ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 888	15-00081 -00-BR	GALLATIN	24	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99604	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM
OFF SYSTEM BRIDGE

PROJECT L7J6(824)
SECTION 15-00081-00-BR
SHAWNEETOWN - NEW HAVEN ROAD
F.A.S. 888 / C.H. 11
GALLATIN COUNTY
PROPOSED STRUCTURE NO. 030-3138
C-99-522-16

INDEX OF SHEETS

HIGHWAY STANDARDS:

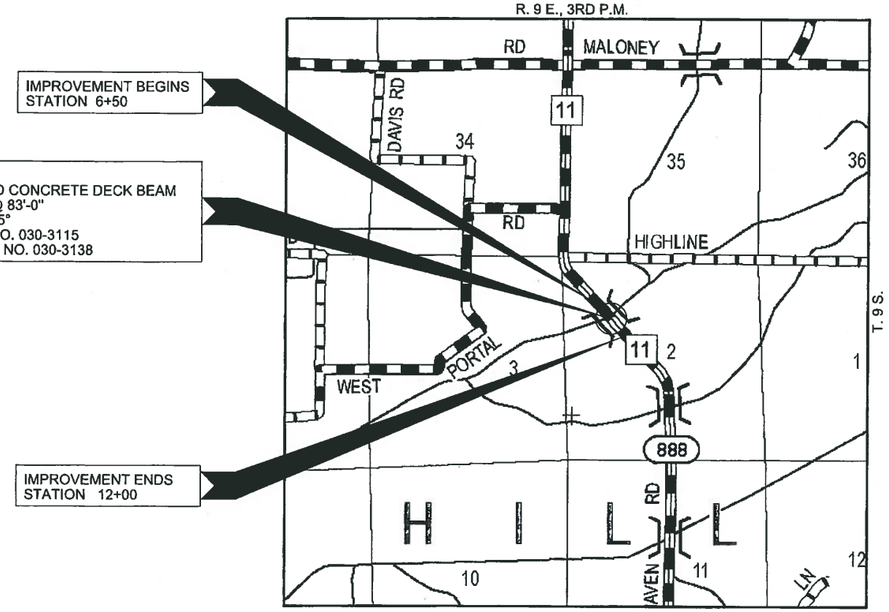
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
701901-07	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 23-4	TRAFFIC BARRIER TERMINAL, TYPE 1

UTILITIES

SHAWNEE TELEPHONE CO.
120 W. LANE STREET
EQUALITY, IL 62934

FRONTIER COMMUNICATIONS
208 W. UNION STREET
MARION, IL 62959

SOUTHERN IL ELECTRIC COOP.
585 HIGHWAY 142 SOUTH
ELDORADO, IL 62930



LOCATION MAP

APPROXIMATE SCALE: 0 — ½ MILE

NET LENGTH OF SECTION = 550 FEET = 0.104 MILES

LOCATION OF SECTION INDICATED THUS: –

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED _____ 20____

COUNTY ENGINEER

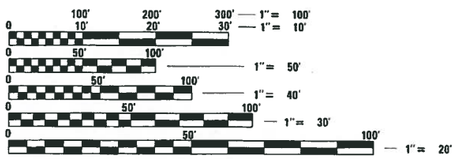
PASSED APRIL 06 2018

DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review APRIL 06 2018

REGION FIVE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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.

FUNCTIONAL CLASSIFICATION:	MAJOR COLLECTOR
DESIGN SPEED:	50 MPH
DESIGN TRAFFIC:	1850 ADT

WARNING

CALL JULIE TOLL FREE 1-800-892-0123

CALL 811 BEFORE YOU DIG

DIG NO: X0741641

DATE: 03/30/2018

LICENSED PROFESSIONAL ENGINEER — STEVEN W. MEGGINSON — 062-5005 — STATE OF ILLINOIS

EXPIRES: 11/30/2019

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: 18.0026.130 DATE: 03/30/18

CONTRACT NO. 99604 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

	ITEM NO.	ITEM	CONSTRUCTION TYPE CODE 001 C UNIT	TOTAL
^	20200100	EARTH EXCAVATION	CU YD	163
	20300100	CHANNEL EXCAVATION	CU YD	185
	20400800	FURNISHED EXCAVATION	CU YD	450
^	28100807	STONE DUMPED RIPRAP, CLASS A4	TON	50
	35100100	AGGREGATE BASE COURSE, TYPE A	TON	667
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	459
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	36
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	146
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19, N50	TON	125
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	171
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	47
	48203013	HOT-MIX ASPHALT SHOULDERS, 4"	SQ YD	414
^	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50300225	CONCRETE STRUCTURES	CU YD	38.0
	50400705	PRECAST PRESTRESSED CONCRETE DECK BEAMS (42" DEPTH)	SQ FT	2,490
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5,670
*	50901050	STEEL RAILING, TYPE SM	FOOT	166
	51201600	FURNISHING STEEL PILES HP12X53	FOOT	1,560
	51202305	DRIVING PILES	FOOT	1,560
	51500100	NAME PLATES	EACH	1
	58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	190
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75
*	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
	63200310	GUARDRAIL REMOVAL	FOOT	585
	67100100	MOBILIZATION	L SUM	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
*	78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	1,238
^	X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	220
^	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.7

^ SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

GENERAL NOTES

1.) ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2016", (HERE IN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2018; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.

2.) ALL CLEARING, GRUBBING, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN EARTH EXCAVATION. ALL MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPER DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

3.) THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTIONS.

4.) WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

5.) PAVEMENT REMOVAL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

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

POROUS GRANULAR EMBANKMENT **1.5 TON/CU.YD.**
STONE RIPRAP **1.75 TON/CU.YD.**
AGGREGATE BASE COURSE **2.05 TON/CU.YD.**

BITUMINOUS MATERIAL

SURFACE TYPE	RESIDUAL RATE	
AGGREGATE BASE	0.250	LB / SQ. YD.
MILLED HMA OR PCC (TACK COAT)	0.080	LB / SQ. YD.
EXISTING PAVEMENT (TACK COAT)	0.080	LB / SQ. YD.
TACK COAT (BETWEEN LIFTS)	0.040	LB / SQ. YD.

ROADWAY SCHEDULE

LOCATION	AGGREGATE BASE COURSE TYPE A (12") 35100100 TON	BITUMINOUS MATERIALS (PRIME COAT) 40600275 POUND	BITUMINOUS MATERIALS (TACK COAT) 40600290 POUND	HOT MIX ASPHALT SURFACE REMOVAL BUTT-JOINT 40600982 SQ YD	HOT MIX ASPHALT BINDER COURSE IL-19, N50 40603080 TON	HOT MIX ASPHALT SURFACE COURSE MIX C, N50 40603310 TON	AGGREGATE SHOULDERS, TYPE B (6") 48101200 TON	HOT MIX ASPHALT SHOULDERS, 4" 48203013 SQ YD
CH 11 / FAS 888								
STA. 6+50 TO STA. 9+58	470	257	19	73	88	84	23	274
STA. 9+58 TO STA. 10+42		70	7			44	0	
STA. 10+42 TO STA. 12+00	197	132	10	73	37	43	24	140
TOTAL	667	459	36	146	125	171	47	414

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION 20200100 CU.YD.	CHANNEL EXCAVATION 20300100 CU.YD.	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE CU.YD.	EMBANKMENT REQUIRED CU.YD.	EARTHWORK BALANCE CU.YD.
CH 11 / FAS 888							
STA. 6+50 TO STA. 9+57.81	74		25.00%	100.00%	55	575	-520
STA. 10+42.19 TO STA. 12+00	90		25.00%	100.00%	67	93	-26
CHANNEL EXCAVATION		185	25.00%	70.00%	97		97
TOTAL	163	185			219	668	-449
USE	163	185					450

FURNISHED EXCAVATION = 450 CU YDS

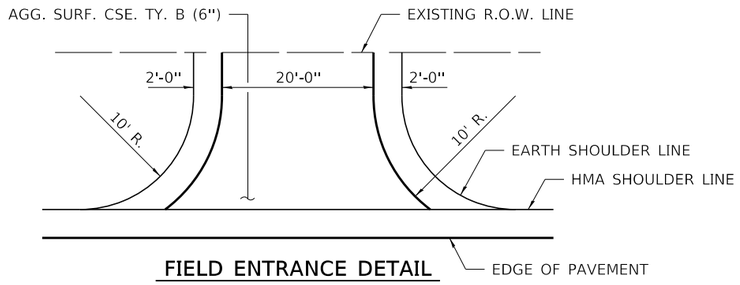
FILE NAME = 180026-sht-summary.dgn	USER NAME = rhosick	DESIGNED - S.W.M.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3965 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - R.D.H.	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 4/5/2018	DATE - 03/30/18	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

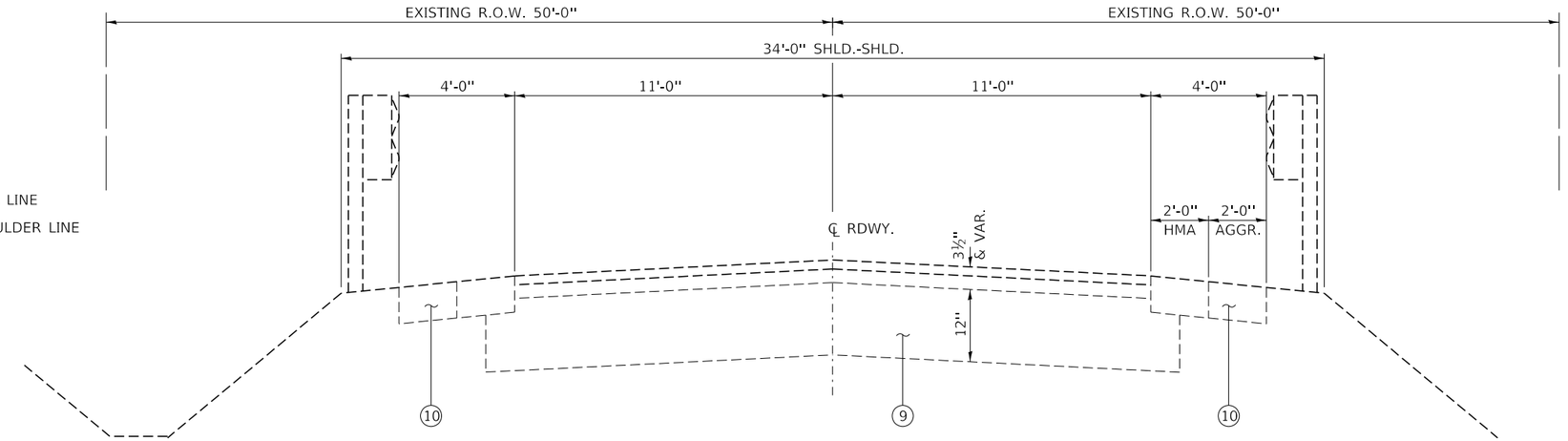
SUMMARY OF QUANTITIES AND GENERAL NOTES

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

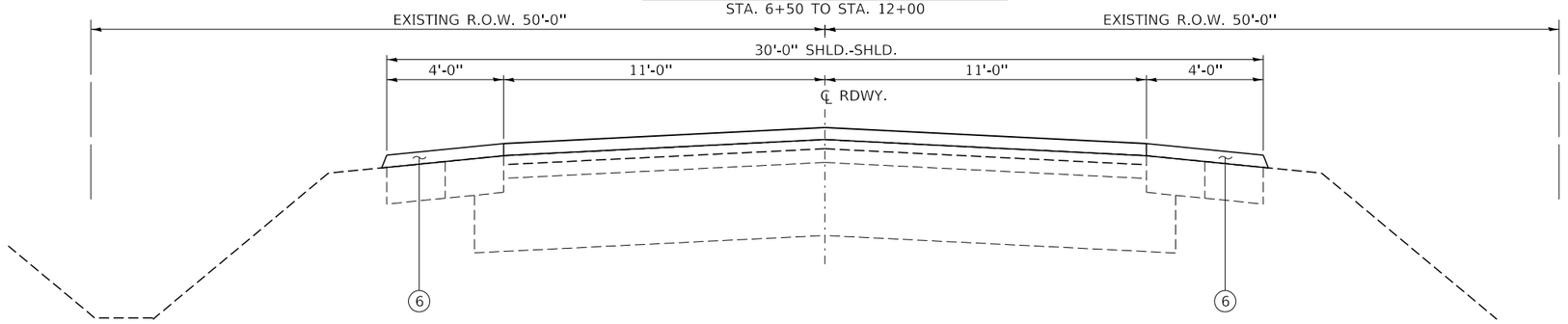
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	2
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J5(824)		



FIELD ENTRANCE DETAIL



EXISTING TYPICAL CROSS SECTION
STA. 6+50 TO STA. 12+00



PROPOSED TYPICAL CROSS SECTION
STA. 6+50 TO STA. 7+00 &
STA. 11+50 TO 12+00

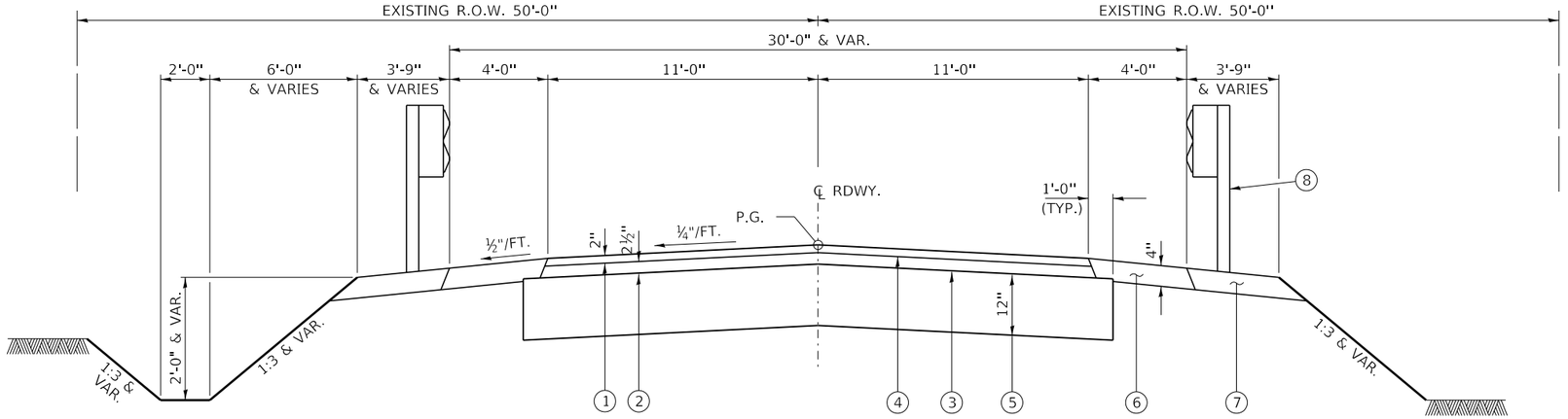
LEGEND

1. HMA SURFACE COURSE, MIX C, N50 (2" THICKNESS)
2. HMA BINDER COURSE, IL.-19.0, N50 (2½" THICKNESS)
3. BITUMINOUS MATERIALS (PRIME COAT)
4. BITUMINOUS MATERIALS (TACK COAT)
5. AGGREGATE BASE COURSE, TYPE A (12")
6. HMA SHOULDERS (4")
7. AGGREGATE SHOULDERS, TYPE B (4")
8. PROPOSED SM RAIL
9. EXISTING BITUMINOUS CONCRETE SURFACE (31#2") ON AGGREGATE BASE (12")
10. EXISTING HMA / AGGREGATE SHOULDER

MIXTURE REQUIREMENTS			
	HOT MIX ASPHALT SURFACE COURSE	HOT MIX ASPHALT BINDER COURSE	HOT MIX ASPHALT SHOULDERS
PG GRADE *	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS	4% @ N50	4% @ N50	4% @ N50
MIXTURE COMPOSITION	IL 9.5	IL 19.0 FG	IL 19.0 FG
FRICTION AGGREGATE	MIXTURE C	NONE	NONE
DENSITY TEST METHOD	CORES	CORES	CORES

NOTES:
1. MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

2. WHEN RAP/RAS ABR EXCEEDS 20 PERCENT, THE HIGH AND LOW VIRGIN ASPHALT BINDER GRADES SHALL EACH BE REDUCED BY ONE GRADE (I.E. 25% ABR WOULD REQUIRE A VIRGIN ASPHALT BINDER GRADE OF PG 64-22 TO BE REDUCED TO PG 58-28).



SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL CROSS SECTION
STA. 7+00 TO STA. 11+50
SEE SHEET 5 FOR SHOULDER LAYOUT

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

FILE NAME = 180026-sht-typsections.dgn	USER NAME = dburdell	DESIGNED - S.W.M.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - R.D.H.	REVISED -
3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = $SCALE$	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

TYPICAL CROSS SECTIONS

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	3
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			

PLAN
SURVEYED
PLOTTED
AUTOMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
PLANS CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

CP#2
MAG NAIL IN PP
23.90'
98.00'
87.30'
SLOW SIGN

CP#1
CAP
22.70'
53.10'
22.80'
CAP

CP#1
16.27'

STA. 10+00
PRECAST PRESTRESSED CONCRETE
DECK BEAM BRIDGE. SINGLE SPAN @ 83'-0"
30'-0" RDWY; 15° SKEW
PROPOSED SN 030-3138

JAMES W. MONROE, & WIFE
NW¼, NW¼, SEC 2, T. 9 S., R. 9 E., 3RD P.M.

CREEK
CYPRESS
NORTH FORK
75°

0 20' 40'

P.O.T. STA. 4+99.85
EXIST. MAG NAIL
N. 402285.879
E. 1026365.459

P.O.T. STA. 10+00.00
MAG NAIL (SET)
N. 402651.26
E. 1026025.278

P.O.T. STA. 15+01.33
EXIST. MAG NAIL
N. 403016.377
E. 1025682.891

50' R.O.W.
50' EXISTING
22'
4"
C.H. 11 7 8 9 10 11 12
HMA SURFACE / AGGR.
18" CONC.
℄ PROPOSED IMPROVEMENT
+30 F.E.

IMPROVEMENT BEGINS
STATION 6+50

RT. STA. 7+30 F.E.
PIPE CULVERT USE IN PLACE

IMPROVEMENT ENDS
STATION 12+00

JAMES W. MONROE, & WIFE
NW¼, NW¼, SEC 2, T. 9 S., R. 9 E., 3RD P.M.

EXISTING STRUCTURE NO. 030-3115
STATION 10+00 - THREE SPAN PRECAST CONCRETE SLAB BRIDGE WITH CONCRETE ABUTMENTS AND WINGWALLS. 95.75' FC.-FC. ABUTS; 30.0' o.-o.

BM#1 - SPIKE NAIL IN POWER POLE
49' LT., STA. 7+78
ELEV. 355.54

BM#3 - SPIKE NAIL IN POWER POLE
49' LT., STA. 11+28
ELEV. 355.19

VPC
VPI STA. 7+50 ELEV. 359.90
K = 96
150' V.C.
VPRC STA. 8+25 ELEV. 361.15
VPI STA. 9+00 ELEV. 362.40
K = 90
150' V.C.
VPT

100 YEAR BACKWATER ELEV. 367.5± (OHIO RIVER)
100 YEAR H.W. ELEV. 356.3
30 YEAR H.W. ELEV. 355.9

HMA-REM BUTT JOINT +80
HMA-REM BUTT JOINT +70

PROPOSED ℄ GRADE
EXISTING ℄ GRADE
-0.10%
+1.67%
0.00%

CHANNEL EXCAVATION
STONE RIPRAP CLASS A4
* 1:2 AT RT. ∠'S
℄ ELEV. 344.4

6+50	7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50
359.80	359.80	359.50	359.88	359.29	360.19	359.40	360.76	359.67	361.53	359.79	362.09	360.04	362.37	360.80	362.40	361.54	362.40	361.76	362.40	362.00	362.40	362.40	362.40	362.66

365 360 355 350 345 340

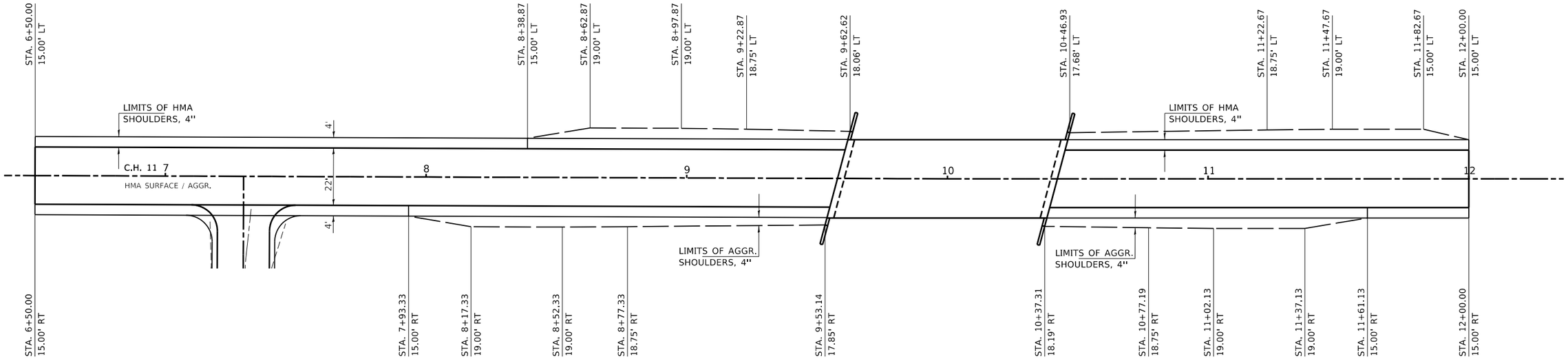
FILE NAME = 180026-sht_plan.dgn	USER NAME = dburdell	DESIGNED - S.W.M.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - R.D.H.	REVISED -
3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = $SCALE$	CHECKED - J.W.F.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

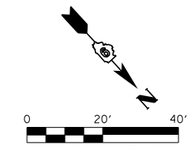
PLAN & PROFILE

SCALE: 5H:2V | SHEET NO. 1 OF 1 SHEETS | STA. 6+50.00 TO STA. 12+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	4
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
ILLINOIS	FED. AID PROJECT L7J6(824)			



SHOULDER LAYOUT



GUARDRAIL LAYOUT

① STEEL RAILING, TYPE SM
② TBT TY 6A
③ 12.5' GUARDRAIL
④ TBT TY 1, SPECIAL TANGENT

FILE NAME = 180026-sht-guardrail.dgn	USER NAME = dburdell	DESIGNED - S.W.M.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP: 184.000959	PLOT SCALE = $SCALE$	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

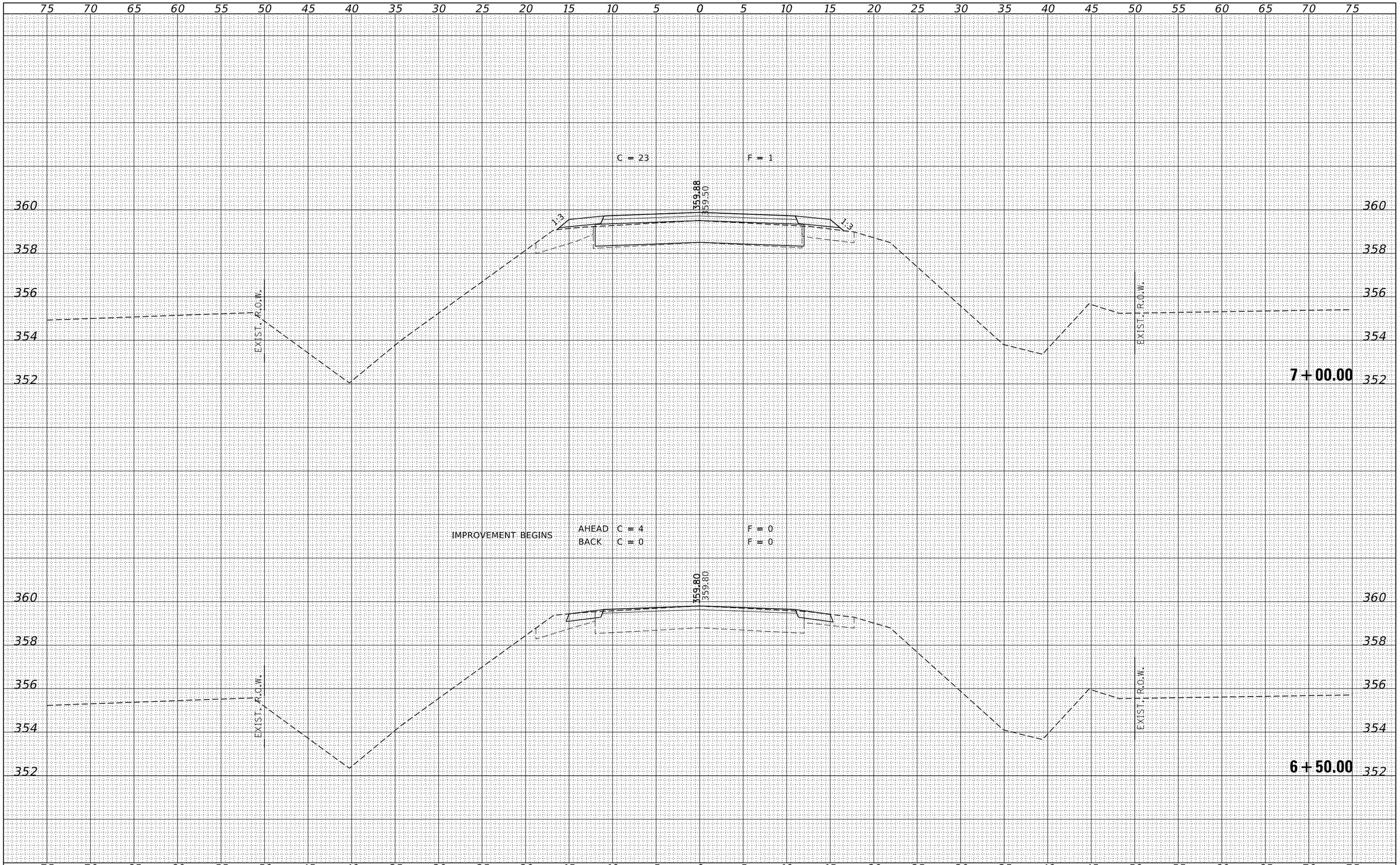
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

GUARDRAIL & SHOULDER LAYOUT

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	5
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		

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



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

FILE NAME = 180026-sht_xs.dgn	USER NAME = dburdell	DESIGNED - X.X.X.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - X.X.X.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = $SCALE$	CHECKED - X.X.X.	REVISED -
	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

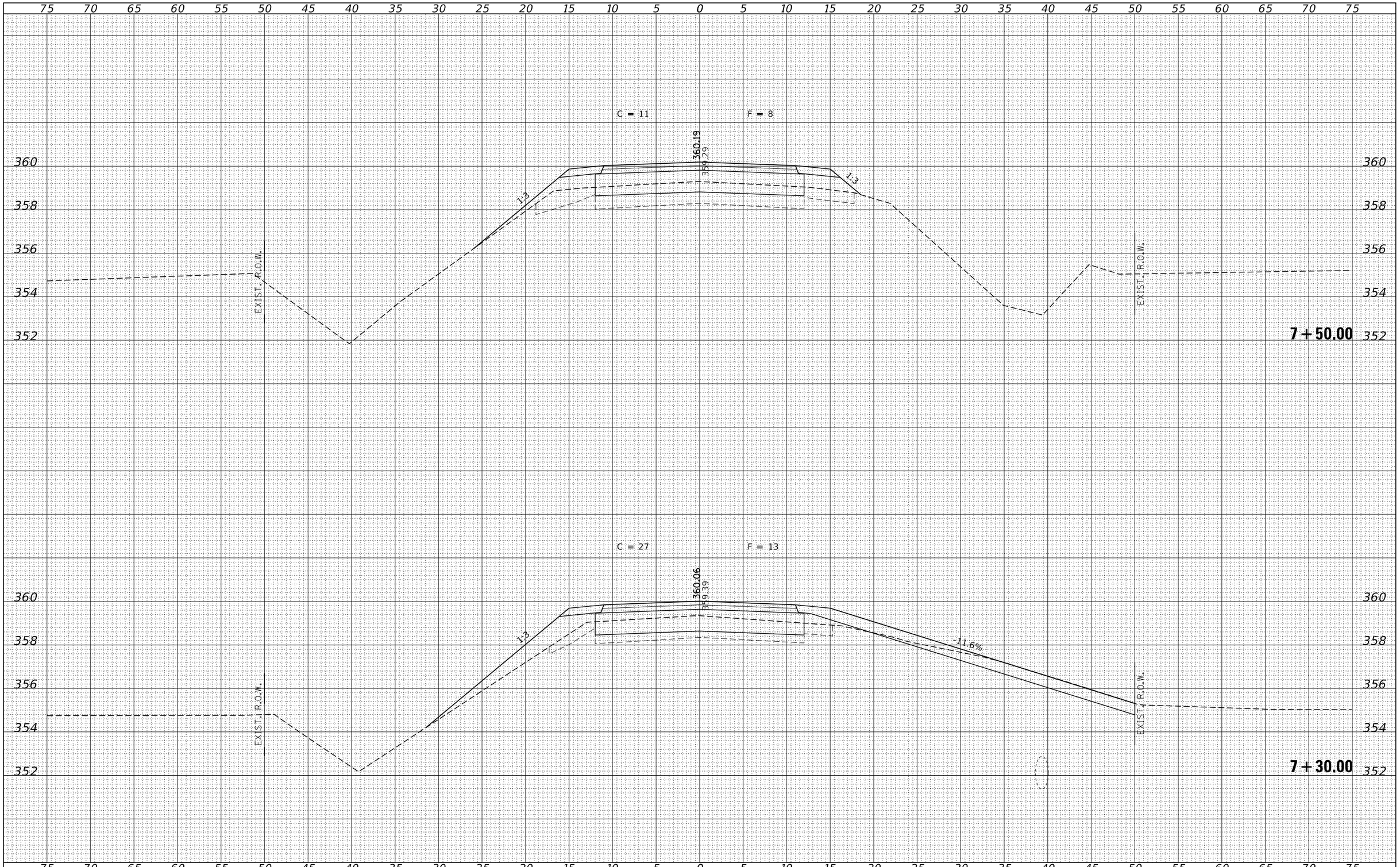
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 1 OF 10 SHEETS | STA. 6+50.00 | TO STA. 7+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	6
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		

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



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

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	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

