06-12-2015 LETTING ITEM 222

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 14	10-00163 -00-BR	JACKSON	82	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99519	

INDEX OF SHEETS

HIGHWAY STANDARDS SEE SHEET 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED

SURFACE TRANSPORTATION PROGRAM SYSTEM BRIDGE

PROJECT BRS-0869(106)
SECTION 10-00163-00-BR
JACKSON COUNTY
F.A.S. 869 / C.H. 14 / ROYALTON ROAD
PROPOSED STRUCTURE NO. 039-3277
C-99-542-11

LOCATION OF SECTION INDICATED THUS:-

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
DESIGN SPEED: 50 MPH
DESIGN TRAFFIC: 1695 ADT (2015)

UTILITIES

EGYPTIAN ELECTRIC COOP
10169 OLD HIGHWAY 3
MURPHYSBORO, IL 62966
ATTN: BROOKE GUTHMAN
618-684-2143

AMEREN ILLINOIS
1050 WEST BOULEVARD
BELLEVILLE, IL 62221
ATTN: MARTIN FULLER
618-236-6281

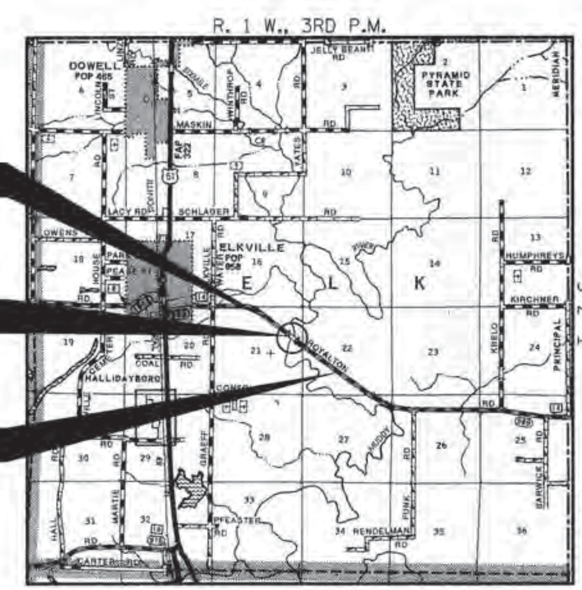
FRONTIER COMMUNICATIONS
208 W UNION STREET
MARION, IL 62959
ATTN: TERRY PHILLIPS
618-997-0679

IMPROVEMENT BEGINS
STATION 81+05

STA. 84+22.00
CONTINUOUS STEEL WIDE FLANGE BEAM BRIDGE
THREE SPANS: 82'-0", 102'-6", 82'-0"
30'-0" RDWY., SKEW = 0°
PROPOSED STRUCTURE NO. 039-3277
EXISTING STRUCTURE NO. 039-3000

IMPROVEMENT ENDS
STATION 97+00

R. 1 W., 3RD P.M.



LOCATION MAP

APPROXIMATE SCALE: 0 — 1 MILE

NET LENGTH OF SECTION = 1595 FEET = 0.302 MILES

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.

WARNING
CALL JULIE TOLL FREE 1-800-892-0123
CALL 811 BEFORE YOU DIG
DIG NO: X0020539

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED 4-8 20 15
COUNTY ENGINEER

PASSED April 9, 20 15
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 4/9 20 15
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE: 04/03/2015
LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS 062-5005
EXPIRES: 11/30/2015

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: 13.0340.130 DATE: 04/03/15

CONTRACT NO. 99519 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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 LOCATIONS 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 UTILITY COMPANIES AND BY FIELD INSPECTION.

3. 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) = 2.25 ACRES

4. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

ALL HOT MIX ASPHALT	112 LBS/SQ.YD./INCH OF THICKNESS
ALL AGGREGATE	2.05 TONS/CU.YD.
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.05 LB./SQ.FT.
INTERMEDIATE LIFTS(FOG COAT)	0.025 LB./SQ.FT.
ON AGGREGATE SURFACE	0.25 LB./SQ.FT.

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING FIELD DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

6. AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

7. VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

8. ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.

9. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.

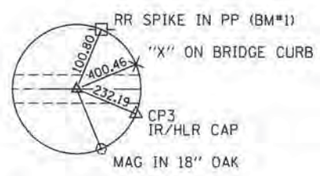
10. TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER. ANY TREES ALREADY FELLED SHALL BE MEASURED AND REMOVED AS PER THE SPECIAL PROVISIONS.

11. TREE REMOVAL IS PROHIBITED BETWEEN APRIL 1 AND SEPTEMBER 30.

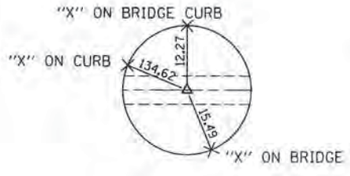
HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
4200401-11	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
642006-02	SHOULDER RUMBLE STRIPS, 8 IN
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5M (15') AWAY
701006-05	OFF-ROAD OPERATIONS 2L, 2W, 4.5M (15') TO 600 MM (24") FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS - DAY ONLY FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS, DAY ONLY
701321-14	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEEDS ≥ 45 MPH
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS

BENCHMARKS AND TIES



P.O.T. STA. 79+00.00
MAG NAIL (SET)
N. 450956.34
E. 731787.86



POT. STA. 84+34.22
MAG NAIL (SET)
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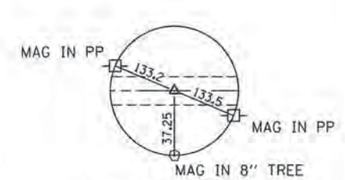
E. 731698.79



P.O.T. STA. 99+00.00
MAG NAIL (SET)
N. 449678.36
E. 732826.38

BM#1 - RR SPIKE IN POWER POLE
40' LT., STA. 79+93
ELEV. 389.38

BM#2 - CHISELED "□" ON N.W. CURB
13' LT., STA. 83+00
ELEV. 388.92

BM#3 - RR SPIKE IN POWER POLE
60' RT., STA. 96+94
ELEV. 376.83

HMA MIXTURE REQUIREMENTS

LOCATION(S):	FAS 689\CH14\ROYALTON ROAD	FAS 689\CH14\ROYALTON ROAD	FAS 689\CH14\ROYALTON ROAD	FAS 689\CH14\ROYALTON ROAD
MIXTURE USE(S):	HMA BASE COURSE	HMA SURFACE COURSE	HMA BINDER COURSE	HMA SHOULDERS
PG:	PG 64-22	PG 64-22	PG 64-22	PG 58-22
DESIGN AIR VOIDS:	4% @ Ndes 70	4% @ Ndes 70	4% @ Ndes 70	2% @ Ndes 70
MIXTURE COMPOSITION: (MIXTURE GRADATION):	IL 19.0	IL 9.5	IL 19.0	HMA SHOULDERS
FRICTION AGGREGATE:	NONE	MIXTURE C	NONE	NONE
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS	112 LBS \ SY \ INCH THICKNESS	112 LBS \ SY \ INCH THICKNESS	112 LBS \ SY \ INCH THICKNESS

FILE NAME = 130340-sht-notes.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2903 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LIC / PE / SE CORP. 184.001989		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 04/03/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

GENERAL NOTES AND STANDARDS
C.H. 14 / ROYALTON ROAD

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	2
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

	ITEM NO.	CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011 UNIT	QUANTITY
	1	20100500	TREE REMOVAL, ACRES	ACRE	0.5
	2	20200100	EARTH EXCAVATION	CU YD	1586
	3	20300100	CHANNEL EXCAVATION	CU YD	820
	4	20400800	FURNISHED EXCAVATION	CU YD	2984
	5	25100115	MULCH, METHOD 2	ACRE	4.5
	6	25100630	EROSION CONTROL BLANKET	SQ YD	895
	7	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	432
	8	28000400	PERIMETER EROSION BARRIER	FOOT	3123
	9	28100207	STONE RIPRAP, CLASS A4	TON	1486
	10	28200200	FILTER FABRIC	SQ YD	1601
	11	30201500	LIME	TON	144
	12	35100100	AGGREGATE BASE COURSE, TYPE A	TON	464
	13	35501312	HOT-MIX ASPHALT BASE COURSE, 7"	SQ YD	1108
^	14	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	3338
	15	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	120
	16	40600990	TEMPORARY RAMP	SQ YD	68
	17	40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	37
	18	40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	258
	19	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	40
	20	44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	183
	21	48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	666
	22	48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	505
	23	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	24	50104650	SLOPE WALL REMOVAL	SQ YD	686
	25	50200100	STRUCTURE EXCAVATION	CU YD	188
	26	50200300	COFFERDAM EXCAVATION	CU YD	328
^	27	50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1
^	28	50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1
	29	50300225	CONCRETE STRUCTURES	CU YD	219.2
	30	50300255	CONCRETE SUPERSTRUCTURE	CU YD	243.5

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES

	ITEM NO.	CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011 UNIT	QUANTITY
	31	50300260	BRIDGE DECK GROOVING	SQ YD	1020
	32	50300300	PROTECTIVE COAT	SQ YD	1259
	33	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
	34	50500505	STUD SHEAR CONNECTORS	EACH	4338
	35	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	84490
	36	50800515	BAR SPLICERS	EACH	1096
*	37	50901050	STEEL RAILING, TYPE SM	FOOT	596
	38	51202100	FURNISHING STEEL PILES HP14X117	FOOT	1332
	39	51202305	DRIVING PILES	FOOT	1332
	40	51204100	TEST PILE STEEL HP14X117	EACH	4
	41	51204650	PILE SHOES	EACH	24
	42	51500100	NAME PLATES	EACH	1
	43	52000110	PREFORMED JOINT STRIP SEAL	FOOT	62
	44	52100510	ANCHOR BOLTS, 3/4"	EACH	24
	45	52100520	ANCHOR BOLTS, 1"	EACH	24
	46	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	58
*	47	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	100
*	48	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
*	49	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
*	50	63200310	GUARDRAIL REMOVAL	FOOT	464
	51	64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	1585
	52	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9
	53	67100100	MOBILIZATION	L SUM	1
^	54	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
^	55	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
^	56	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
^	57	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
	58	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10
*	59	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
	60	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES

	ITEM NO.	CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011 UNIT	QUANTITY
	61	70300100	SHORT TERM PAVEMENT MARKING	FOOT	72
	62	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4392
	63	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1479
	64	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1625
^	65	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	588
	66	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
	67	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
*	68	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4392
*	69	78200410	GUARDRAIL MARKERS, TYPE A	EACH	14
*^	70	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
	71	78300100	PAVEMENT MARKING REMOVAL	SQ FT	791
*	72	86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
^	73	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	2.25
^	74	X4404400	PAVEMENT REMOVAL (SPECIAL)	SQ YD	1382
^	75	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	200
^	76	X5040100	PRECAST BRIDGE APPROACH SLAB	SQ FT	1749
^	77	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	128
^	78	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	124
^	79	Z0026407	TEMPORARY SHEET PILING	SQ FT	531
	80	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
		Z0076600	TRAINEES	hr	500
^	81	3100 1900	PROCESSING LIME STABILIZED SOIL MIXTURE 36"	SQ YD	1778
		Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	hr	500

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

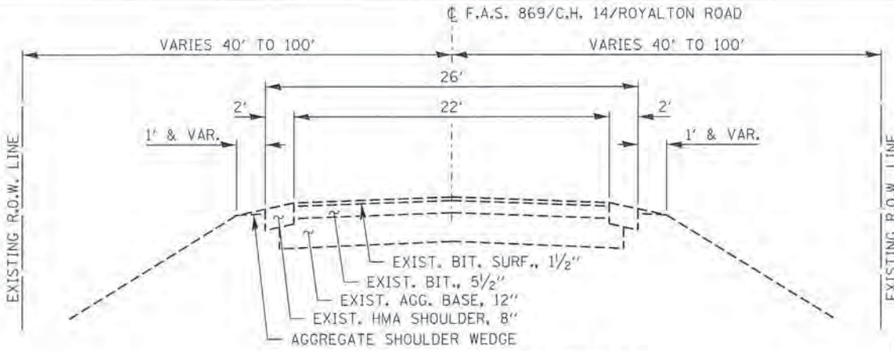
FILE NAME = 130348-sht-summary.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002859		DRAWN - T.W.K.	REVISED -	
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -	
	PLOT DATE = 4/6/2015	DATE - 08/05/14	REVISED -	

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
C.H. 14 / ROYALTON ROAD

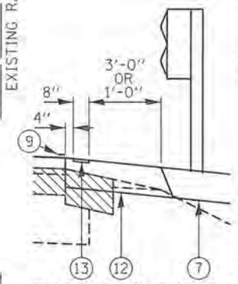
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	3
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT		

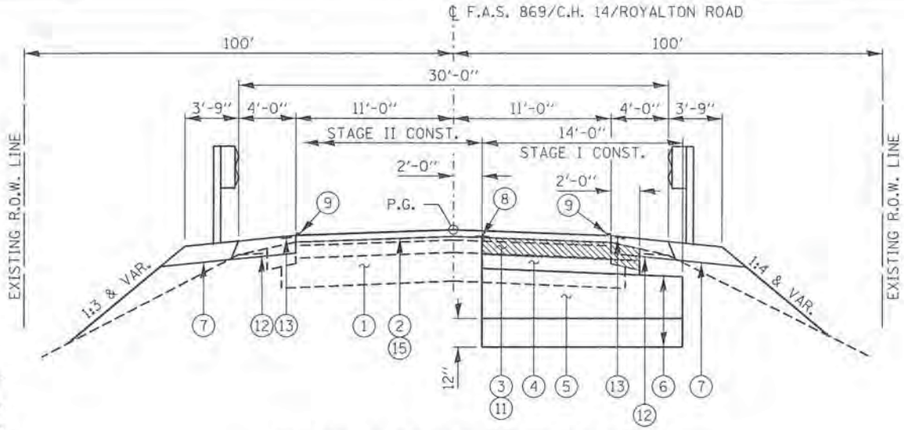


EXISTING TYPICAL CROSS SECTION

STA. 80+00 TO STA. 82+99.14
STA. 85+69.31 TO STA. 98+00

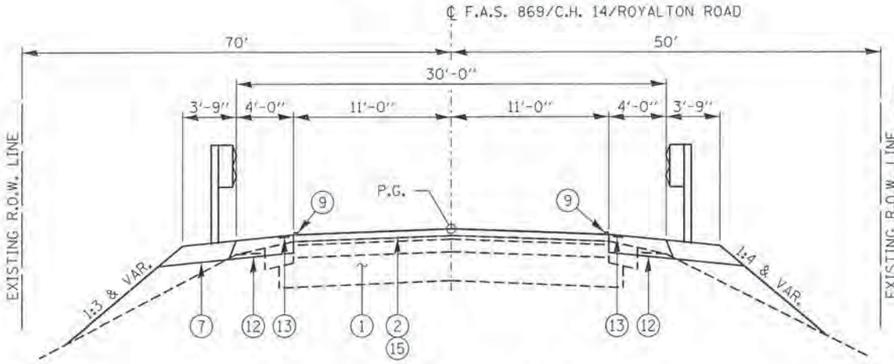


PROPOSED TYPICAL RUMBLE STRIP DETAIL



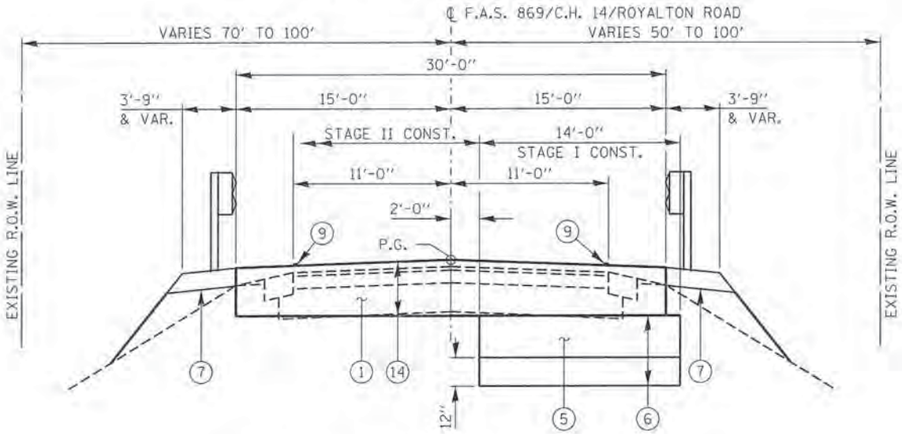
PROPOSED TYPICAL CROSS SECTION

STA. 85+91.92 TO STA. 87+75



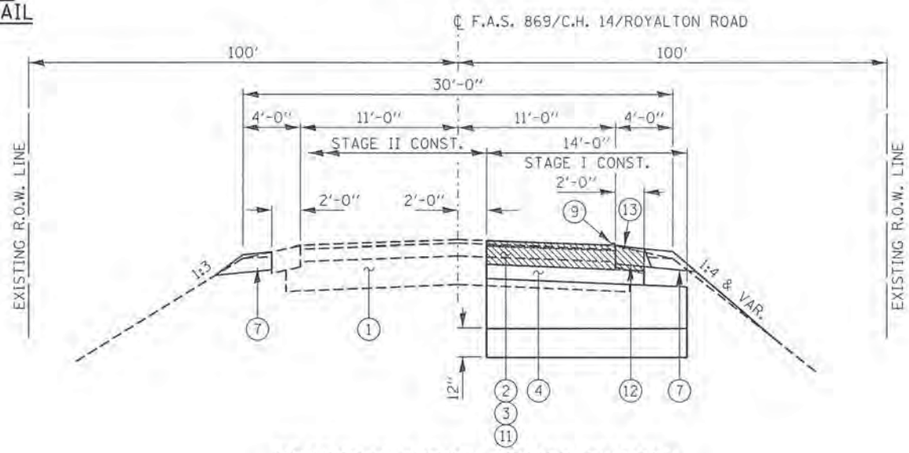
PROPOSED TYPICAL CROSS SECTION

STA. 81+05 TO STA. 82+52.08



PROPOSED TYPICAL CROSS SECTION

STA. 82+52.08 TO STA. 82+58.08 (FLEXIBLE CONNECTOR)
STA. 82+58.08 TO STA. 82+88.08 (APPROACH PAVEMENT)
STA. 85+55.92TO STA. 85+85.92 (APPROACH PAVEMENT)
STA. 85+85.92 TO STA. 85+91.92 (FLEXIBLE CONNECTOR)



PROPOSED TYPICAL CROSS SECTION

STA. 87+75 TO STA. 97+00

LEGEND

1. EXISTING PAVEMENT
2. HMA SURFACE COURSE MIX "C", N70, 2¼"
3. HMA BASE COURSE, 7"
4. AGGREGATE BASE COURSE, TYPE A, 6"
5. EARTH EXCAVATION
6. LIME STABILIZED SOIL, 36"
7. AGGREGATE SHOULDERS, 8"
8. STRIP REFLECTIVE CRACK CONTROL TREATMENT
9. PAINT PAVEMENT MARKING - LINE 4"
10. TBT TYPE 6A, SPBGR TY. A OR TBT TY. 1 (SPL) TANGENT
11. PAVEMENT REMOVAL, SPECIAL
12. HMA SHOULDERS 8"
13. SHOULDER RUMBLE STRIP 8" (8" WIDE, ½" DEEP RUMBLE STRIP AT LOCATIONS AS DIRECTED BY ENGINEER)
14. PRECAST BRIDGE APPROACH SLAB
15. HMA BINDER COURSE, IL 19.0, N70

FILE NAME = 13034@-sht-typsections.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3066 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - D.A.B.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 04/03/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

TYPICAL CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	4
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

ROADWAY SCHEDULE

LOCATION	PROCESSING LIME STABILIZED SOIL MIXTURE 36"	LIME	AGGREGATE BASE COURSE TYPE A	HOT-MIX ASPHALT BASE COURSE 7"	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT BINDER COURSE IL 19.0, N70	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50 (2.25")	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	STRIP REFLECTIVE CRACK CONTROL TREATMENT	AGGREGATE SHOULDERS TYPE B 8"	HOT-MIX ASPHALT SHOULDERS 8"	SHOULDER RUMBLE STRIPS 8 INCH	PAVEMENT REMOVAL (SPECIAL)
		30201500	35100100	35501312	40600275	40600982	40600990	40603085	40603315	42001430	44300200	48101600	48203029	64200108	X4404400
	TON	TON	TON	TON	POUND	SQ YD	SQ YD	TON	TON	SQ YD	FOOT	SQ YD	SQ YD	FOOT	SQ YD
FAS 689 \ CH14 \ ROYALTON RD															
STA. 81+00 TO STA. 82+99.14					180	68	34	17	51	20		131	131	294	
STA. 85+69.31 TO STA. 97+00	1778	144	464	1108	3158	52	34	20	207	20	183	535	374	1291	1382
TOTAL	1,778	144	464	1,108	3,338	120	68	37	258	40	183	666	505	1,585	1,382

EARTHWORK SUMMARY

LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE(25%)	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	20200100	20300100					
	CU YD	CU YD			CU YD	CU YD	CU YD
FAS 689\CH14\ROYALTON ROAD							
STA. 81+05 TO STA. 82+87.08	17		25.00%	100.00%	13	110	-97
STA. 82+87.08 TO STA. 85+56.92		820	25.00%	70.00%	574		574
STA. 85+56.92 TO STA. 97+00	1569		25.00%	100.00%	1177	4638	-3461
TOTAL	1586				1764	4748	-2984
						FURNISHED EXCAVATION	2984 CU.YD.

PAVEMENT MARKING SCHEDULE

LOCATION	TEMPORARY PAVEMENT MARKING - LINE 4"		PAINT PAVEMENT MARKING - LINE 4"		SHORT TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
	SINGLE WHITE EDGE LINE	SKIPPED DASHED YELLOW CENTERLINE	SINGLE WHITE EDGE LINE	SKIPPED DASHED YELLOW CENTERLINE			
	70300220	70300220	78001110	78001110	70300100	70301000	78300100
	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	SQ FT
FAS 689\ CH14\ROYALTON RD							
LT. STA. 80+05.69 TO LT. STA. 99+58	1,952		1,952			651	546
CL. STA. 80+05.69 TO CL. STA. 99+58		488		488		163	49
RT. STA. 80+05.69 TO RT. STA. 99+58	1,952		1,952			651	196
CL. STA. 80+05 TO CL. STA. 87+75					72	14	
SUBTOTAL	3904	488	3904	488	72	1479	791
TOTAL	4392		4392		72	1479	791

GUARDRAIL SCHEDULE

LOCATION	STEEL PLATE BEAM GUARD RAIL TYPE A 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE 6A	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	GUARD RAIL REMOVAL	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKERS TYPE A
	63000001	63100087	63100167	63200310	78201000	78200410
FAS 689\ CH14\ROYALTON RD	FOOT	EACH	EACH	FOOT	EACH	EACH
RT. STA. 81+26.21 TO RT. STA. 82+99.60	50	1	1	165	1	
LT. STA. 81+76.21 TO LT. STA. 82+99.60		1	1	66	1	
RT. STA. 85+68.42 TO RT. STA. 86+67.80		1	1	66	1	
LT. STA. 85+68.42 TO LT. STA. 87+17.8	50	1	1	167	1	
RT. STA. 81+26.21 TO RT. STA. 86+67.80						7
LT. STA. 81+76.21 TO LT. STA. 87+17.80						7
PROJECT TOTAL	100	4	4	464	4	14

STAGING SCHEDULE

LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	TEMPORARY BRIDGE TRAFFIC SIGNALS	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3
	70400100	70400200	70106500	70600250	70600350
	FOOT	FOOT	EACH	EACH	EACH
FAS 689\ CH14\ROYALTON RD					
STAGE I					
RT. STA. 80+05.69 TO RT. STA. 99+58	1625		1	2	
STAGE II					
LT. STA. 80+05.69 TO LT. STA. 88+50		588			2
TOTAL	1625	588	1	2	2

FILE NAME = 138340-sht-schedule.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3081 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM. LS / PE / SE CORP. 184.005958		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 04/03/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

SCHEDULE OF QUANTITIES
C.H. 14 / ROYALTON ROAD

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	5
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

SEEDING SCHEDULE				
LOCATION	MULCH, METHOD 2 *	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING *	SEEDING CLASS 2 (SPECIAL)
	25100115	25100630	28000250	X2501000
LOCATION	ACRE	SQ YD	POUND	ACRE
FAS 689\CH14\ROYALTON ROAD				
LT. STA. 81+05 TO LT. STA. 82+87.08	0.18	292	18	0.09
RT. STA. 81+05 TO RT. STA. 82+87.08	0.22	0	22	0.11
CL. STA. 82+87.08 TO STA. 85+56.92	0.26	0	26	0.13
LT. STA. 85+56.92 TO LT. STA. 97+00	0.28	166	28	0.14
RT. STA. 85+56.92 TO RT. STA. 97+00	3.38	437	338	1.69
TOTAL	4.32	895	432	2.16
USE	4.50	895	432	2.25

* 2 APPLICATIONS

28000400 PERIMETER EROSION BARRIER	
LOCATION	FOOT
FAS 689\CH14\ROYALTON ROAD	
RT. STA. 81+05 TO RT. STA. 83+00	286
LT. STA. 81+05 TO LT. STA. 83+00	295
RT. STA. 85+69 TO RT. STA. 97+00	1,272
LT. STA. 85+69 TO LT. STA. 97+00	1,270
TOTAL	3123

20100500 TREE REMOVAL	
LOCATION	ACRE
FAS 689\CH14\ROYALTON ROAD	
RT. STA. 86+29 TO RT. STA. 96+03	0.30
TOTAL	0.30
USE	0.50

FILE NAME = 130340-sht-schedule.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	SCHEDULE OF QUANTITIES C.H. 14 / ROYALTON ROAD	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 2055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LIMITED LIABILITY CORP. 184.003958		DRAWN - T.W.K.	REVISED -			869	10-00163-00-BR	JACKSON	82	6
	PLOT SCALE =	CHECKED - S.W.M.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	DATE - 04/03/15	REVISED -		SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

PLAN	DATE	BY
SURVEYED		
PLOTTED		
ALIGNMENT CHECKED		
GRADES CHECKED		
NOTE BOOK		
NO.		

VIRGIL O. BRILEY
NE¼, NE¼, SEC 21, T. 7 S., R. 1 W., 3RD P.M.

N

GRAPHIC SCALE 0 20' 40'

EXISTING R.O.W. LINE

WETLANDS BOUNDARY

TIMBER

+50 70'

+00 70'

+00 50'

+65 100'

+65 50'

CONSTRUCTION LIMITS

+25 P.E.

+50 40'

18" CONC.

℄ PROPOSED IMPROVEMENT

SLOPE WALL TO BE REMOVED

3M#2

80 CH14 / ROYALTON ROAD 81 82 83 84 85 86

HMA SURFACE

IMPROVEMENT BEGINS STATION 81+05

+70 40'

+70 50'

+82 P.E.

CONSTRUCTION LIMITS

LITTLE MUDDY

RIVER

90°

TREE REMOVAL

TREE LINE

MATCH LINE STA. 86+00

LEGEND

PERIMETER EROSION BARRIER

PAVEMENT REMOVAL (SPECIAL)

WETLANDS IMPACTS

STA. 84+22.00
CONTINUOUS STEEL WIDE FLANGE BEAM BRIDGE
THREE SPANS: 82'-0", 102'-6", 82'-0"
30'-0" RDWY., SKEW = 0°
PROPOSED STRUCTURE NO. 039-3277

CONSOLIDATION COAL CO.
SW¼, NE¼, SEC 21, T. 7 S., R. 1 W., 3RD P.M.

EXISTING STRUCTURE NO. 039-3000
STATION 84+34.22 - 3 SPAN STEEL I-BEAM BRIDGE WITH CONCRETE DECK ON SPILL THRU CONCRETE ABUTMENTS WITH CONCRETE SLOPE WALLS, WINGWALLS, AND PIERS.
263.6' FC.-FC. ABUTS; 26.00' o.-o. DECK

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
GRADES CHECKED		
STRUCTURE NOTATIONS CHKD		
NOTE BOOK		
NO.		

PROPOSED ℄ GRADE

100 YEAR H.W. ELEV. 385.4
15 YEAR H.W. ELEV. 382.1

+0.29%

+0.00%

EXISTING ℄ GRADE

VPI STA. 81+05.00
ELEV. 389.09

VPI STA. 81+60.00
ELEV. 389.25

VPI STA. 86+00.00
ELEV. 389.25

HMA SURFACE REMOVAL BUTT JOINT

CHANNEL EXCAVATION

STONE RIPRAP, CLASS A4 (TYP.)

℄ ELEV. 362.3

390 385 380 375 370 365 360 355

389.6 389.3 389.1 389.0 389.22 389.1 389.25 388.7 389.25 388.4 389.25 388.4 389.25 388.4 389.25 388.4 389.25 388.4 389.25 388.4 389.25 388.6 389.25

80+00 80+50 81+00 81+50 82+00 82+50 83+00 83+50 84+00 84+50 85+00 85+50 86+00

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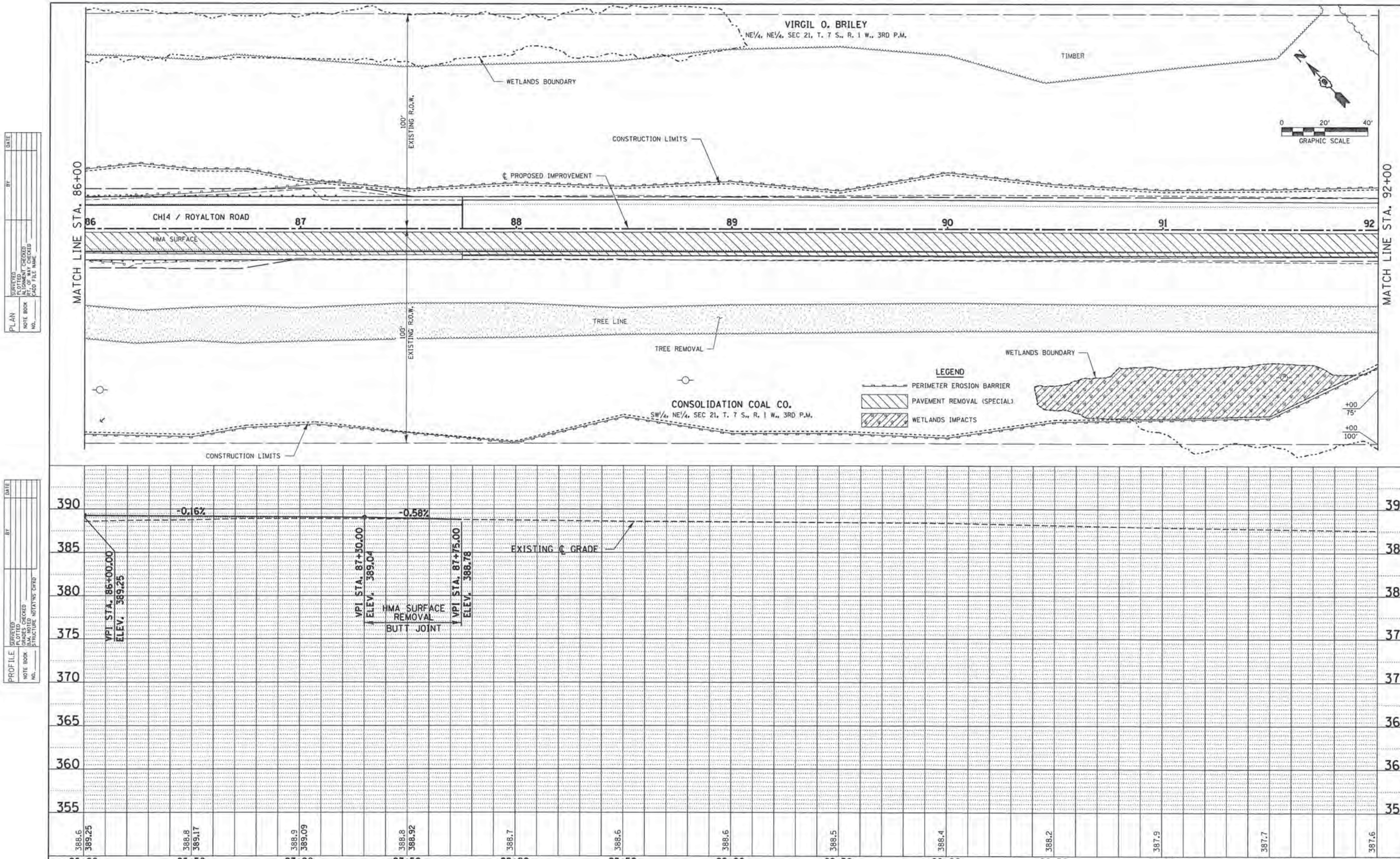
HAMPTON, LENZINI AND RENWICK, INC. 3305 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.G / PE / SE CORP. 184.002858		DRAWN - L.G.C.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

PLAN & PROFILE
C.H. 14 / ROYALTON ROAD

SCALE: 20H×5V | SHEET NO. 1 OF 3 SHEETS | STA. 80+00.00 TO STA. 86+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	7
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PS / SE CORP. 184.000959		DRAWN - L.G.C.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

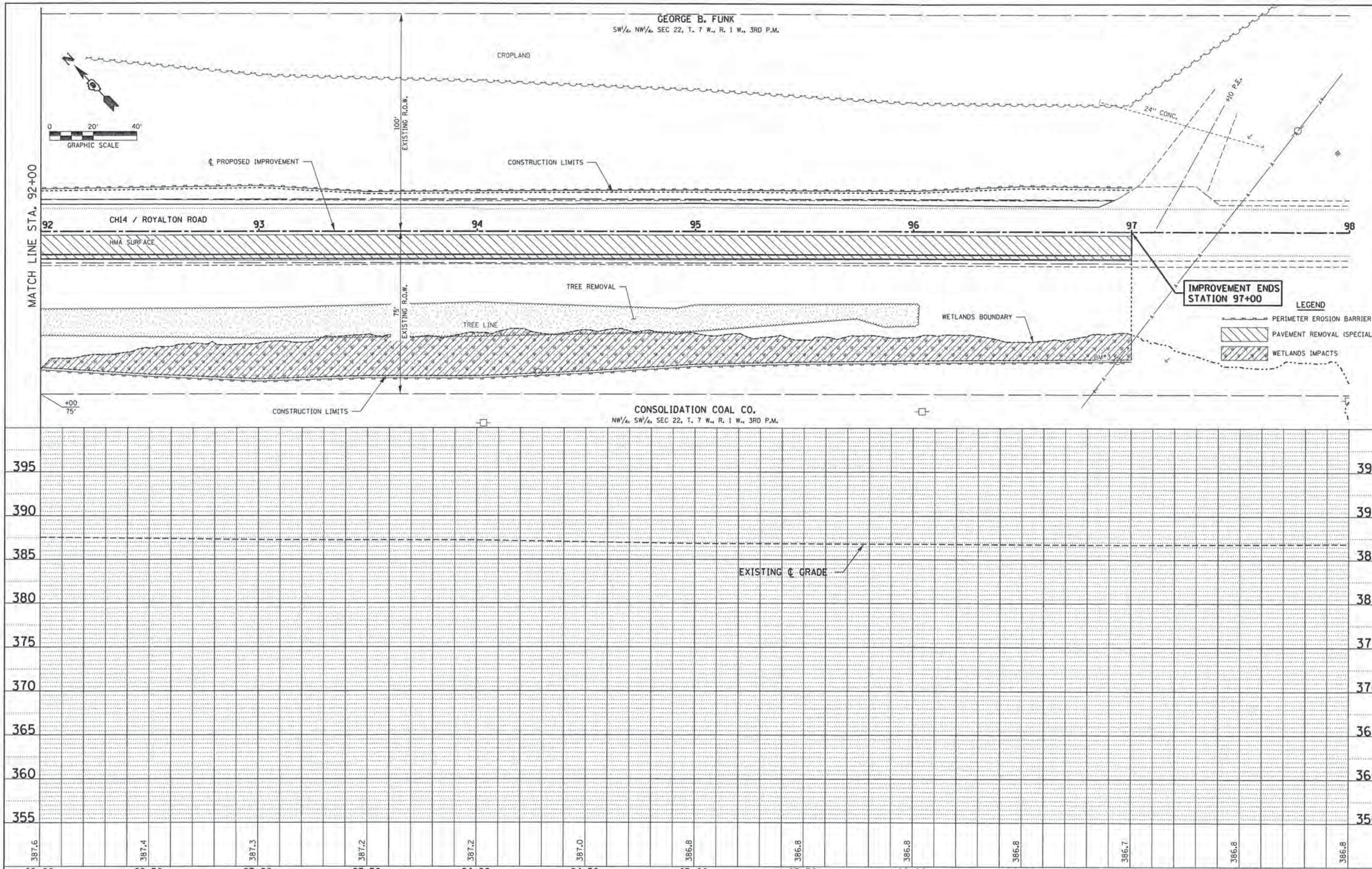
PLAN & PROFILE
C.H. 14 / ROYALTON ROAD

SCALE: 20H:5V | SHEET NO. 2 OF 3 SHEETS | STA. 86+00.00 TO STA. 92+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	8

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT



GEORGE B. FUNK
SW1/4, NW1/4, SEC 22, T. 7 W., R. 1 W., 3RD P.M.
CROPLAND
0 20' 40'
GRAPHIC SCALE
N
MATCH LINE STA. 92+00
100' EXISTING R.O.W.
℄ PROPOSED IMPROVEMENT
CONSTRUCTION LIMITS
24" CONC.
CH14 / ROYALTON ROAD
92
93
94
95
96
97
98
HMA SURFACE
IMPROVEMENT ENDS
STATION 97+00
TREE REMOVAL
75' EXISTING R.O.W.
TREE LINE
WETLANDS BOUNDARY
LEGEND
PERIMETER EROSION BARRIER
PAVEMENT REMOVAL (SPECIAL)
WETLANDS IMPACTS
+00
75'
CONSTRUCTION LIMITS
CONSOLIDATION COAL CO.
NW1/4, SW1/4, SEC 22, T. 7 W., R. 1 W., 3RD P.M.
395
390
385
380
375
370
365
360
355
EXISTING ℄ GRADE
387.6
387.4
387.3
387.2
387.2
387.0
386.8
386.8
386.8
386.8
386.7
386.8
386.8
92+00
92+50
93+00
93+50
94+00
94+50
95+00
95+50
96+00
96+50
97+00
97+50
98+00

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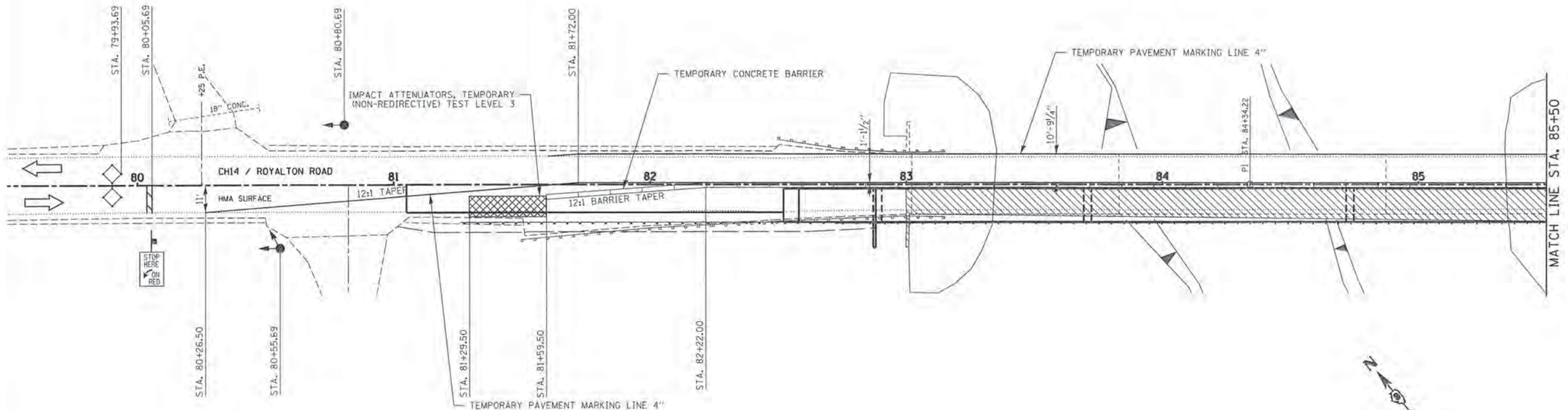
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

PLAN & PROFILE
C.H. 14 / ROYALTON ROAD

SCALE: 20H:5V | SHEET NO. 3 OF 3 SHEETS | STA. 92+00.00 TO STA. 98+00.00

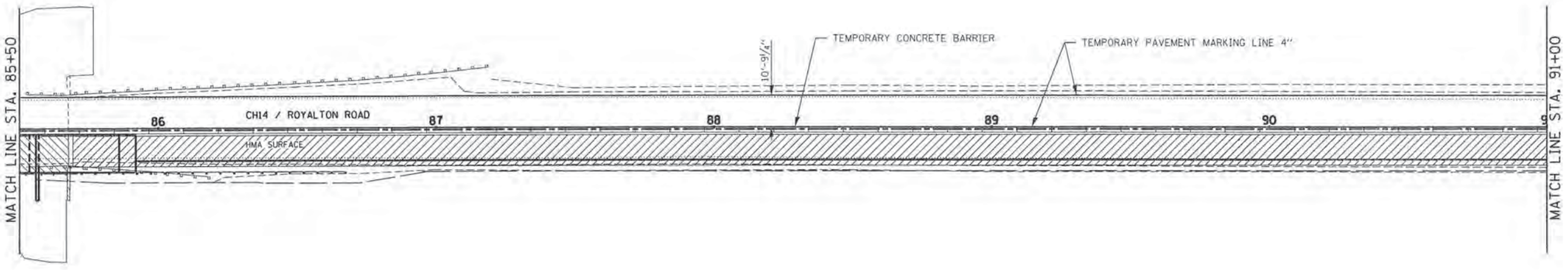
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	9
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



