

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 31	13-17111-03-BR	LIVINGSTON	23	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 87590		

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.	CENTERLINE, GUARDRAIL AND SHOULDER LAYOUT
6-13.	STATION CROSS SECTIONS
14-21.	BRIDGE PLANS
22-23.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR & TERMINAL MARKER PLACEMENT
701901-04	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

PLANS FOR PROPOSED SURFACE TRANSPORTATION PROGRAM – BRIDGE

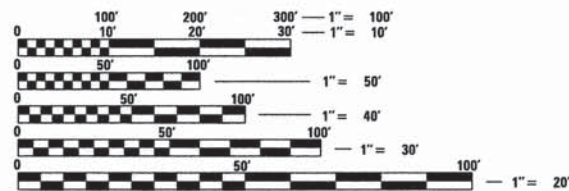
**PROJECT BR05-0105(060)
SECTION 13-17111-03-BR
NEWTOWN ROAD DISTRICT
LIVINGSTON COUNTY
T.R. 31 / 2950N
PROPOSED STRUCTURE NO. 053-4217
C-93-080-14**



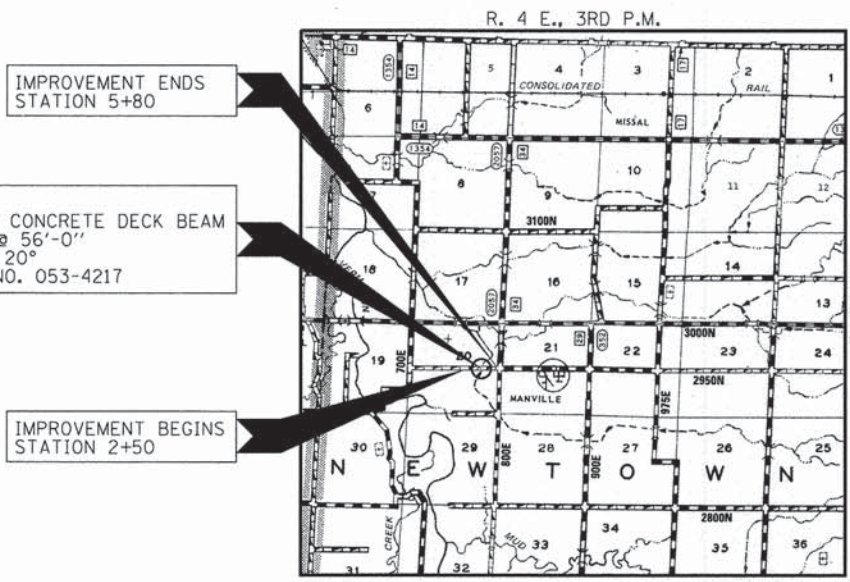
UTILITIES

COMMONWEALTH EDISON
1910 SOUTH BRIGGS STREET
JOLIET, IL 60433

FRONTIER COMMUNICATIONS
109 E MARKET STREET
BLOOMINGTON, IL 61701



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



LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 330 FEET = 0.062 MILES



FUNCTIONAL CLASSIFICATION: LOCAL ROAD (RURAL)
DESIGN SPEED: 40 MPH
DESIGN TRAFFIC: 260 ADT (2014)

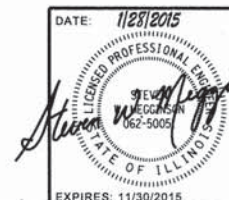
ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED *[Signature]* 02-04 2015
COUNTY ENGINEER

APPROVED *[Signature]* 02-04 2015
TOWNSHIP COMMISSIONER

PASSED *[Signature]* 2-10 2015
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
[Signature] 2-10 2015
DEPUTY DIRECTOR OF HIGHWAYS
REGION TWO 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.hlrengineering.com

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 14.0158.130 DATE: 01/28/15

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011	
		UNIT	TOTAL
A 20200100	EARTH EXCAVATION	CU YD	225
20300100	CHANNEL EXCAVATION	CU YD	155
20400800	FURNISHED EXCAVATION	CU YD	65
28000305	TEMPORARY DITCH CHECKS	FOOT	48
A 28100107	STONE RIPRAP, CLASS A4	SQ YD	452
28200200	FILTER FABRIC	SQ YD	452
35101400	AGGREGATE BASE COURSE, TYPE B	TON	225
A 40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	158
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	78
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	46
A 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	28.4
50300280	CONCRETE ENCASMENT	CU YD	2.8
A 50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1512
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3200
* 50900205	STEEL RAILING, TYPE S1	FOOT	122
51201400	FURNISHING STEEL PILES HP10X42	FOOT	245
51202305	DRIVING PILES	FOOT	245
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
58700300	CONCRETE SEALER	SQ FT	112
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67100100	MOBILIZATION	L SUM	1
A 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
A X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	110
A X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4
A Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	106

A SEE SPECIAL PROVISIONS
* SPECIALTY ITEM

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", (HERE IN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2015; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- ALL CLEARING, GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR IN METHOD APPROVED BY THE ENGINEER. REMOVAL AND DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 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.
- ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE DEPARTMENT.
- THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, TELEPHONE LINES, ELECTRIC LINES, WATER SERVICE LINES, GAS MAINS, AND OTHER UTILITY FACILITIES AS SHOWN ON THE PLANS ARE BASED ON 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.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ADJUTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE BASE COURSE, TYPE B	2.05 TON/CU YD
POROUS GRANULAR EMBANKMENT	2.00 TON/CU YD
STONE RIPRAP	1.75 TON/CU YD
HOT-MIX ASPHALT	112 LBS/SQ. YD./INCH DEPTH
BITUMINOUS MATERIALS	
INTERMEDIATE LIFTS (FOG COAT)	0.025 LB./SQ.FT.
ON AGGREGATE SURFACE	0.25 LB./SQ.FT.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. SEEDING, CLASS 2 (SPECIAL) = **0.4 ACRES**
- THE FINAL SURFACE OF ALL EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE VEGETATIVE SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATIVE SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION.

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 31							
STA 2+50 TO STA 3+88.29	99		25.00%	100.00%	74	157	-83
STA 3+88.29 TO STA 4+45.71		155	25.00%	70.00%	81	0	81
STA 4+45.71 TO STA 5+80	125		25.00%	100.00%	94	155	-61
TOTAL	224	155			249	312	-63
TOTAL USE	225	155					-65

FURNISHED = 65 CU YDS

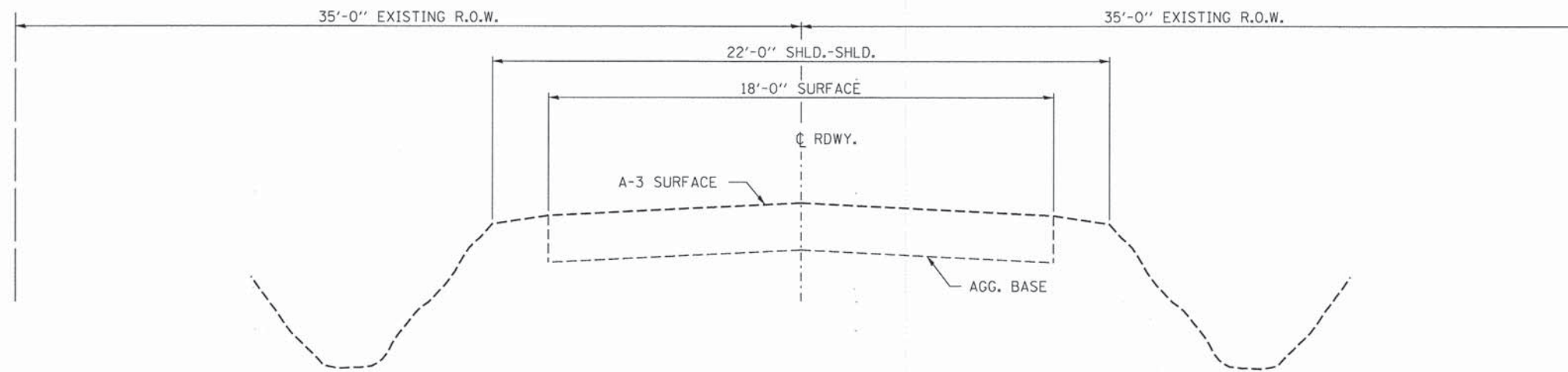
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HAMPTON, LENZINI AND RENWICK, INC. 3080 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLDT SCALE =	DRAWN - R.D.H.	REVISED -
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 194.000999	PLDT DATE = 1/28/2015	CHECKED - S.W.M.	REVISED -
		DATE - 01/28/15	REVISED -

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

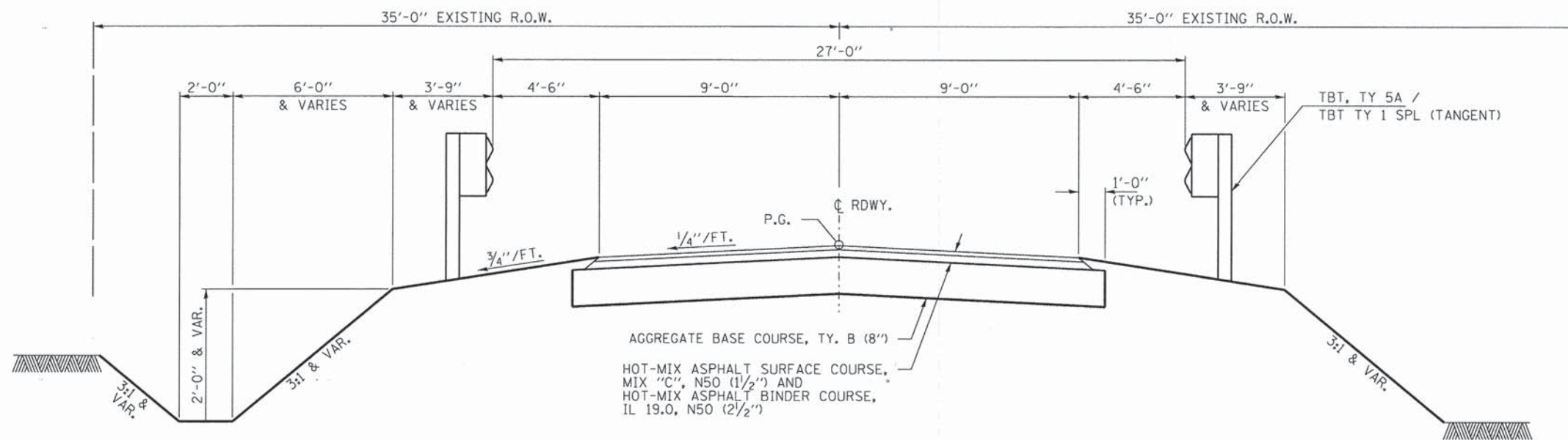
SUMMARY OF QUANTITIES AND GENERAL NOTES

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	2
NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL CROSS SECTION
STA. 2+50 TO 5+80



SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL CROSS SECTION
STA. 2+50 TO 5+80

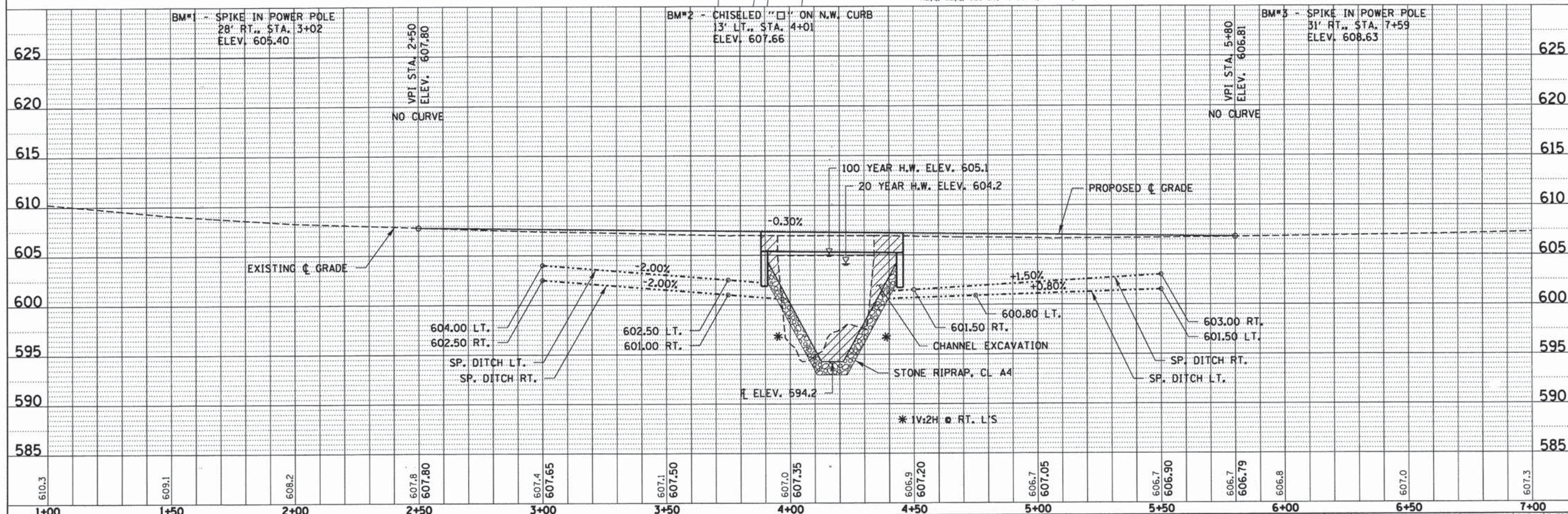
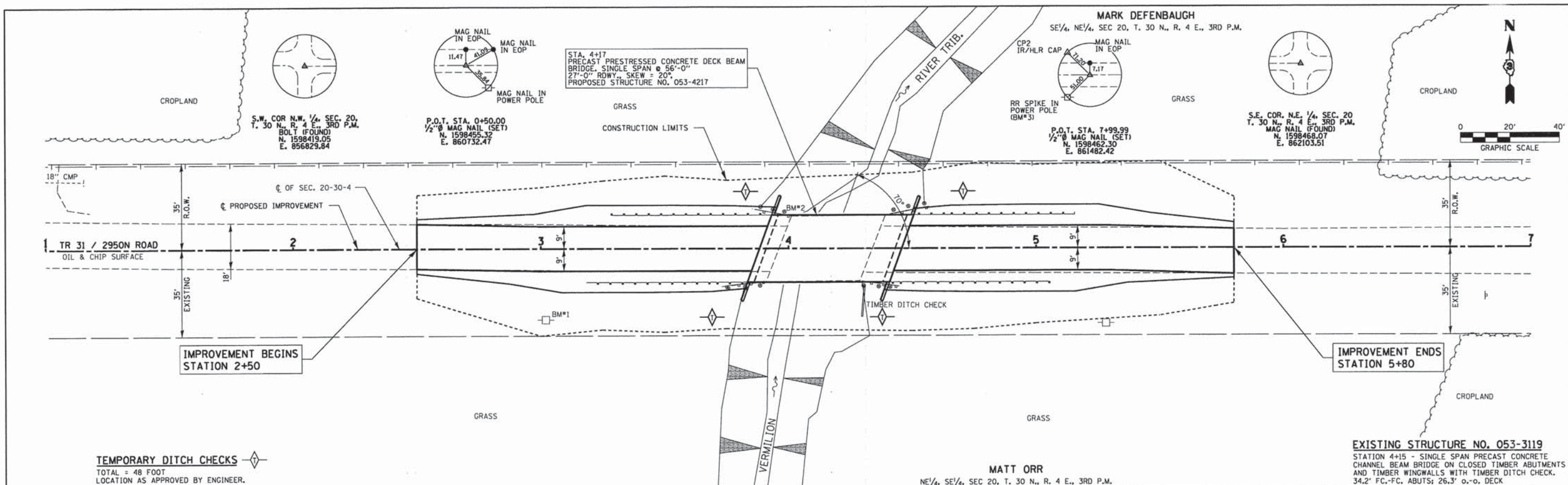
TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY ARE TO BE CONSTRUCTED FROM STA. 2+50 TO 3+00 AND STA. 5+30 TO 5+80. SEE SHEET 12 FOR TRANSITION AT BRIDGE.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
LOCATIONS(S)	TR 31 / 2950 N	TR 31 / 2950 N
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT BINDER COURSE
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4% @ 50 Gyr.	4% @ 50 Gyr.
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5 mm	IL 19.0
FRICITION AGGREGATE:	MIXTURE C	NONE
MIXTURE WEIGHT:	112 LBS \ SY \ INCH THICKNESS	112 LBS \ SY \ INCH THICKNESS
QUALITY CONTROL PROGRAM:	QC/QA	QC/QA

FILE NAME = 148158-sht-typsections.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS LIVINGSTON COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3985 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			31	13-17111-03-BR	LIVINGSTON	23	3	
	PLOT DATE = 1/28/2015	CHECKED - S.W.M.	REVISED -			NEWTOWN ROAD DISTRICT CONTRACT NO. 87590					
		DATE - 01/28/15	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		

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REVIEWED	
ALTERNATE CHECKED	
NOTE BOOK	
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ALTERNATE CHECKED	
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FILE NAME	



