

11-08-2013 LETTING ITEM 065

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE**

**PROJECT BROS-0181(053)
SECTION 10-01199-00-BR
COUNTY UNIT ROAD DISTRICT
UNION COUNTY
T.R. 72 / CLARK LANE
PROPOSED STRUCTURE NO. 091-3239
C-99-526-11**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 72	10-01199-00-BR	UNION	28	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99520		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5.	ALIGNMENT TIES
6-18.	STATION CROSS SECTIONS
19-27.	BRIDGE PLANS
28.	BORINGS

HIGHWAY STANDARDS:

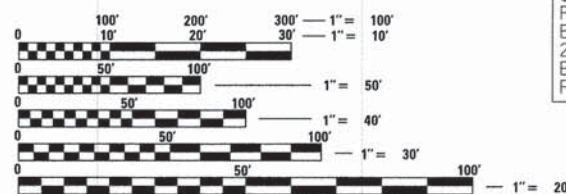
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-02	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

FRONTIER COMMUNICATIONS
208 W. UNION
MARION, IL. 62959

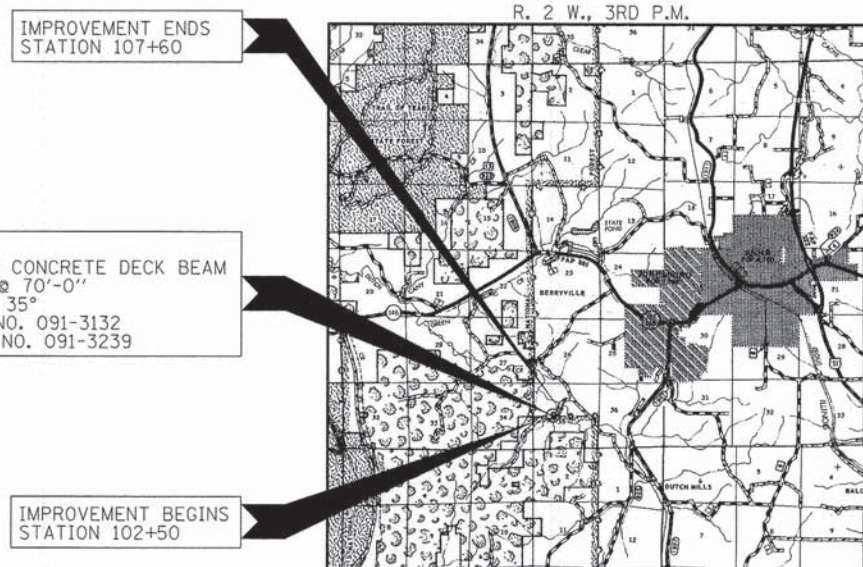


FUNCTIONAL CLASSIFICATION: LOCAL ROAD 0-250
DESIGN SPEED: 20 MPH
DESIGN TRAFFIC: 15 ADT (2013)



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.

STA. 105+57
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE, SINGLE SPAN @ 70'-0"
24'-0" RDWY.; SKEW = 35°
EXISTING STRUCTURE NO. 091-3132
PROPOSED STRUCTURE NO. 091-3239

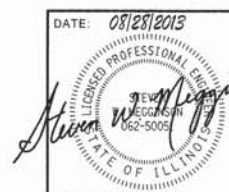


LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 510 FEET = 0.097 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	August 30, 2013 <i>Kevin Hammer</i> COUNTY ENGINEER
PASSED	September 3, 2013 <i>Dennis Hill</i> DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	September 3, 2013 <i>Jeffrey L. Keirn</i> JEFFREY L. KEIRN, P.E. ACTING DEPUTY DIRECTOR OF HIGHWAYS REGION FIVE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



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

DATE: 08/25/2013
EXPIRES: 11/30/2013

PROJECT NUMBER: 12.0104.130 DATE: 08/28/13

CONTRACT NO. 99520

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL
			CONSTRUCTION TYPE CODE 0011
^ 20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	168
^ 20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	120
20200100	EARTH EXCAVATION	CU YD	115
20300100	CHANNEL EXCAVATION	CU YD	150
20400800	FURNISHED EXCAVATION	CU YD	405
^ 28100807	STONE DUMPED RIPRAP, CLASS A4	TON	280
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	355
^ 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	37.8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,680
50800105	REINFORCEMENT BARS	POUND	3,340
* 50900205	STEEL RAILING, TYPE S1	FOOT	136
51201400	FURNISHING STEEL PILES HP10X42	FOOT	405
51202305	DRIVING PILES	FOOT	405
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
67100100	MOBILIZATION	LSUM	1
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

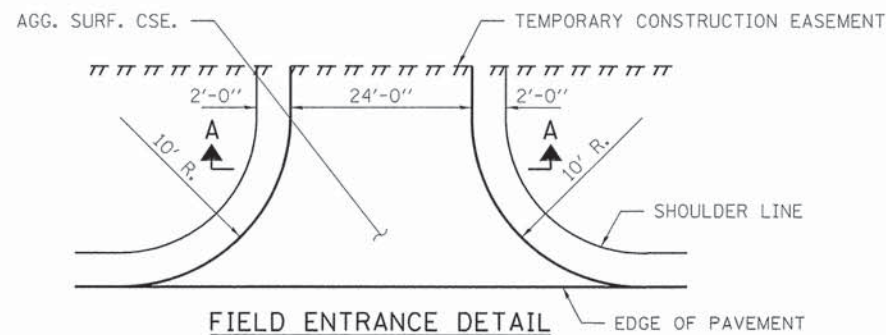
GENERAL NOTES

1. 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.
2. THE REVISION NUMBERS OF THE STANDARDS LISTED IN THE PLANS ARE TO BE USED FOR CONSTRUCTING OF THIS SECTION.
3. ALL CLEARING AND GRUBBING, FENCE REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
4. THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
6. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

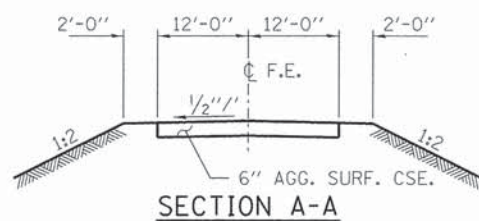
AGGREGATE SURFACE COURSE	2.05 TON/CU YD
STONE DUMPED RIPRAP	1.75 TON/CU YD
7. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.
ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.4 ACRES
8. TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE 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.
9. IN STREAM WORK IS PROHIBITED BETWEEN JUNE 1 AND AUGUST 31. TREE REMOVAL IS PROHIBITED BETWEEN APRIL 1 AND SEPTEMBER 30.

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100 CU.YD.	20300100 CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 72 / CLARK LANE							
STA 102+50 TO STA 105+22.50	98		25.00%	100.00%	74	373	-299
STA 105+22.50 TO STA 105+91.26		150	25.00%	70.00%	79		79
STA 105+91.26 TO STA 107+60	13		25.00%	100.00%	10	170	-160
ENTRANCE EMBANKMENT						24	-24
TOTAL	111	150			163	567	-404
USE	115	150					-405

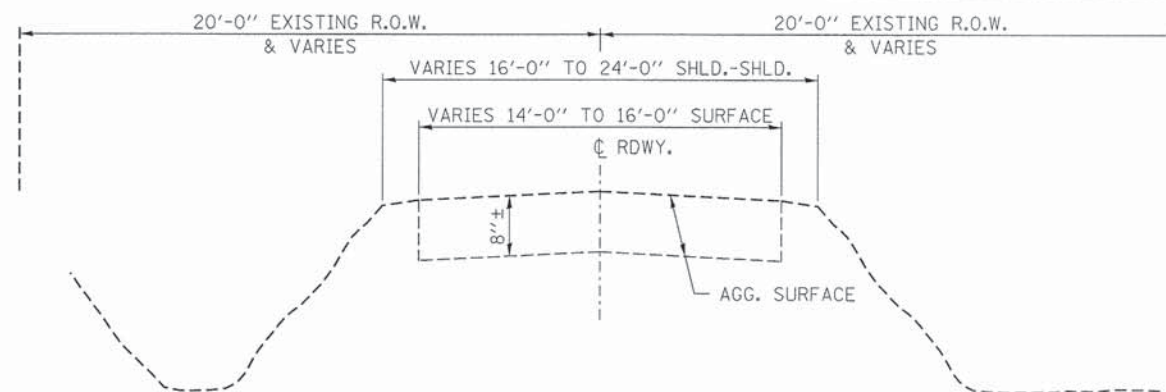
FURNISHED EXCAVATION 405 CU YDS



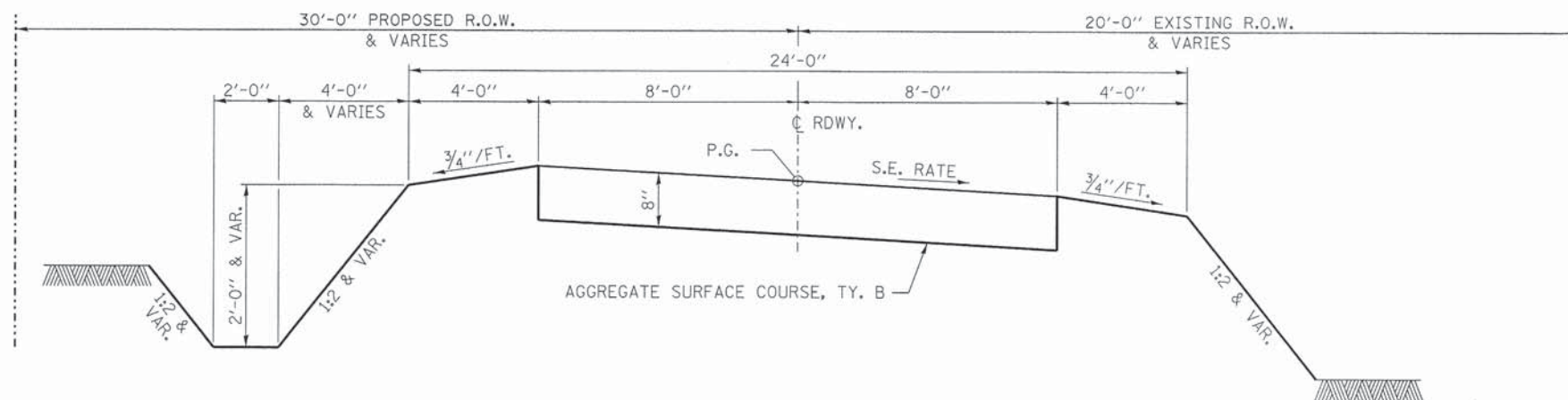
FIELD ENTRANCE DETAIL



SECTION A-A



EXISTING TYPICAL CROSS SECTION
STA. 102+50 TO 107+60

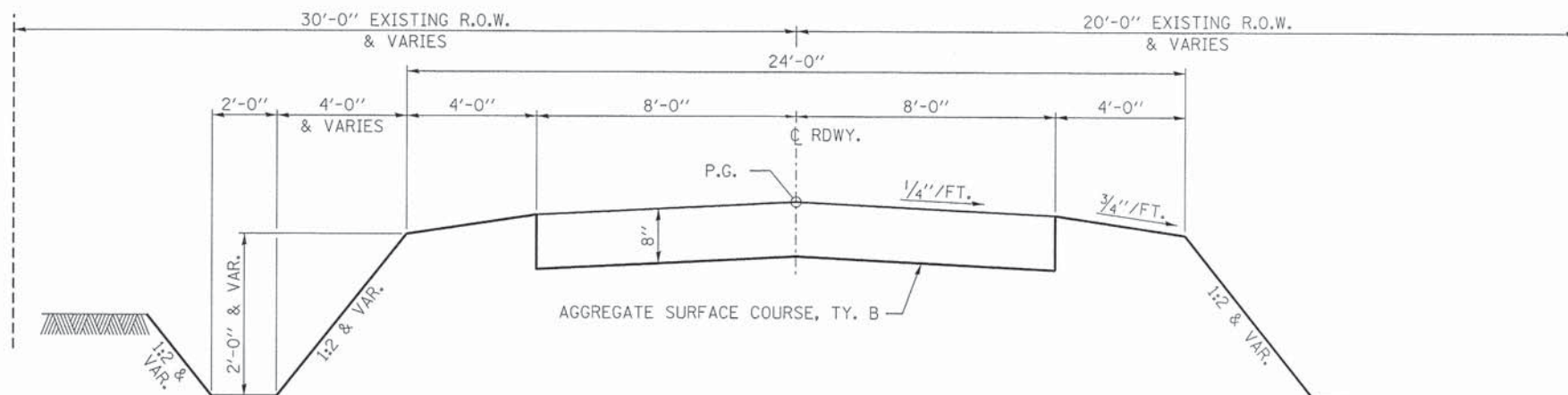


SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL CROSS SECTION
STA. 102+50 TO 106+45.80

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY ARE TO BE CONSTRUCTED FROM STA. 102+50 TO 103+00. SEE SHEET 19 FOR TRANSITION AT BRIDGE.

