

11-4-2016 LETTING ITEM 110

INDEX OF SHEETS

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HIGHWAY STANDARDS

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515001-03	NAME PLATE FOR BRIDGES (2 SHEETS)
701901-05	TRAFFIC CONTROL DEVICES (3 SHEETS)
725001	OBJECT AND TERMINAL MARKERS
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO-WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)
B.L.R. 23-4	TRAFFIC BARRIER TERMINAL TYPE 1
B.L.R. 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.40
20200100	EARTH EXCAVATION	CU YD	1380.00
20300100	CHANNEL EXCAVATION	CU YD	30.00
20400800	FURNISHED EXCAVATION	CU YD	1492.00
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SO YD	775.00
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	765.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	600.00
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.00
50300225	CONCRETE STRUCTURES	CU YD	34.60
50300280	CONCRETE ENCASEMENT	CU YD	4.00
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SO FT	2160.00
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3980.00
Δ50900205	STEEL RAILING, TYPE S1	FOOT	163.00
51201400	FURNISHING STEEL PILES 10X42	FOOT	352.00
51202305	DRIVING PILES	FOOT	352.00
51203400	TEST PILE STEEL HP 10X42	EACH	1.00
51500100	NAME PLATES	EACH	1.00
54200229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	50.00
54201063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	60.00
58700300	CONCRETE SEALER	SO FT	118.00
Δ63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2.00
67100100	MOBILIZATION	L SUM	1.00
Δ72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4.00
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.90
XX004633	FIELD TILE ADJUSTMENT	EACH	1.00
20068900	STONE LINED DITCH	TON	350.00
ΔLR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2.00

Δ SPECIALTY ITEMS

DESIGN DESIGNATION:
 DESIGN SPEED: 30 MPH
 HIGHWAY CLASS - LOCAL ROAD
 EXISTING STRUCTURE NO.: 097-3134
 PROPOSED STRUCTURE NO.: 097-3296
 CURRENT A.D.T. = 75
 CONTRACT NO. 99550



Know what's below.
 Call before you dig.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED FEDERAL AID - S.T.P. BRIDGE

T.R. 353 WHITE COUNTY SECTION 03-07119-00-BR

PROJECT NO. BROS-193(031) JOB NO. C-99-569-06

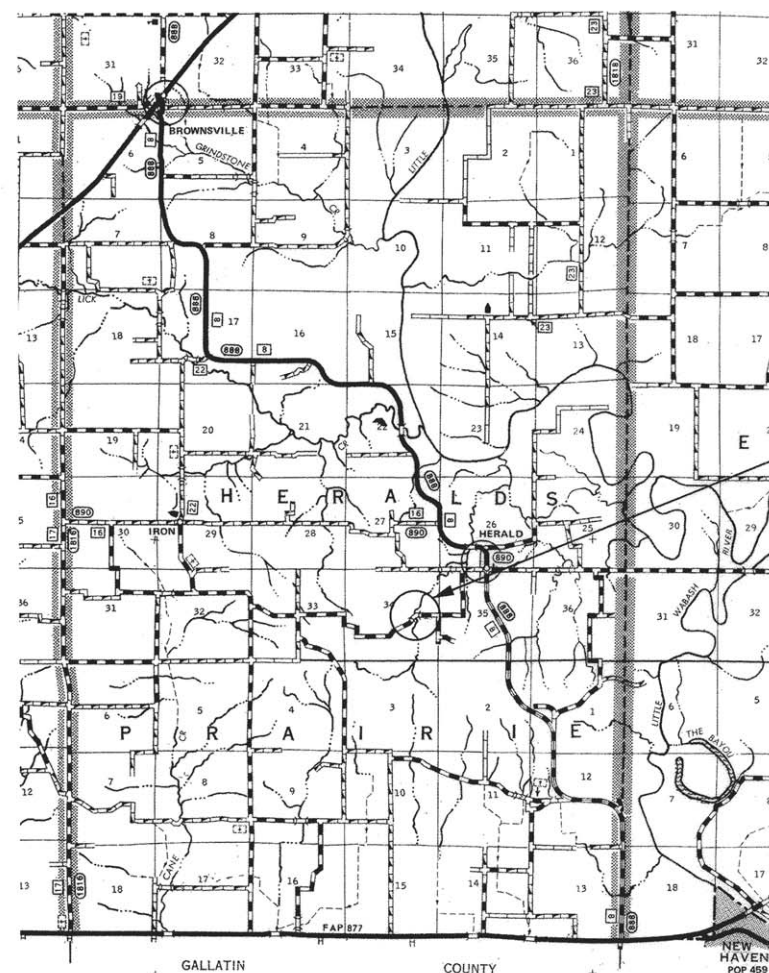
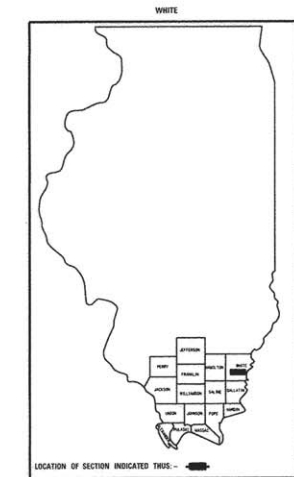
CONTRACT #99550 LITTLE WABASH TRIBUTARY

