

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 215	10-06129-00-BR	WHITE	21	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99602	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-12.	STATION CROSS SECTIONS
13-19.	BRIDGE PLANS
20-21.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
701901-07	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM
OFF SYSTEM BRIDGE

PROJECT XQU5(427)
SECTION 10-06129-00-BR
HAWTHORNE ROAD DISTRICT
WHITE COUNTY
T.R. 215
PROPOSED STRUCTURE NO. 097-3282
C-99-527-11

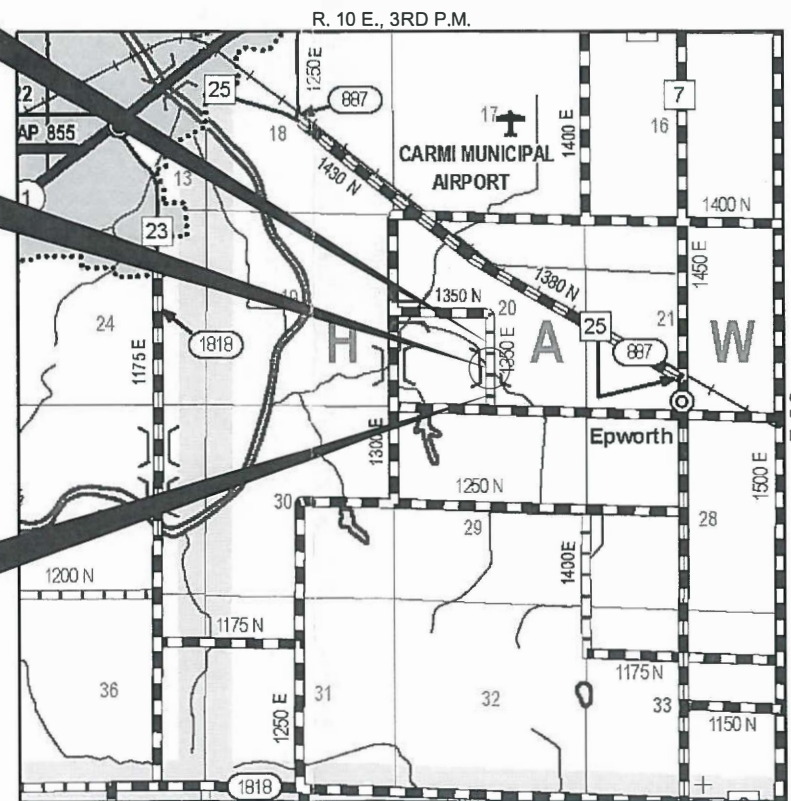
UTILITIES

NONE

STA. 10+01
PRECAST PRESTRESSED CONCRETE DECK BEAM
BRIDGE. SINGLE SPAN @ 55'-0"
24'-0" RDWY.; SKEW = 35°
EXISTING STRUCTURE NO. 097-3110
PROPOSED STRUCTURE NO. 097-3282

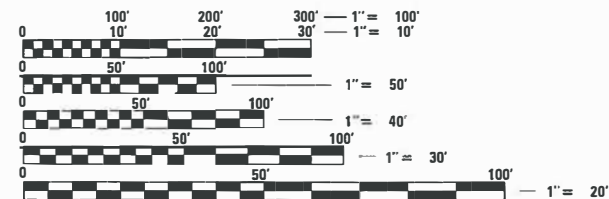
IMPROVEMENT ENDS
STATION 11+50

IMPROVEMENT BEGINS
STATION 9+00



LOCATION MAP

APPROXIMATE SCALE: 0 1/2 MILE
NET LENGTH OF SECTION = 250 FEET = 0.047 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.

FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 25 ADT



ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED *April 9th 2018*
Brian A. Ray
COUNTY ENGINEER

APPROVED *4-9 2018*
Jeff Keim
TOWNSHIP COMMISSIONER

PASSED *MAY 08 2018*
Jeff Keim
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
MAY 08 2018
REGION FIVE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WARNING

CALL 811
BEFORE YOU DIG
DIG NO: A2082874

DATE: 04/06/2018

REGISTERED PROFESSIONAL ENGINEER
Hampton, Lenzi and Renwick, Inc.
STATE OF ILLINOIS

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

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

EXPIRES: 11/30/2019 PROJECT NUMBER: 17.0546.130 DATE: 04/06/18

SUMMARY OF QUANTITIES			
CODE NO	ITEM	UNIT	TOTAL
			CONSTRUCTION TYPE CODE 0011
20200100	EARTH EXCAVATION	CU YD	90
20300100	CHANNEL EXCAVATION	CU YD	155
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	240
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	235
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	27.8
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1,320
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3,060
* 50900205	STEEL RAILING, TYPE S1	FOOT	108
51201400	FURNISHING STEEL PILES HP10X42	FOOT	520
51202305	DRIVING PILES	FOOT	520
51500100	NAME PLATES	EACH	1
58700300	CONCRETE SEALER	SQ FT	115
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.1

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

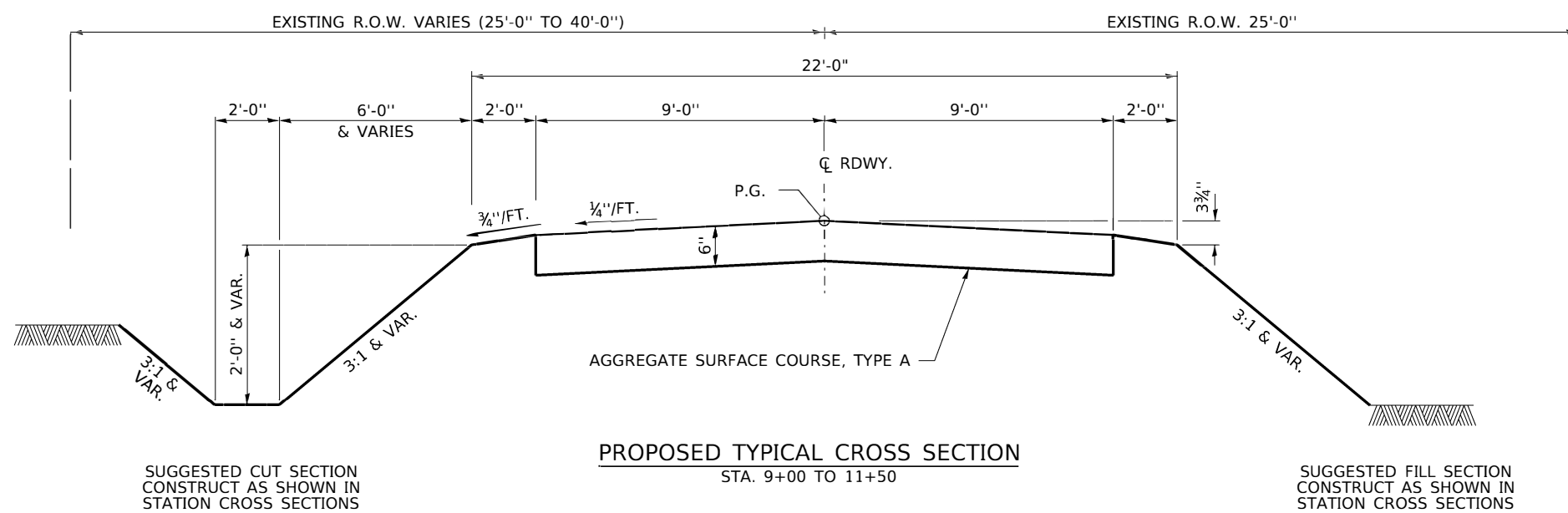
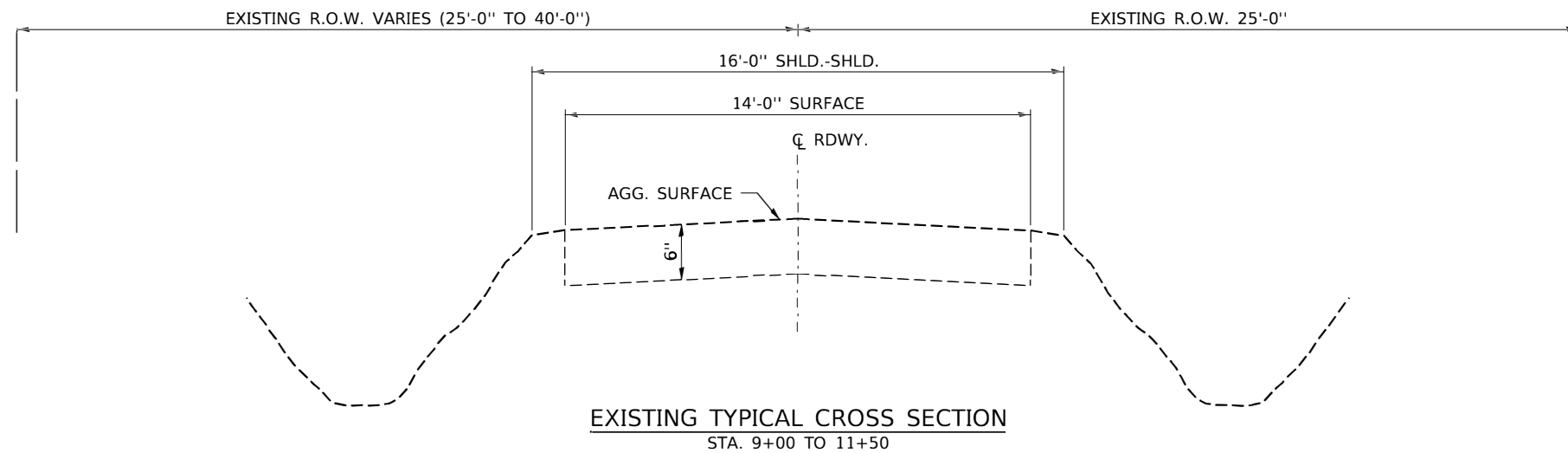
EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100	20300100					
	CU.YD.	CU.YD.			CU.YD.		CU.YD.
TR 276							
STA 9+00 TO STA 9+72.68	68		25.00%	100.00%	51	20	31
STA 9+72.68 TO STA 10+29.31		155	25.00%	70.00%	81		81
STA 10+29.31 TO STA 11+50	21		25.00%	100.00%	16	16	0
TOTAL	89	155			148	36	112
USE	90	155					112

WASTE EXCAVATION 112 CU YDS

GENERAL NOTES

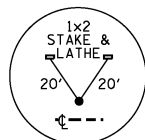
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL, STUMP REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL AND DISPOSAL OF EXISTING AGGREGATE PAVEMENT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- 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.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

AGGREGATE SURFACE COURSE	2.05 TON/CU YD
STONE DUMPED RIPRAP	1.75 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER
ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.1 ACRES
- COMMITMENTS
 - TREES SHALL NOT BE CLEARED BETWEEN APRIL 1 TO SEPTEMBER 30.
 - A BAT ASSESSMENT SHALL BE CONDUCTED IF WORK OCCURS TO EXISTING STRUCTURE AFTER AUGUST 15.

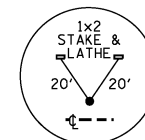


TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY ARE TO BE CONSTRUCTED FROM STA. 9+00 TO 9+50 AND STA. 11+00 TO STA. 11+50. SEE SHEET 13 FOR TRANSITION AT BRIDGE.