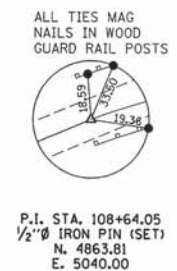
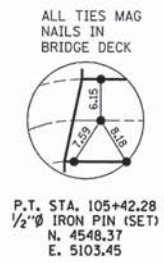
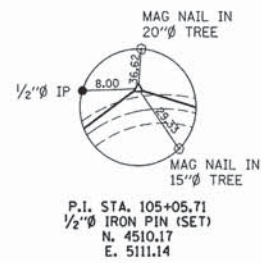
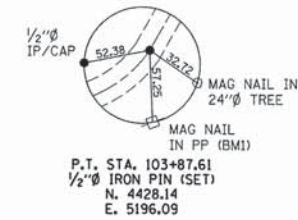
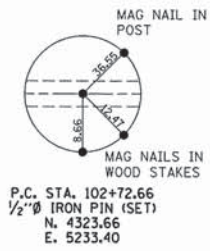


SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

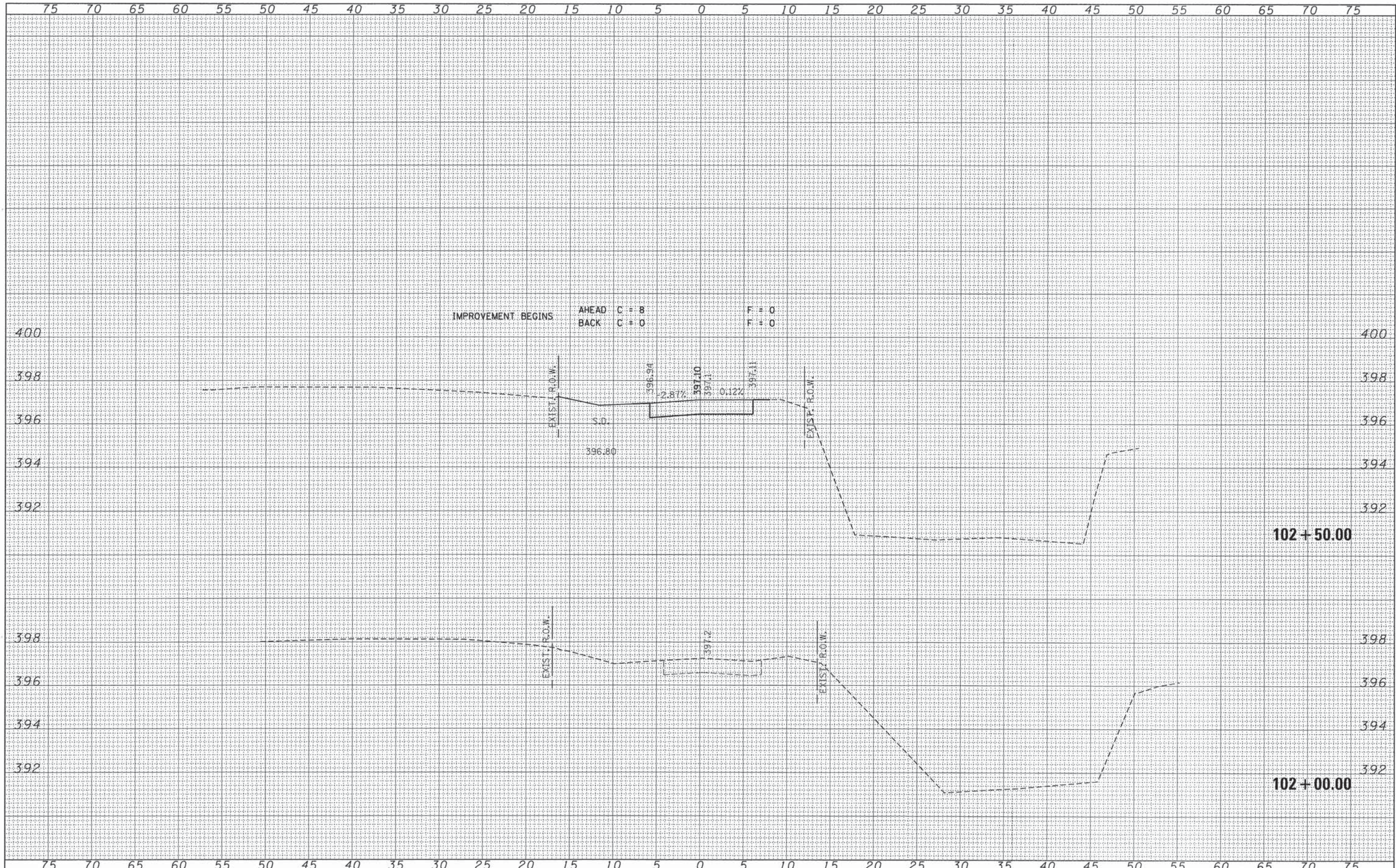
PROPOSED TYPICAL CROSS SECTION
STA. 106+45.80 TO 107+00

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			72	10-01199-00-BR	UNION	28	3	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000989	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -			COUNTY UNIT ROAD DISTRICT	CONTRACT NO. 99520				
		DATE - 08/28/13	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		
						ILLINOIS FED. AID PROJECT BR05-01810531					



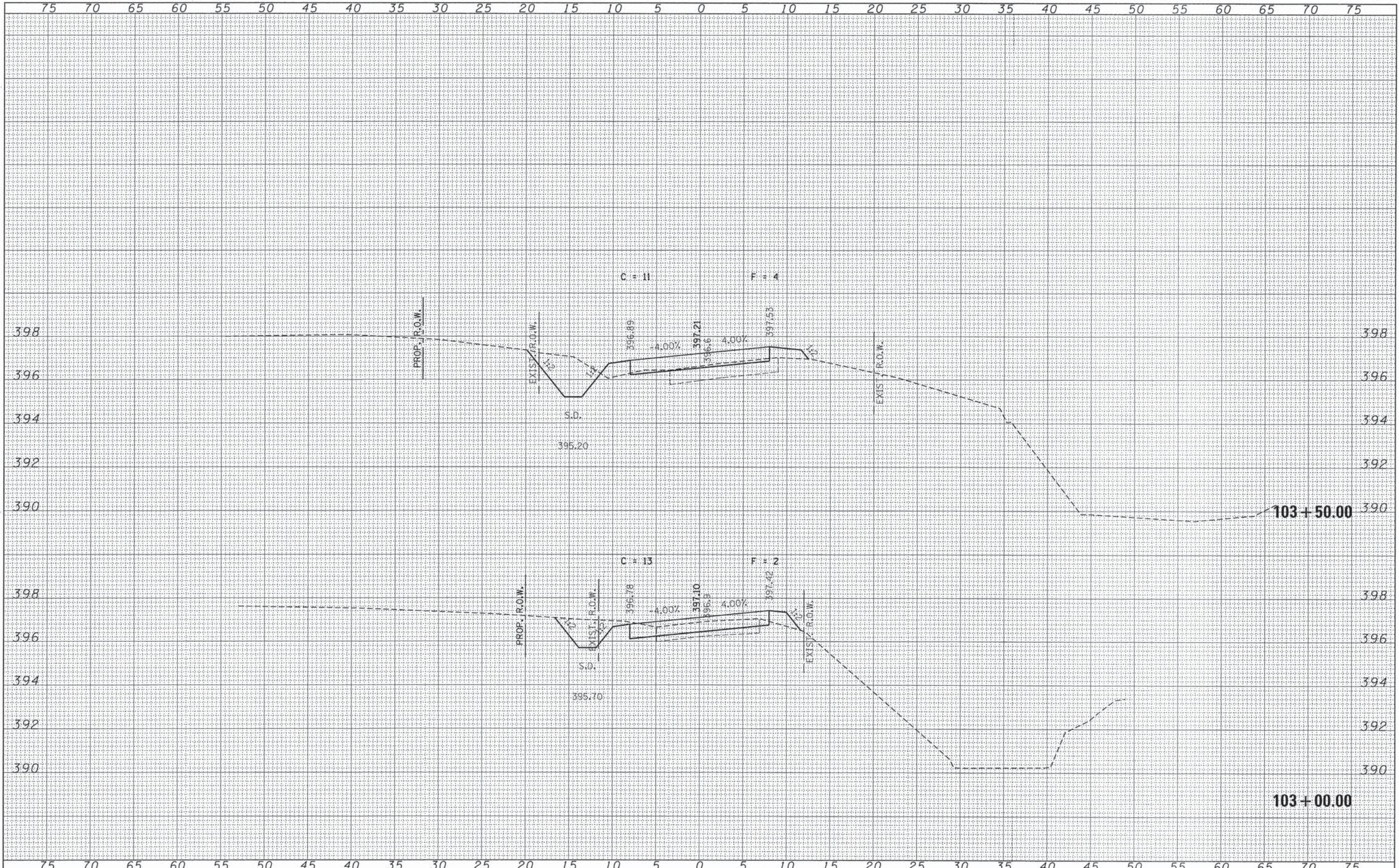
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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62705	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		72	10-01199-00-BR	UNION	28	5		
ILLINOIS PROFESSIONAL DESIGN FIRM LS/PB/SE CORP. 184-002859	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -		COUNTY UNIT ROAD DISTRICT	CONTRACT NO. 99520		ILLINOIS FED. AID PROJECT BROS-0181(053)			
	DATE = 08/28/13	DATE = 08/28/13	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			



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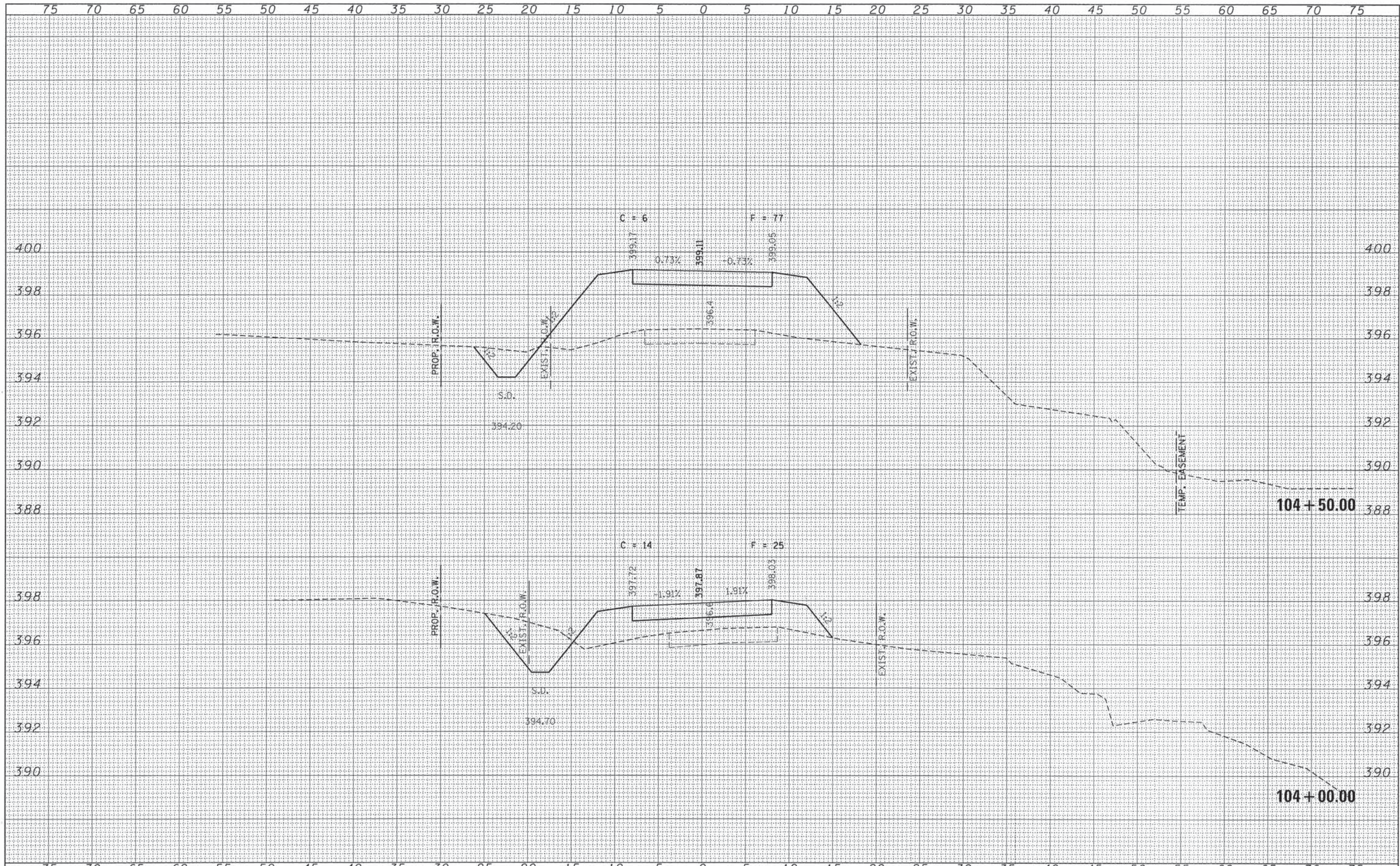
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	72	10-01199-00-BR	UNION	28	6
2005 KENNEDY DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -	COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00099	PLOT DATE = 8/28/2013	DATE - 08/28/13	REVISED -	SCALE:		ILLINOIS FED. AID PROJECT BROS-01810531		
STATE OF ILLINOIS UNION COUNTY HIGHWAY DEPARTMENT				STATION CROSS SECTIONS CLARK LANE				
				SHEET NO. 1 OF 13 SHEETS		STA. 102+00.00 TO STA. 102+50.00		