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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -	31	13-17111-03-BR	LIVINGSTON	23	4
308 STEVENSON DRIVE, SUITE 307 SPRINGFIELD, ILLINOIS 62763	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -	NEWTOWN ROAD DISTRICT CONTRACT NO. 87590				
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PS / SE CORP. 184-000000	PLLOT DATE = 1/28/2015	DATE - 01/28/15	REVISED -	ILLINOIS FED. AID PROJECT				

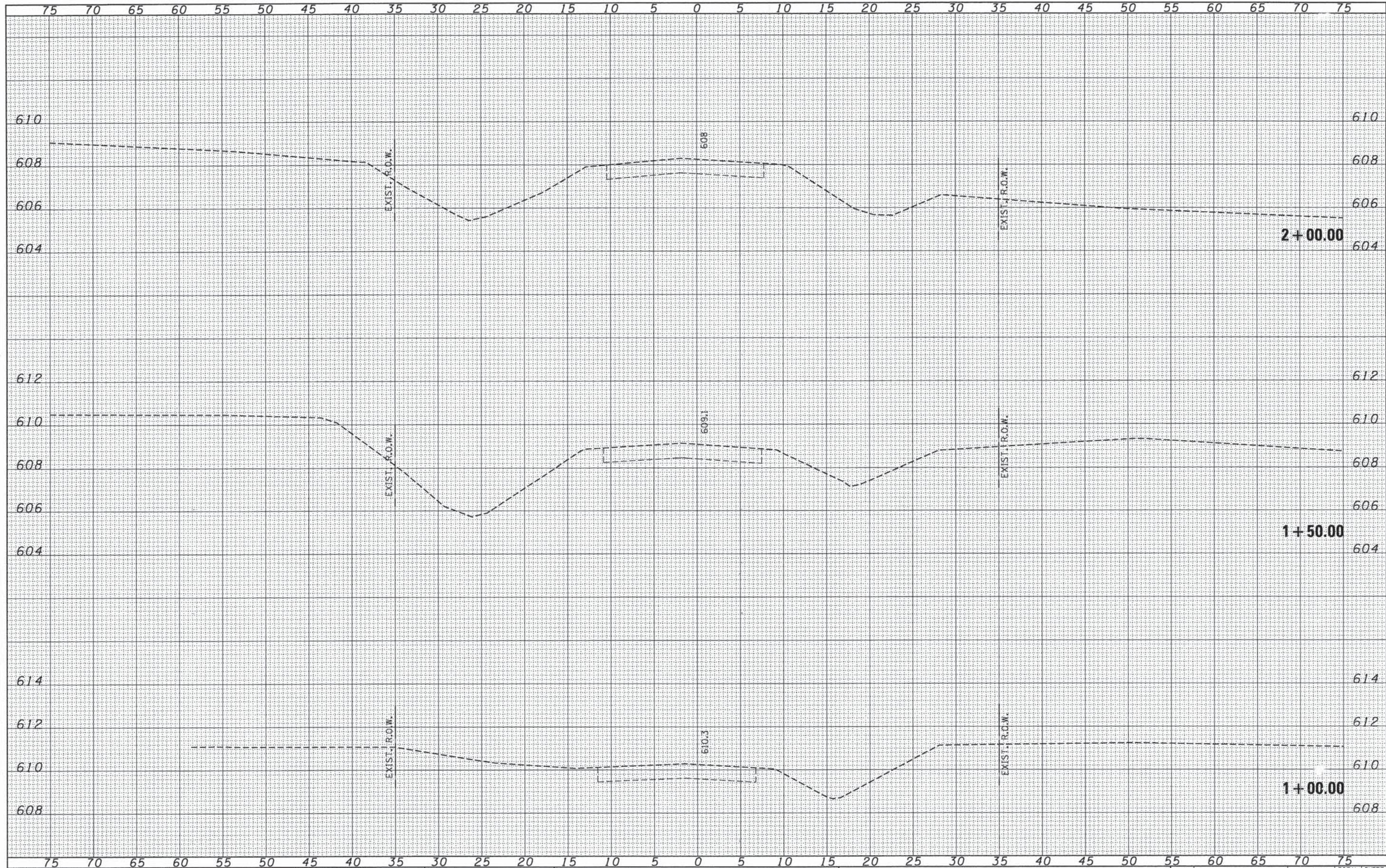
STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

PLAN & PROFILE

SCALE: 20H:5V SHEET NO. 1 OF 1 SHEETS STA. 1+00.00 TO STA. 7+00.00

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

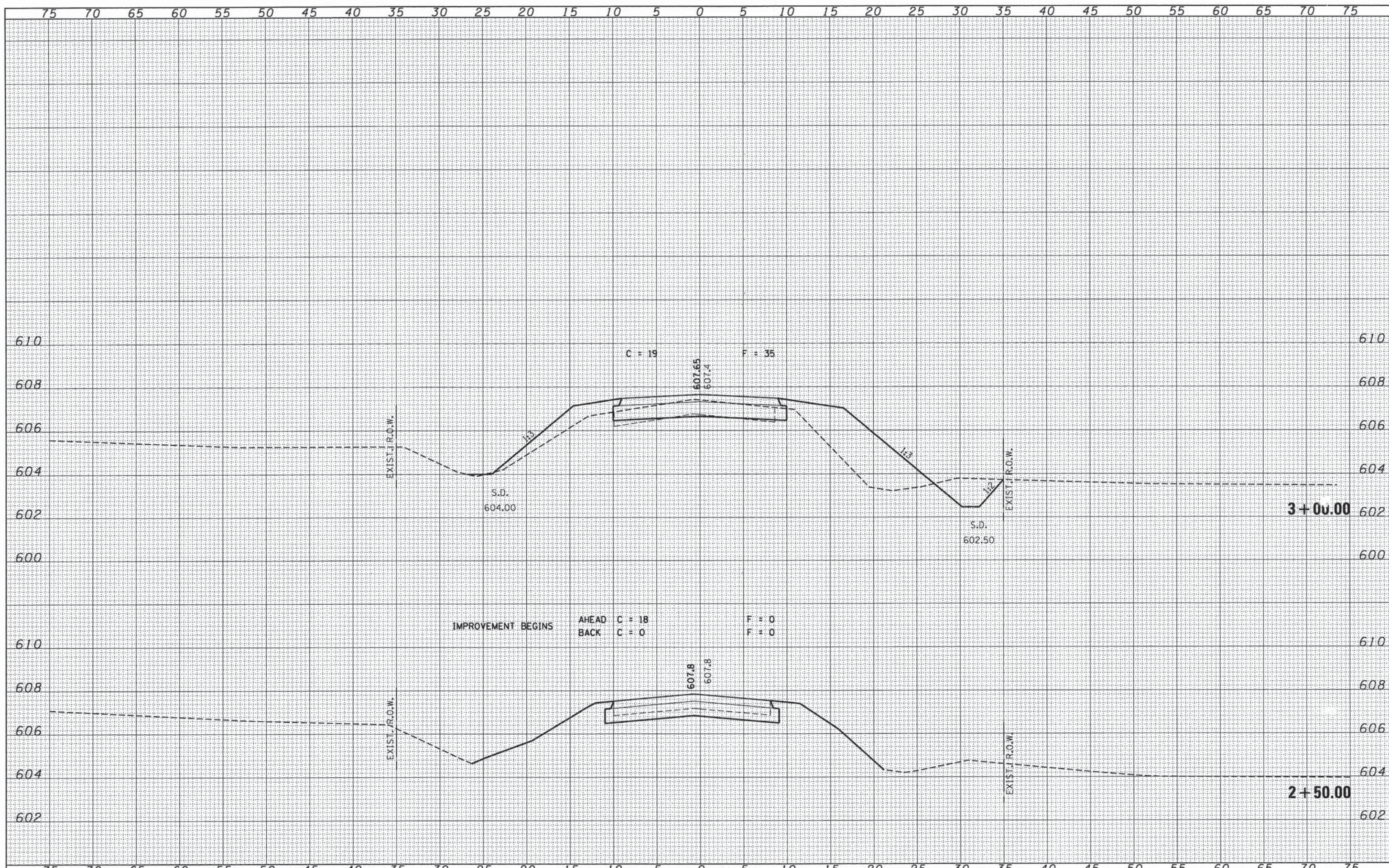
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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HAMPTON, LENZINI AND RENWICK, INC. 3098 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000899	PLLOT SCALE =	DRAWN - L.G.C.	REVISED -		SCALE: 5H:2V	SHEET NO. 1 OF 8 SHEETS	STA. 1+00.00 TO STA. 2+00.00	TR 31	SECTION 13-17111-03-BR	COUNTY LIVINGSTON	TOTAL SHEETS 23	SHEET NO. 6
PLLOT DATE = 1/28/2015	DATE = 01/28/15	CHECKED - S.W.M.	REVISED -		NEWTOWN ROAD DISTRICT CONTRACT NO. 87590							
					ILLINOIS FED. AID PROJECT							

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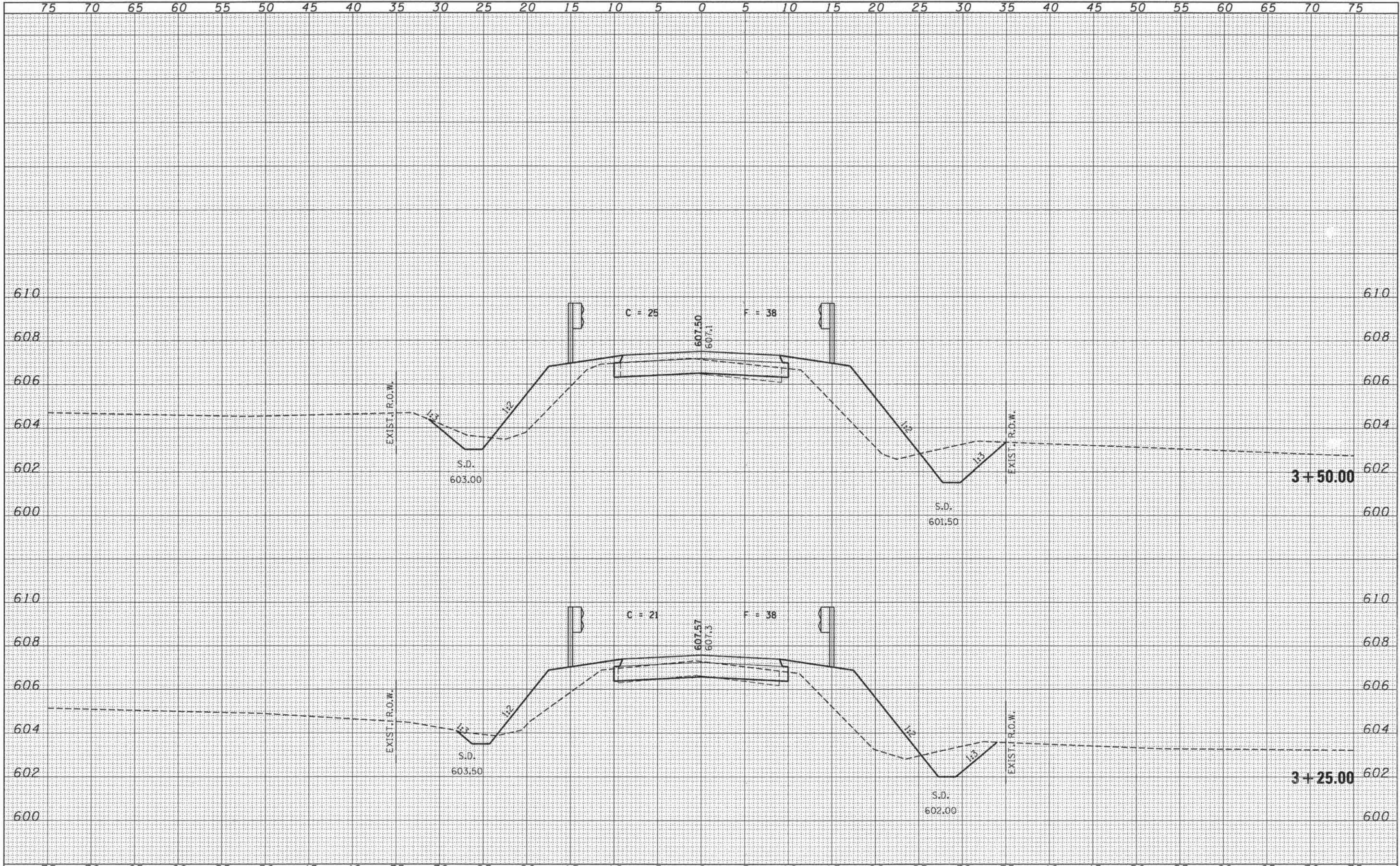
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		31	13-17111-03-BR	LIVINGSTON	23	7				
300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		NEWTOWN ROAD DISTRICT				CONTRACT NO. 87590				
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184-000999	PLOT DATE = 1/28/2015	DATE - 01/28/15	REVISED -		ILLINOIS FED. AID PROJECT								
					SCALE: 5H:2V	SHEET NO. 2 OF 8 SHEETS	STA. 2+50.00	TO STA. 3+00.00					

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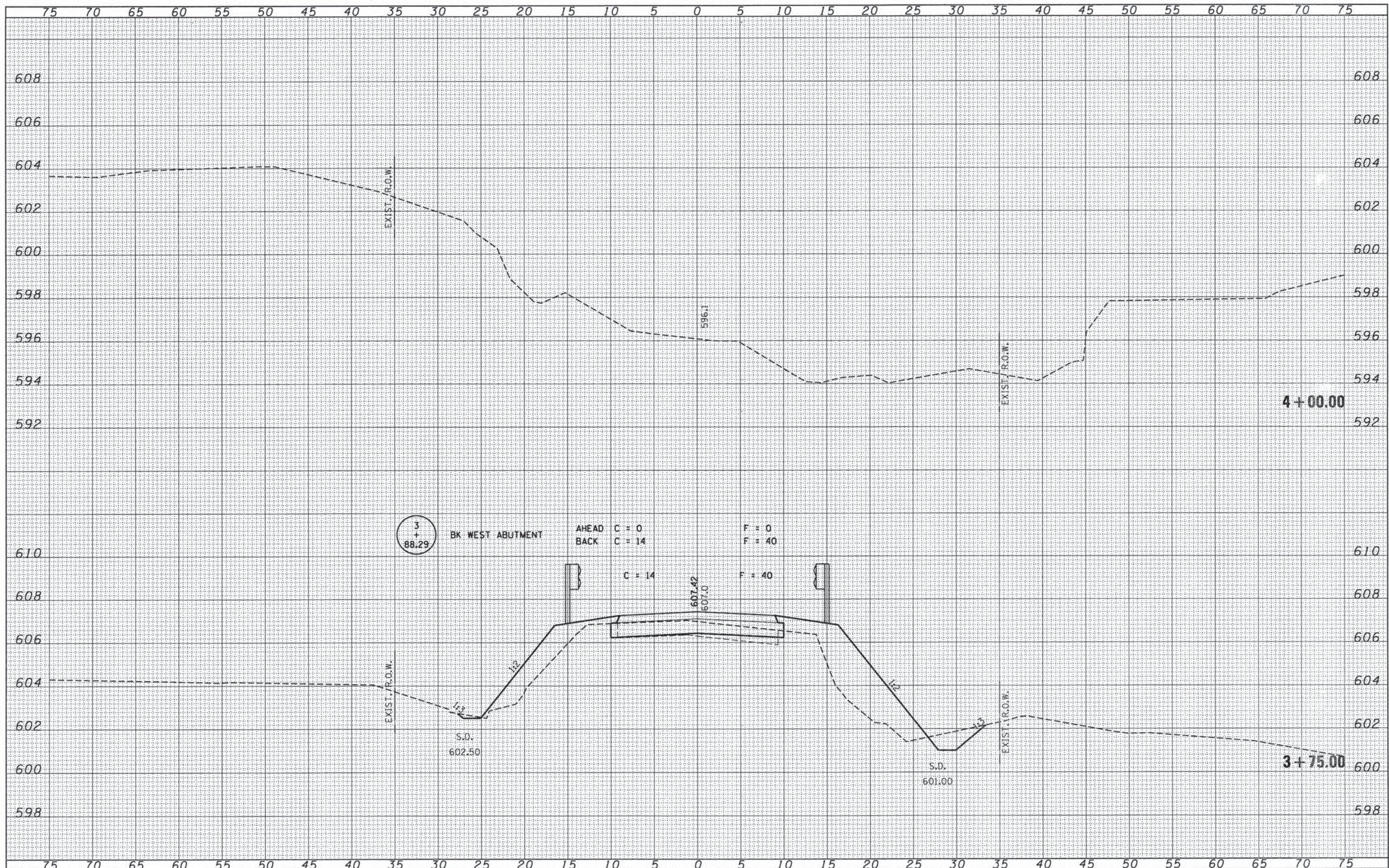
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HAMPTON, LENZINI AND RENWICK, INC. <small>2805 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761</small>		DRAWN - L.G.C.	REVISED -	31	13-17111-03-BR	LIVINGSTON	23	8
		CHECKED - S.W.M.	REVISED -	NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		
ILLINOIS PROFESSIONAL DESIGN FIRM LS/P/E/SE CORP. 184-02889		DATE - 01/28/15	REVISED -	SCALE: 5H:2V SHEET NO. 3 OF 8 SHEETS STA. 3+25.00 TO STA. 3+50.00		[ILLINOIS] FED. AID PROJECT		

**STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT**

STATION CROSS SECTIONS

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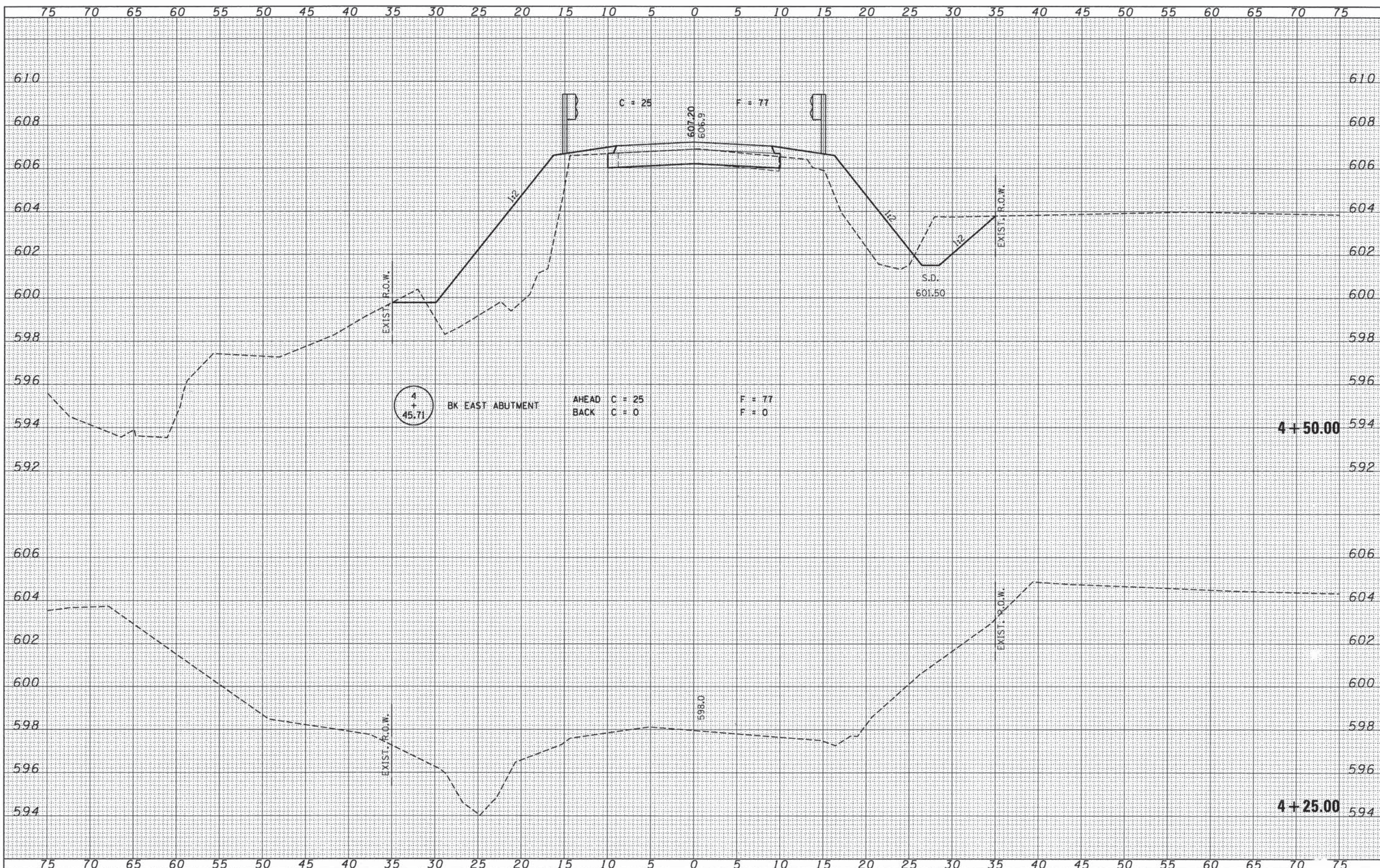
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000089	PLOT SCALE =	DRAWN - L.G.C.	REVISED -			31	13-17111-03-BR	LIVINGSTON	23	9		
PLOT DATE = 1/28/2015	DATE - 01/28/15	CHECKED - S.W.M.	REVISED -	SCALE: 5H:2V		SHEET NO. 4 OF 8 SHEETS		NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		
		DATE - 01/28/15	REVISED -			STA. 3+75.00 TO STA. 4+00.00		ILLINOIS FED. AID PROJECT				

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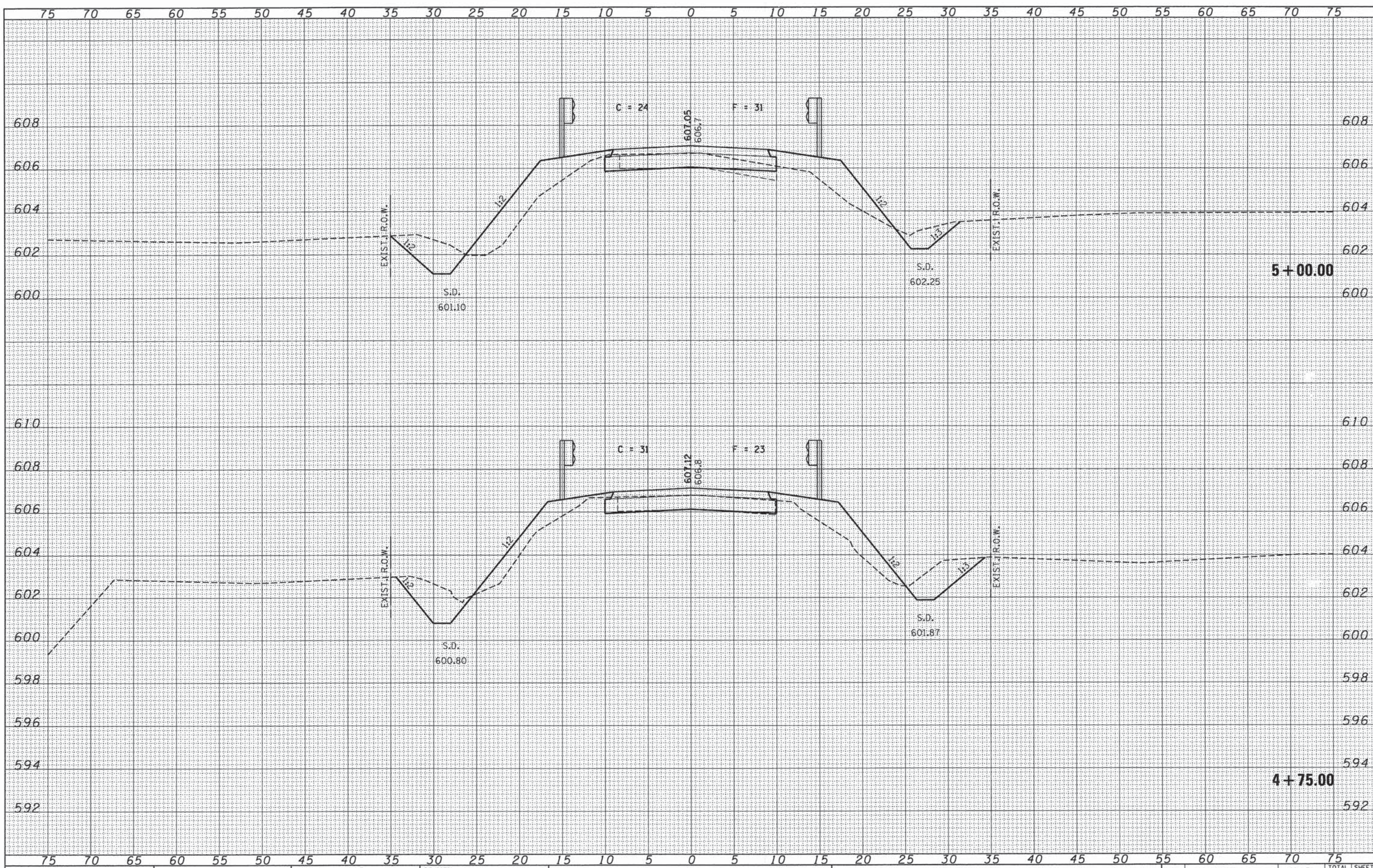
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IN	
NOTE BOOK	
AREAS CHECKED	
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		31	13-17111-03-BR	LIVINGSTON	23	10
3005 STEVENSON DRIVE, SUITE 201		CHECKED - S.W.M.	REVISED -		NEWTOWN ROAD DISTRICT CONTRACT NO. 87590				
SPRINGFIELD, ILLINOIS 62793		DATE - 01/28/15	REVISED -		ILLINOIS FED. AID PROJECT				
ILLINOIS PROFESSIONAL DESIGN FIRM									
LSI P/E/SE CORP. 184-000969									

DATE	
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FINAL SURVEY	
SURVEYED	
PLOTTED	
DATE	
NOTE BOOK	
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DATE	
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ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
DATE	
NOTE BOOK	
NO.	
AREAS CHECKED	



FILE NAME = 140158-sh1-axa.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 2008 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62753
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LB / PE / SE CORP. 184-000999

USER NAME =
 PLOT SCALE =
 PLOT DATE = 1/28/2015

DESIGNED - J.W.F.
 DRAWN - L.G.C.
 CHECKED - S.W.M.
 DATE - 01/28/15

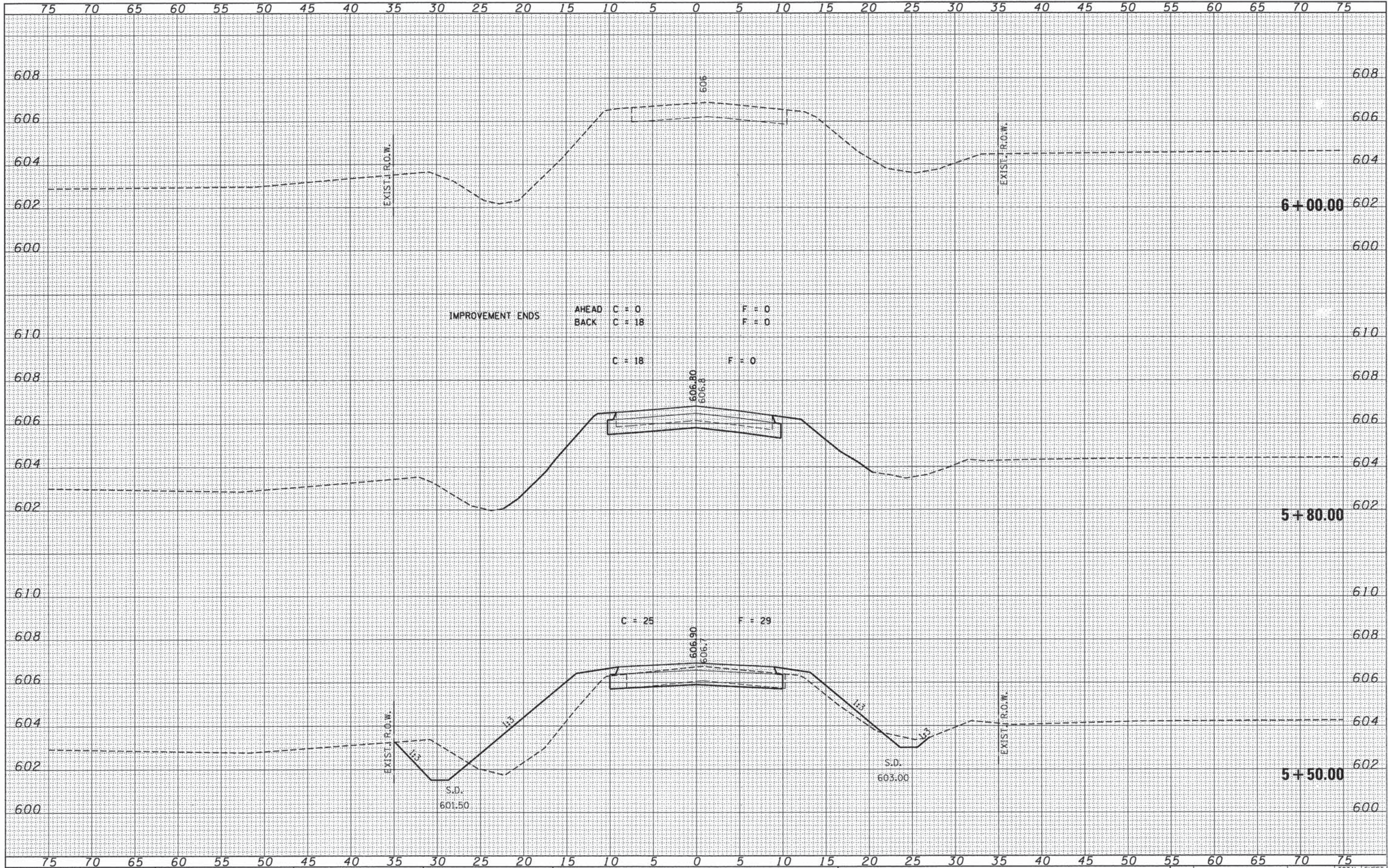
STATE OF ILLINOIS
 LIVINGSTON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 6 OF 8 SHEETS
 STA. 4+75.00 TO STA. 5+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	11
NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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DATE	
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ORIGINAL SURVEY	
SURVEYED	
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NOTE BOOK	
AREAS CHECKED	
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FILE NAME = 140150-ah1-ss1.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3080 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62761
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LB / PE / BE CORP. 184.009989

USER NAME =
 PLOT SCALE =
 PLOT DATE = 1/28/2015

DESIGNED - J.W.F.
 DRAWN - L.G.C.
 CHECKED - S.W.M.
 DATE - 01/28/15

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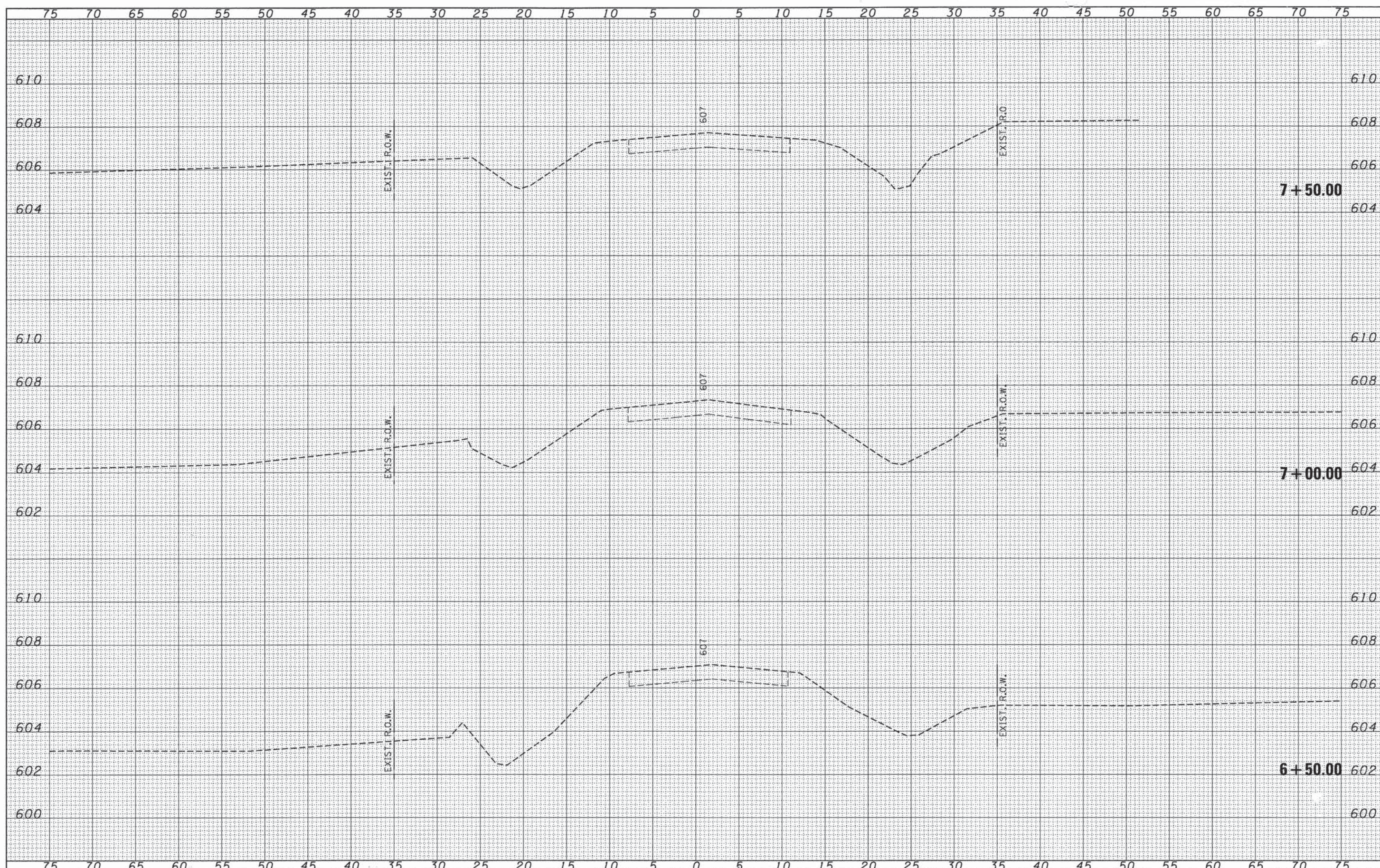
STATE OF ILLINOIS
 LIVINGSTON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 7 OF 8 SHEETS
 STA. 5+50.00 TO STA. 6+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	12
NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
[ILLINOIS] FED. AID PROJECT				