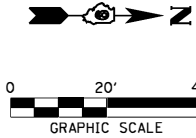
FILE NAME = 170546-sht-typsections.dgn	USER NAME = rmosick	DESIGNED - S.W.M.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS			T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$\$SCALE\$	DRAWN - R.D.H.	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO	STA.	215	10-06129-00-BR	WHITE	21	3
PLOT DATE = 5/1/2018	DATE = 04/06/18	CHECKED - S.W.M.	REVISED -					HAWTHORNE ROAD DISTRICT			CONTRACT NO. 99602			
		DATE = 04/06/18	REVISED -					ILLINOIS (FED. AID PROJECT XQU5(427))						



STA. 4+74.22
8.09' LT
IRON PIN (SET)
N. 510875.73
E. 1044167.77

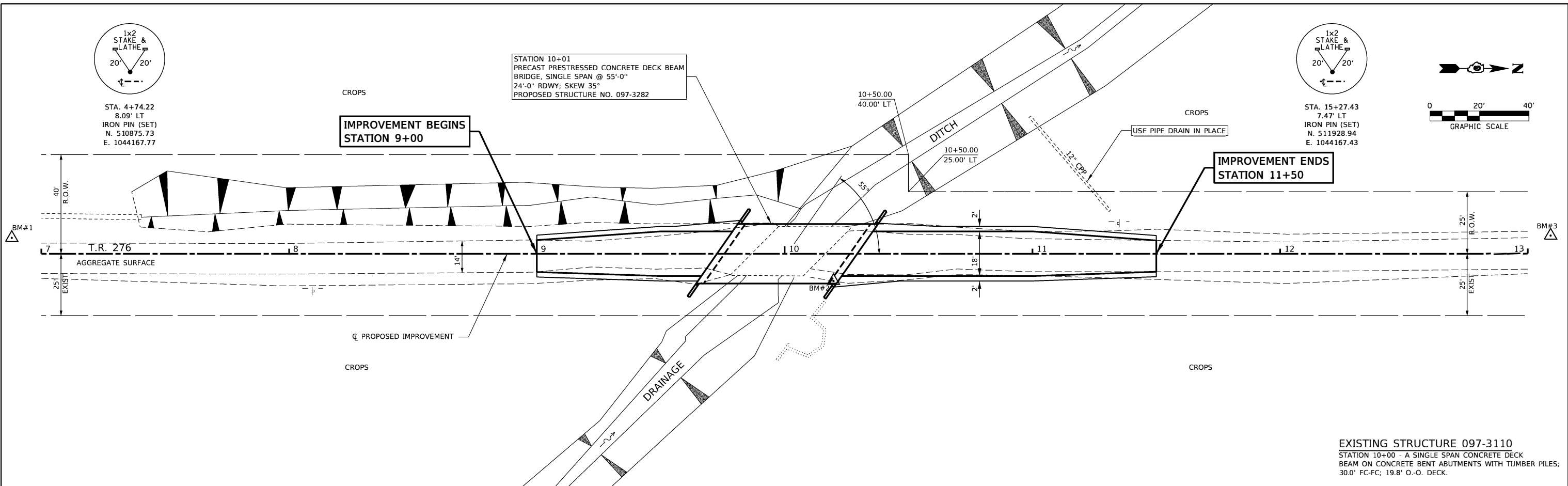


STA. 15+27.43
7.47' LT
IRON PIN (SET)
N. 511928.94
E. 1044167.43

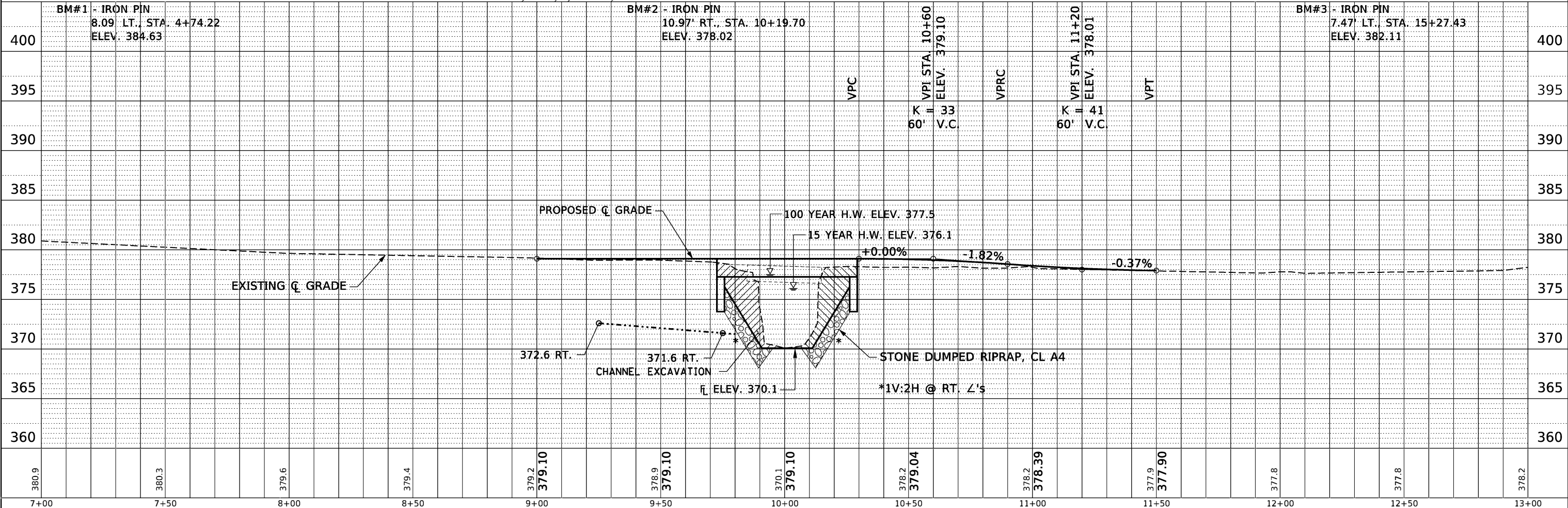


PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	DESIGNED	
	NOTED	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES	
	CHECKED	
	DESIGNED	
	NOTED	
	FILE NAME	
	NO.	



EXISTING STRUCTURE 097-3110
STATION 10+00 - A SINGLE SPAN CONCRETE DECK BEAM ON CONCRETE BENT ABUTMENTS WITH TIMBER PILES; 30.0' FC-FC; 19.8' O-O. DECK.



7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00
380.9	380.3	379.6	379.4	379.2	379.10	379.10	379.10	379.04	378.39	377.90	377.8	378.2

LAMAC ENGINEERING
A Division of Hampton, Lenzini and Fenwick, Inc.
323 W. 3RD ST.
P.O. BOX 180
MT. CARMEL, IL 62863
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 1840002959

USER NAME = rmosick	DESIGNED - A.M.M.	REVISED -
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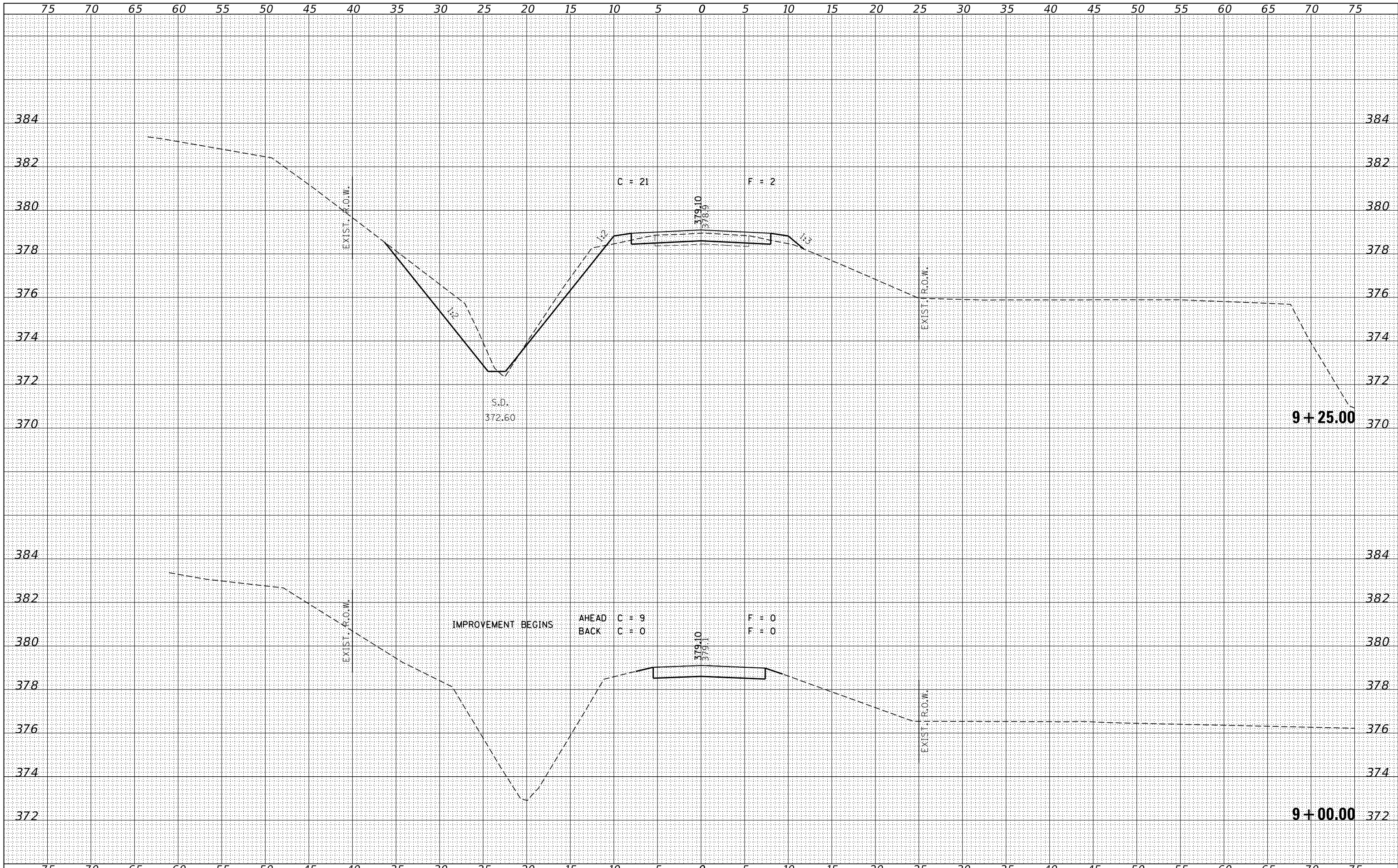
STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

PLAN & PROFILE
SCALE: 20H:5V
SHEET NO. 1 OF 1 SHEETS
STA. 7+00 TO STA. 13+00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
215	10-06129-00-BR	WHITE	21	4
HAWTHORNE ROAD DISTRICT		CONTRACT NO. 99602		
ILLINOIS FED. AID PROJECT XQU5(427)				

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

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



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 DESIGNED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 DATE - 04/06/18
 PLOT SCALE = *SCALE*
 PLOT DATE = 5/1/2018

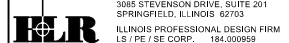
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DRAWN	-	R.D.H.	REVISED	-
CHECKED	-	S.W.M.	REVISED	-
DATE	-	04/06/18	REVISED	-

