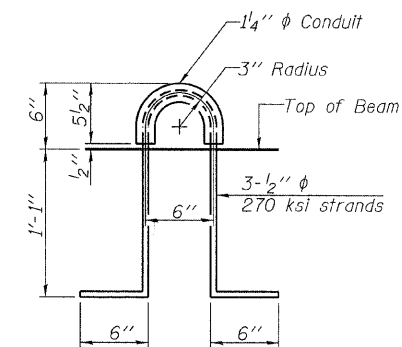


BAR U1(E)

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 1021.06 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 reinforcement shall be epoxy coated.

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



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,440
---	---------	-------

PD-1748-RD

7-1-10

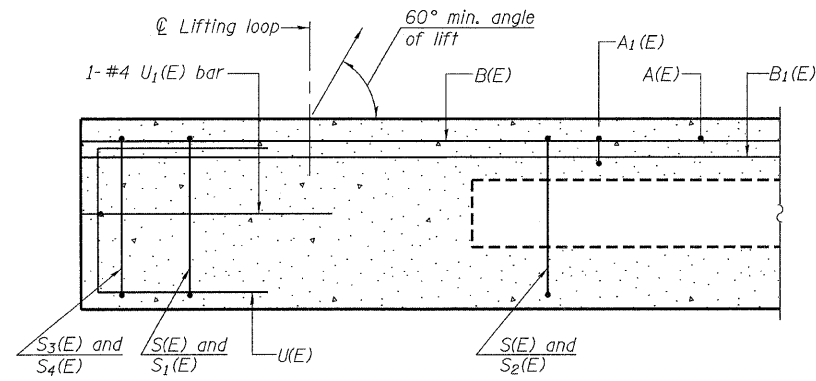
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3908 STEPHENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P3 / S3 CONP. - 184-009839	PLOT DATE = 2/28/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

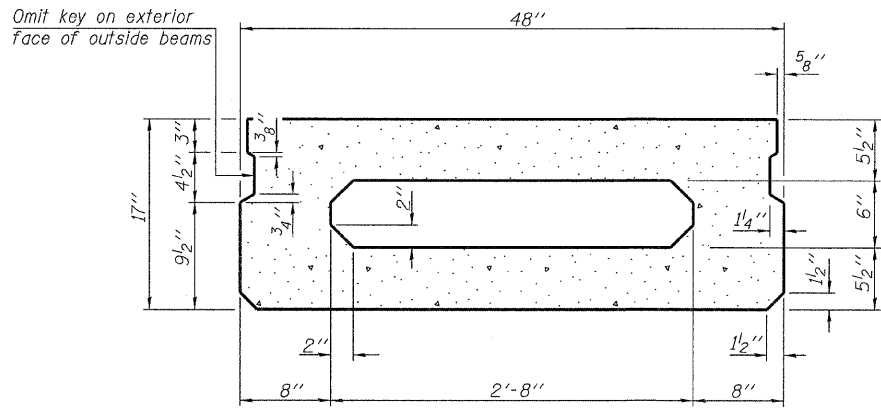
17" x 48" PPC DECK BEAM DETAILS - SPANS 1 & 3
STRUCTURE NO. 041-3748

SHEET NO. 4 OF 12 SHEETS

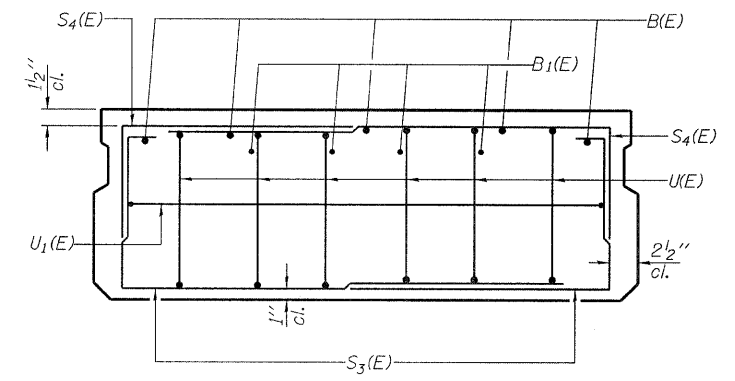
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	29
FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471		
[ILLINOIS] FED. AID PROJECT BR08-00810631				