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1001 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -		SCALE: SHEET NO. 2 OF 13 SHEETS STA. 103+00.00 TO STA. 103+50.00		CONTRACT NO. 99520				
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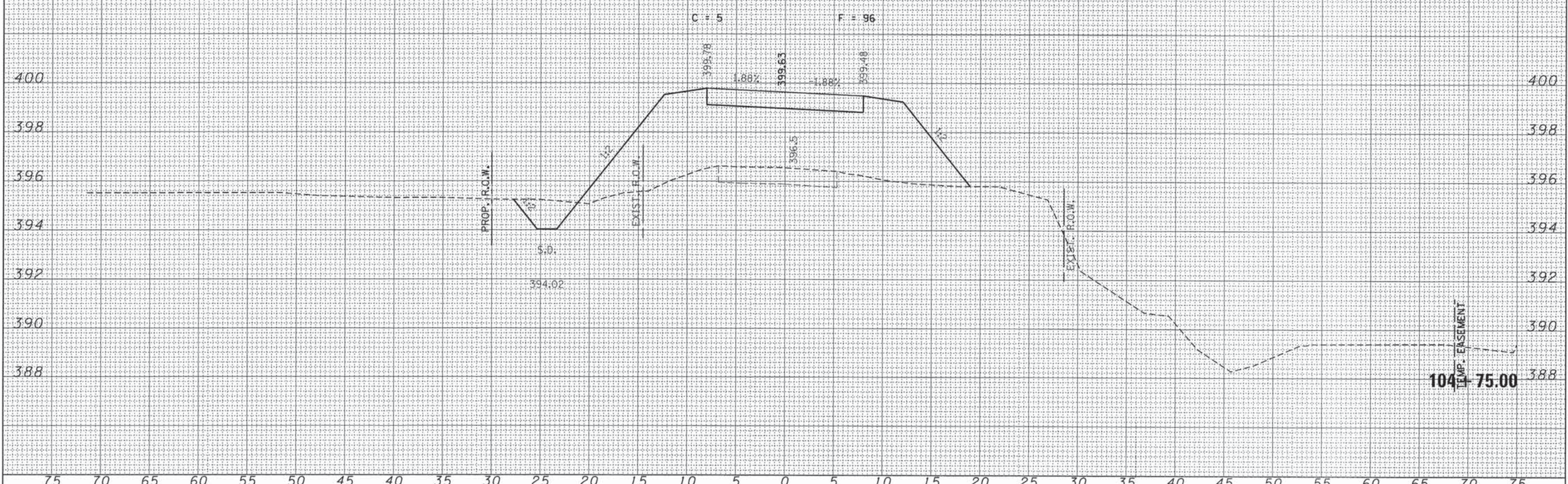
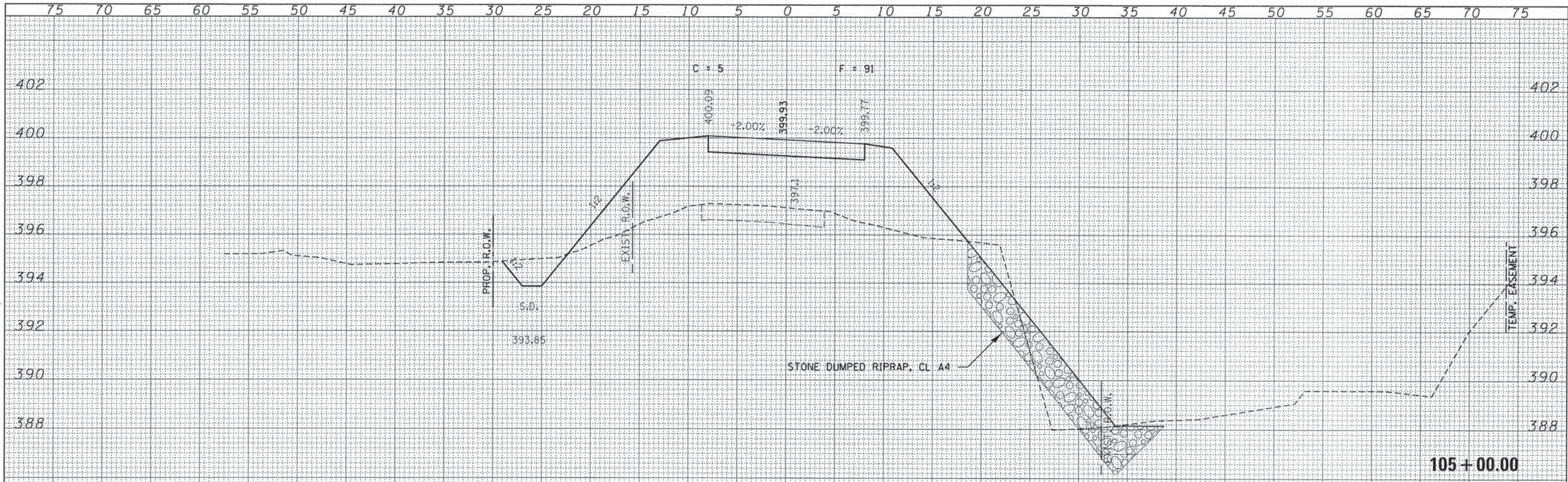
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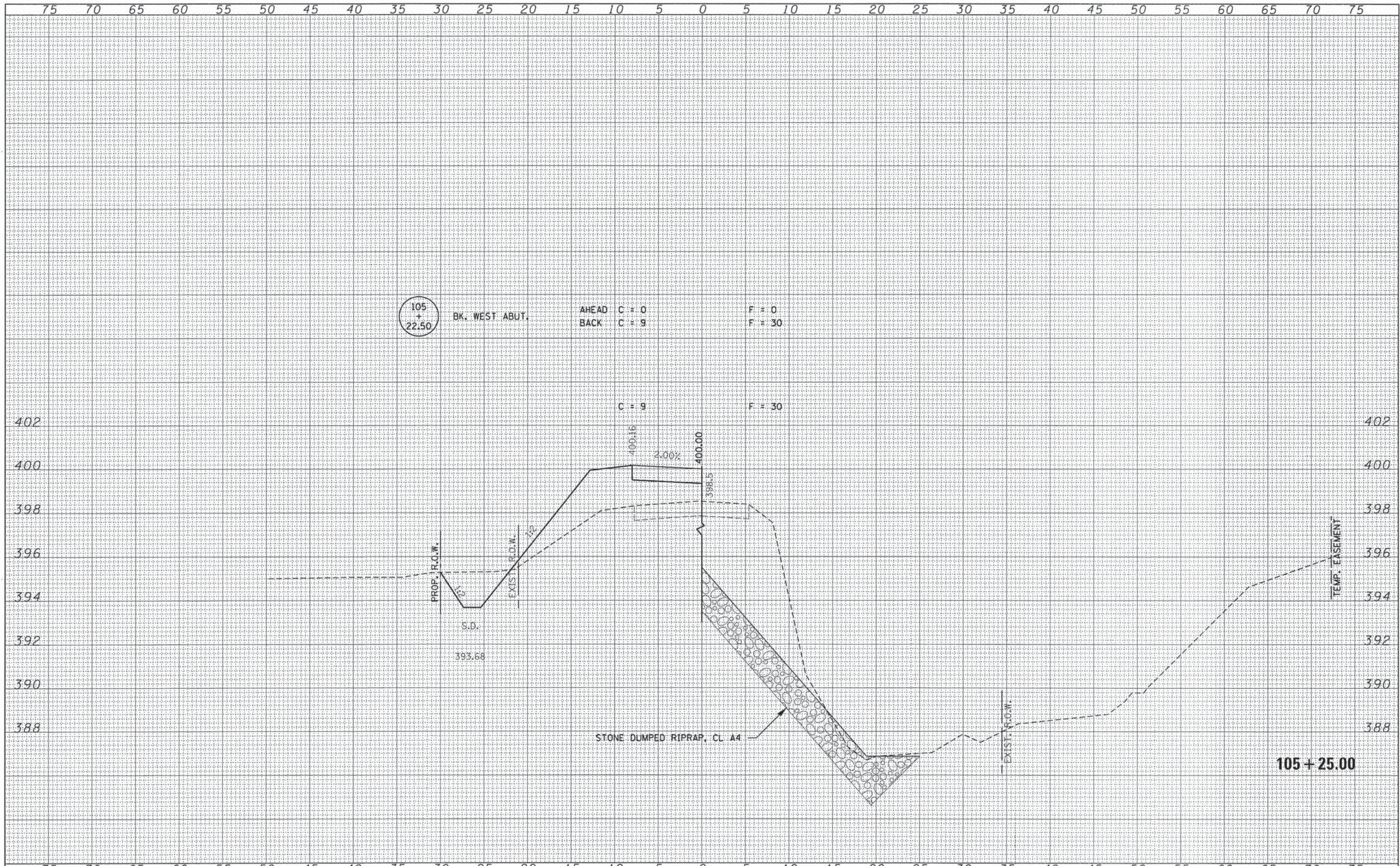
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HAMPTON, LENZINI AND RENWICK, INC. 2005 BILKINSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00059	PLOT SCALE =	DRAWN - L.G.C.	REVISED -					SCALE:	SHEET NO. 3 OF 13 SHEETS	STA. 104+00.00 TO STA. 104+50.00	72	10-01199-00-BR	UNION	28	8	
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2003 E. RIVERVIEW DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -	COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
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				STATE OF ILLINOIS UNION COUNTY HIGHWAY DEPARTMENT				
				STATION CROSS SECTIONS CLARK LANE				
				ILLINOIS FED. AID PROJECT BROS-081(093)				



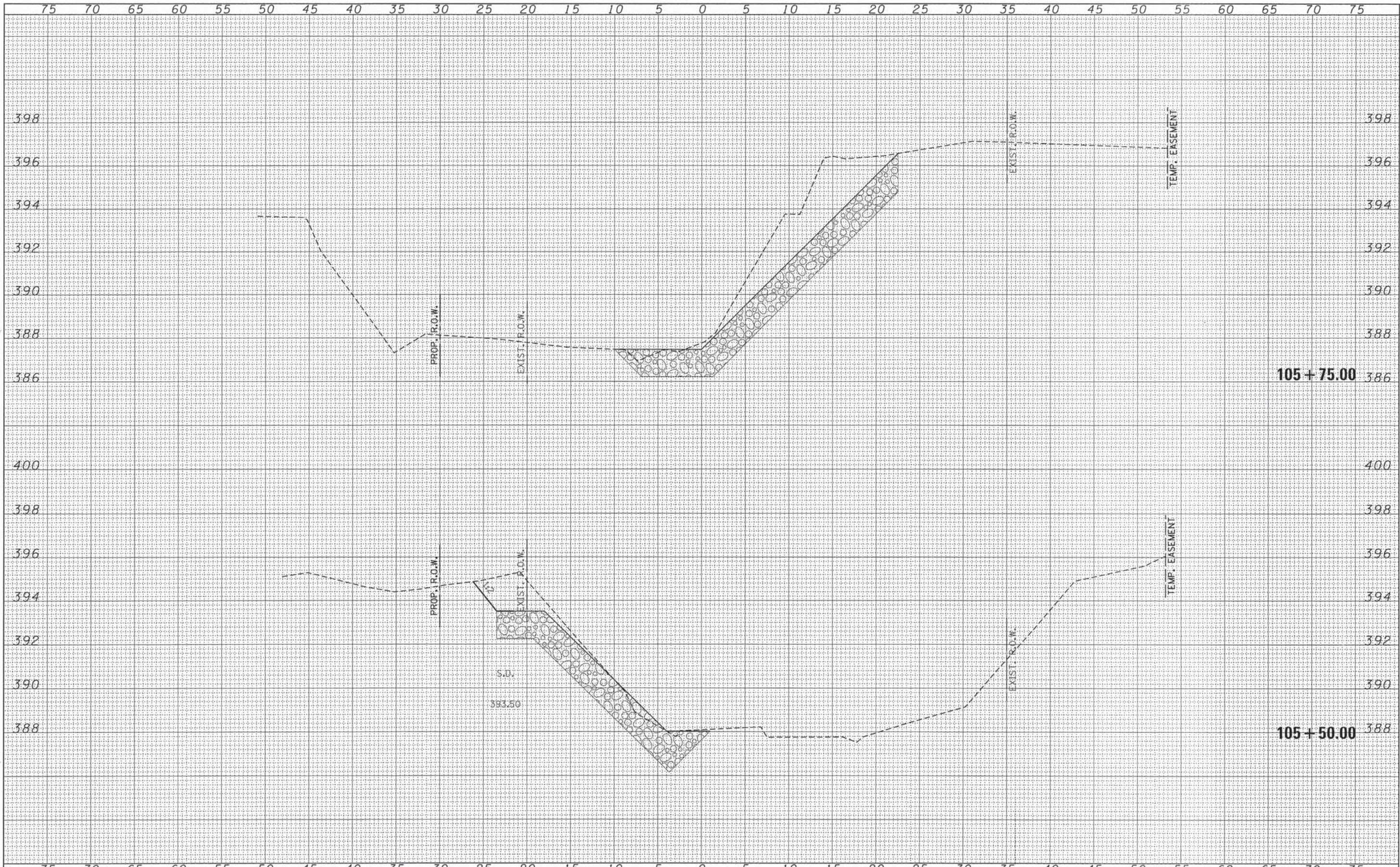
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HLR HAMPSON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 18400999	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		SCALE:	SHEET NO. 5 OF 13 SHEETS	STA. 105+25.00 TO STA. 105+25.00	72	10-01199-00-BR	UNION	28	10
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		DATE - 08/28/13	REVISED -					[ILLINOIS] FED. AID PROJECT BROS-01810531				

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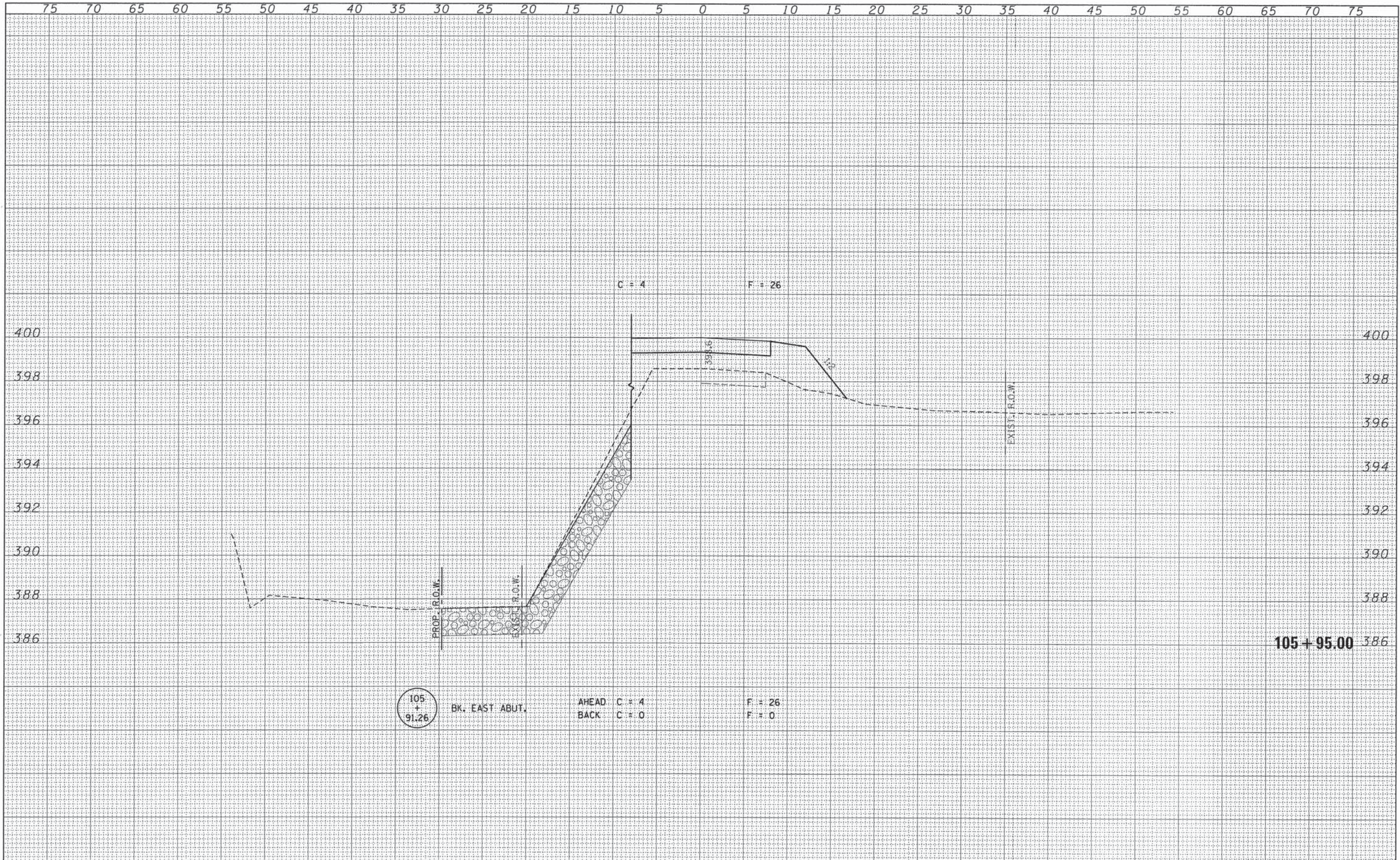
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ILLINOIS PROFESSIONAL DESIGN FIRM		DATE - 08/28/13	REVISED -								