STATE OF ILLINOIS
 WHITE COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

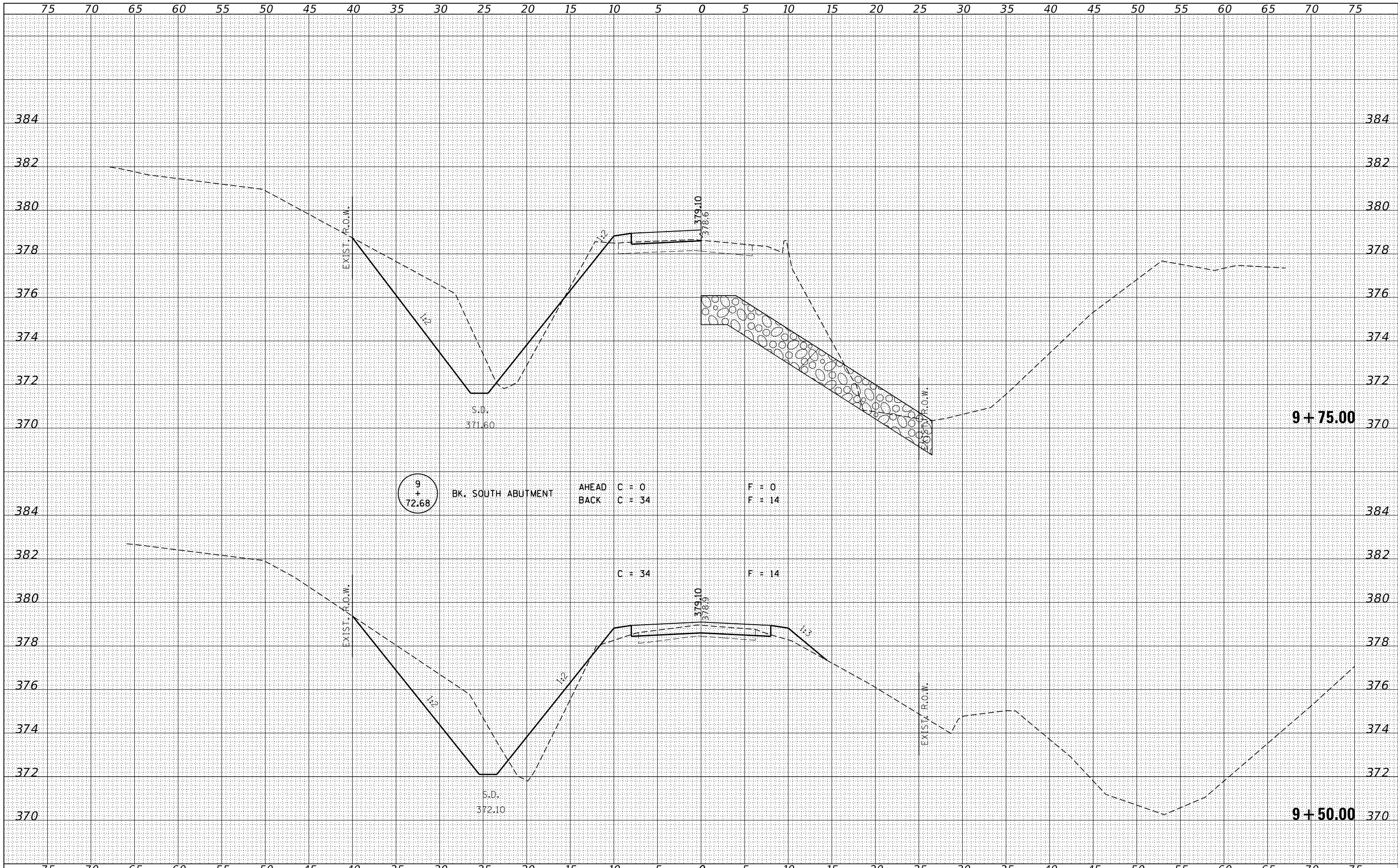
SCALE: 5H:2V SHEET NO. 3 OF 8 SHEETS STA. 9+50 TO STA. 9+75

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
276	10-06129-00-BR	WHITE	21	7
HAWTHORNE ROAD DISTRICT			CONTRACT NO. 99602	
ILLINOIS FED. AID PROJECT X0514271				



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

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



9 + 72.68

BK. SOUTH ABUTMENT

AHEAD C = 0 F = 0
 BACK C = 34 F = 14

C = 34 F = 14

FILE NAME = 170546-sht-xxsht.dgn
 USER NAME = rhosick
 DESIGNED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 DATE - 04/06/18
 REVISIONS:
 REVISED -
 REVISED -
 REVISED -
 REVISED -

HAMPTON, LENZINI AND RENWICK, INC.
 3885 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000958

STATE OF ILLINOIS
 WHITE COUNTY HIGHWAY DEPARTMENT

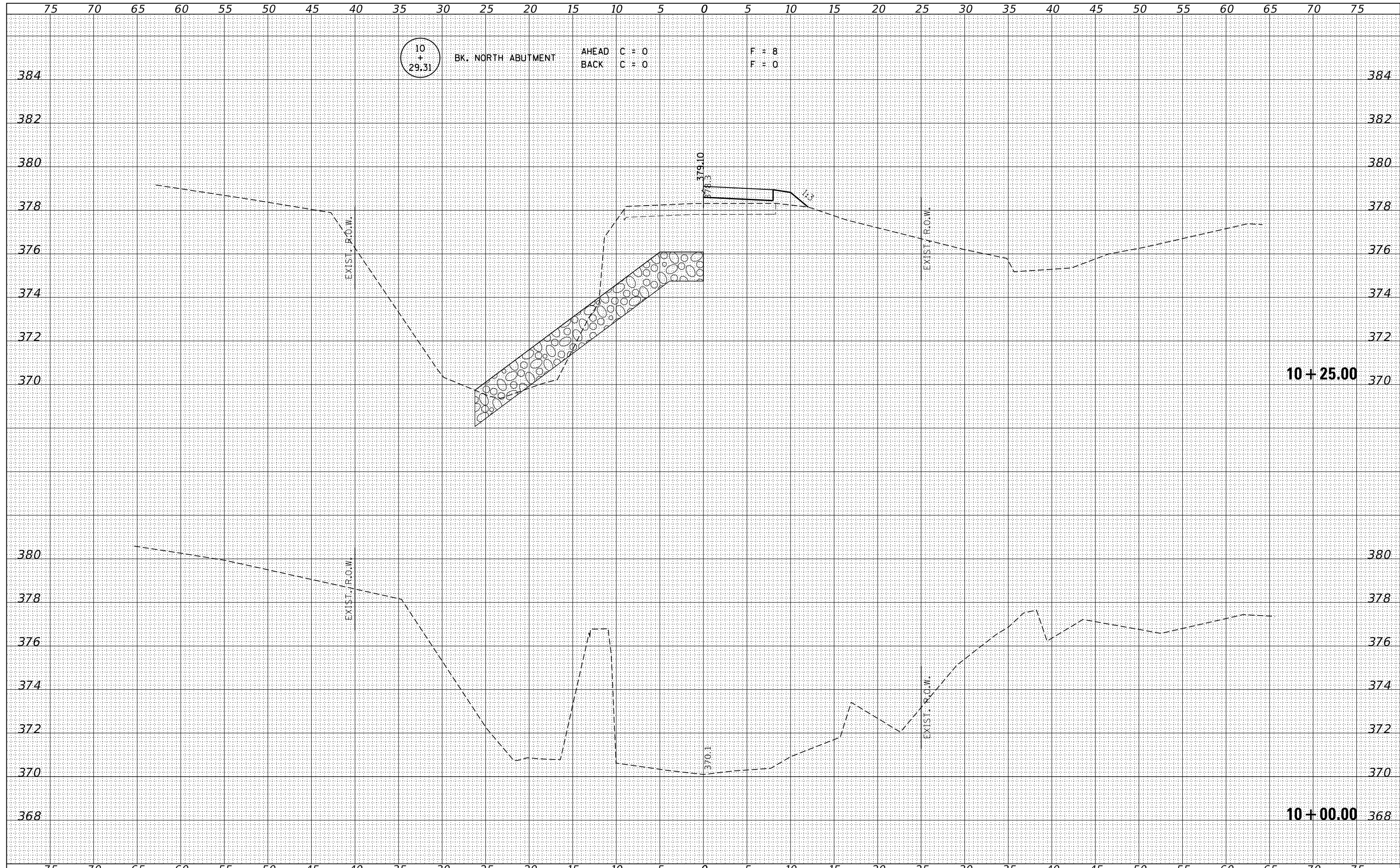
STATION CROSS SECTIONS

SCALE: 5H:2V
 SHEET NO. 4 OF 8 SHEETS
 STA. 9+50 TO STA. 9+75

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
276	10-06129-00-BR	WHITE	21	8
HAWTHORNE ROAD DISTRICT			CONTRACT NO. 99602	
ILLINOIS FED. AID PROJECT X05(427)				

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

DATE	
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ORIGINAL SURVEY	
NOTE BOOK	
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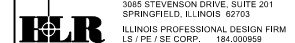
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 PLOT DATE = 5/1/2018

DESIGNED	-	S.W.M.	REVISED	-
DRAWN	-	R.D.H.	REVISED	-
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DATE	-	04/06/18	REVISED	-

STATE OF ILLINOIS
 WHITE COUNTY HIGHWAY DEPARTMENT

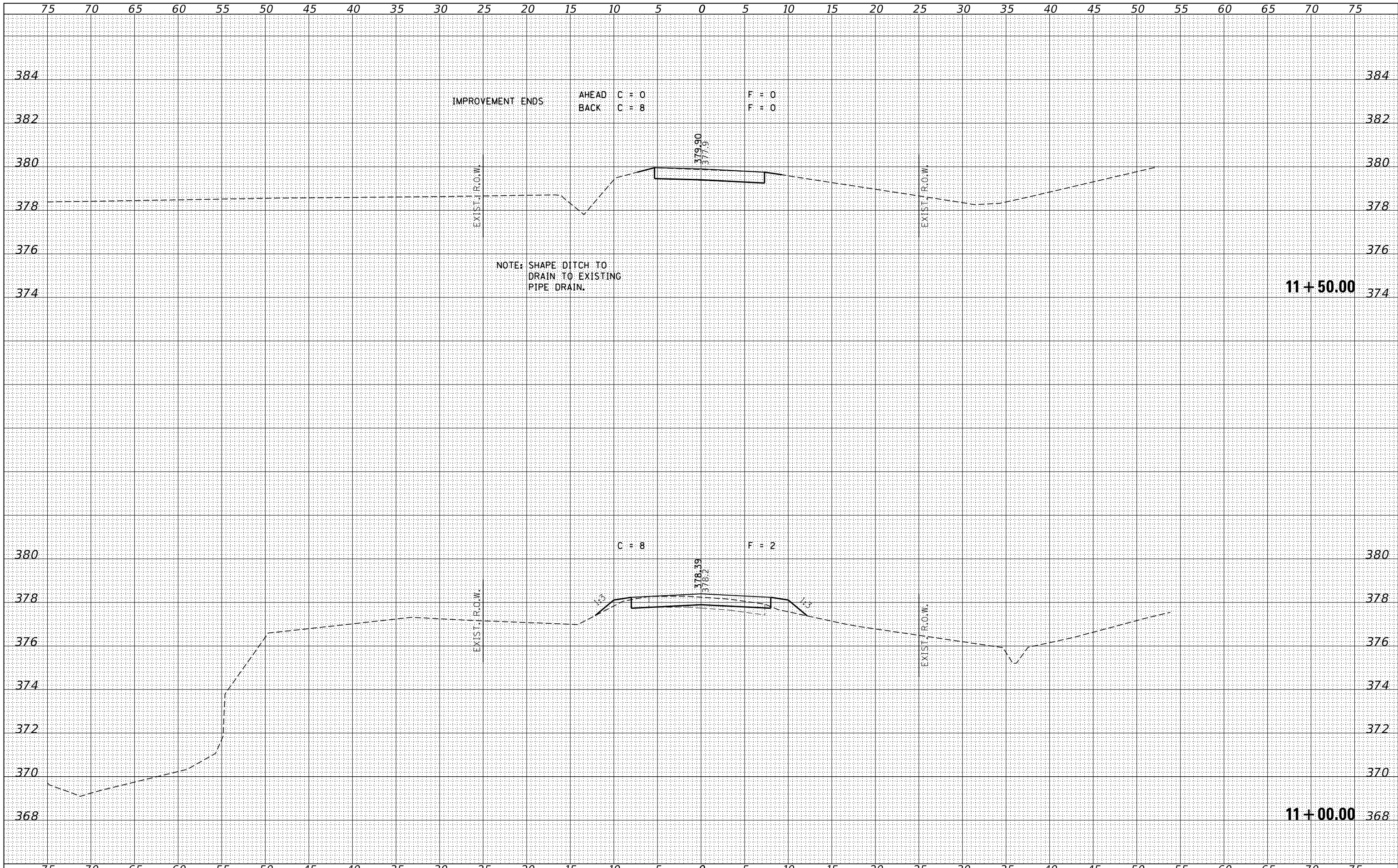
STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 5 OF 8 SHEETS
 STA. 10+00 TO STA. 10+25