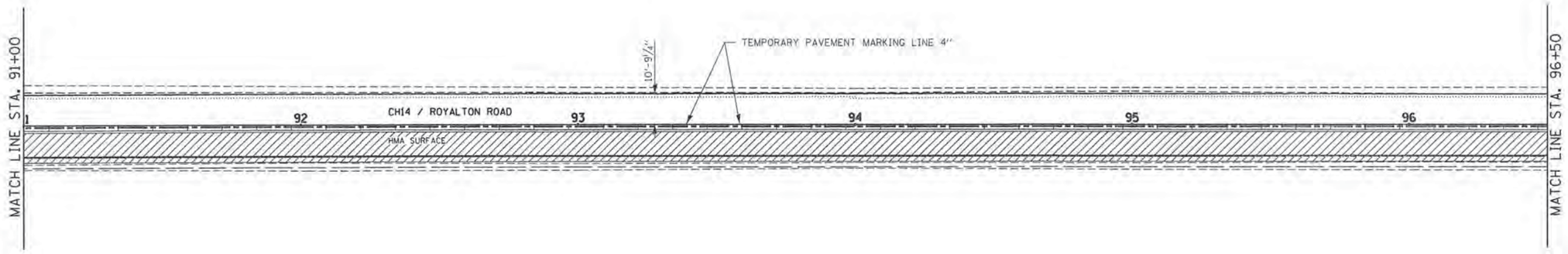
LEGEND

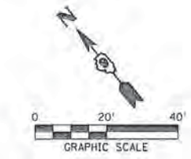
PAVEMENT REMOVAL (SPECIAL)

EXISTING STRUCTURE REMOVAL



FILE NAME = 130340-sht-stages.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	STAGE 1 CONSTRUCTION C.H. 14 / ROYALTON ROAD	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3025 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LD / PE / SE CORP. - 184.001666		DRAWN - T.W.K.	REVISED -			869	10-00163-00-BR	JACKSON	82	10
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -		SCALE: SHEET NO. 1 OF 3 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

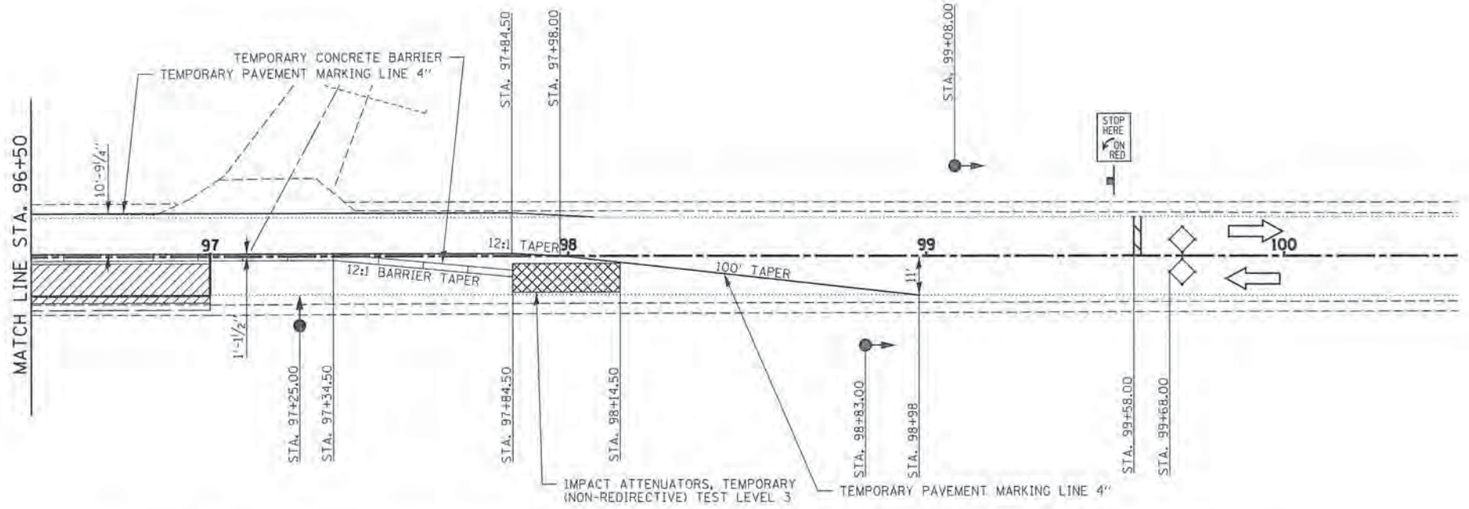




LEGEND

PAVEMENT REMOVAL (SPECIAL)

EXISTING STRUCTURE REMOVAL



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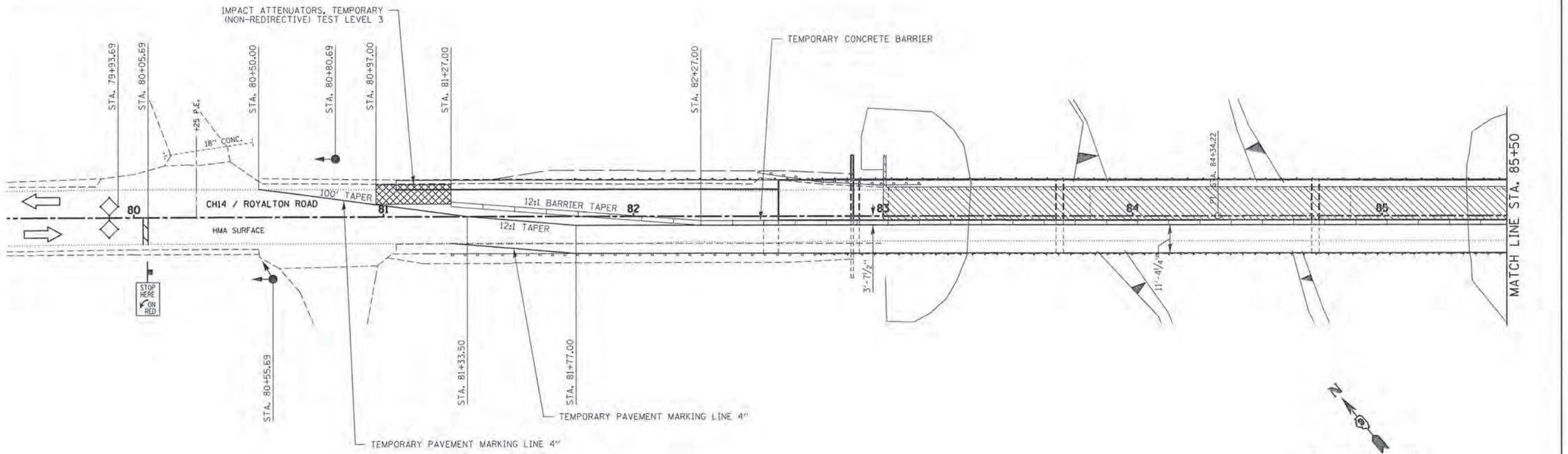
HAMPTON, LENZINI AND RENWICK, INC. 2035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LSI PE/SE CORP. 184.005853		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STAGE 1 CONSTRUCTION
C.H. 14 / ROYALTON ROAD

SCALE: | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	10-00163-00-BR	JACKSON	82	11
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		



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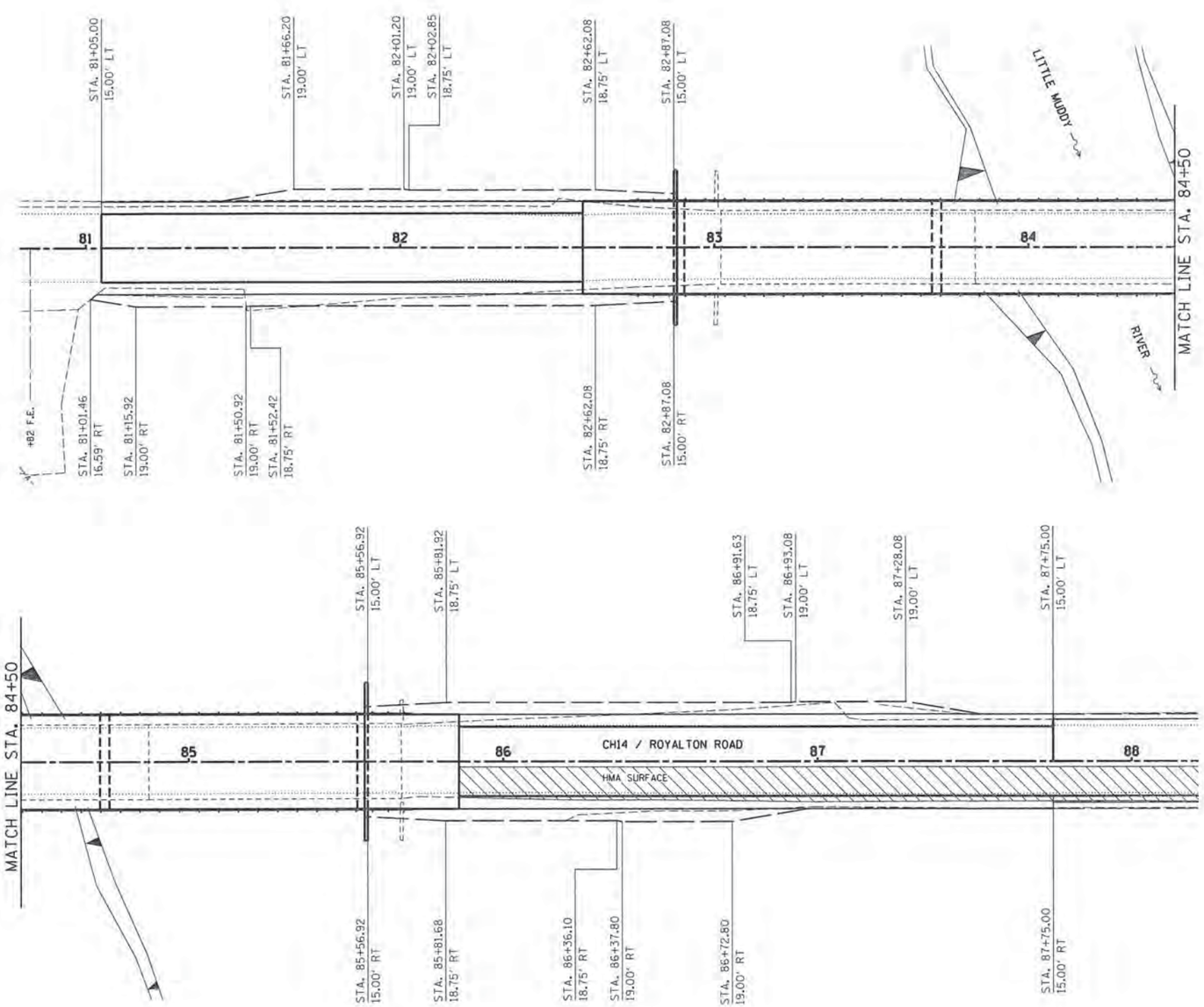
HAMPTON, LENZINI AND RENWICK, INC. 2345 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LJR / PE / BS CORP. 184.002809	PLOT SCALE =	DRAWN - T.W.K.	REVISED -				14	10-00163-00-BR	JACKSON	82	12
	PLOT DATE = 4/6/2015	CHECKED - J.W.F.	REVISED -						CONTRACT NO.		
		DATE - 02/23/15	REVISED -		SCALE:	SHEET NO. 3 OF 3 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		



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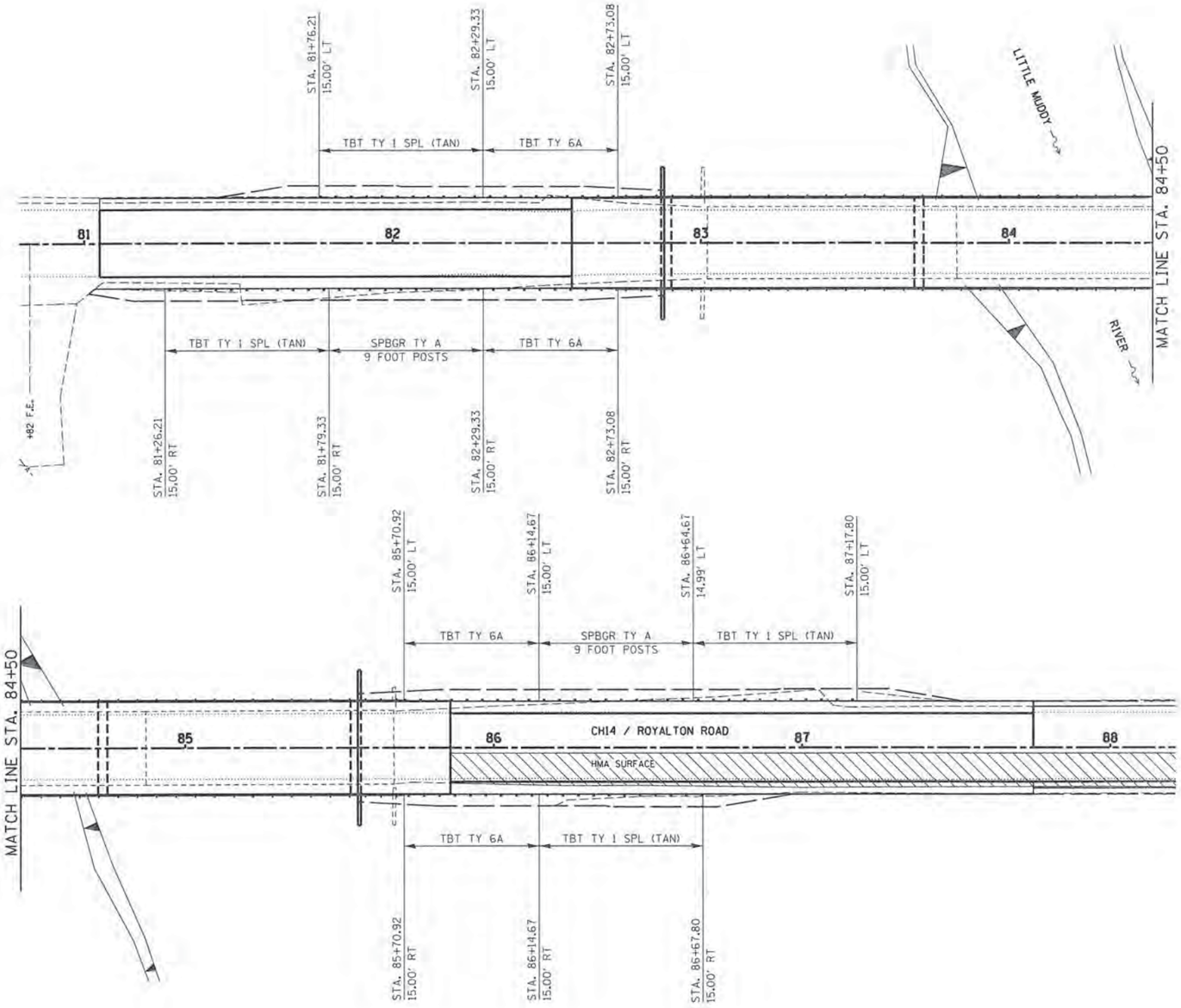
HAMPTON, LENZINI AND RENWICK, INC. 2903 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LB / PE / SE CORP. 184.000959		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

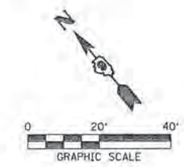
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

PAVED SHOULDER LAYOUT
C.H. 14 / ROYALTON ROAD

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	13
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			





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HAMPTON, LENZINI AND RENWICK, INC. 3105 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS-PE-RE CORP. 184.000958		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

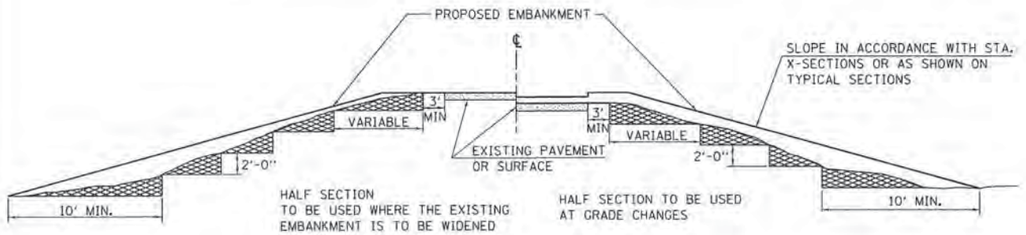
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

GUARDRAIL LAYOUT
C.H. 14 / ROYALTON ROAD

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	14
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

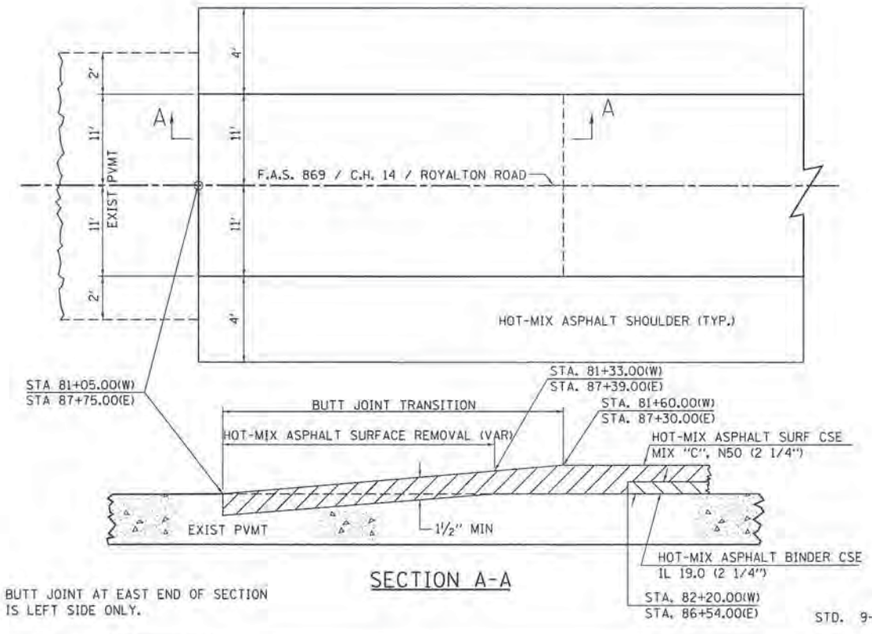


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-83
REVISED	8-15-84
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

BUTT JOINT



SECTION A-A

NOTE: BUTT JOINT AT EAST END OF SECTION IS LEFT SIDE ONLY.

REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	

STD. 9-86

FILE NAME = 130340-sht-standards.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3310 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LE / PE / RE CORP 184.005954		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 08/11/14	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STANDARD DETAILS DISTRICT 9
C.H. 14 / ROYALTON ROAD

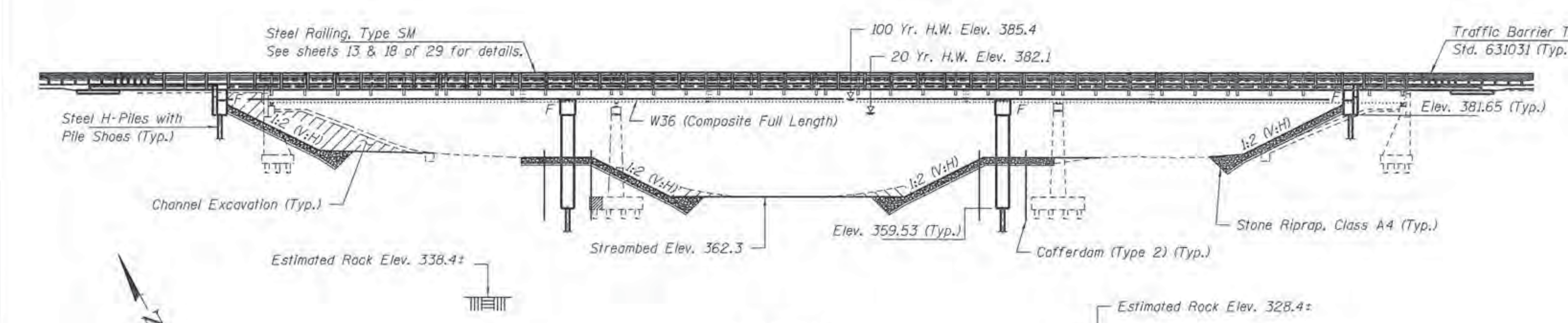
SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	15
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

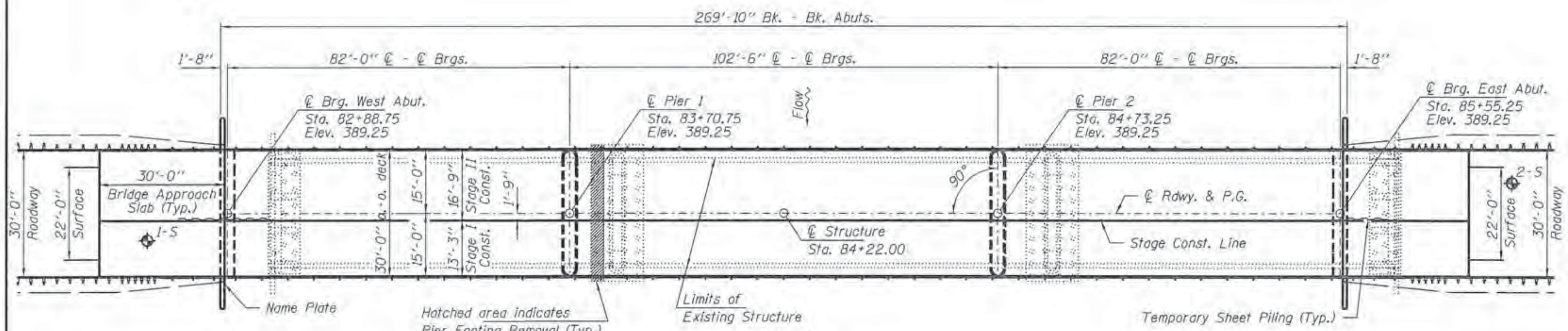
BENCHMARK: Chiseled "□" on NW curb. 13' Lt., Sta. 83+00, Elev. 388.92.

EXISTING STRUCTURE NO. 039-3000: Sta. 84+34.22 - Three span steel I-beam bridge on open abutments and solid wall concrete piers. 270.17' bk.-bk. abuts.: 26.00' o.-o. deck.

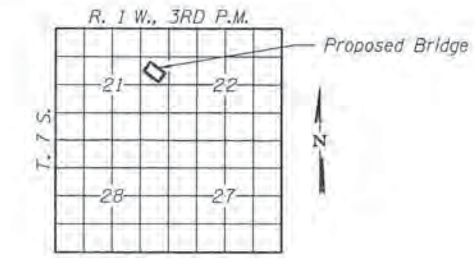
Structure to be replaced using staged construction to maintain one lane of traffic at all times.



ELEVATION



PLAN



LOCATION SKETCH

INDEX OF STRUCTURE SHEETS

LITTLE MUDDY RIVER
BUILT 201_ BY
JACKSON COUNTY
C.H. 14 - F.A.S. 869
SEC. 10-00163-00-BR
STR. NO. 039-3277
LOADING HL-93

NAME PLATE

See Std. 515001

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.249g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.680g
Soil Site Class = C

Event/Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	381.6	362.7	360.8	381.6	5
Q200	381.6	361.0	360.5	381.6	
Design	381.6	362.7	360.8	381.6	
Check	381.6	361.0	360.5	381.6	

DESIGN SPECIFICATIONS (NEW CONST.)

2012 AASHTO LRFD Bridge Design Specification, with 2013 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Structural Steel) (M270 Gr. 50W)

PRECAST UNITS - (APPROACH SLAB)

f'c = 6,000 psi
f'ci = 5,000 psi
fy = 60,000 (Reinf.)

WATERWAY INFORMATION

Drainage Area = 262 Sq. Mi. — Existing Low Grade Elev. 386.7 @ Sta. 97+00; Proposed Low Grade Elev. 386.7 @ Sta. 97+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	10600	2380	2660	380.60	0.33	0.32	380.93	380.92
Design	20	12800	2720	3040	382.13	0.38	0.36	382.51	382.49
Base	100	18100	3260	3640	385.36	0.09	0.08	385.45	385.44
Max. Calc.	200	20600	3260	3640	386.70	0.26	0.25	386.96	386.95

10 Year Velocity through Existing Bridge = 4.5 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."

04/03/2015

ILLINOIS STRUCTURAL NO. 081-6529 Expires 11-30-2016

GENERAL PLAN & ELEVATION
ROYALTON ROAD / FAS 869
OVER LITTLE MUDDY RIVER
SECTION 10-00163-00-BR
JACKSON COUNTY
STATION 84+32.22
STRUCTURE NO. 039-3277

FILE NAME = 130340-sht-bridge.dgn | USER NAME =
3085 STEVENSON DRIVE, SUITE 201, SPRINGFIELD, ILLINOIS 62703 — ILLINOIS PROFESSIONAL DESIGN FIRM
PLOT SCALE = | PLOT DATE = 4/6/2015

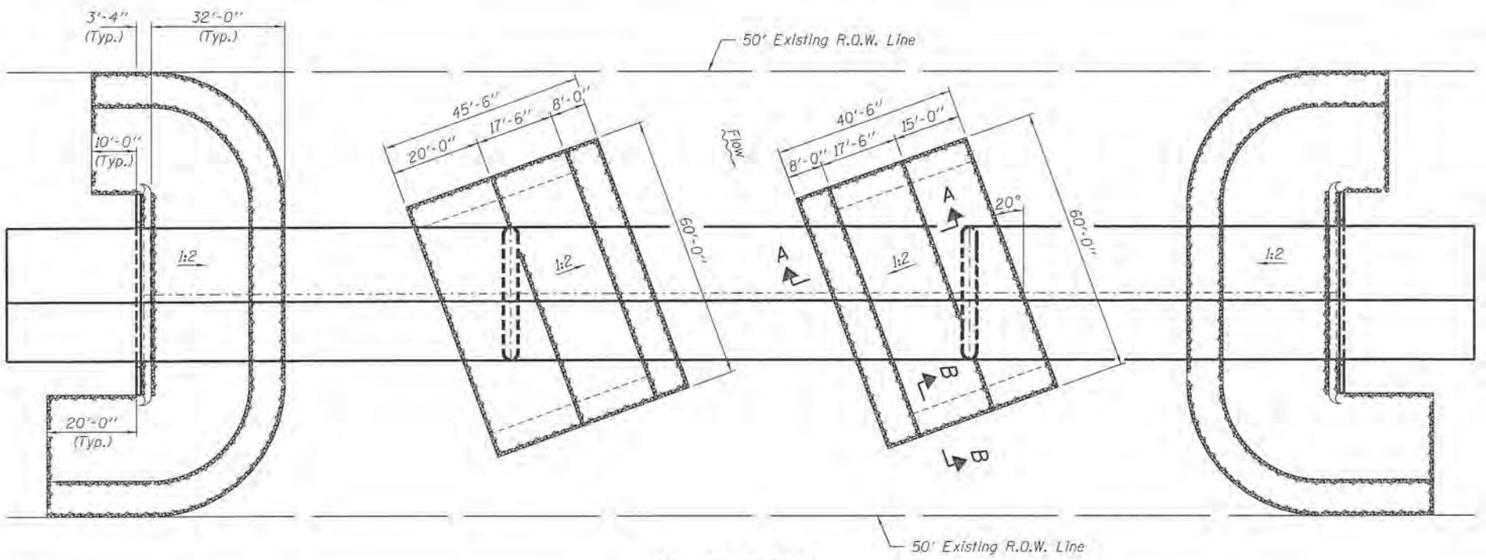
DESIGNED - S.M.S. | REVISED -
CHECKED - D.W.T. | REVISED -
DRAWN - D.A.B. | REVISED -
CHECKED - M.D.C. | REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

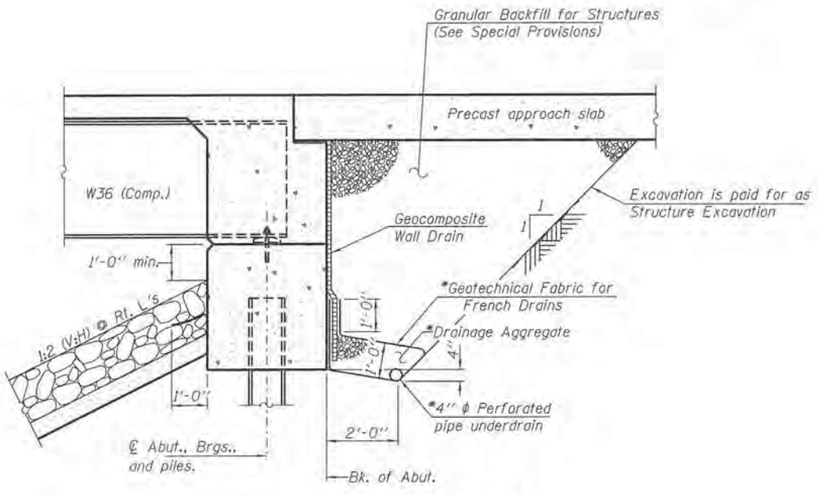
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 039-3277
SHEET NO. 1 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	16

CONTRACT NO. 99519
ILLINOIS FED. AID PROJECT BRS-0869(106)



RIPRAP LAYOUT

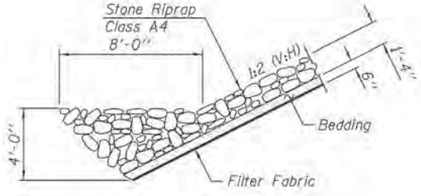


SECTION THRU INTEGRAL ABUTMENT

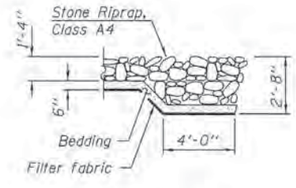
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A



SECTION B-B

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts $\frac{7}{8}$"ϕ, holes $\frac{15}{16}$"ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 267,520 lbs.

All structural steel shall be AASHTO M 270 Grade 50W except expansion joints which shall be AASHTO M 270 Grade 50.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars and Bar Splicers designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$" (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

PROFILE GRADE

(along ℄ roadway)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			820
Stone Riprap, Class A4	Ton			1,486
Filter Fabric	Sq. Yd.			1,601
Removal of Existing Structures	Each			1
Slope Wall Removal	Sq. Yd.			686
Structure Excavation	Cu. Yd.			188
Cofferdam Excavation	Cu. Yd.			328
Cofferdam (Type 2) (Location-1)	Each			1
Cofferdam (Type 2) (Location-2)	Each			1
Concrete Structures	Cu. Yd.		219.2	219.2
Concrete Superstructure	Cu. Yd.	243.5		243.5
Bridge Deck Grooving	Sq. Yd.	1,020		1,020
Protective Coat	Sq. Yd.	1,259		1,259
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4,338		4,338
Reinforcement Bars, Epoxy Coated	Pound	62,970	21,520	84,490
Bar Splicers	Each	852	244	1,096
Steel Railing, Type SM	Foot	596		596
Furnishing Steel Piles HP14x117	Foot		1,332	1,332
Driving Piles	Foot		1,332	1,332
Test Pile Steel HP14x117	Each		4	4
Pile Shoes	Each		24	24
Name Plates	Each		1	1
Preformed Joint Strip Seal	Foot		62	62
Anchor Bolts, $\frac{3}{4}$"	Each		24	24
Anchor Bolts, 1"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.			58
Temporary Sheet Piling	Sq. Ft.			531
Pipe Underdrains for Structures 4"	Foot			124
Concrete Wearing Surface, 5"	Sq. Yd.	200		200
Precast Bridge Approach Slab	Sq. Ft.	1,749		1,749
Granular Backfill for Structures	Cu. Yd.			128.0

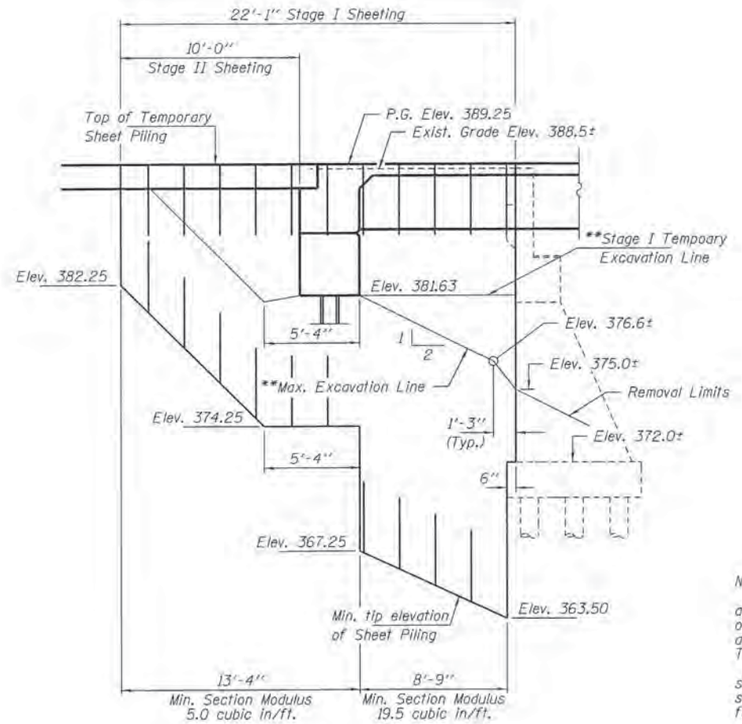
HLR
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.585.3430 www.hlrengineering.com
184.010109
ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

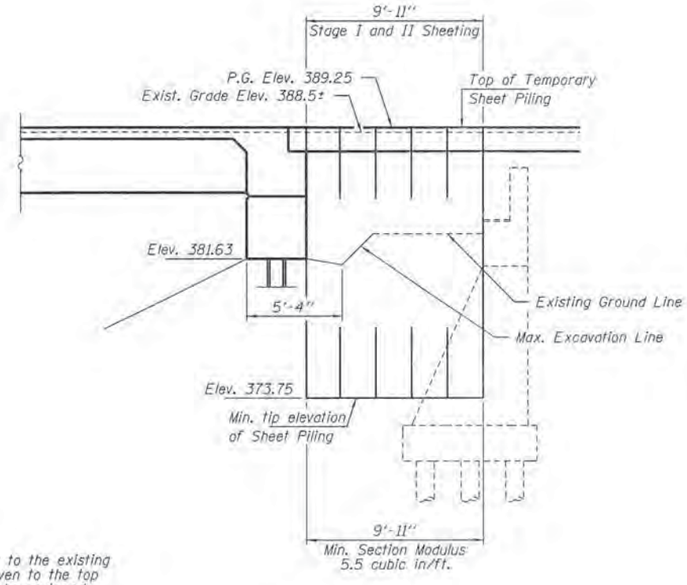
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

GENERAL DETAILS
STRUCTURE NO. 039-3277
SHEET NO. 2 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	17
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



WEST ABUTMENT



EAST ABUTMENT

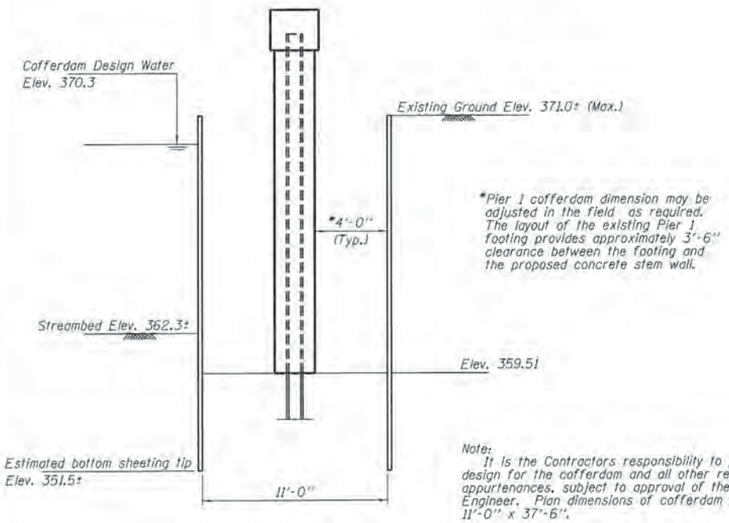
Notes:

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Pilling.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

***Due to existing open abutments, the Stage 1 Construction excavation will need to be limited to the Stage I Temporary Excavation Line at the Stage Construction Line until the Stage II removal begins.*

TEMPORARY SHEET PILING AT ABUTMENTS

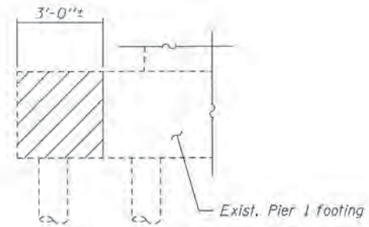


**Pier 1 cofferdam dimension may be adjusted in the field as required. The layout of the existing Pier 1 footing provides approximately 3'-6" clearance between the footing and the proposed concrete stem wall.*

Note:

It is the Contractors responsibility to provide a design for the cofferdam and all other required appurtenances, subject to approval of the Engineer. Plan dimensions of cofferdam are 11'-0" x 37'-6".

COFFERDAM DETAIL

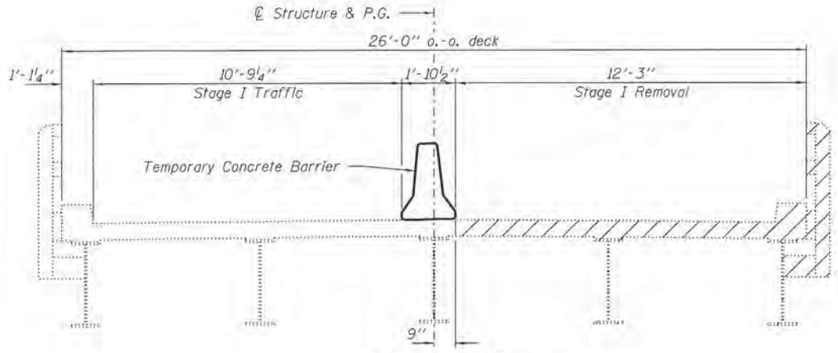


EXISTING PIER 1 REMOVAL

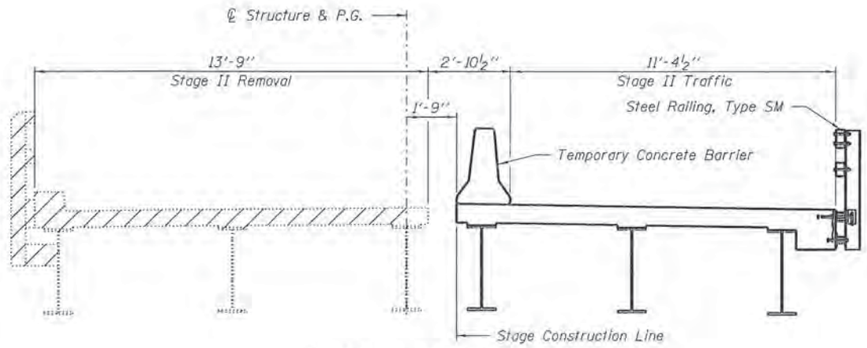
(Required for Cofferdam installation)

Hatch area indicates Pier Footing removal.

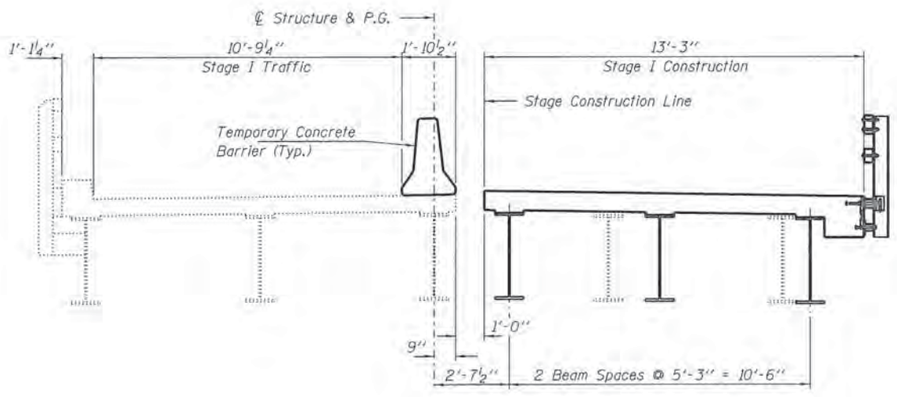
FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	GENERAL DETAILS STRUCTURE NO. 039-3277 SHEET NO. 3 OF 29 SHEETS	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hrengineering.com 184.005898 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	18
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -				ILLINOIS	FED. AID PROJECT BRS-0869(106)		



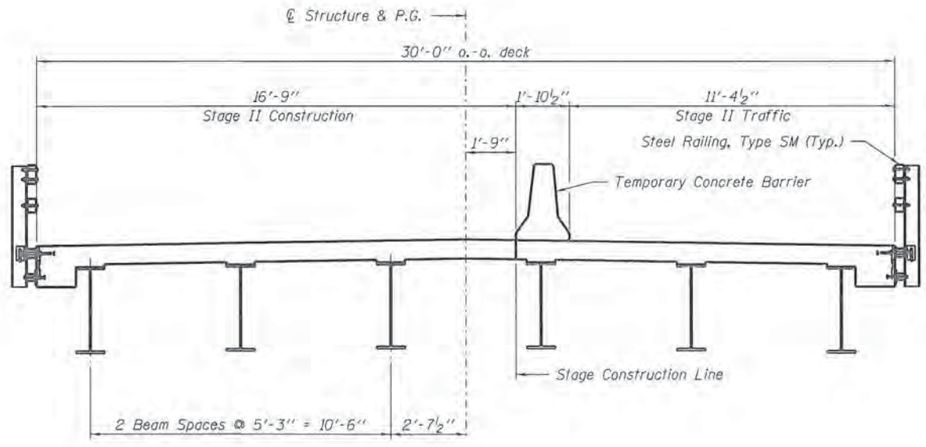
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

Notes:
All sections are looking East.
Hatched areas indicate removal.
See Roadway Plans for quantity of Temporary Concrete Barrier.