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	03-07119-00-BR	WHITE	14	1

323 W. 3RD ST.
 P.O. BOX 160
 MT. CARMEL, IL
 62863
 PHONE:
 (618)-262-8651
 FAX:
 (618)-263-3327

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 LAND SURVEY, PROFESSIONAL ENGINEERING & STRUCTURAL ENGINEERING CORPORATION
 184-000959

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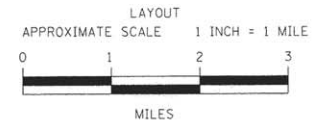


PLAN	1" = 50'	
PROFILE	1" = 50'	
PROFILE VERT.	1" = 5'	

SECTION 03-07119-00-BR
 BEGINS STATION 0+70

STA 5+00, STRUCTURE NO. 097-3296,
 A 80' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH
 33" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
 27' WIDTH, ON 4.0% GRADE, 35° LT. FWD. SKEW, S.E. 3.5% RT.

SECTION 03-01779-00-BR
 ENDS STATION 8+95



GROSS LENGTH	825.00 FT	0.156 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	825.00 FT	0.156 MILES

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

APPROVED August 16, 2016
Brian Ray
 COUNTY ENGINEER

PASSED AUGUST 25, 2016
Dani W. Hill
 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID
 BASED ON LIMITED REVIEW: AUGUST 25, 2016
Jeffrey L. Keirn
 JEFFREY L. KEIRN, P.E.
 REGION FIVE ENGINEER



AARON M. MEFFORD
 NAME
 SIGNATURE
 DATE
 11-30-17
 EXPIRES

TOWNSHIP ROUTE 353
 OVER LITTLE WABASH TRIB.
 WHITE COUNTY, ILLINOIS

SHEET TITLE:
 TITLE SHEET

SCALE:	VARIABLES
BY:	A.M.M.
DATE:	8/9/16
REV:	

1 OF 14 SHEETS
 SHEET NO. 1

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
353	03-07119-00-BR	WHITE	14	2	
FED. ROAD DIST. NO. 9		ILLINOIS	LITTLE WABASH TRIB.		
PROJECT # BR05-193030		CONTRACT # 99550		PHONE: (618)-262-8651	
HLR JOB # 15J119		LEC JOB # H131007WH		FAX: (618)-263-3327	

GENERAL NOTES:

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED APRIL 1, 2016.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 80 FOOT LONG SINGLE SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE WHITE COUNTY HIGHWAY DEPARTMENT AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER.

AGGREGATE SURFACE COURSE, TYPE B INCLUDES 60 TON FOR FILL NEXT TO THE BRIDGE, 43 TON FOR THE FIELD ENTRANCES, AND 497 TON FOR THE ROADWAY.