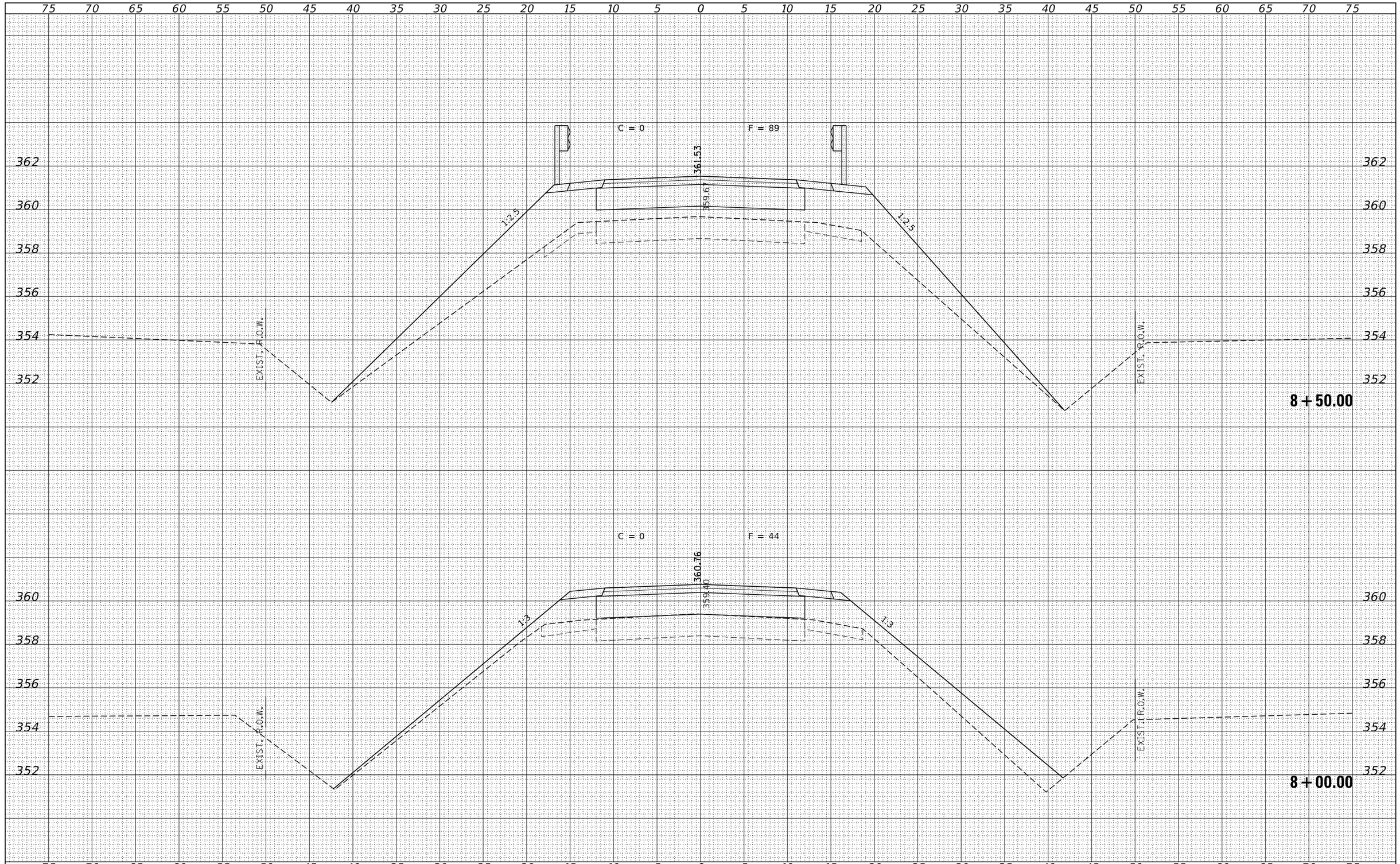
HAMPTON, LENZINI AND RENWICK, INC.
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LS / PE / SE CORP. 184.000959

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 2 OF 10 SHEETS | STA. 7+30.00 | TO STA. 7+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	7
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		



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	SURVEYED	BY
	PLOTTED	DATE
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

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

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STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 3 OF 10 SHEETS | STA. 8+00.00 | TO STA. 8+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	8
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
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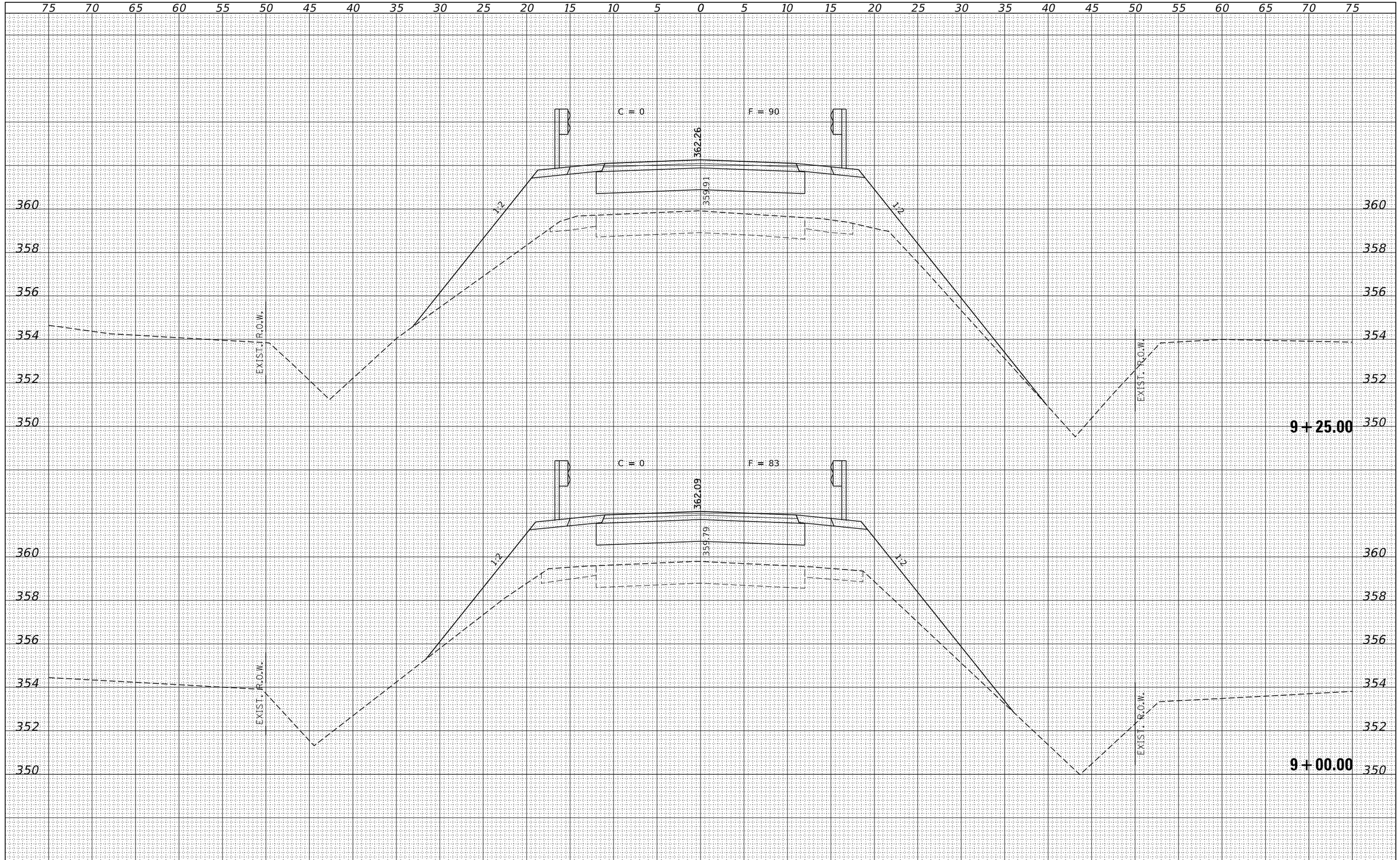

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	AREAS	
	AREAS CHECKED	

BY	DATE

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	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

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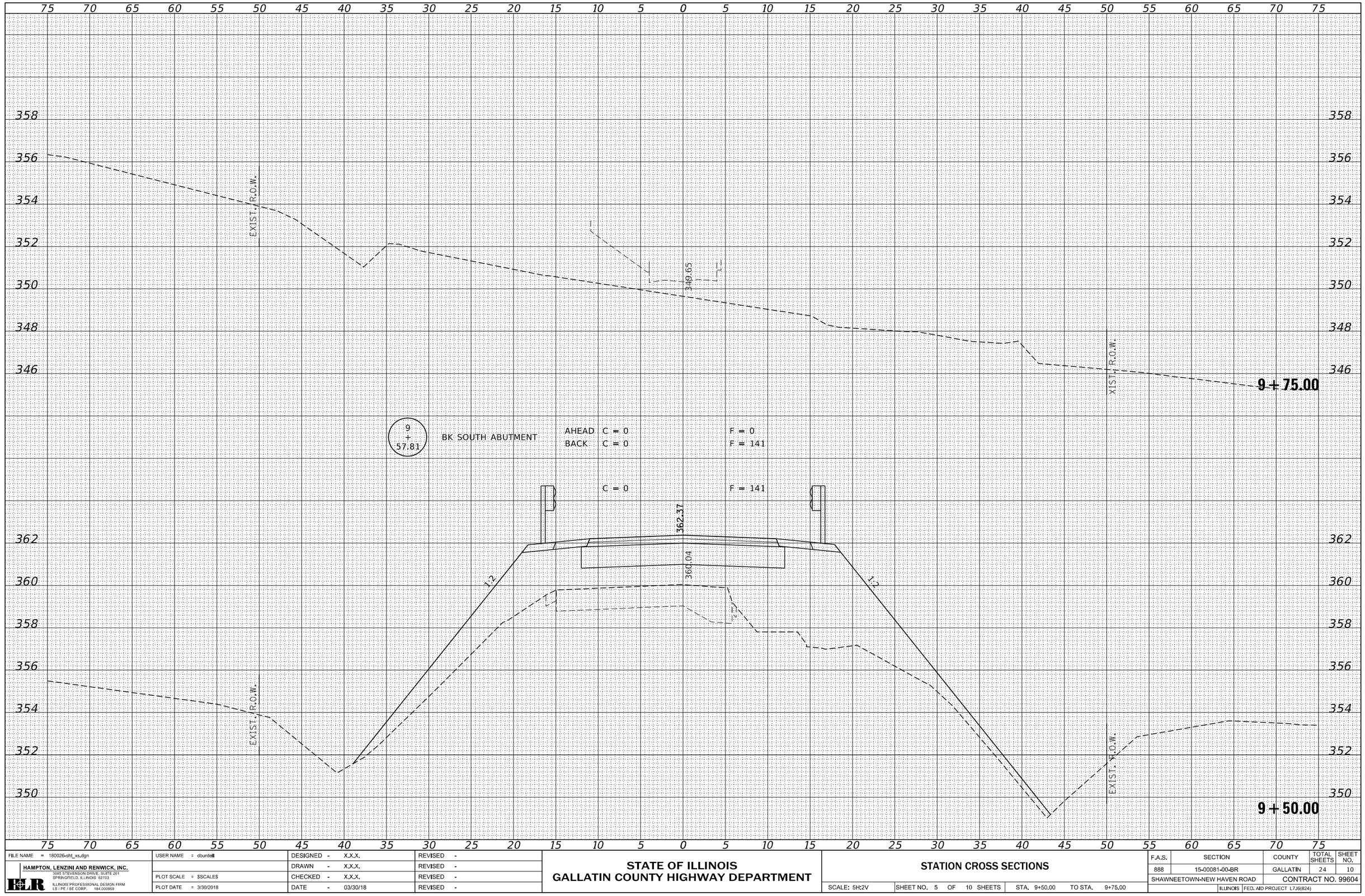
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 4 OF 10 SHEETS | STA. 9+00.00 TO STA. 9+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	9
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
		ILLINOIS FED. AID PROJECT L7J6(824)		



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NO.	NOTE BOOK	BY	DATE

SURVEYED
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TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY

NO.	NOTE BOOK	BY	DATE

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PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

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STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 5 OF 10 SHEETS | STA. 9+50.00 TO STA. 9+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	10
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		

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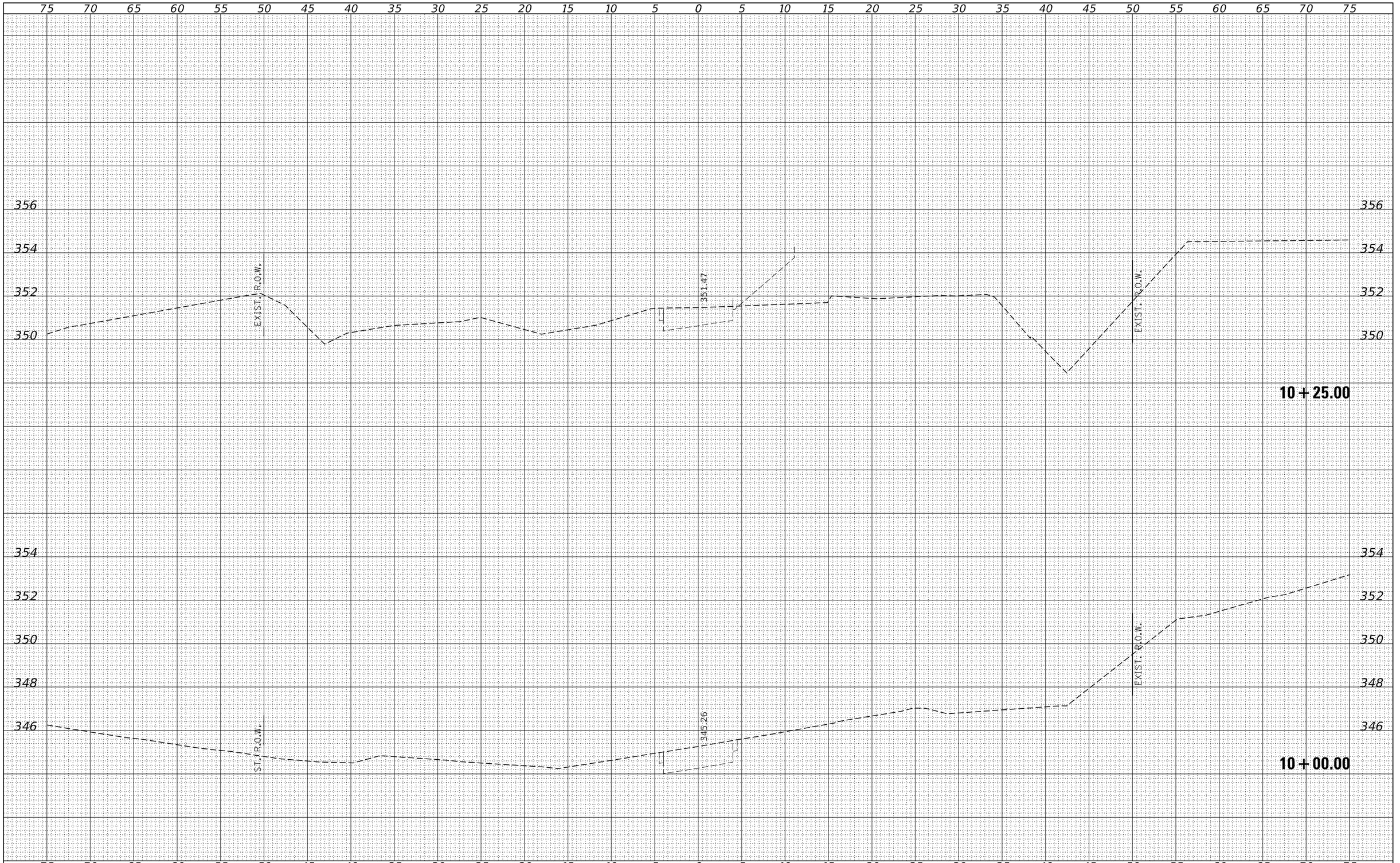
BY	DATE