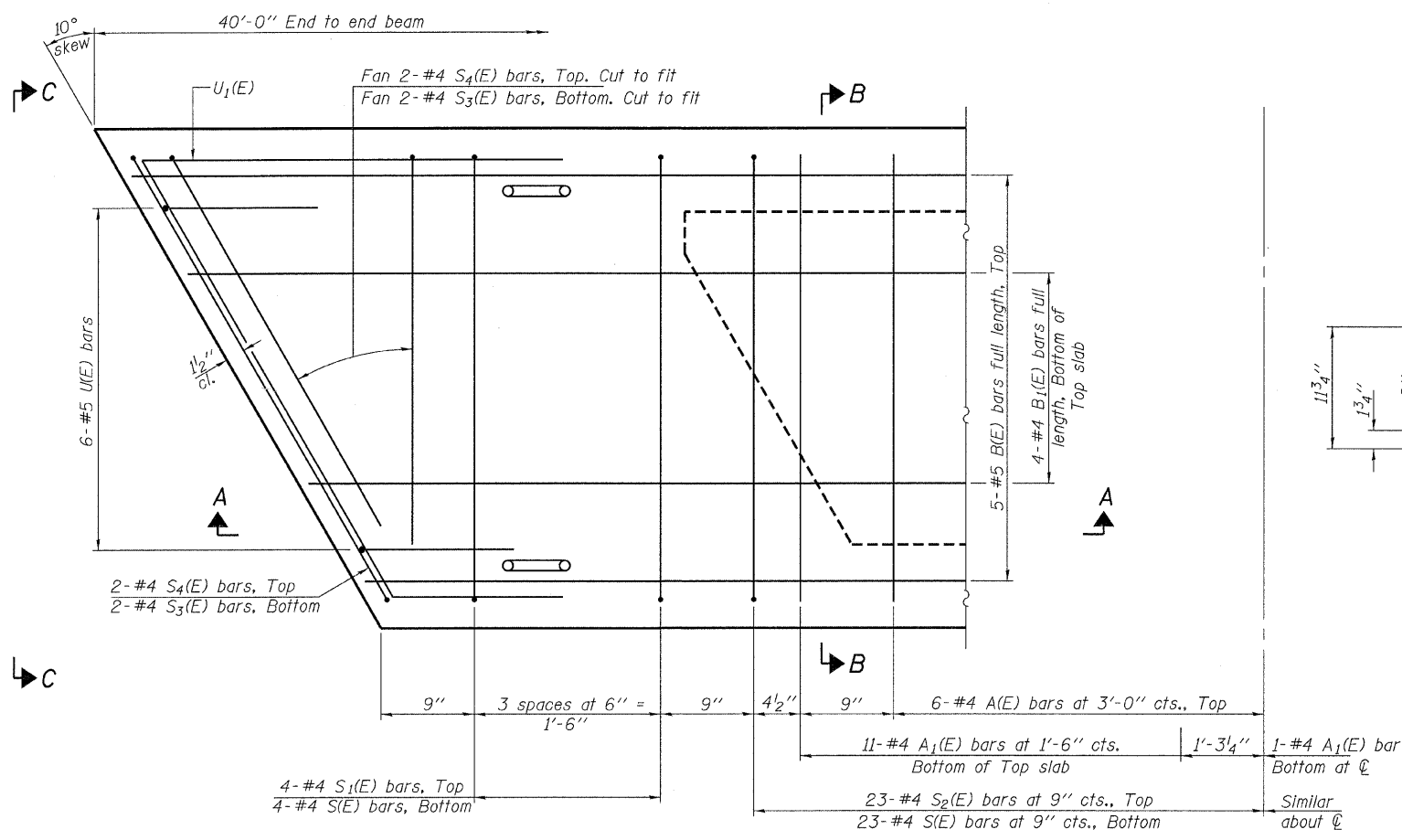
SECTION A-A



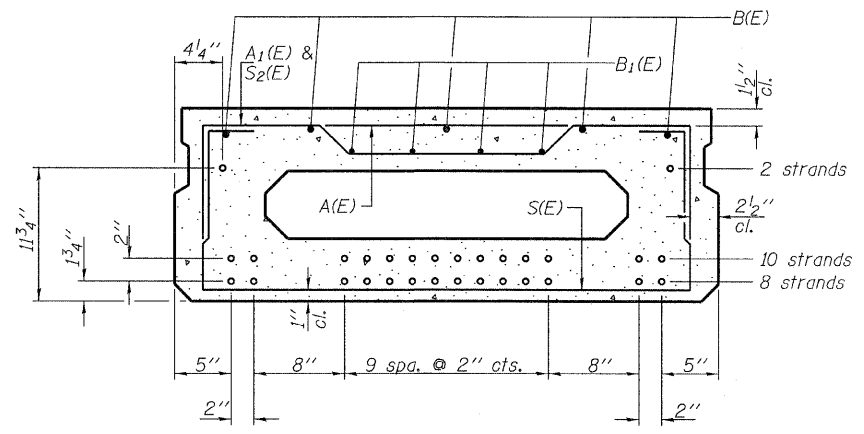
SECTION B-B
(Showing dimensions)



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)	12	#4	3'-7"	—
A1(E)	23	#4	3'-10"	—
B(E)	5	#5	39'-8"	—
B1(E)	4	#4	39'-8"	—
S(E)	54	#4	6'-9"	—
S1(E)	8	#4	5'-3"	—
S2(E)	46	#4	5'-6"	—
S3(E)	8	#4	4'-4"	—
S4(E)	8	#4	3'-7"	—
U(E)	12	#5	3'-8"	—
U1(E)	2	#4	6'-8"	—

Note: See sheets 6 & 7 of 12 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.

MINIMUM BAR LAP

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

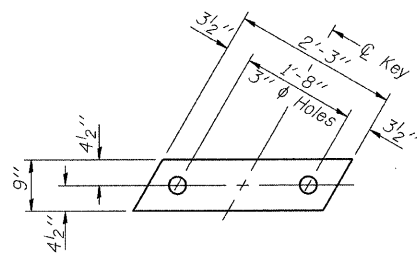
PD-1748-R 7-1-10

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ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000939	PLOT DATE = 2/28/2012	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

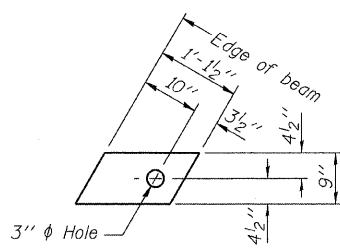
STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM - SPAN 2
STRUCTURE NO. 041-3748
SHEET NO. 5 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	30
FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
ILLINOIS FED. AID PROJECT BR05-00810631				



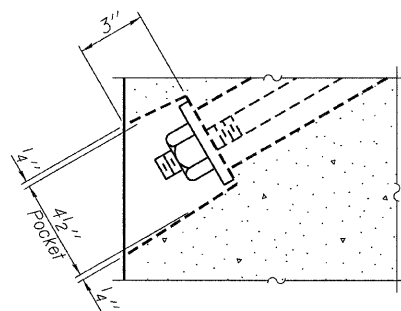
FABRIC BEARING PAD
(Interior - 10 Req'd)



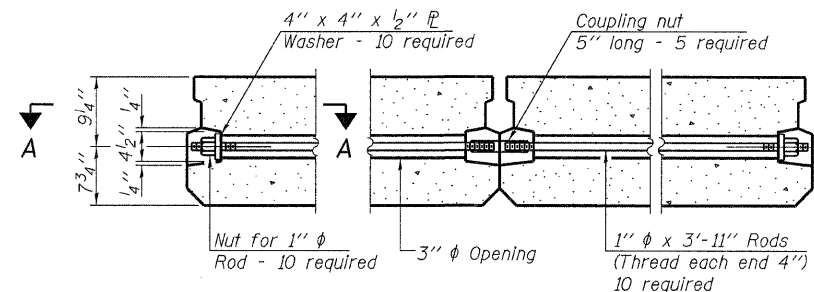
FABRIC BEARING PAD
(Exterior - 4 Req'd)

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

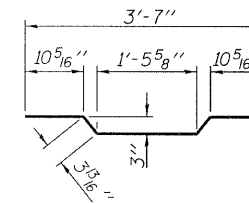
FIXED



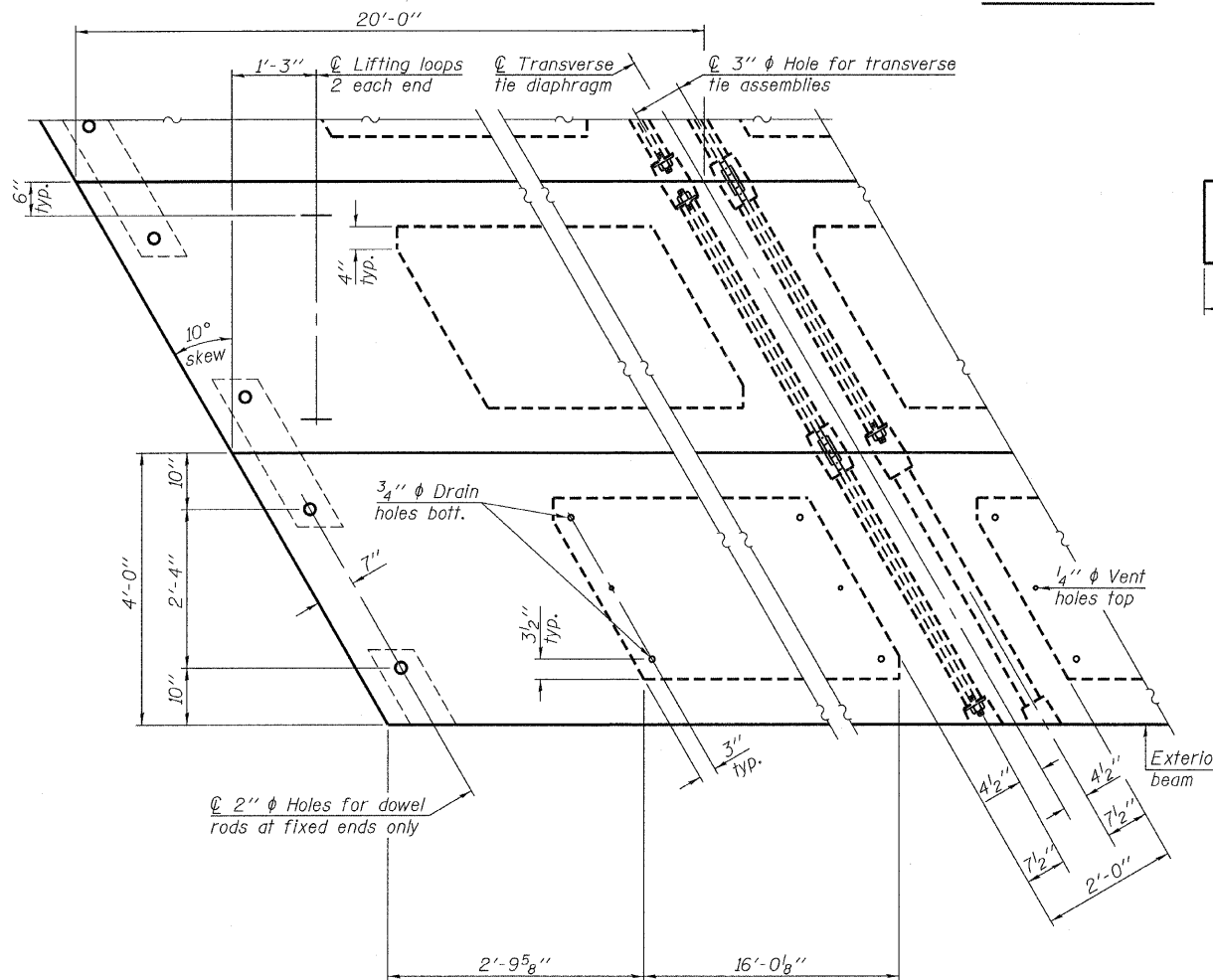
SECTION A-A



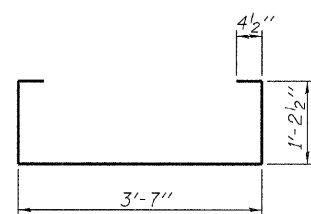
TYPICAL TRANSVERSE TIE ASSEMBLY



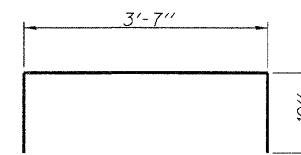
BAR A1(E)