THE ABANDON ROADWAY SHALL BE DEGRADED AND USED FOR CONSTRUCTION FILL ON THE SITE. THE REMOVED ROADWAY SHALL BE BACKFILLED WITH SUITABLE SOIL.

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	ESTIMATED UNSUITABLE MATERIAL	SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA 0+00 TO 4+52.2	1128.9	0.0	0.0	846.7	1875.5	-1028.8
STA 4+52.2 TO 5+43.8	0.0	30.0	15.0	11.3	0.0	+11.3
STA 5+43.8 TO 10+00	251.1	0.0	0.0	188.3	625.2	-436.9
2 FIELD ENTRANCE	0.0	0.0	0.0	0.0	37.7	-37.7
TOTAL	1380.0	30.0	15.0	1046.3	2538.4	-1492.1

HEAVY DUTY EROSION CONTROL BLANKET

STATION	STATION	SIDE	QUANTITY (SQ YD)
3+00	TO 4+82	LT	280.0
2+00	TO 3+75	RT	495.0
TOTAL			775.0

STONE LINED DITCH

STATION	STATION	SIDE	QUANTITY (TONS)
1+00	TO 4+82	LT	184.0
1+00	TO 3+75	RT	132.0
5+50	TO 5+75	LT	12.0
5+25	TO 5+70	RT	22.0
TOTAL			350.0

SEE STONE LINED DITCH DETAIL, ON SHEET 3.

STONE DUMPED RIPRAP

STATION	STATION	SIDE	QUANTITY (TONS)
3+75	TO 4+46	RT	115.0
4+52	TO 5+44	BOTH	650
TOTAL			765.0

TREE REMOVAL, ACRE

STATION	STATION	SIDE	QUANTITY (ACRES)
0+70	TO 3+10	LT	0.04
0+70	TO 5+60	RT	0.36
TOTAL			0.40

SPECIAL DITCH

STATION	STATION	SIDE
1+00	TO 4+82	LT
1+00	TO 4+46	RT
5+50	TO 8+50	LT
5+25	TO 8+00	RT

PIPE CULVERTS

STATION	SIDE	CLASS D TYPE 1 24" (FOOT)	CLASS D TYPE 2 18" (FOOT)
6+00	RT		60.0
6+50	LT	50.0	
TOTAL		50.0	60.0

FIELD TILE ADJUSTMENT

STATION	SIDE	QUANTITY (EACH)
5+25	RT	1.0
TOTAL		1.0

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AARON M. MEFFORD
NAME
SIGNATURE
DATE: 8-16-16
11-30-17 EXPIRES

TOWNSHIP ROUTE 353
OVER LITTLE WABASH TRIB.
WHITE COUNTY, ILLINOIS

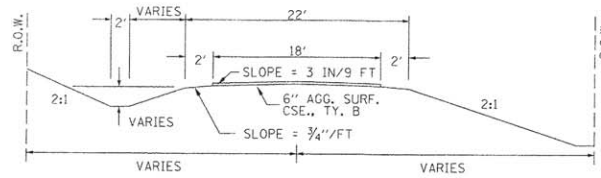
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GENERAL NOTES & SCHEDULE OF QUANTITIES

SCALE: VARS
BY: A.M.M.
DATE: 8/16
REV:

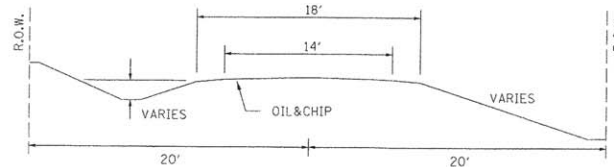
2 OF 14 SHEETS

SHEET NO. 2

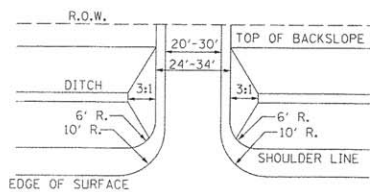
TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