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
276	10-06129-00-BR	WHITE	21	9
HAWTHORNE ROAD DISTRICT			CONTRACT NO. 99602	
ILLINOIS FED. AID PROJECT X0U54271				



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

DATE	
BY	
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ORIGINAL SURVEY	
NOTE BOOK	
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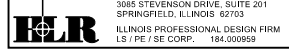
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 PLOT DATE = 5/1/2018

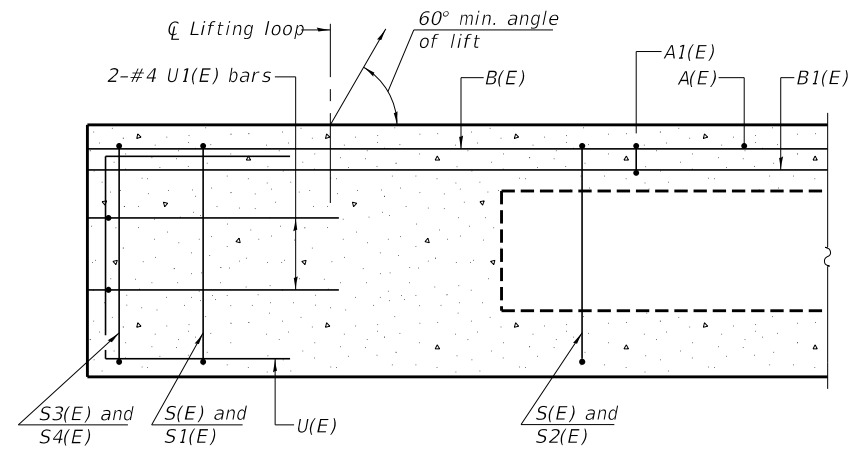
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DATE	-	04/06/18	REVISED	-

STATE OF ILLINOIS
 WHITE COUNTY HIGHWAY DEPARTMENT

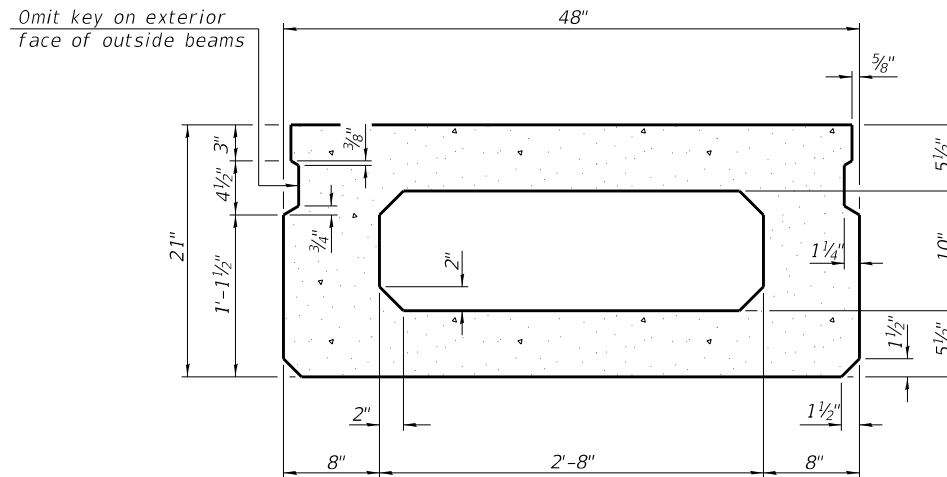
SCALE: 5H:2V
 SHEET NO. 7 OF 8 SHEETS
 STA. 11+00 TO STA. 11+50

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
276	10-06129-00-BR	WHITE	21	11
HAWTHORNE ROAD DISTRICT			CONTRACT NO. 99602	
ILLINOIS FED. AID PROJECT X0J5(427)				



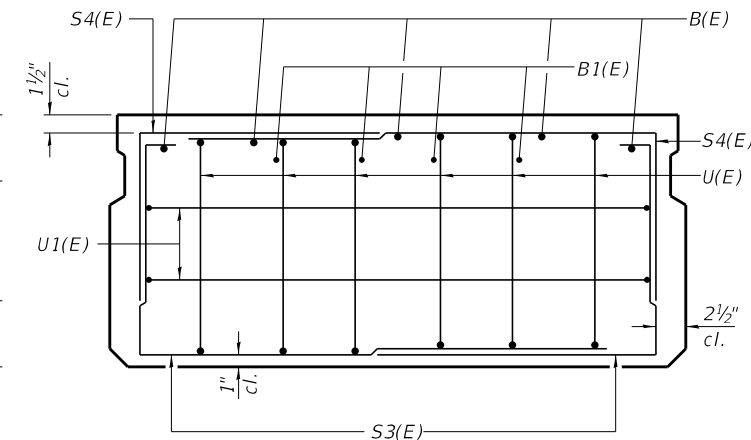


SECTION A-A

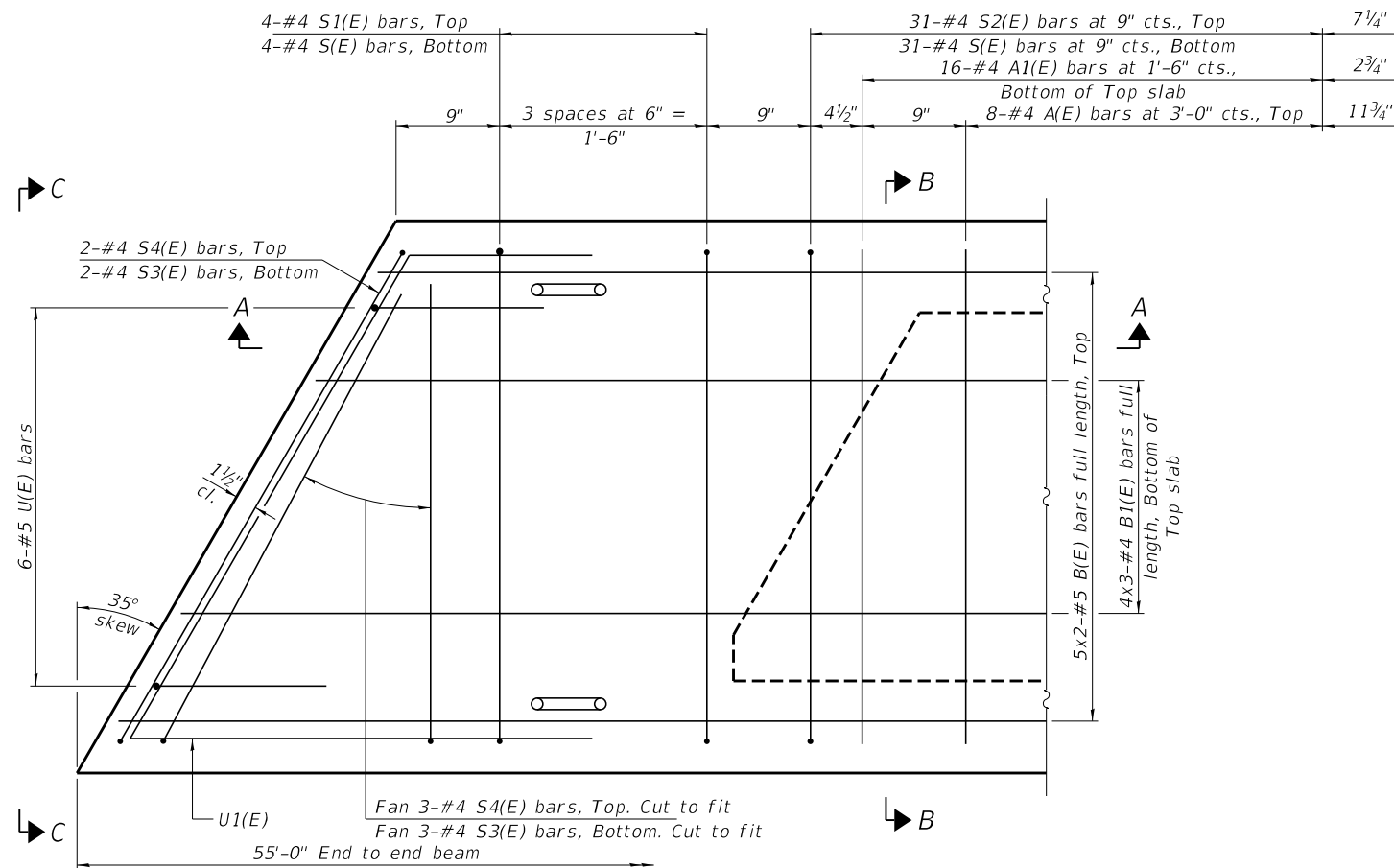


SECTION B-B

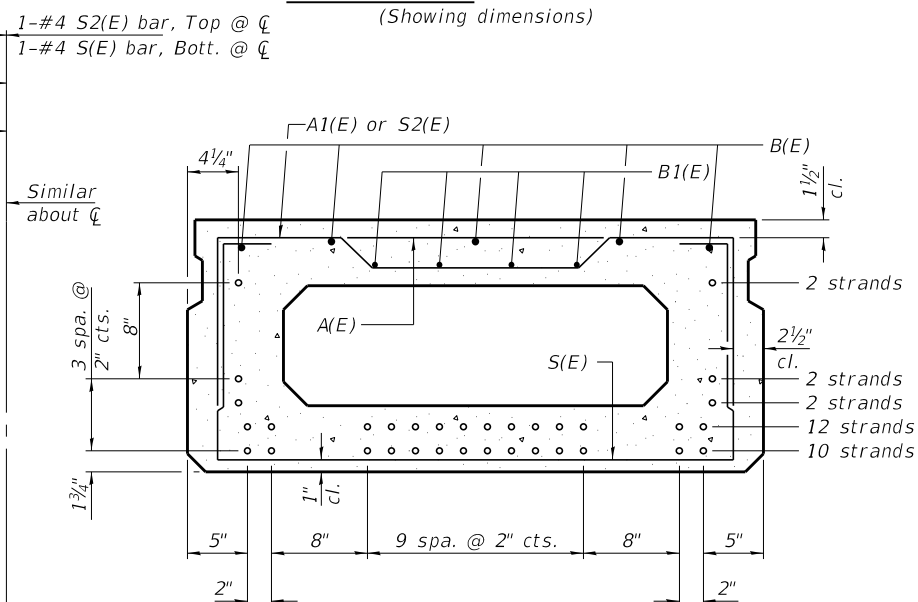
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(Showing reinforcement and permissible strand locations)

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	16	#4	3'-7"	—
A1(E)	32	#4	3'-10"	—
B(E)	10	#5	28'-8"	—
B1(E)	12	#4	19'-6"	—
S(E)	71	#4	7'-5"	⌈
S1(E)	8	#4	5'-11"	⌈
S2(E)	63	#4	6'-2"	⌈
S3(E)	10	#4	5'-2"	⌈
S4(E)	10	#4	4'-5"	⌈
U(E)	12	#5	4'-0"	⌈
U1(E)	4	#4	9'-3"	⌈

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

Contractor has the option to use 36" wide beams.