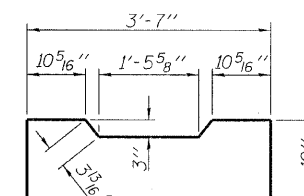
PLAN VIEW



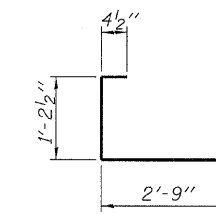
BAR S(E)



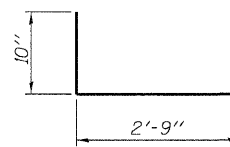
BAR S1(E)



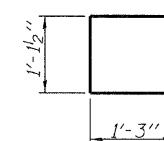
BAR S2(E)



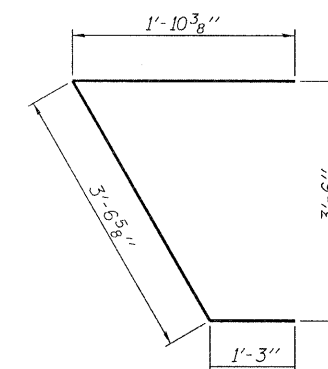
BAR S3(E)



BAR S4(E)



BAR U(E)

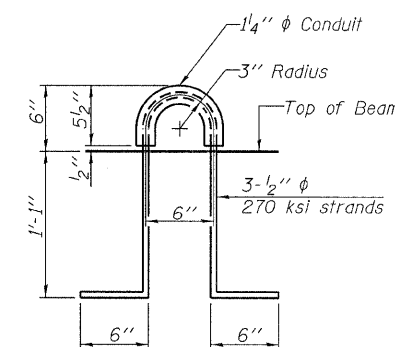


BAR U1(E)

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 reinforcement shall be epoxy coated.

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



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	960
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PD-1748-RD

7-1-10

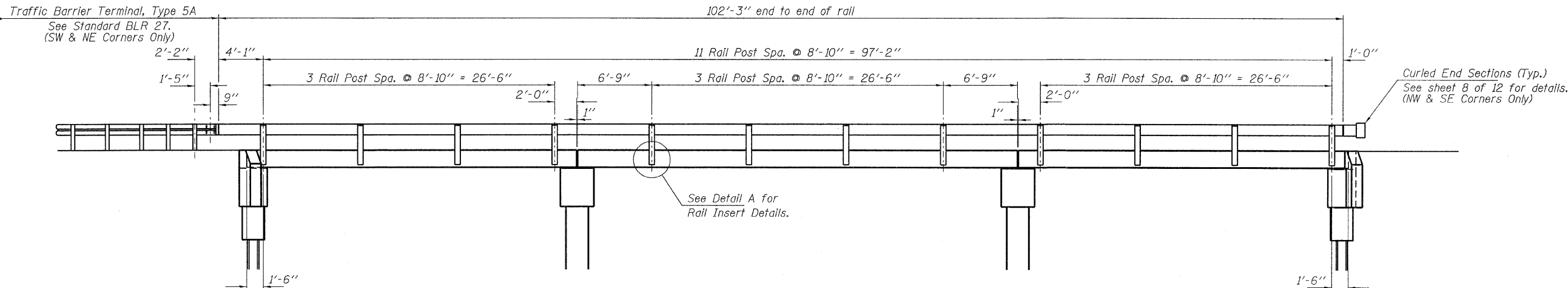
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3030 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184 600999	PLOT DATE = 2/28/2012	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM DETAILS - SPAN 2
STRUCTURE NO. 041-3748

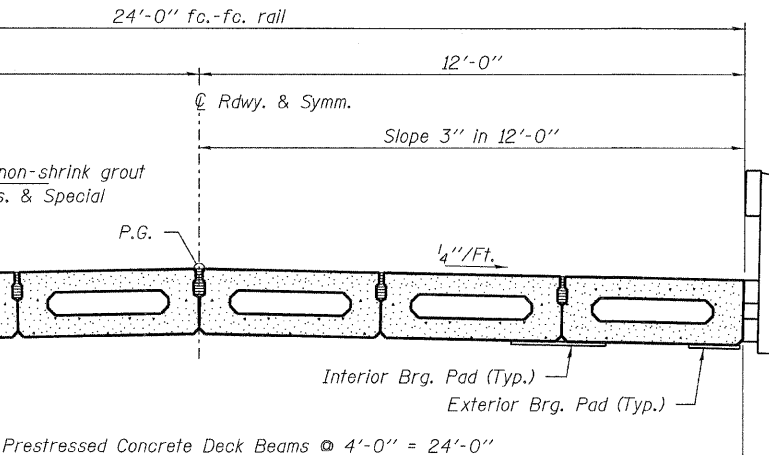
SHEET NO. 6 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	31
FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
ILLINOIS FED. AID PROJECT BR05-00810631				

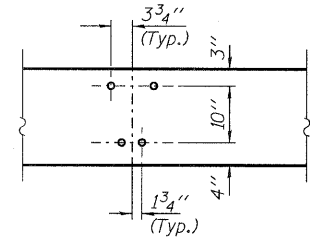


ELEVATION
Showing Rail Post Spaces
See sheet 8 of 12 for Railing Details.

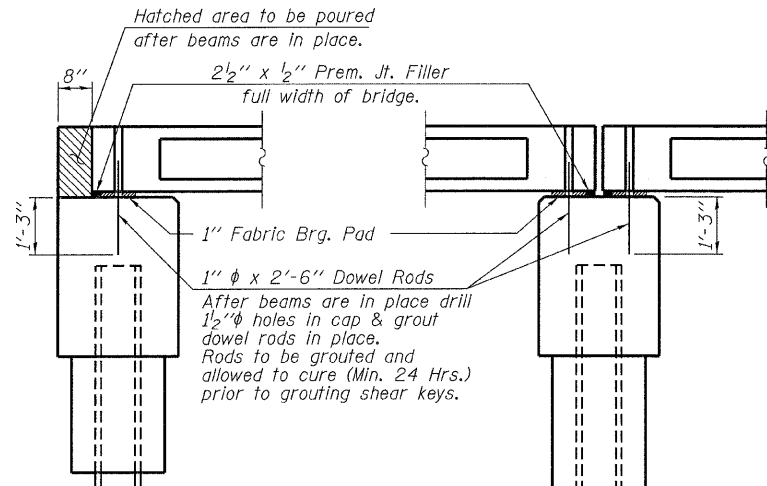
Curled End Sections (Typ.)
See sheet 8 of 12 for details.
(NW & SE Corners Only)



CROSS SECTION
See sheets 2 thru 6 of 12 for Superstructure.