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

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



FILE NAME = 140158-ah1-sss.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 390 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - L.G.C.	REVISED -	31	13-17111-03-BR	LIVINGSTON	23	13
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-929989	PLOT SCALE =	CHECKED - S.W.M.	REVISED -	NEWTOWN ROAD DISTRICT				CONTRACT NO. 87590
	PLOT DATE = 1/28/2015	DATE - 01/28/15	REVISED -	ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

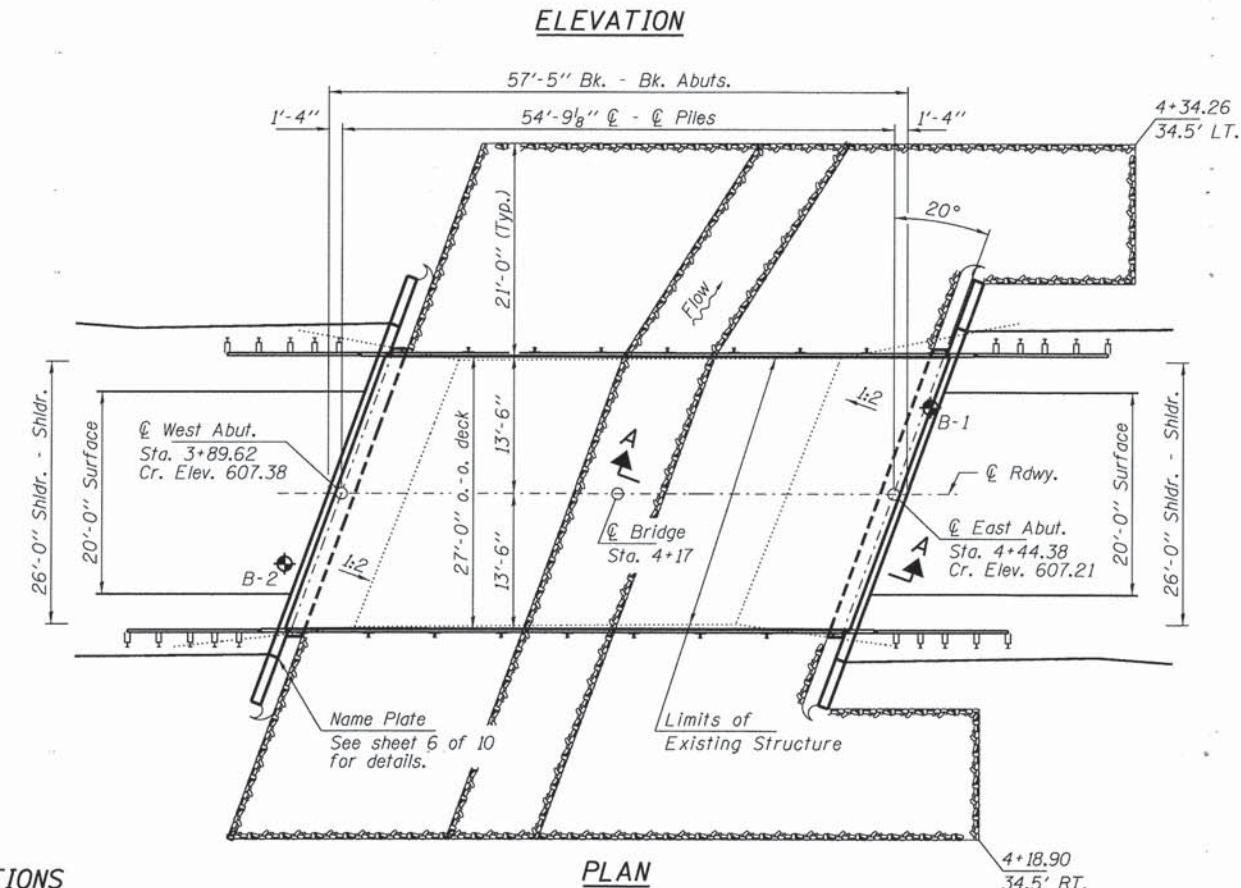
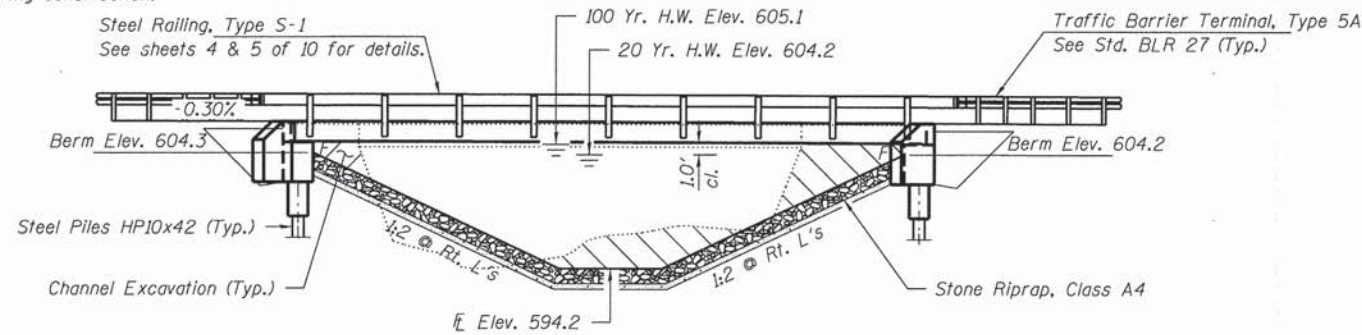
SCALE: 5H:2V SHEET NO. 8 OF 8 SHEETS STA. 6+50.00 TO STA. 7+50.00

BENCHMARK: Chiseled "□" on N.W. Curb 13.0' Lt., Sta. 4+01, Elev. 607.66

EXISTING STRUCTURE: Sta. 4+15 - Single span precast concrete channel beam bridge on closed timber abutments and wingwalls with timber ditch check. 34.20' fc.-fc. abuts; 26.30' o.-o. deck.

Structure closed to traffic during construction.

No Salvage



DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($1/2$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi (2 " ϕ low lax. strands)
 $f_y = 60,000$ psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.105g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.172g
Soil Site Class = D

Design Scour Elevations (ft.)		
	W. Abut.	E. Abut.
Q100	601.9	601.7

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	1050	230	260	603.70	0.05	0.08	603.75	603.78
Base	20	1330	250	280	604.20	0.18	0.16	604.38	604.36
Max. Calc. (Overtop)	100	2010	270	320	605.07	0.98	0.58	606.05	605.65
10 Year Velocity through Existing Bridge = 4.6 fps	500	2740	270	330	605.77	1.49	1.24	607.26	607.01
10 Year Velocity through Proposed Bridge = 4.0 fps									

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

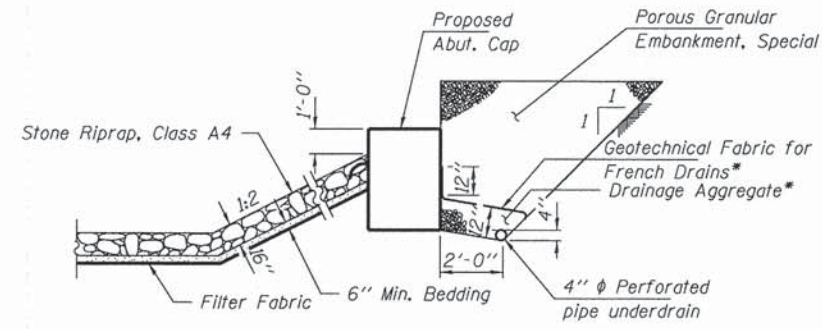
Steven W. Megginson 01/28/15
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2016

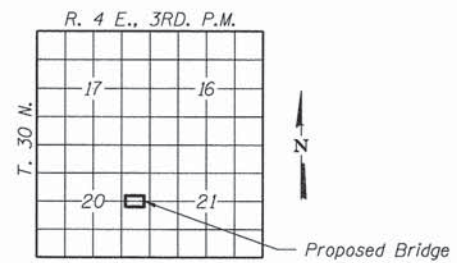
GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the West Abutment or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
All bars to be epoxy coated.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
Concrete sealer shall be applied to the designated areas of the abutments.



INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 21"x36" PPC Deck Beam
3. 21"x36" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. West Abutment
7. East Abutment
8. HP Pile Details
- 9-10. Borings



LOCATION SKETCH

BUILT 201L BY
LIVINGSTON COUNTY
SEC. 13-17111-03-BR
NEWTOWN ROAD DISTRICT
STR. NO. 053-4217
LOADING HL-93

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			155
Stone Riprap, Class A4	Sq. Yd.			452
Filter Fabric	Sq. Yd.			452
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		28.4	28.4
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,512		1,512
Reinforcement Bars, Epoxy Coated	Pound		3,200	3,200
Steel Railing, Type S-1	Foot	122		122
Furnishing Steel Piles HP10x42	Foot		245	245
Driving Piles	Foot		245	245
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Porous Granular Embankment, Special	Ton		110	110
Pipe Underdrains for Structures 4"	Foot		106	106
Concrete Sealer	Sq. Ft.		112	112

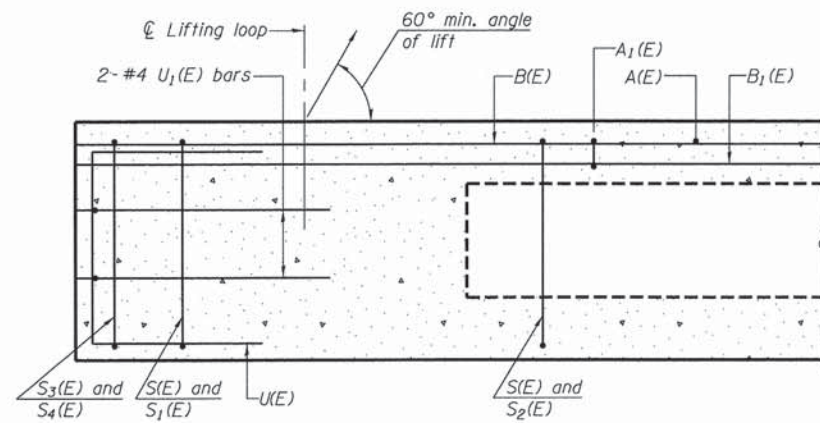
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ILLINOIS PROFESSIONAL DESIGN FIRM 131 FRI. ST. CORP. 184-20068	PLOT DATE = 1/28/2015	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

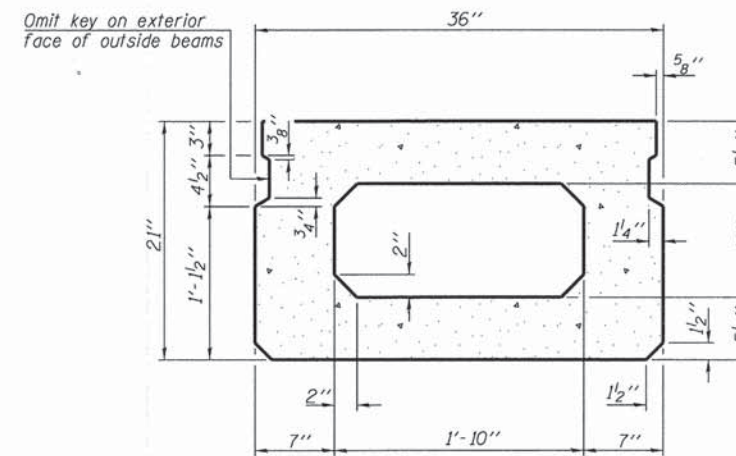
GENERAL PLAN & ELEVATION
STRUCTURE NO. 053-4217

SHEET NO. 1 OF 10 SHEETS

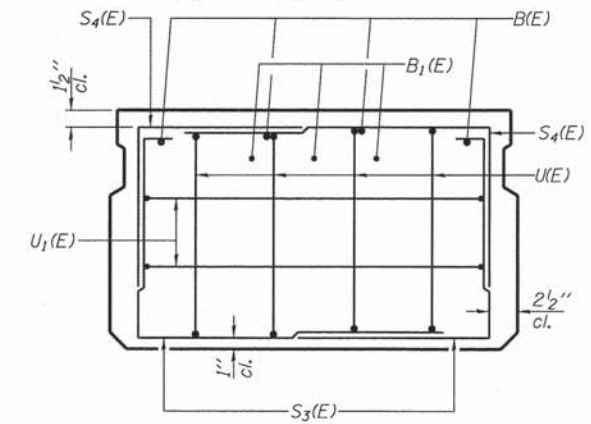
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NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
ILLINOIS FED. AID PROJECT				



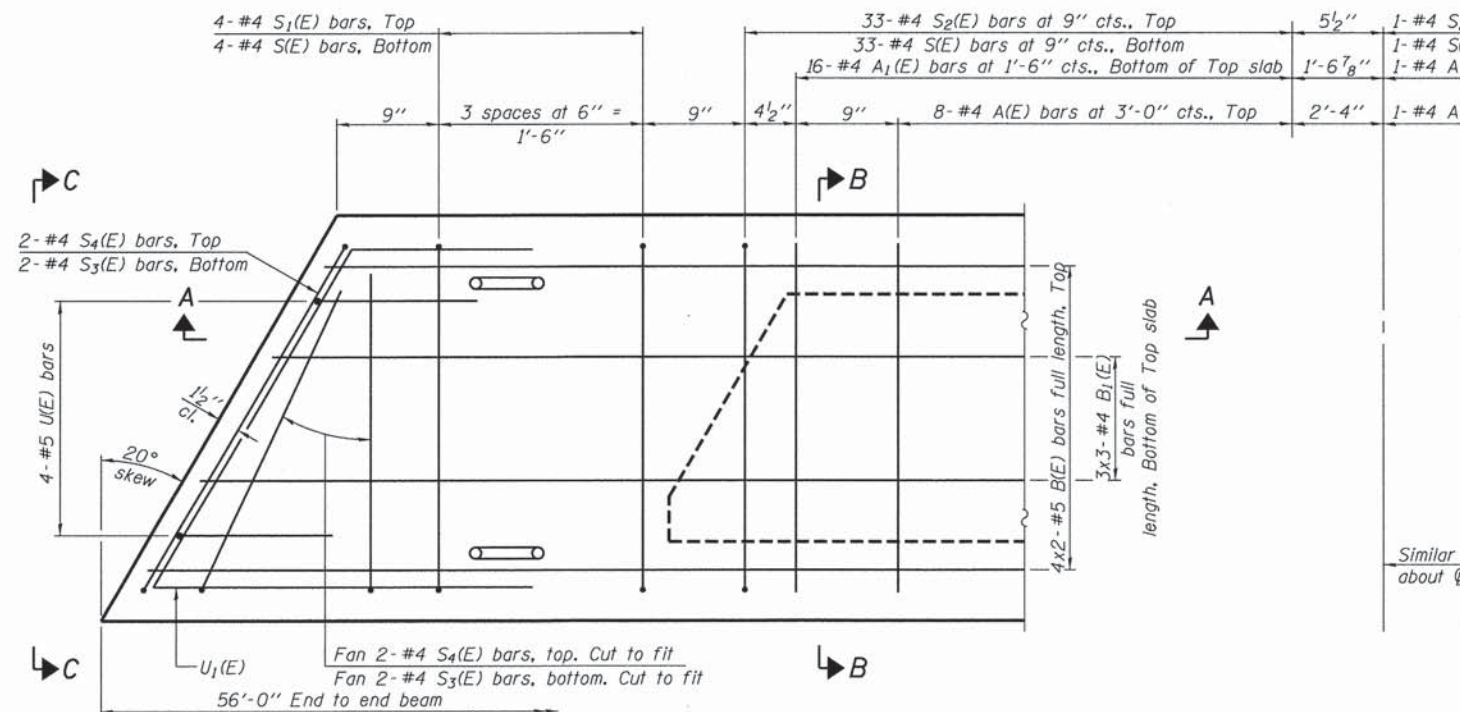
SECTION A-A



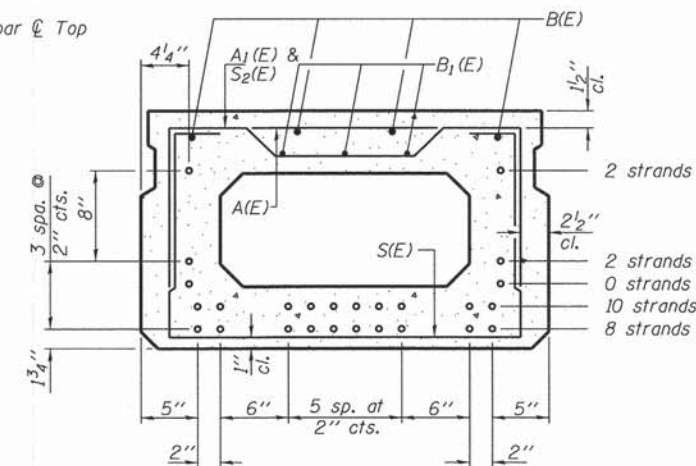
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	17	#4	2'-7"	—
A1(E)	33	#4	2'-10"	—
B(E)	8	#5	29'-2"	—
B1(E)	9	#4	19'-11"	—
S(E)	75	#4	6'-5"	⌌
S1(E)	8	#4	4'-11"	⌌
S2(E)	67	#4	5'-2"	⌌
S3(E)	8	#4	4'-3"	⌌
S4(E)	8	#4	3'-6"	⌌
U(E)	8	#5	4'-0"	⌌
U1(E)	4	#4	6'-1"	⌌