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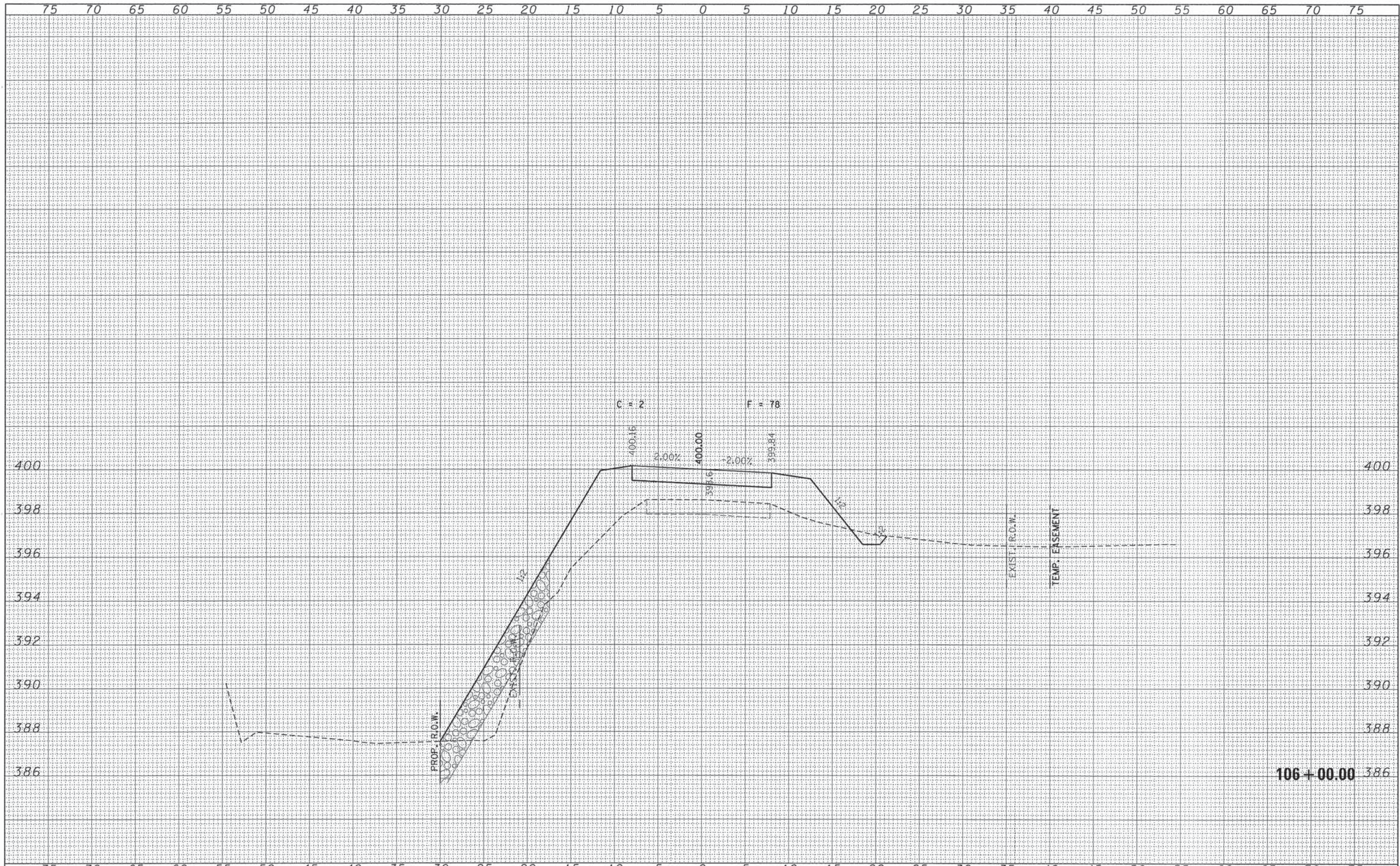
105 + 91.26

BK. EAST ABUT.

AHEAD C = 4 F = 26
 BACK C = 0 F = 0

105 + 95.00

FILE NAME = 128104-sht-axs.dgn	USER NAME =	DESIGNED - S.W.M	REVISED -	STATE OF ILLINOIS		STATION CROSS SECTIONS		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	UNION COUNTY HIGHWAY DEPARTMENT		CLARK LANE		72	10-01199-00-BR	UNION	28	13
300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -					COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. COMP. 134-000003	PLOT DATE = 8/28/2013	DATE - 08/28/13	REVISED -					SCALE:		SHEET NO. 8 OF 13 SHEETS		STA. 105+95.00 TO STA. 105+95.00
												ILLINOIS FED. AID PROJECT BR05-018105(3)



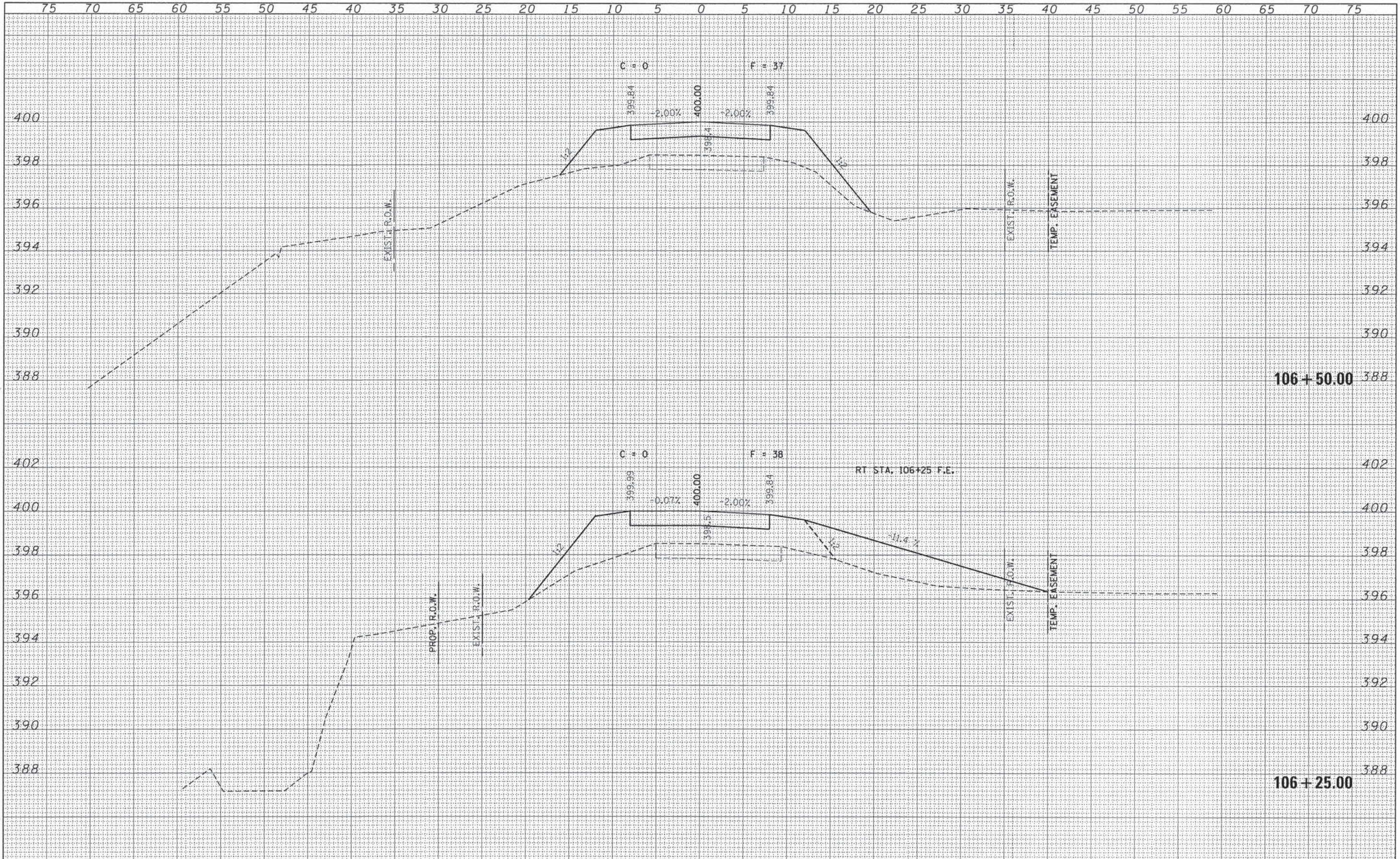
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NO.	AREAS CHECKED

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HAMPTON, LENZI AND RENWICK, INC. 205 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE COMP. 184.00099	PLOT SCALE =	CHECKED - S.W.M	REVISED -		SCALE:	SHEET NO. 9 OF 13 SHEETS	STA. 106+00.00 TO STA. 106+00.00	72	10-01199-00-BR	UNION	28	14
	PLOT DATE = 8/28/2013	DATE - 08/28/13	REVISED -					COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
								ILLINOIS		FED. AID PROJECT BROS-01810531		

DATE	
BY	
FINAL SURVEY	
CONVERTED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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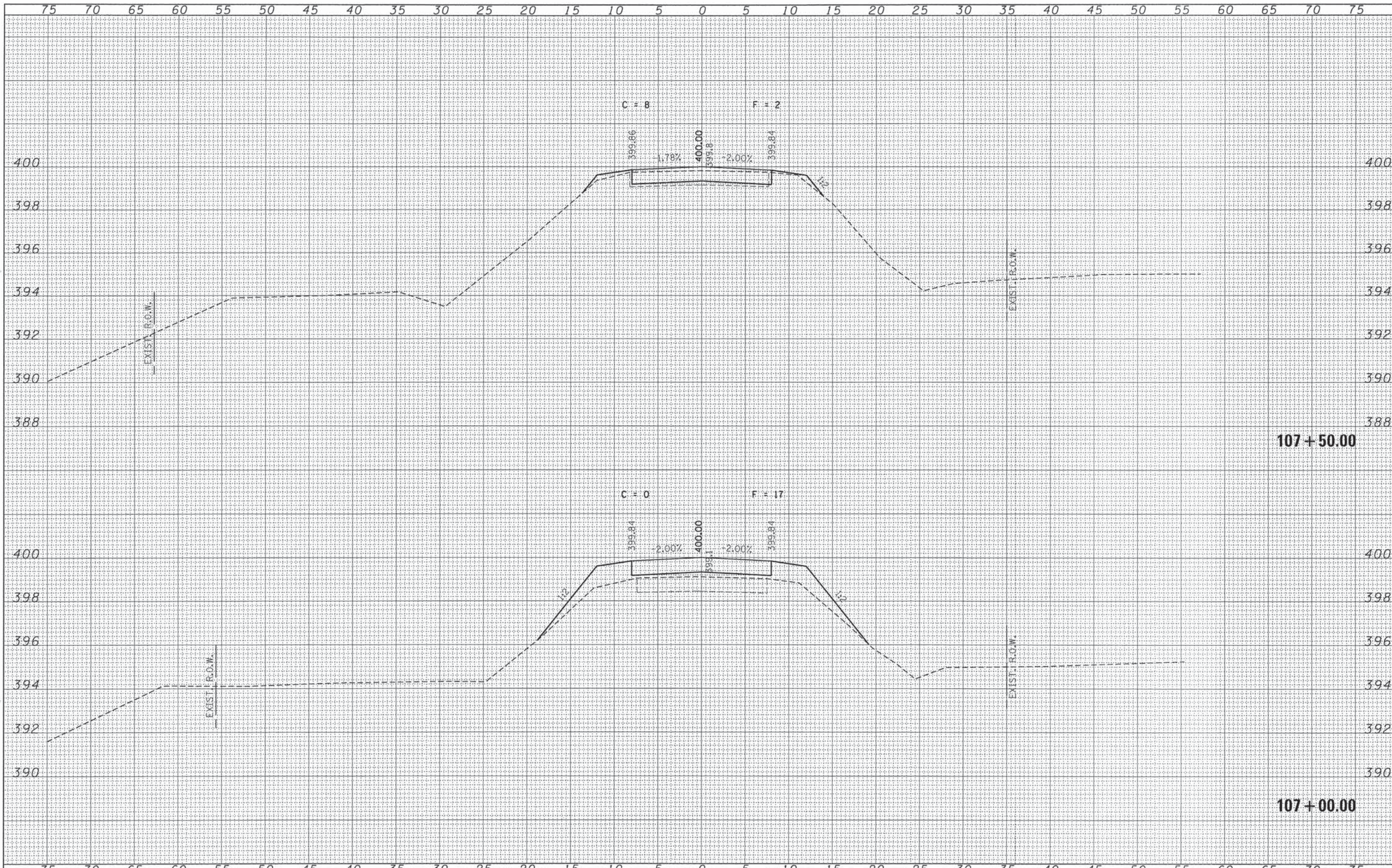
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NOTE BOOK	
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		72	10-01199-00-BR	UNION	28	15			
2001 BELLEVILLE DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE:		SHEET NO. 10 OF 13 SHEETS		STA. 106+25.00 TO STA. 106+50.00		CONTRACT NO. 99520	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00099	PLOT DATE = 8/28/2013	DATE - 08/28/13	REVISED -		[ILLINOIS] FED. AID PROJECT BROS-0810531							