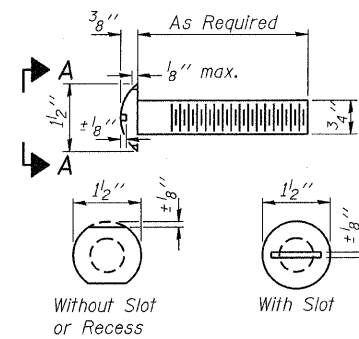
DETAIL A



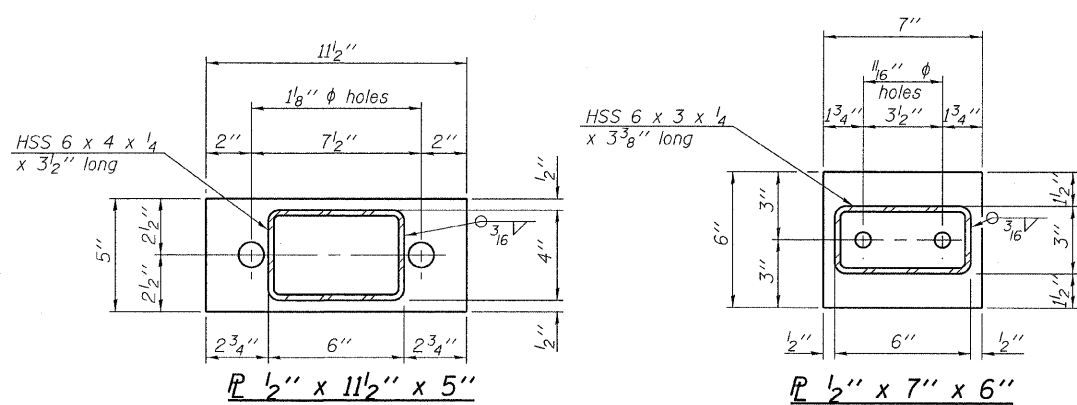
SECTION AT ABUTMENTS
© Rt. L's

SECTION AT PIERS
© Rt. L's

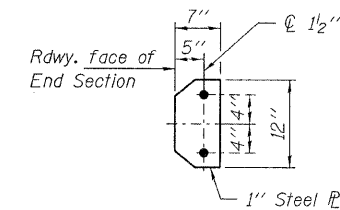
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HAMPTON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			91	09-06122-00-BR	JEFFERSON	37	32	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000989	PLOT DATE = 2/20/2012	DRAWN - D.A.B.	REVISED -			FARRINGTON ROAD DISTRICT CONTRACT NO. 99471					
		CHECKED - S.W.M.	REVISED -			SHEET NO. 7 OF 12 SHEETS					
						[ILLINOIS] FED. AID PROJECT BR05-00810631					



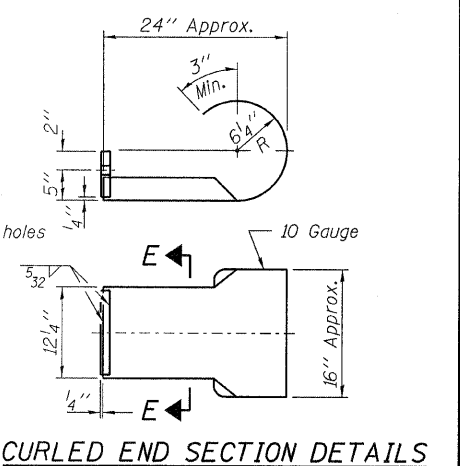
**VIEW A-A
ROUND HEAD BOLT**



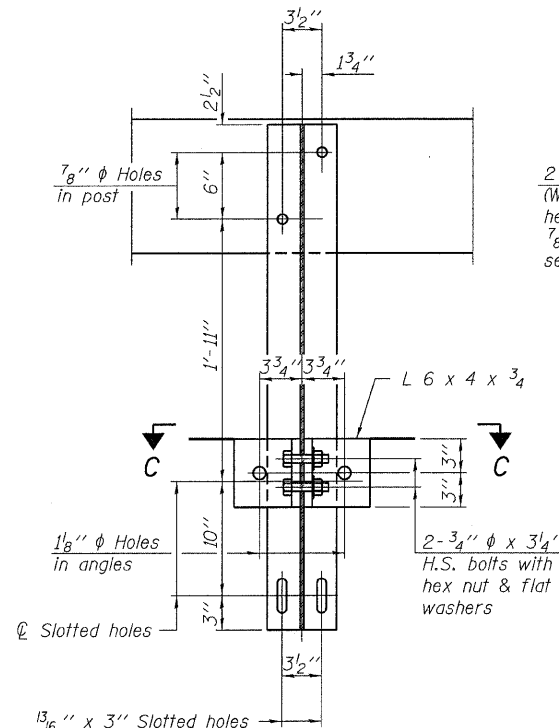
Note: Cost of curled end sections shall be included with the Steel Railing. (2 Required)