MINIMUM BAR LAP

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

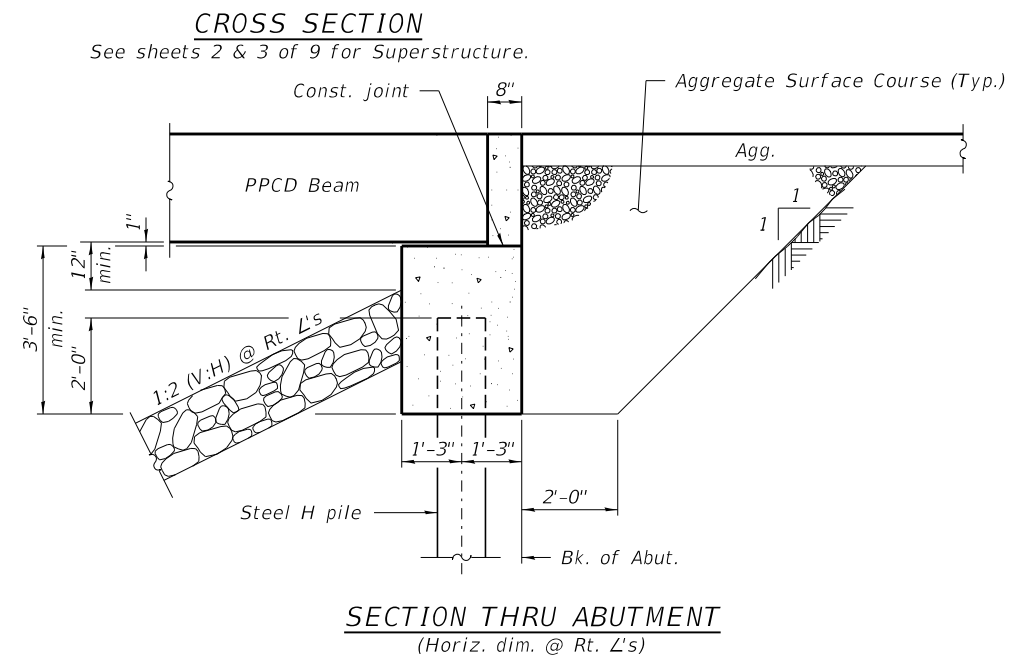
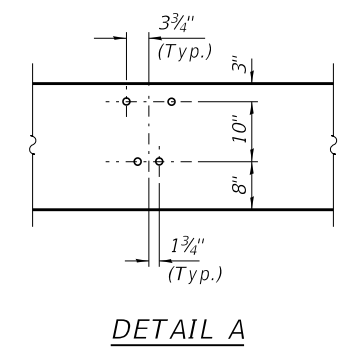
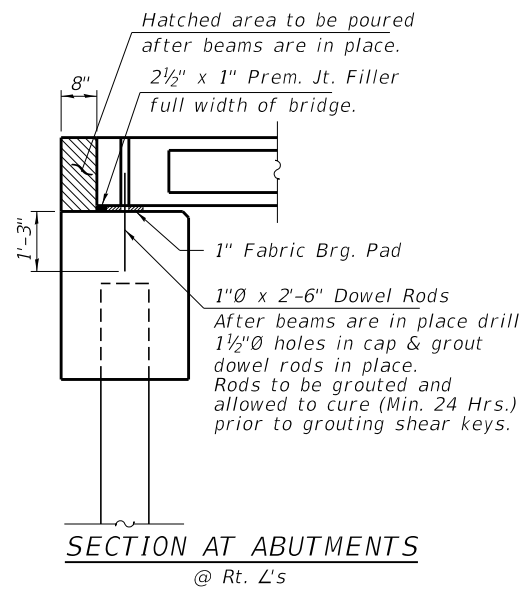
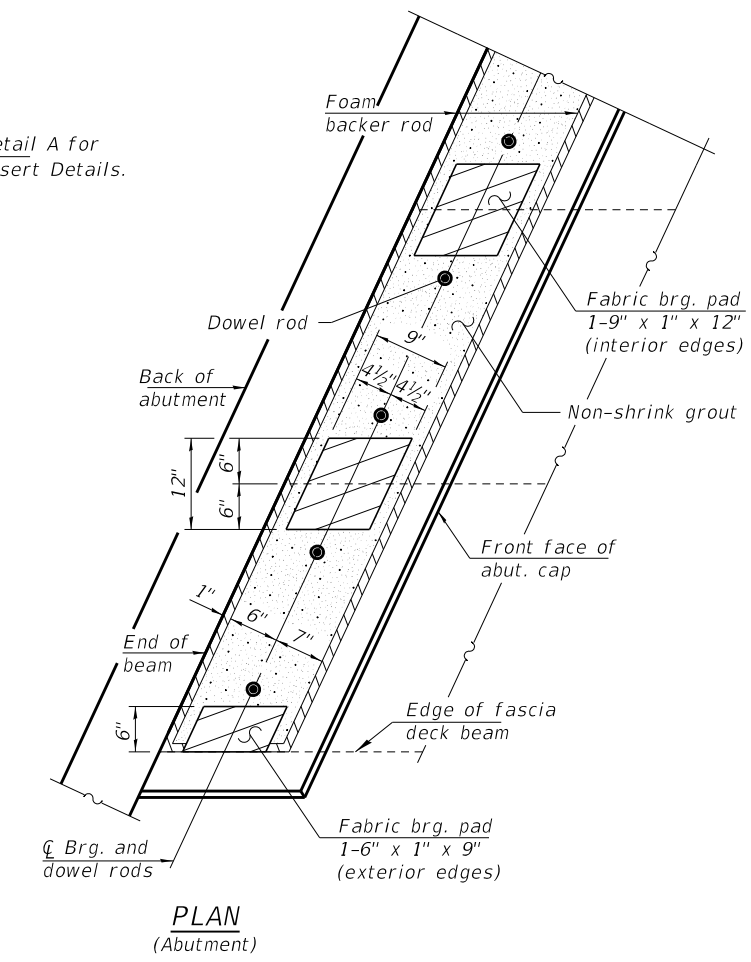
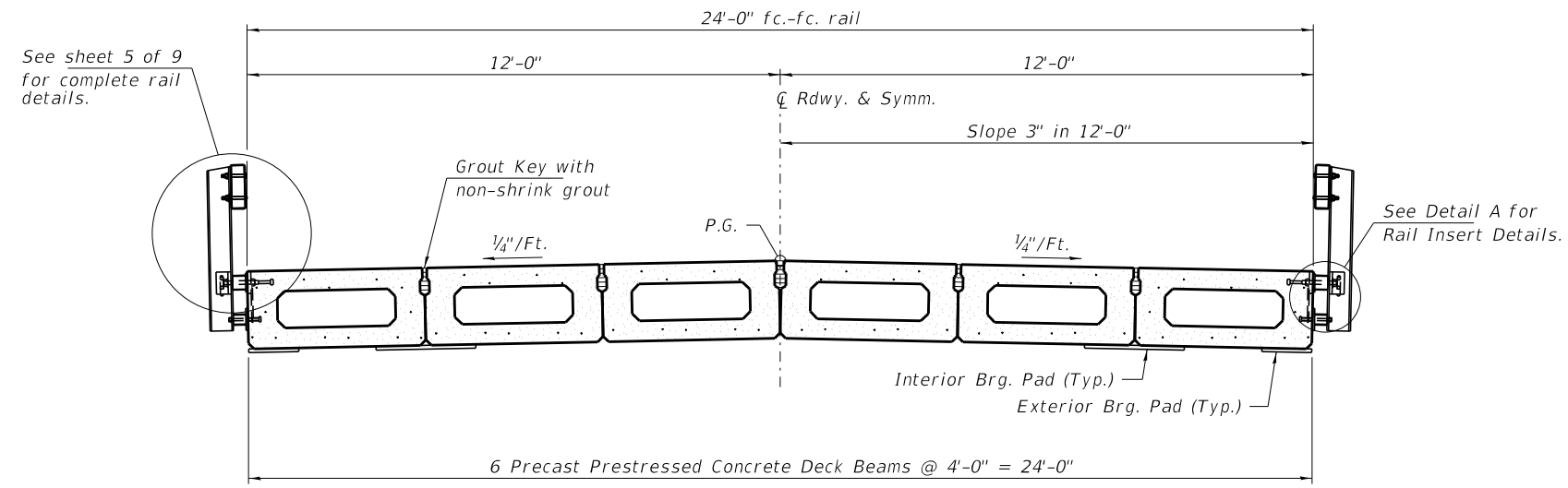
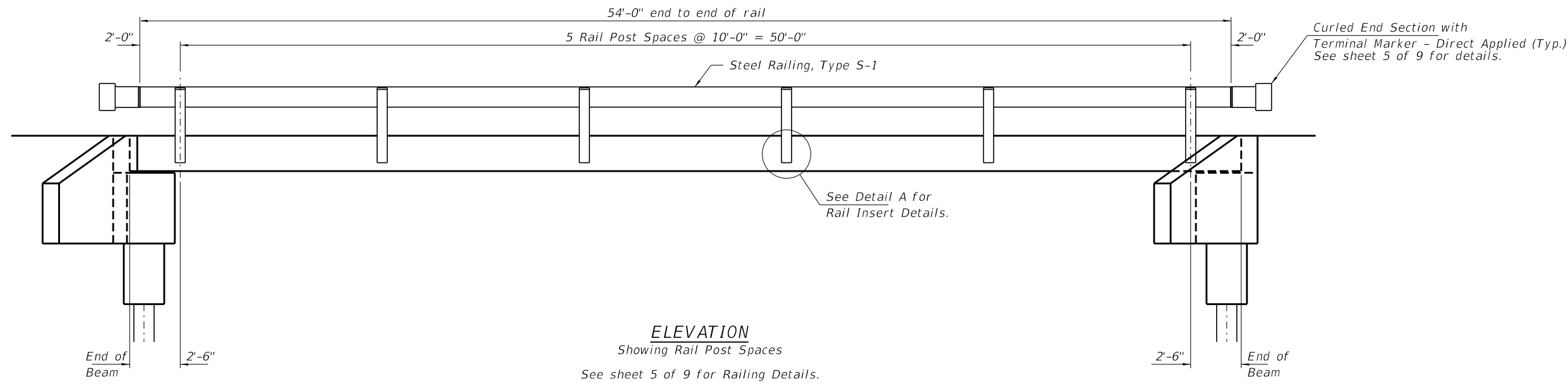
Notes:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