Note: See sheet 3 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 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

MINIMUM BAR LAP

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

PD-2136-L

7-1-10

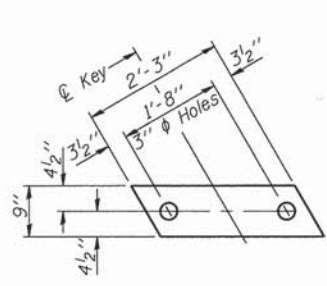
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STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

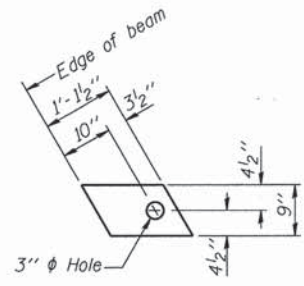
21" x 36" PPC DECK BEAM
STRUCTURE NO. 053-4217

SHEET NO. 2 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		
ILLINOIS FED. AID PROJECT				



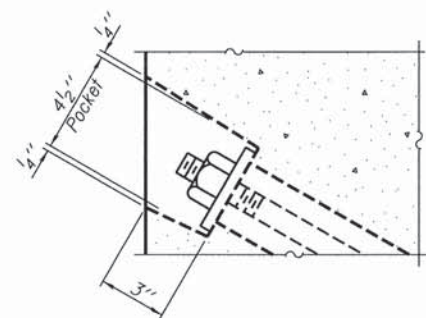
FABRIC BEARING PAD
(Interior - 16 req'd)



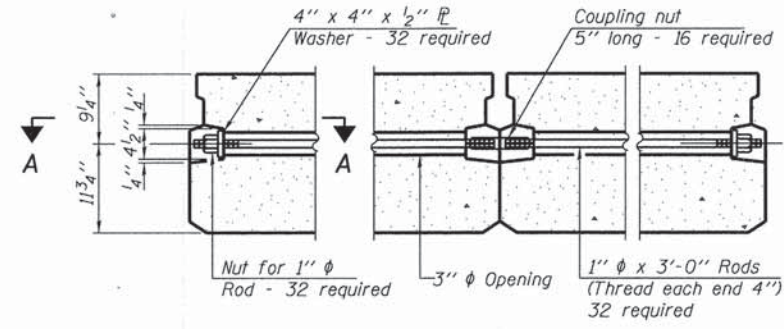
FABRIC BEARING PAD
(Exterior - 4 req'd)

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

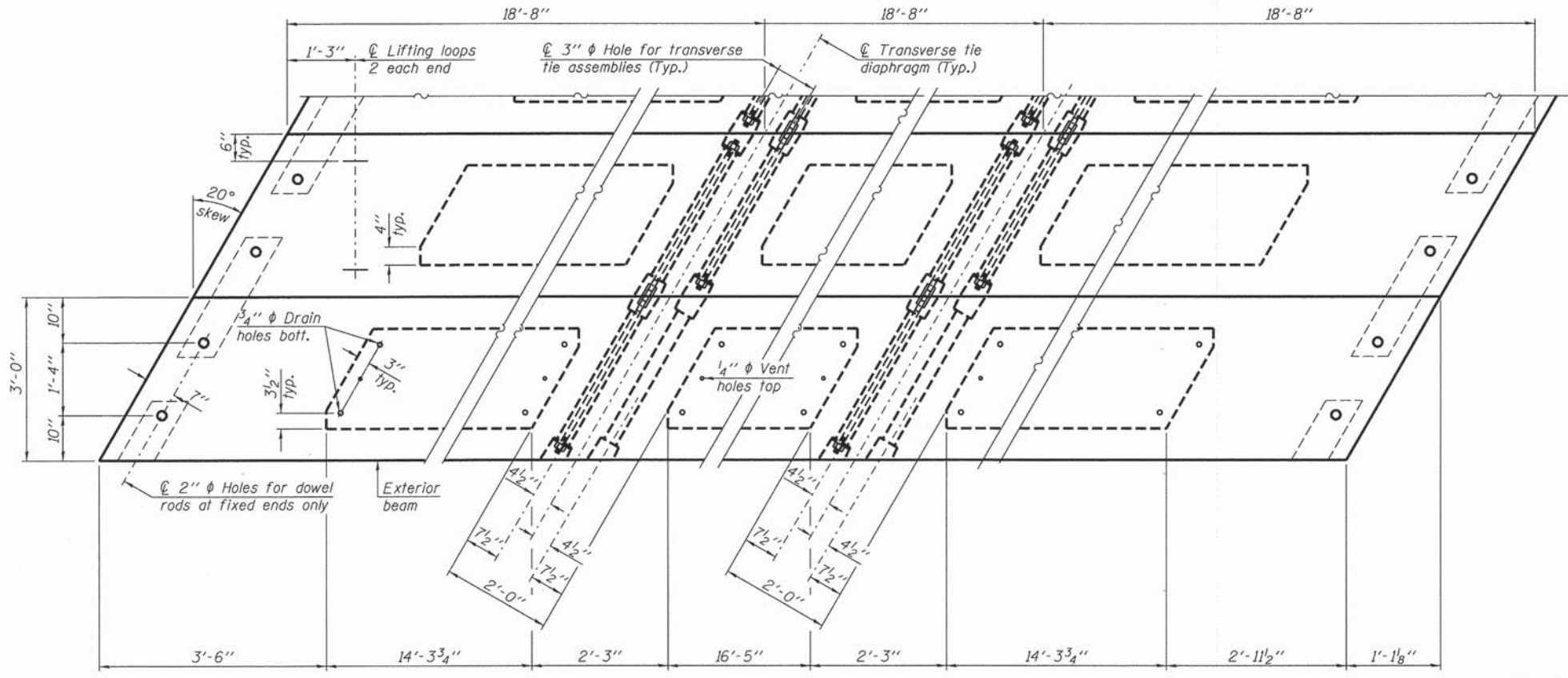
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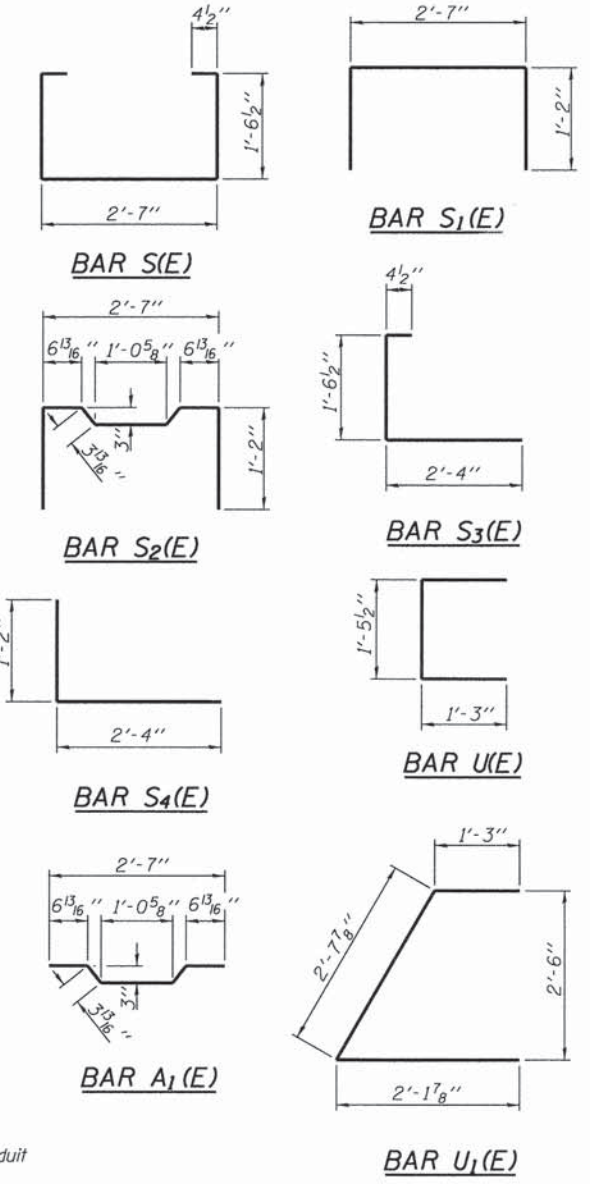
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

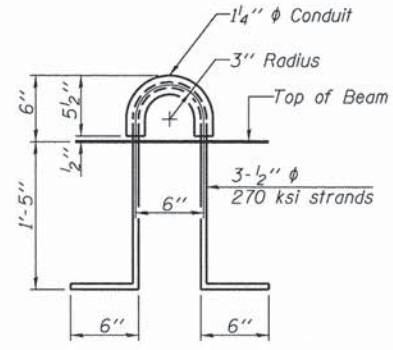


PLAN VIEW



BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,512
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LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" 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.

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

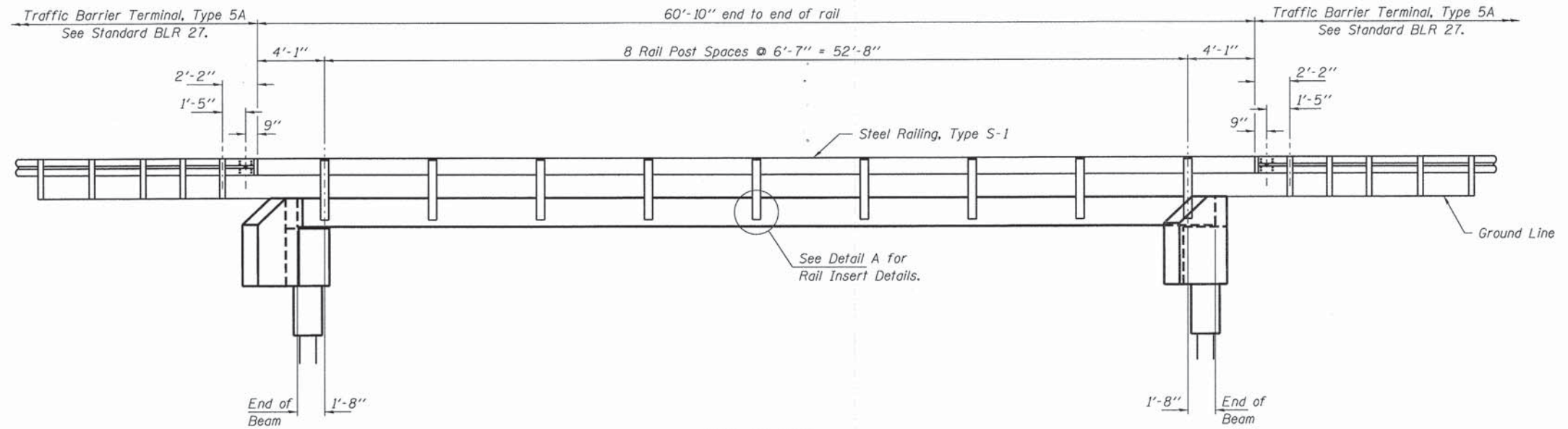
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ILR ILLINOIS PROFESSIONAL DESIGN FIRM LTD. P.C. / INC. CORP. - 534-00009	CHECKED - S.W.M.
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	REVISED -
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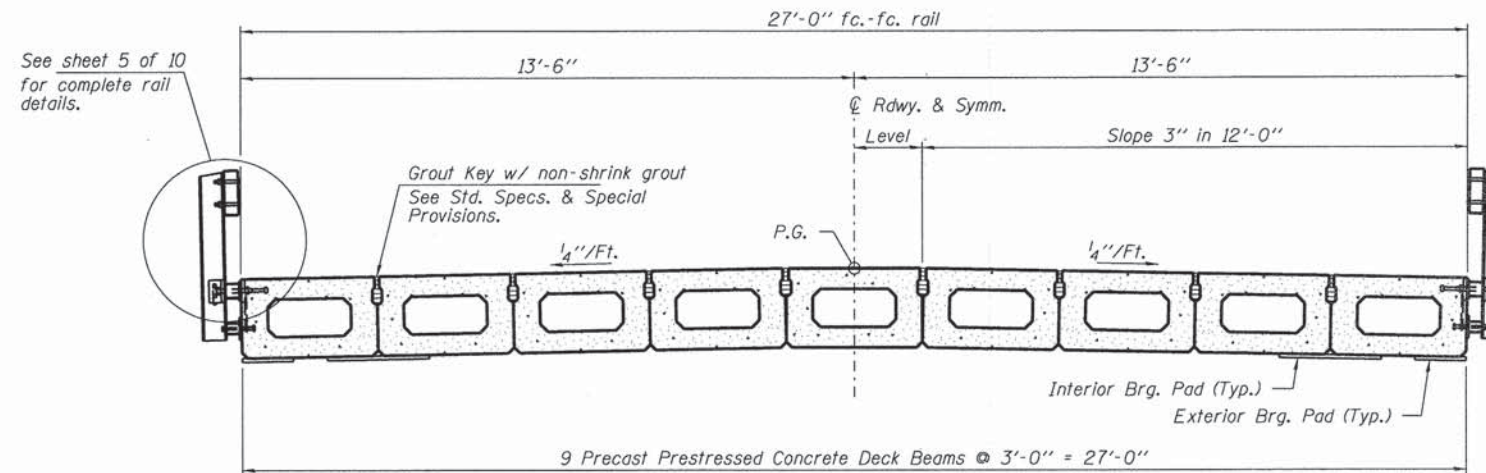
STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

21" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 053-4217
SHEET NO. 3 OF 10 SHEETS

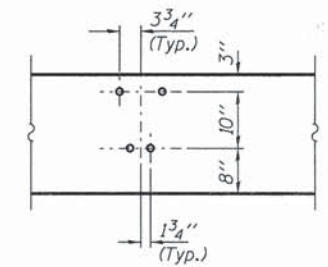
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NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
ILLINOIS FED. AID PROJECT				



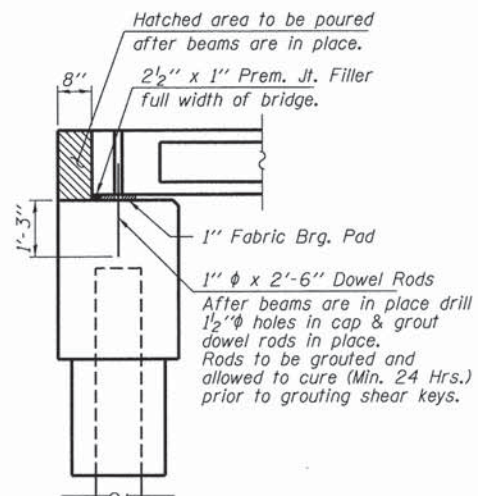
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 10 for Railing Details.



CROSS SECTION
See sheets 2 & 3 of 10 for Superstructure.