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BY	DATE

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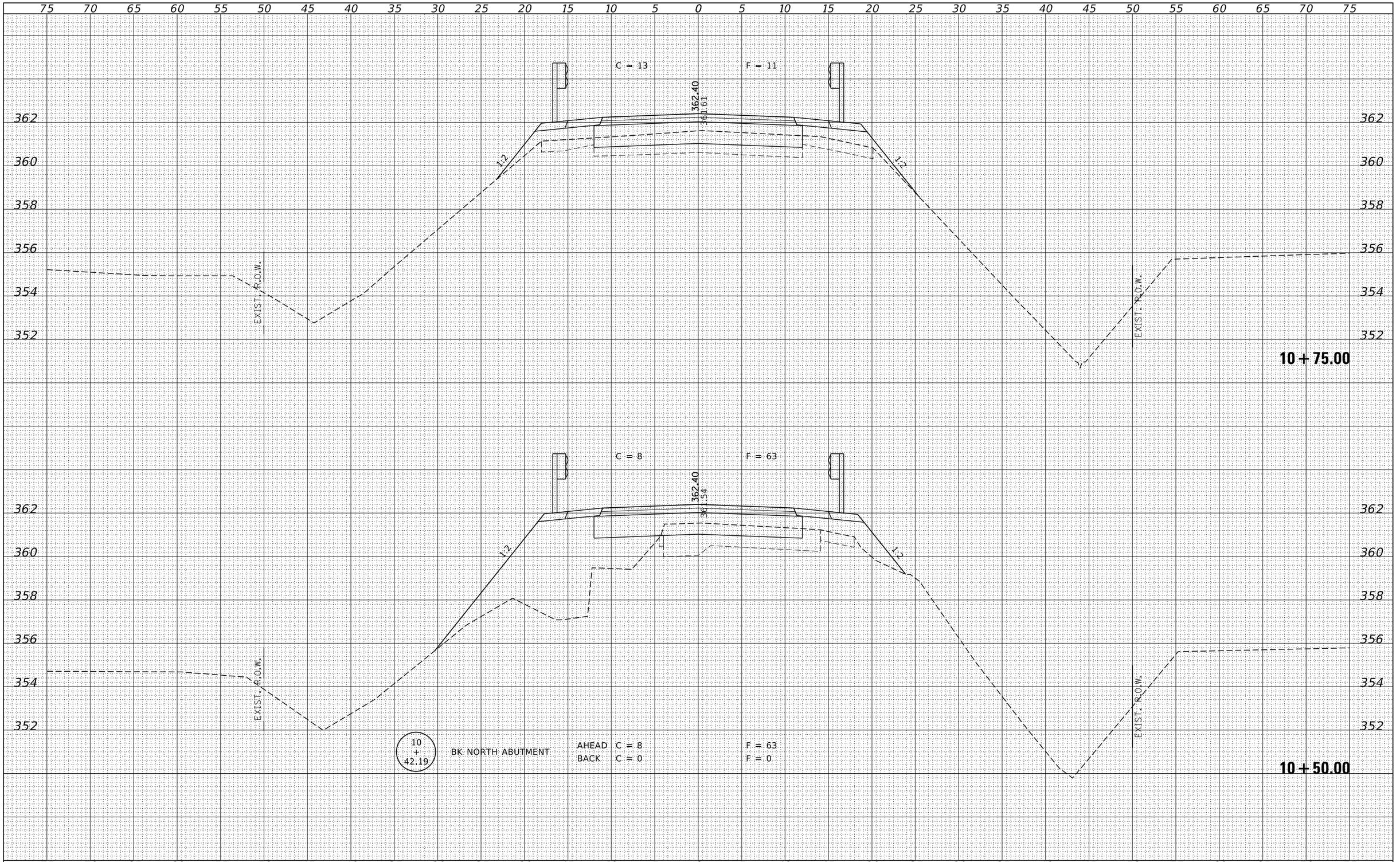
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - X.X.X.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = $SCALE$	CHECKED - X.X.X.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 6 OF 10 SHEETS | STA. 10+00.00 TO STA. 10+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	11
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		



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

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

BY	DATE

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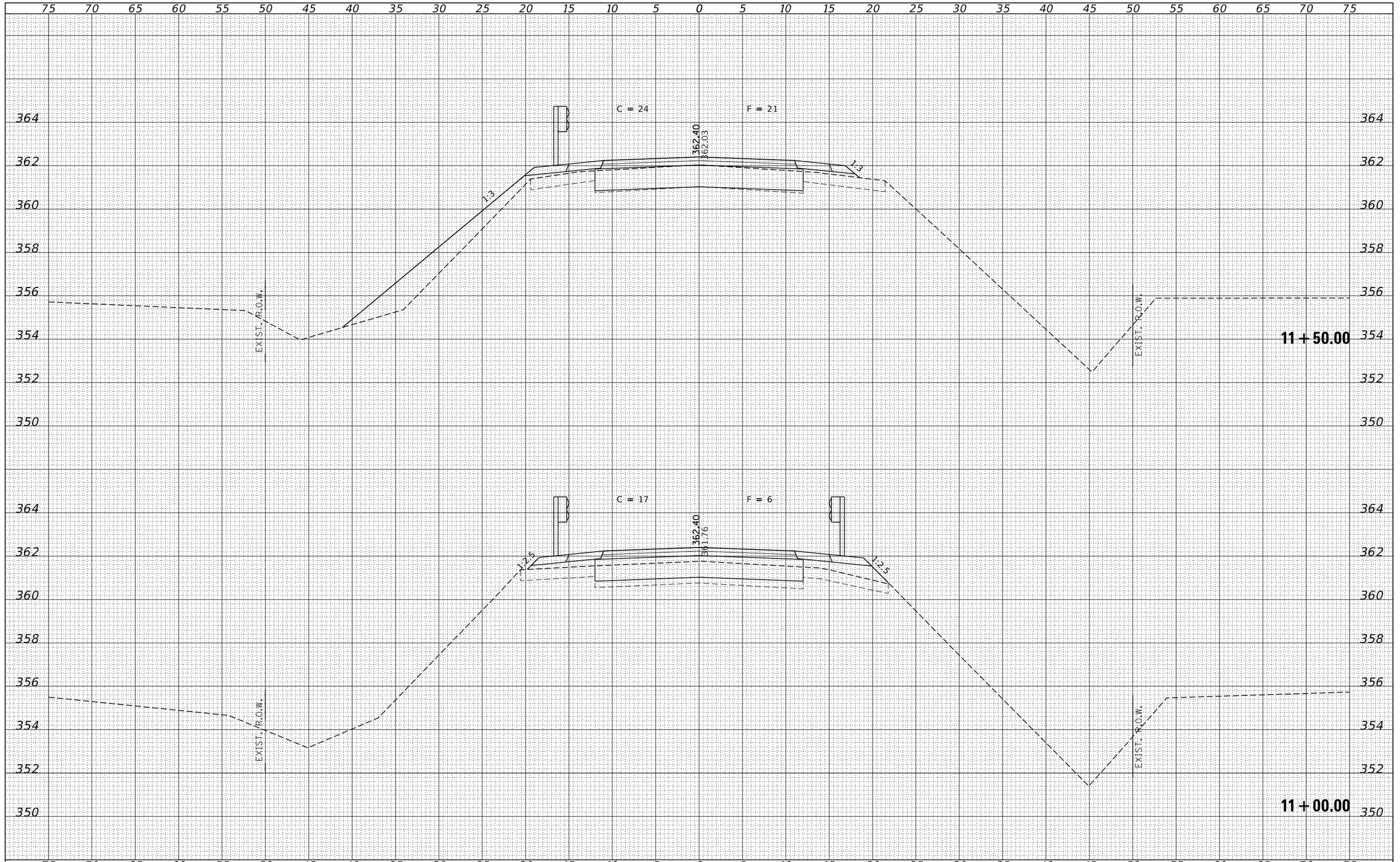
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 7 OF 10 SHEETS | STA. 10+75.00 TO STA. 11+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	12
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
		ILLINOIS FED. AID PROJECT L7J6(824)		



FINAL SURVEY

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

ORIGINAL SURVEY

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

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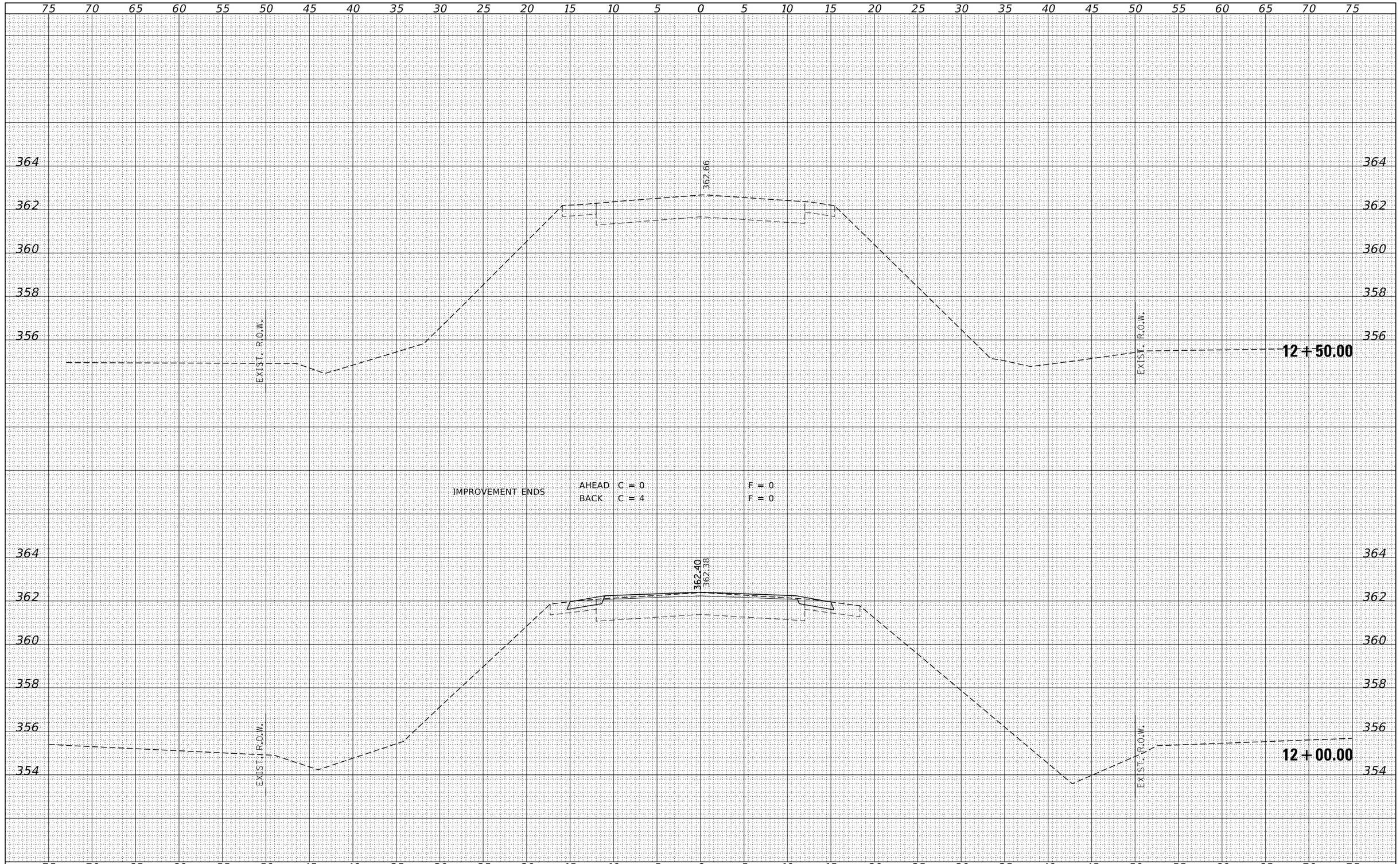
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 8 OF 10 SHEETS | STA. 11+50.00 TO STA. 11+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	13
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		



FINAL SURVEY

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

ORIGINAL SURVEY

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

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STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 9 OF 10 SHEETS | STA. 12+00.00 TO STA. 12+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	14
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		

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

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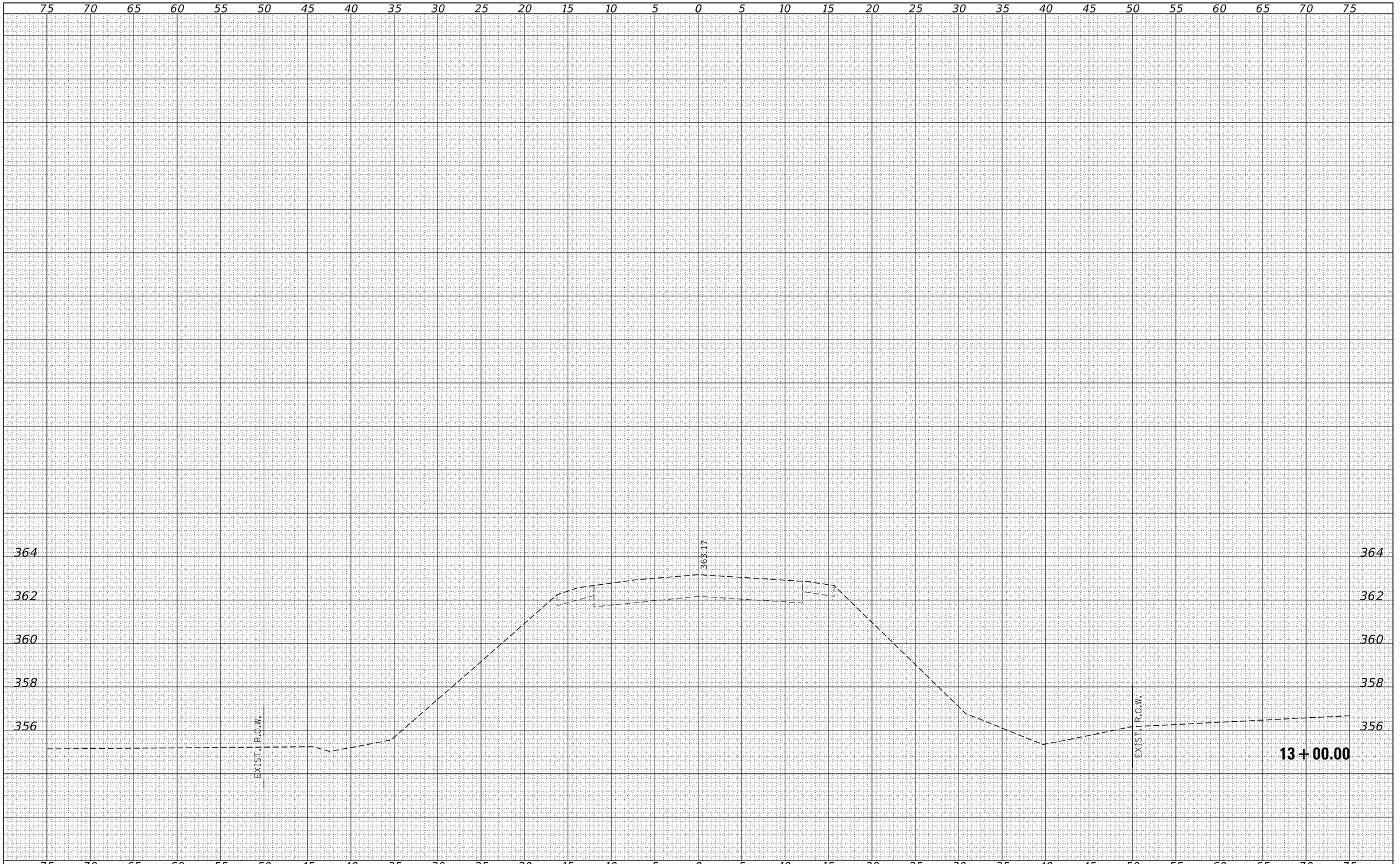
	AREAS		
	AREAS CHECKED		