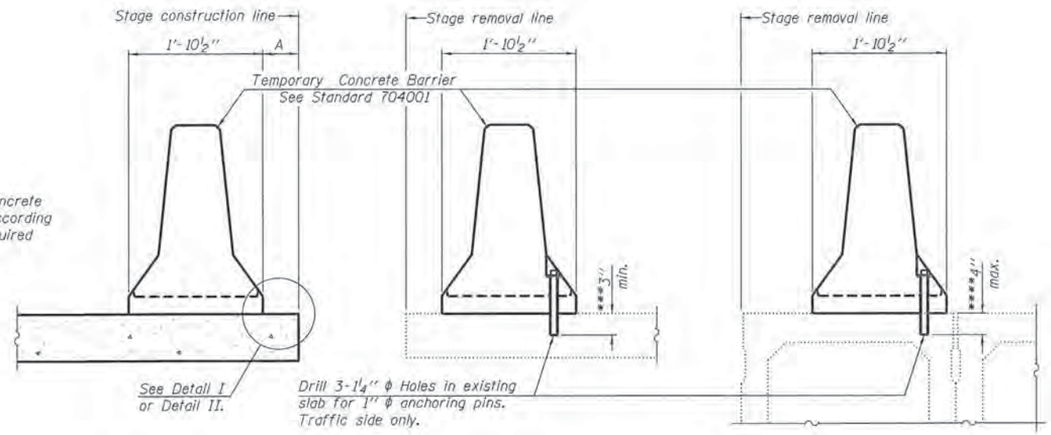
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com
184.001559
ILLINOIS PROFESSIONAL DESIGN FIRM
LS | PE | SE CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 039-3277
SHEET NO. 4 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	19
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		



SECTIONS THRU SLAB OR DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" 'x "W" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

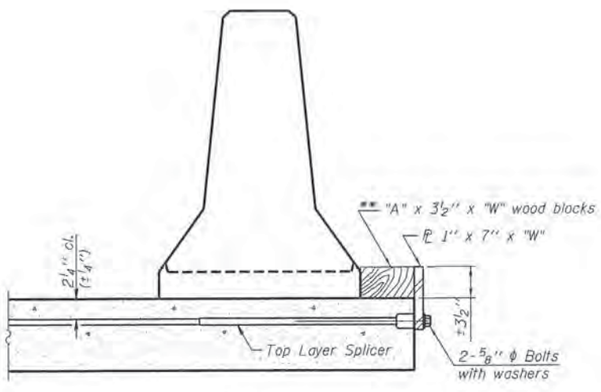
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of retainer assembly is included with Temporary Concrete Barrier.

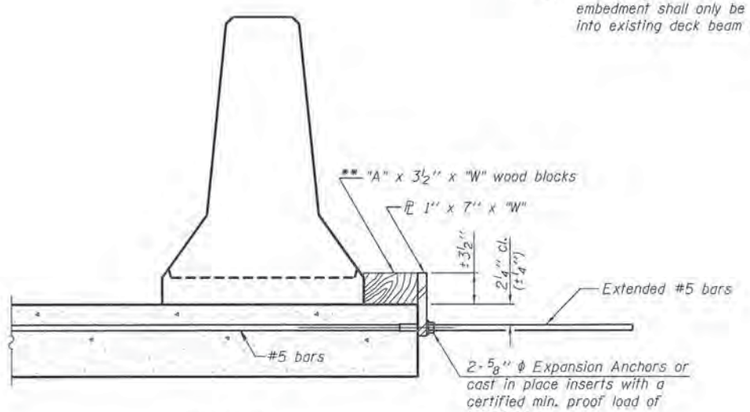
The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

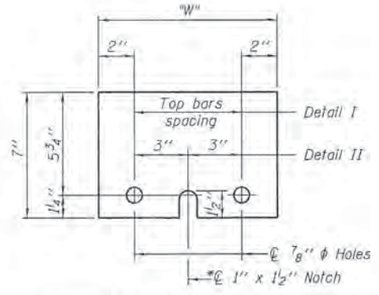
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER ℄ 1" x 7" x "W"

* Required only with Detail II

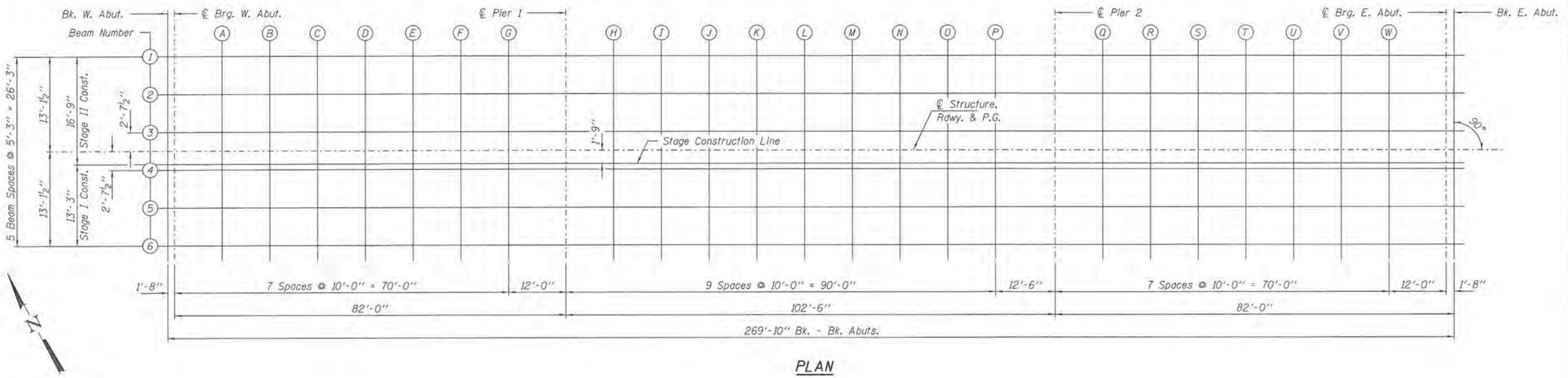
RETAINER ASSEMBLY

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

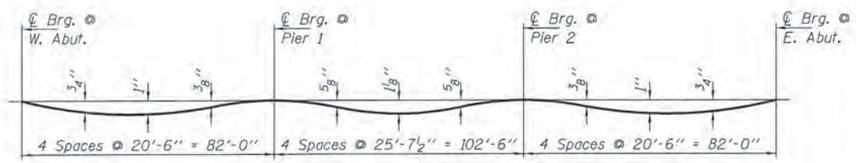
R-27

1-12-15

FILE NAME = 138340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 039-3277	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hrengineering.com		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	20
184.000559 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PS / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -		SHEET NO. 5 OF 29 SHEETS				CONTRACT NO. 99519	
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -					ILLINOIS	FED. AID PROJECT BRS-0869(106)	



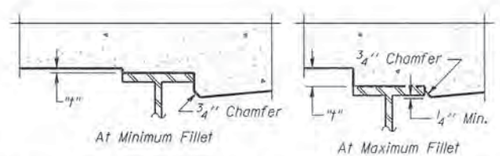
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 7 thru 9 of 29.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 7 thru 9 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	TOP OF SLAB ELEVATIONS STRUCTURE NO. 039-3277 SHEET NO. 6 OF 29 SHEETS	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3083 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hirengineering.com		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	21
184.000155 ILLINOIS PROFESSIONAL DESIGN FIRM LS FP FS CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -					ILLINOIS FED. AID PROJECT BRS-0869(106)		

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	-13.13	389.04	389.04
℄ Brg. W. Abut.	82+88.75	-13.13	389.04	389.04
A	82+98.75	-13.13	389.04	389.08
B	83+08.75	-13.13	389.04	389.11
C	83+18.75	-13.13	389.04	389.13
D	83+28.75	-13.13	389.04	389.13
E	83+38.75	-13.13	389.04	389.11
F	83+48.75	-13.13	389.04	389.09
G	83+58.75	-13.13	389.04	389.06
℄ Pier 1	83+70.75	-13.13	389.04	389.04
H	83+80.75	-13.13	389.04	389.05
I	83+90.75	-13.13	389.04	389.08
J	84+00.75	-13.13	389.04	389.11
K	84+10.75	-13.13	389.04	389.13
L	84+20.75	-13.13	389.04	389.14
M	84+30.75	-13.13	389.04	389.13
N	84+40.75	-13.13	389.04	389.11
O	84+50.75	-13.13	389.04	389.09
P	84+60.75	-13.13	389.04	389.06
℄ Pier 2	84+73.25	-13.13	389.04	389.04
Q	84+83.25	-13.13	389.04	389.05
R	84+93.25	-13.13	389.04	389.08
S	85+03.25	-13.13	389.04	389.10
T	85+13.25	-13.13	389.04	389.12
U	85+23.25	-13.13	389.04	389.13
V	85+33.25	-13.13	389.04	389.12
W	85+43.25	-13.13	389.04	389.09
℄ Brg. E. Abut.	85+55.25	-13.13	389.04	389.04
Bk. E. Abut.	85+56.92	-13.13	389.04	389.04

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	-7.88	389.13	389.13
℄ Brg. W. Abut.	82+88.75	-7.88	389.13	389.13
A	82+98.75	-7.88	389.13	389.17
B	83+08.75	-7.88	389.13	389.20
C	83+18.75	-7.88	389.13	389.21
D	83+28.75	-7.88	389.13	389.21
E	83+38.75	-7.88	389.13	389.19
F	83+48.75	-7.88	389.13	389.17
G	83+58.75	-7.88	389.13	389.14
℄ Pier 1	83+70.75	-7.88	389.13	389.13
H	83+80.75	-7.88	389.13	389.14
I	83+90.75	-7.88	389.13	389.16
J	84+00.75	-7.88	389.13	389.19
K	84+10.75	-7.88	389.13	389.21
L	84+20.75	-7.88	389.13	389.22
M	84+30.75	-7.88	389.13	389.21
N	84+40.75	-7.88	389.13	389.20
O	84+50.75	-7.88	389.13	389.17
P	84+60.75	-7.88	389.13	389.14
℄ Pier 2	84+73.25	-7.88	389.13	389.13
Q	84+83.25	-7.88	389.13	389.14
R	84+93.25	-7.88	389.13	389.16
S	85+03.25	-7.88	389.13	389.19
T	85+13.25	-7.88	389.13	389.20
U	85+23.25	-7.88	389.13	389.21
V	85+33.25	-7.88	389.13	389.20
W	85+43.25	-7.88	389.13	389.17
℄ Brg. E. Abut.	85+55.25	-7.88	389.13	389.13
Bk. E. Abut.	85+56.92	-7.88	389.13	389.13

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	-2.63	389.21	389.21
℄ Brg. W. Abut.	82+88.75	-2.63	389.21	389.21
A	82+98.75	-2.63	389.21	389.25
B	83+08.75	-2.63	389.21	389.28
C	83+18.75	-2.63	389.21	389.29
D	83+28.75	-2.63	389.21	389.29
E	83+38.75	-2.63	389.21	389.28
F	83+48.75	-2.63	389.21	389.25
G	83+58.75	-2.63	389.21	389.22
℄ Pier 1	83+70.75	-2.63	389.21	389.21
H	83+80.75	-2.63	389.21	389.22
I	83+90.75	-2.63	389.21	389.24
J	84+00.75	-2.63	389.21	389.27
K	84+10.75	-2.63	389.21	389.29
L	84+20.75	-2.63	389.21	389.30
M	84+30.75	-2.63	389.21	389.30
N	84+40.75	-2.63	389.21	389.28
O	84+50.75	-2.63	389.21	389.25
P	84+60.75	-2.63	389.21	389.23
℄ Pier 2	84+73.25	-2.63	389.21	389.21
Q	84+83.25	-2.63	389.21	389.22
R	84+93.25	-2.63	389.21	389.24
S	85+03.25	-2.63	389.21	389.27
T	85+13.25	-2.63	389.21	389.29
U	85+23.25	-2.63	389.21	389.29
V	85+33.25	-2.63	389.21	389.28
W	85+43.25	-2.63	389.21	389.25
℄ Brg. E. Abut.	85+55.25	-2.63	389.21	389.21
Bk. E. Abut.	85+56.92	-2.63	389.21	389.21

3085 STEVENSON DRIVE, SUITE 201
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217.544.3405 www.hlrengineering.com
184.001858
ILLINOIS PROFESSIONAL DESIGN FIRM
H.L.R. / P.B. / S.B. CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-3277
SHEET NO. 7 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	22
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		

℄ STRUCTURE, RDWY., & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	0.00	389.25	389.25
℄ Brg. W. Abut.	82+88.75	0.00	389.25	389.25
A	82+98.75	0.00	389.25	389.29
B	83+08.75	0.00	389.25	389.32
C	83+18.75	0.00	389.25	389.34
D	83+28.75	0.00	389.25	389.33
E	83+38.75	0.00	389.25	389.32
F	83+48.75	0.00	389.25	389.29
G	83+58.75	0.00	389.25	389.27
℄ Pier 1	83+70.75	0.00	389.25	389.25
H	83+80.75	0.00	389.25	389.26
I	83+90.75	0.00	389.25	389.28
J	84+00.75	0.00	389.25	389.31
K	84+10.75	0.00	389.25	389.33
L	84+20.75	0.00	389.25	389.34
M	84+30.75	0.00	389.25	389.34
N	84+40.75	0.00	389.25	389.32
O	84+50.75	0.00	389.25	389.29
P	84+60.75	0.00	389.25	389.27
℄ Pier 2	84+73.25	0.00	389.25	389.25
Q	84+83.25	0.00	389.25	389.26
R	84+93.25	0.00	389.25	389.28
S	85+03.25	0.00	389.25	389.31
T	85+13.25	0.00	389.25	389.33
U	85+23.25	0.00	389.25	389.33
V	85+33.25	0.00	389.25	389.32
W	85+43.25	0.00	389.25	389.30
℄ Brg. E. Abut.	85+55.25	0.00	389.25	389.25
Bk. E. Abut.	85+56.92	0.00	389.25	389.25

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	1.75	389.22	389.22
℄ Brg. W. Abut.	82+88.75	1.75	389.22	389.22
A	82+98.75	1.75	389.22	389.26
B	83+08.75	1.75	389.22	389.29
C	83+18.75	1.75	389.22	389.31
D	83+28.75	1.75	389.22	389.31
E	83+38.75	1.75	389.22	389.29
F	83+48.75	1.75	389.22	389.26
G	83+58.75	1.75	389.22	389.24
℄ Pier 1	83+70.75	1.75	389.22	389.22
H	83+80.75	1.75	389.22	389.23
I	83+90.75	1.75	389.22	389.26
J	84+00.75	1.75	389.22	389.28
K	84+10.75	1.75	389.22	389.31
L	84+20.75	1.75	389.22	389.32
M	84+30.75	1.75	389.22	389.31
N	84+40.75	1.75	389.22	389.29
O	84+50.75	1.75	389.22	389.27
P	84+60.75	1.75	389.22	389.24
℄ Pier 2	84+73.25	1.75	389.22	389.22
Q	84+83.25	1.75	389.22	389.23
R	84+93.25	1.75	389.22	389.26
S	85+03.25	1.75	389.22	389.28
T	85+13.25	1.75	389.22	389.30
U	85+23.25	1.75	389.22	389.30
V	85+33.25	1.75	389.22	389.29
W	85+43.25	1.75	389.22	389.27
℄ Brg. E. Abut.	85+55.25	1.75	389.22	389.22
Bk. E. Abut.	85+56.92	1.75	389.22	389.22

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	2.63	389.21	389.21
℄ Brg. W. Abut.	82+88.75	2.63	389.21	389.21
A	82+98.75	2.63	389.21	389.25
B	83+08.75	2.63	389.21	389.28
C	83+18.75	2.63	389.21	389.29
D	83+28.75	2.63	389.21	389.29
E	83+38.75	2.63	389.21	389.28
F	83+48.75	2.63	389.21	389.25
G	83+58.75	2.63	389.21	389.22
℄ Pier 1	83+70.75	2.63	389.21	389.21
H	83+80.75	2.63	389.21	389.22
I	83+90.75	2.63	389.21	389.24
J	84+00.75	2.63	389.21	389.27
K	84+10.75	2.63	389.21	389.29
L	84+20.75	2.63	389.21	389.30
M	84+30.75	2.63	389.21	389.30
N	84+40.75	2.63	389.21	389.28
O	84+50.75	2.63	389.21	389.25
P	84+60.75	2.63	389.21	389.23
℄ Pier 2	84+73.25	2.63	389.21	389.21
Q	84+83.25	2.63	389.21	389.22
R	84+93.25	2.63	389.21	389.24
S	85+03.25	2.63	389.21	389.27
T	85+13.25	2.63	389.21	389.29
U	85+23.25	2.63	389.21	389.29
V	85+33.25	2.63	389.21	389.28
W	85+43.25	2.63	389.21	389.25
℄ Brg. E. Abut.	85+55.25	2.63	389.21	389.21
Bk. E. Abut.	85+56.92	2.63	389.21	389.21

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	7.88	389.13	389.13
℄ Brg. W. Abut.	82+88.75	7.88	389.13	389.13
A	82+98.75	7.88	389.13	389.17
B	83+08.75	7.88	389.13	389.20
C	83+18.75	7.88	389.13	389.21
D	83+28.75	7.88	389.13	389.21
E	83+38.75	7.88	389.13	389.19
F	83+48.75	7.88	389.13	389.17
G	83+58.75	7.88	389.13	389.14
℄ Pier 1	83+70.75	7.88	389.13	389.13
H	83+80.75	7.88	389.13	389.14
I	83+90.75	7.88	389.13	389.16
J	84+00.75	7.88	389.13	389.19
K	84+10.75	7.88	389.13	389.21
L	84+20.75	7.88	389.13	389.22
M	84+30.75	7.88	389.13	389.21
N	84+40.75	7.88	389.13	389.20
O	84+50.75	7.88	389.13	389.17
P	84+60.75	7.88	389.13	389.14
℄ Pier 2	84+73.25	7.88	389.13	389.13
Q	84+83.25	7.88	389.13	389.14
R	84+93.25	7.88	389.13	389.16
S	85+03.25	7.88	389.13	389.19
T	85+13.25	7.88	389.13	389.20
U	85+23.25	7.88	389.13	389.21
V	85+33.25	7.88	389.13	389.20
W	85+43.25	7.88	389.13	389.17
℄ Brg. E. Abut.	85+55.25	7.88	389.13	389.13
Bk. E. Abut.	85+56.92	7.88	389.13	389.13

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	82+87.08	13.13	389.04	389.04
℄ Brg. W. Abut.	82+88.75	13.13	389.04	389.04
A	82+98.75	13.13	389.04	389.08
B	83+08.75	13.13	389.04	389.11
C	83+18.75	13.13	389.04	389.13
D	83+28.75	13.13	389.04	389.13
E	83+38.75	13.13	389.04	389.11
F	83+48.75	13.13	389.04	389.09
G	83+58.75	13.13	389.04	389.06
℄ Pier 1	83+70.75	13.13	389.04	389.04
H	83+80.75	13.13	389.04	389.05
I	83+90.75	13.13	389.04	389.08
J	84+00.75	13.13	389.04	389.11
K	84+10.75	13.13	389.04	389.13
L	84+20.75	13.13	389.04	389.14
M	84+30.75	13.13	389.04	389.13
N	84+40.75	13.13	389.04	389.11
O	84+50.75	13.13	389.04	389.09
P	84+60.75	13.13	389.04	389.06
℄ Pier 2	84+73.25	13.13	389.04	389.04
Q	84+83.25	13.13	389.04	389.05
R	84+93.25	13.13	389.04	389.08
S	85+03.25	13.13	389.04	389.10
T	85+13.25	13.13	389.04	389.12
U	85+23.25	13.13	389.04	389.13
V	85+33.25	13.13	389.04	389.12
W	85+43.25	13.13	389.04	389.09
℄ Brg. E. Abut.	85+55.25	13.13	389.04	389.04
Bk. E. Abut.	85+56.92	13.13	389.04	389.04

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.klrengineering.com
184.005959
ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORPORATION

FILE NAME = 130348-sht-bridge.dgn | USER NAME = | PLOT SCALE = | PLOT DATE = 4/6/2015

DESIGNED - S.M.S. | CHECKED - D.W.T. | DRAWN - D.A.B. | CHECKED - M.D.C.

REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-3277
SHEET NO. 9 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	24
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		

NORTH EDGE OF SHOULDER

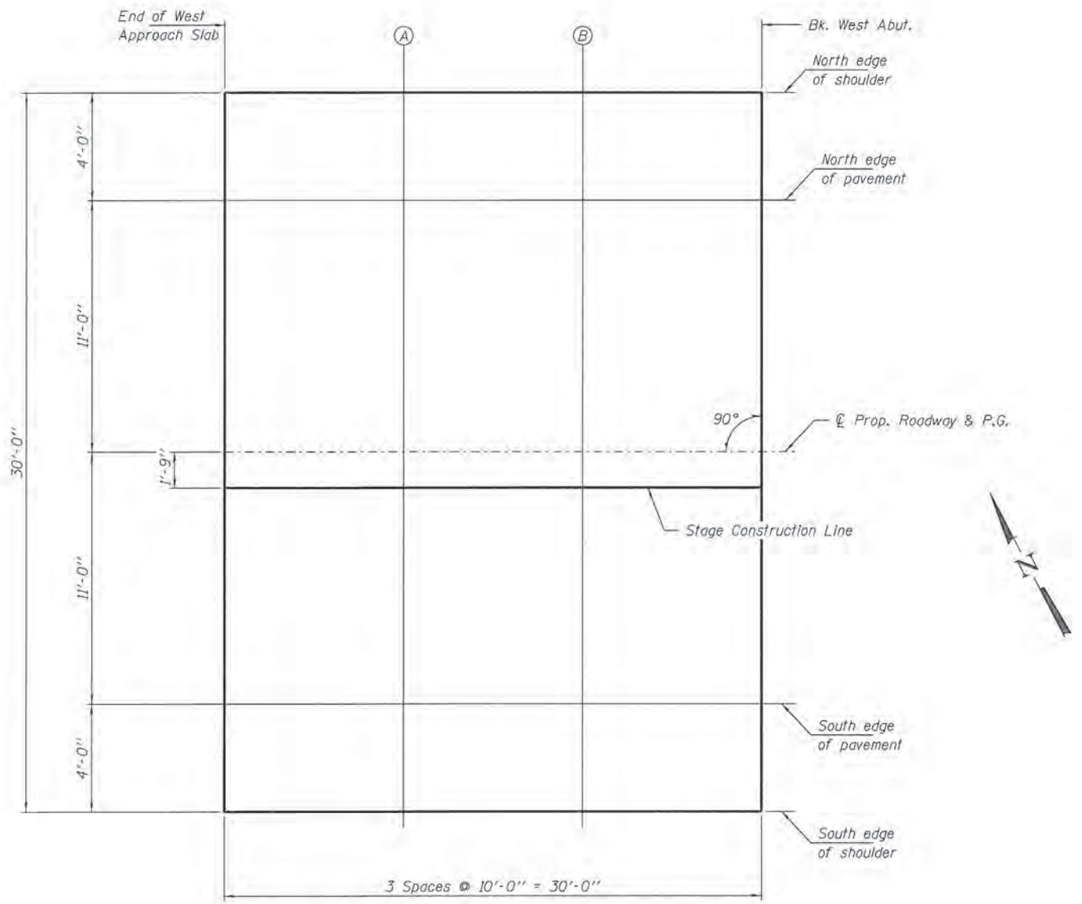
Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	-15.00	389.02
A	85+68.08	-15.00	389.02
B	82+78.08	-15.00	389.02
Bk. W. Abutment	82+88.08	-15.00	389.02

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	-11.00	389.08
A	85+68.08	-11.00	389.08
B	82+78.08	-11.00	389.08
Bk. W. Abutment	82+88.08	-11.00	389.08

℄ PROPOSED ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	0.00	389.25
A	85+68.08	0.00	389.25
B	82+78.08	0.00	389.25
Bk. W. Abutment	82+88.08	0.00	389.25



WEST APPROACH SLAB - PLAN

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	1.75	389.22
A	85+68.08	1.75	389.22
B	82+78.08	1.75	389.22
Bk. W. Abutment	82+88.08	1.75	389.22

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	11.00	389.08
A	85+68.08	11.00	389.08
B	82+78.08	11.00	389.08
Bk. W. Abutment	82+88.08	11.00	389.08

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of W. Approach Slab	82+58.08	15.00	389.02
A	85+68.08	15.00	389.02
B	82+78.08	15.00	389.02
Bk. W. Abutment	82+88.08	15.00	389.02

3085 STEVENSON DRIVE, SUITE 201
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ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 039-3277
SHEET NO. 10 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	25
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		

NORTH EDGE OF SHOULDER

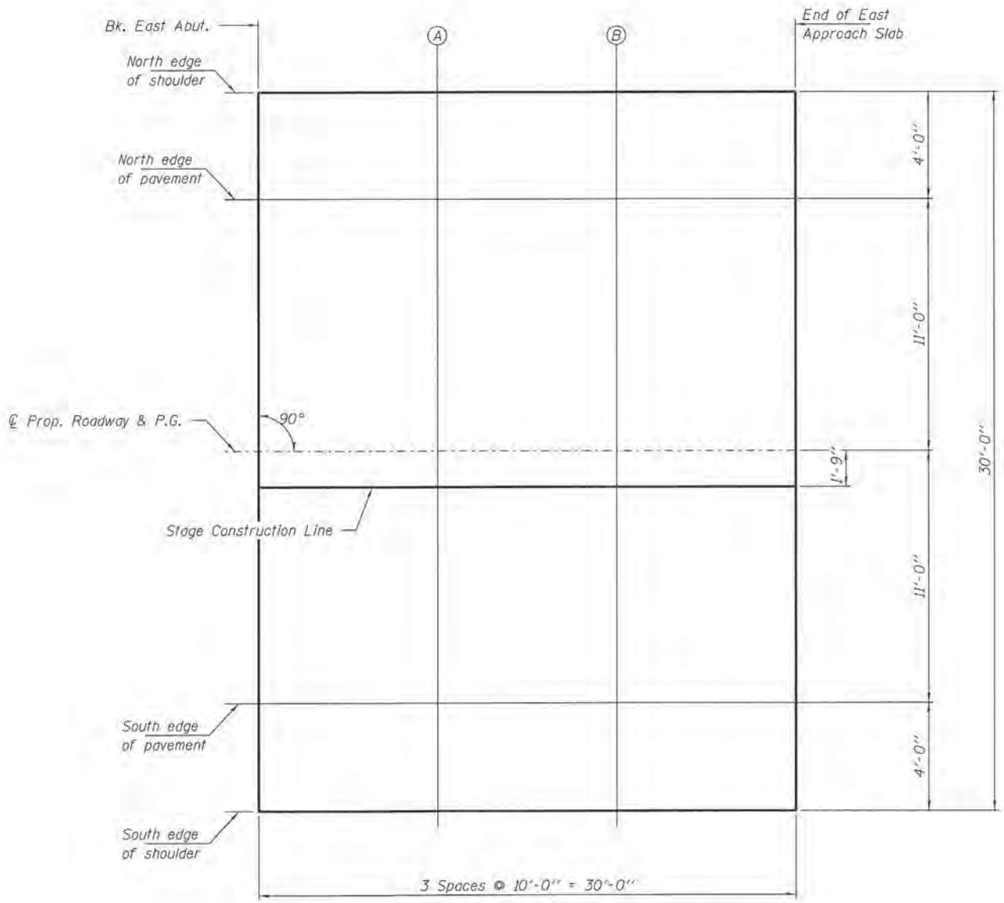
Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	-15.00	389.02
A	85+65.92	-15.00	389.02
B	85+75.92	-15.00	389.02
Bk. E. Approach Slab	85+85.92	-15.00	389.02

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	-11.00	389.08
A	85+65.92	-11.00	389.08
B	85+75.92	-11.00	389.08
Bk. E. Approach Slab	85+85.92	-11.00	389.08

℄ PROPOSED ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	0.00	389.25
A	85+65.92	0.00	389.25
B	85+75.92	0.00	389.25
Bk. E. Approach Slab	85+85.92	0.00	389.25



EAST APPROACH SLAB - PLAN

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	1.75	389.22
A	85+65.92	1.75	389.22
B	85+75.92	1.75	389.22
Bk. E. Approach Slab	85+85.92	1.75	389.22

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	11.00	389.08
A	85+65.92	11.00	389.08
B	85+75.92	11.00	389.08
Bk. E. Approach Slab	85+85.92	11.00	389.08

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abutment	85+55.92	15.00	389.02
A	85+65.92	15.00	389.02
B	85+75.92	15.00	389.02
Bk. E. Approach Slab	85+85.92	15.00	389.02

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184.000559
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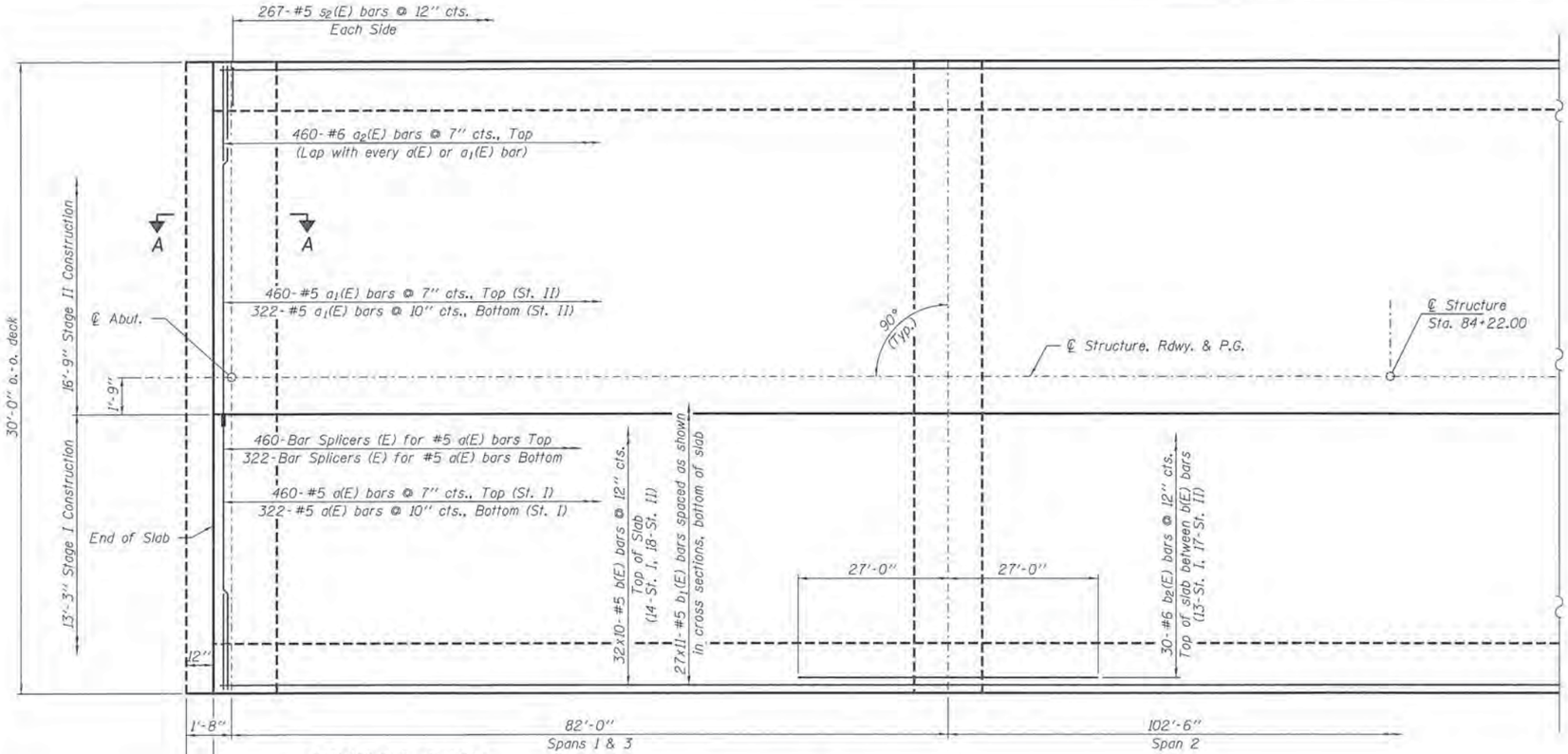
FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

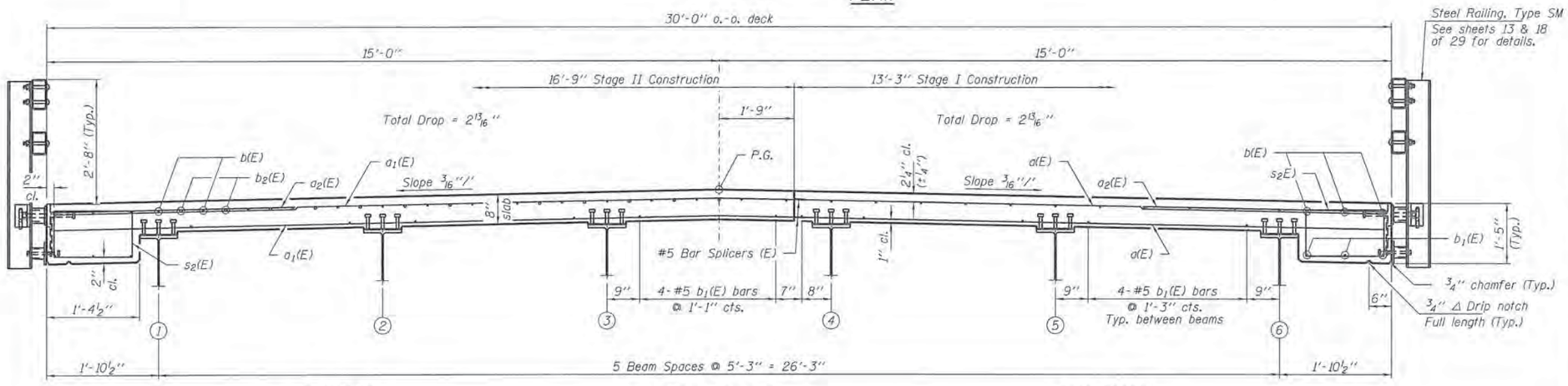
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 039-3277
SHEET NO. 11 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	26
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		



PLAN



NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

MIN. BAR LAP

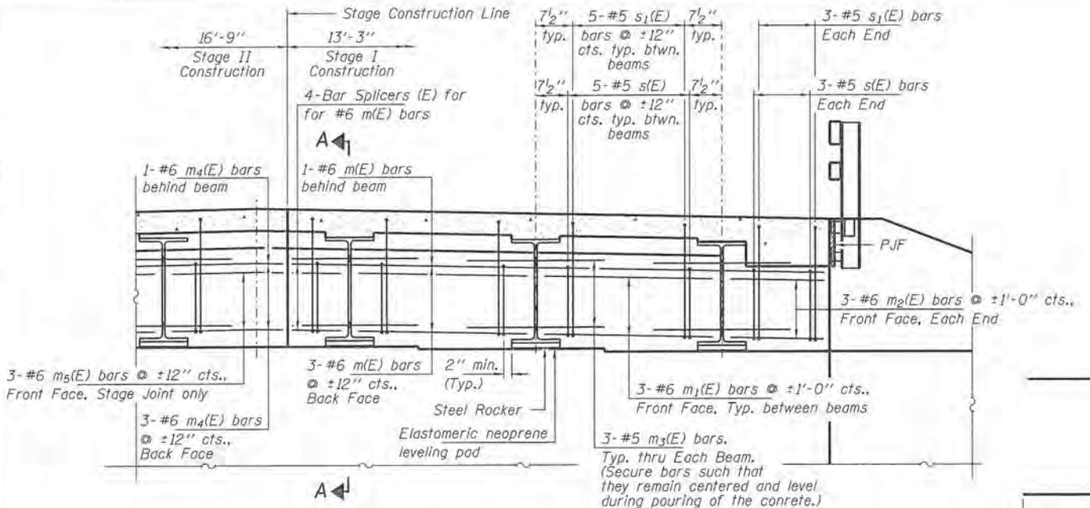
#5 bars = 2'-7"
#6 bars = 3'-1"

Notes:
See sheet 13 of 29 for superstructure details.
Bars indicated thus 32x10-#5 etc. indicates 32 lines of bars with 10 lengths per line.
See sheet 13 of 29 for Section A-A.
See sheet 27 of 29 for Bar Splicer Details.

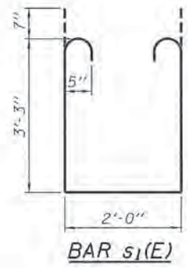
SUPERSTRUCTURE BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	782	#5	12'-11"	——
a1(E)	782	#5	16'-5"	——
a2(E)	920	#6	6'-6"	——
b(E)	320	#5	29'-1"	——
b1(E)	297	#5	26'-8"	——
b2(E)	60	#6	54'-0"	——
m(E)	8	#6	12'-11"	——
m1(E)	24	#6	4'-10"	——
m2(E)	12	#6	1'-5"	——
m3(E)	36	#5	4'-0"	——
m4(E)	8	#6	16'-5"	——
m5(E)	6	#6	4'-0"	——
s(E)	62	#5	7'-9"	⊐
s1(E)	62	#5	9'-8"	⊓
s2(E)	534	#5	5'-2"	⊐
Concrete Superstructure			Cu. Yd.	243.5
Bridge Deck Grooving			Sq. Yd.	833
Protective Coat			Sq. Yd.	1,059
Reinforcement Bars, Epoxy Coated			Pound	60,480
Bar Splicers			Each	790

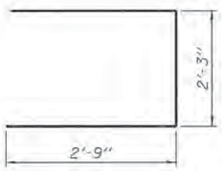
FILE NAME = 130348-sht-bridge.dgn | USER NAME = | PLOT SCALE = | PLOT DATE = 4/6/2015
DESIGNED - S.M.S. | CHECKED - D.W.T. | DRAWN - D.A.B. | CHECKED - M.D.C.
REVISED - | REVISED - | REVISED - | REVISED -
3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3409 www.hlrengineering.com
184.000899 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT
SUPERSTRUCTURE
STRUCTURE NO. 039-3277
SHEET NO. 12 OF 29 SHEETS
F.A.S. 869 | SECTION 10-00163-00-BR | COUNTY JACKSON | TOTAL SHEETS 82 | SHEET NO. 27
CONTRACT NO. 99519
ILLINOIS | FED. AID PROJECT BRS-0869(106)



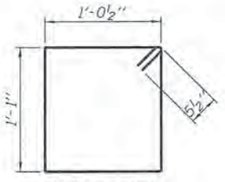
DIAPHRAGM ELEVATION AT ABUTMENT



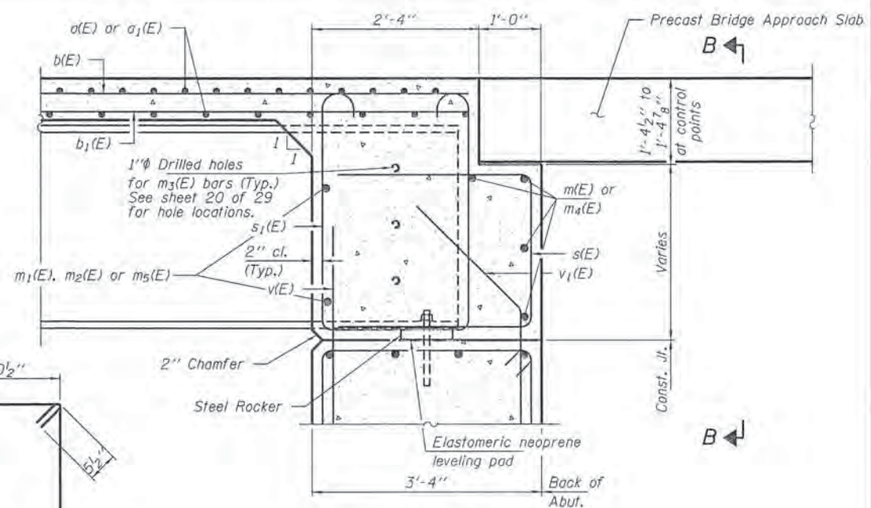
BAR $s_1(E)$



BAR s(E)

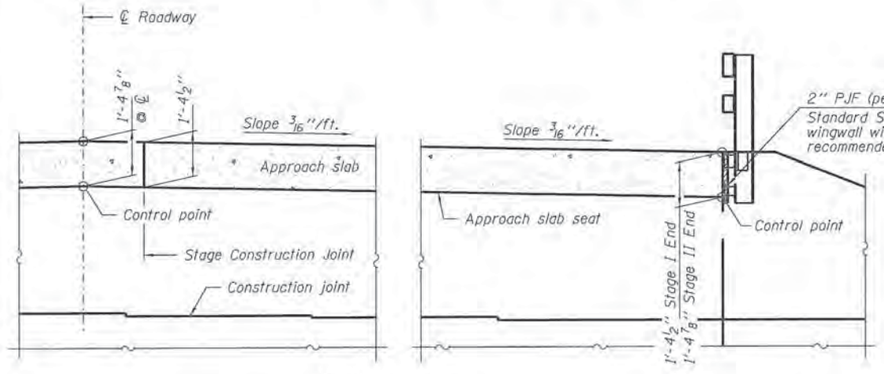


BAR $s_2(E)$

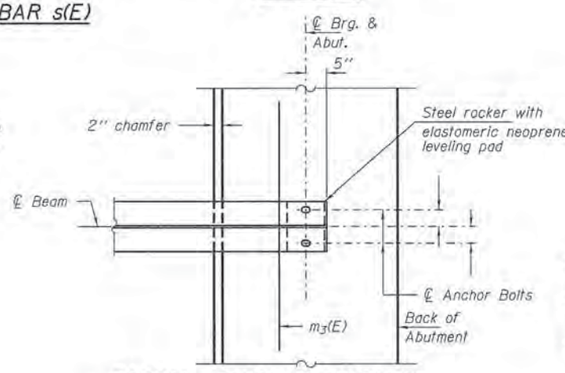


SECTION A-A

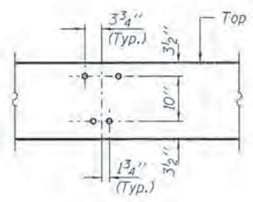
Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 29.
Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 29.
For details of bars v(E) and $v_1(E)$ see sheet 23 & 24 of 29.
The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet 22 of 29.
For Bar Splicer details see sheet 27 of 29.