PD-2148-L

2-17-2017

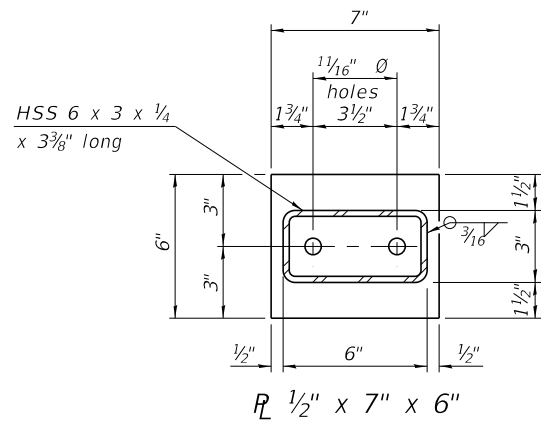
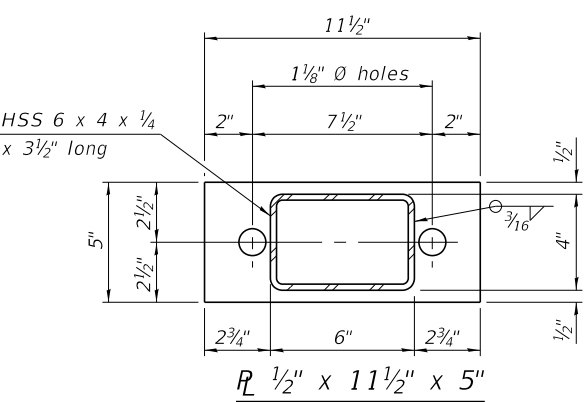
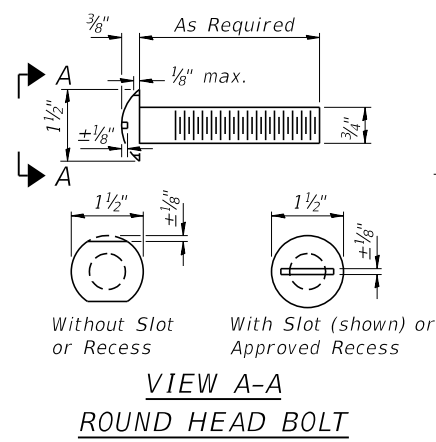
FILE NAME = 170546-shl-brldge.dgn	USER NAME = rmosck	DESIGNED - R.D.H.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	21" x 48" PPC DECK BEAM STRUCTURE NO. 097-3282	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			276	10-06129-00-BR	WHITE	21	14
HLR	PLOT DATE = 5/1/2018	DRAWN - R.D.H.	REVISED -			HAWTHORNE ROAD DISTRICT		CONTRACT NO. 99602		
		CHECKED - S.W.M.	REVISED -			ILLINOIS		FED. AID PROJECT XQU5(427)		

SHEET NO. 2 OF 9 SHEETS

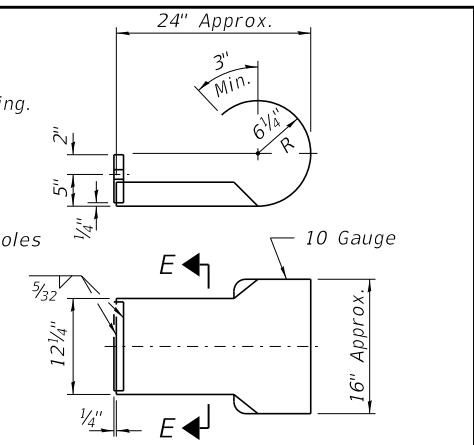
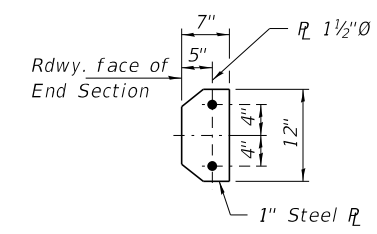


Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

FILE NAME = 170546-shl-bridge.dgn	USER NAME = rmosck	DESIGNED - R.D.H.	REVISED -	<p align="center">STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT</p>	<p align="center">SUPERSTRUCTURE DETAILS STRUCTURE NO. 097-3282</p>	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			276	10-06129-00-BR	WHITE	21	16
PLOT DATE = 5/1/2018		DRAWN - R.D.H.	REVISED -			HAWTHORNE ROAD DISTRICT		CONTRACT NO. 99602		
		CHECKED - S.W.M.	REVISED -			ILLINOIS		FED. AID PROJECT XQU5(427)		



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



SECTION E-E

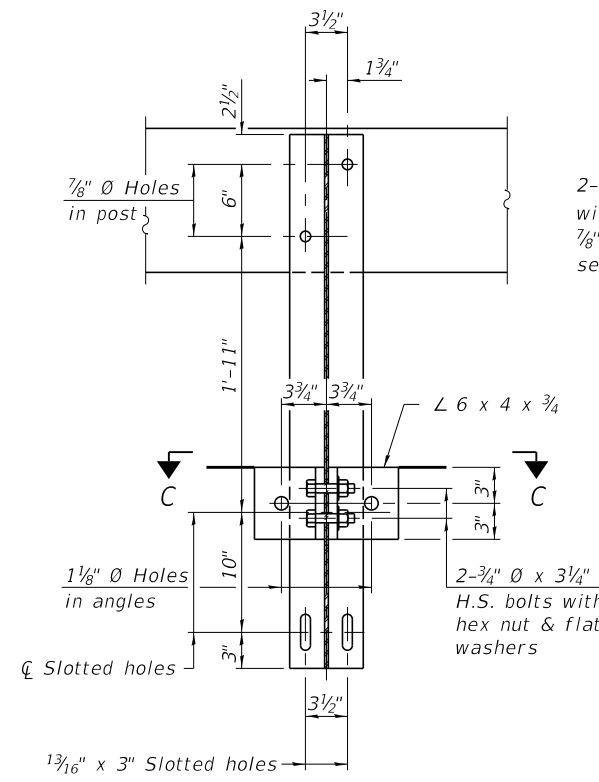
CURLED END SECTION DETAILS

SPLICE DIMENSIONS

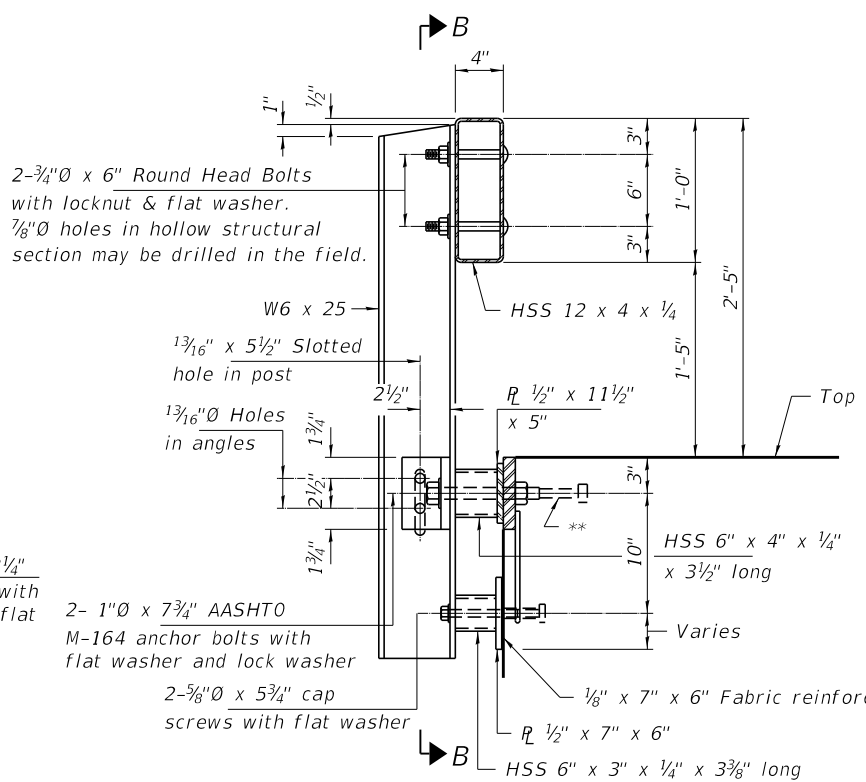
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	

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

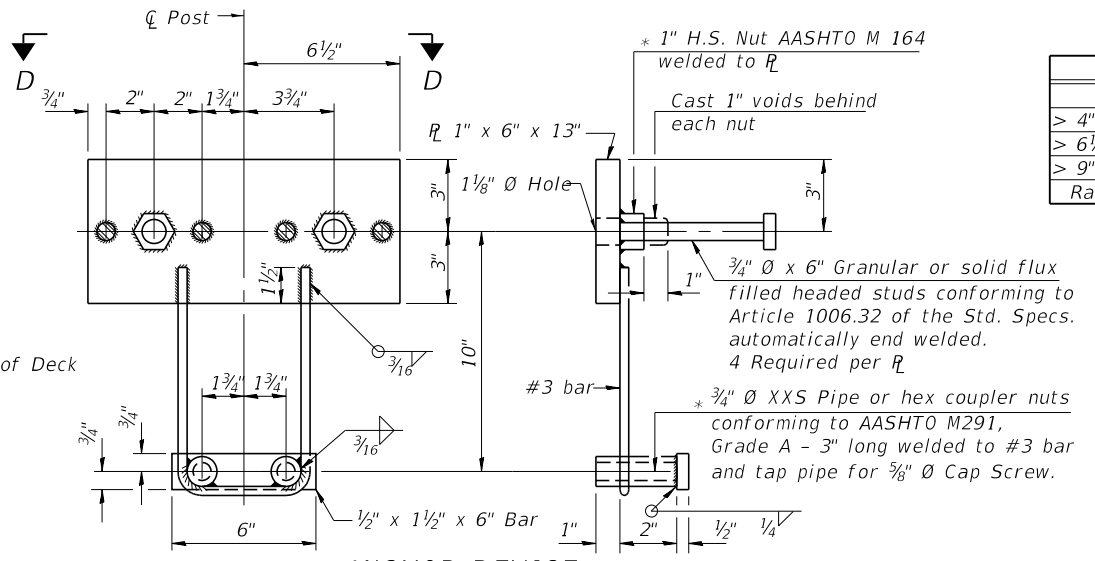
Notes:
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



SECTION B-B

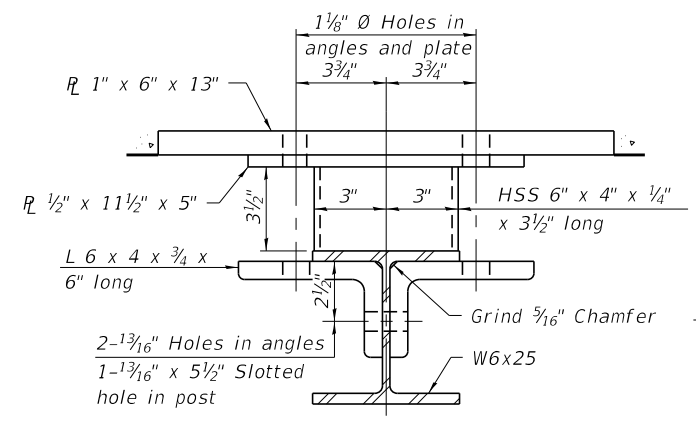


SECTION AT RAILING POST

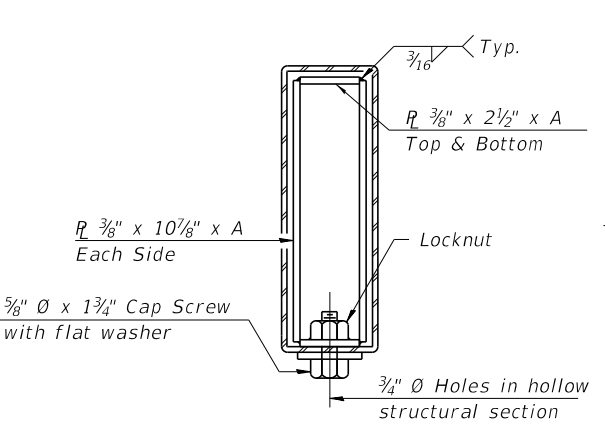


ANCHOR DEVICE

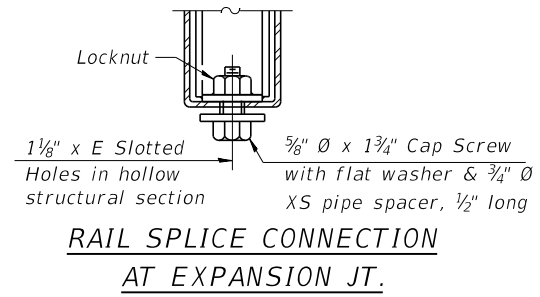
* Threaded areas shall be plugged or blocked off during casting of beam.