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3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = $SCALE$	CHECKED - X.X.X.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/30/2018	DATE - 03/30/18	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

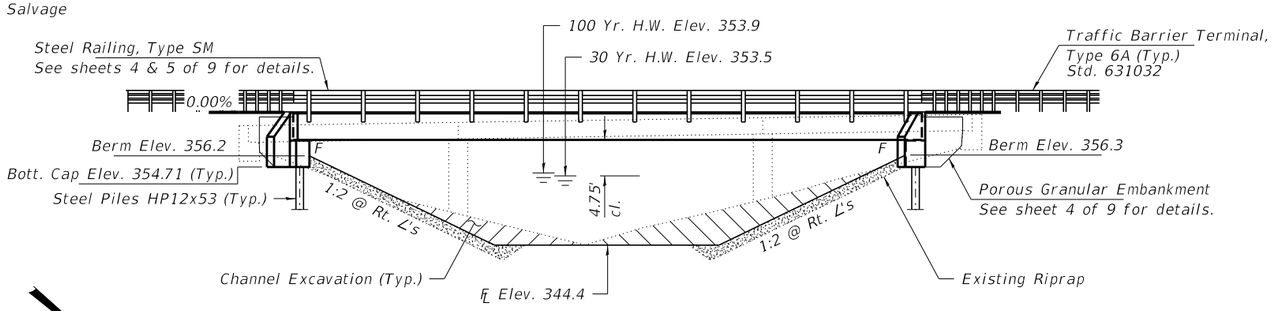
SCALE: 5H:2V | SHEET NO. 10 OF 10 SHEETS | STA. 13+00.00 | TO STA. 13+00.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	15
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			

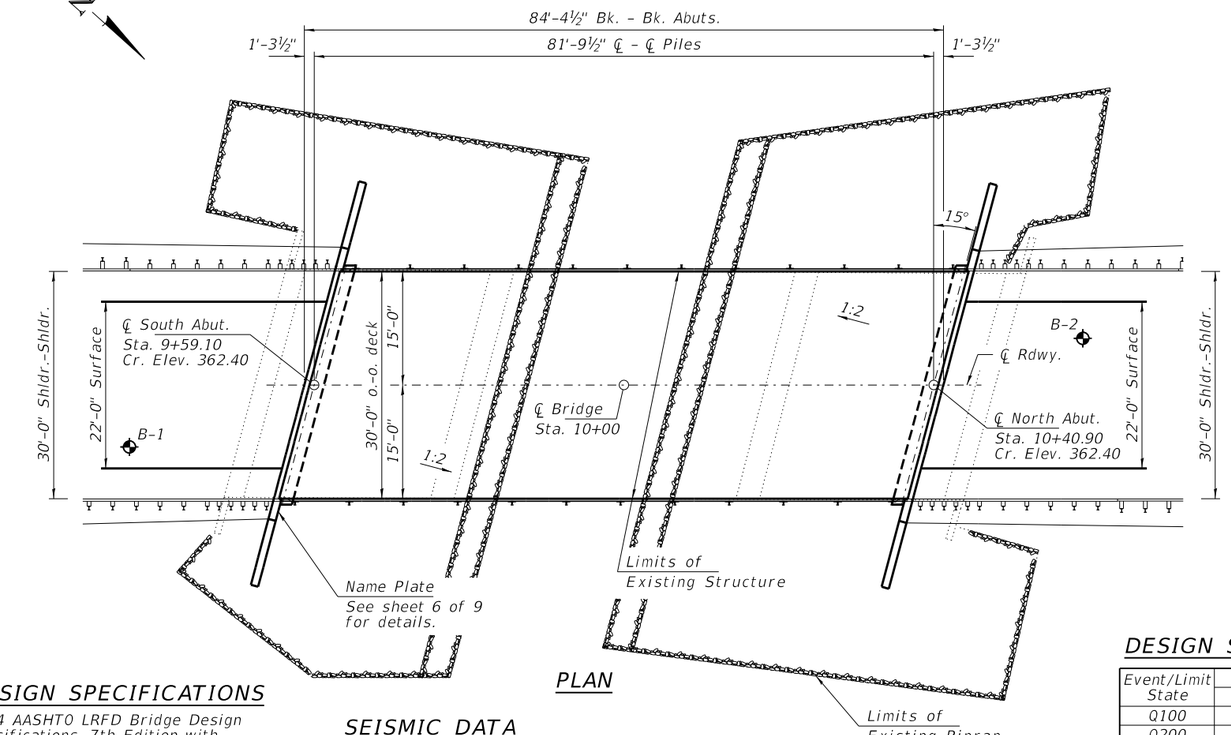
EXISTING STRUCTURE NO. 030-3115: Sta. 10+00 – Three span precast concrete slab bridge with concrete abutments and wingwalls.
95.75' fc.-fc.; 30.0' o.-o. deck.

Structure closed to traffic during construction.

No Salvage



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with all interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"Ø low lax. strands)
fpbt = 201,960 psi (½"Ø low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.315g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.739g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 6.7 Sq. Mi.
Existing Low Grade Elev. 359.3 @ Sta. 7+50
Proposed Low Grade Elev. 359.8 @ Sta. 6+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	650	430	430	353.5	0.1	0.0	353.6	353.6
Base	100	790	450	450	353.9	0.1	0.1	354.0	354.0
Prop. Overtop		Ohio River backwater overtops south approach.							
Max Calc.	500	970	490	490	354.4	0.1	0.1	354.5	354.4

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elev. (ft.) E. Abut.	Design Scour Elev. (ft.) W. Abut.	Item 113
Q100	354.7	354.7	8
Q200	354.7	354.7	
Design	354.7	354.7	
Check	354.7	354.7	

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

Steven W. Meggenson 03/30/18
ILLINOIS STRUCTURAL ENGR. NO. 081-6064

LICENSED STRUCTURAL ENGINEER
STEVEN W. MEGGINSON
081-6064
SPRINGFIELD, ILL.
STATE OF ILLINOIS

Expires 11-30-2018

GENERAL NOTES

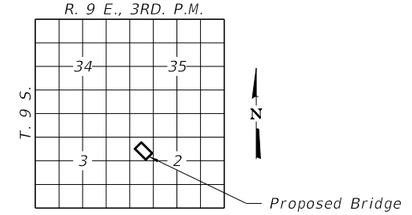
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
All bars to be epoxy coated.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

INDEX OF STRUCTURE SHEETS

N. FK. CYPRESS CREEK
BUILT 201_ BY
GALLATIN COUNTY
SEC. 15-00081-00-BR
C.H. 11 / F.A.S. 858
STR. NO. 030-3138
LOADING HL-93

NAME PLATE

See Std. 515001



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			185
Porous Granular Embankment	Ton			220
Stone Dumped Riprap, Class A4	Sq. Yd.			50
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	44		44
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		38.0	38.0
Precast Prestressed Conc. Deck Beams (42" Depth)	Sq. Ft.	2,490		2,490
Reinforcement Bars, Epoxy Coated	Pound		5,670	5,670
Steel Railing, Type SM	Foot	166		166
Furnishing Steel Piles HP12x53	Foot		1,560	1,560
Driving Piles	Foot		1,560	1,560
Name Plates	Each		1	1
Portland Cement Mortar Fairing Course	Foot	190		190
Terminal Marker - Direct Applied	Each	4		4

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -
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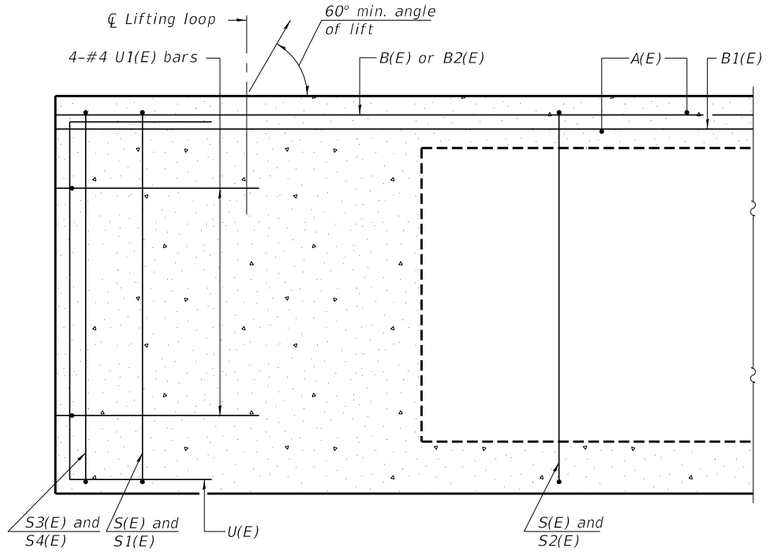
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -

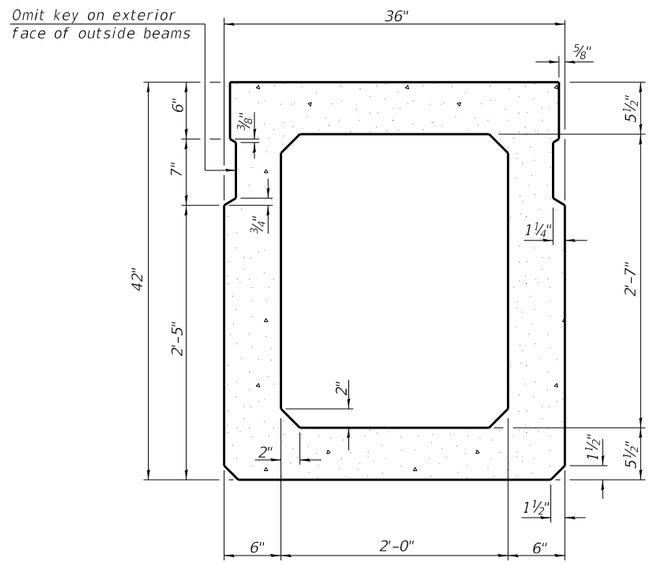
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 030-3138
SHEET NO. 1 OF 9 SHEETS

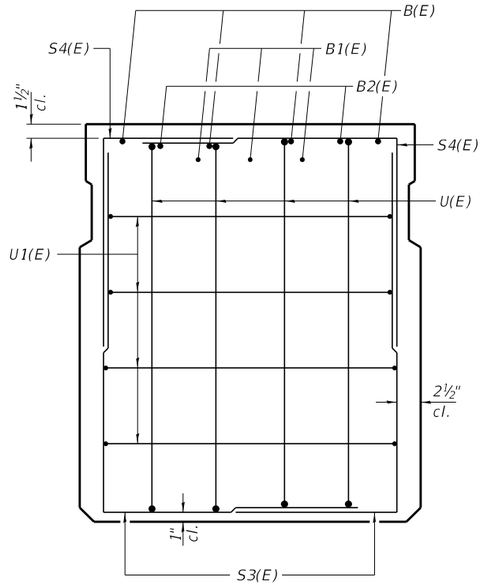
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	16
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			



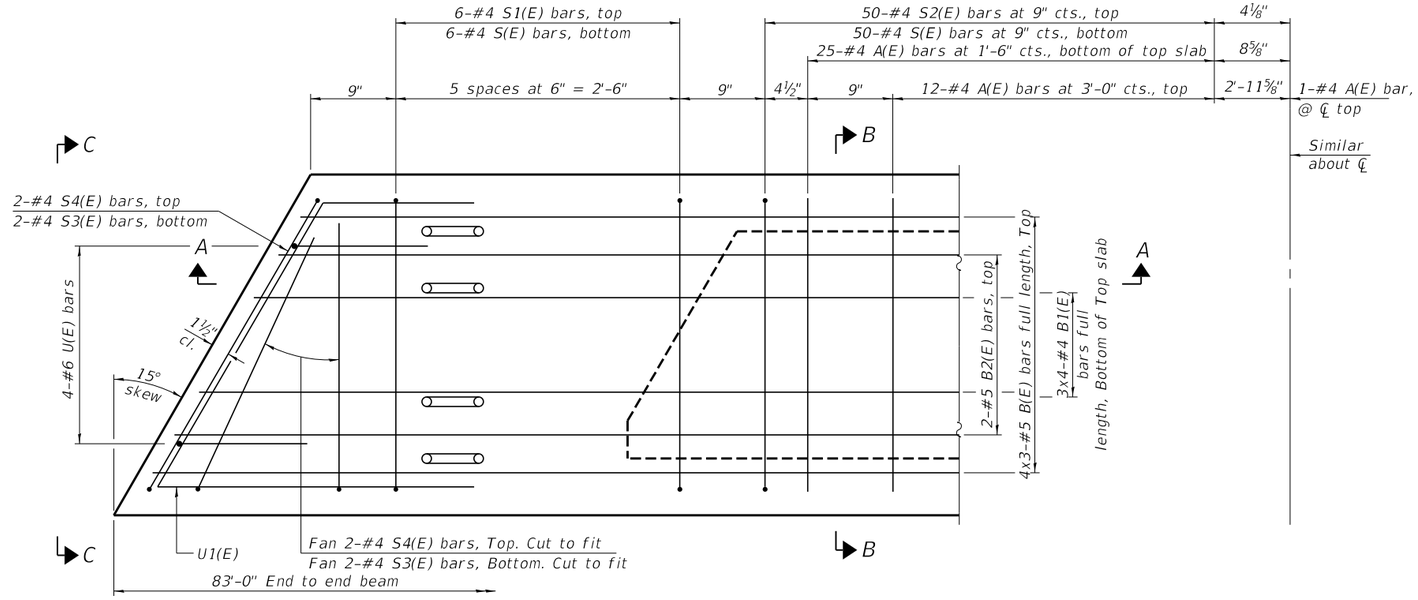
SECTION A-A



SECTION B-B
(Showing dimensions)



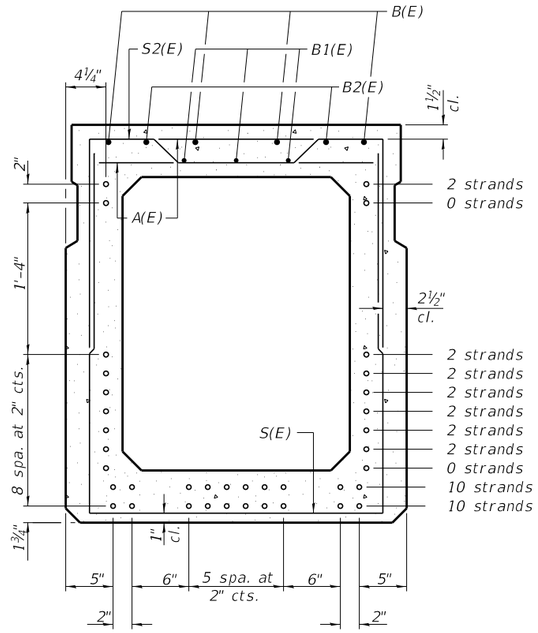
VIEW C-C



PLAN VIEW

Notes:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Bars indicated thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"



SECTION B-B
(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	75	#4	2'-7"	—
B(E)	12	#5	29'-3"	—
B1(E)	12	#4	22'-2"	—
B2(E)	4	#5	10'-0"	—
S(E)	112	#4	9'-2"	⊔
S1(E)	12	#4	6'-5"	⊓
S2(E)	100	#4	6'-8"	⊓
S3(E)	8	#4	5'-9"	⊔
S4(E)	8	#4	4'-4"	⊔
U(E)	8	#6	5'-9"	⊏
U1(E)	8	#4	5'-9"	⊏

Note:
See sheet 3 & 4 of 9 for additional details and Bill of Material.