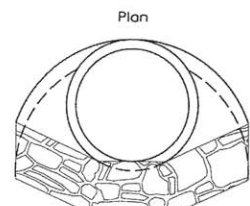
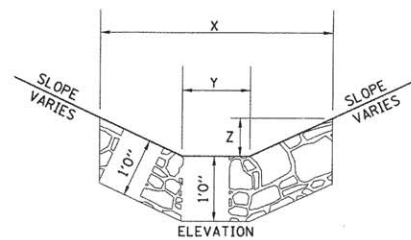
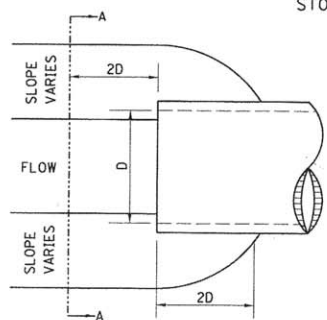
FIELD ENTRANCE DETAIL
STA 6+00 RT & STA 6+50 LT



EXISTING BRIDGE STA 5+28.6; STRUCTURE NUMBER: 097-3134
21" CONCRETE DECK BEAMS WITH 8" CONCRETE CURB ON
12" WOOD CAP WITH WOOD PILING AND WOOD MUDWALLS
AND WOOD WINGWALLS.

ONE (1) EACH-REMOVAL OF EXISTING STRUCTURES ALLOWED IN
THIS PROPOSAL.

STONE LINED DITCH DESIGN



Section A-A

NOTE: FOR PLACEMENT, QUALITY
GRADATION AND OTHER MISCELLANEOUS
REQUIREMENTS FOR STONE LINED
DITCH-SEE SPECIAL PROVISIONS.

NOTE:	BOTTOM OF DITCH	SLOPE			
		1 1/2:1	2:1	3:1	
	2 FT	X= 5 FT	6 FT	8 FT	
	Y= 2 FT	2 FT	2 FT	2 FT	
	Z= 1 FT	1 FT	1 FT	1 FT	
		0.40	0.48	0.62	TON/LIN. FT