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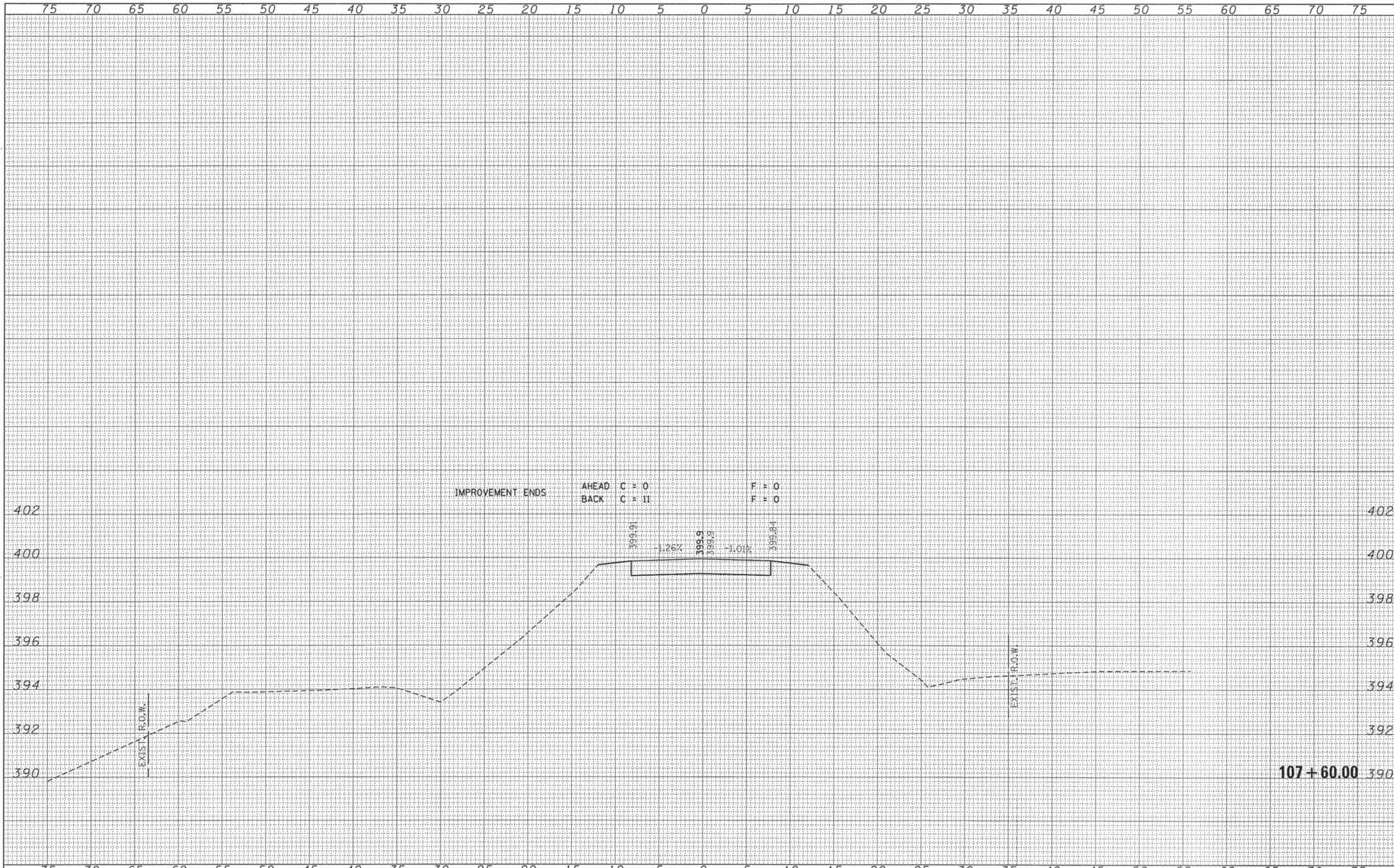
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NOTE BOOK	
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		72	10-0199-00-BR	UNION	28	16			
383 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -		SCALE:		SHEET NO. 11 OF 13 SHEETS		STA. 107+00.00 TO STA. 107+50.00		CONTRACT NO. 99520	
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P3 / S3 CORP. 13A-00089	PLOT DATE = 8/28/2013	DATE - 08/28/13	REVISED -		ILLINOIS FED. AID PROJECT BR05-01810531							

DATE	
BY	
FINAL SURVEY	
REVISIONS PLOTTED	
NOTE BOOK	
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DATE	
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ORIGINAL SURVEY	
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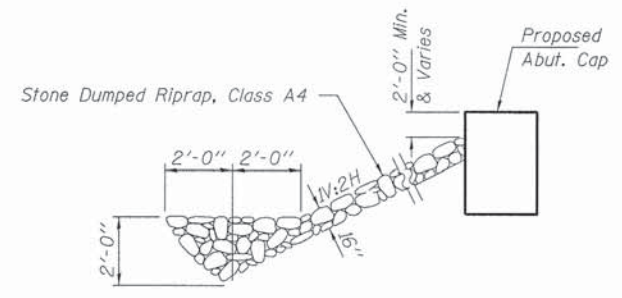
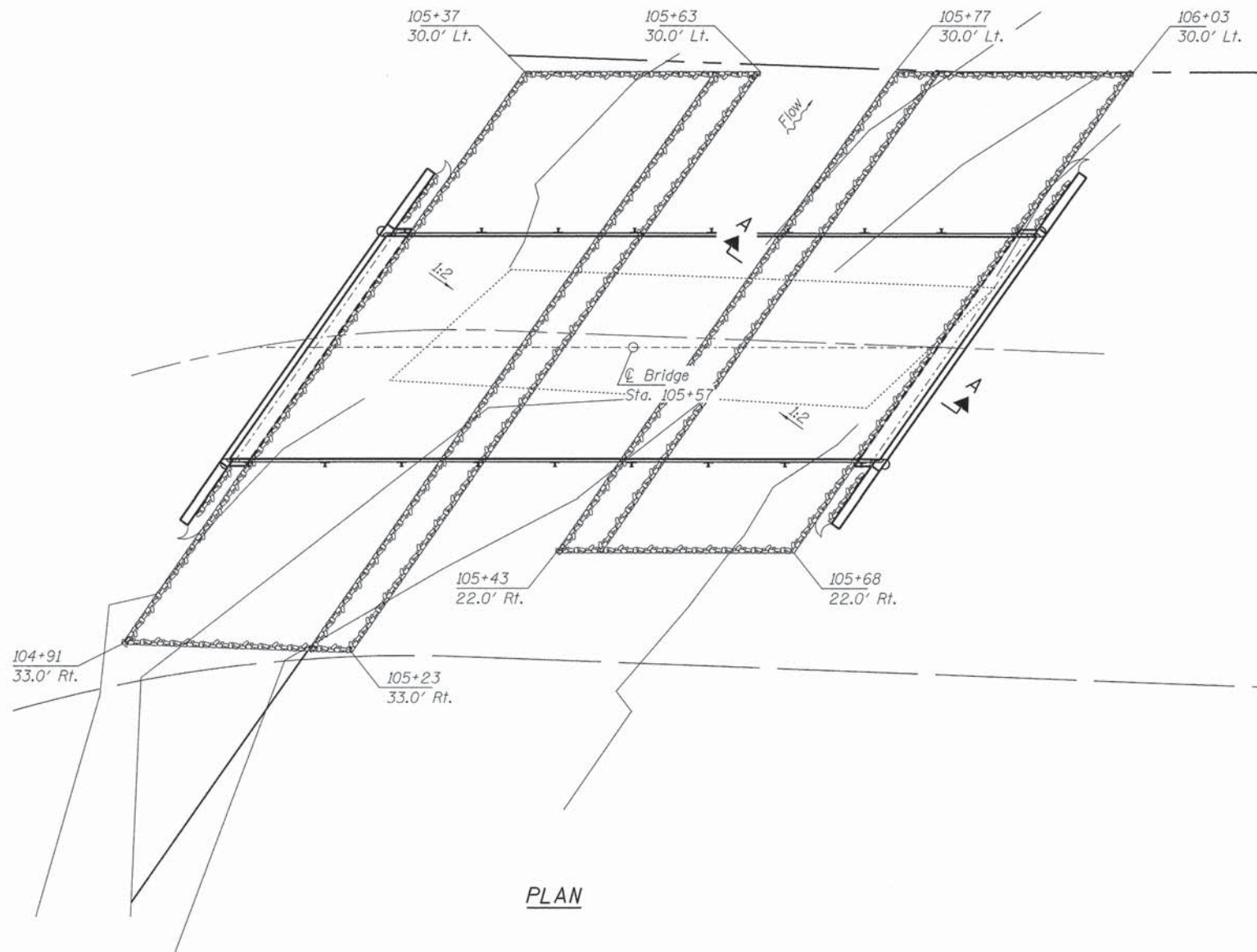
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HAMPTON, LENZINI AND RENWICK, INC. 300 REVEREND DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE COMP. 184-00099	PLOT SCALE =	DRAWN - L.G.C.	REVISED -	SCALE:		SHEET NO. 12 OF 13 SHEETS		72	10-01199-00-BR	UNION	28	17
	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -			STA. 107+60.00 TO STA. 107+60.00		COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		ILLINOIS FED. AID PROJECT BR05-01810531
		DATE = 08/28/13	REVISED -									



DATE	
BY	
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NOTE BOOK	
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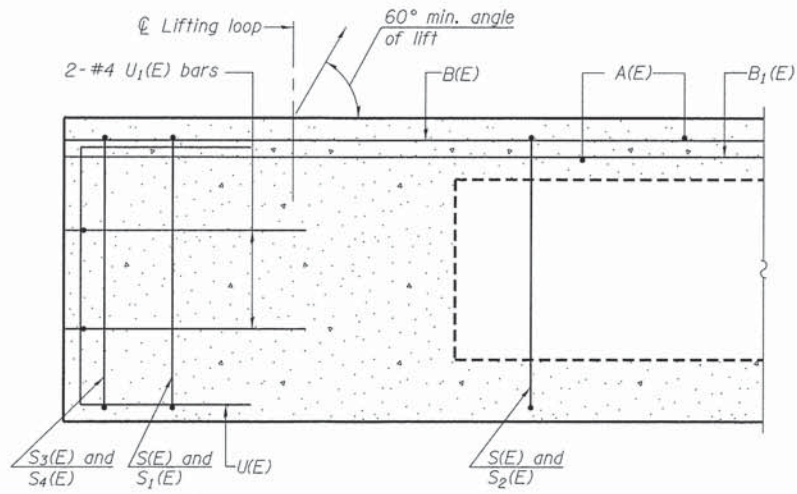
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HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		72	10-01199-00-BR	UNION	28	18	CONTRACT NO. 99520		
ILR ILLINOIS PROFESSIONAL DESIGN FIRM 1517 PE / SE CORP. 184-00089	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -		SCALE:	SHEET NO. 13 OF 13 SHEETS	STA. 108+00.00 TO STA. 108+00.00	ILLINOIS FED. AID PROJECT BR05-01810531				
		DATE - 08/28/13	REVISED -									

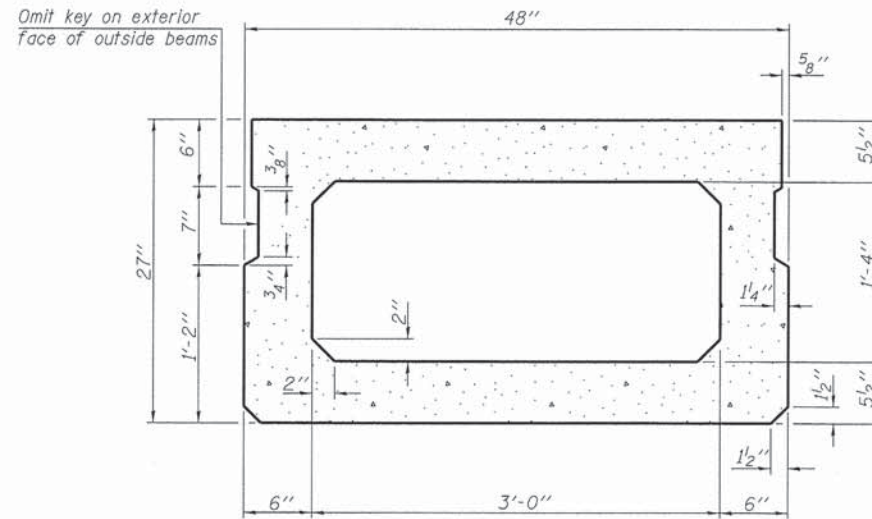


SECTION A-A
 Note: See Special Provisions for Stone Dumped Riprap, Class A4.