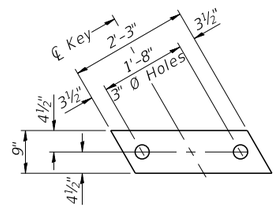
PD-4236-L 2-17-2017

FILE NAME = 180026-shl-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -	
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -	

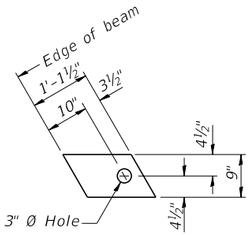
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

42" x 36" PPC DECK BEAM
STRUCTURE NO. 030-3138
SHEET NO. 2 OF 9 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	17
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			



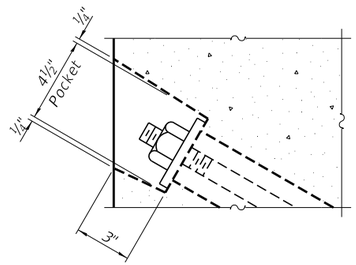
FABRIC BEARING PAD
(Interior - 18 Req'd.)



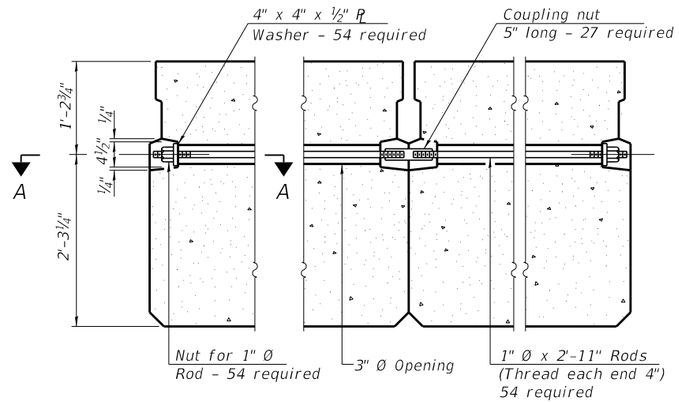
FABRIC BEARING PAD
(Exterior - 4 Req'd.)

FIXED

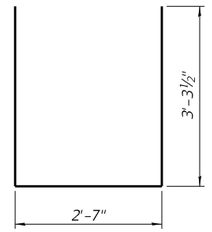
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



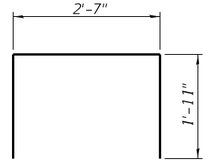
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S(E)



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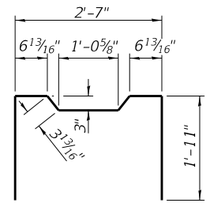

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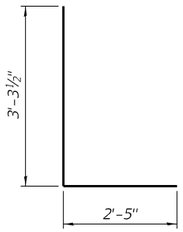

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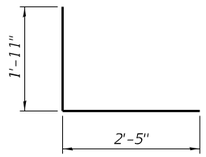
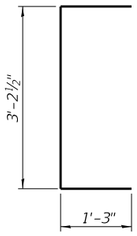
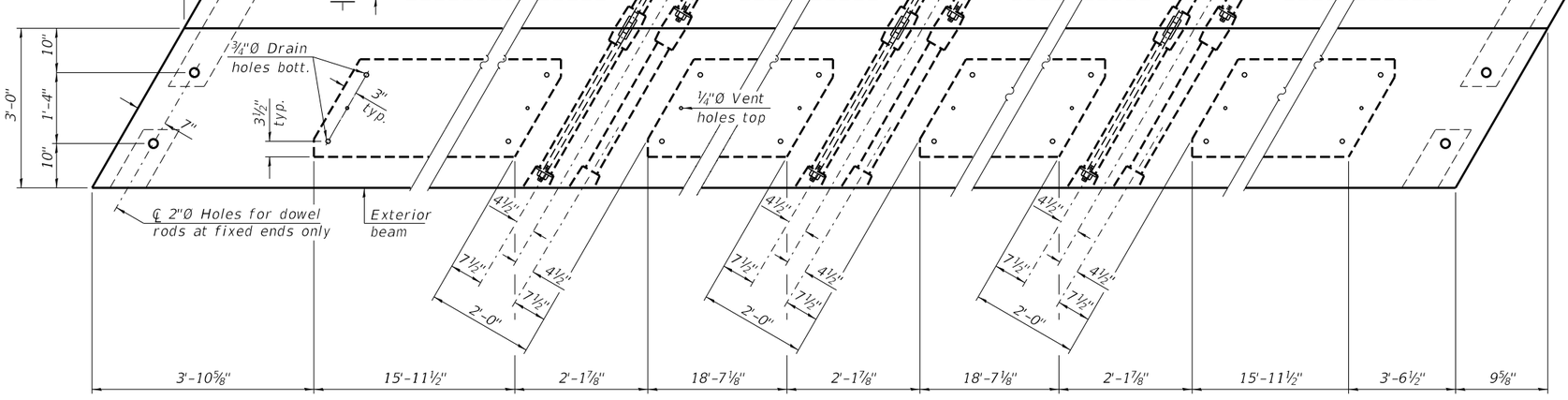


BAR S4(E)

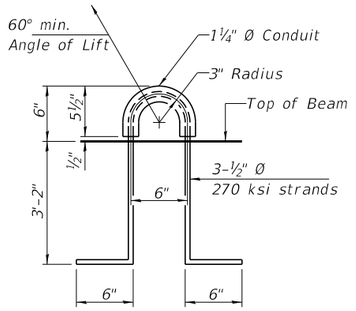


BAR U(E)



PLAN VIEW

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



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Prestressed Conc. Deck Bms. (42" depth)	Sq. Ft.	2,490
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	44
Portland Cement Mortar Fairing Course	Foot	190

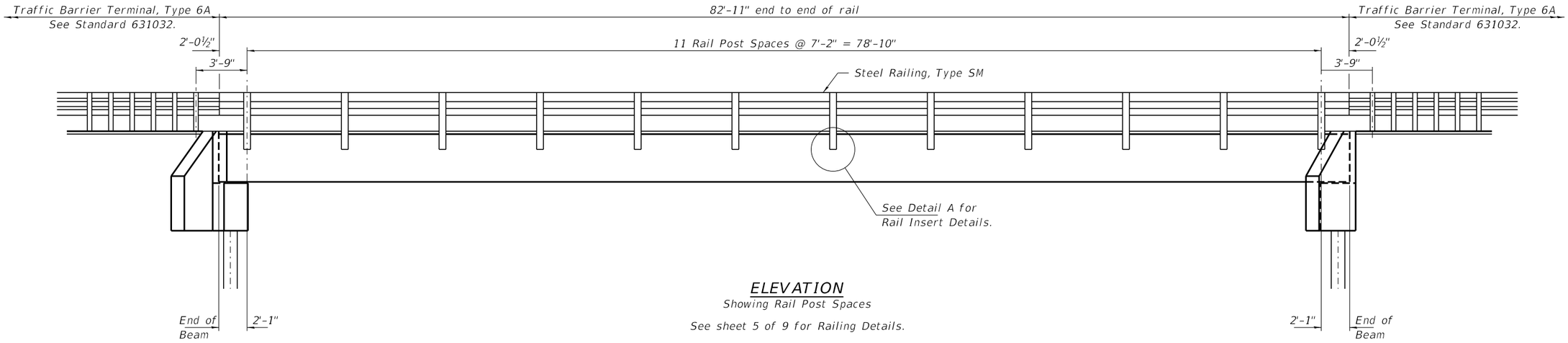
PD-4236-LD 2-17-2017

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -	
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -	

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

42" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 030-3138
SHEET NO. 3 OF 9 SHEETS

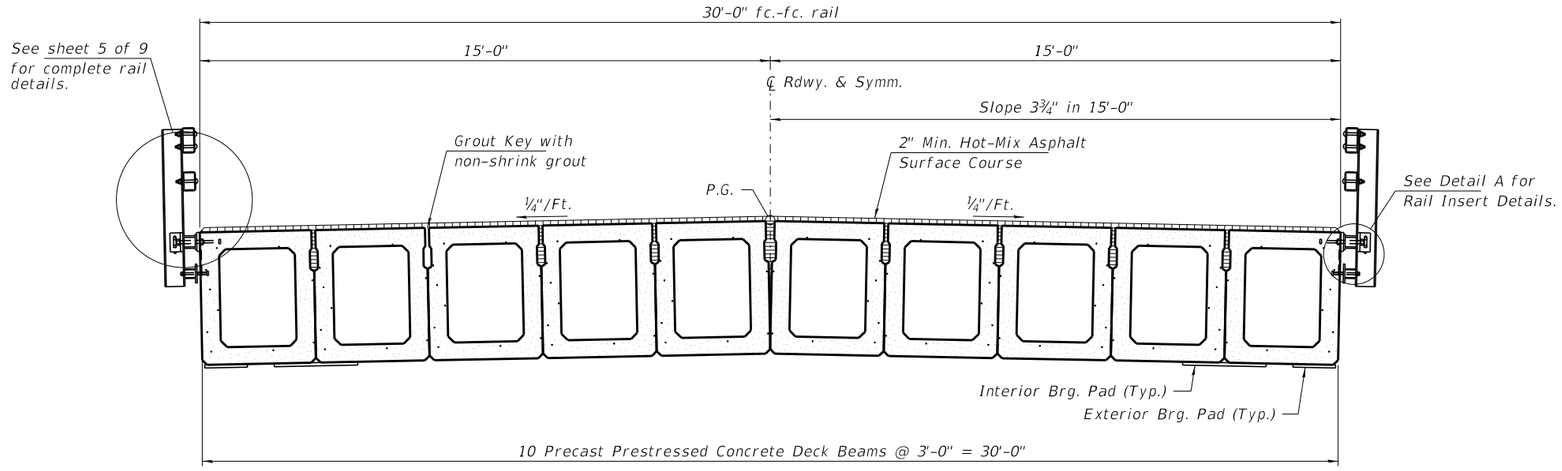
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	18
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS	FED. AID PROJECT L7J6(824)		



ELEVATION

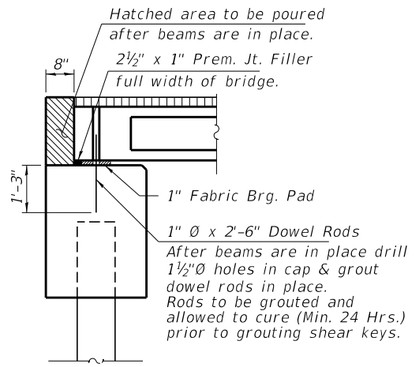
Showing Rail Post Spaces

See sheet 5 of 9 for Railing Details.



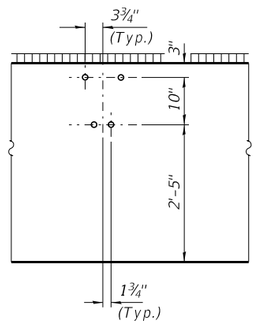
CROSS SECTION

See sheets 2 & 3 of 9 for Superstructure.

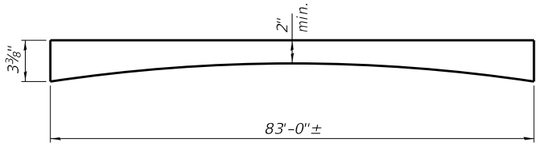


SECTION AT ABUTMENTS

@ Rt. ℒ's

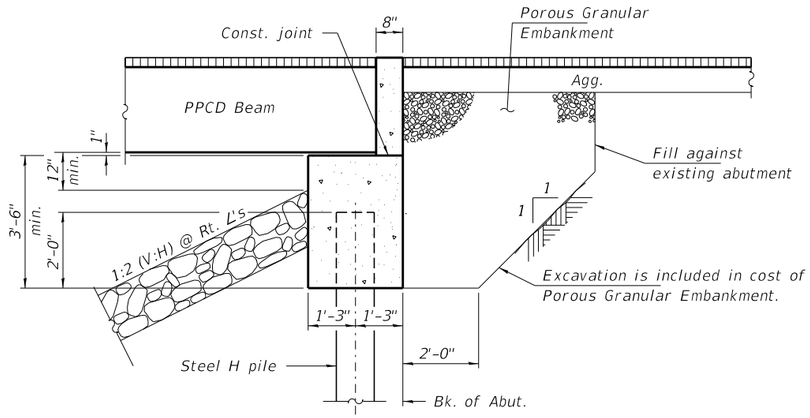


DETAIL A



ANTICIPATED HMA WEARING SURFACE PROFILE

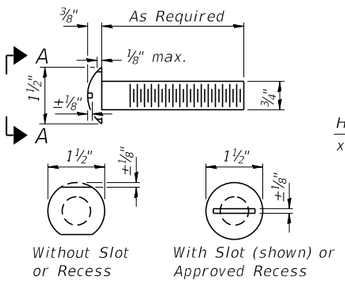
(For information only)



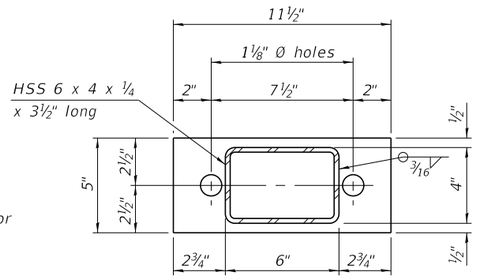
SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. ℒ's)

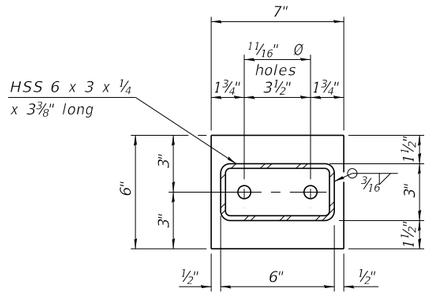
FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	**STATE OF ILLINOIS** **GALLATIN COUNTY HIGHWAY DEPARTMENT**	**SUPERSTRUCTURE DETAILS** **STRUCTURE NO. 030-3138**	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -			888	15-00081-00-BR	GALLATIN	24	19
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -		SHEET NO. 4 OF 9 SHEETS		ILLINOIS	FED. AID PROJECT L7J6(824)		