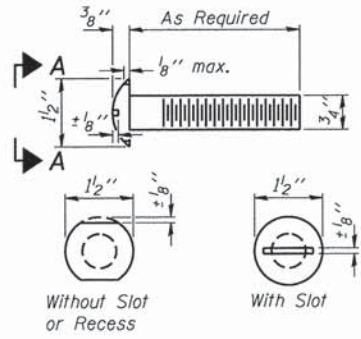


DETAIL A

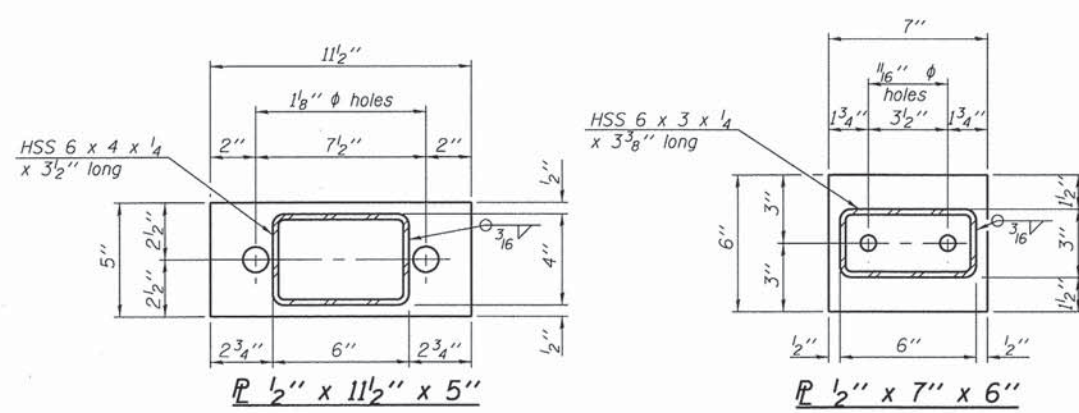


SECTION AT ABUTMENTS
© Rt. L's

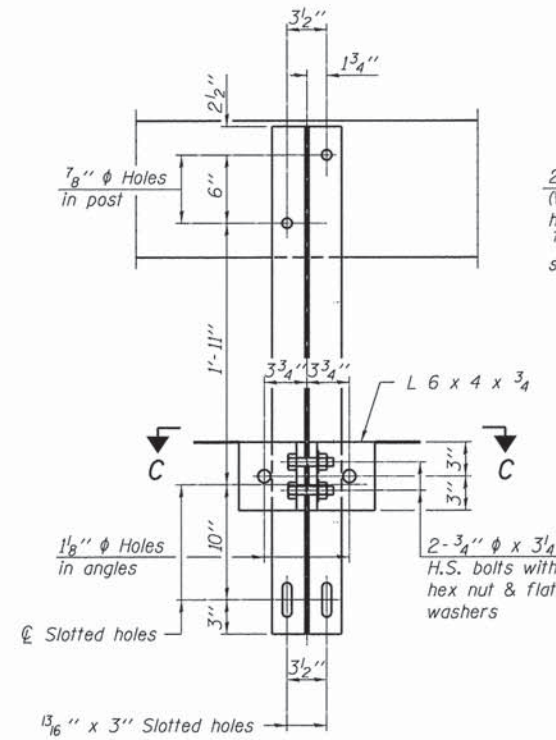
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			31	13-17111-03-BR	LIVINGSTON	23	17	
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		CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 10 SHEETS					



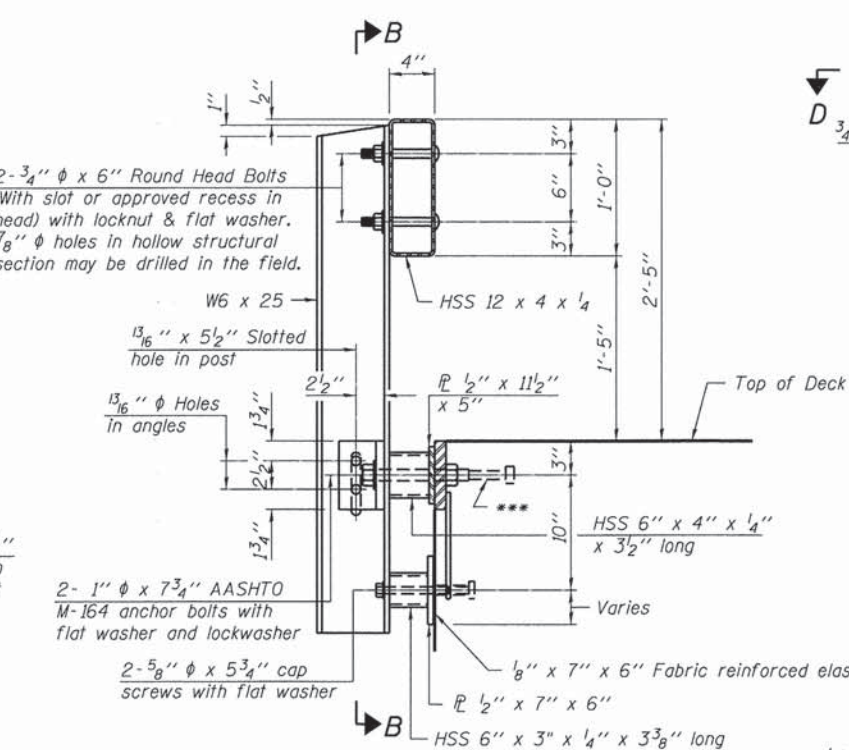
**VIEW A-A
ROUND HEAD BOLT**



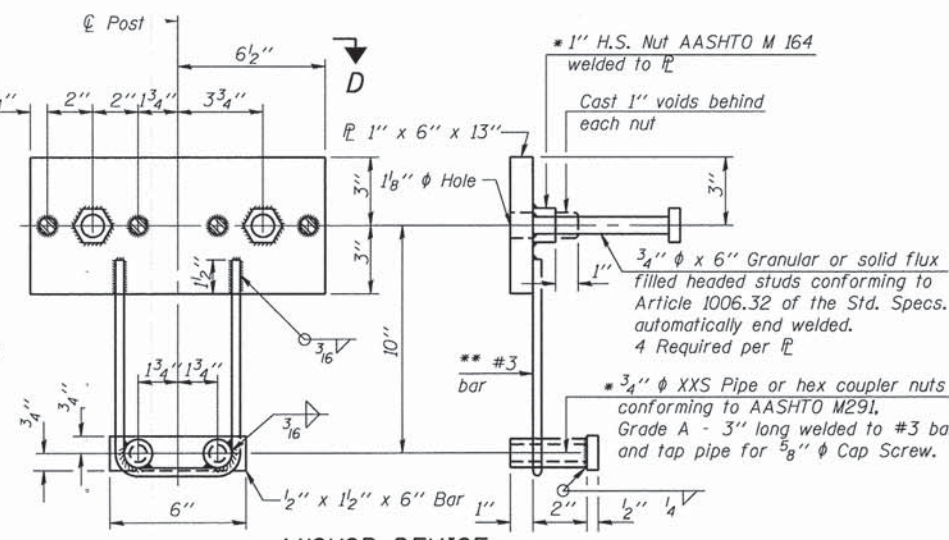
SECTION AT RAILING POST



SECTION B-B

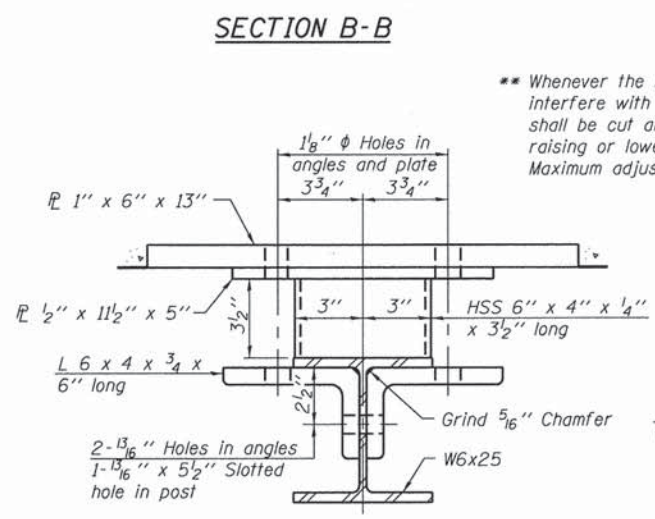


SECTION AT RAILING POST

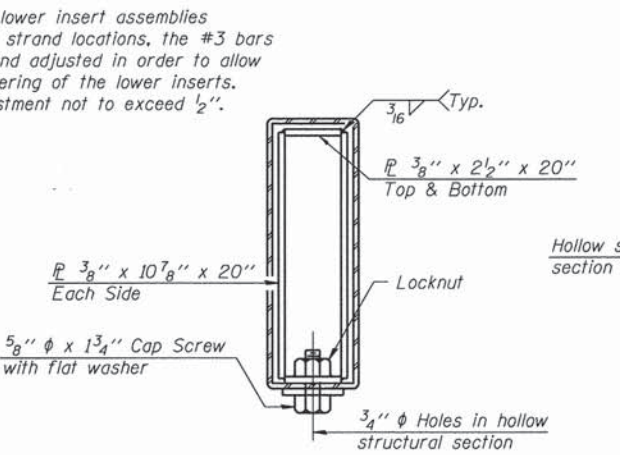


ANCHOR DEVICE

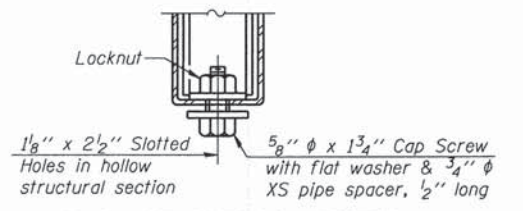
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cast included with Steel Railing, Type S-1.
All steel rail elements shall 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.



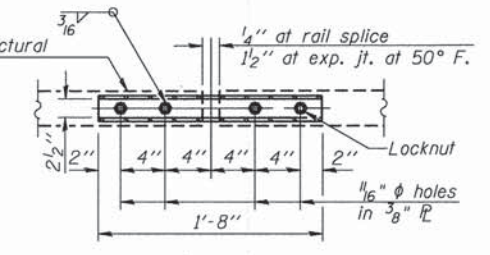
SECTION C-C



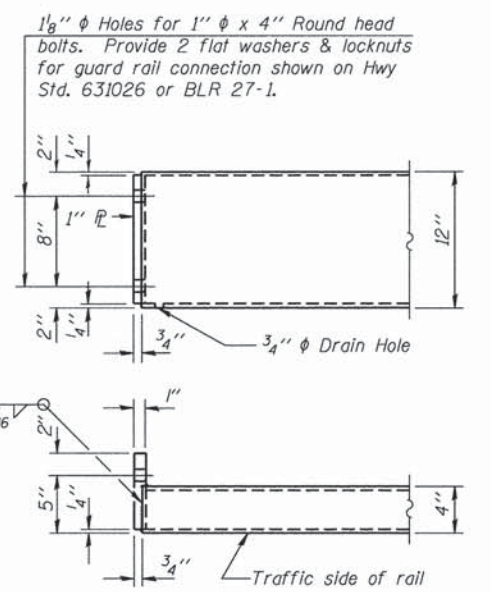
SECTIONS AT RAIL SPLICE



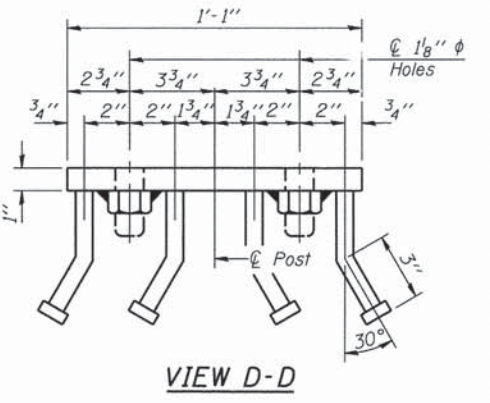
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE AT 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	122

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

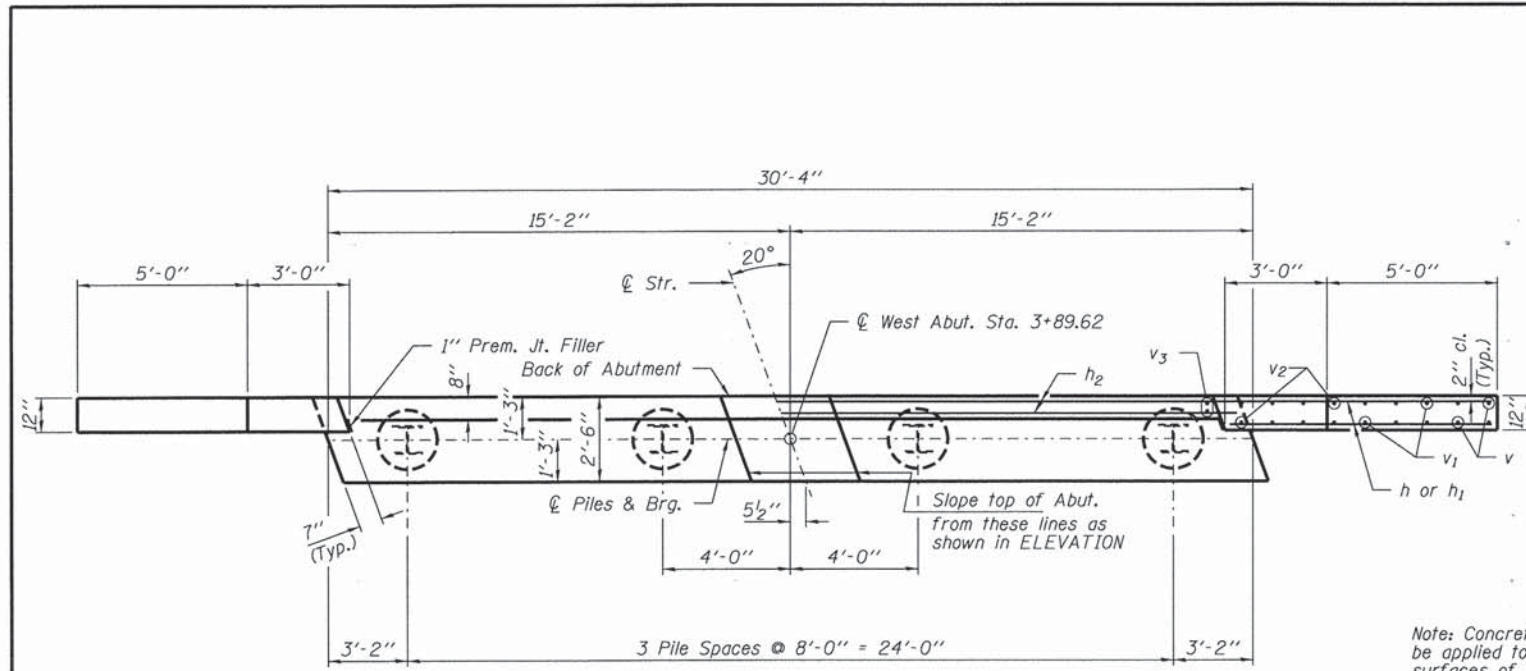
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3095 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184.000989	PLLOT DATE = 1/28/2015	CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 053-4217**

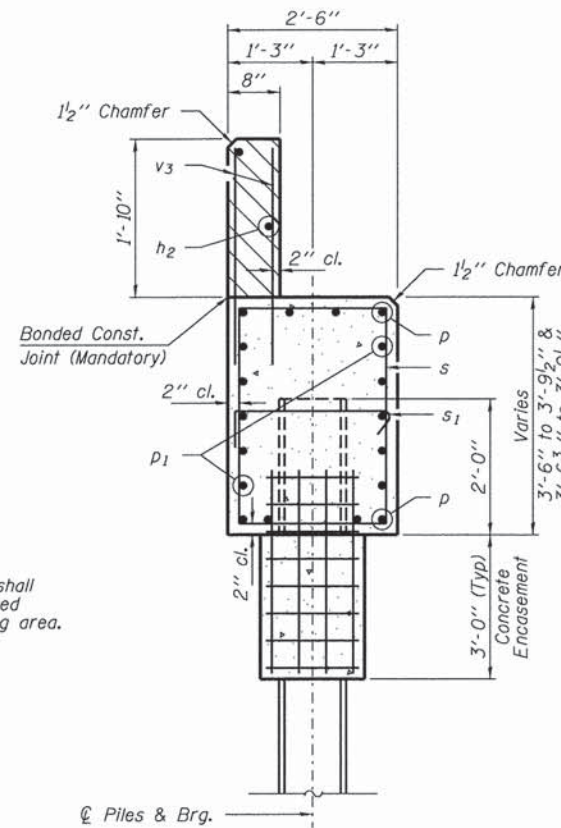
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	18
NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		
ILLINOIS FED. AID PROJECT				

SHEET NO. 5 OF 10 SHEETS



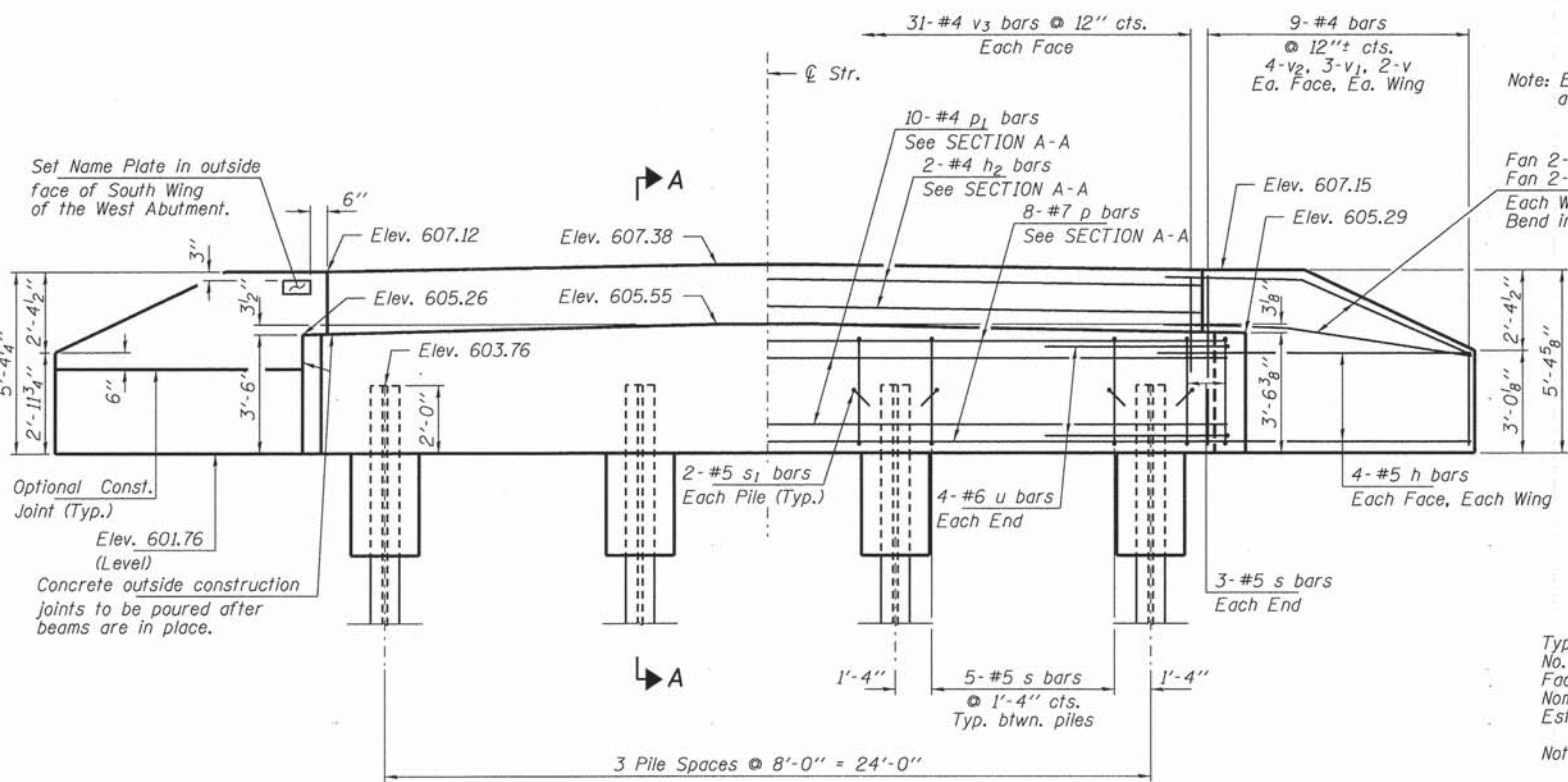
PLAN

Note: Concrete sealer shall be applied to all exposed surfaces of the bearing area.