NOTE: CONSTRUCTION TRANSITION
STA. 0+70 TO STA 1+20
STA. 8+45 TO STA 8+95

ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL



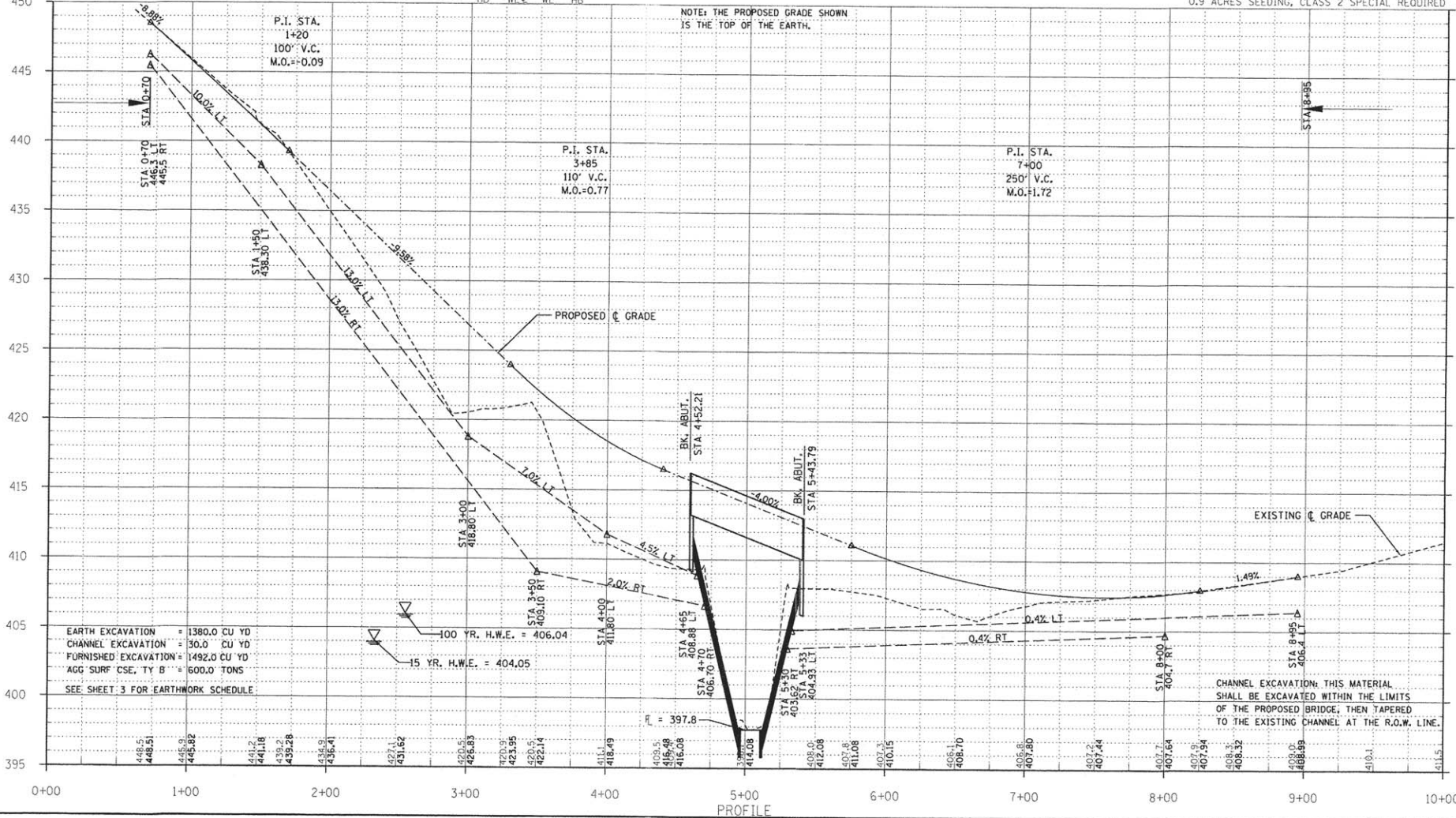
UTILITIES:
J.U.L.I.E. 1-800-892-0123
COUNTRYMARK
1-812-838-8545
GALLATIN-WHITE WATER DISTRICT
1-618-599-6040

SECTION 03-07119-00-BR
BEGINS STA 0+70

NOTE: FILL NEXT TO BRIDGE TO BE
AGGREGATE SURFACE COURSE

PROPOSED STRUCTURE: NO. 097-3296, STA 5+00,
A 90' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH
33" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
27' WIDTH, ON 4.0% GRADE, 35° LT. FWD. SKEW, S.E. 3.5% RT.
SEE SHEETS 6-14 FOR THE DESIGN AND BILL OF MATERIALS.

0.4 ACRES TREE REMOVAL, ACRE
0.9 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



EARTH EXCAVATION = 1380.0 CU YD
CHANNEL EXCAVATION = 30.0 CU YD
FURNISHED EXCAVATION = 1492.0 CU YD
AGG SURF CSE, TY B = 600.0 TONS
SEE SHEET 3 FOR EARTHWORK SCHEDULE

CHANNEL EXCAVATION: THIS MATERIAL
SHALL BE EXCAVATED WITHIN THE LIMITS
OF THE PROPOSED BRIDGE, THEN TAPERED
TO THE EXISTING CHANNEL AT THE R.O.W. LINE.