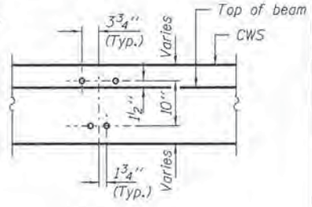
SECTION B-B



PARTIAL PLAN AT ABUTMENT
(Showing bottom flange of beam)



DETAIL A

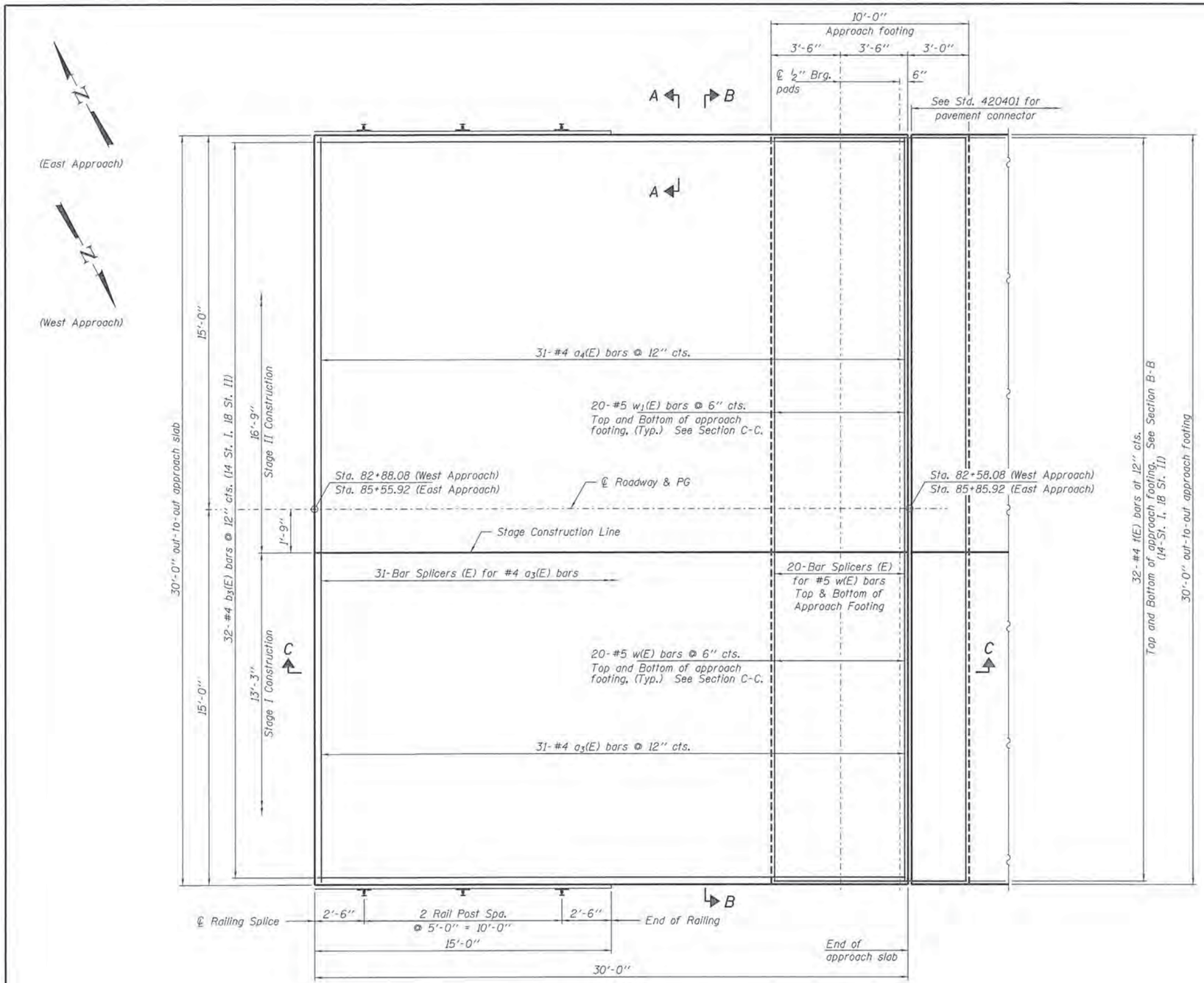


DETAIL B

RAILING ELEVATION
Showing Rail Post Spaces

See sheet 18 of 29 for Railing Details.

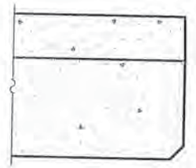
FILE NAME = 132340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 039-3277	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.544.3490 www.hlrengineering.com		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	28
184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -		SHEET NO. 13 OF 29 SHEETS			ILLINOIS FED. AID PROJECT BRS-0869(106)		



PLAN

(Showing wearing surface)
(East Approach Slab Shown)
(West Approach Slab similar by 180° rotation)

(Beams: 36" min. width; 72" max. width)



SECTION A-A

(Sheet 1 of 4)

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	PRECAST BRIDGE APPROACH SLAB STRUCTURE NO. 039-3277
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.005956 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -		SHEET NO. 14 OF 29 SHEETS
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -		

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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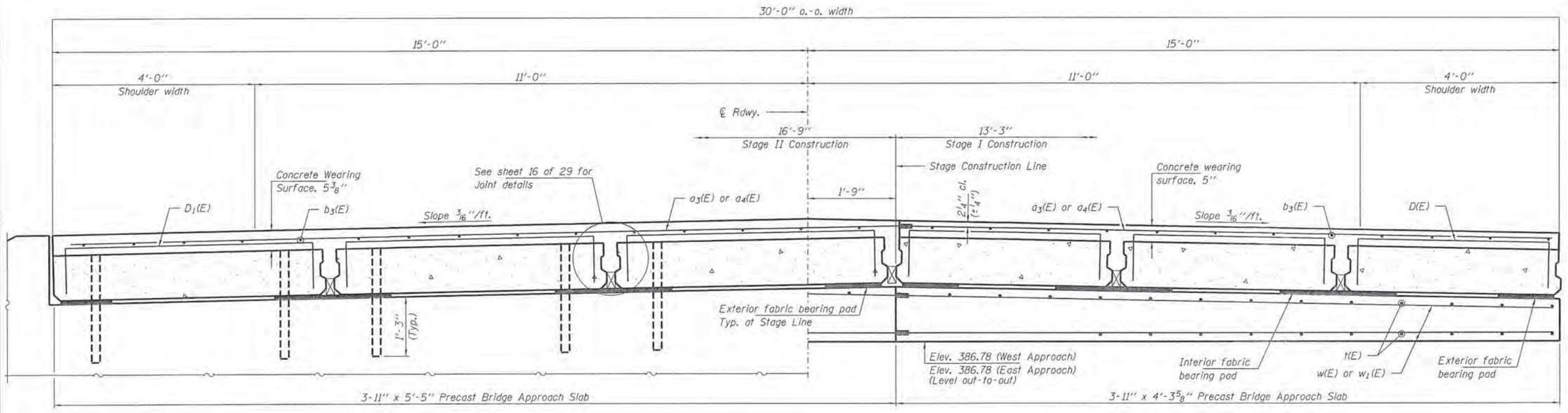
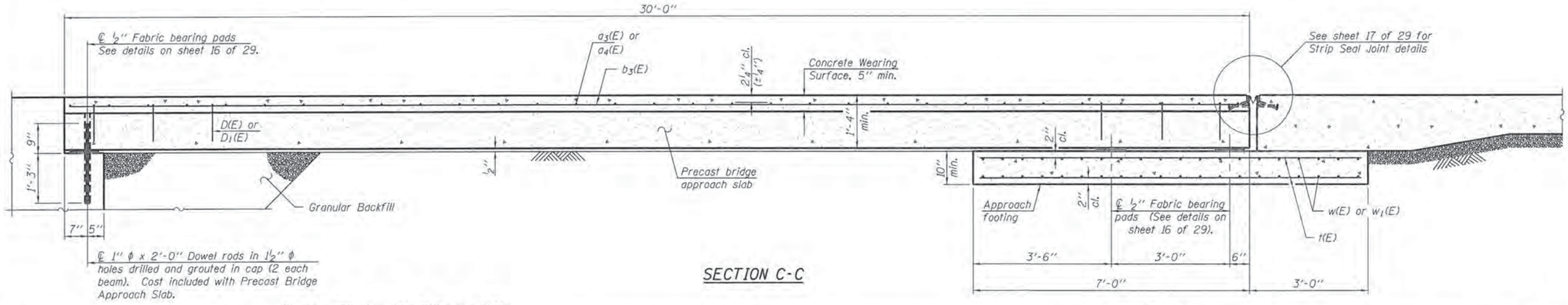
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



SECTION B-B



SECTION C-C

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.ltdengineering.com 184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -	
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -	

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 039-3277
SHEET NO. 15 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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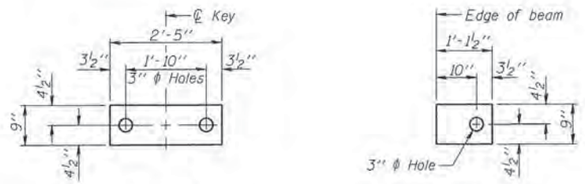
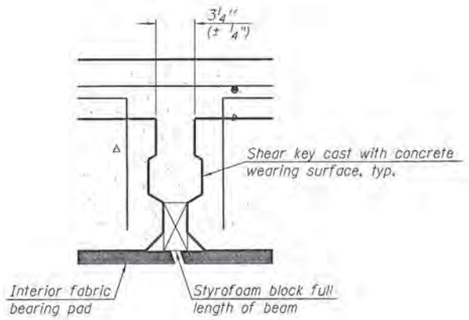
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



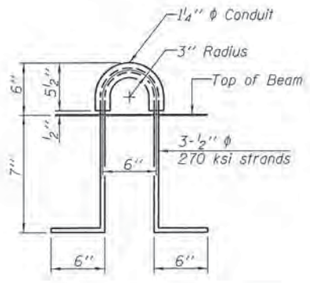
INTERIOR EXTERIOR

FABRIC BEARING PAD

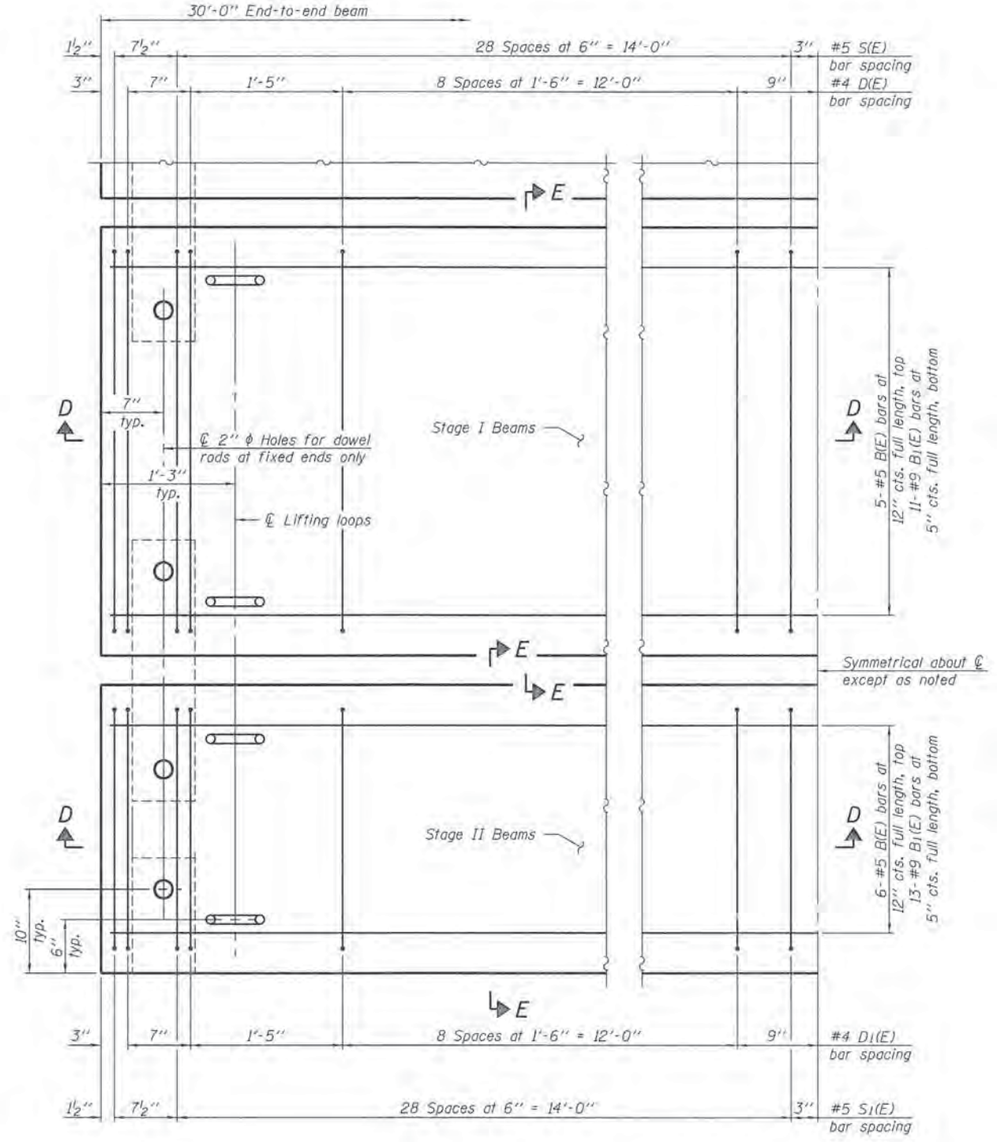
Notes:
All bearing pads shall be ½" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.



SECTION THRU SHEAR KEY JOINT



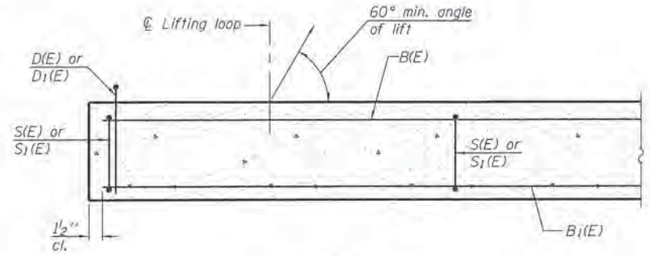
LIFTING LOOP DETAIL



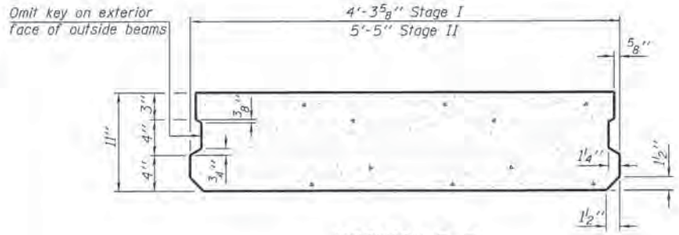
PLAN

(Beams: 36" min. width; 72" max. width)

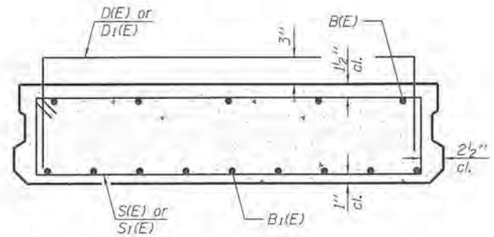
FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	PRECAST BRIDGE APPROACH SLAB STRUCTURE NO. 039-3277	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.585.3400 www.hlrengineering.com 184.002959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	31
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -						CONTRACT NO. 99519	
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -		SHEET NO. 16 OF 29 SHEETS			ILLINOIS	FED. AID PROJECT BRS-0869(106)	



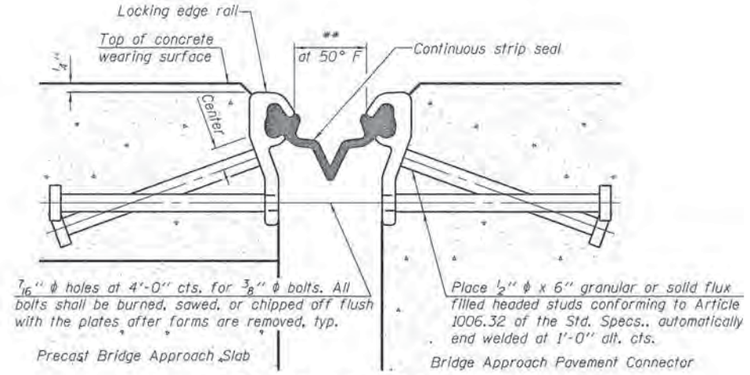
SECTION D-D



SECTION E-E
(Showing dimensions)

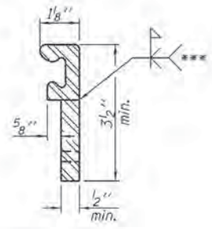


SECTION E-E
(Showing reinforcement)

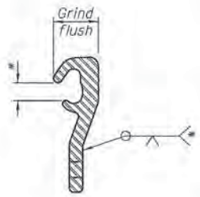


SECTION THRU STRIP SEAL JOINT
(at rt. angles)

ROLLED (EXTRUDED) RAIL



WELDED RAIL



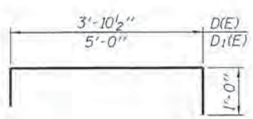
LOCKING EDGE RAIL SPLICE
Rolled rail shown, welded rail similar.

LOCKING EDGE RAIL

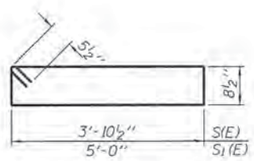
* Omit weld at seal opening.

** The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1½" for installation purposes.

*** Back gouge not required if complete joint penetration is verified by mock-up.



BARS D(E) & D1(E)



BARS S(E) & S1(E)

BAR LIST
EACH STAGE I BEAM
(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
B1(E)	11	#9	29'-8"	—
D(E)	22	#4	5'-11"	⌐
S(E)	58	#5	10'-1"	⌐

BAR LIST
EACH STAGE II BEAM
(For information only)

Bar	No.	Size	Length	Shape
B(E)	6	#5	29'-8"	—
B1(E)	13	#9	29'-8"	—
D1(E)	22	#4	7'-0"	⌐
S1(E)	58	#5	12'-4"	⌐

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3(E)	62	#4	12'-11"	—
a4(E)	62	#4	16'-5"	—
b3(E)	64	#4	29'-8"	—
t(E)	128	#4	9'-8"	—
w(E)	80	#5	12'-11"	—
w1(E)	80	#5	16'-5"	—
Concrete Structures			Cu. Yd.	21.4
Bridge Deck Grooving			Sq. Yd.	187
Protective Coat			Sq. Yd.	200
Reinforcement Bars, Epoxy Coated			Pound	5,760
Bar Splicers			Each	142
Preformed Joint Strip Seal			Foot	62
Concrete Wearing Surface, 5"			Sq. Yd.	200
Precast Bridge Approach Slab			Sq. Ft.	1,749

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.

Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.

Wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.

The top surface of precast bridge approach slabs shall be roughened to a depth of ¼" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 ½" ϕ lifting pins shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.

For additional rail details, see sheets 13 & 18 of 29.

Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The strip seal shall extend 6" beyond the edge of the approach slab on each end. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

(Beams: 36" min. width; 72" max. width)

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

3085 STEVENSON DRIVE, SUITE 201
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217.546.3400 www.hrengineering.com
184.003959
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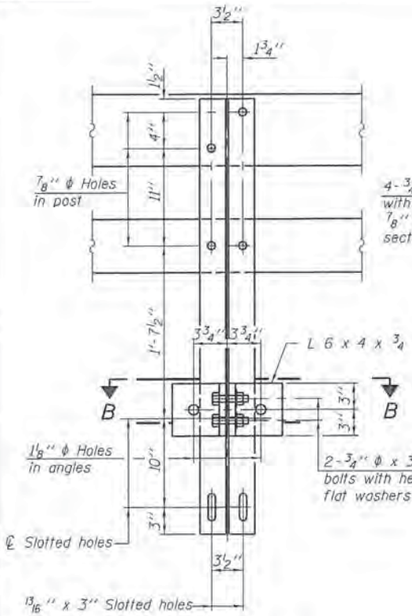
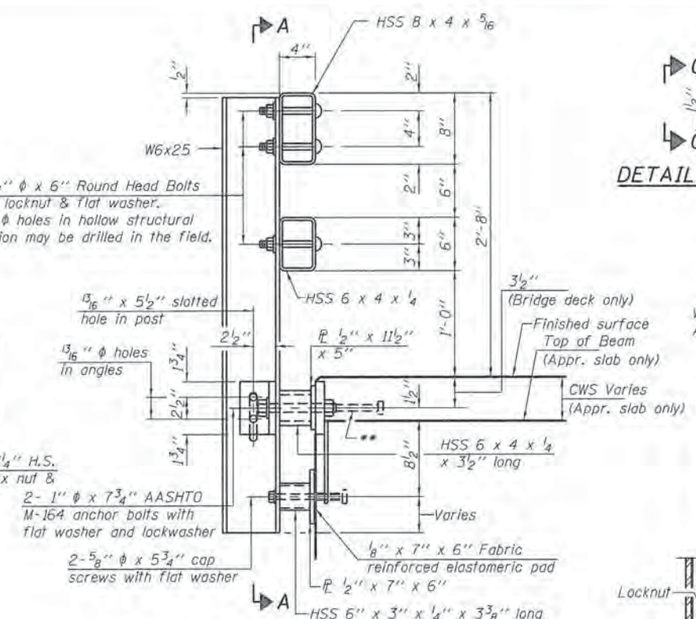
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 039-3277
SHEET NO. 17 OF 29 SHEETS

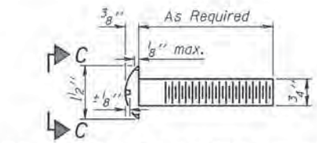
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	32
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		



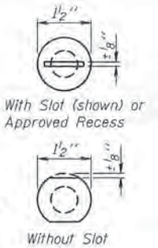
SECTION A-A



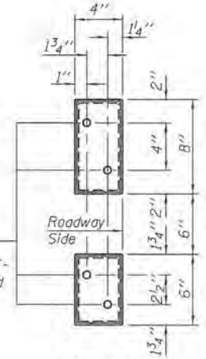
SECTION AT RAIL POST



DETAIL OF ¾" ϕ ROUND HEAD BOLT

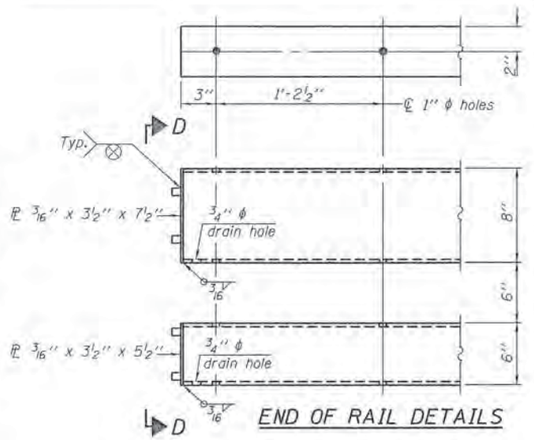


VIEW C-C

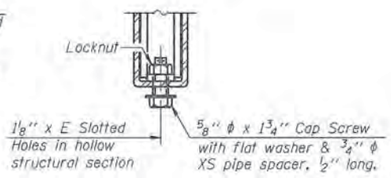


℄ -⅝" reduced base welded studs. Provide 4-⅝" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032 .

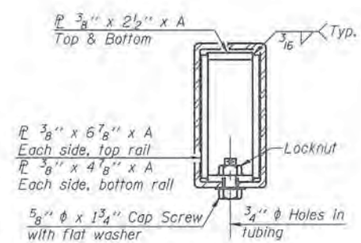
VIEW D-D



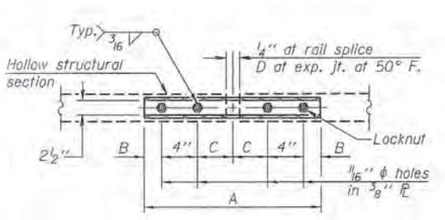
END OF RAIL DETAILS



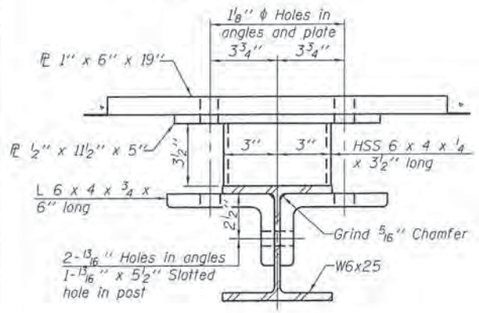
RAIL SPLICE CONNECTION AT EXPANSION JT.



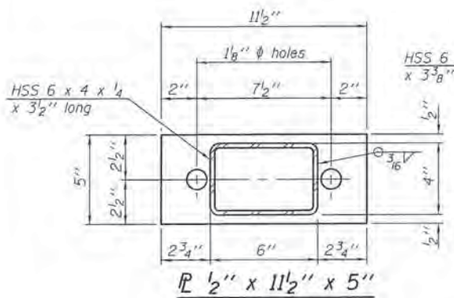
SECTION AT RAIL SPLICE



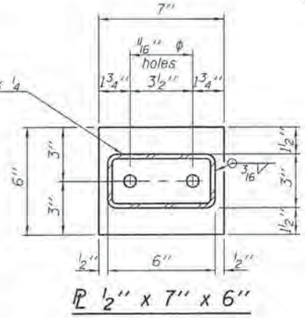
PLAN-BOTT. SPLICE PL TYPICAL



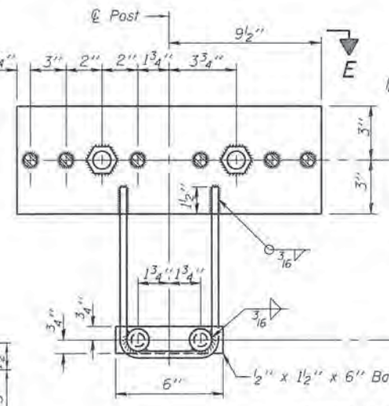
SECTION B-B



PL ½" x 11½" x 5"

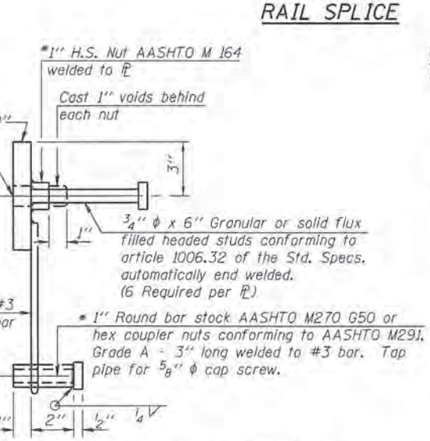


PL ½" x 7" x 6"



ANCHOR DEVICE

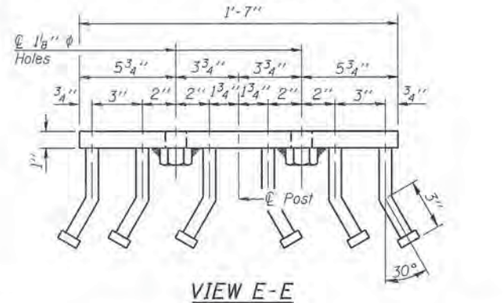
*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	——

T = Total movement at expansion joint as shown on the design plans.



VIEW E-E

Notes:
For multi-span bridges, sufficient ¼" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	596

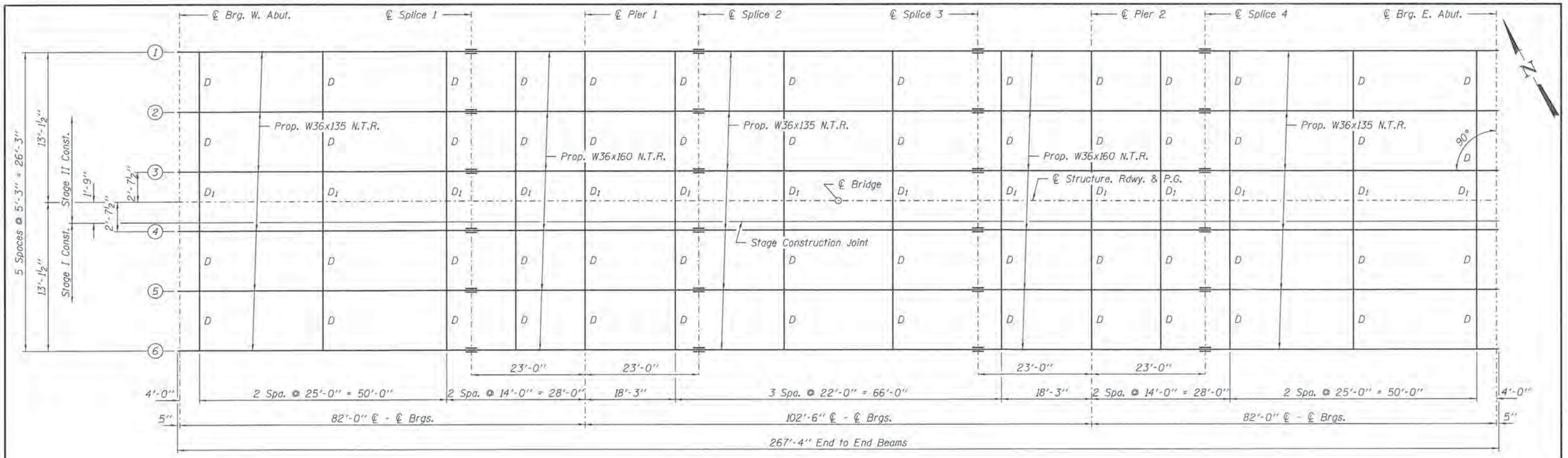
(6'-3" Maximum Post Spacing) (5" minimum to 7⅛" maximum CWS thickness)

FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3405 www.hlrengineering.com 184.002959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE SM
STRUCTURE NO. 039-3277
SHEET NO. 18 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	33
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



PLAN

Location	℄ Brg. W. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Brg. Splice 3	℄ Pier 2	℄ Splice 4	℄ Brg. E. Abut.
BEAM 1	388.31	388.32	388.32	388.32	388.32	388.32	388.32	388.31
BEAM 2	388.39	388.41	388.41	388.41	388.41	388.41	388.41	388.39
BEAM 3	388.47	388.49	388.49	388.49	388.49	388.49	388.49	388.47
BEAM 4	388.47	388.49	388.49	388.49	388.49	388.49	388.49	388.47
BEAM 5	388.39	388.41	388.41	388.41	388.41	388.41	388.41	388.39
BEAM 6	388.31	388.32	388.32	388.32	388.32	388.32	388.32	388.31

TOP OF WEB ELEVATIONS

(For fabrication only)
(Does not include Dead Load Deflections)

Notes:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.
All beams, diaphragms, connection plates and splices shall be M270 Grade 50W.
For Structural Steel details see sheets 20 & 21 of 29.

3085 STEVENSON DRIVE, SUITE 201
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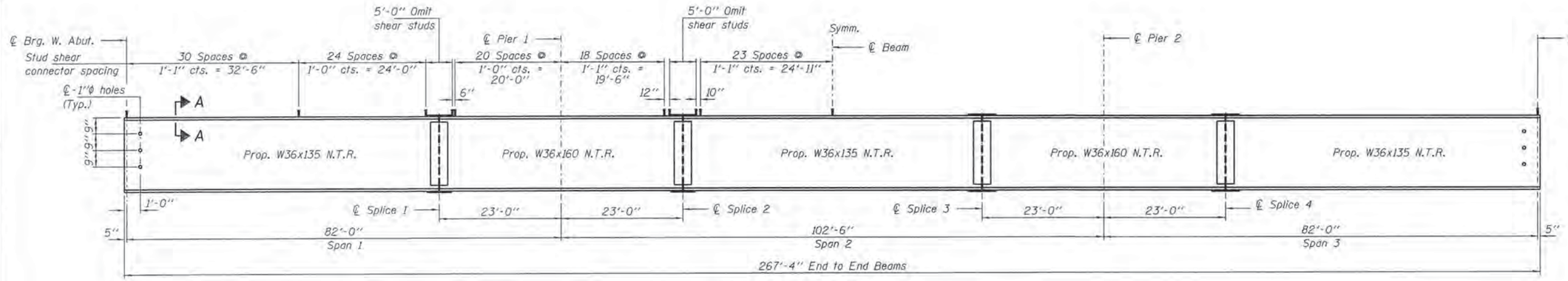
217.546.3400 www.hlrengineering.com
184.005959
ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORPORATION

FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

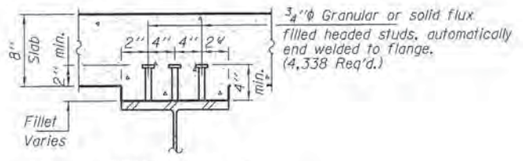
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STRUCTURAL STEEL
STRUCTURE NO. 039-3277
SHEET NO. 19 OF 29 SHEETS

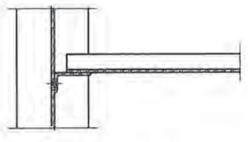
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	34
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



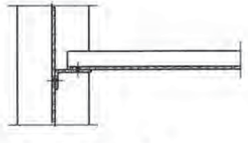
BEAM ELEVATION



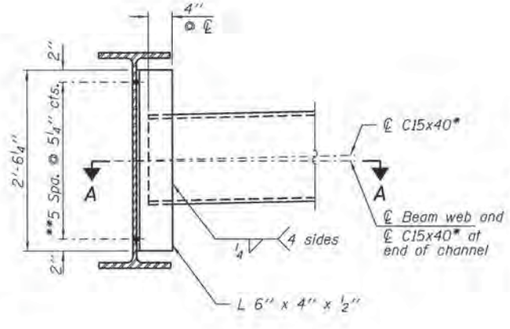
SECTION A-A



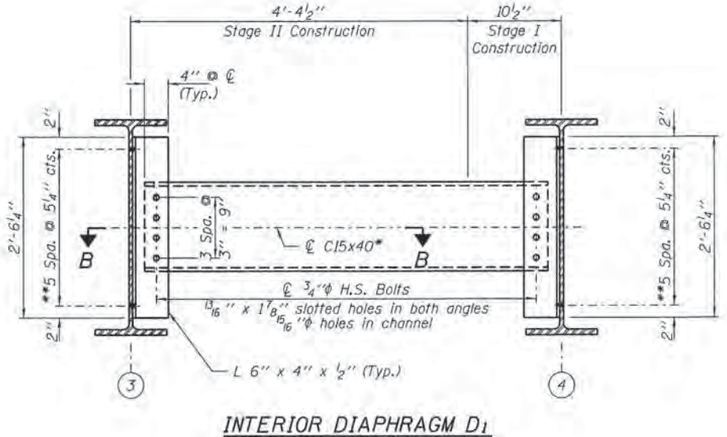
SECTION A-A



SECTION B-B



INTERIOR DIAPHRAGM D
(56 Required)



INTERIOR DIAPHRAGM D1
(14 Required)

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
All beams, diaphragms, connection plates and splices shall be M270 Grade 50W.
*Alternate channels (C15X50) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**¾"ϕ HS bolts, 15/16"ϕ holes.
Two hardened washers required for each set of oversized holes.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Bolts in slots shall be finger tight until the second stage pour is complete and fully tightened after completion of the deck pour for Stage II Construction. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing main members.

3085 STEVENSON DRIVE, SUITE 201
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ILLINOIS PROFESSIONAL DESIGN FIRM
ILK / PS / SS CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 039-3277
SHEET NO. 20 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	35
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I_s	(in^4)	7,800	9,760	7,800
$I_c(n)$	(in^4)	20,821	24,431	20,821
$I_c(3n)$	(in^4)	15,281	17,833	15,281
$I_c(cr)$	(in^4)	9,077	12,141	9,077
S_s	(in^3)	438	542	438
$S_c(n)$	(in^3)	649	775	649
$S_c(3n)$	(in^3)	585	698	585
$S_c(cr)$	(in^3)	420	577	420
DC1	(k/')	0.72	0.75	0.72
M_{DC1}	('k)	317	654	290
DC2	(k/')	0.04	0.04	0.04
M_{DC2}	('k)	16	31	15
DW	(k/')	0.27	0.27	0.27
M_{DW}	('k)	119	236	111
M_{L+IM}	('k)	839	961	817
M_U (Strength I)	('k)	2,063	2,892	1,978
$\phi_f M_n$	('k)	3,240	-	3,263
f_s DC1	(ksi)	8.7	14.5	7.9
f_s DC2	(ksi)	0.3	0.6	0.3
f_s DW	(ksi)	2.4	4.9	2.3
f_s (L+IM)	(ksi)	15.5	20.0	15.1
f_s (Service II)	(ksi)	31.6	46.0	30.2
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	61.2	-
$\phi_f F_n$	(ksi)	-	-	-
V_f	(k)	25.2	-	27.2

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier 1 or 2
R_{DC1}	(k)	21.4	74.9
R_{DC2}	(k)	1.1	3.6
R_{DW}	(k)	8.0	27.2
R_{L+IM}	(k)	65.3	116.7
R_{Total}	(k)	95.8	222.4

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_U (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

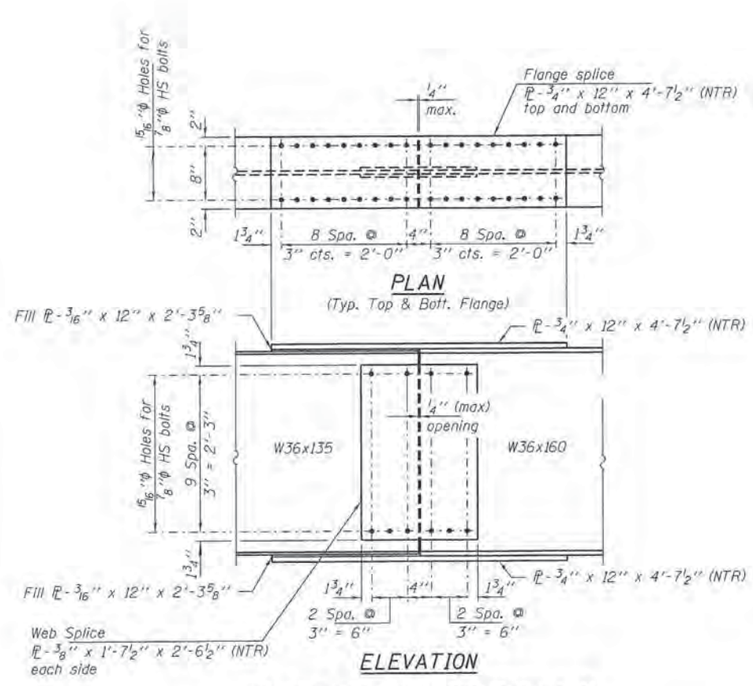
$0.95R_hF_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{L+IM} and R_{L+IM} include the effects of centrifugal force and superelevation.