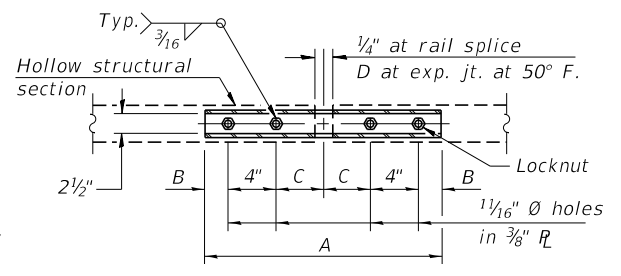
SECTION C-C



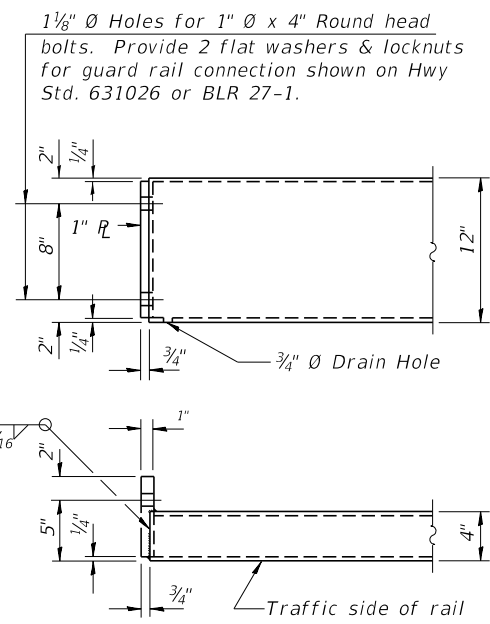
SECTIONS AT RAIL SPLICE



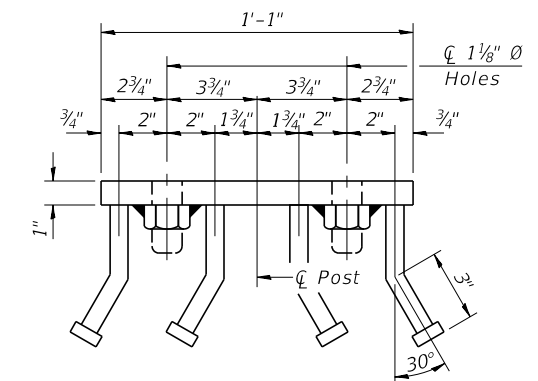
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	108

R-23A 2-17-2017 (10'-9" Maximum Post Spacing)

FILE NAME = 170546-shl-bridge.dgn	USER NAME = rmosck	DESIGNED - R.D.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.009959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 5/1/2018	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

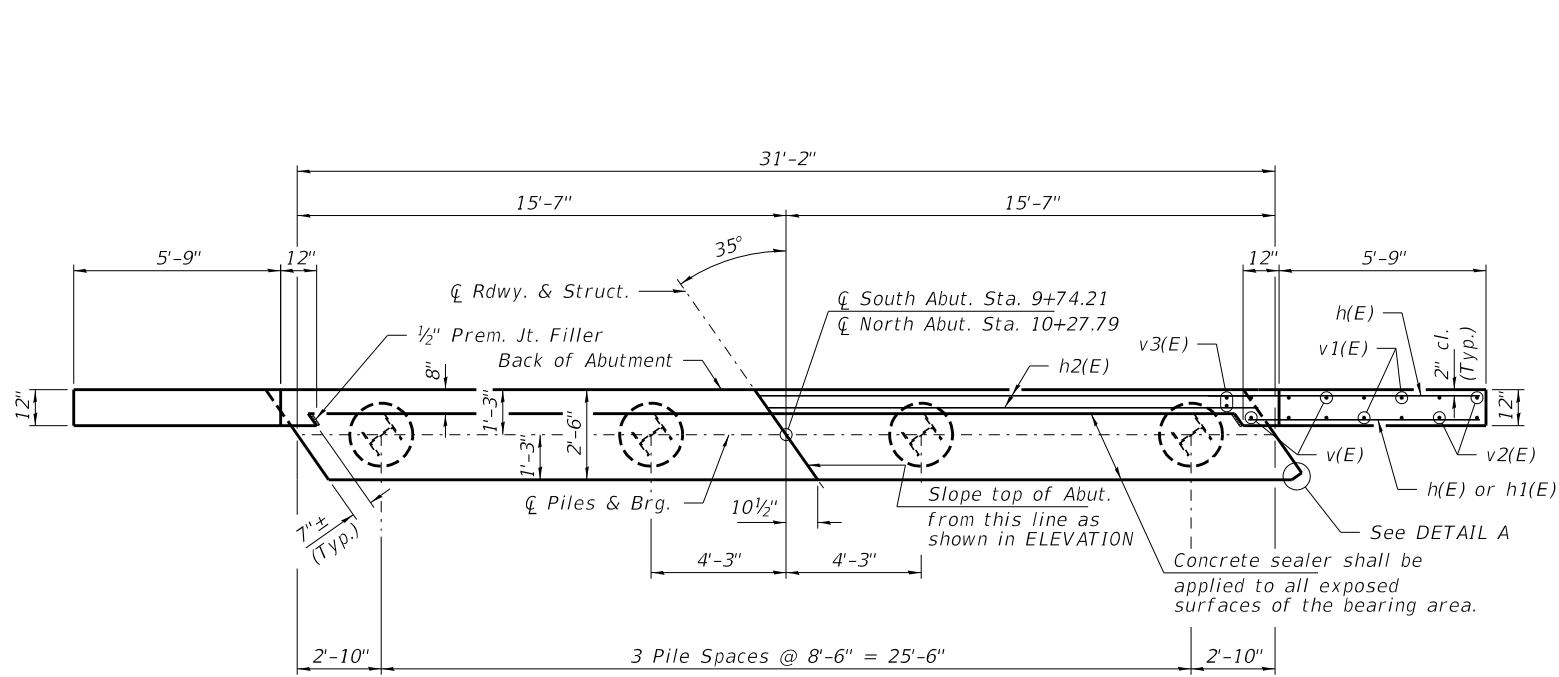
STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

RAILING DETAILS
STRUCTURE NO. 097-3282

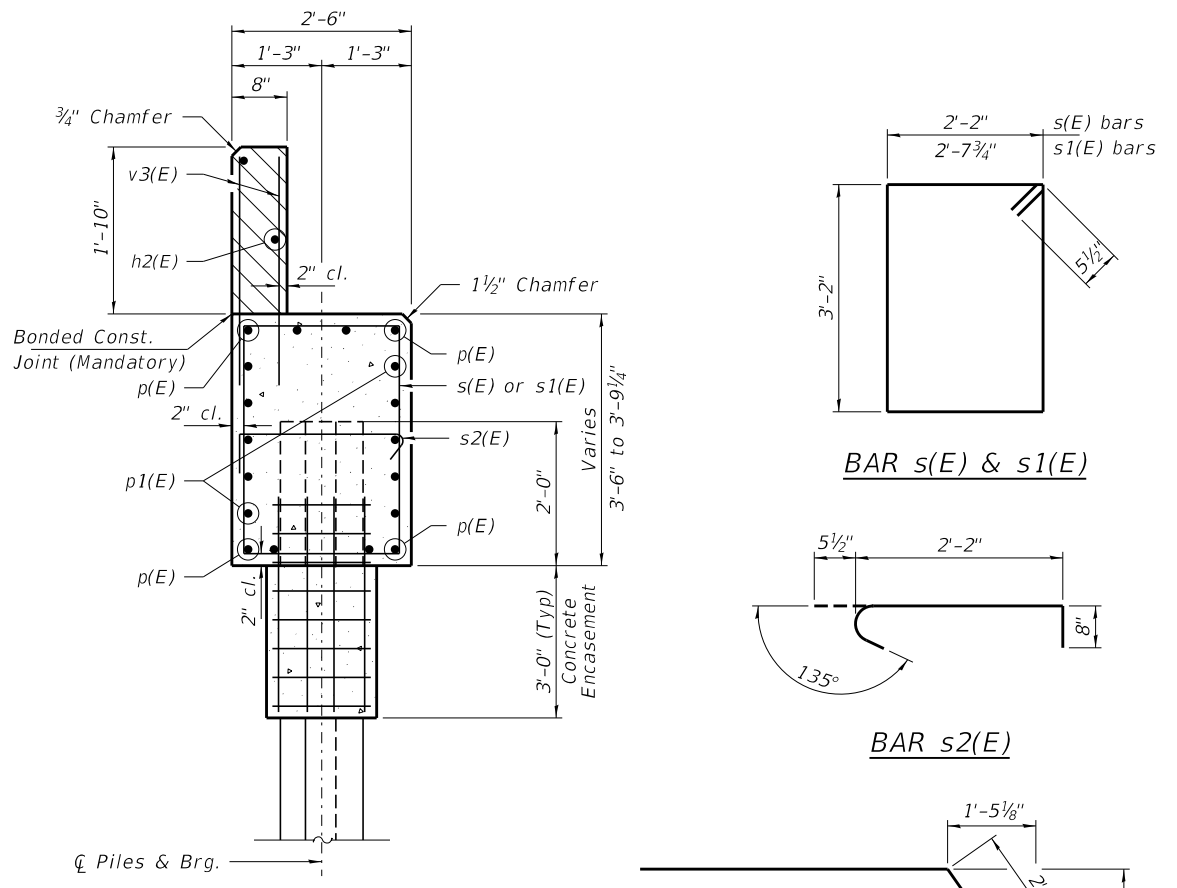
SHEET NO. 5 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
276	10-06129-00-BR	WHITE	21	17
HAWTHORNE ROAD DISTRICT		CONTRACT NO. 99602		

ILLINOIS FED. AID PROJECT XQU5(427)