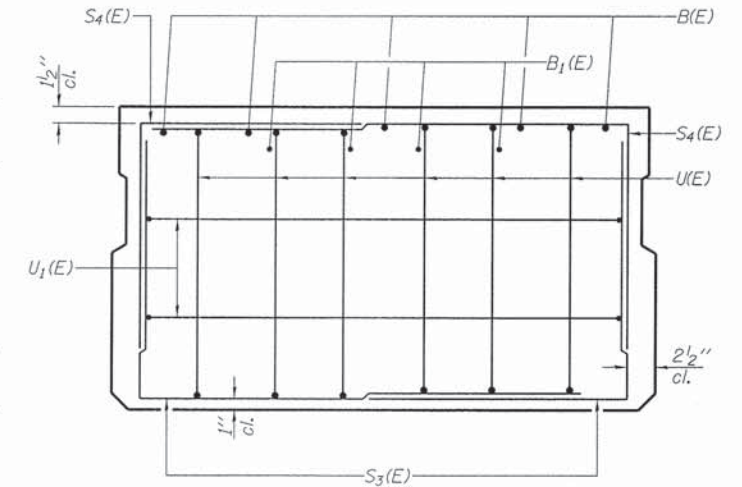
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HAMPTON, LENZINI AND RENWICK, INC. 3038 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62705		CHECKED - S.W.M.	REVISED -			72	10-01199-00-BR	UNION	28	20
ILR ILLINOIS PROFESSIONAL DESIGN FIRM 15 / PE / SE CORP. 184 000989	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -			SHEET NO. 2 OF 10 SHEETS		ILLINOIS FED. AID PROJECT BR05-01810531		



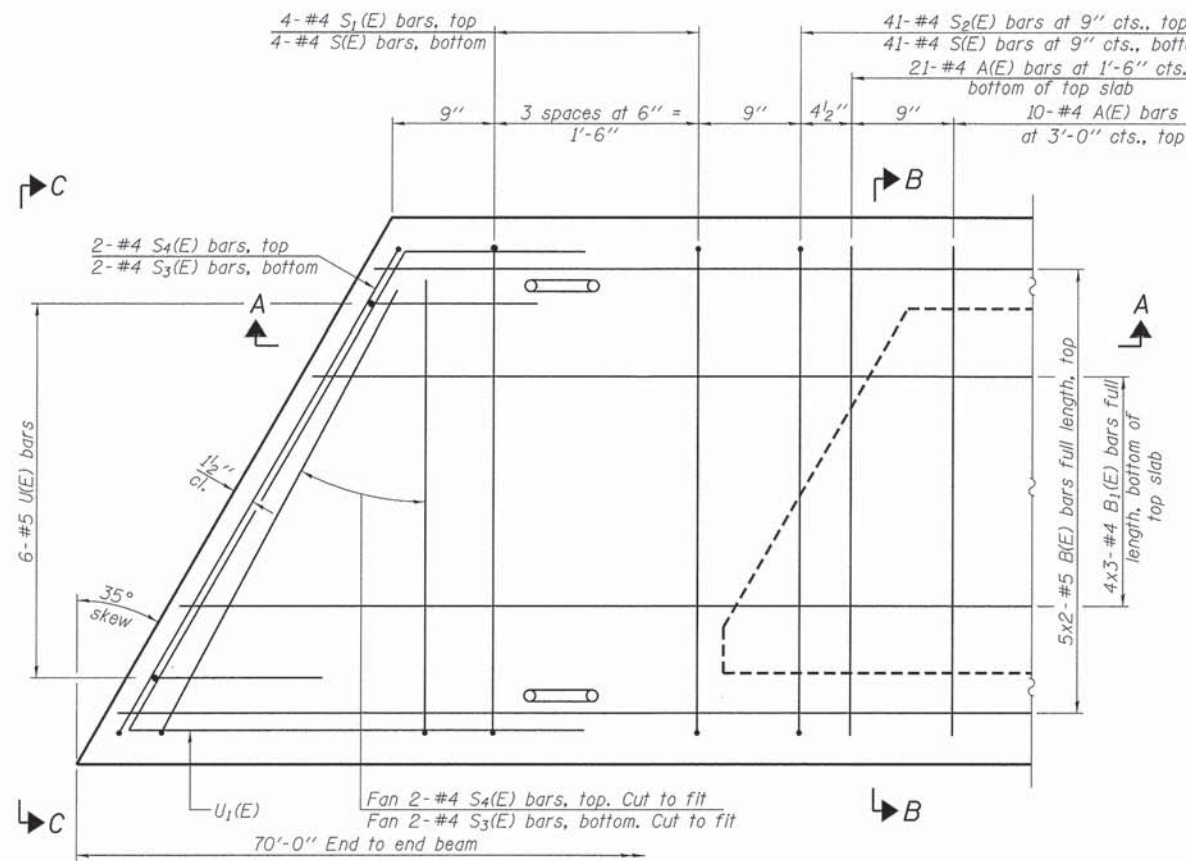
SECTION A-A



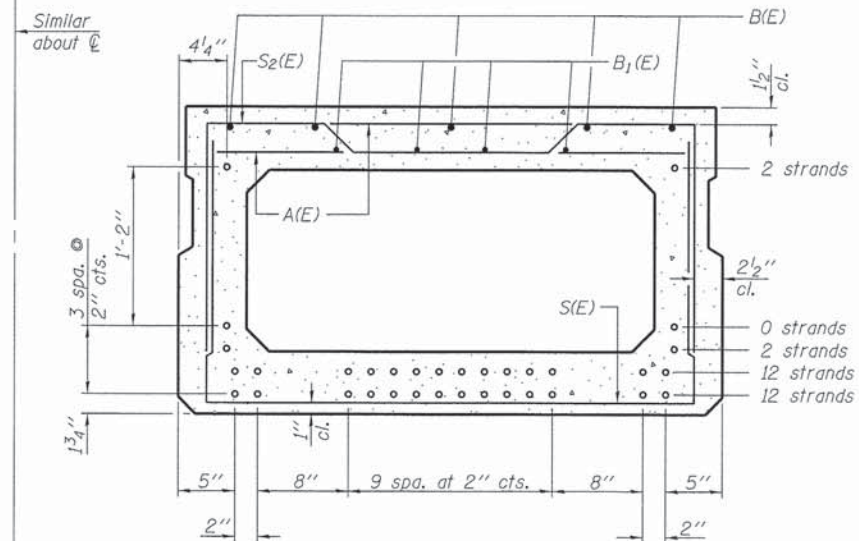
SECTION B-B
(Showing dimensions)



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)	63	#4	3'-7"	—
B(E)	10	#5	36'-2"	—
B1(E)	12	#4	24'-7"	—
S(E)	91	#4	7'-5"	┌
S1(E)	8	#4	6'-11"	┌
S2(E)	83	#4	7'-2"	┌
S3(E)	8	#4	5'-0"	┌
S4(E)	8	#4	4'-9"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	9'-3"	┌

Note: See sheets 4 & 5 of 10 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 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

MINIMUM BAR LAP

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

PD-2748-L

7-1-10

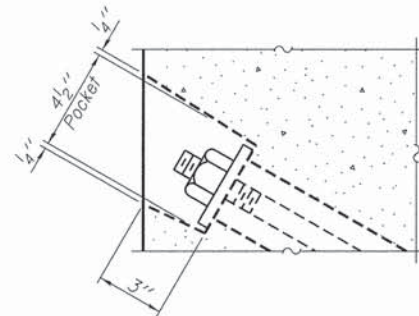
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HAMPTON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-000989	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
UNION COUNTY HIGHWAY DEPARTMENT

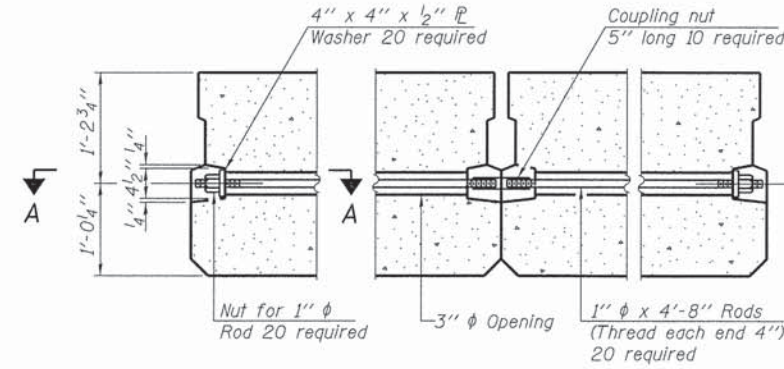
27" x 48" PPC DECK BEAM
STRUCTURE NO. 091-3239

SHEET NO. 3 OF 10 SHEETS

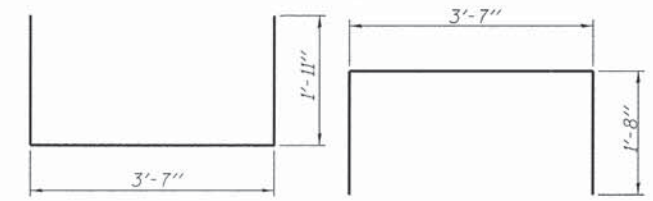
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	10-01199-00-BR	UNION	28	21
COUNTY UNIT ROAD DISTRICT			CONTRACT NO. 99520	
ILLINOIS FED. AID PROJECT BROS-0181(053)				



SECTION A-A

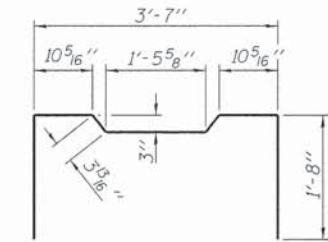


TYPICAL TRANSVERSE TIE ASSEMBLY

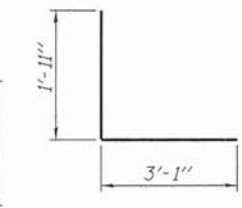


BAR S(E)

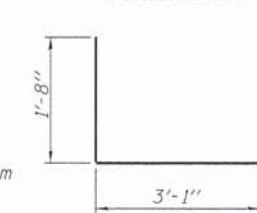
BAR S1(E)



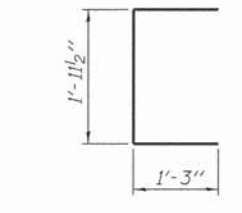
BAR S2(E)



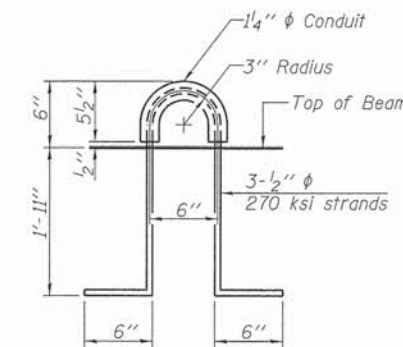
BAR S3(E)



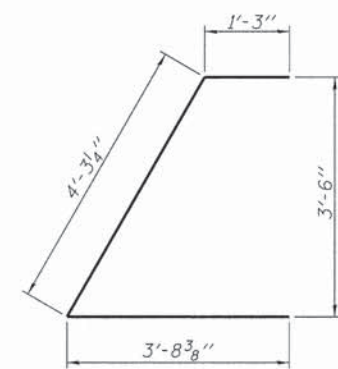
BAR S4(E)



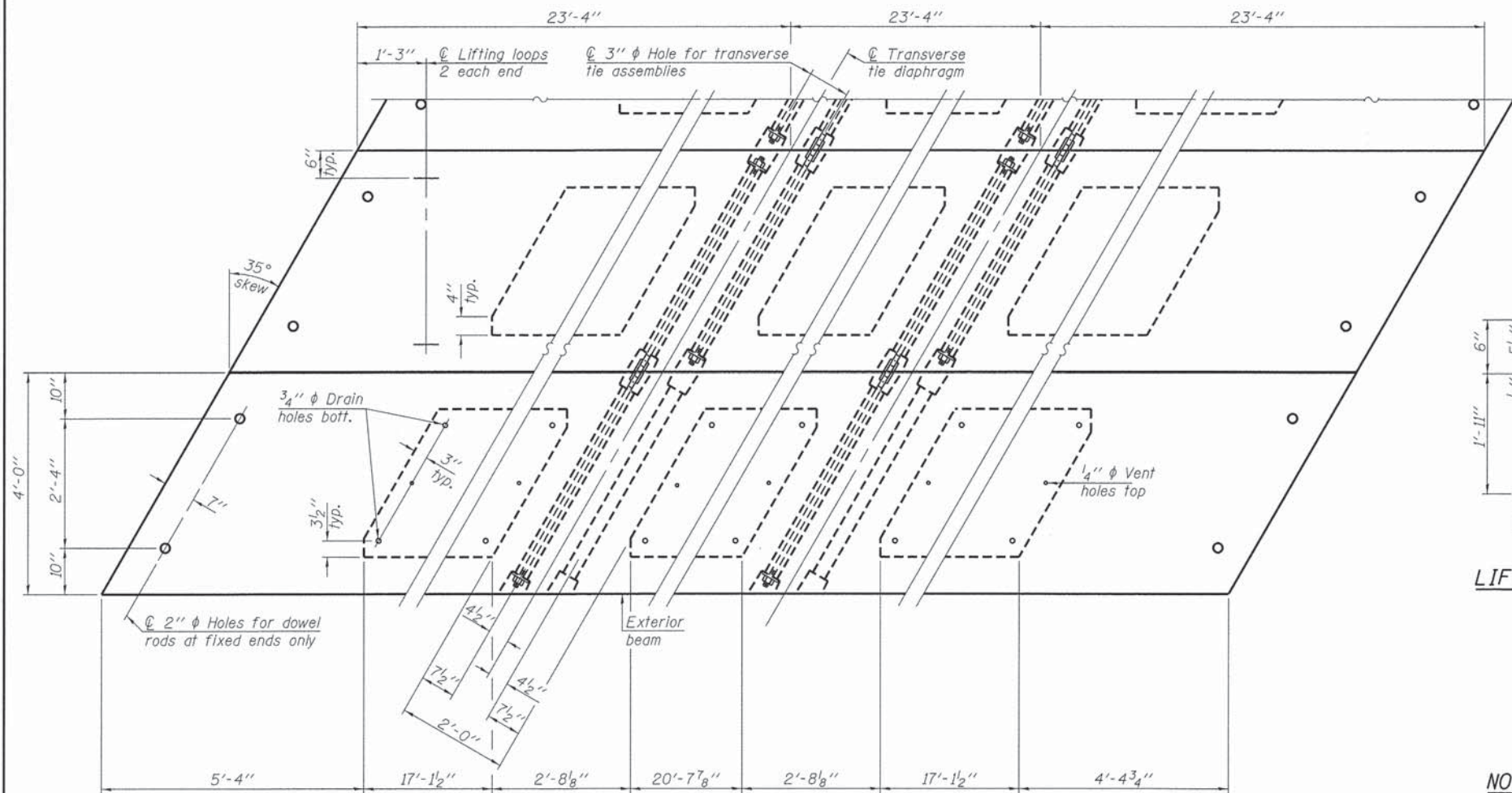
BAR U(E)