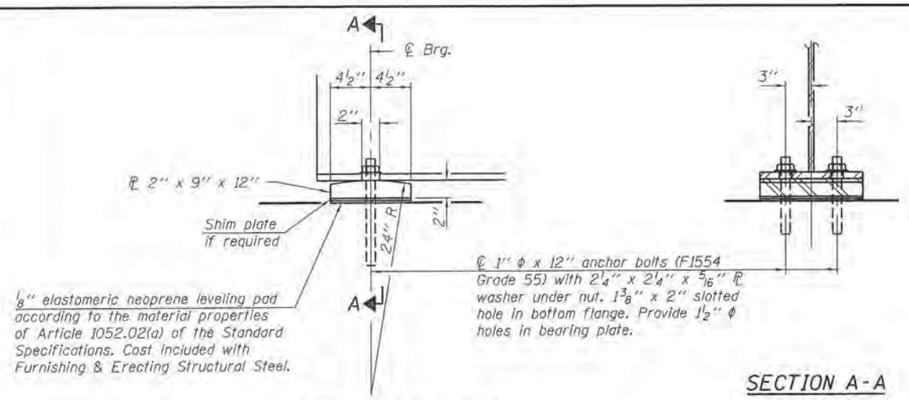


SPLICE DETAIL (LOCATIONS 1-4)
(24 Required)

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.
All beams and splices shall be M270 Grade 50W.

FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.009959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	STRUCTURAL STEEL DETAILS STRUCTURE NO. 039-3277 SHEET NO. 21 OF 29 SHEETS
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -	

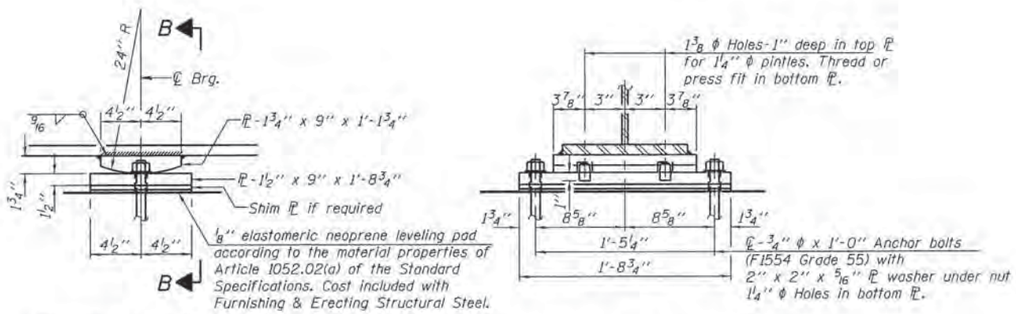
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	36
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



ELEVATION AT ABUTMENT

SECTION A-A

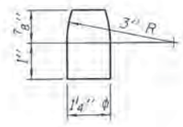
FIXED BEARING AT ABUTMENTS
(12 required)



ELEVATION AT PIER

SECTION B-B

FIXED BEARING AT PIERS 1 & 2
(12 required)



PINTLE

Notes:

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The coresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

The structural steel plates of the fixed bearings, including pintles, shall conform to the requirements of AASHTO M270 Grade 50W.

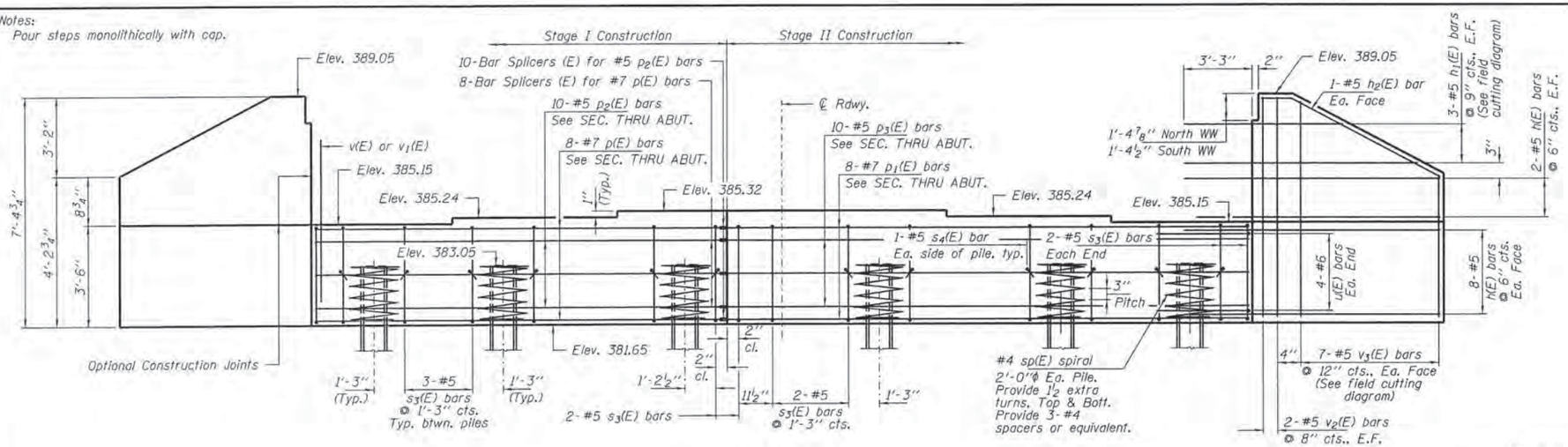
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

BILL OF MATERIAL

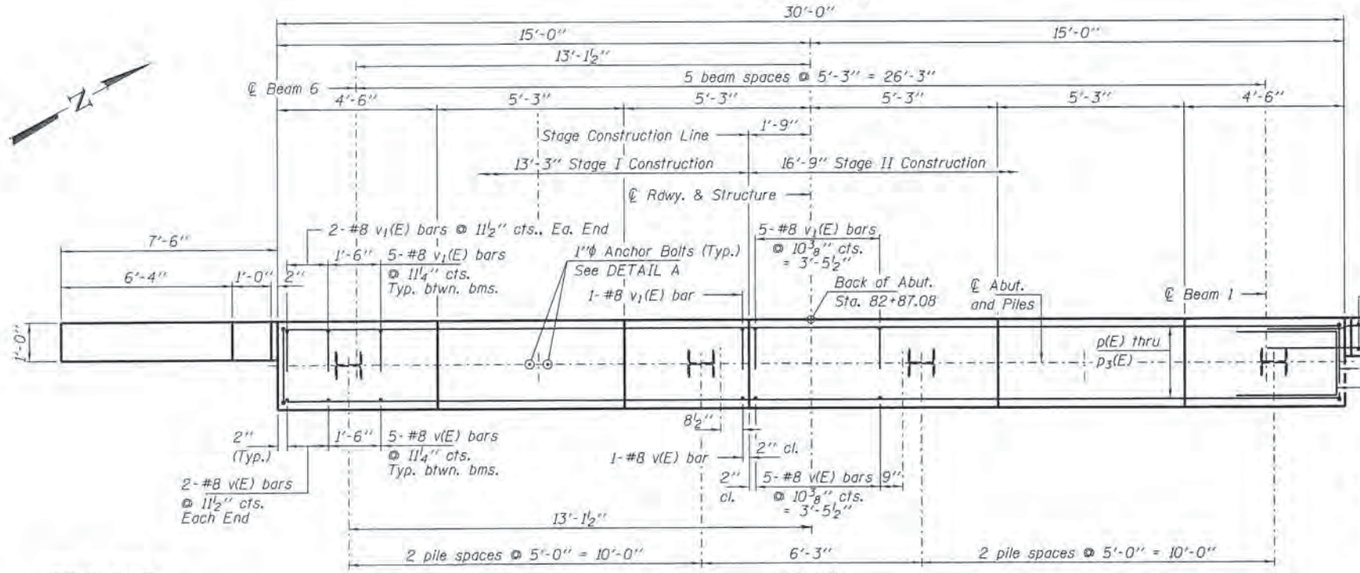
Item	Unit	Total
Anchor Bolts, ¾"	Each	24
Anchor Bolts, 1"	Each	24

FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	BEARING DETAILS STRUCTURE NO. 039-3277	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2053 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	37
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -		SHEET NO. 22 OF 29 SHEETS			ILLINOIS FED. AID PROJECT BRS-0869(106)		

Notes:
Pour steps monolithically with cap.

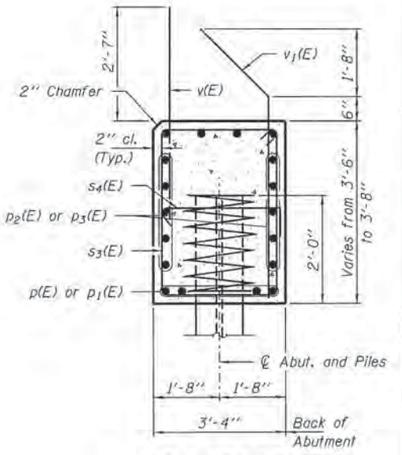


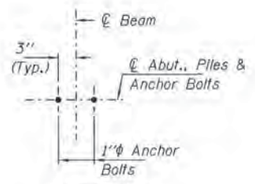
ELEVATION



PLAN

SEC. THRU ABUT.





DETAIL A

WEST ABUTMENT BILL OF MATERIAL

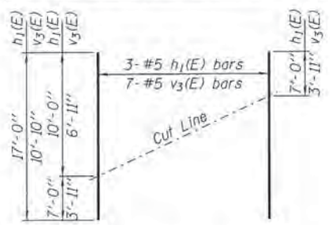
Bar	No.	Size	Length	Shape
h(E)	40	#5	10'-9"	
h1(E)	6	#5	17'-0"	
h2(E)	4	#5	7'-9"	
p(E)	8	#7	12'-11"	
p1(E)	8	#7	16'-5"	
p2(E)	10	#5	12'-11"	
p3(E)	10	#5	16'-5"	
s3(E)	21	#5	13'-3"	
s4(E)	12	#5	4'-0"	
sp(E)	6	#4	2'-0"	
u(E)	8	#6	10'-7"	
v(E)	30	#8	5'-11"	
v1(E)	30	#8	6'-2"	
v2(E)	8	#5	7'-0"	
v3(E)	14	#5	10'-10"	
Structure Excavation		Cu. Yd.	94	
Concrete Structures		Cu. Yd.	16.5	
Reinforcement Bars, Epoxy Coated		Pound	3,300	
Bar Splicers		Each	18	
Furnishing Steel Piles HP14x117		Foot	245	
Driving Piles		Foot	245	
Test Pile Steel HP14x117		Each	1	
Pile Shoes		Each	5	

*Length is height of spiral.

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 26 of 29.
For details of Bars Splicers, see sheet 27 of 29.

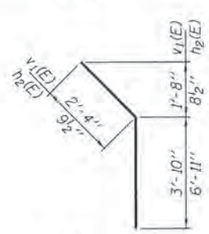
PILE DATA

Type: Steel HP14x117 with Pile Shoes
Nominal Required Bearing: 929 Kips/pile
Factored Resistance Available: 510 Kips/pile
Est. Length: 49'
No. Production Piles: 5
No. Test Piles: 1

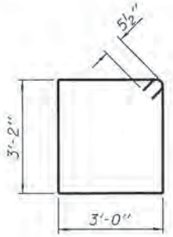


FIELD CUTTING DIAGRAM

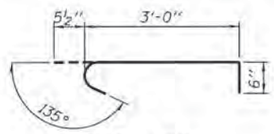
Order $h_1(E)$ and $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face.



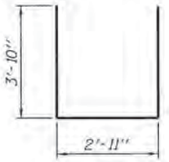
BAR $v_1(E)$ & $h_2(E)$



BAR $s_3(E)$



BAR $s_4(E)$



BAR $u(E)$

AI-2440S-0 8-31-12

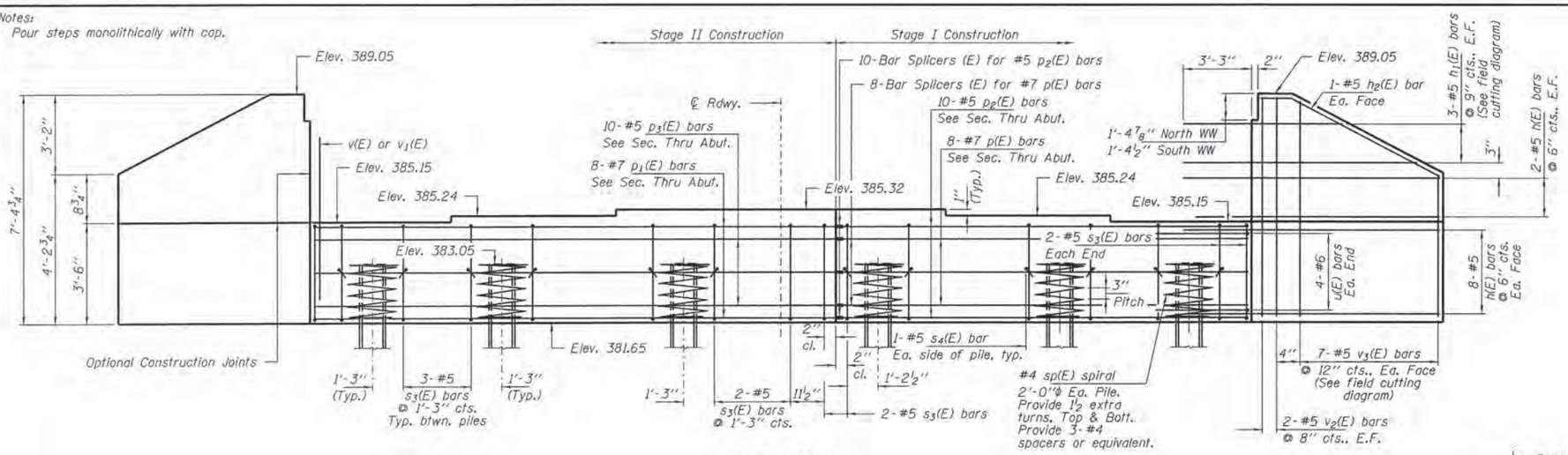
FILE NAME = 130348-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com (84.000151) ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -	
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -	

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

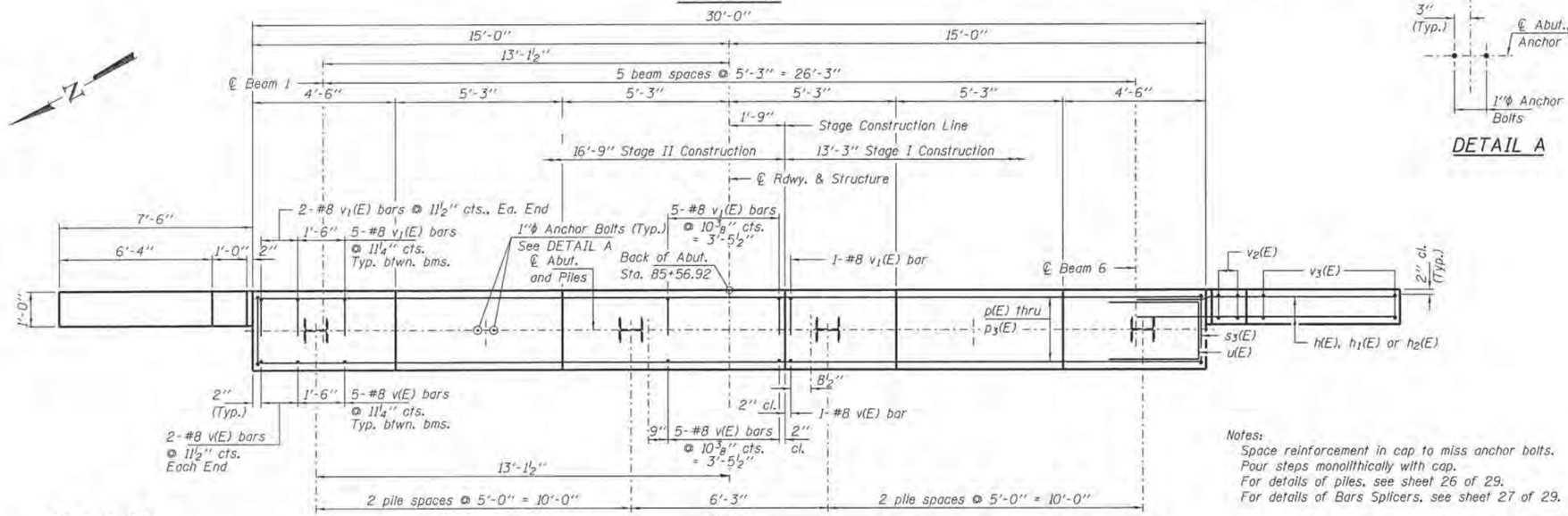
WEST ABUTMENT
STRUCTURE NO. 039-3277
SHEET NO. 23 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	38
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-D869(106)		

Notes:
Pour steps monolithically with cap.

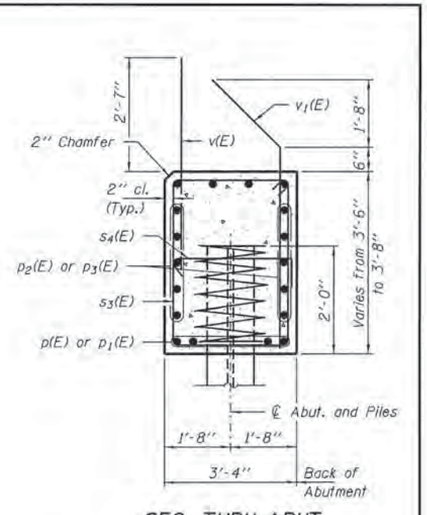


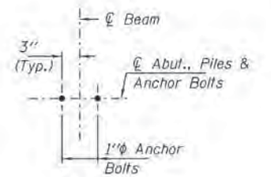
ELEVATION



PLAN

SEC. THRU ABUT.

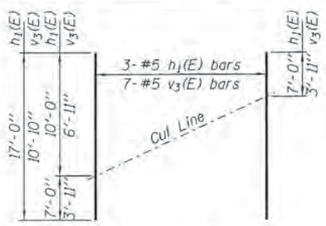




DETAIL A

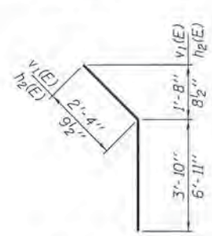
PILE DATA

Type: Steel HP14x117 with Pile Shoes
Nominal Required Bearing: 929 Kips/pile
Factored Resistance Available: 510 Kips/pile
Est. Length: 62'
No. Production Piles: 5
No. Test Piles: 1

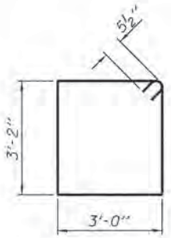


FIELD CUTTING DIAGRAM

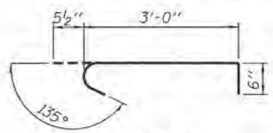
Order $h_1(E)$ and $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face.



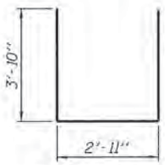
BAR $v_1(E)$ & $h_2(E)$



BAR $s_3(E)$



BAR $s_4(E)$



BAR u(E)

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#5	10'-9"	
$h_1(E)$	6	#5	17'-0"	
$h_2(E)$	4	#5	7'-9"	
p(E)	8	#7	12'-11"	
$p_1(E)$	8	#7	16'-5"	
$p_2(E)$	10	#5	12'-11"	
$p_3(E)$	10	#5	16'-5"	
$s_3(E)$	21	#5	13'-3"	
$s_4(E)$	12	#5	4'-0"	
*sp(E)	6	#4	2'-0"	
u(E)	8	#6	10'-7"	
v(E)	30	#8	5'-11"	
$v_1(E)$	30	#8	6'-2"	
$v_2(E)$	8	#5	7'-0"	
$v_3(E)$	14	#5	10'-10"	
Structure Excavation			Cu. Yd.	94
Concrete Structures			Cu. Yd.	16.5
Reinforcement Bars, Epoxy Coated			Pound	3,300
Bar Splicers			Each	18
Furnishing Steel Piles HP14x117			Foot	310
Driving Piles			Foot	310
Test Pile Steel HP14x117			Each	1
Pile Shoes			Each	5

*Length is height of spiral.

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 26 of 29.
For details of Bars Splicers, see sheet 27 of 29.

AI-2440S-0 8-31-12

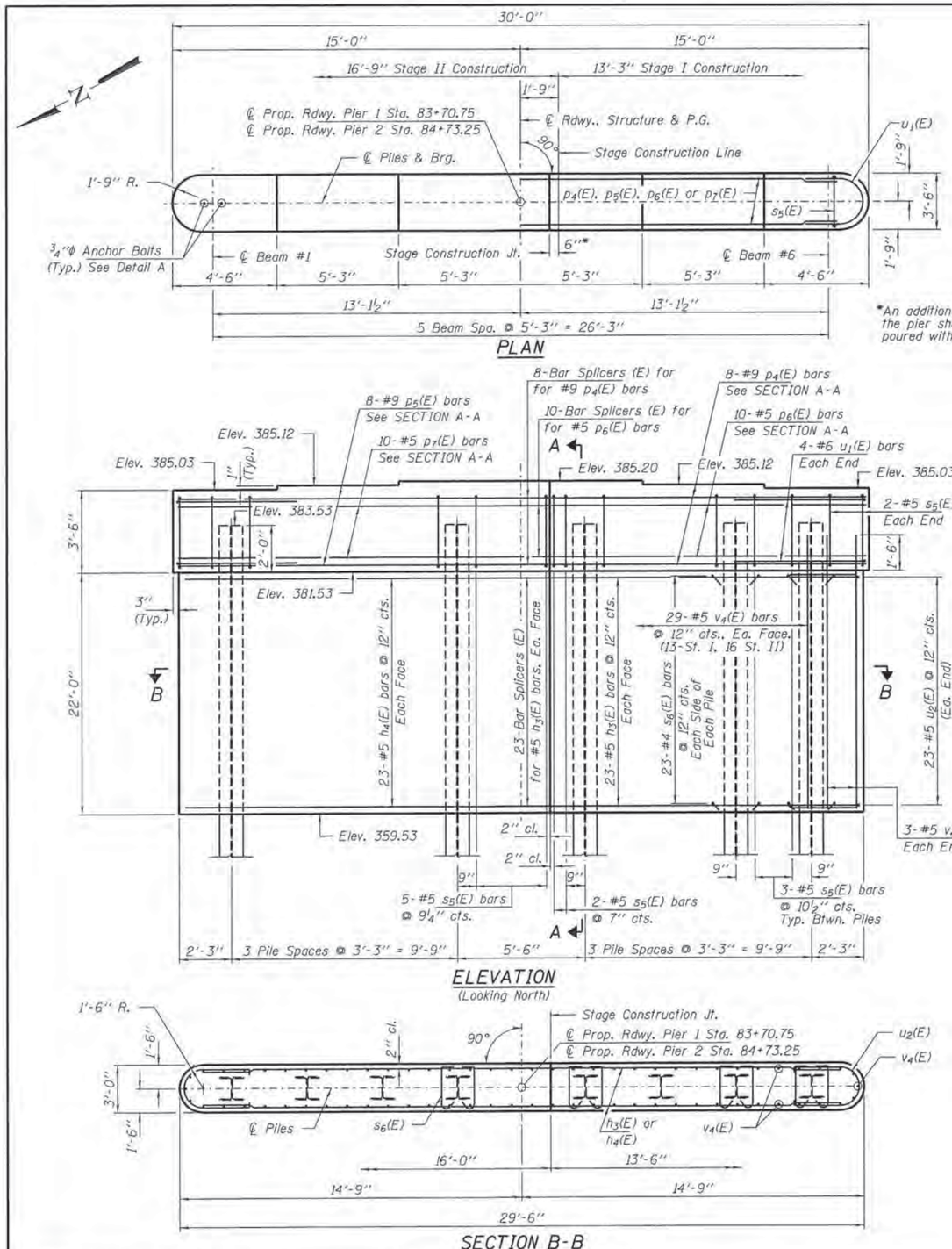
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3450 www.hlrengineering.com
184.002959
ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORPORATION

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

EAST ABUTMENT
STRUCTURE NO. 039-3277
SHEET NO. 24 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	39
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT BRS-0869(106)		



Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 26 of 29.
For details of Bars Splicers, see sheet 27 of 29.

PILE DATA

Type: Steel HP14x117 with Pile Shoes
Nominal Required Bearing: 929 Kips/pile
Factored Resistance Available: 401 Kips/pile
Est. Length: 49' (Pier 1)
62' (Pier 2)
No. Production Piles: 14
No. Test Piles: 2 (1-Pier 1, 1-Pier 2)

2 PIERS
BILL OF MATERIAL

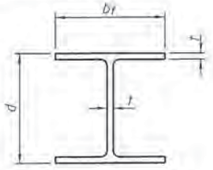
Bar	No.	Size	Length	Shape
$h_3(E)$	92	#5	12'-0"	
$h_4(E)$	92	#5	14'-6"	
$p_4(E)$	16	#9	12'-0"	
$p_5(E)$	16	#9	14'-6"	
$p_6(E)$	20	#5	12'-0"	
$p_7(E)$	20	#5	14'-6"	
$s_5(E)$	58	#5	13'-7"	
$s_6(E)$	736	#4	3'-9"	
$u_1(E)$	16	#6	14'-11"	
$u_2(E)$	92	#5	9'-11"	
$v_4(E)$	128	#5	23'-6"	
Cofferdam Excavation		Cu. Yd.	328	
Concrete Structures		Cu. Yd.	164.8	
Reinforcement Bars, Epoxy Coated		Pound	11,650	
Bar Splicers		Each	128	
Furnishing Steel Piles HP14x117		Foot	777	
Driving Piles		Foot	777	
Test Pile Steel HP14x117		Each	2	
Pile Shoes		Each	14	

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.005559 ILLINOIS PROFESSIONAL DESIGN FIRM LS I PE I SE CORPORATION		CHECKED - D.W.T.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

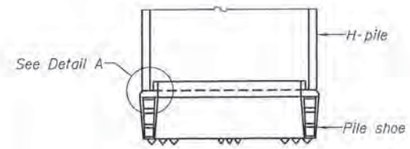
PIERS
STRUCTURE NO. 039-3277
SHEET NO. 25 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	40
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		

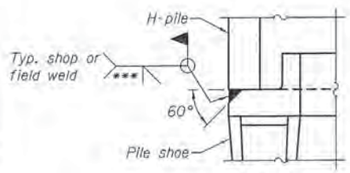


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''

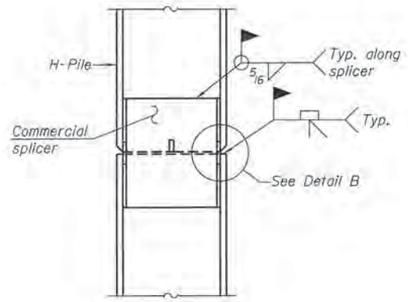


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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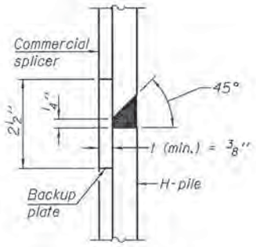
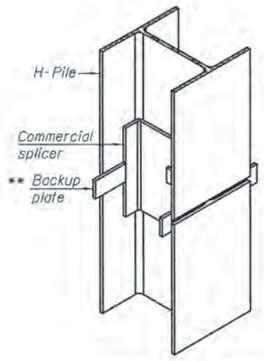
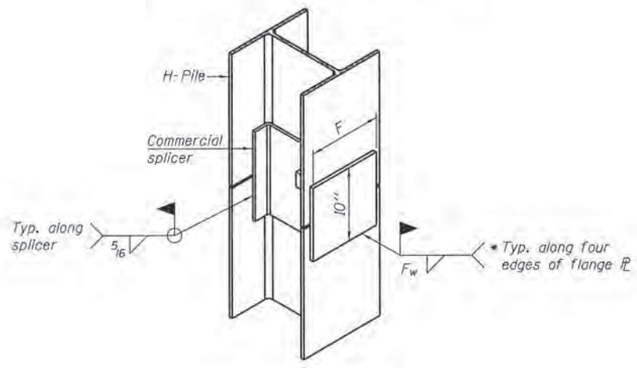


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



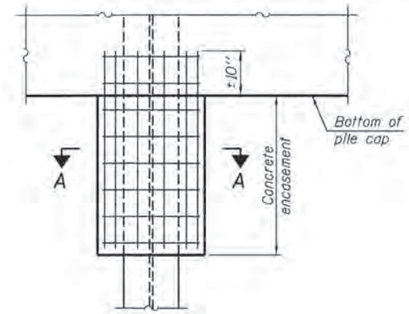
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼'' from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



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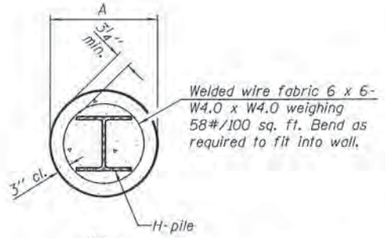
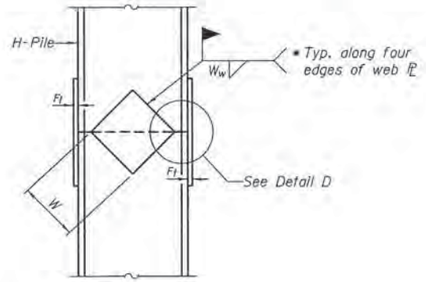


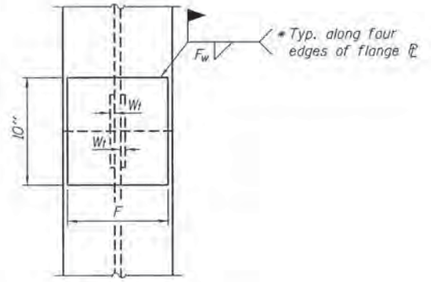
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

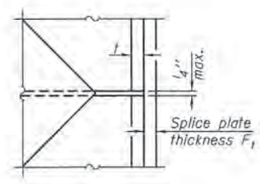
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

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

F-HP 1-27-12

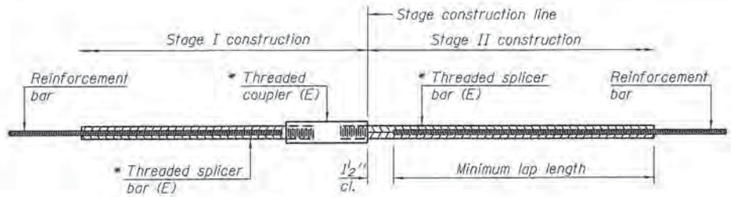
FILE NAME = 130340-sht-bridge.dgn
USER NAME =
PLOT SCALE =
PLOT DATE = 4/6/2015
3083 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com
184.005959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

DESIGNED -	S.M.S.	REVISED -	
CHECKED -	D.W.T.	REVISED -	
DRAWN -	D.A.B.	REVISED -	
CHECKED -	M.D.C.	REVISED -	

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

HP PILE DETAILS
STRUCTURE NO. 039-3277
SHEET NO. 26 OF 29 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	41
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT BRS-0869(106)			



STANDARD BAR SPLICER ASSEMBLY

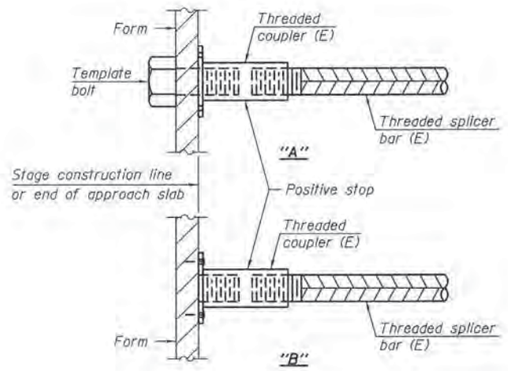
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

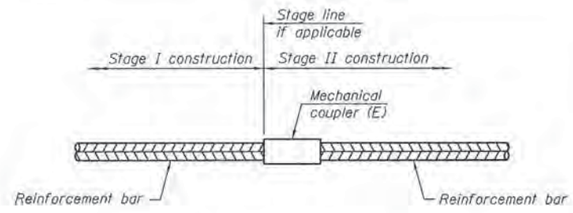
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Top of slab	#5	460	3
Bottom of slab	#5	322	3
Diaphragm	#6	8	6
Approach Slab	#4	62	3
Appr. Slab Footing	#5	80	3
Abutments	#7	16	6
Abutments	#5	20	6
Piers	#9	16	6
Piers	#5	112	6



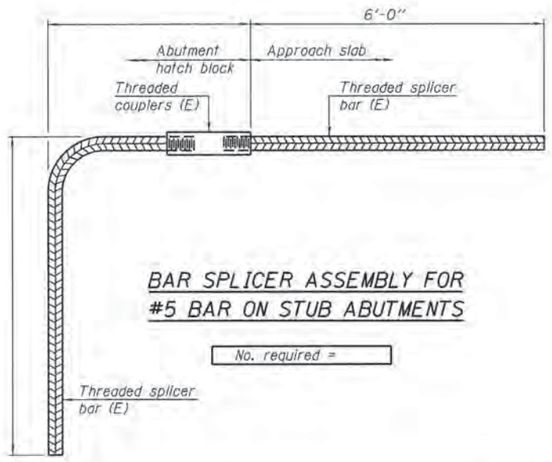
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 8-31-12

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 039-3277
3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.585.3490 www.hrgreen.com		CHECKED - D.W.T.	REVISED -		SHEET NO. 27 OF 29 SHEETS
HLR 184.000156 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -		

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	42
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT BRS-0869(106)		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 2

FAS 869-CH 14 Over Little Muddly River

Route: FAS 869-CH 14 Structure Number: 039-3000 Date: 10/2/2006
Section Bored By: Bryan Keller
County: Jackson Location: NE.1/4 SEC 1 21-7-1 Checked By: Rob Graeff

Boring No 1-3
Station 27' W. of W. Abut
Offset 5' S. CL
Ground Surface 100.2 Ft

Surf Wat Elev: 77.3
Ground Water Elevation
when Drilling 60.7
At Completion
At: Hrs:

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Bituminous Pavement				Very stiff, moist, brown mottled	4	2.7S	22
98.7				grey, Clay A7-6	6		
				73.2			
Stiff, moist to very moist,	1			Stiff, moist, brown mottled	3		
grey, Clay A7-6	3	1.2S	30	grey, Clay A7-6	5	1.0S	24
	3				7		
95.7				70.7			
Medium, very moist, grey, 5.0	2			Very stiff, moist, brown, Silty 30.0	2		
Clay A7-6	4	0.9S	31	Clay to Clay A7-6	5	2.4B	16
	4				7		
93.2				68.2			
Stiff, very moist, grey,	1			Hard, damp to moist, brown,	5		
Clay A7-6	2	1.1S	30	Clay A7-6	9	5.0S	22
	2				12		
90.7							
Stiff, very moist, grey, 10.0	2			35.0	6		
Clay A7-6	4	1.5S	26		16	9.5S	18
	5				27		
	1				7		
	3	1.2B	28		18	7.8S	19
	3				30		
15.0	1			40.0	7		
	4	1.6B	25		21	6.4S	19
	5				28		
	1						
	3	1.3B	27				
	3						
80.7							
Very stiff, moist, brown mottled 20.0	1			45.0	4		
grey, Clay A7-6	3	2.4B	25		9	4.5S	25
	5				10		
78.2							
Stiff, moist, brown mottled	2						
grey, Clay A7-6	3	1.6B	24				
	4						
75.7				50.7			
25.0	2			50.2 50.0	100/6"		

N-Std Pentr Test: 2" OD Sampler,
140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 2

Route: FAS 869-CH 14
Section:
County: Jackson
Date: 10/2/2006

Boring No: 1-3
Station: 27' W. of W. Abut
Offset: 5' S. CL
Ground Surface: 100.2 Ft

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Hard, dry, brown, Sandstone							
Cored from 50.0 ft to 55.0 ft.							
Hard, dry, brown Sandstone							
40% Recovery							
54% RQD							
45.2							
55.0				80.0			
Bottom of hole = 55.0 ft							
Free water observed at 39.5 ft							
Elevation referenced to Center of Existing Strusture at W. Abut Assume d Elevation = 100.0 ft							
To convert "N" values to "N60" values multiply by 1.25.							
60.0				85.0			
65.0				90.0			
70.0				95.0			
75.0				100.0			

N-Std Pentr Test: 2" OD Sampler,
140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 1-S

FILE NAME = 138342-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	BORINGS STRUCTURE NO. 039-3277 SHEET NO. 28 OF 29 SHEETS	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.000859 ILLINOIS PROFESSIONAL DESIGN FIRM LB / PE / SE CORPORATION		CHECKED - D.W.T.	REVISED -			869	10-00163-00-BR	JACKSON	82	43
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -					ILLINOIS FED. AID PROJECT BRS-0869(106)		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 2

FAS 869-CH 14 Over Little Muddiy River
Route: FAS 869-CH 14 Structure Number: 039-3000 Date: 10/2/2006
Section Bored By: Bryan Keller
County: Jackson Location: NE.1/4 SEC # 21-7-1 Checked By: Ron Graeff

Boring No 2-S
Station 24' E. of E Abut
Offset 5' N. CL
Ground Surface 100.3 ft

Surf Wat Elev: 77.3
Ground Water Elevation
when Drilling 65.8
At Completion 68.3
At: Hrs:

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Bituminous Pavement				Medium, very moist, brown mottled grey, Clay A7-6	2	0.8B	33
98.8					2		
				73.3			
Stiff, very moist, grey, Clay A7-6	1			Stiff, moist, brown mottled grey, Clay A7-6	2		
	3	1.2S	25		3	1.8B	27
	3				4		
95.8				70.8			
Medium, very moist, grey, Clay A7-6 5.0	1			Hard, damp, brown, Clay A7-6 30.0	1		
	2	0.9S	28		7	4.3S	24
	3				10		
	1				5		
	2	0.9B	27		10	4.1S	17
	2				13		
				65.8			
10.0	1			Hard, moist to damp, brown, Clay to Silty Clay A7-6 35.0	4		
	2	0.9S	40		11	5.2B	16
	3				15		
88.3				63.3			
Soft, very moist, grey, Clay A7-6	1			Hard, damp to moist, brown, Clay A7-6	5		
	2	0.3B	35		10	4.6S	18
	2				11		
85.8				60.8			
Medium, very moist, grey, Clay A7-6 15.0	1			Hard, moist, brown, Silty Clay to Silty Clay A7-6 with a Sand Layer 40.0	4		
	2	0.9S	38		9	4.2B	16
	4				13		
83.3							
Stiff, very moist to moist, grey, Clay A7-6	1						
	4	1.5B	29				
	4						
80.8				55.8			
Medium, very moist, grey, Silty Clay A7-6 20.0	2			Hard, damp, brown, Clay to Silty Clay A7-6 45.0	5		
	2	0.8B	30		13	5.1B	16
	3				17		
78.3							
Stiff, very moist, grey mottled brown, Clay A7-6	2						
	2	1.4B	27				
	2						
75.8				50.8			
25.0	1			50.0	4		

N-Std Pentr Test: 2" OD Sampler,
140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 2

Route: FAS 869-CH 14
Section:
County: Jackson
Date: 10/2/2006

Boring No: 2-S
Station: 24' E. of E Abut
Offset: 5' N. CL
Ground Surface: 100.3 Ft

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Very stiff, moist, grey, Clay A7-6 with some Gravel	10	3.9S	21				
	16						
45.8							
Very stiff, moist, brown, Clay A7-6 55.0	4			80.0			
	10	3.5S	20				
	11						
40.8							
Hard, dry, grey, Clay Shale 60.0	100/11"			85.0			
35.3							
Hard, dry, grey, Clay shale 35.3 65.0	100/2"			90.0			
Bottom of hole = 65.0 ft							
Free water observed at 34.5 ft.							
Elevation referenced to Center of Existing Struture at W. Abut Assume d Elevation = 100.0 ft							
To convert "N" values to "N60" values multiply by 1.25 70.0				95.0			
75.0				100.0			