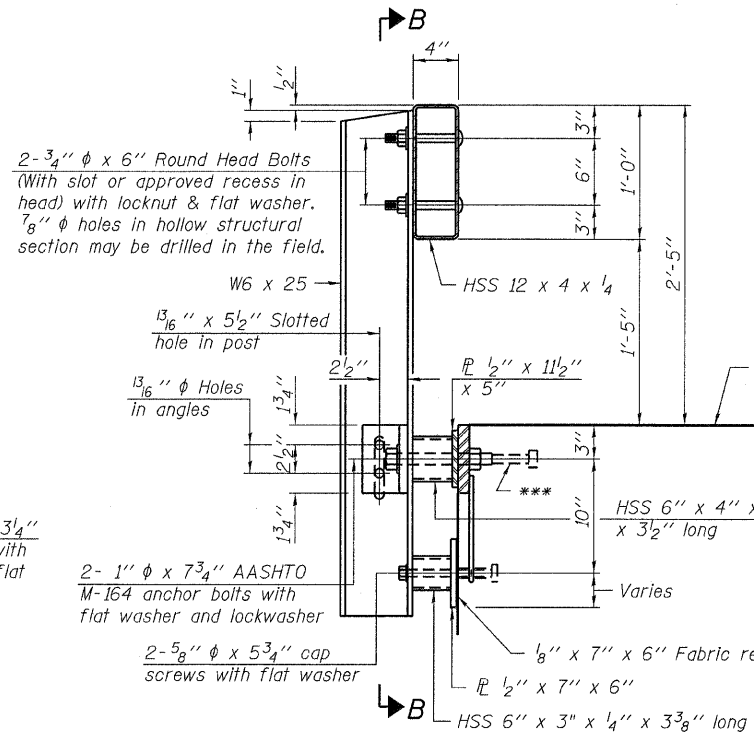
SECTION E-E



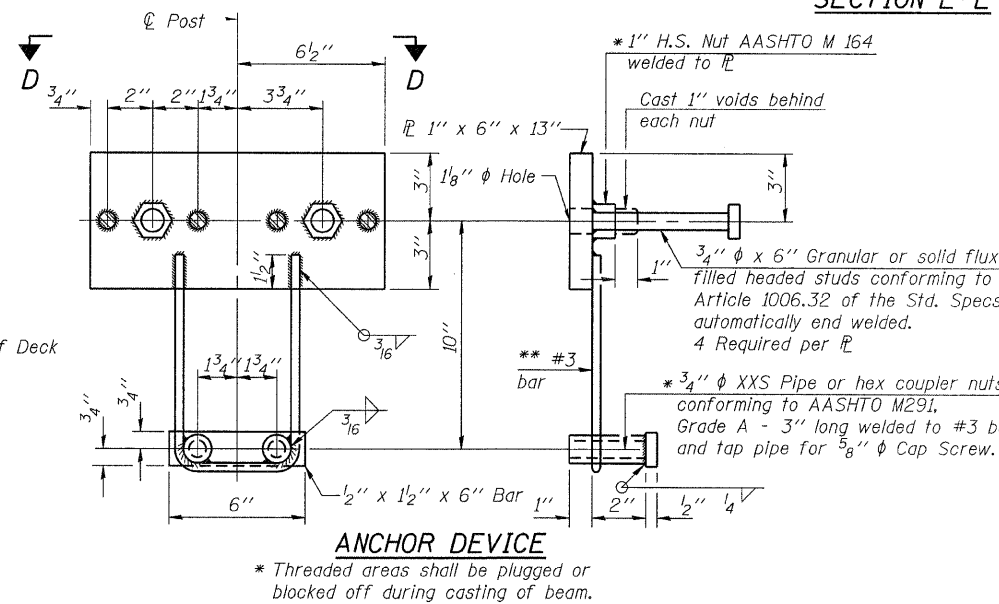
CURLLED END SECTION DETAILS



SECTION B-B

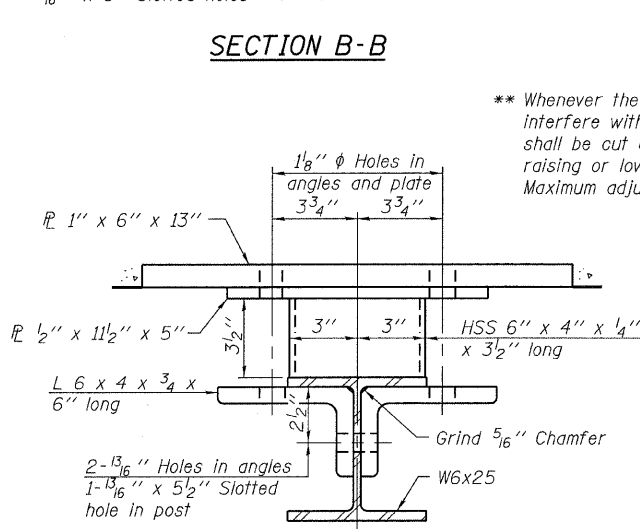


SECTION AT RAILING POST



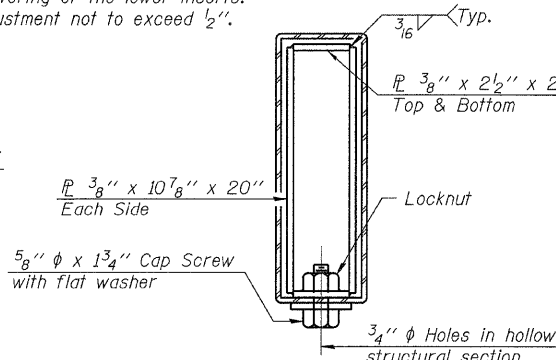
ANCHOR DEVICE

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.

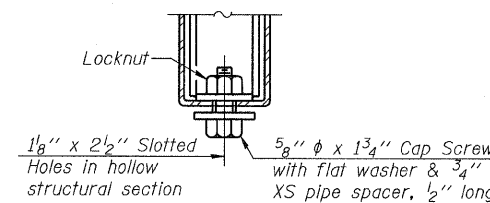


SECTION C-C

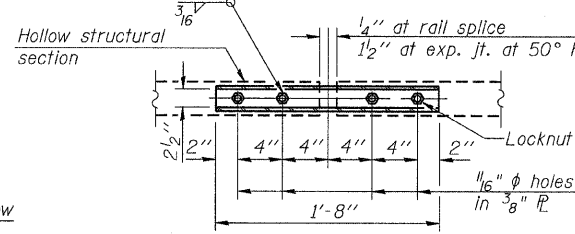
*** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



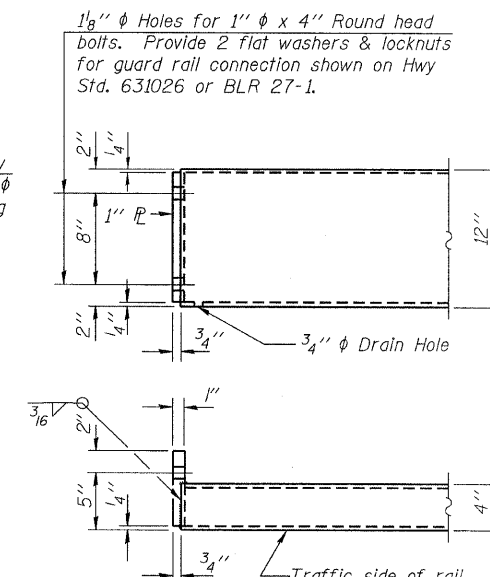
SECTIONS AT RAIL SPLICE



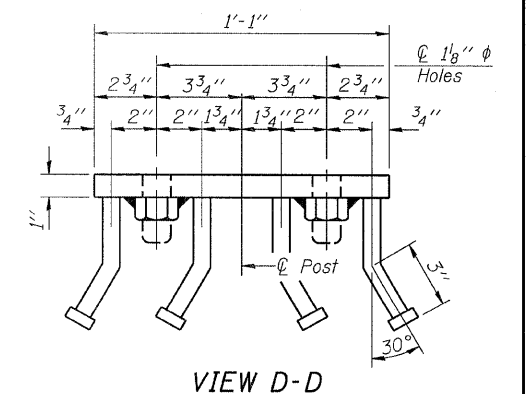
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL TYPICAL



STEEL RAILING, TYPE S-1 END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	205