LIFTING LOOP DETAIL



BAR U1(E)



PLAN VIEW

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

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,680
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PD-2748-LD 7-1-10

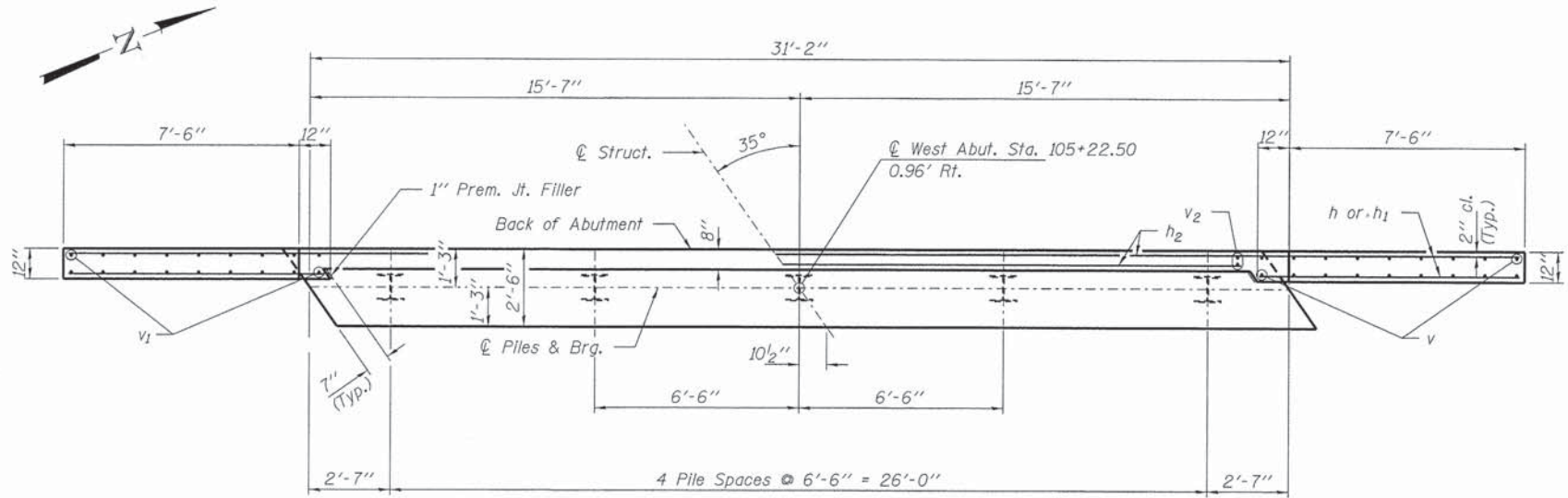
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3035 STEVENSON DRIVE, SUITE 301		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62763		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM			
LS / PE / SE CDMP 184.000859			

STATE OF ILLINOIS
UNION COUNTY HIGHWAY DEPARTMENT

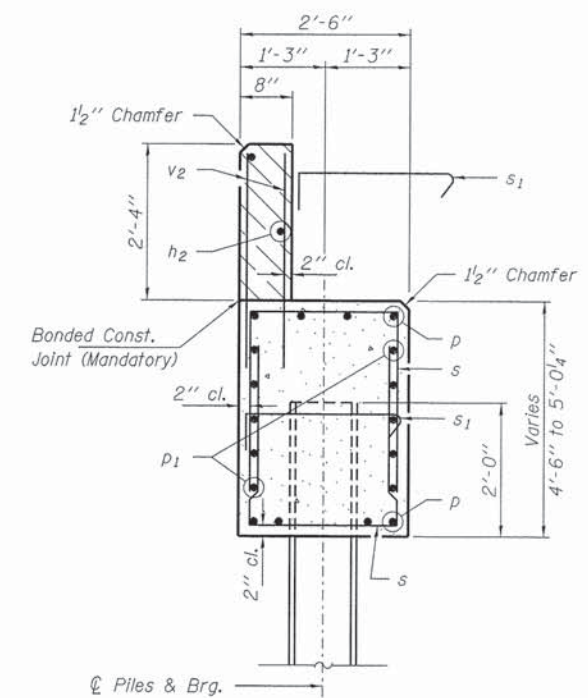
27" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 091-3239

SHEET NO. 4 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	10-0199-00-BR	UNION	28	22
COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
ILLINOIS FED. AID PROJECT BROS-01810531				

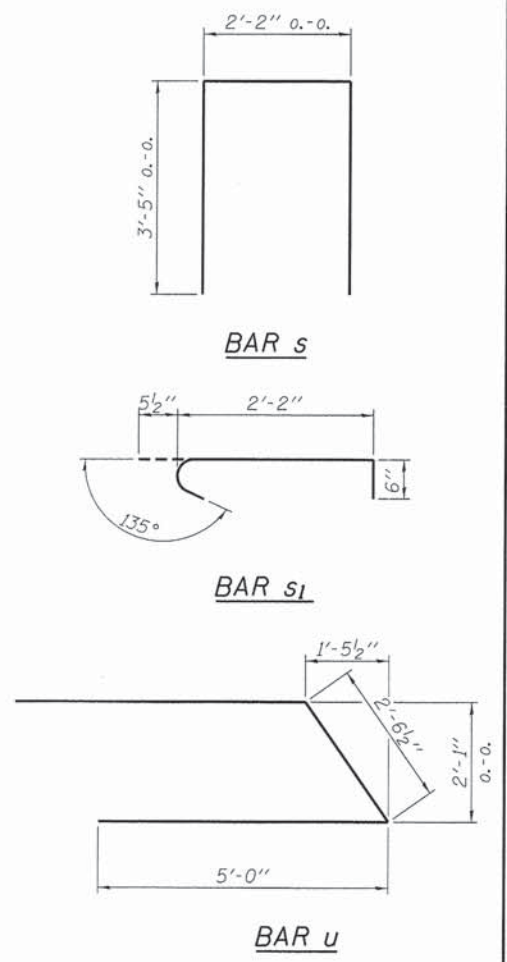


PLAN

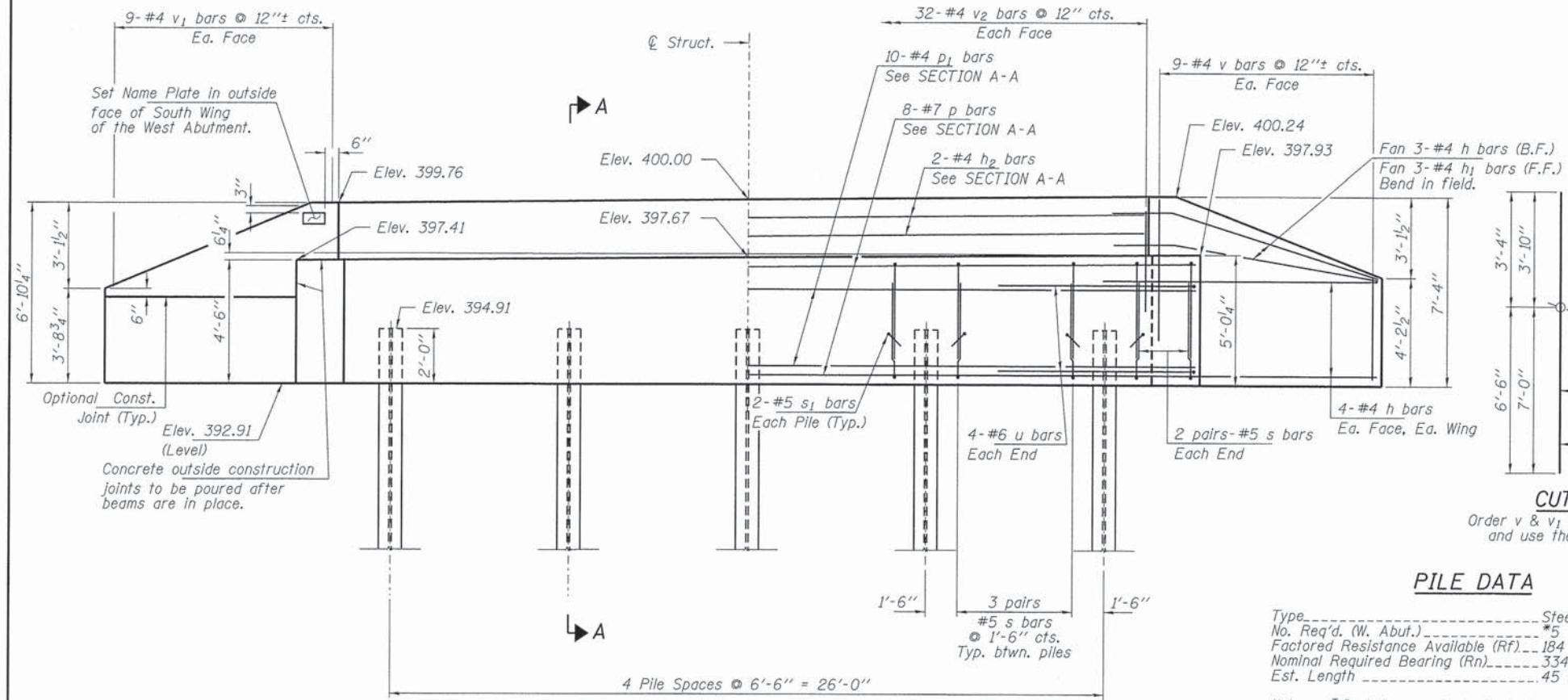


SECTION A-A

Hatched area to be poured after beams are in place.



Note: Extend h bars into abutment cap.



ELEVATION
(Looking West)

CUTTING DIAGRAM
Order v & v1 bars full length. Cut as shown and use the remainder in opposite face.

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (W. Abut.) ----- 5
 Factored Resistance Available (Rf) ----- 184 Kips/Pile
 Nominal Required Bearing (Rn) ----- 334 Kips/Pile
 Est. Length ----- 45 Ft/Pile

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

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

BILL OF MATERIAL - W. ABUT.

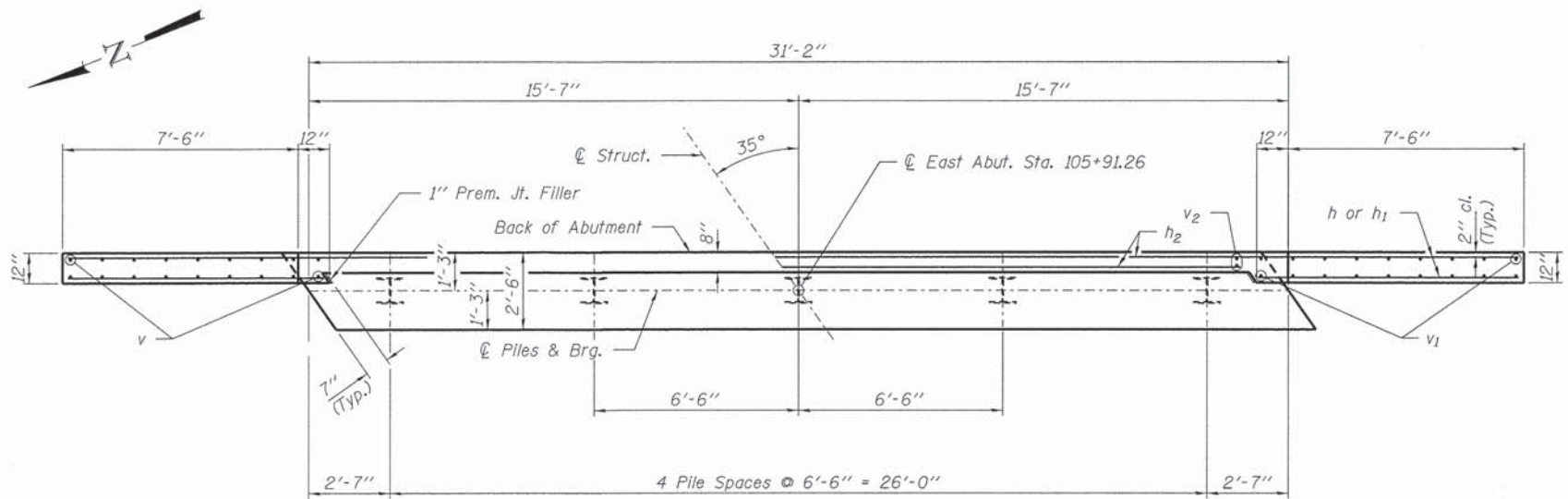
BAR	NO.	SIZE	LENGTH	SHAPE
h	22	#4	9'-9"	—
h1	6	#4	8'-3"	—
h2	2	#4	30'-10"	—
p	8	#7	30'-10"	—
p1	10	#4	30'-10"	—
s	32	#5	9'-0"	□
s1	10	#5	3'-2"	┌
u	8	#6	12'-7"	└
v	9	#4	10'-10"	—
v1	9	#4	9'-10"	—
v2	64	#4	3'-2"	—
Concrete Structures			Cu. Yd.	18.9
Reinforcement Bars			Pound	1,670
Steel Piles HP10x42			Foot	180
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

FILE NAME = 120104-sht-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3003 STEVENSON DRIVE, SUITE 201		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
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LSI/PE/SE CORP. 184-00089	PLOT DATE = 8/28/2013		