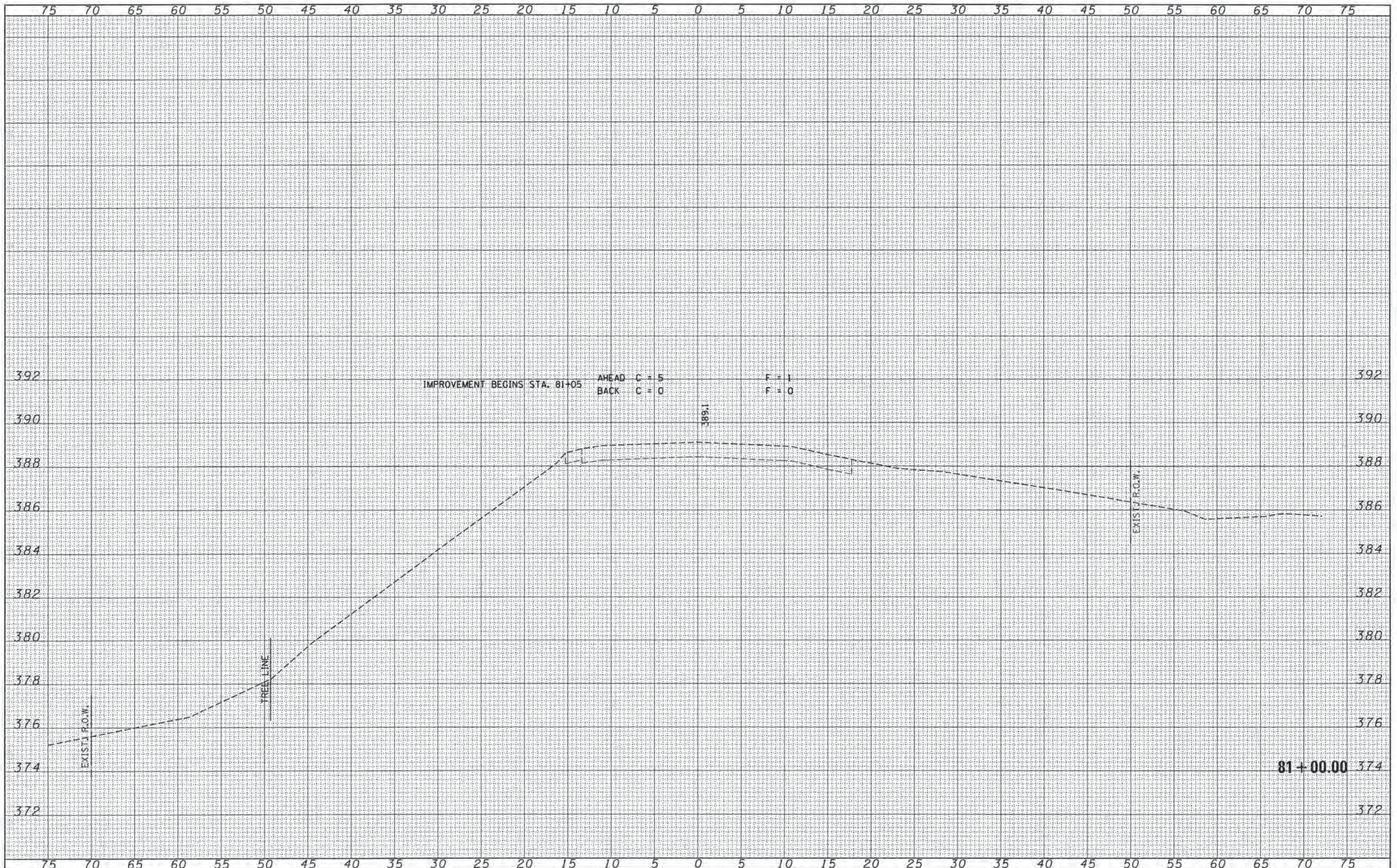
N-Std Pentr Test: 2" OD Sampler,
140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 2-S

FILE NAME = 130340-sht-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	BORINGS STRUCTURE NO. 039-3277 SHEET NO. 29 OF 29 SHEETS	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.000999 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION						869	10-00163-00-BR	JACKSON	82	44
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -					CONTRACT NO. 99519		
	PLOT DATE = 4/6/2015	CHECKED - M.D.C.	REVISED -					ILLINOIS FED. AID PROJECT BRS-0869(106)		

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

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



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	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

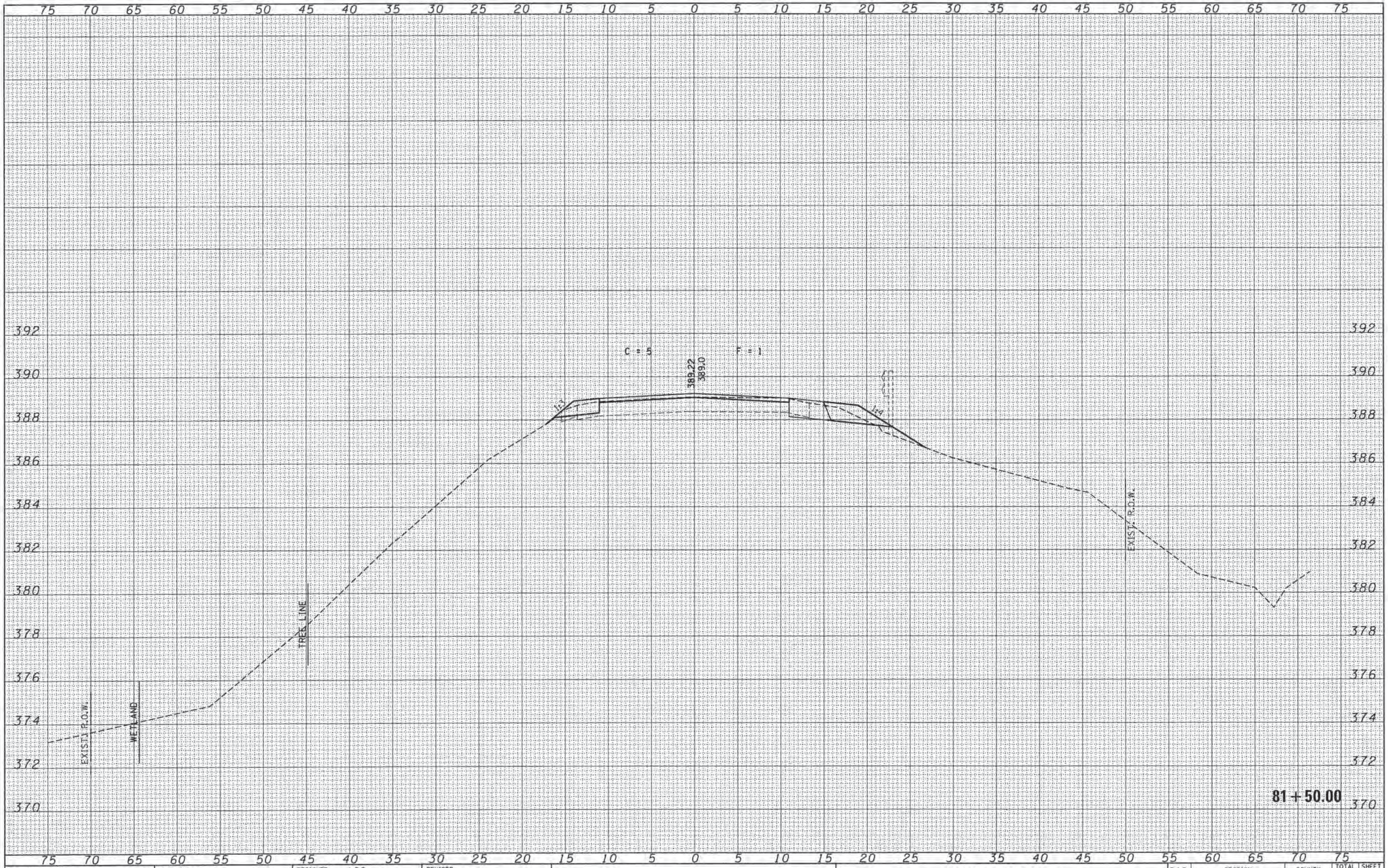
HAMPTON, LENZINI AND RENWICK, INC.
3346 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LR / PS / SB CORP. 184.005855

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Ht2V | SHEET NO. OF SHEETS | STA. 81+00.00 TO STA. 81+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	45
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
HLR	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 81+50.00 TO STA. 81+50.00

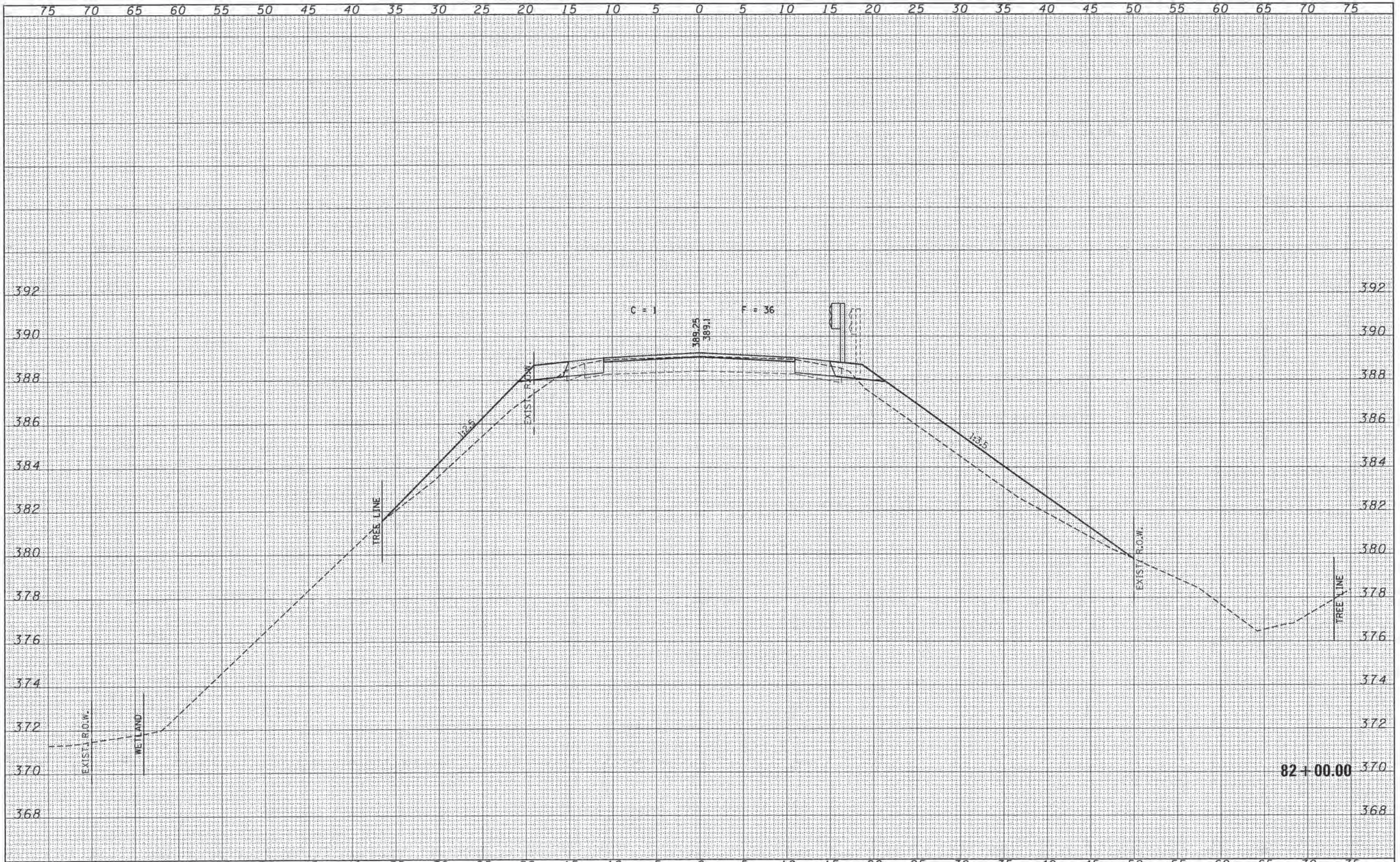
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	46

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT

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

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



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HAMPTON, LENZINI AND RENWICK, INC. 2595 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LB / PE / RS CORP. 184.002659		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 82+00.00 | TO STA. 82+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	47
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	MISC. FT.		
	AREAS		
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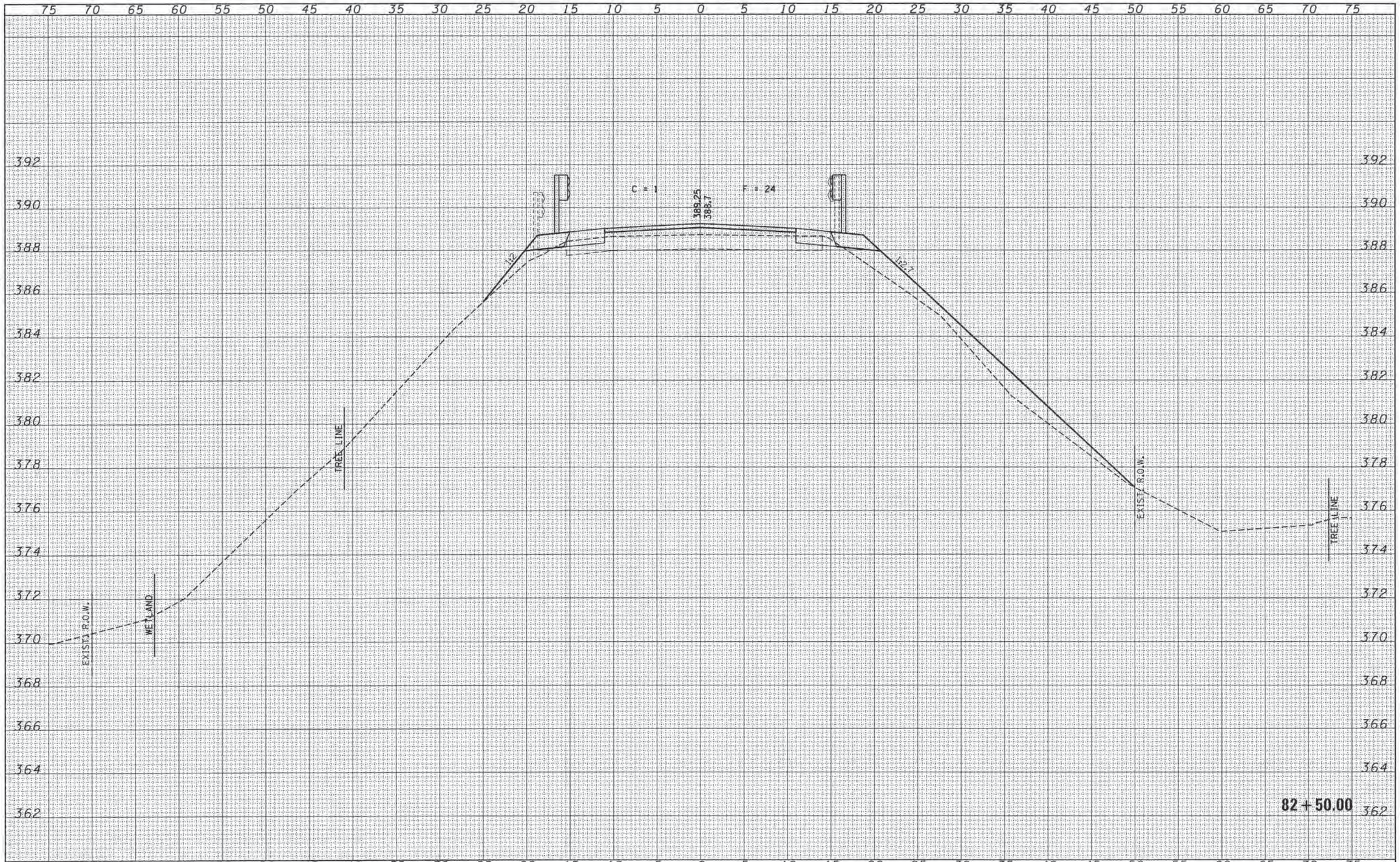

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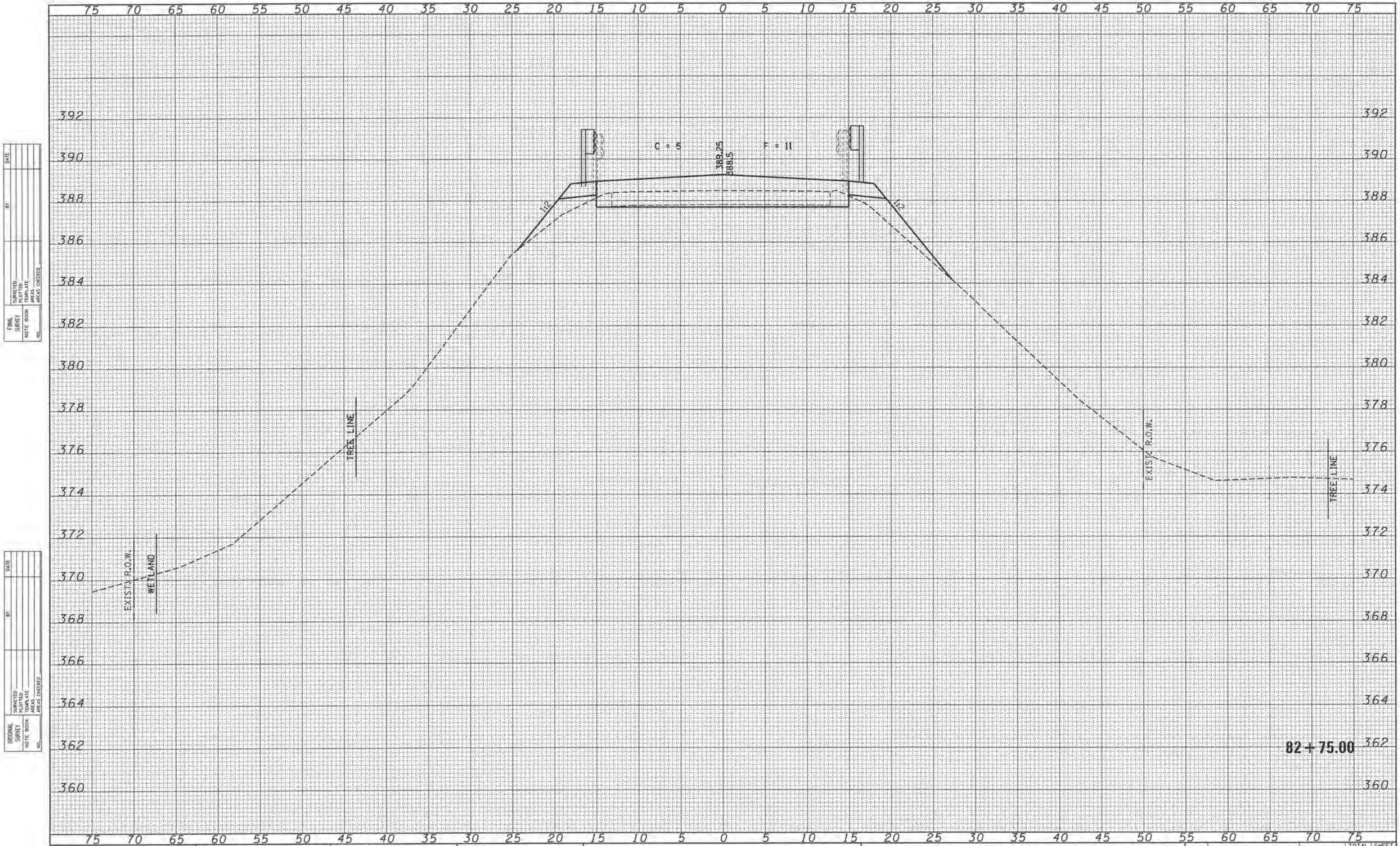
HAMPTON, LENZINI AND RENWICK, INC. 3981 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - T.W.K.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LR / PE / SE CORP. 184.005969	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 82+50.00 TO STA. 82+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	48
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 82+75.00 TO STA. 82+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	49

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT

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

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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	AREAS	
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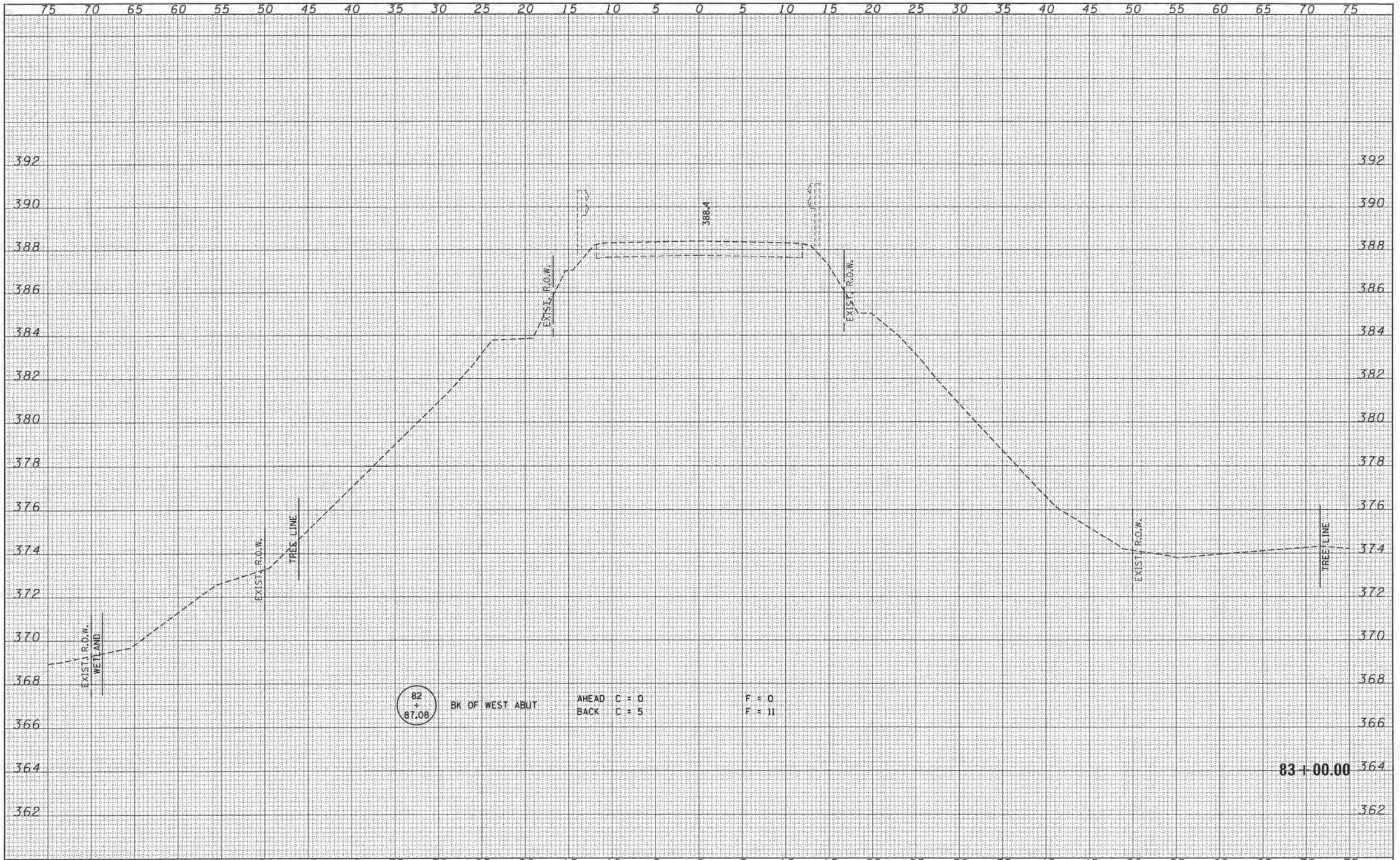

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2395 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS/PE/SE CORP. 184.009905	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

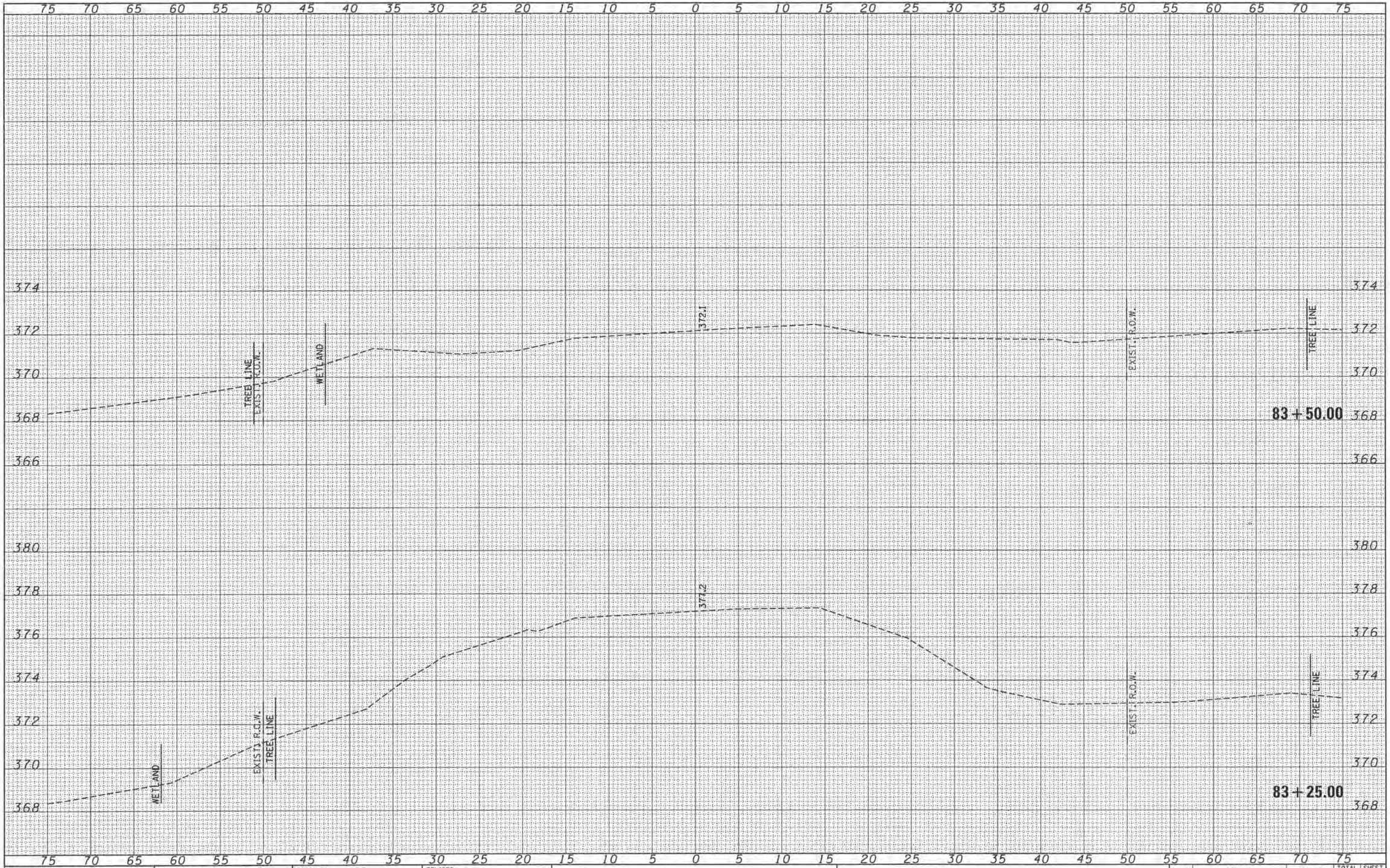
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Ht2V | SHEET NO. OF SHEETS | STA. 83+00.00 TO STA. 83+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	50
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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



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

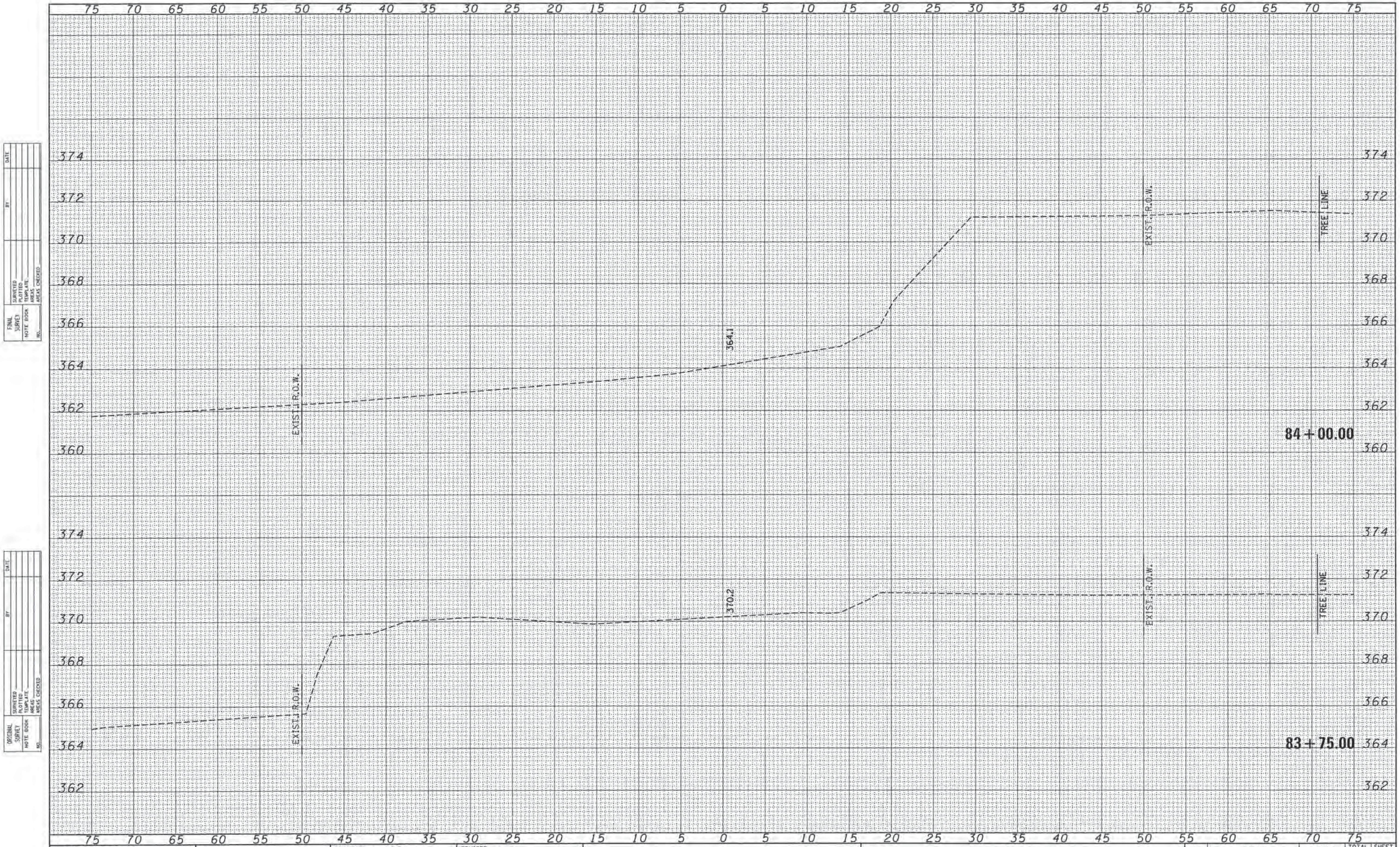
FILE NAME = 130340-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3304 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM 184.005558		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 83+25.00 TO STA. 83+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	51
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 83+75.00 TO STA. 84+00.00

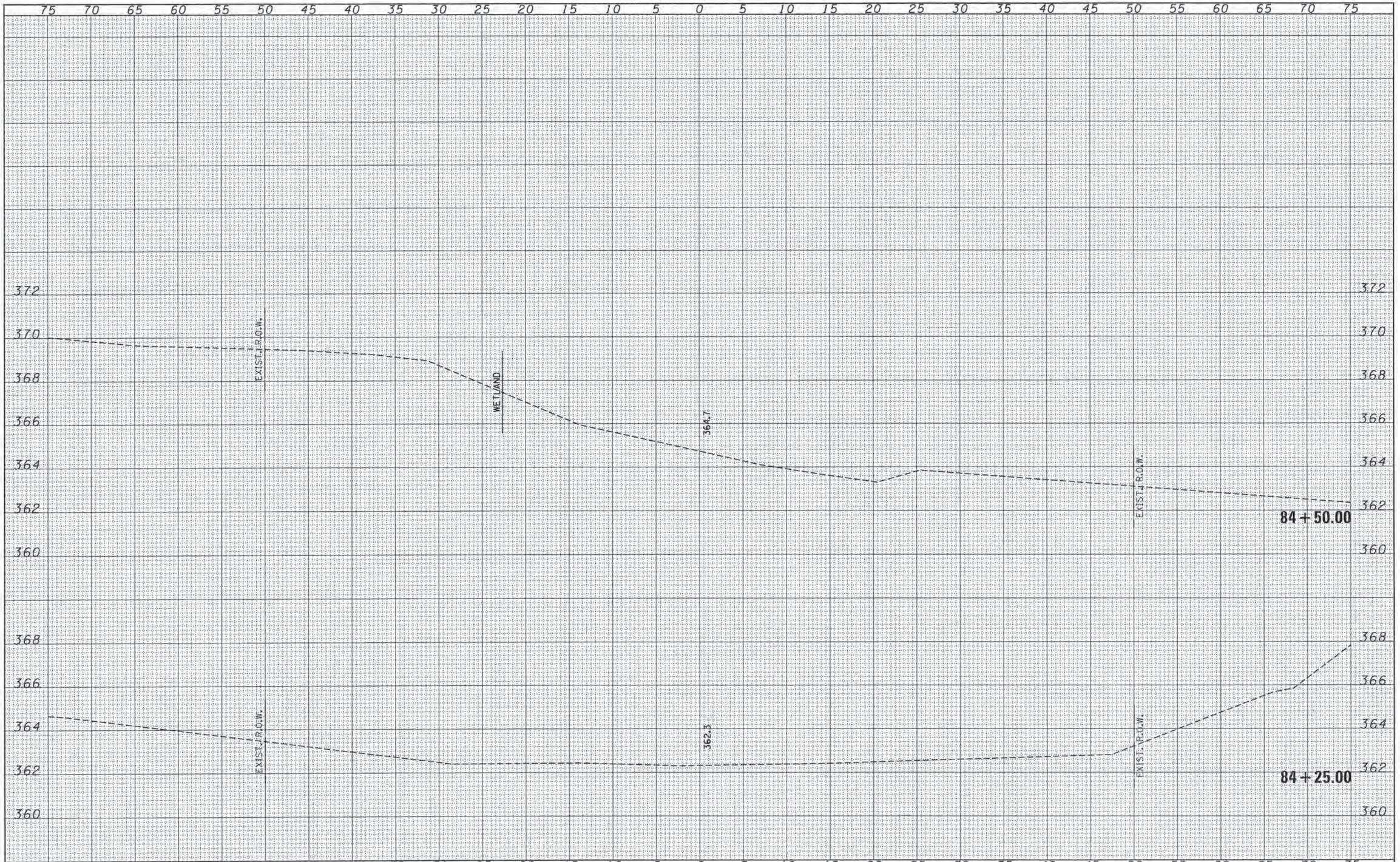
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	52

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT

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

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



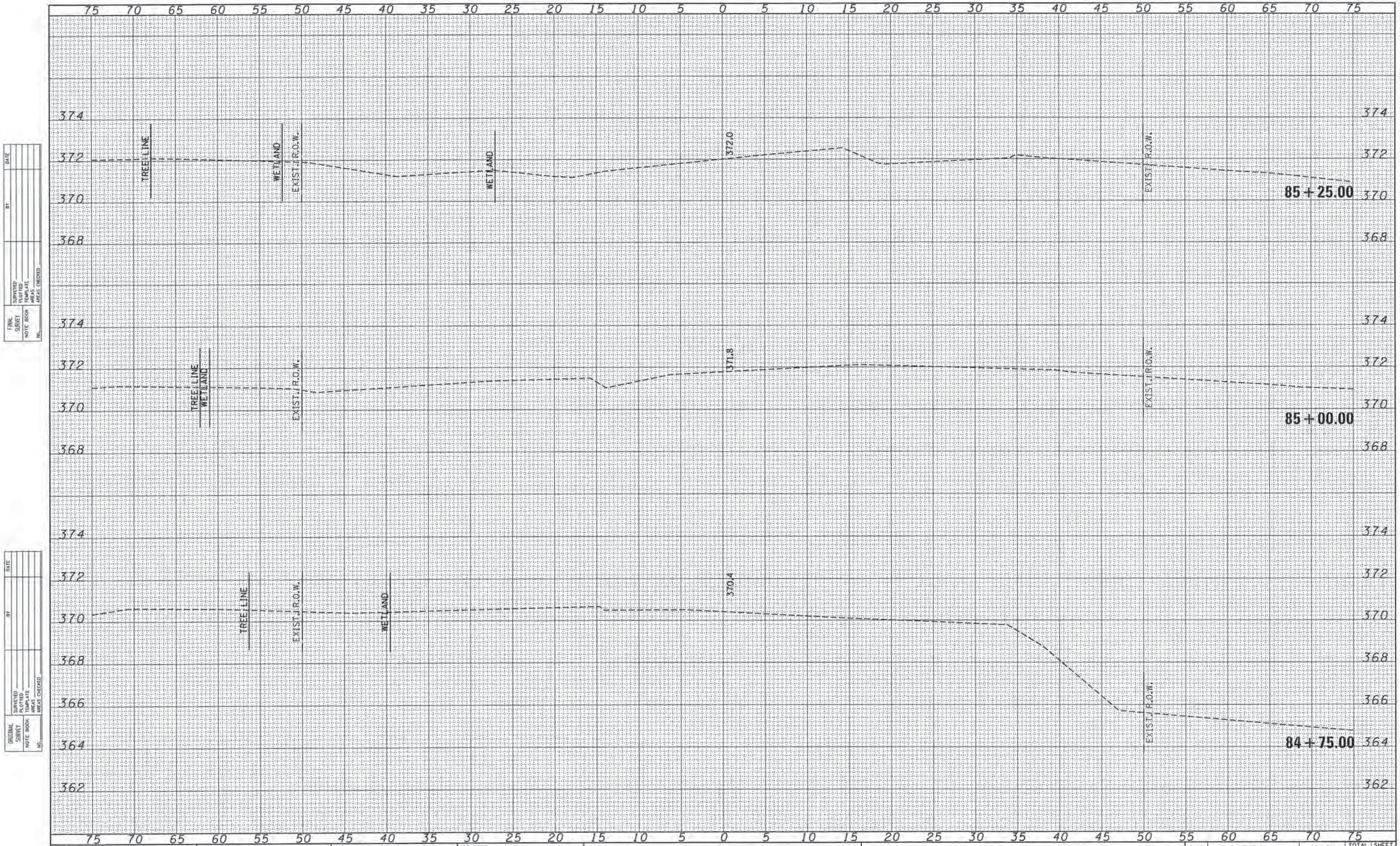
FILE NAME = 130340-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SS CORP. 184.005656		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 84+25.00 TO STA. 84+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	53
		CONTRACT NO. 99519		
ILLINOIS	FED. AID PROJECT			



FILE NAME = 130340-sht-xss.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000906		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

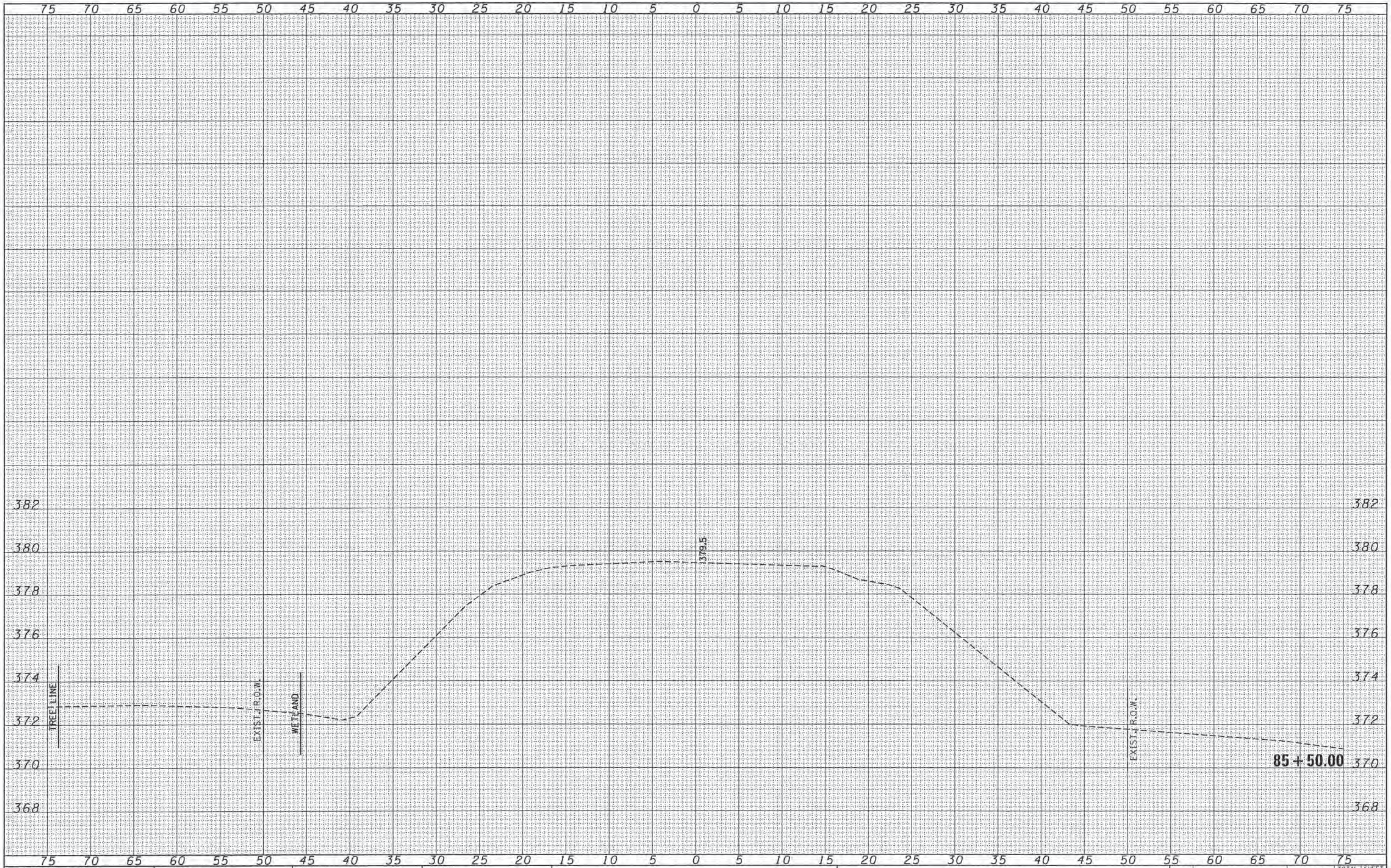
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 84+75.00 TO STA. 85+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	54