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

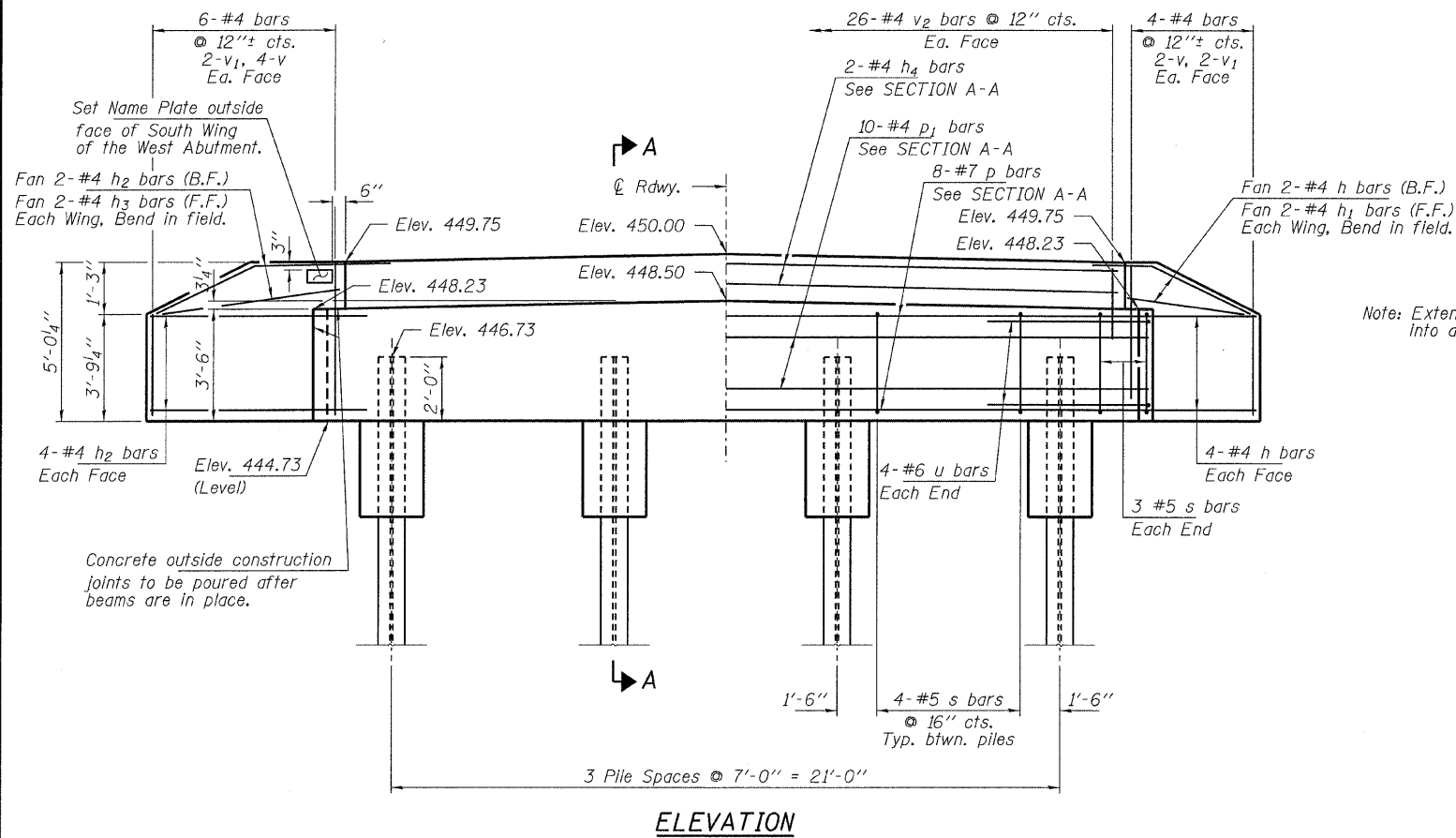
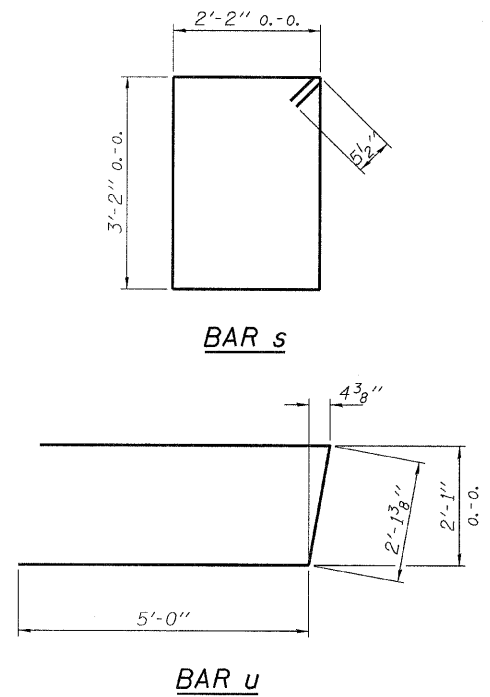
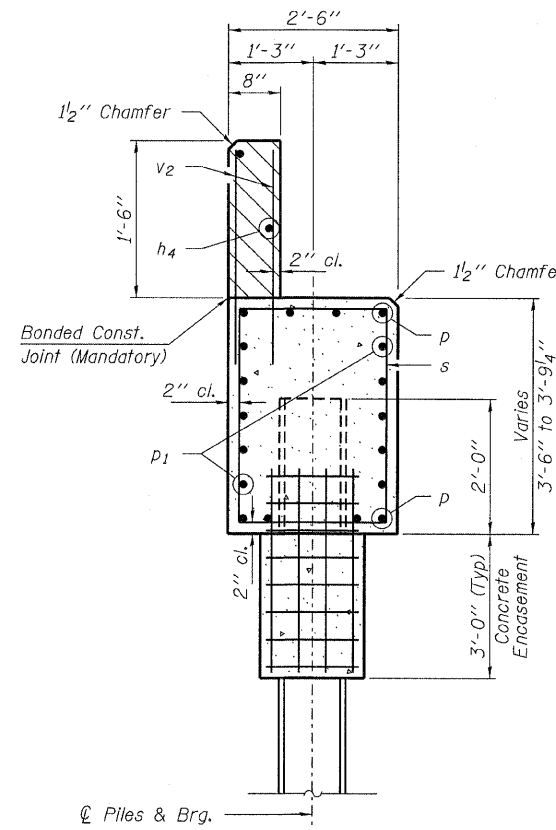
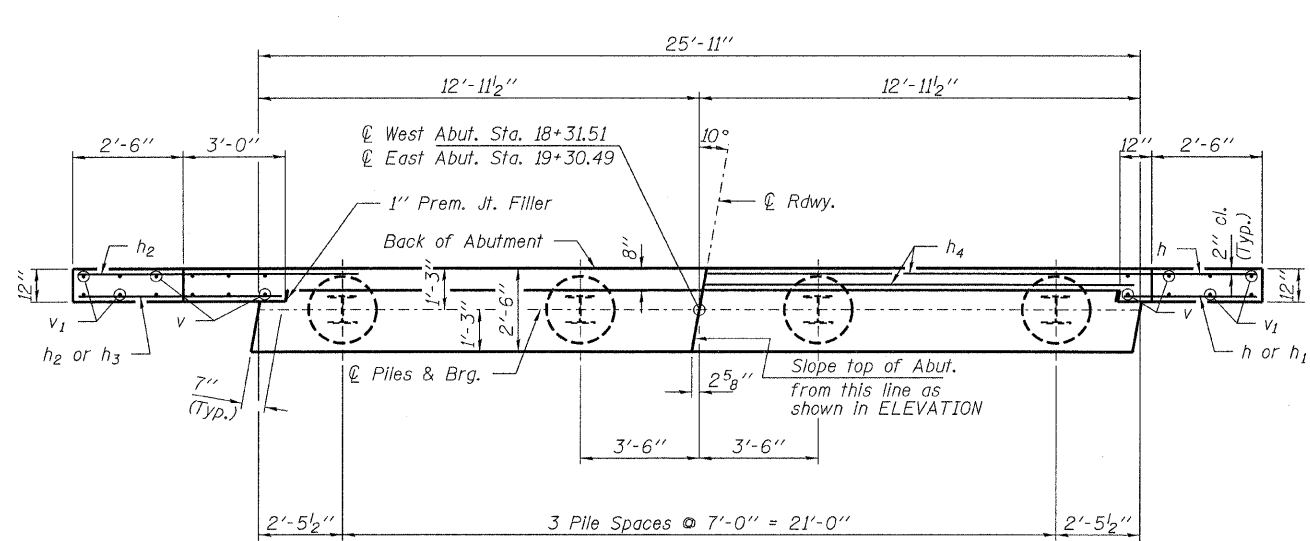
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HAMPTON, LENZINI AND RENWICK, INC. 2308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62705	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 194.000959	PLLOT DATE = 2/28/2012	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 041-3748

SHEET NO. 8 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	09-06122-00-BR	JEFFERSON	37	33
FARRINGTON ROAD DISTRICT			CONTRACT NO. 99471	
[ILLINOIS] FED. AID PROJECT BR05-00810631				



Hatched area to be poured after beams are in place.

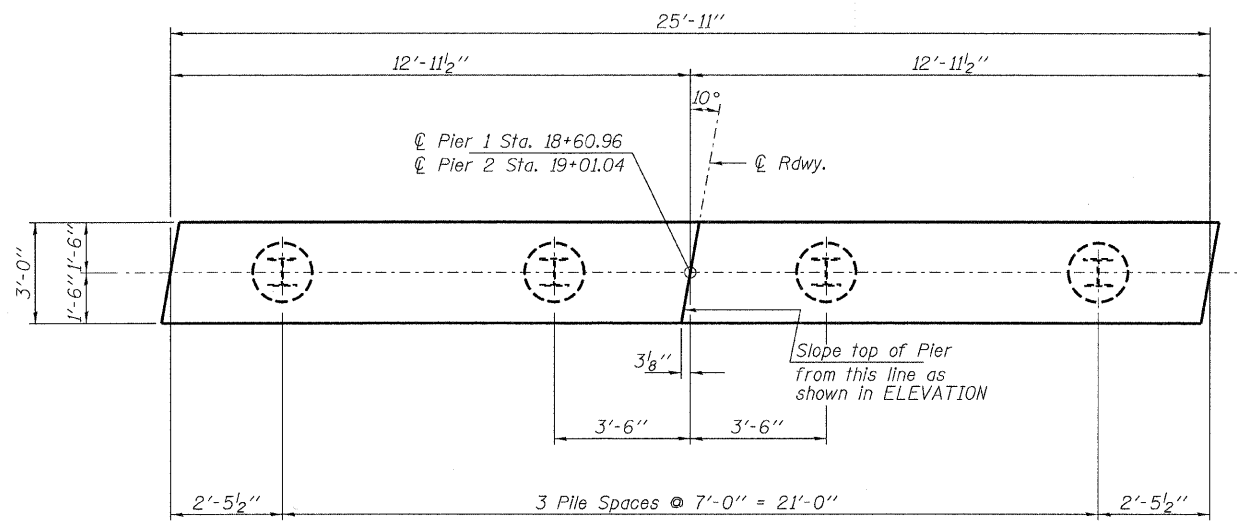
Note: Extend h & h₂ bars into abutment cap.