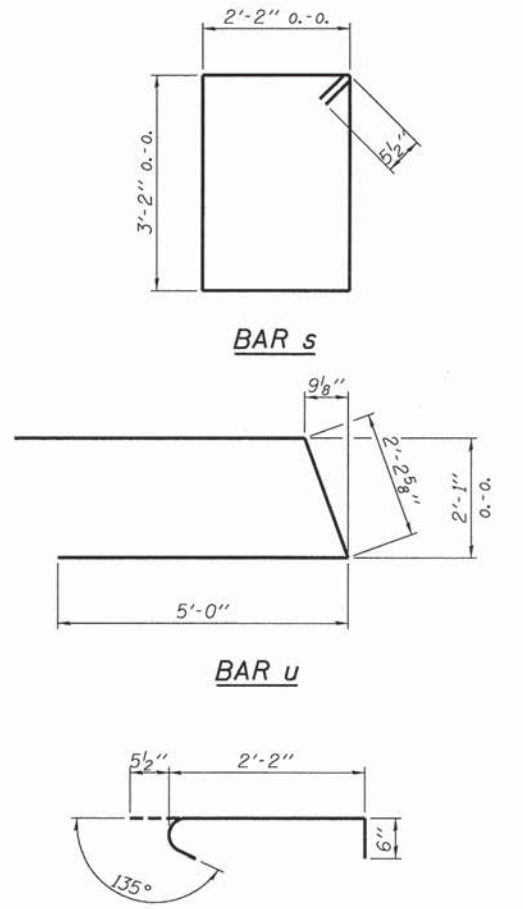


SECTION A-A

Note: Extend h bars into abutment cap. Hatched area to be poured after beams are in place.



ELEVATION
(Looking West)



BAR s1
BILL OF MATERIAL - W. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE	
h	20	#5	9'-3"	—	
h1	4	#5	7'-9"	—	
h2	2	#5	30'-0"	—	
p	8	#7	30'-0"	—	
p1	10	#4	30'-0"	—	
s	21	#5	11'-7"	□	
s1	8	#5	3'-2"	┌	
u	8	#6	12'-3"	U	
v	8	#4	2'-9"	—	
v1	12	#4	3'-8"	—	
v2	16	#4	5'-0"	—	
v3	62	#4	2'-8"	—	
Concrete Structures				Cu. Yd.	14.2
Concrete Encasement				Cu. Yd.	1.4
Reinforcement Bars, Epoxy Coated				Pound	1,600
Steel Piles HPI0x42				Foot	105
Test Pile Steel HPI0x42				Each	1
Name Plates				Each	1
Concrete Sealer				Sq. Ft.	56

All reinforcement bars shall be epoxy coated

PILE DATA

Type Steel HPI0x42
 No. Req'd. (W. Abut.) 4
 Factored Resistance Available 184 Kips/Pile
 Nominal Req'd Bearing 335 Kips/Pile
 Est. Length 35 Ft/Pile

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

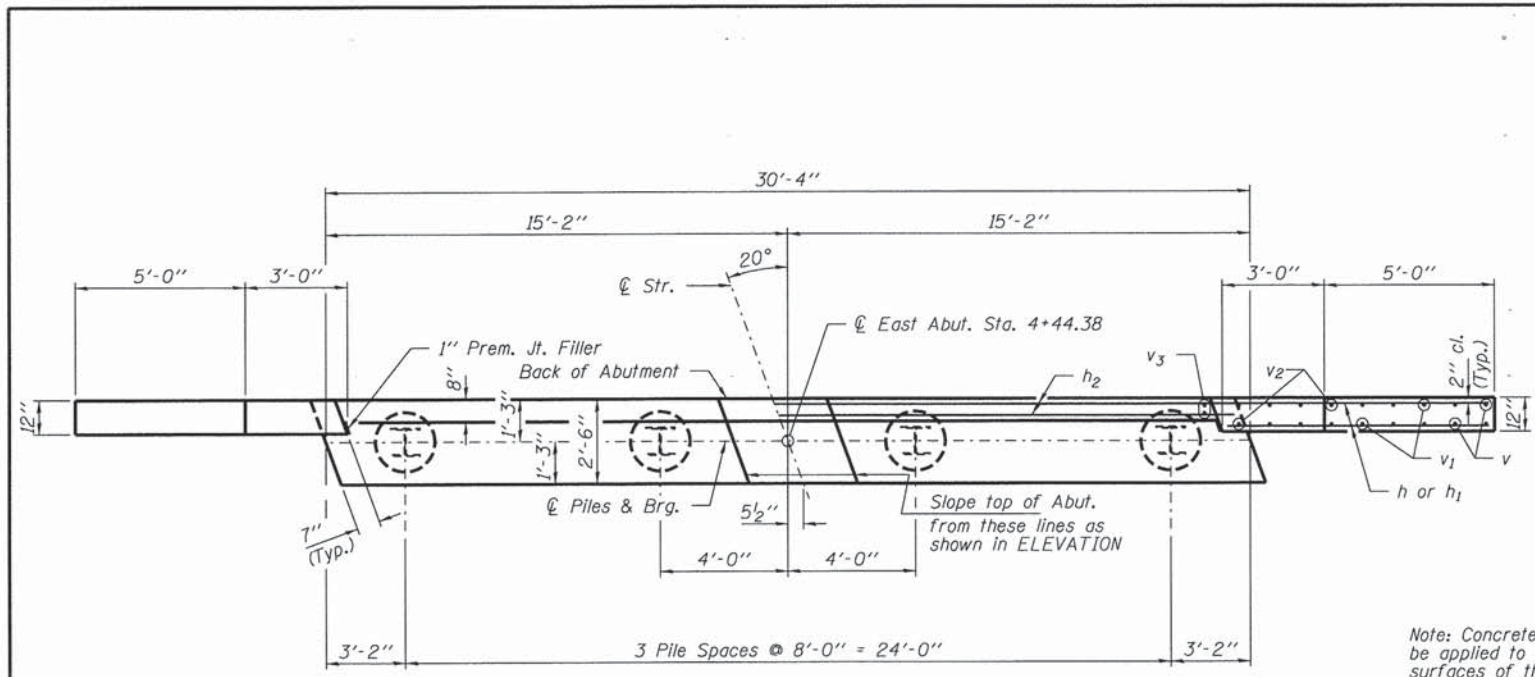
The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

FILE NAME = 148158-ah-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3033 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. / C.O.P.E. - 184-00008	PLOT DATE = 1/28/2015	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

WEST ABUTMENT
STRUCTURE NO. 053-4217
SHEET NO. 6 OF 10 SHEETS

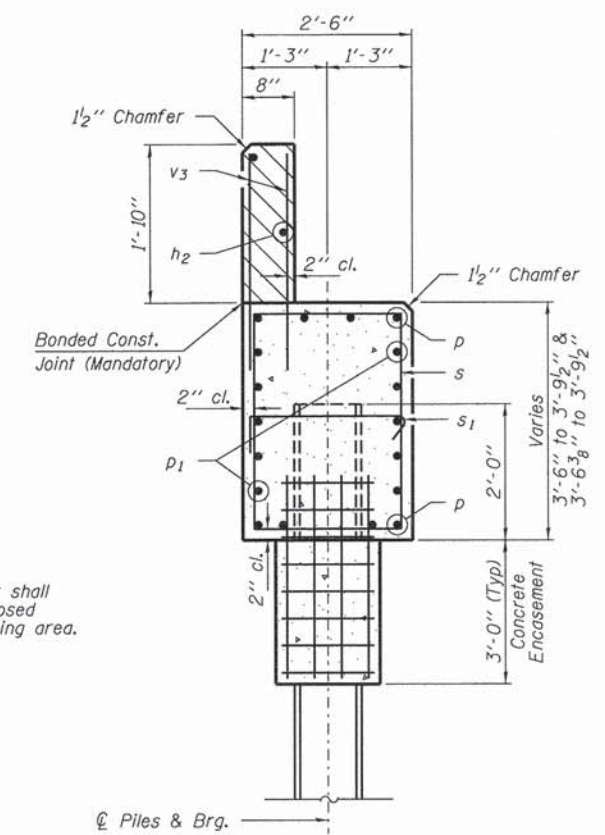
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	19
NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
[ILLINOIS] FED. AID PROJECT				



PLAN



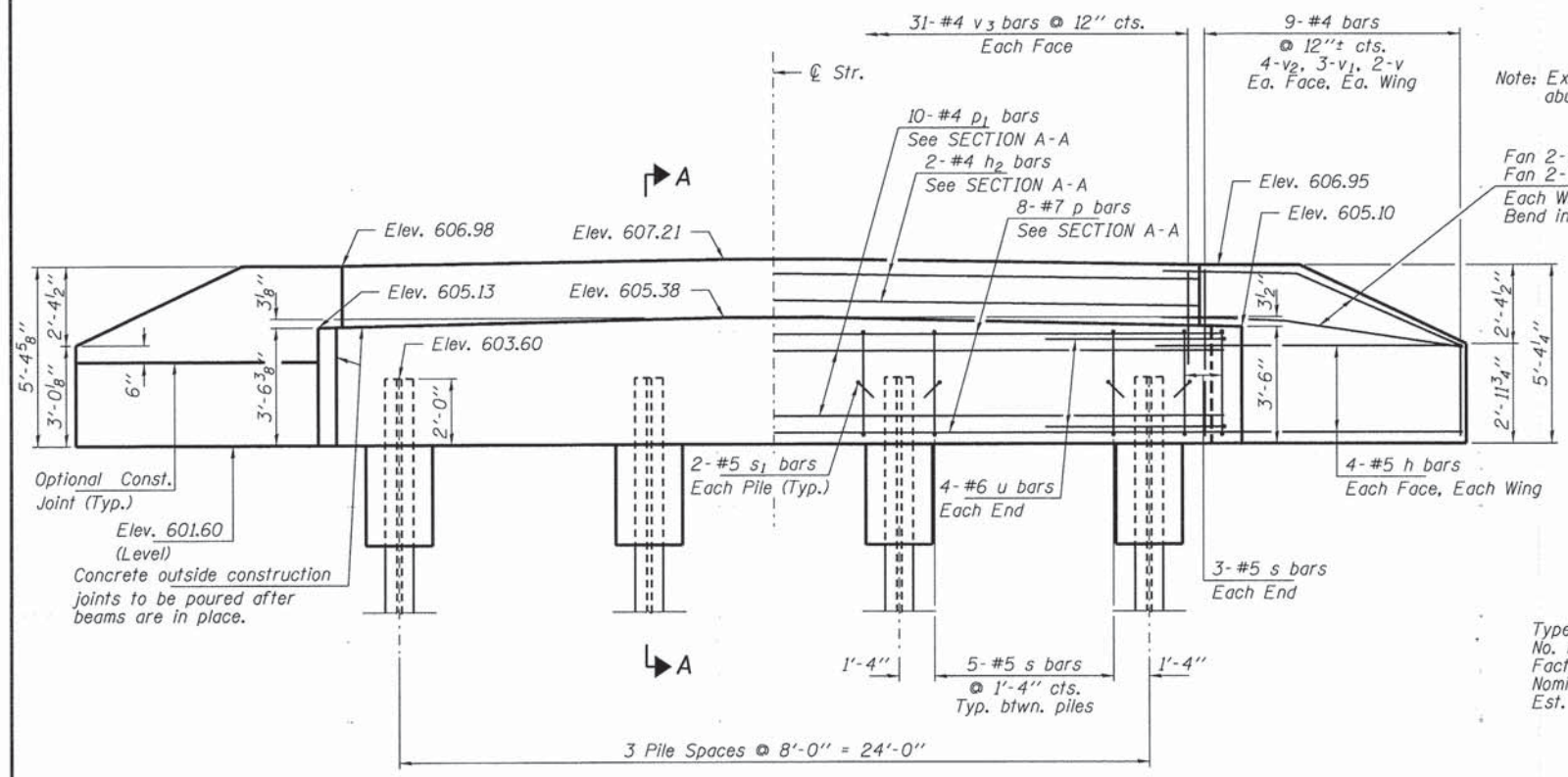
Note: Concrete sealer shall be applied to all exposed surfaces of the bearing area.



SECTION A-A

Note: Extend h bars into abutment cap.

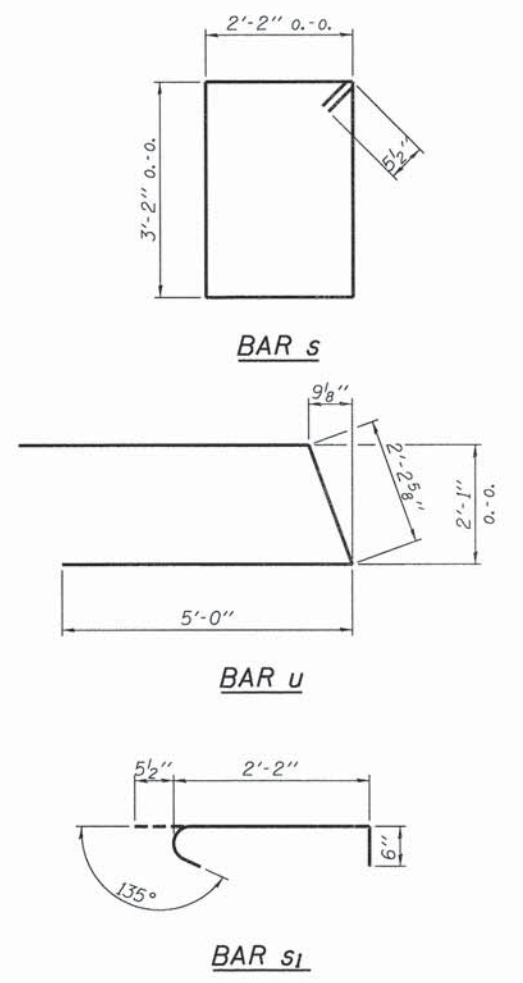
Hatched area to be poured after beams are in place.



ELEVATION
(Looking East)

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (E. Abut.) ----- 4
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 35 Ft./Pile



BILL OF MATERIAL - E. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#5	9'-3"	—
h1	4	#5	7'-9"	—
h2	2	#5	30'-0"	—
p	8	#7	30'-0"	—
p1	10	#4	30'-0"	—
s	21	#5	11'-7"	□
s1	8	#5	3'-2"	┌
u	8	#6	12'-3"	—
v	8	#4	2'-9"	—
v1	12	#4	3'-8"	—
v2	16	#4	5'-0"	—
v3	62	#4	2'-8"	—
Concrete Structures			Cu. Yd.	14.2
Concrete Encasement			Cu. Yd.	1.4
Reinforcement Bars, Epoxy Coated			Pound	1,600
Steel Piles HP10x42			Foot	140
Concrete Sealer			Sq. Ft.	56

All reinforcement bars shall be epoxy coated

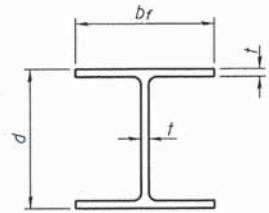
FILE NAME = 140158-ah-bridge.dgn
 USER NAME =
 DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.

DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT

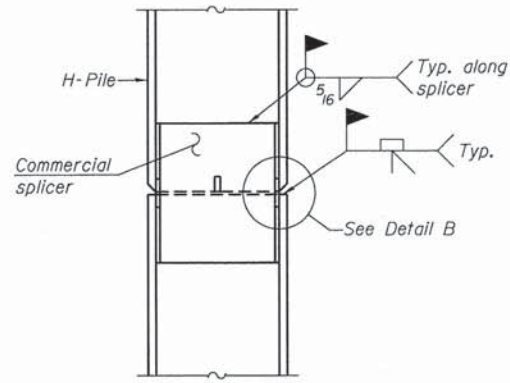
EAST ABUTMENT
STRUCTURE NO. 053-4217
 SHEET NO. 7 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
31	13-17111-03-BR	LIVINGSTON	23	20
NEWTOWN ROAD DISTRICT			CONTRACT NO. 87590	
ILLINOIS FED. AID PROJECT				

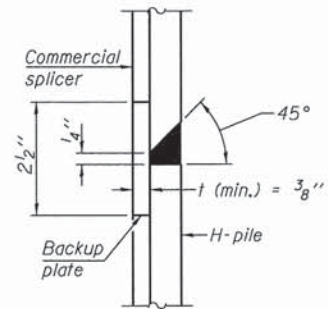


STEEL PILE TABLE

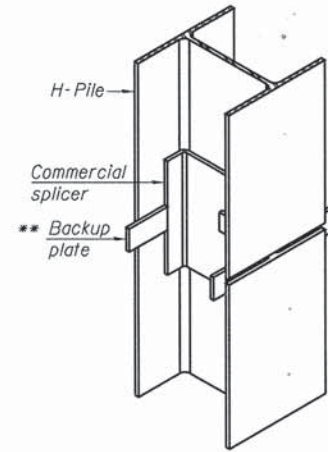
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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

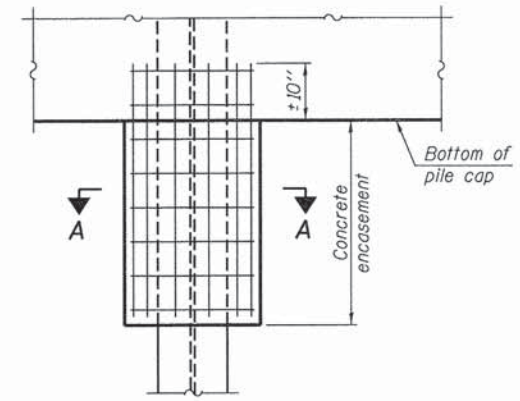


DETAIL "B"



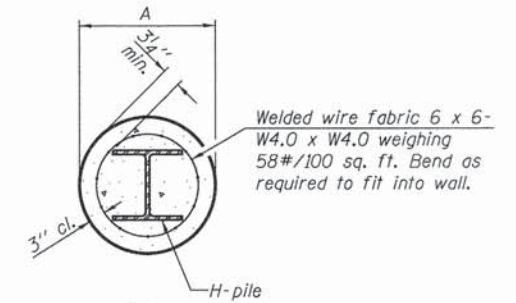
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



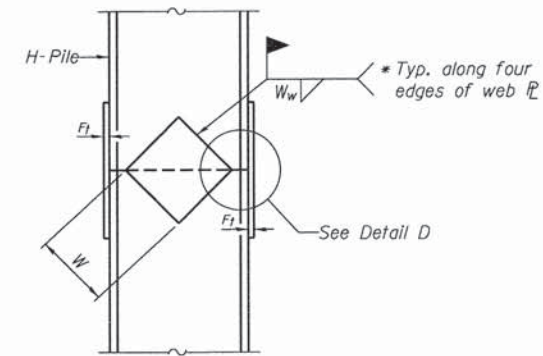
ELEVATION

PILE ENCASEMENT

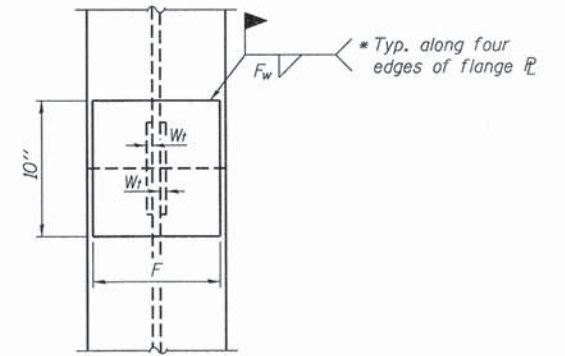


SECTION A-A

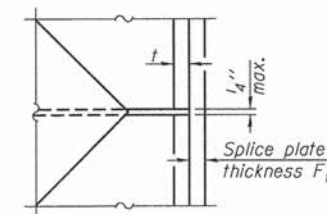
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



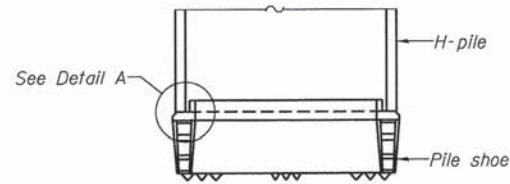
END VIEW



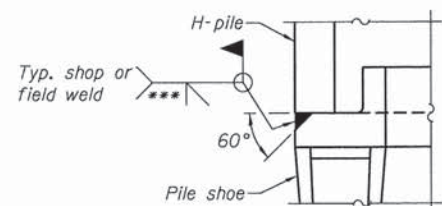
DETAIL D

WELDED PLATE FIELD SPLICE

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

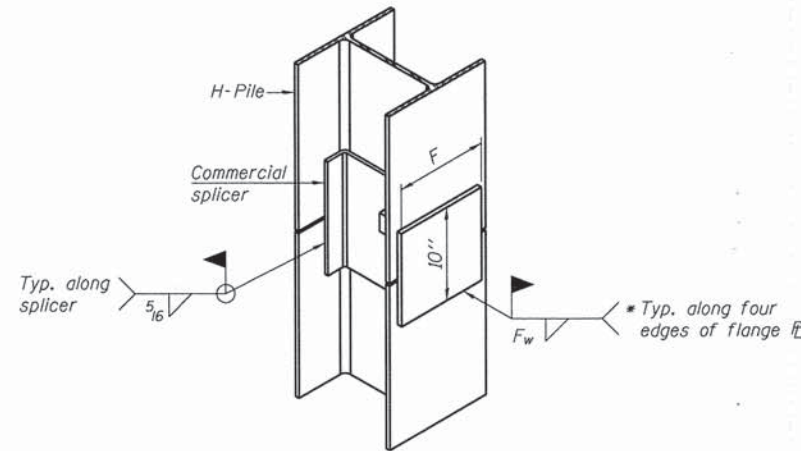


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

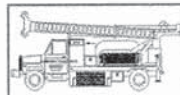
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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

F-HP

1-27-12

FILE NAME = 140158-sht-br-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED	STATE OF ILLINOIS LIVINGSTON COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 053-4217	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			31	13-17111-03-BR	LIVINGSTON	23	21	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM 151 P.E. / S.E. CORP. 184-000689	PLOT DATE = 1/28/2015	DRAWN - R.D.H.	REVISED -			NEWTOWN ROAD DISTRICT		CONTRACT NO. 87590		ILLINOIS FED. AID PROJECT	
		CHECKED - S.W.M.	REVISED -			SHEET NO. 8 OF 10 SHEETS					
CONTRACT NO. 87590											



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 1 of 2

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

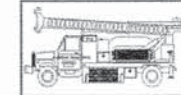
Client: Hampton, Lenzi & Renwick
Project Name: Newton Twp. Section 13-17111-03-BR
Project Site: Livingston County, Illinois

Boring No. B-1
Surface Elev. 607.0
Auger Depth 41' Rotary Depth NA
Start Date 05/31/14 Finish Date 05/31/14

Location: 8.5' Left of Station 4+48

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES					Dry Density (PCF)	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear		
607.00										
606.00	Stiff Brownish Gray Clay Mixed With Gravel (Fill)		1							
605.00			2							
604.00			3	1	SS	---	11	---	14	
603.00	Stiff Black To Brown Clay		4							
602.00			5							
601.00			6	2	SS	1.3	7	B	20	
600.00			7							
599.00	Medium Gray Fine Sand With Occasional Gravel		8							
598.00			9							
597.00			10							
596.00			11	4	SS	---	17	---	10	
595.00			12							
594.00	Very Stiff Gray Sandy Clay		13							
593.00			14							
592.00			15							
591.00			16	6	SS	---	22	---	---	
590.00			17							
589.00			18	7	SS	---	25	---	---	
588.00			19							
587.00			20	8	SS	3.1	39	S	14	

Groundwater Data: Static water level - Elevation 595.5
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 2 of 2

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hampton, Lenzi & Renwick
Project Name: Newton Twp. Section 13-17111-03-BR
Project Site: Livingston County, Illinois

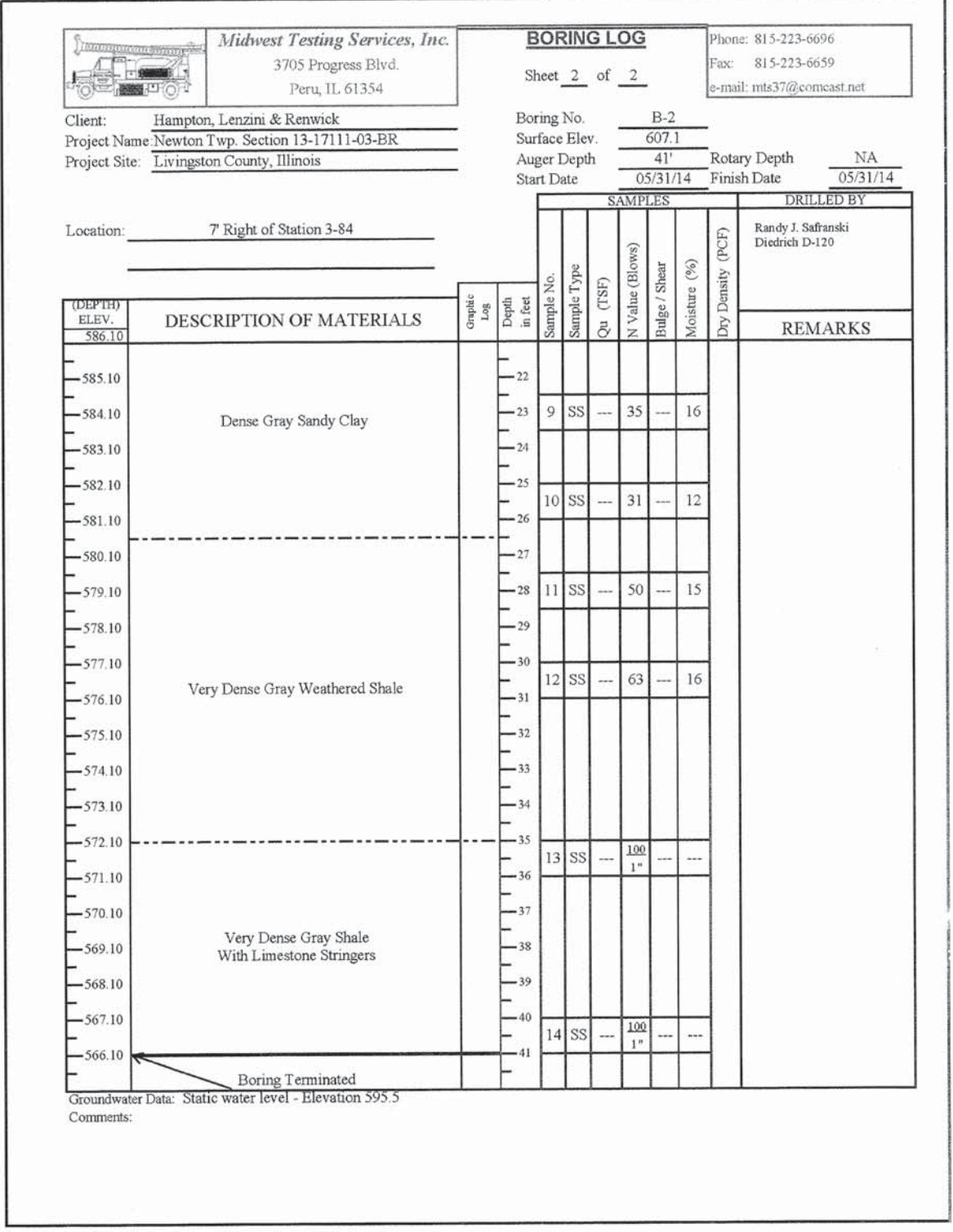
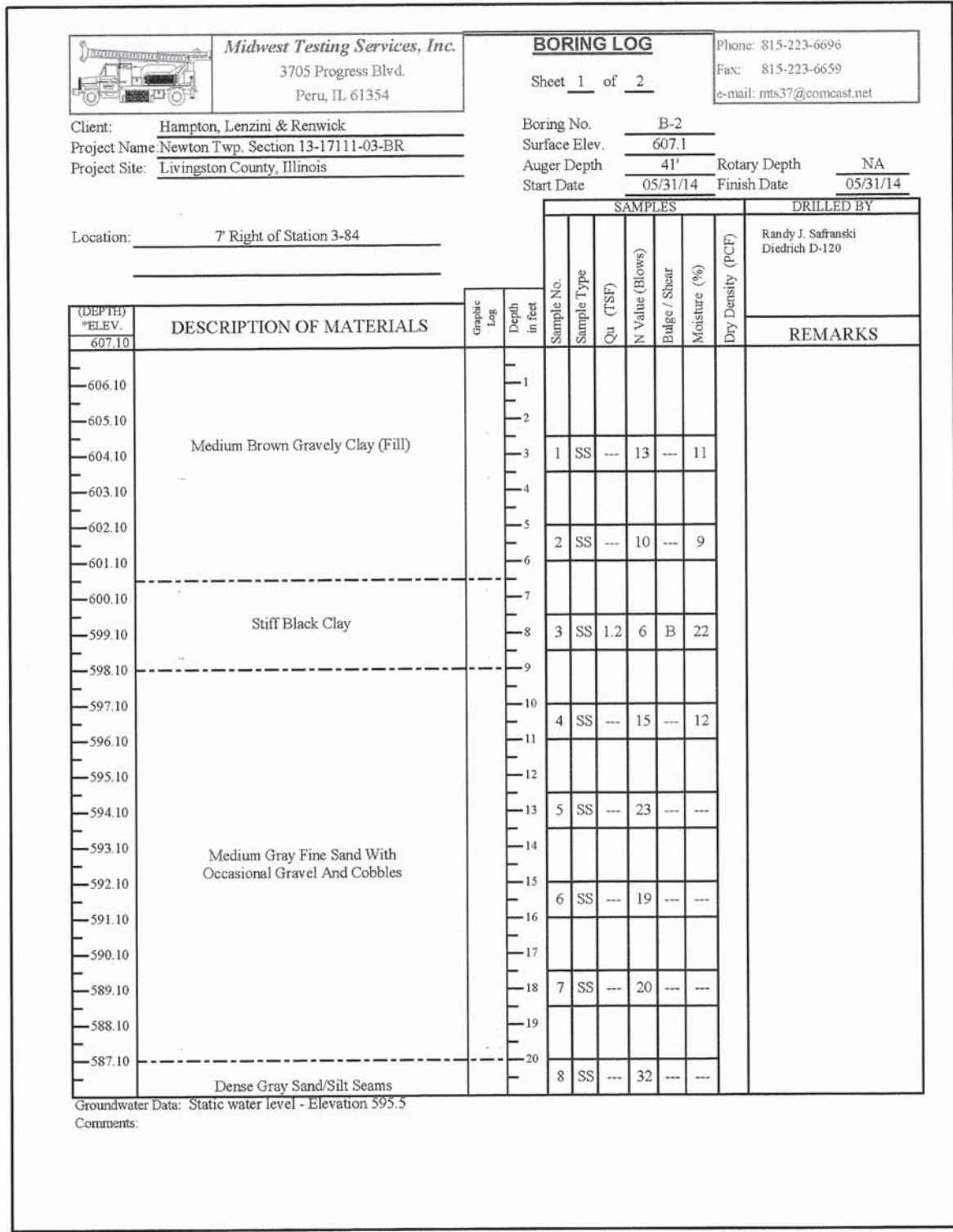
Boring No. B-1
Surface Elev. 607.0
Auger Depth 41' Rotary Depth NA
Start Date 05/31/14 Finish Date 05/31/14

Location: 8.5' Left of Station 4+48

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES					Dry Density (PCF)	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear		
586.00										
585.00	Very Stiff Gray Sandy Clay With Silt Seams		22							
584.00			23	9	SS	---	28	---	17	
583.00			24							
582.00	Very Dense Gray Weathered Shale		25							
581.00			26							
580.00			27	10	SS	3.0	22	S	15	
579.00			28							
578.00	Very Dense Gray Shale With Limestone Stingers		29							
577.00			30							
576.00			31							
575.00			32							
574.00			33							
573.00	Very Dense Gray Shale With Limestone Stingers		34							
572.00			35							
571.00			36	11	SS	---	56	---	14	
570.00			37							
569.00			38							
568.00			39							
567.00			40							
566.00			41	13	SS	---	100 1"	---	---	
			41	14	SS	---	100 2"	---	---	

Groundwater Data: Static water level - Elevation 595.5
Comments:

BORING-1



BORING-2