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT



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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

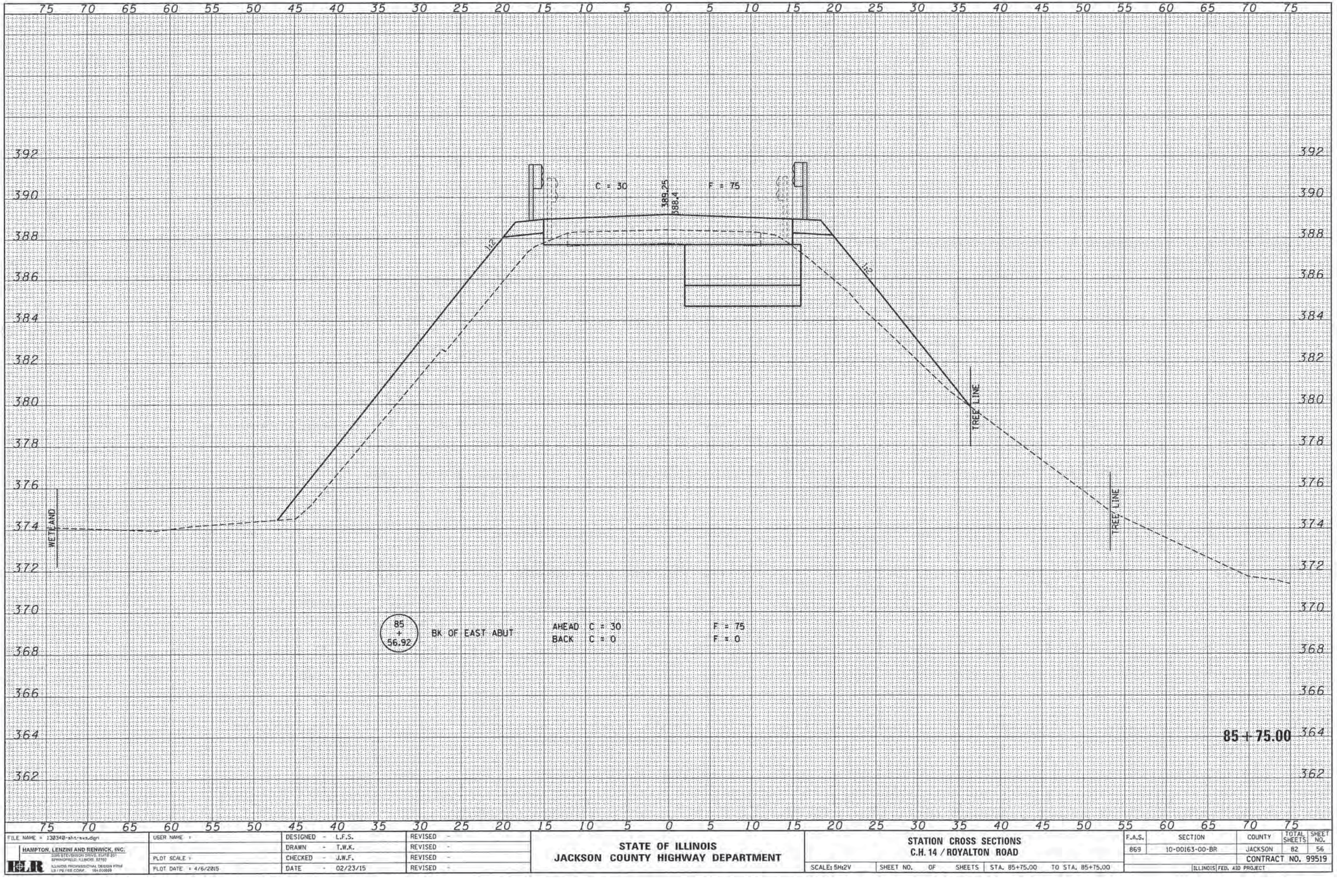
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 85+50.00 TO STA. 85+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	55
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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



FILE NAME = 130340-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3285 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LR / PE / SE CORP. - 184.000899		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

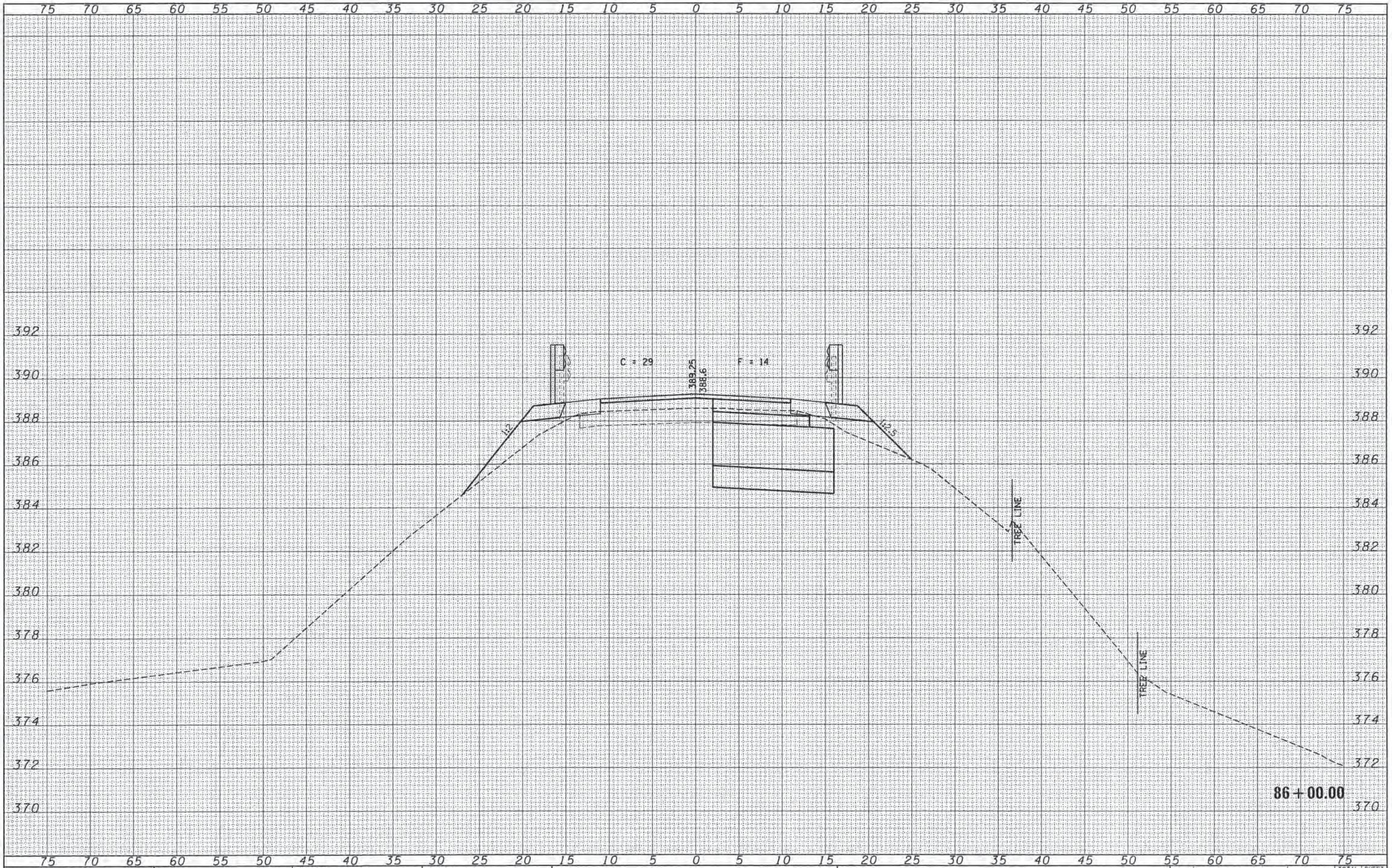
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 85+75.00 TO STA. 85+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	56
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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



FILE NAME = 130348-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

HAMPTON, LENZINI AND RENWICK, INC.
300 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LR / PE / SE CORP. 184.002656

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

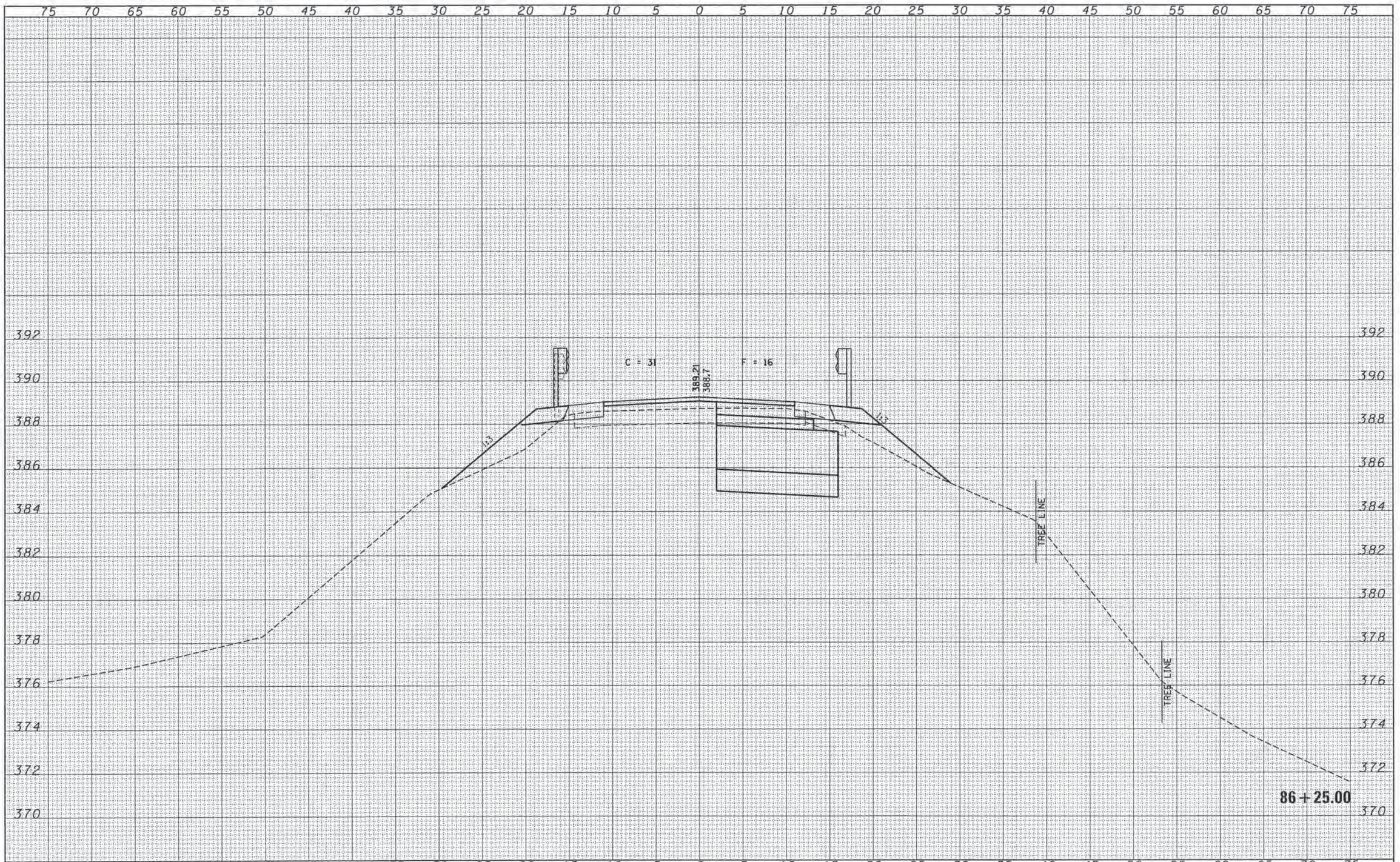
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 86+00.00 TO STA. 86+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	57
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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



FILE NAME = 130348-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

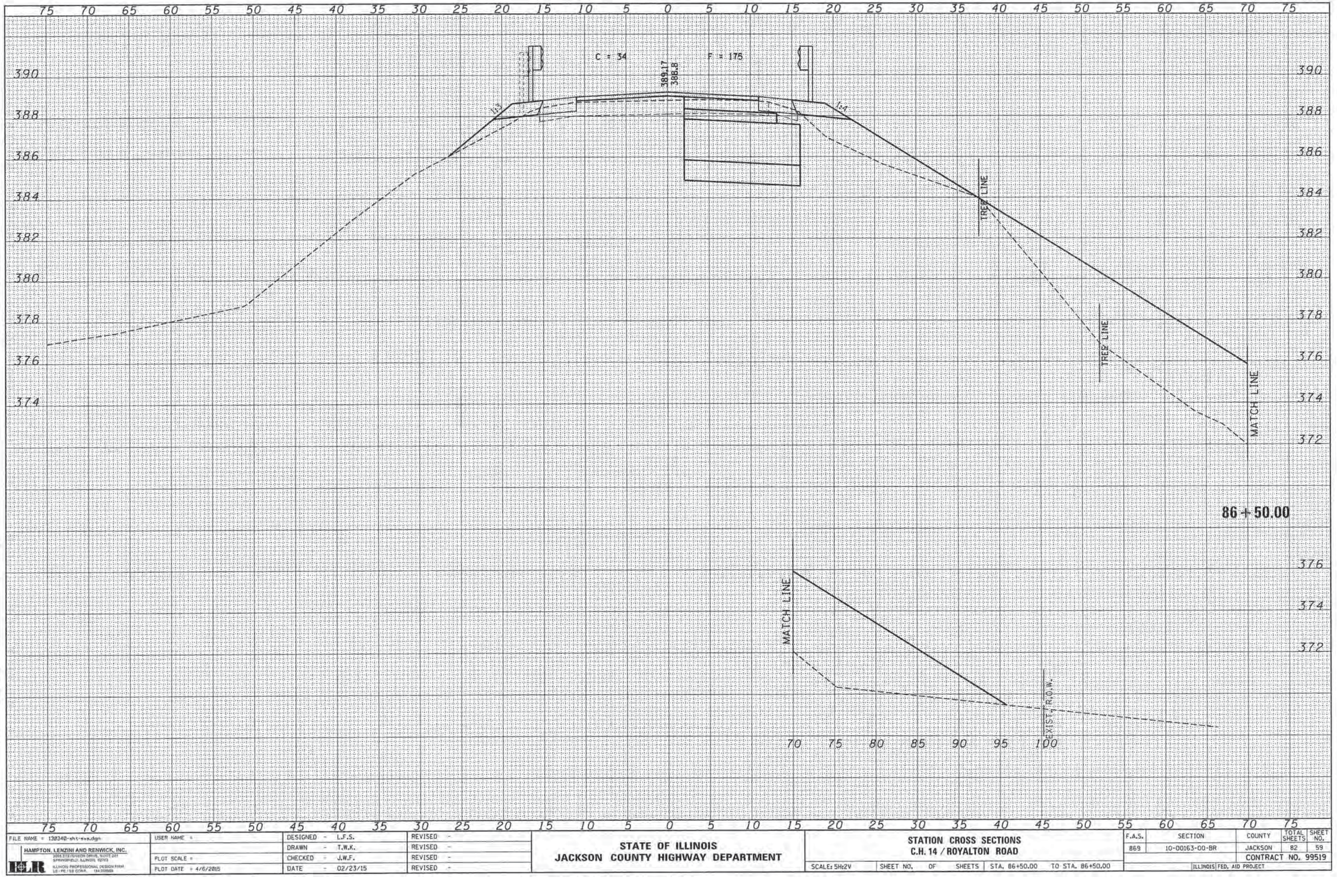
HAMPTON, LENZINI AND RENWICK, INC.
2055 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LD / PE / SE CORP. 184.005058

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 86+25.00 TO STA. 86+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	58
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		



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

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

FILE NAME = 130340-sht-xsa.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

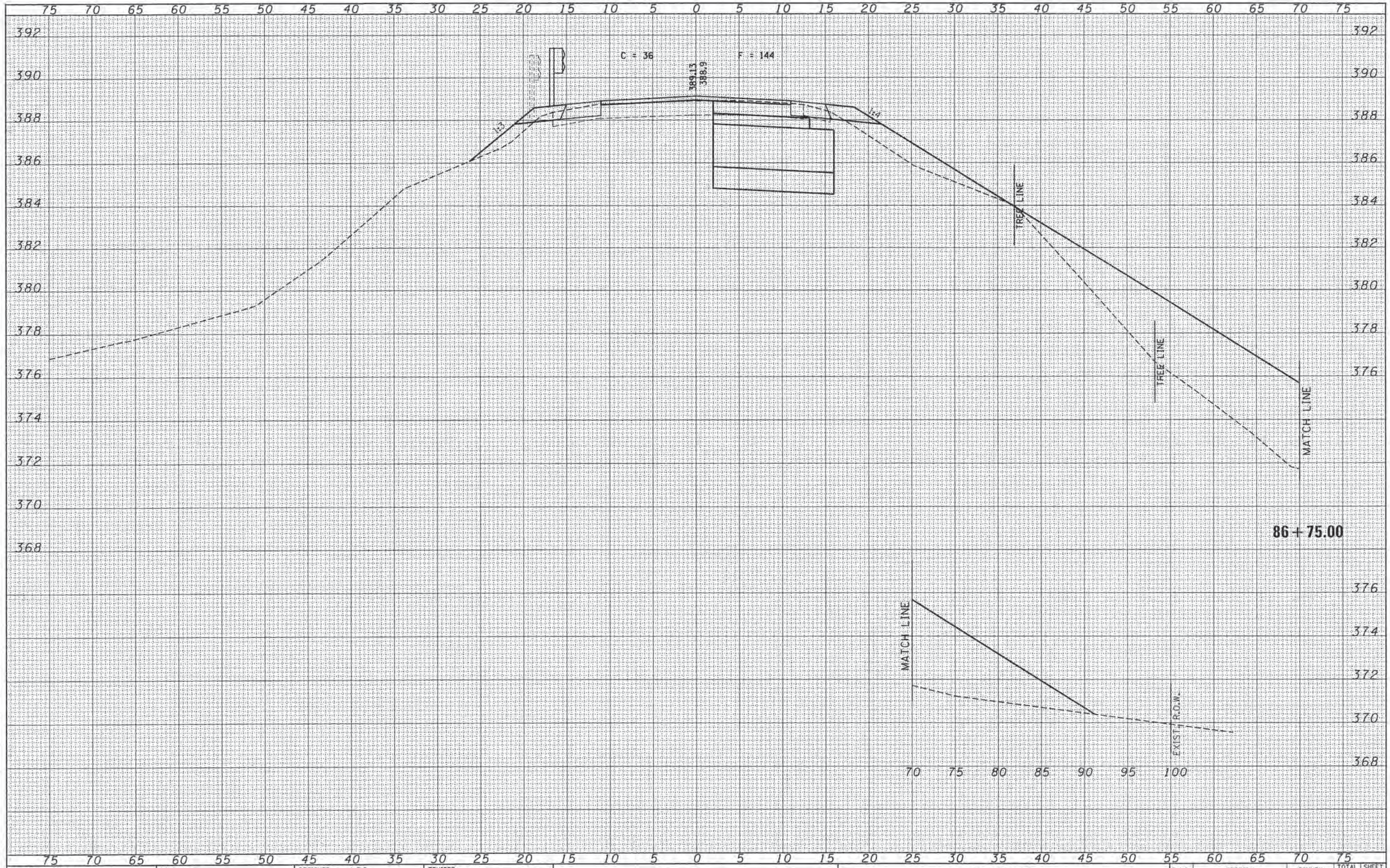
HAMPTON, LENZINI AND RENWICK, INC.
2055 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LD - PE / SE CORP. 184.005569

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 86+50.00 TO STA. 86+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	59
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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

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

FILE NAME = 138340-sht-xsx.dgn

USER NAME =

PLOT SCALE =

PLOT DATE = 4/8/2015

DESIGNED - L.F.S.

DRAWN - T.W.K.

CHECKED - J.W.F.

DATE - 02/23/15

REVISED -

REVISED -

REVISED -

REVISED -

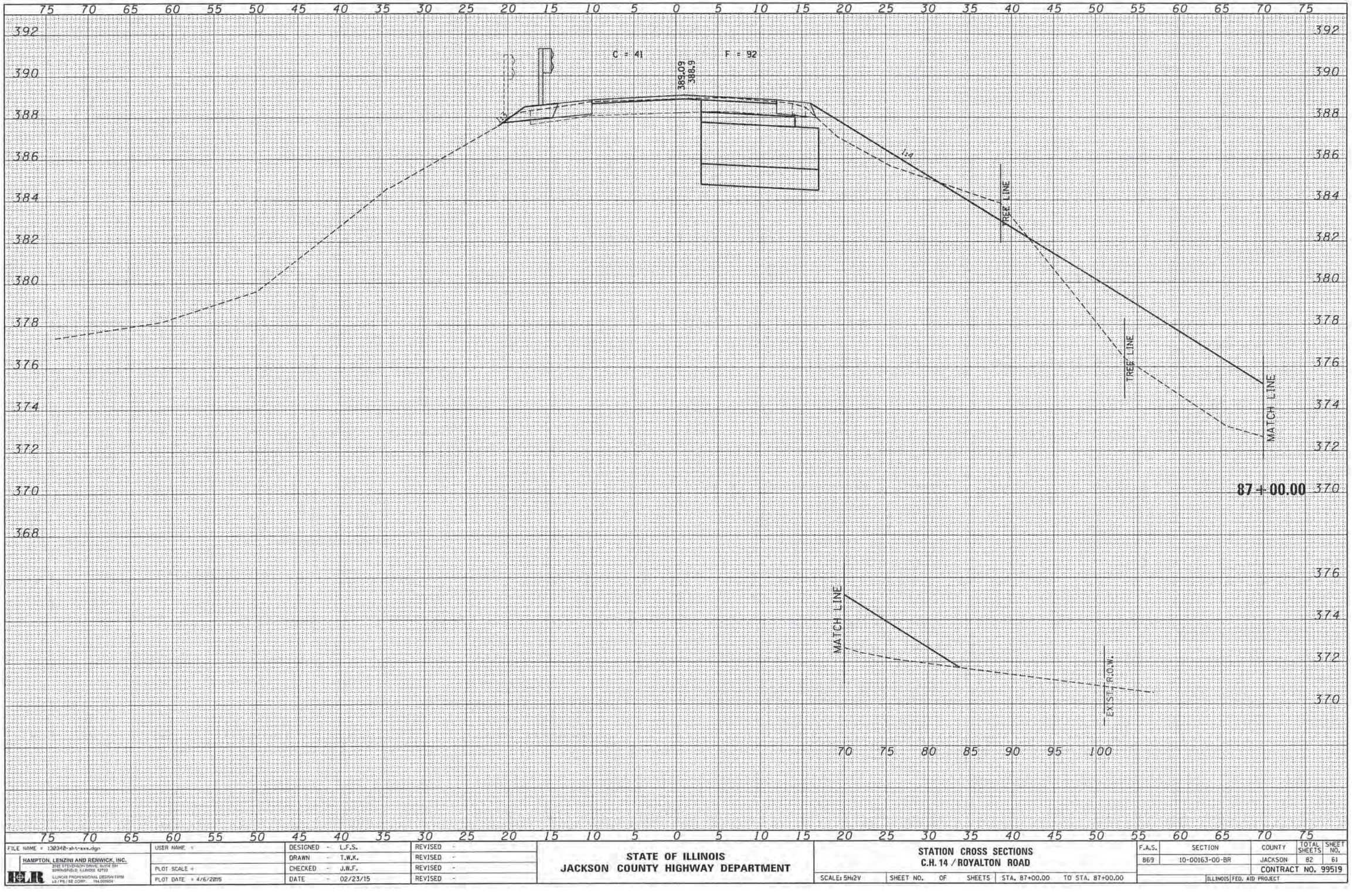
HAMPTON, LENZINI AND RENWICK, INC.
2360 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
184.003958

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hr2V | SHEET NO. OF SHEETS | STA. 86+75.00 | TO STA. 86+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	60
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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

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

FILE NAME = 130342-sht-xss.dgn

USER NAME =

PLOT SCALE =

PLOT DATE = 4/6/2015

DESIGNED - L.F.S.

DRAWN - T.W.K.

CHECKED - J.W.F.

DATE - 02/23/15

REVISED -

REVISED -

REVISED -

REVISED -

HAMPTON, LENZINI AND RENWICK, INC.
3161 STEVENSON DRIVE, SUITE 251
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
184.001859

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 87+00.00 TO STA. 87+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	61
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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

C = 37 F = 207

388.92
388.8

L5

L5

TREE LINE

TREE LINE

MATCH LINE

MATCH LINE

EXIST. R.O.W.

87+50.00

FILE NAME = 130348-sht-ss.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

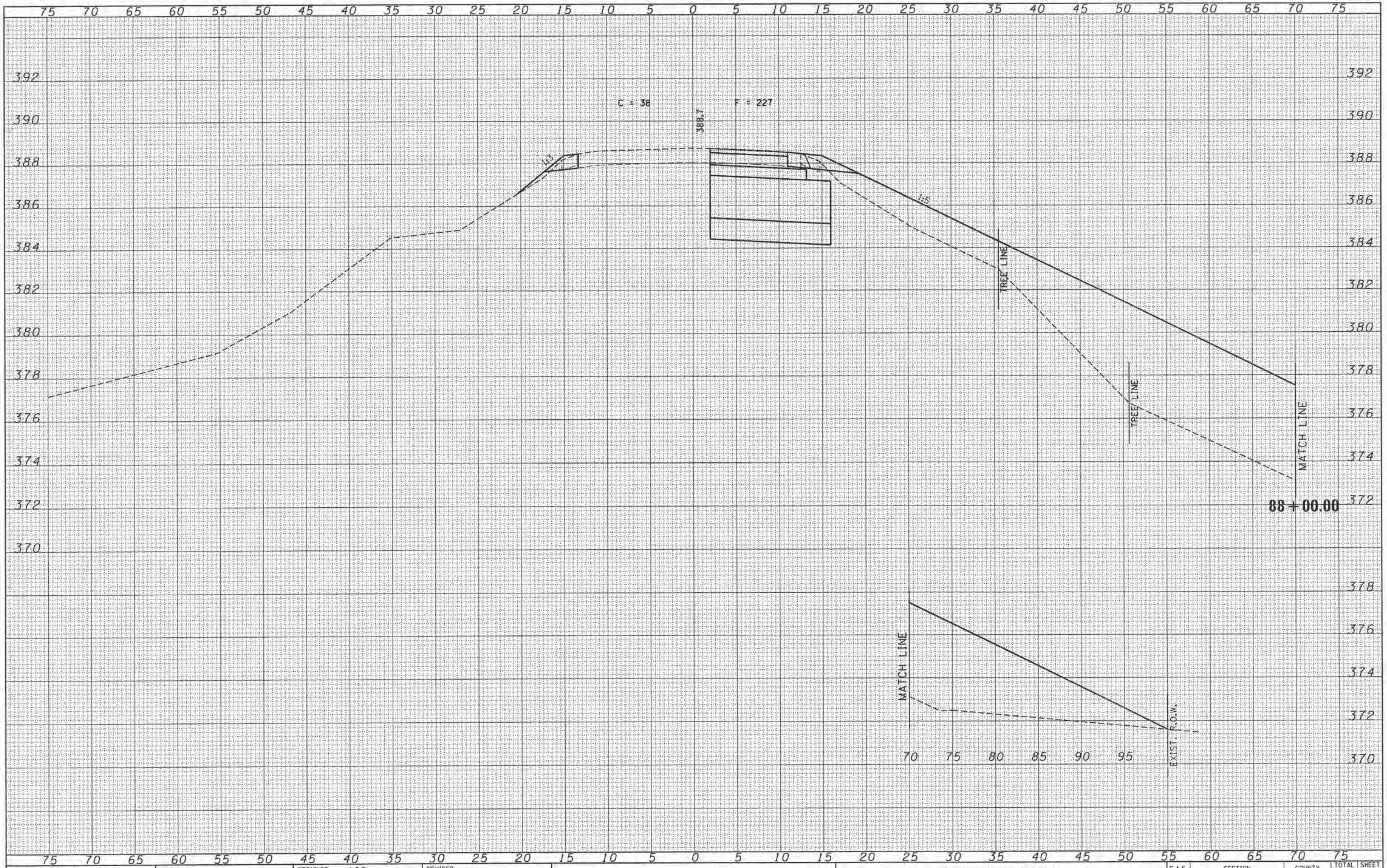
HAMPTON, LENZINI AND RENWICK, INC.
5395 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LR / PB / SE CORP. 184.005959

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 87+50.00 TO STA. 87+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	62
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



FILE NAME = 130340-sht-xxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 14 / ROYALTON ROAD
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -		
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -		
HLR	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -		SCALE: 5H:2V · SHEET NO. OF SHEETS · STA. 88+00.00 TO STA. 88+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	63
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

C = 38

F = 187

388.6

L3

L5

TREE LINE

TREE LINE

MATCH LINE

MATCH LINE

EXIST. R.O.W.

88 + 50.00

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

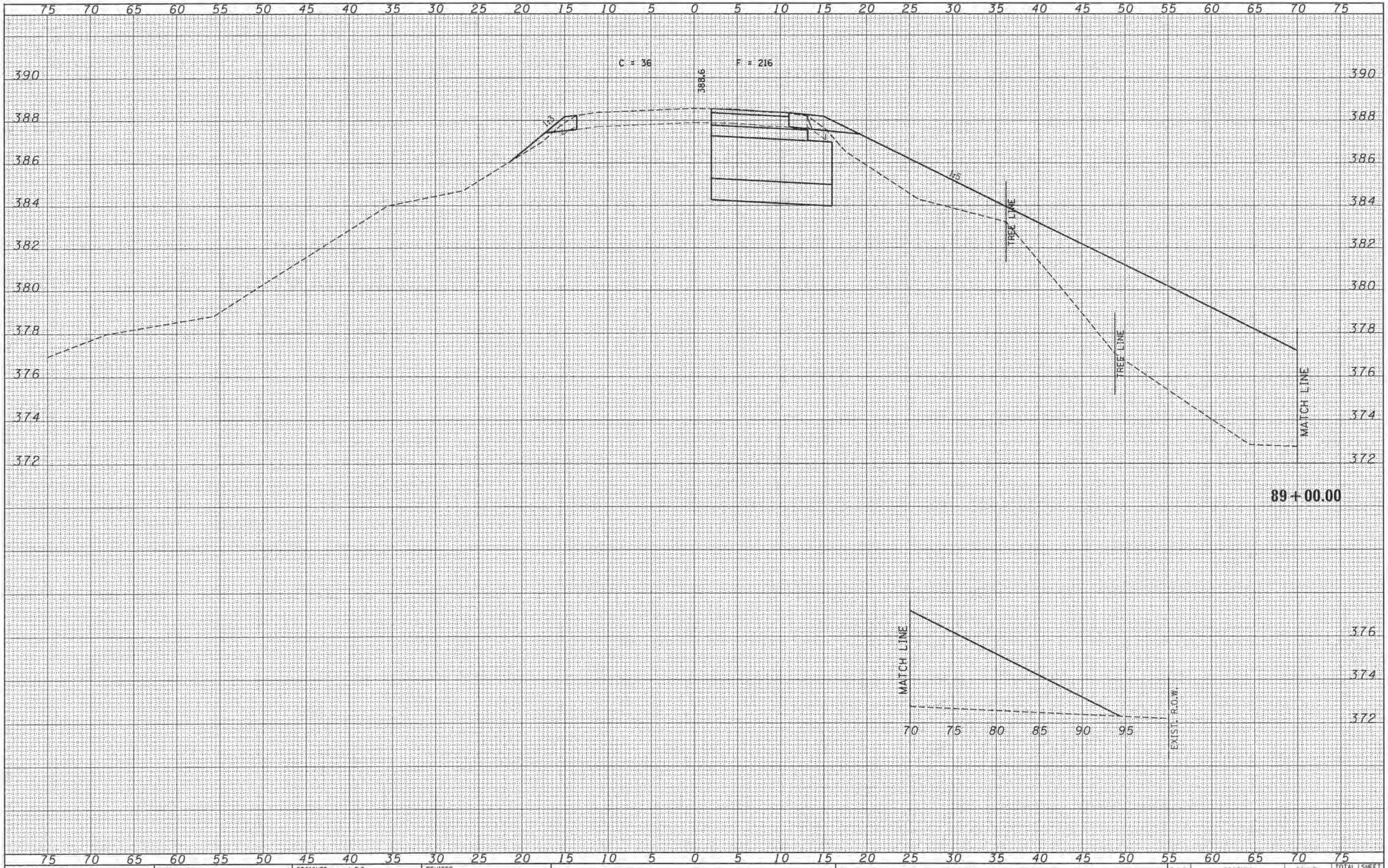
FILE NAME = 130340-sht-xxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2965 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.005993		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 88+50.00 TO STA. 88+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	64 10-00163-00-BR	JACKSON	82	64
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

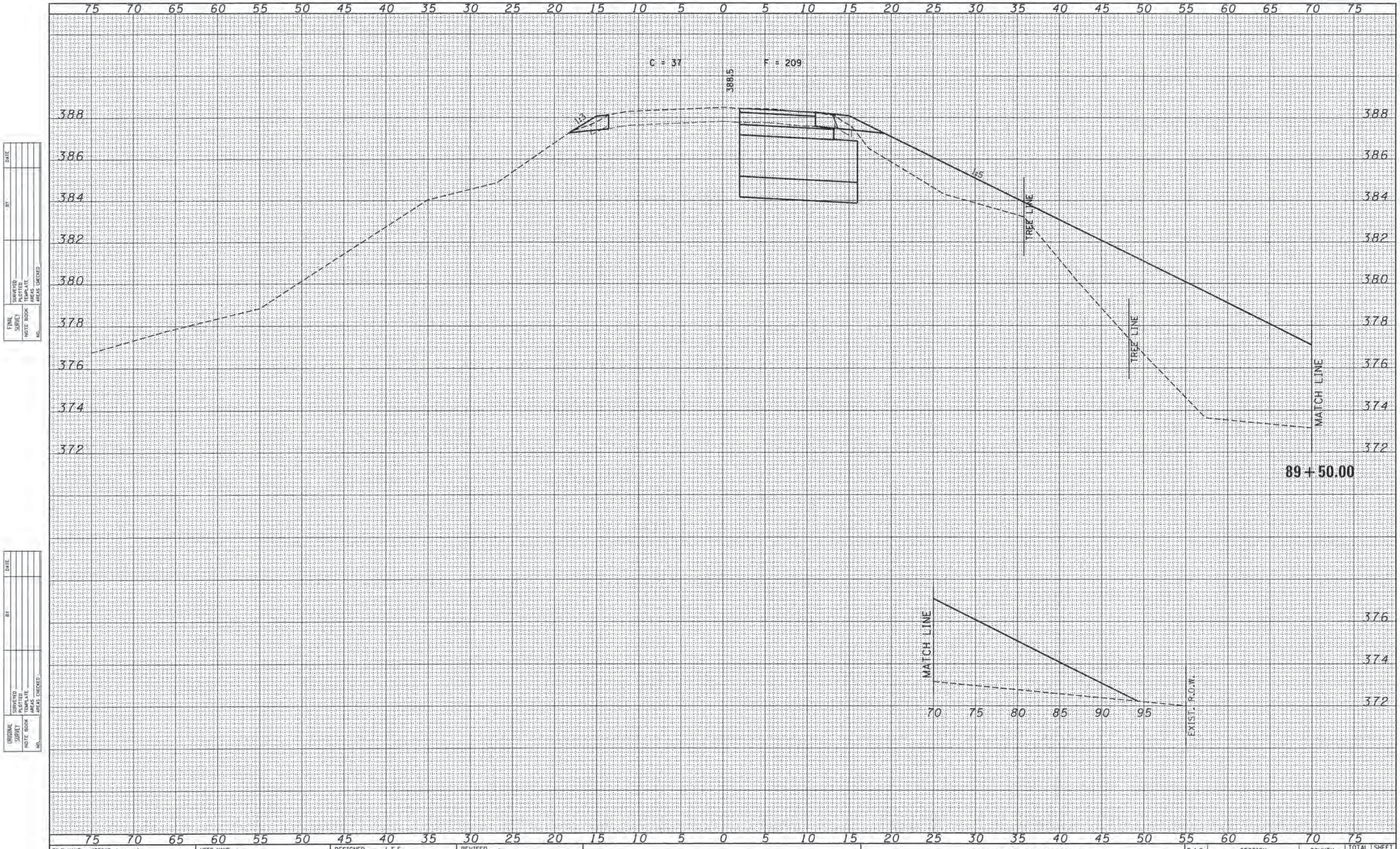
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 89+00.00 TO STA. 89+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	65

CONTRACT NO. 99519

ILLINOIS FED. AID PROJECT



FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - T.W.K.	REVISED -	
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -	
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -	

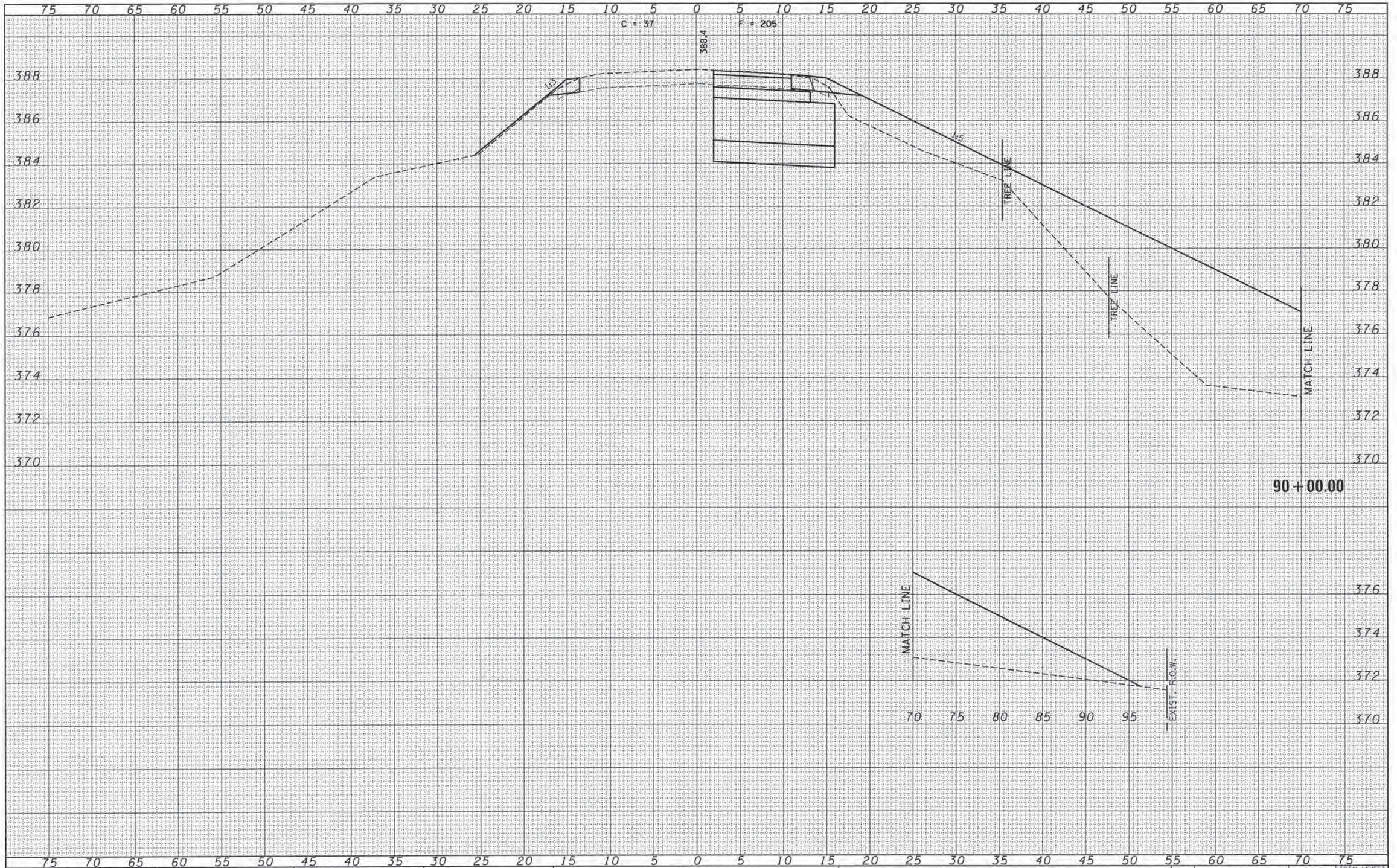
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V	SHEET NO. OF SHEETS	STA. 89+50.00	TO STA. 89+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	66
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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



FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 14 / ROYALTON ROAD
HAMPTON, LENZINI AND RENWICK, INC. 3665 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LE / PE / SE CORP. 184.000858		DRAWN - T.W.K.	REVISED -		
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -		
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -		SCALE: 5H:2V / SHEET NO. OF SHEETS / STA. 90+00.00 TO STA. 90+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	67
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

C = 38 F = 164

388.2

TREE LINE

TREE LINE

TREE LINE

MATCH LINE

MATCH LINE

WETLAND

EXIST. R.O.W.