PILE DATA

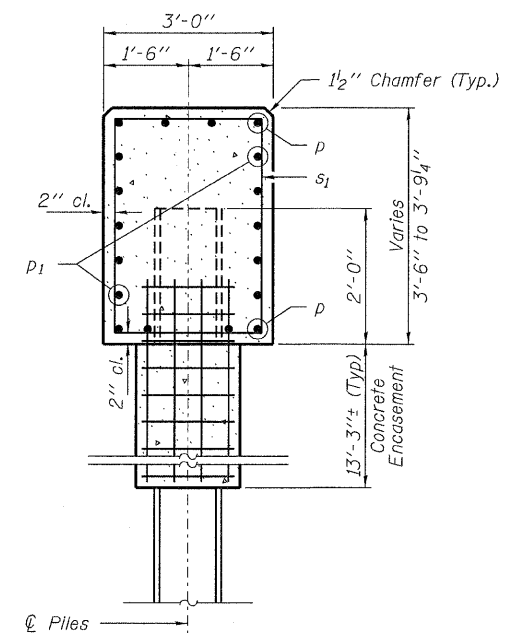
Type ----- Steel HP10x42
 No. Req'd. (2 Abutments) ----- 8
 Factored Resistance Available (Rf) ----- 184 Kips/Pile
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile
 Est. Length ----- 20 Ft/Pile

BILL OF MATERIAL - 2 ABUTS.

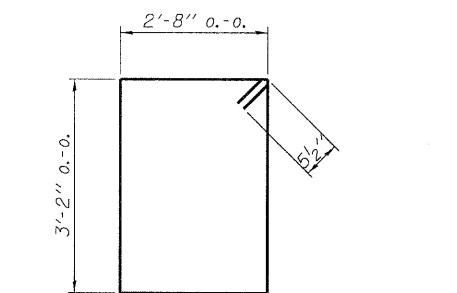
BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#4	4'-9"	—
h ₁	4	#4	3'-3"	—
h ₂	20	#4	6'-9"	—
h ₃	4	#4	5'-3"	—
h ₄	4	#4	25'-7"	—
p	16	#7	25'-7"	—
p ₁	20	#4	25'-7"	—
s	36	#5	11'-7"	□
u	16	#6	12'-2"	▭
v	24	#4	4'-6"	—
v ₁	16	#4	3'-6"	—
v ₂	104	#4	2'-4"	—
Concrete Structures			Cu. Yd.	22.0
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,340
Steel Piles HP10x42			Foot	160
Name Plates			Each	1



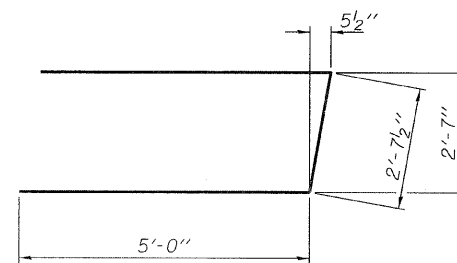
PLAN



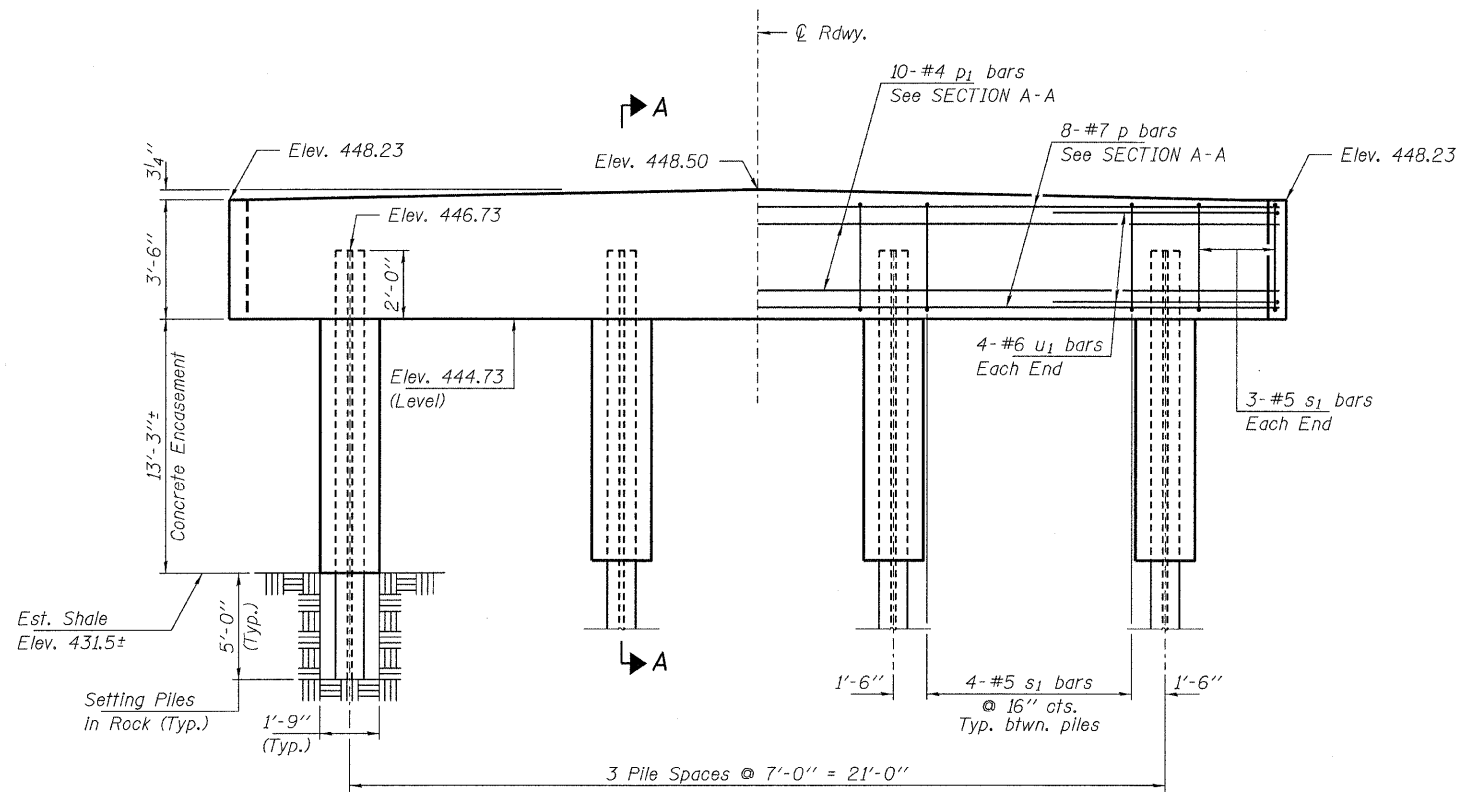
SECTION A-A



BAR s1



BAR u1



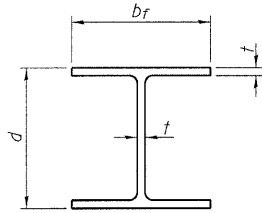
ELEVATION

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (2 Piers) ----- 8
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 22 Ft/Pile

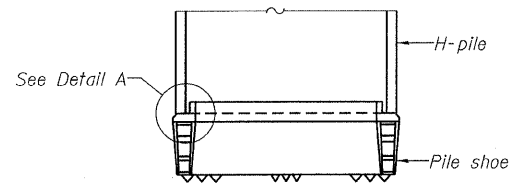
BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
p	16	#7	25'-7"	—
p1	20	#4	25'-7"	—
s1	36	#5	12'-7"	□
u1	16	#6	12'-8"	U
Concrete Structures			Cu. Yd.	20.8
Concrete Encasement			Cu. Yd.	12.0
Reinforcement Bars			Pound	1,960
Steel Piles HP10x42			Foot	176
Setting Piles in Rock			Each	8

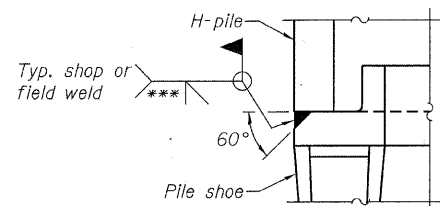


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	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"	11/16"	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"