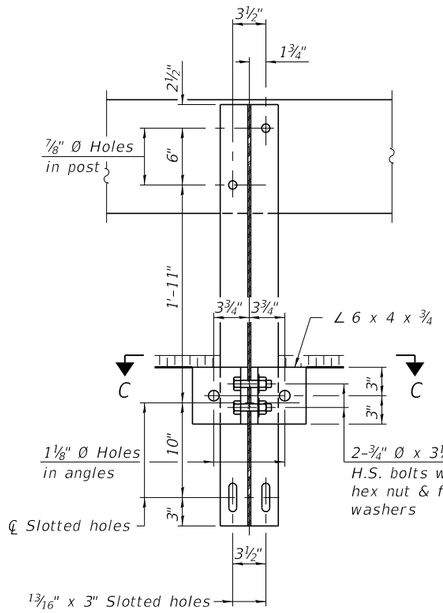
VIEW A-A
ROUND HEAD BOLT



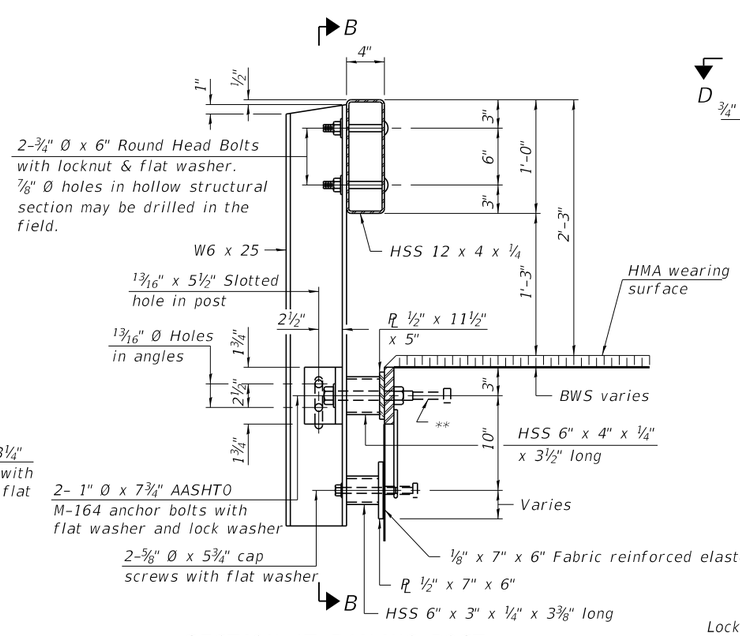
℄ 1/2" x 11 1/2" x 5"



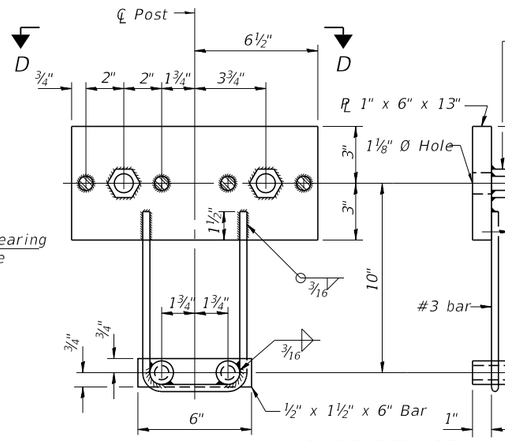
℄ 1/2" x 7" x 6"



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

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

SPLICE DIMENSIONS

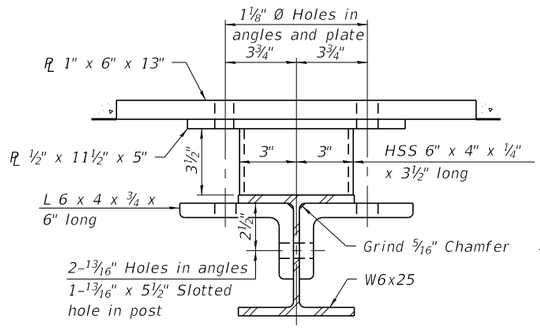
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	——

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

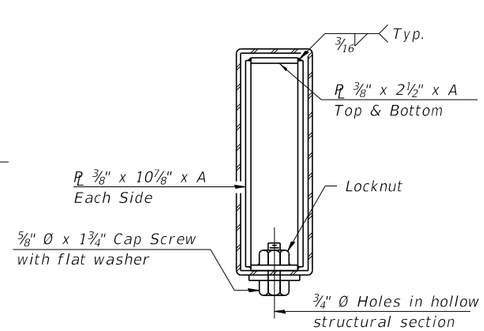
Notes:

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

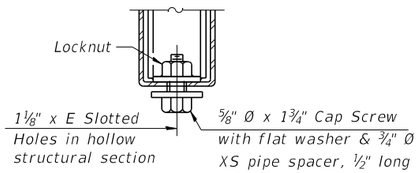
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



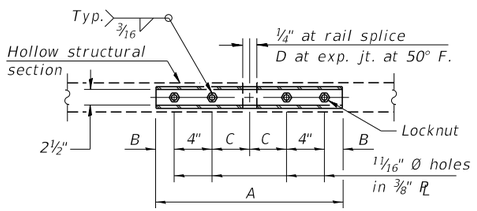
SECTION C-C



SECTIONS AT RAIL SPLICE

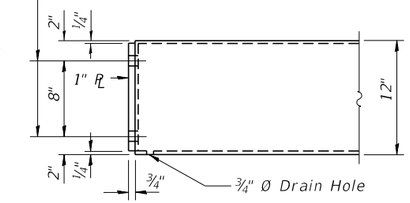


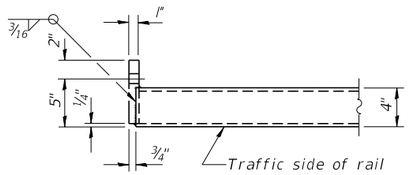
RAIL SPLICE CONNECTION
AT EXPANSION JT.



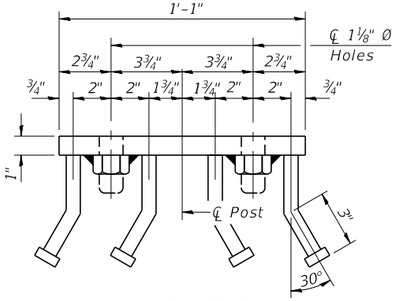
PLAN-BOTT. SPLICE ℄
TYPICAL

1 1/8" Ø Holes for 1" Ø x 4" Round head bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy Std. 631026 or BLR 27-1.





END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	166

** 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. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

R-23A

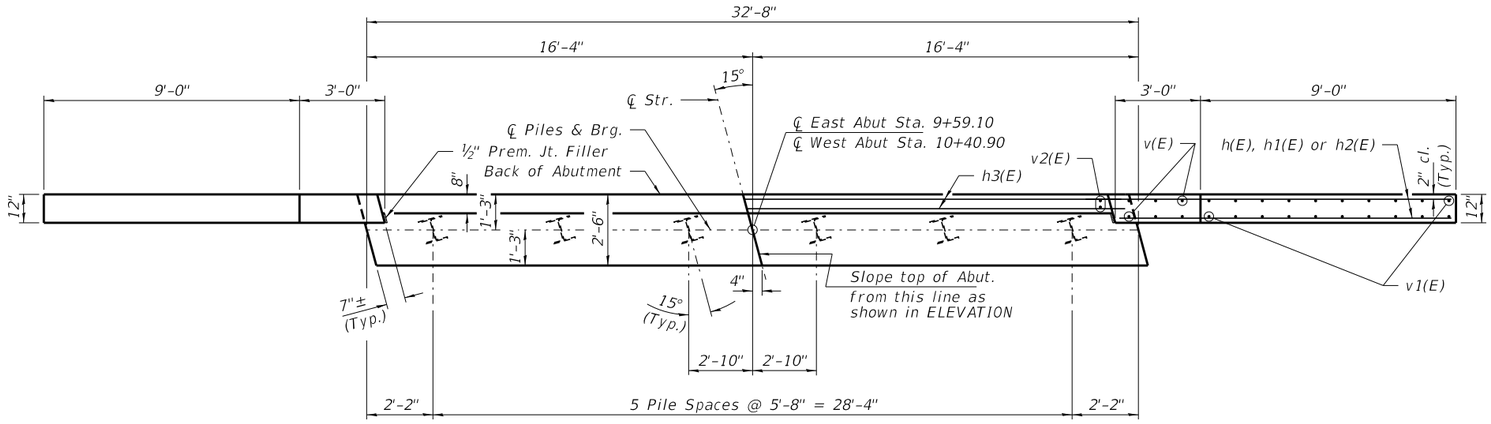
8-11-2017 (10'-9" Maximum Post Spacing)

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -

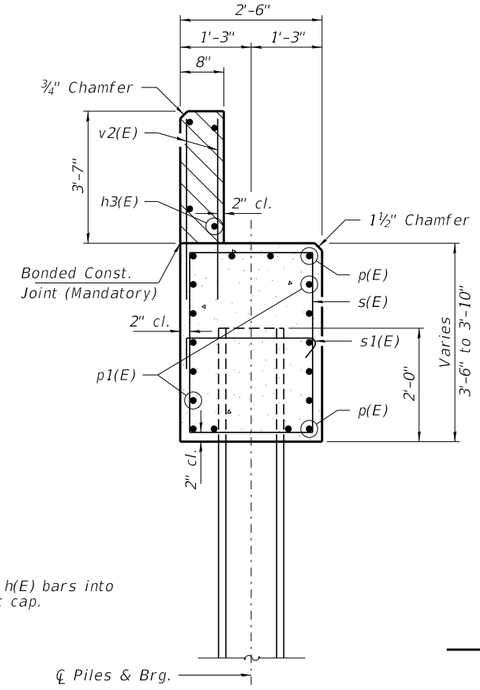
STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 030-3138
SHEET NO. 5 OF 9 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	20
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
ILLINOIS	FED. AID PROJECT L7J6(824)			



PLAN

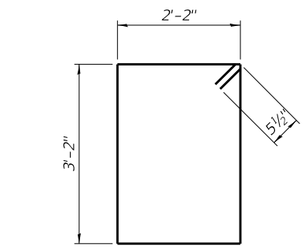


SECTION A-A

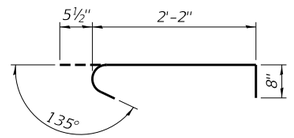
Hatched area to be poured after beams are in place.

Cast top of wingwall flush with exterior beam face after beams have been erected.

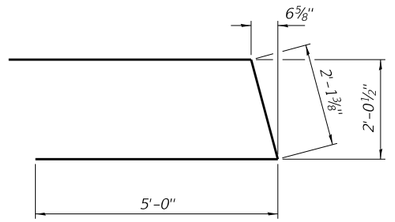
Note: Extend h(E) bars into abutment cap.



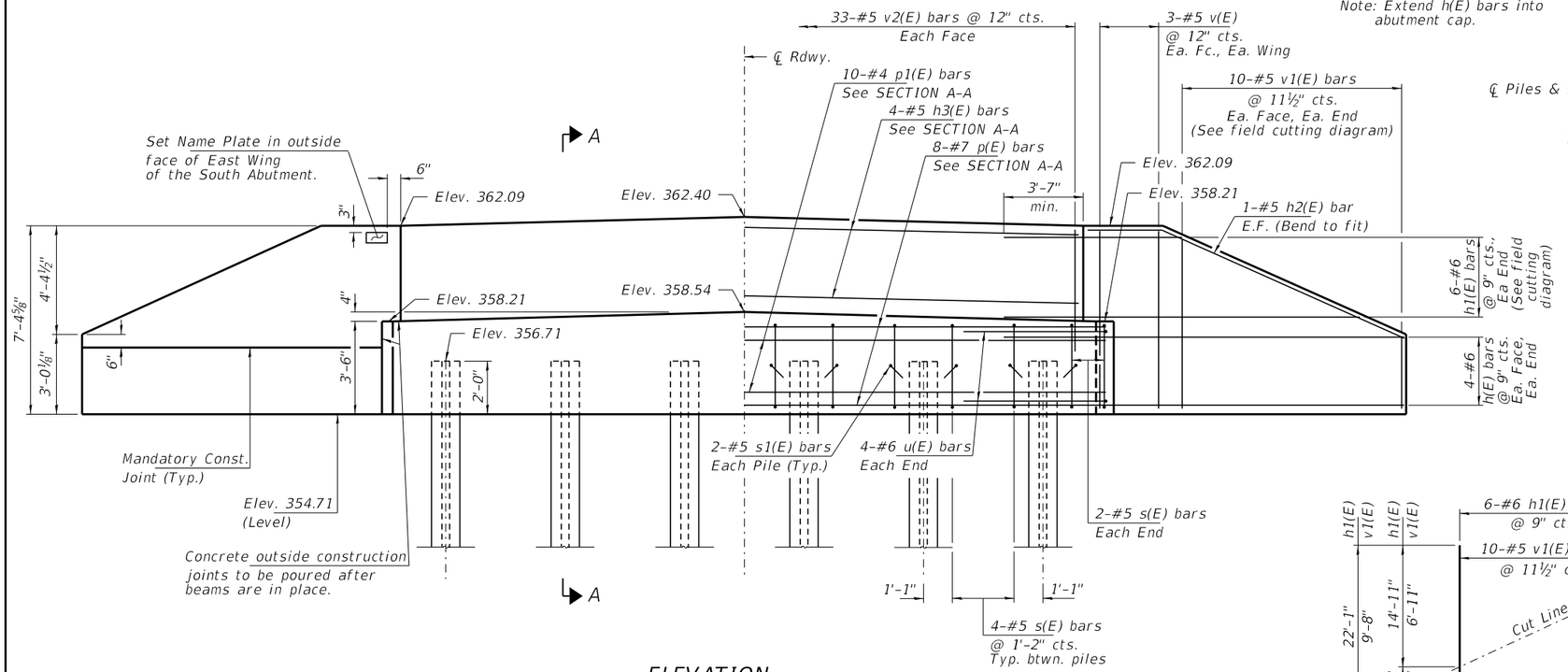
BAR s(E)



BAR s1(E)



BAR u(E)



ELEVATION

PILE DATA

Type _____ Steel HP12x53
No. Req'd. (2 Abuts.) _____ 12
Factored Resistance Available (Rf) __ 230 Kips/Pile
Nominal Required Bearing (Rn) _____ 419 Kips/Pile
Est. Length _____ 130 Ft/Pile

FIELD CUTTING DIAGRAM

Order h1(E) and v1(E) full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL - 2 ABUTS.