90 + 50.00

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

FILE NAME = 138340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3304 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS (184) SE CORP. 184.000969		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 90+50.00 TO STA. 90+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	68
		CONTRACT NO. 99519		
	ILLINOIS	FED. AID PROJECT		

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

C = 38 F = 161

387.9

1.5:1

1.5:1

TREE LINE

TREE LINE

WETLAND

MATCH LINE

91 + 00.00

MATCH LINE

EXIST. R.O.W.

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

FILE NAME = 130248-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
2145 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.005969	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

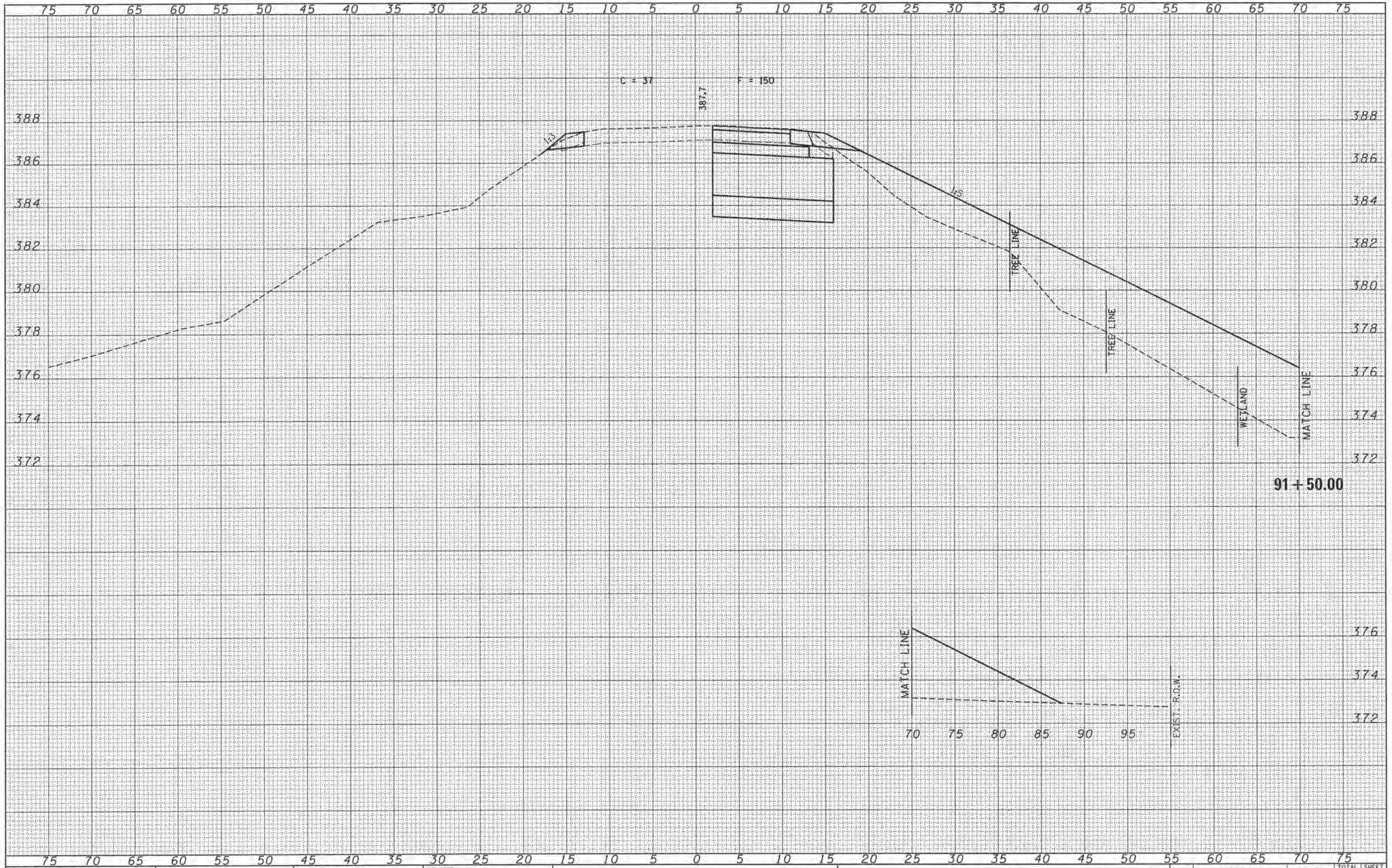
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 91+00.00 TO STA. 91+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	69
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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



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

FILE NAME = 130348-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2001 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM I.D / PETSS CORP. 184.000686		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

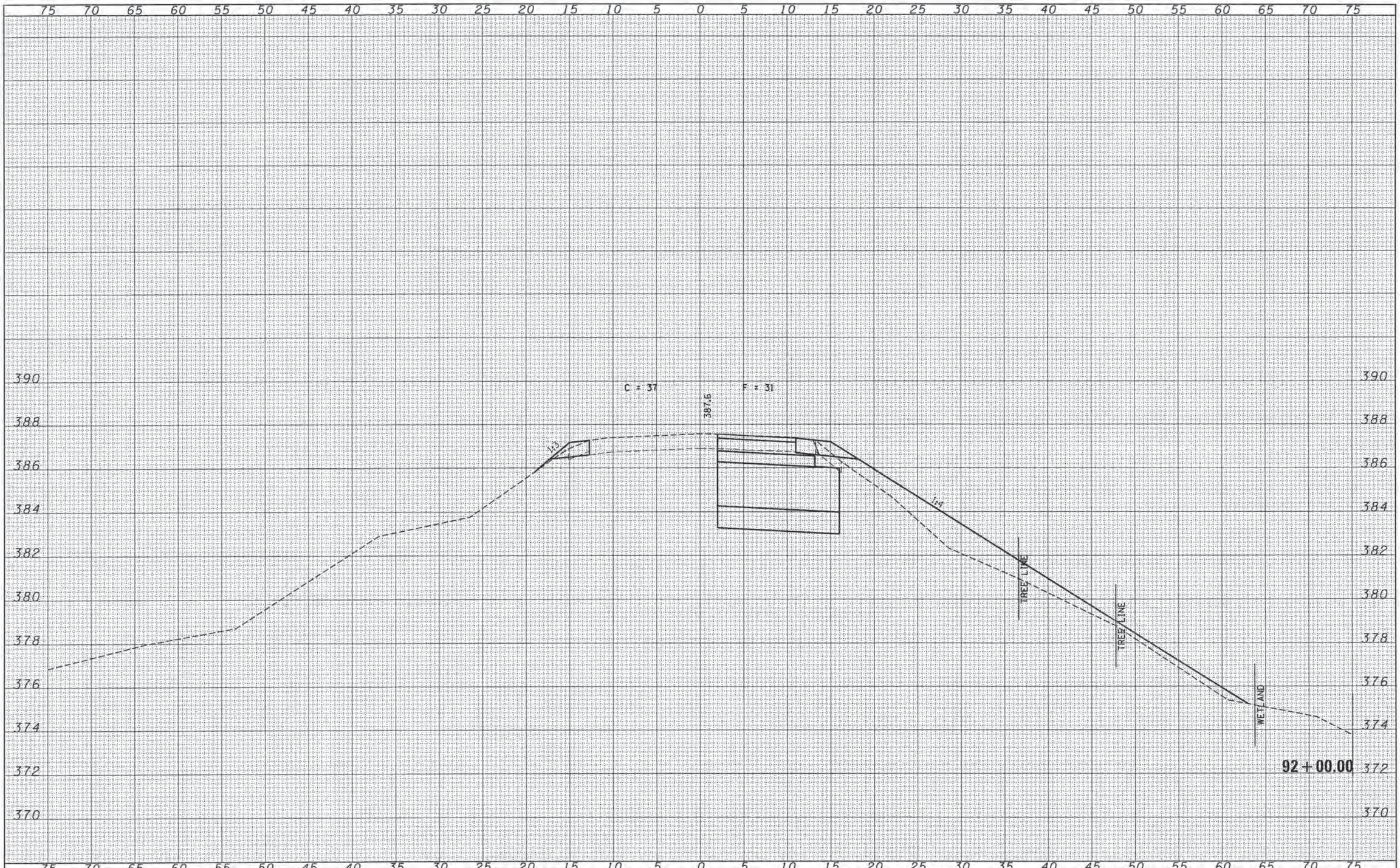
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 91+50.00 TO STA. 91+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	70
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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



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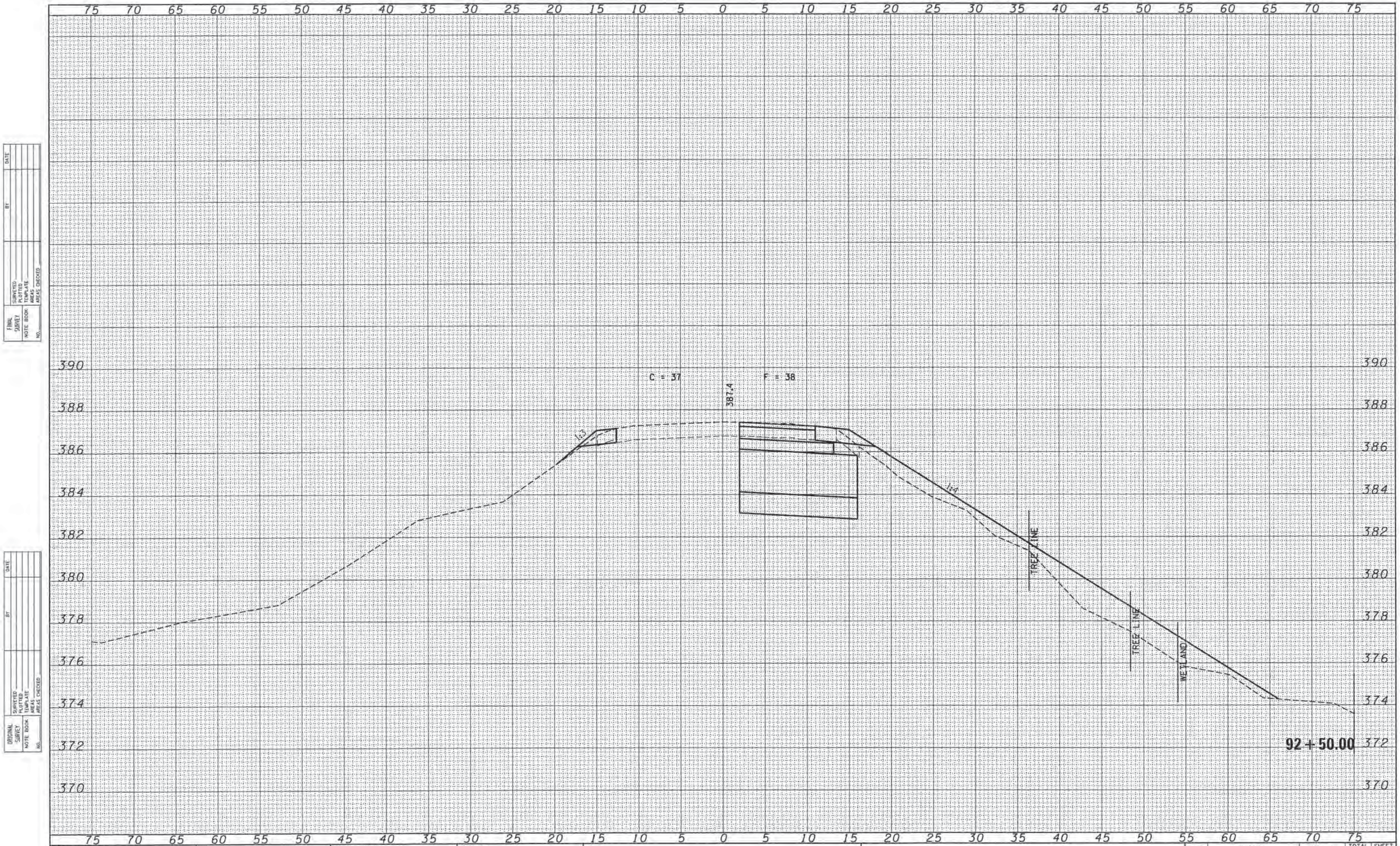
HAMPTON, LENZINI AND RENWICK, INC. 2395 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE CORP: 184.005958		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 92+00.00 | TO STA. 92+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	71
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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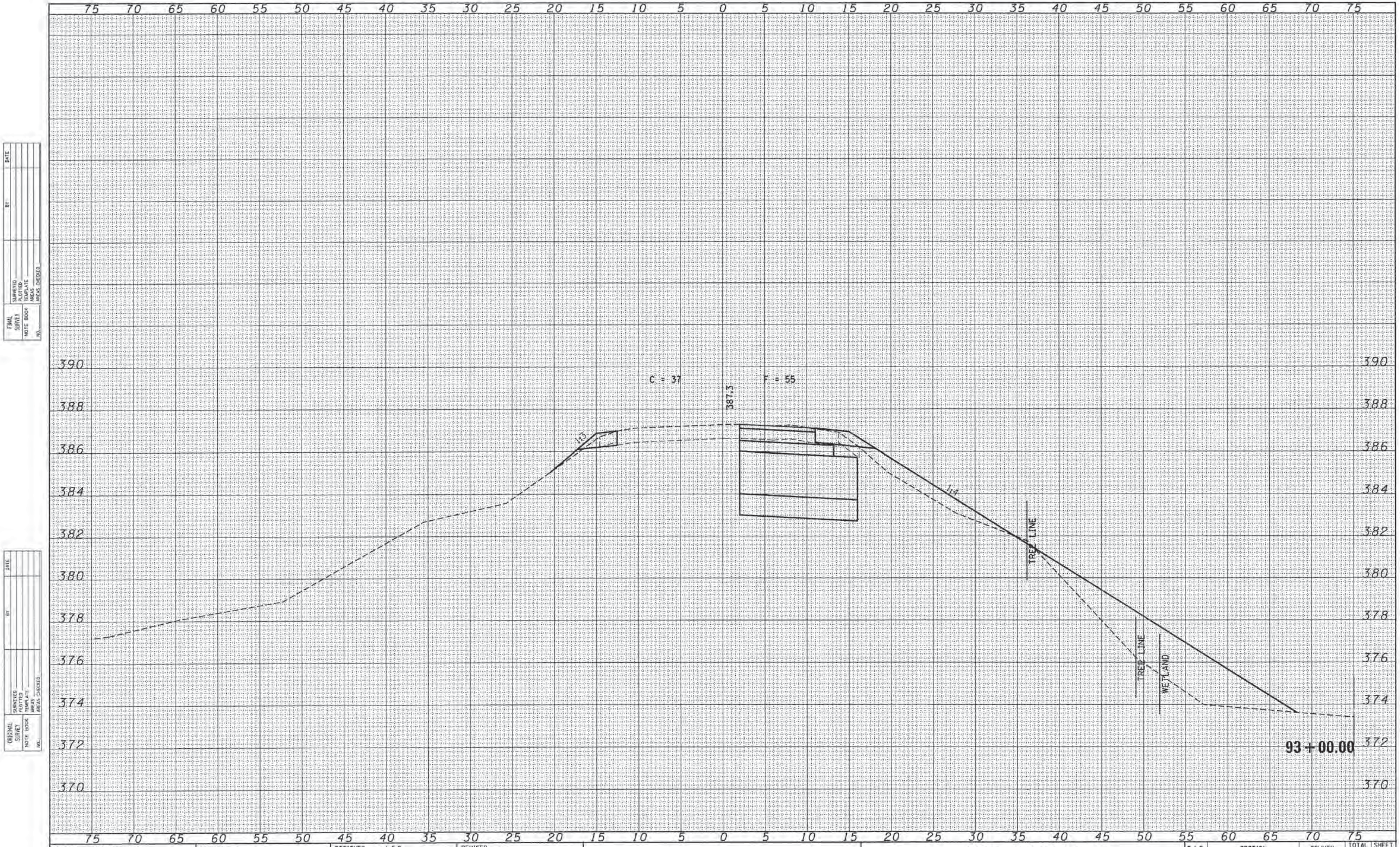
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 92+50.00 TO STA. 92+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	72
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			



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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

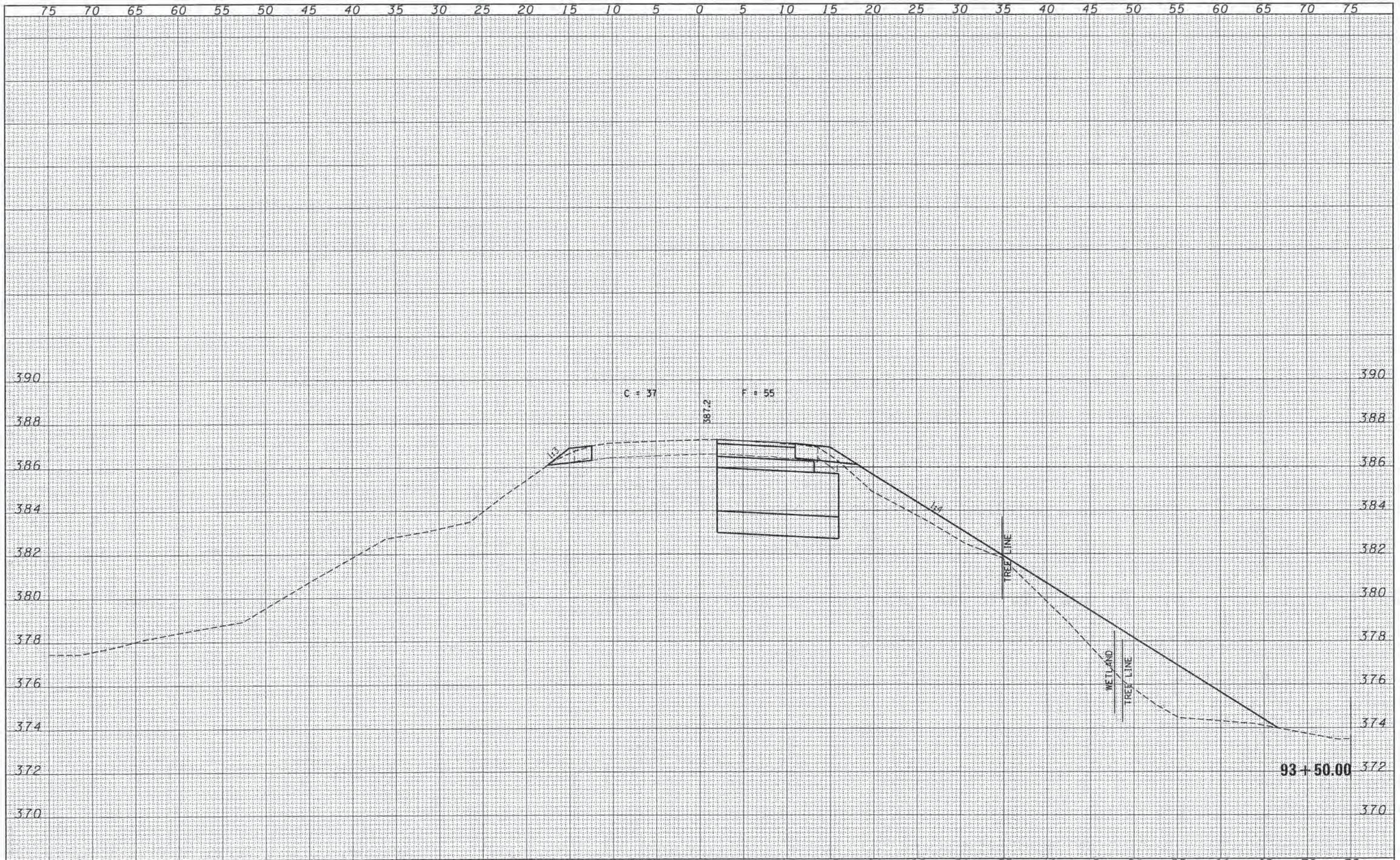
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 93+00.00 TO STA. 93+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	73
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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



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		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

HAMPTON, LENZINI AND RENWICK, INC.
3365 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LD / PE / SE CORP. 184.005155

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 93+50.00 TO STA. 93+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	74
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

C = 39 F = 60

387.2

390 388 386 384 382 380 378 376 374 372 370

TREE LINE

WETLAND

TREE LINE

94 + 00.00

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

FILE NAME = 130340-sht-svs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2345 STEVENSON DRIVE, SUITE 291 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE CORP. 184.000869		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

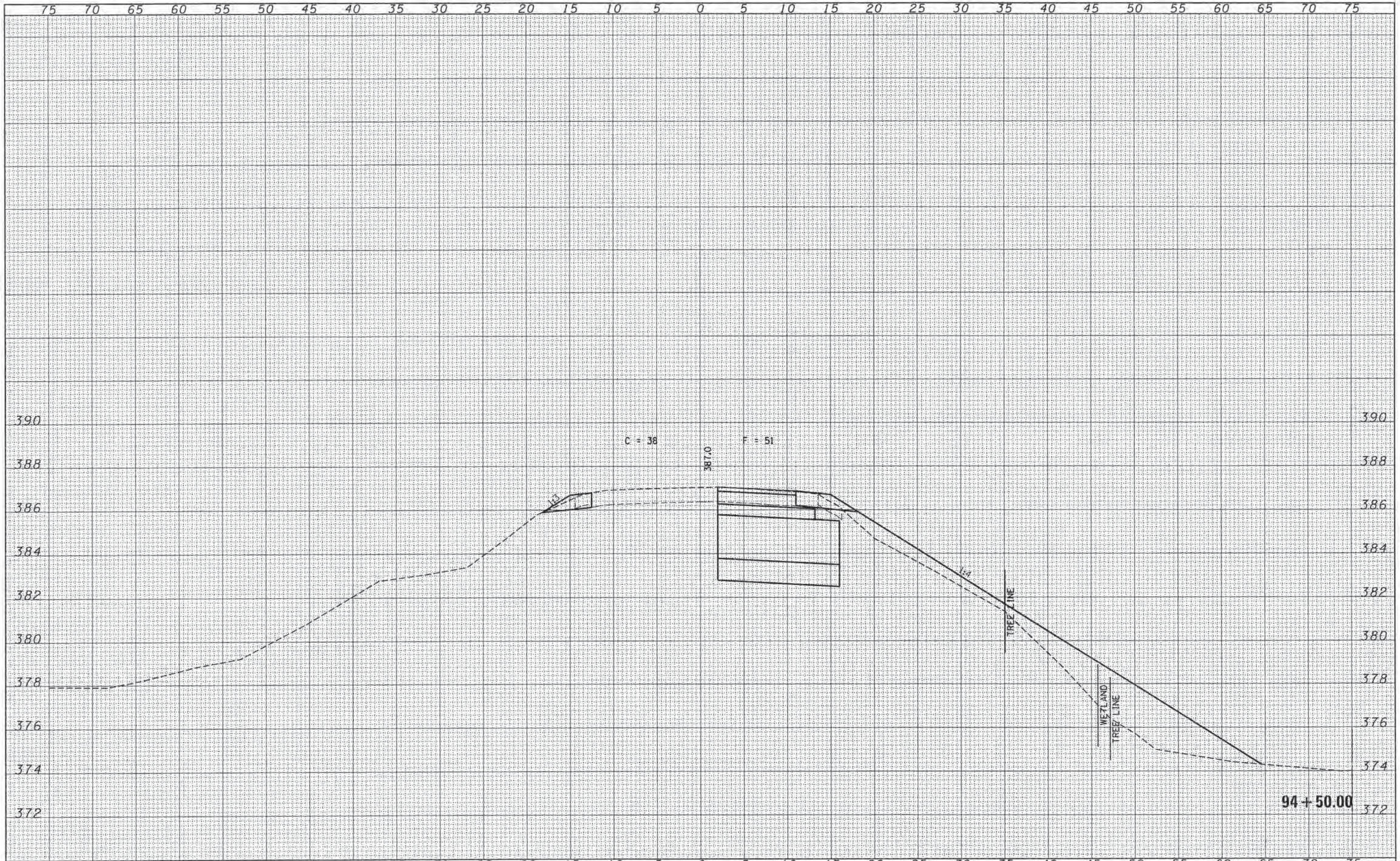
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Ht2V | SHEET NO. OF SHEETS | STA. 94+00.00 TO STA. 94+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	75
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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



FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
3995 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.005009	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

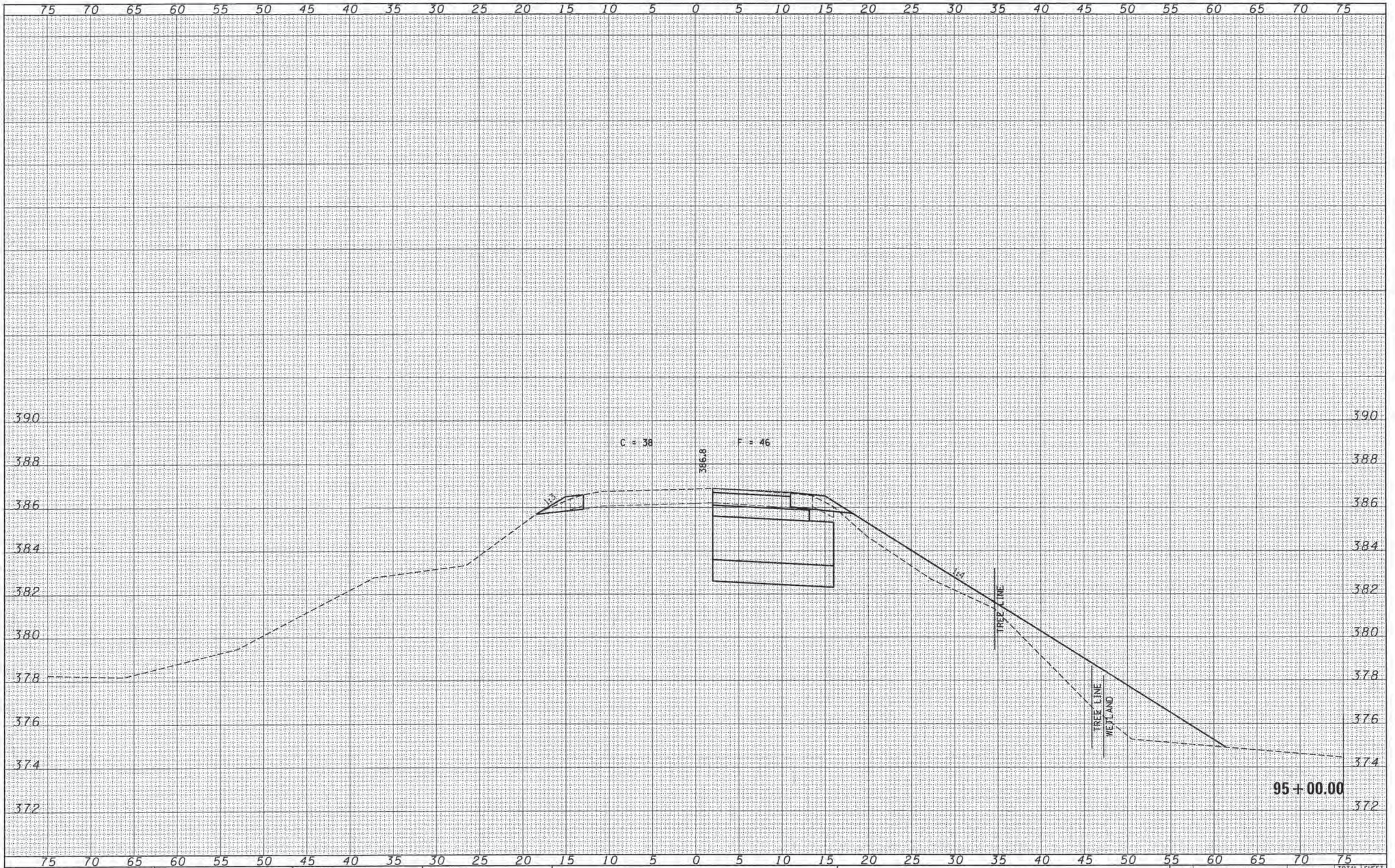
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 94+50.00 TO STA. 94+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	76
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

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

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



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HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LIC / PE / SE CORP. 184.005858		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 95+00.00 | TO STA. 95+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	77
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	MAP SCALE		
	MEAS		
	AREAS CHECKED		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

390
388
386
384
382
380
378
376
374
372

C = 38 F = 38

386.8

1:3

1:4

TREE LINE

TREE LINE

WETLAND

95 + 50.00

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	MAP SCALE		
	MEAS		
	AREAS CHECKED		

FILE NAME = 130340-sht-sxs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3105 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LR / PE / SE CORP. - 184.008613		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 95+50.00 TO STA. 95+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	78
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

390 388 386 384 382 380 378 376 374 372

C = 38 F = 38

386.8

1:3

1:4

TREE LINE

TREE LINE

WETLAND

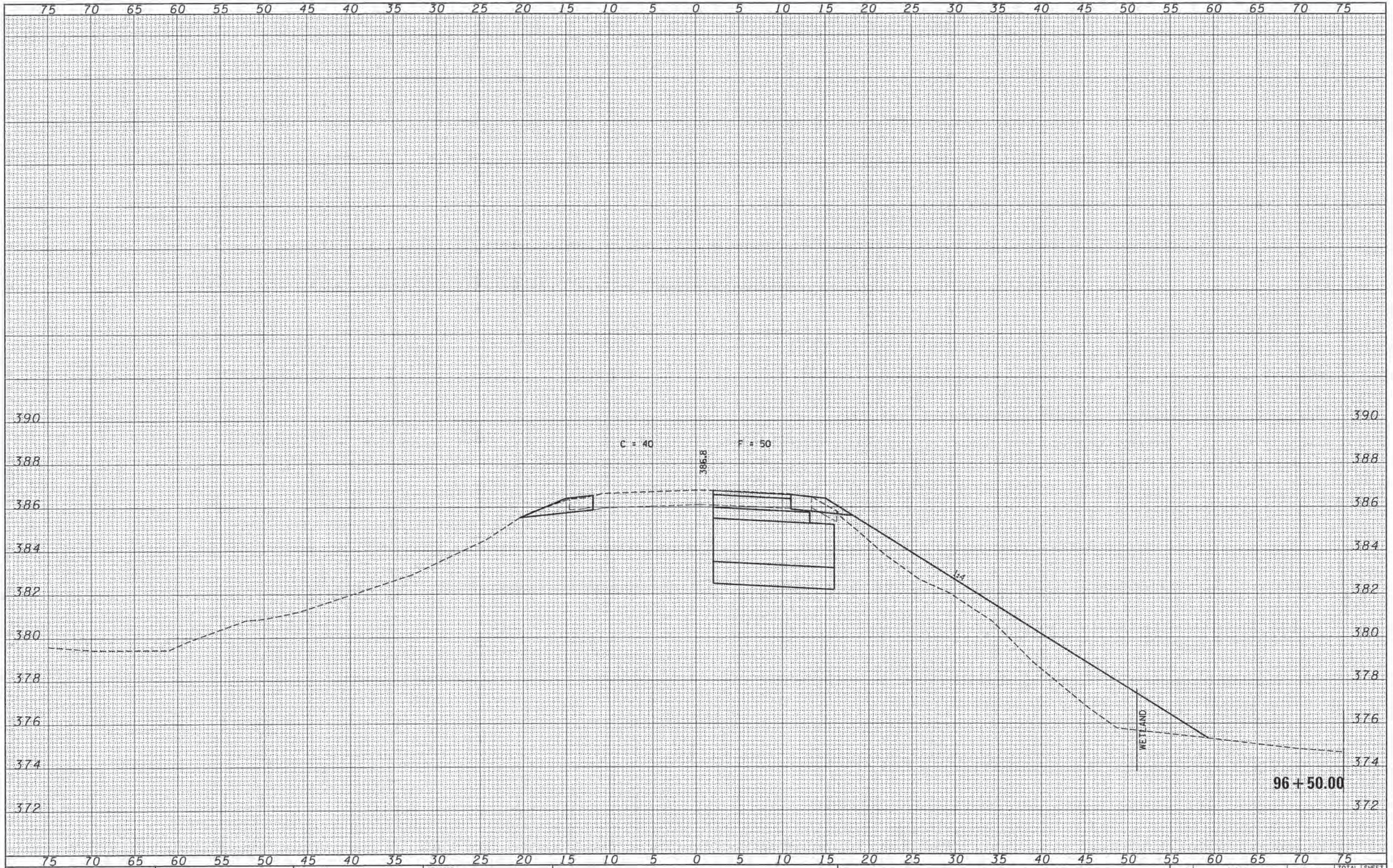
96+00.00

FILE NAME = 130348-sht-xss.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS JACKSON COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 14 / ROYALTON ROAD
HAMPTON, LENZINI AND RENWICK, INC. 3965 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS/PE/SE CORP. no. 006808		DRAWN - T.W.K.	REVISED -		
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -		SCALE: 5Hx2V SHEET NO. OF SHEETS STA. 96+00.00 TO STA. 96+00.00
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -		

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	79
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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



FILE NAME = 130340-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM 184.005969		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/8/2015	DATE - 02/23/15	REVISED -

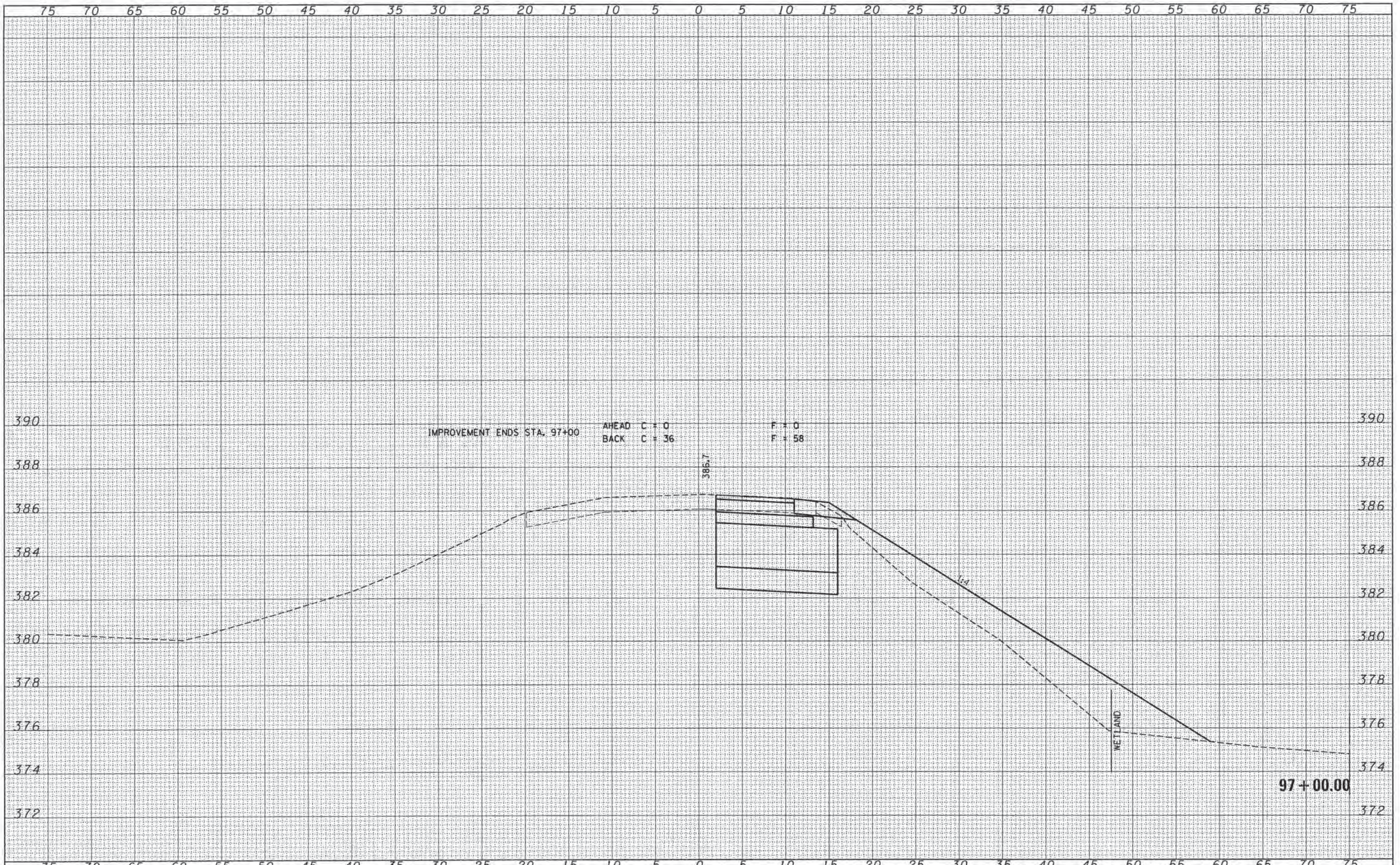
STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 96+50.00 TO STA. 96+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	80
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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



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

FILE NAME = 130348-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM 127 PE | 52 CORP 184.005858	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

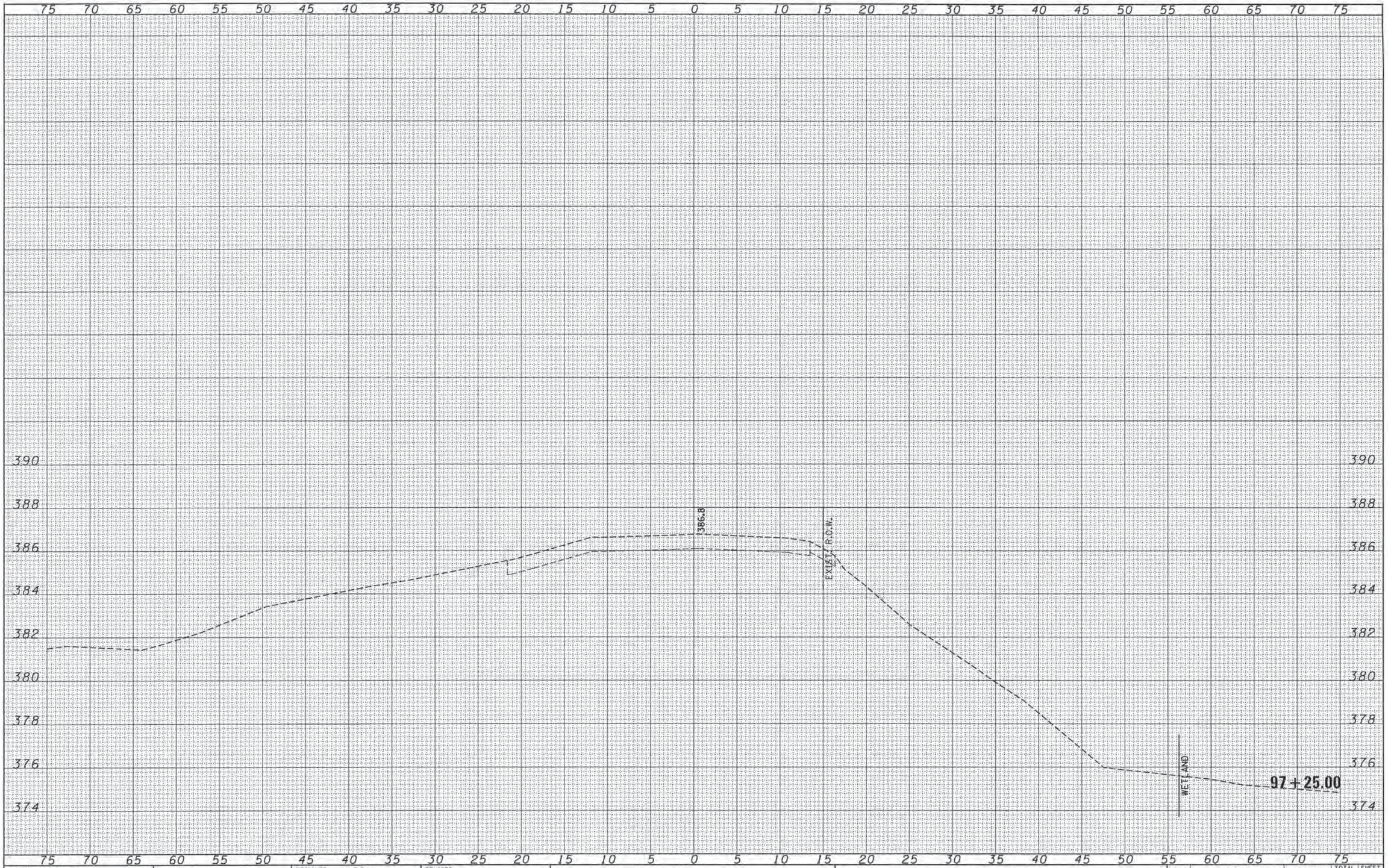
STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5H:2V | SHEET NO. OF SHEETS | STA. 97+00.00 TO STA. 97+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	81
		CONTRACT NO. 99519		
		ILLINOIS FED. AID PROJECT		

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

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



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HAMPTON, LENZINI AND RENWICK, INC. 2360 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS, 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LD / PE / SE CORP. 184.000864		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 4/6/2015	DATE - 02/23/15	REVISED -

STATE OF ILLINOIS
JACKSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
C.H. 14 / ROYALTON ROAD

SCALE: 5Hx2V | SHEET NO. OF SHEETS | STA. 97+25.00 TO STA. 97+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	10-00163-00-BR	JACKSON	82	82
		CONTRACT NO. 99519		
	ILLINOIS FED. AID PROJECT			