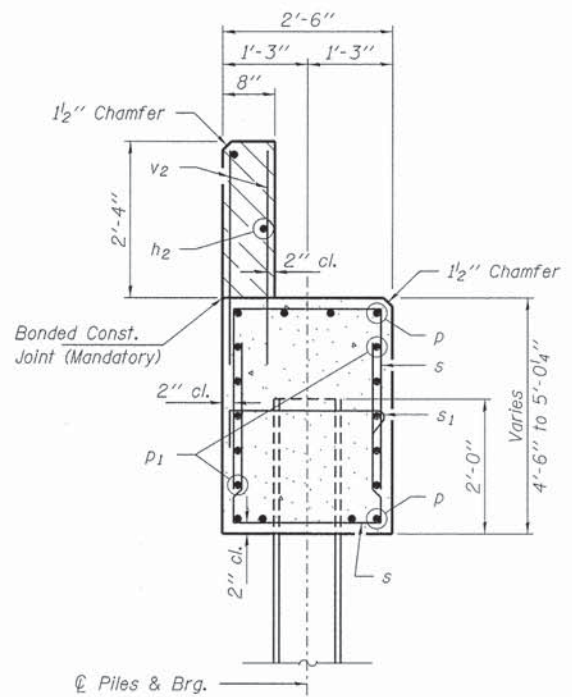
STATE OF ILLINOIS
UNION COUNTY HIGHWAY DEPARTMENT

WEST ABUTMENT
STRUCTURE NO. 091-3239
SHEET NO. 7 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	10-01199-00-BR	UNION	28	25
COUNTY UNIT ROAD DISTRICT			CONTRACT NO. 99520	
[ILLINOIS] FED. AID PROJECT BR05-0181(053)				

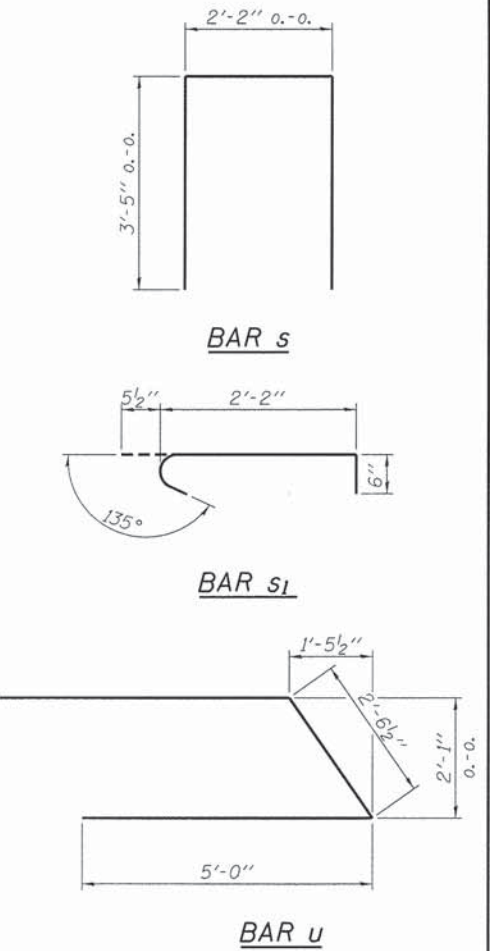


PLAN

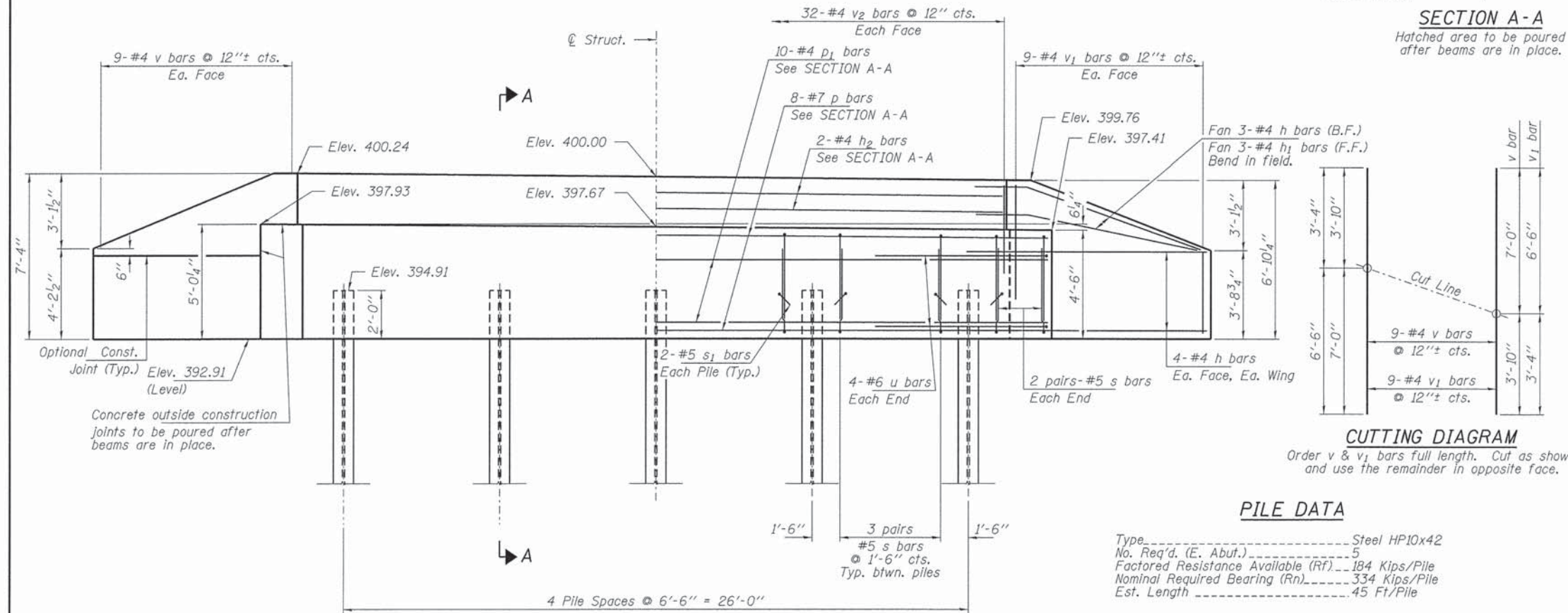


SECTION A-A

Hatched area to be poured after beams are in place.



Note: Extend h bars into abutment cap.



ELEVATION
(Looking East)

CUTTING DIAGRAM

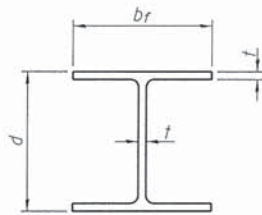
Order v & v1 bars full length. Cut as shown and use the remainder in opposite face.

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (E. Abut.) ----- 5
 Factored Resistance Available (Rf) ----- 184 Kips/Pile
 Nominal Required Bearing (Rn) ----- 334 Kips/Pile
 Est. Length ----- 45 Ft/Pile

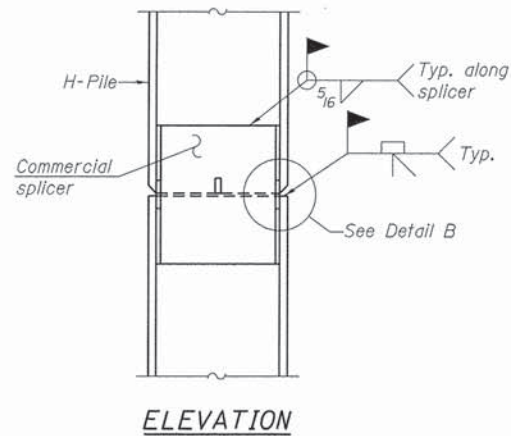
BILL OF MATERIAL - E. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	22	#4	9'-9"	—
h1	6	#4	8'-3"	—
h2	2	#4	30'-10"	—
p	8	#7	30'-10"	—
p1	10	#4	30'-10"	—
s	32	#5	9'-0"	U
s1	10	#5	3'-2"	U
u	8	#6	12'-7"	U
v	9	#4	10'-10"	—
v1	9	#4	9'-10"	—
v2	64	#4	3'-2"	—
Concrete Structures			Cu. Yd.	18.9
Reinforcement Bars			Pound	1,670
Steel Piles HP10x42			Foot	225

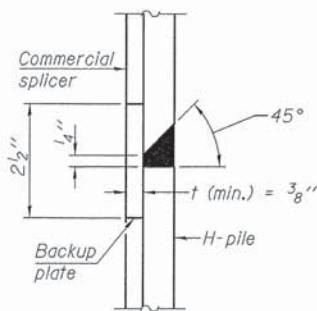


STEEL PILE TABLE

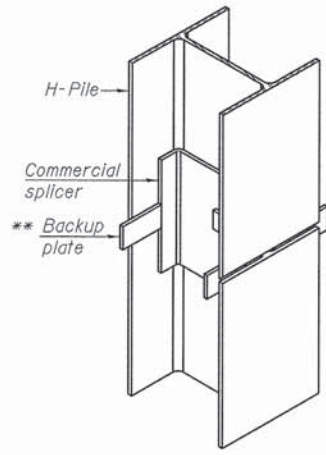
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 1/8"	30"
x102	14"	14 3/4"	1 1/8"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/8"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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

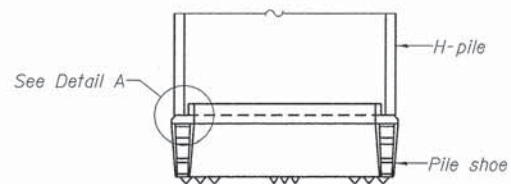


DETAIL "B"

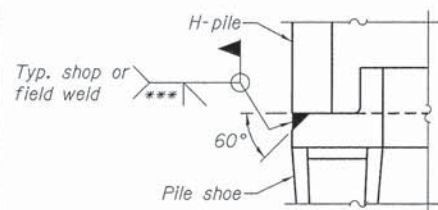


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

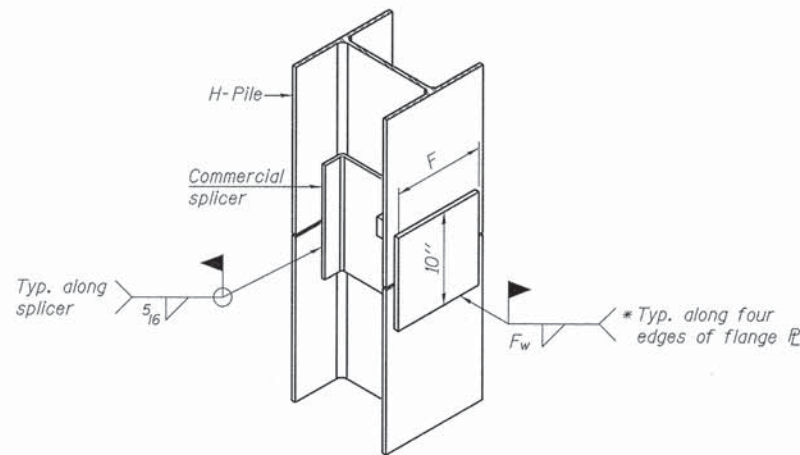


ELEVATION



DETAIL A

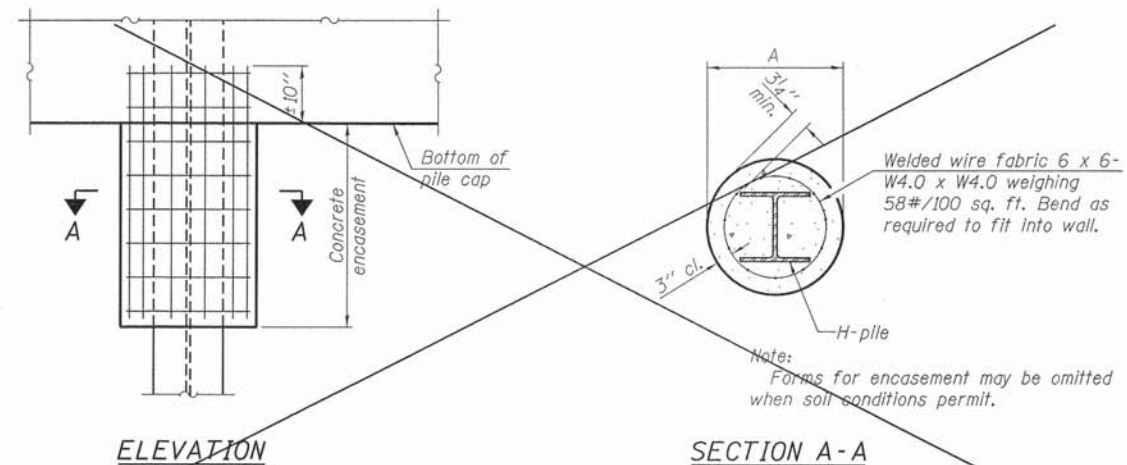
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

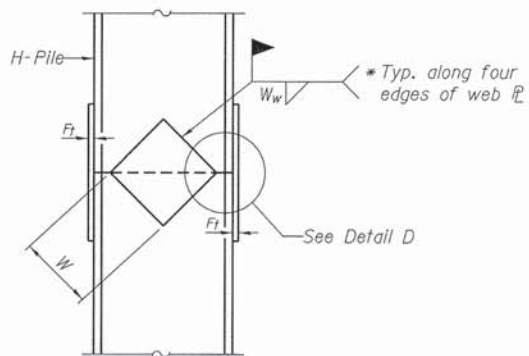
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



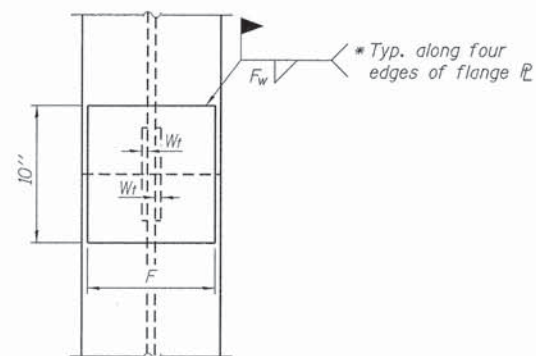
ELEVATION

SECTION A-A

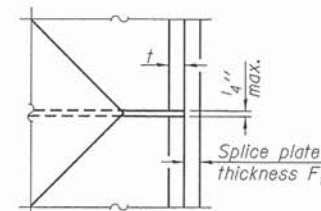
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

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

1-27-12

FILE NAME = 120104-sht-brdgn.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS UNION COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 091-3239	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -			72	10-01199-00-BR	UNION	28	27
3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			COUNTY UNIT ROAD DISTRICT		CONTRACT NO. 99520		
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT DATE = 8/28/2013	CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT BROS-01810531				

SHEET NO. 9 OF 10 SHEETS