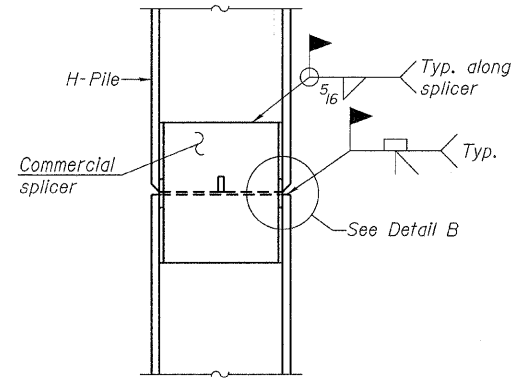


ELEVATION

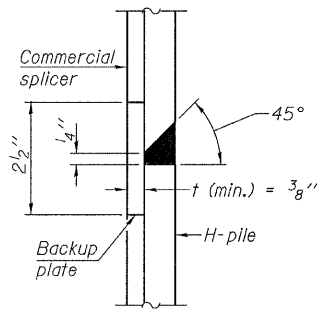


DETAIL A

H-PILE SHOE ATTACHMENT

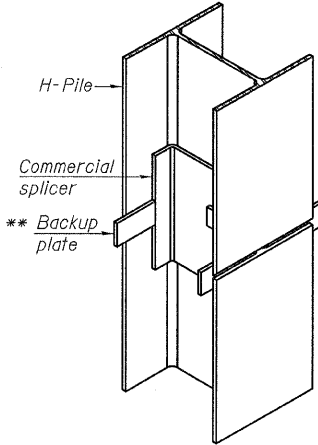


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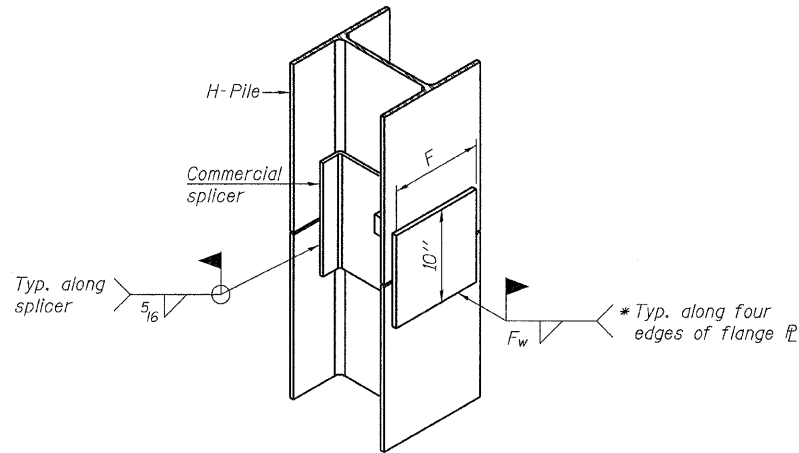


DETAIL "B"

WELDED COMMERCIAL SPLICE



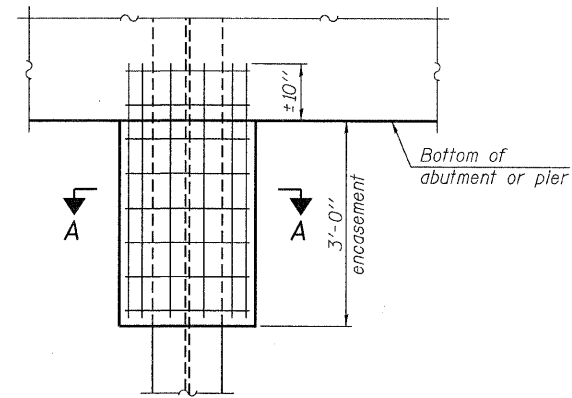
ISOMETRIC VIEW



ISOMETRIC VIEW

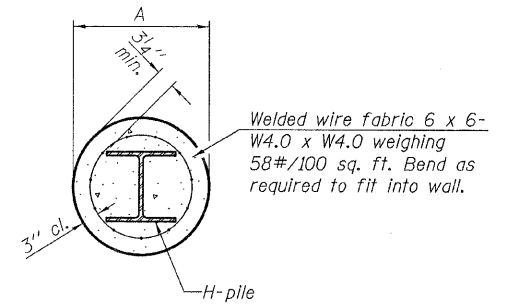
WELDED COMMERCIAL SPLICE ALTERNATE

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

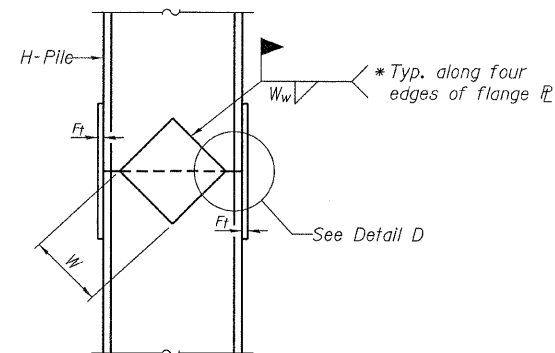


ELEVATION

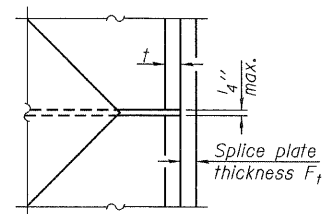
PILE ENCASEMENT



SECTION A-A

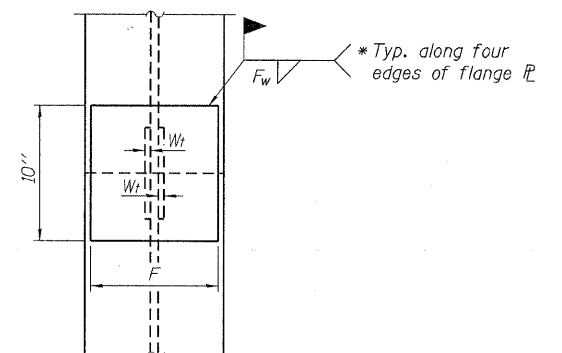


ELEVATION



DETAIL D

WELDED PLATE FIELD SPLICE



END VIEW

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

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

F-HP 7-1-10

FILE NAME = 118266-sh-t-br-ridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 041-3748	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62733	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			91	09-06122-00-BR	JEFFERSON	37	36
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184-00898	PLOT DATE = 2/20/2012	DRAWN - D.A.B.	REVISED -			FARRINGTON ROAD DISTRICT		CONTRACT NO. 99471		
		CHECKED - S.W.M.	REVISED -			SHEET NO. 11 OF 12 SHEETS		CONTRACT NO. 99471		[ILLINOIS] FED. AID PROJECT BR05-0081(063)

Bridge Foundation Boring Log

Project: H-11193 Bridge TR 91 / Malecki Rd Date: 10/14/2011
Section: 09-06122-00-BR Station _____ Bored by: J. Carter
Structure: _____ Checked By: T. Holcomb
County: Jefferson

Boring No. 1	Station	Offset	Elevation	N	Qu tsf	w %	Surface Water Elev.	Ground Water Elev. During Drilling	Ground Water Elev. Upon Completion	Elevation	N	Qu tsf	w %
			447.9	0									
			447.2					435.9	plugged				
				7	1.4B	23				-25			
				5	0.9B	26							
				4	0.45	23				-30			
				5		21							
				5	1.1B	22				-35			
				6	0.3B	25							
			431.9	100	7/4"	8				-40			
				100	7/4"	5							
				100	7/3"	5							
			426.4										
End of Boring @ -21.5'													

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

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BORING 1

Bridge Foundation Boring Log

Project: H-11193 Bridge TR 91 / Malecki Rd Date: 10/14/2011
Section: 09-06122-00-BR Station _____ Bored by: J. Carter
Structure: _____ Checked By: T. Holcomb
County: Jefferson

Boring No. 2	Station	Offset	Elevation	N	Qu tsf	w %	Surface Water Elev.	Ground Water Elev. During Drilling	Ground Water Elev. Upon Completion	Elevation	N	Qu tsf	w %
			447.4	0									
			446.8					436.4	plugged				
				5	1.75	17				-25			
				4	1.0B	26							
				3	1.05	22				-30			
				3	1.05	26							
				2	0.2B	23				-35			
			433.9										
				4		27							
			431.4	100	7/3"	8				-40			
				100	7/2"	6							
				100	7/3"	6							
			425.9										
End of Boring @ -21.5'													

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

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BORING 2