PLAN

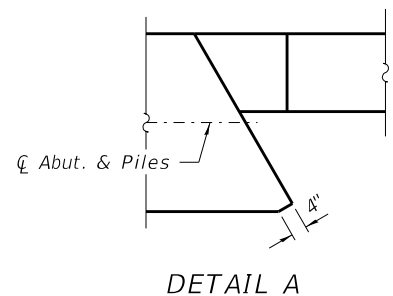


SECTION A-A

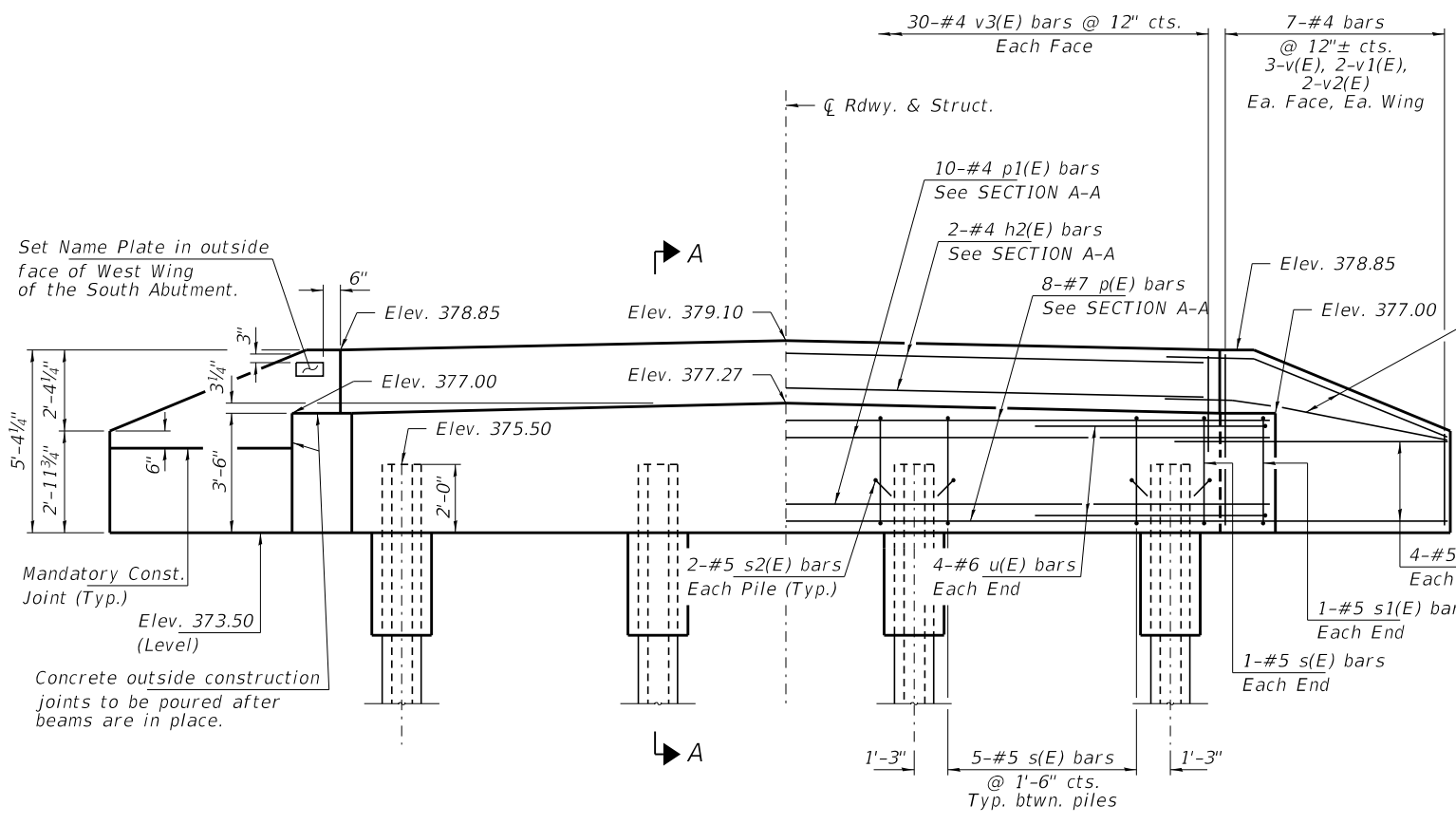
Hatched area to be poured after beams are in place.
Cast top of wingwall flush with exterior beam face after beams have been erected.

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

Fan 2-#5 h(E) bars (B.F.)
Fan 2-#4 h1(E) bars (F.F.)
Each Wing Bend in field.



DETAIL A



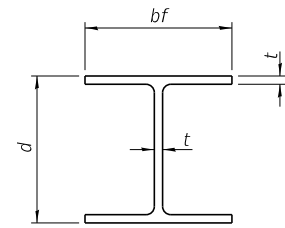
ELEVATION

PILE DATA

Type _____ Steel HP10x42
No. Req'd. (2 Abuts.) _____ 8
Factored Resistance Available (Rf) _____ 184 Kips/Pile
Nominal Required Bearing (Rn) _____ 335 Kips/Pile
Est. Length _____ 65 Ft/Pile

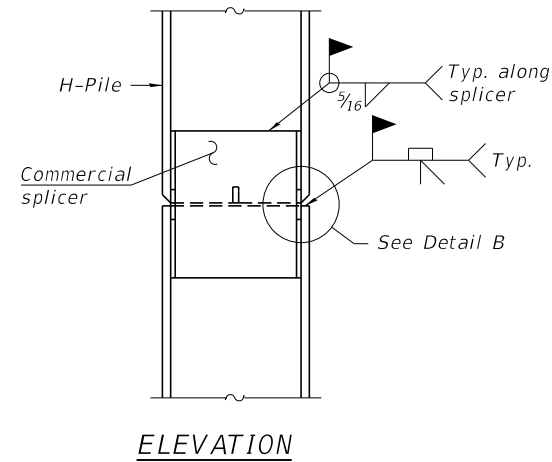
BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	40	#5	8'-0"	—
h1(E)	8	#4	6'-6"	—
h2(E)	4	#4	30'-10"	—
p(E)	16	#7	30'-10"	—
p1(E)	20	#4	30'-10"	—
s(E)	34	#5	11'-7"	□
s1(E)	4	#5	12'-7"	□
s2(E)	16	#5	3'-4"	U
u(E)	16	#6	12'-6"	U
v(E)	24	#4	4'-5"	—
v1(E)	16	#4	3'-7"	—
v2(E)	16	#4	2'-8"	—
v3(E)	120	#4	2'-8"	—
Concrete Structures			Cu. Yd.	27.8
Concrete Encasement			Cu. Yd.	2.8
Reinf. Bars, Epoxy Coated			Pound	3,060
Furnishing Steel Piles HP10x42			Foot	520
Name Plates			Each	1
Concrete Sealer			Sq. Ft.	115

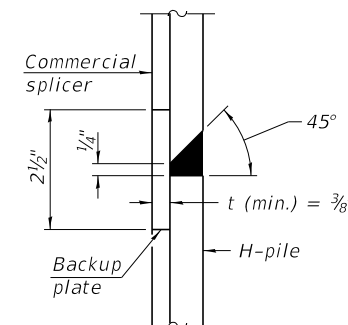


STEEL PILE TABLE

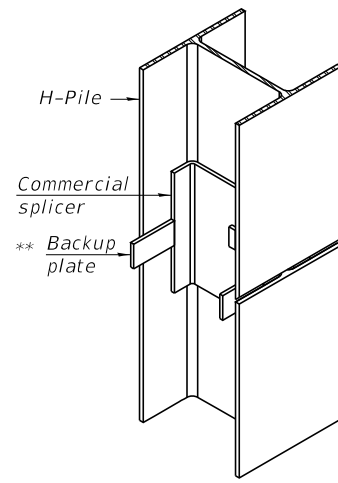
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 3/8"	14 3/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

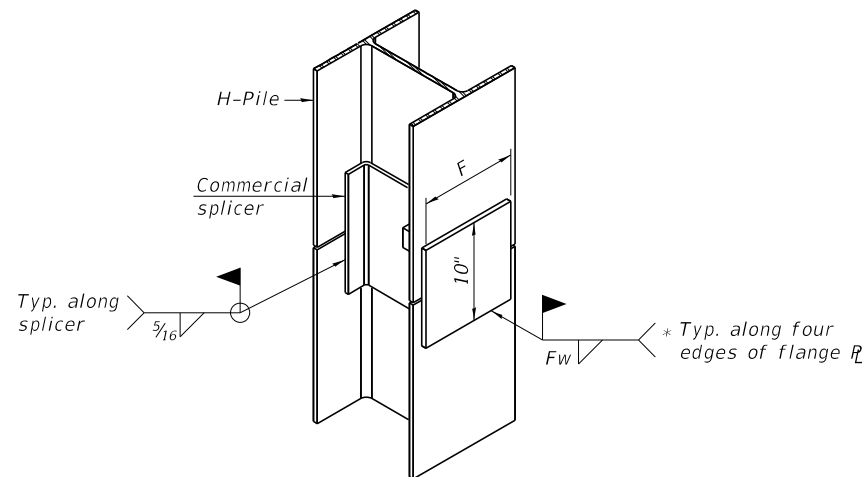


DETAIL "B"



ISOMETRIC VIEW

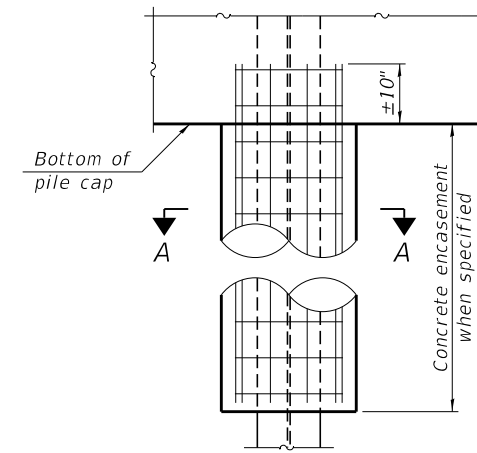
WELDED COMMERCIAL SPLICE



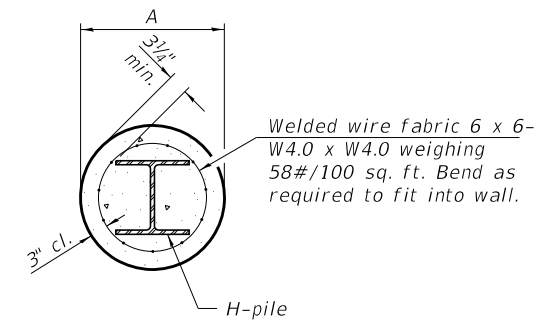
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

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

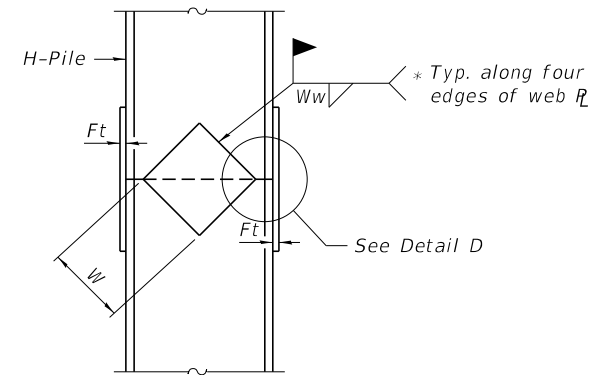


ELEVATION

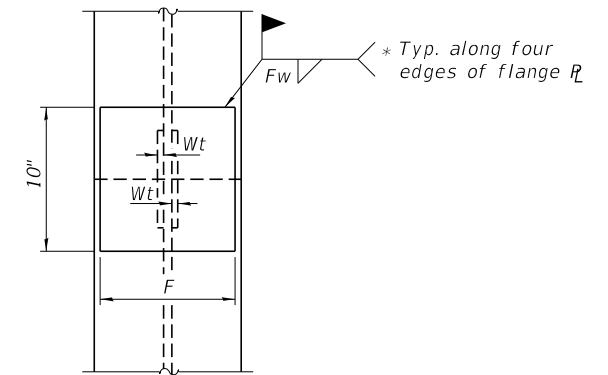


SECTION A-A

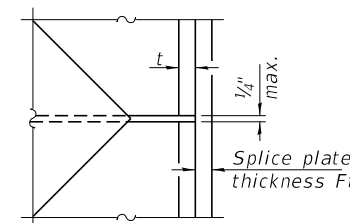
INDIVIDUAL PILE CONCRETE ENCASUREMENT
(Forms for encasement may be omitted when soil conditions permit).



ELEVATION



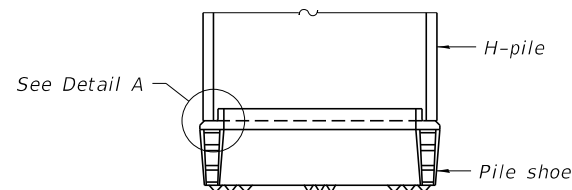
END VIEW



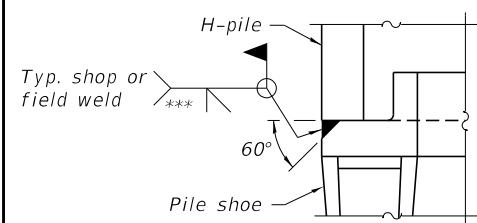
DETAIL D

WELDED PLATE FIELD SPLICE

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



ELEVATION



DETAIL A

SHOE ATTACHMENT

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

F-HP 2-17-2017