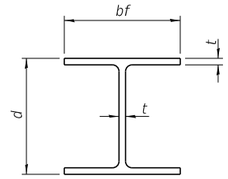
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	32	#6	15'-5"	
h1(E)	24	#6	22'-1"	
h2(E)	8	#5	12'-7"	
h3(E)	8	#5	32'-4"	
p(E)	16	#7	32'-4"	
p1(E)	20	#4	32'-4"	
s(E)	48	#5	11'-7"	
s1(E)	24	#5	3'-4"	
u(E)	16	#6	12'-2"	
v(E)	24	#5	7'-0"	
v1(E)	40	#5	9'-8"	
v2(E)	132	#5	5'-7"	
Concrete Structures			Cu. Yd.	38.0
Reinf. Bars, Epoxy Coated			Pound	5,670
Steel Piles HP10x42			Foot	1,560
Name Plates			Each	1

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -

STATE OF ILLINOIS
GALLATIN COUNTY HIGHWAY DEPARTMENT

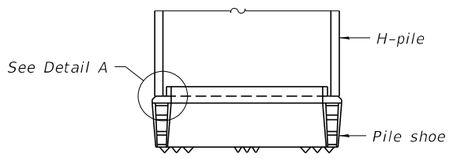
ABUTMENTS
STRUCTURE NO. 030-3138
SHEET NO. 6 OF 9 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	21
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			

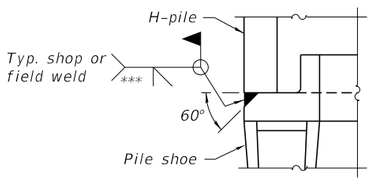


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅝"	14⅝"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



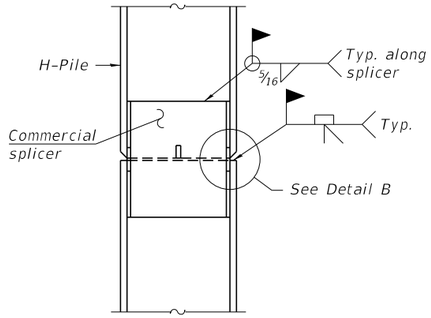
ELEVATION



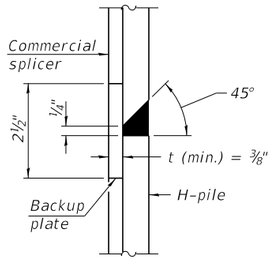
DETAIL A

SHOE ATTACHMENT

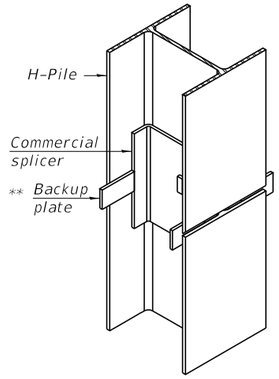
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



ELEVATION

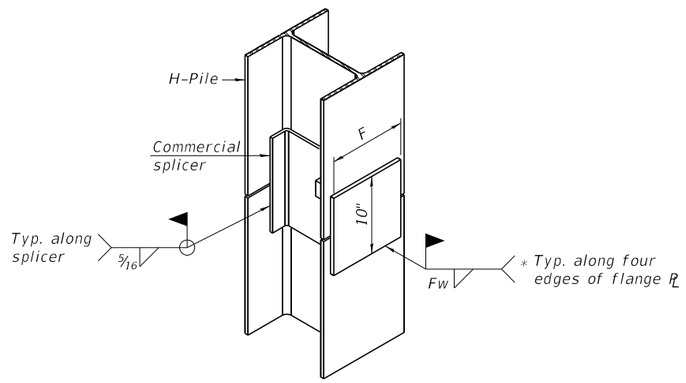


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



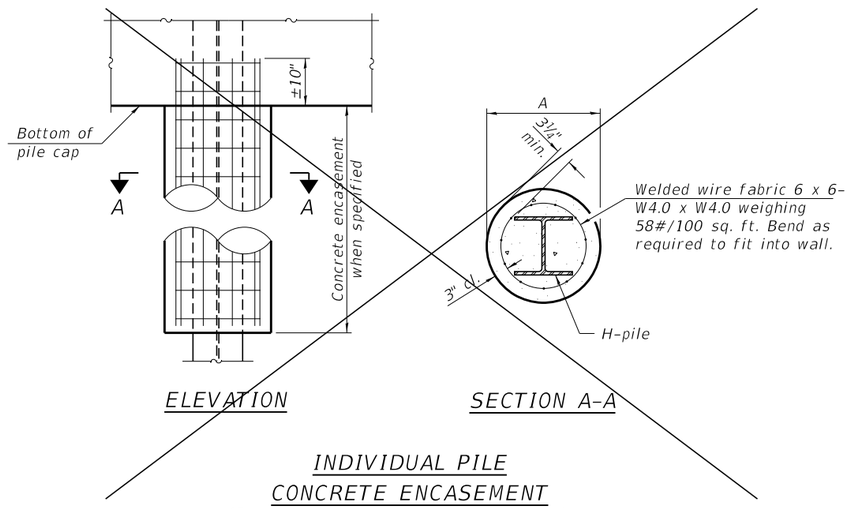
ISOMETRIC VIEW

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.

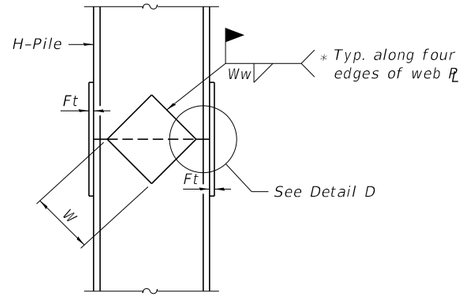
*** Weld size per pile shoe manufacturer (5/16" min.).



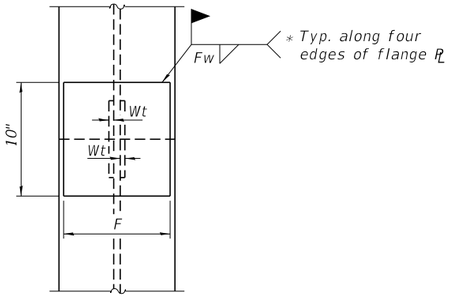
ELEVATION SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

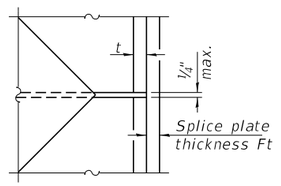
(Forms for encasement may be omitted when soil conditions permit).
(Not Required)



ELEVATION



END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	11/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

WELDED PLATE FIELD SPLICE

F-HP 2-17-2017

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	STATE OF ILLINOIS GALLATIN COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 030-3138
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -		SHEET NO. 7 OF 9 SHEETS
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP: 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -		
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -		

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	22
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials
Bridge Foundation Boring Log
Sheet 1 of 3

FAS 888 (New Haven Rd) Over North Fork Cypress Creek
Route: FAS 888 Structure Number: 030-3000 Date: 02/20/2001
Section 00-00063-00-BR Bored By: Bryan Keller
County: Gallatin Location: 4.25 MI N ILL 13 Checked By: Rob Graeff

Boring No 1-S
Station 26' S of Sabutment
Offset 7' E of CL
Ground Surface 99.9 Ft

Surf Wat Elev: 86.0
Ground Water Elevation
when Drilling 87.9
At Completion
At: Hrs:

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Multi A-1 over Bituminous Pavement				Stiff, very moist, brown mottled grey, Clay A7-6	3	1.5S	33
					2		
97.9							
Stiff, moist, grey, Silty Clay A-6	4				WH		
	6	1.9S	19		2	1.1S	37
	5				2		
95.4				70.4			
Medium, very moist, grey, Clay A7-6 with fine Silty Sand Seams 5.0	1			Medium, very moist, grey, Clay A7-6 30.0	1		
	3	0.9B	26		2	0.7B	42
	2				2		
92.9				67.9			
Very stiff, moist, grey, Clay A7-6 with some Gravel	1			Stiff, very moist, grey, Clay A7-6	1		
	4	2.4S	23		1	1.2S	36
	3				2		
90.4				65.4			
Stiff, very moist, grey mottled brown, Clay A7-6 10.0	2			Stiff, very moist, grey, Clay A7-6 with Coal Seams 35.0	WH		
	3	1.1S	27		1	1.2B	50
	3				2		
87.9							
Loose, very moist, brown to grey, fine Silty Sand 87% Sand 9% Silt 4% Clay	2				1		
	4		20		2	1.5B	61
	5				3		
15.0	1			60.4			
	3			Stiff, very moist, grey, Clay A7-6 40.0	1		
	3				2	1.4B	28
82.9					3		
Stiff, very moist, grey, Clay A7-6 with Sand Layers	WH						
	1	1.1S	26				
	2						
80.4				55.4			
Stiff, very moist, brown to grey, Clay A7-6 20.0	1			Stiff, very moist, grey, Clay A7-6 with Coal Chips 45.0	1		
	3	1.2B	36		3	1.3B	24
	2				2		
	2						
	2	1.4B	29				
	3						
75.4				50.4			
25.0	2			50.0	1		

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

Route: FAS 888
Section: 00-00063-00-BR
County: Gallatin
Sheet 2 of 3
Date: 02/20/2001

Boring No: 1-S
Station: 26' S of Sabutment
Offset: 7' E of CL
Ground Surface: 99.9 Ft

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Medium, very moist, grey, Silty Clay to Clay A-6 with Sand and Gravel layers	4	0.8B	19		6		
	5				6		
45.4				20.4			
Medium, wet, grey, Sandy Gravel 55.0	3			Dense, wet, grey, Sandy Gravel with a Clay Seam 80.0	4		
49% Sand	9				14		
4% Silt	9				24		
1% Clay							
46% Gravel							
40.4							
Medium to dense, wet, Sandy Gravel 60.0	10			85.0			
	13						
	17						
34.9 65.0				10.4			
Medium, wet, grey, Sandy Gravel	9			Medium, wet, grey, Fine Silty Sand with some Gravel 90.0	6		
	13			88% Sand	10		23
	12			0% Silt	10		
				2% Clay			
				10% Gravel			
70.0	7			95.0			
	8						
	7						
75.0	4			0.4			
				100.0	5		

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

Route: FAS 888
Section: 00-00063-00-BR
County: Gallatin
Sheet 3 of 3
Date: 02/20/2001

Boring No: 1-S
Station: 26' S of Sabutment
Offset: 7' E of CL
Ground Surface: 99.9 Ft

DEPTH	BLOW	Qu tsf	W%	DEPTH	BLOW	Qu tsf	W%
Medium, wet, grey, fine Silty Sand with some Gravel -1.1	10						
	10						
ESF = 94.6 Tons							
Bottom of hole = 101.0 ft.							
Free water observed at 12.0 ft.							
Elevation referenced to center of existing structure; Assumed elevation = 100.0 ft. 105.0				130.0			
To convert "N"values to "N60" values multiply by 1.25							
! Note Augers Sandlocked at 101.0 ft.							
110.0				135.0			
115.0				140.0			
120.0				145.0			
125.0				150.0			

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

BORING-1

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	STATE OF ILLINOIS GALLATIN COUNTY HIGHWAY DEPARTMENT	BORINGS STRUCTURE NO. 030-3138	
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -		SHEET NO. 8 OF 9 SHEETS	
	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -			

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	23
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log

FAS 888 (New Haven Rd) Over North Fork Cypress Creek

Sheet 1 of 3

Route: FAS 888 Structure Number: 030-3000 Date: 03/05/2001

Section 00-00063-00-BR Bored By: Bryan Keller

County: Gallatin Location: 4.25 MI N ILL 13 Checked By: Rob Graeff

Boring No 2-S
Station 22' N of N Abutment
Offset 7' W of CL
Ground Surface 99.9 Ft

Surf Wat Elev: 88.0
Ground Water Elevation
when Drilling 85.9
At Completion
At: Hrs:

DEPTH	BLOW	Qu tsf	W%	Material
				Multi A-1 over Bituminous Pavement
98.4				
	3			Stiff, moist, grey, Clay A7-6
	4	1.2B	22	
	5			
95.4				
5.0	3			Medium, moist, grey, Silty Clay to Silty Clay Loam A-6
	2	0.7P	39	
	3			
92.9				
	2			Stiff, moist, grey, Clay A7-6
	4	1.2B	29	
	3			
10.0	2			
	4	1.5B	34	
	3			
87.9				
	2			Medium, very moist, brown mottled grey, Clay A7-6
	2	0.7B	34	
	2			
85.4				
15.0	1			Soft, very moist, brown mottled grey, Clay A7-6 with fine Silty Sand Layers
	5	0.4B	26	
	6			
82.9				
	1			Very loose, wet, grey, fine Silty Sand with a Clay Layer 87% Sand 10% Silt 3% Clay
	2		21	
	2			
80.4				
20.0	1			Stiff, very moist, brown mottled grey, Clay A7-6 with fine Silty Sand Layers
	2	1.2B	36	
	3			
	1			
	3	1.4B	30	
	3			
25.0	1			

DEPTH	BLOW	Qu tsf	W%	Material
	3	1.4S	38	
	3			
72.9				
	1			Stiff, very moist, grey, Clay A7-6
	3	1.2S	39	
	2			
70.4				
30.0	1			Medium, very moist, grey, Clay A7-6
	2	0.6B	42	
	3			
67.9				
	1			Stiff, very moist, grey, Clay A7-6
	3	1.3S	34	
	2			
65.4				
35.0	1			Stiff, moist to very moist, grey, Clay A7-6 with Coal Chips
	3	1.6B	49	
	2			
62.9				
	2			Stiff, moist to very moist, grey, Clay A7-6
	2	1.3B	50	
	3			
40.0	2			
	3	1.2B	28	
	3			
45.0	1			
	3	1.6S	25	
	2			
50.4				
50.0	2			

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

Route: FAS 888
Section: 00-00063-00-BR
County: Gallatin

Sheet 2 of 3
Date: 03/05/2001

Boring No: 2-S
Station: 22' N of N Abutmen
Offset: 7' W of CL
Ground Surface: 99.9 Ft

DEPTH	BLOW	Qu tsf	W%	Material
	4	2.1S	24	Very stiff, moist, grey, Clay A7-6
	4			
45.4				
55.0	2			Stiff, moist, grey, Clay to Silty Clay A7-6 with fine Sand Seams
	5	1.7B	17	
	6			
40.4				
60.0	2			Very loose, wet, brown Sandy Gravel 37% Sand 1% Silt 0% Clay 62% Gravel
	1		13	
	1			
35.4				
65.0	1			Medium, wet, brown, Sandy Gravel
	7			
	9			
30.4				
70.0	12			Dense, wet, brown, Sandy Gravel
	14			
	17			
25.4				
75.0	10			

DEPTH	BLOW	Qu tsf	W%	Material
	14		20	Dense, wet, grey, Clean fine to medium Sand with some Gravel 85% Sand 1% Silt 0% Clay 14% Gravel
	25			
20.4				
60.0	4			Loose to medium, wet, brown, coarse Sand with Gravel 52% Sand 1% Silt 1% Clay 46% Gravel
	5		18	
	5			
65.0				
10.4				
90.0	5			Medium, wet, grey, fine Silty Sand 90% Sand 8% Silt 2% Clay
	11		22	
	11			
95.0				
0.4				
100.0	13			

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

Route: FAS 888
Section: 00-00063-00-BR
County: Gallatin

Sheet 3 of 3
Date: 03/05/2001

Boring No: 2-S
Station: 22' N of N Abutmen
Offset: 7' W of CL
Ground Surface: 99.9 Ft

DEPTH	BLOW	Qu tsf	W%	Material
	16			Medium to dense, fine Silty Sand
	14			
105.0				
-9.6				
110.0	8			Medium, wet, grey, fine Silty Sand
	11			
-11.1	17			
				ESF= 94.5 Tons
				Free water observed at 14.0 ft.
				Elevation referenced to center of existing Structure; Assumed elevation = 100.0 ft.
115.0				To convert "N" values to "N60" values multiply by 1.25
				Augers drilled to 130.0 ft
				Bottom of hole = 130.0 ft.
120.0				
125.0				

DEPTH	BLOW	Qu tsf	W%
-30.1	130.0		
135.0			
140.0			
145.0			
150.0			

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

BORING-2

FILE NAME = 180026-sht-bridge 42" beam.dgn	USER NAME = dburdell	DESIGNED - R.D.H.	REVISED -	STATE OF ILLINOIS GALLATIN COUNTY HIGHWAY DEPARTMENT	BORINGS STRUCTURE NO. 030-3138
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP: 184.000959		CHECKED - S.W.M.	REVISED -		SHEET NO. 9 OF 9 SHEETS
	PLOT SCALE =	DRAWN - R.D.H.	REVISED -		
	PLOT DATE = 3/30/2018	CHECKED - D.A.B.	REVISED -		

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	15-00081-00-BR	GALLATIN	24	24
SHAWNEETOWN-NEW HAVEN ROAD		CONTRACT NO. 99604		
	ILLINOIS FED. AID PROJECT L7J6(824)			