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	03-07119-00-BR	WHITE	14	3

323 W. 3RD ST.
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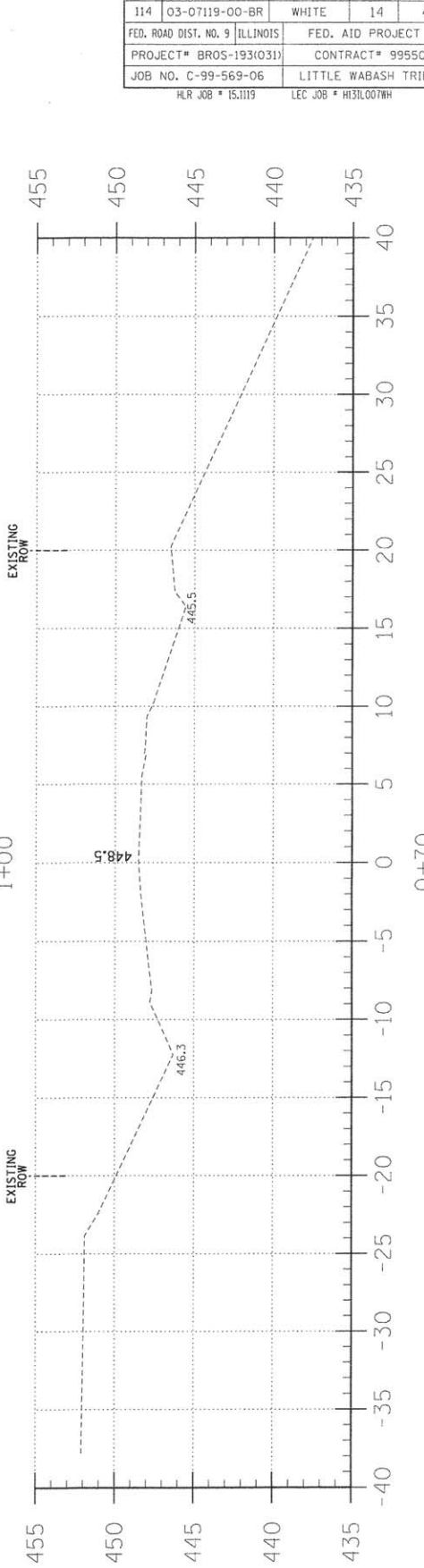
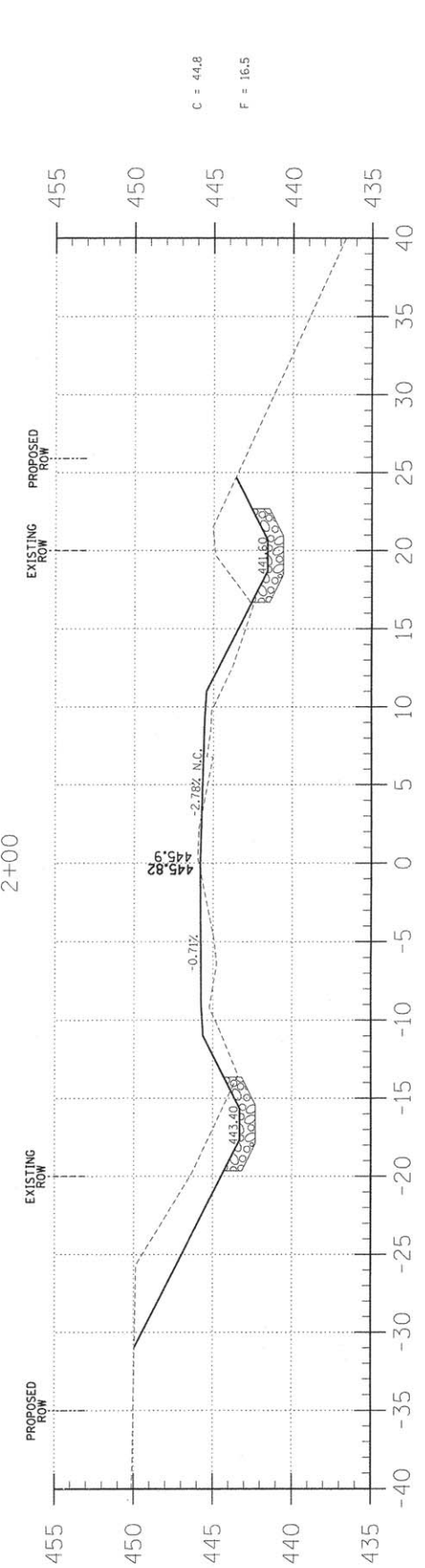
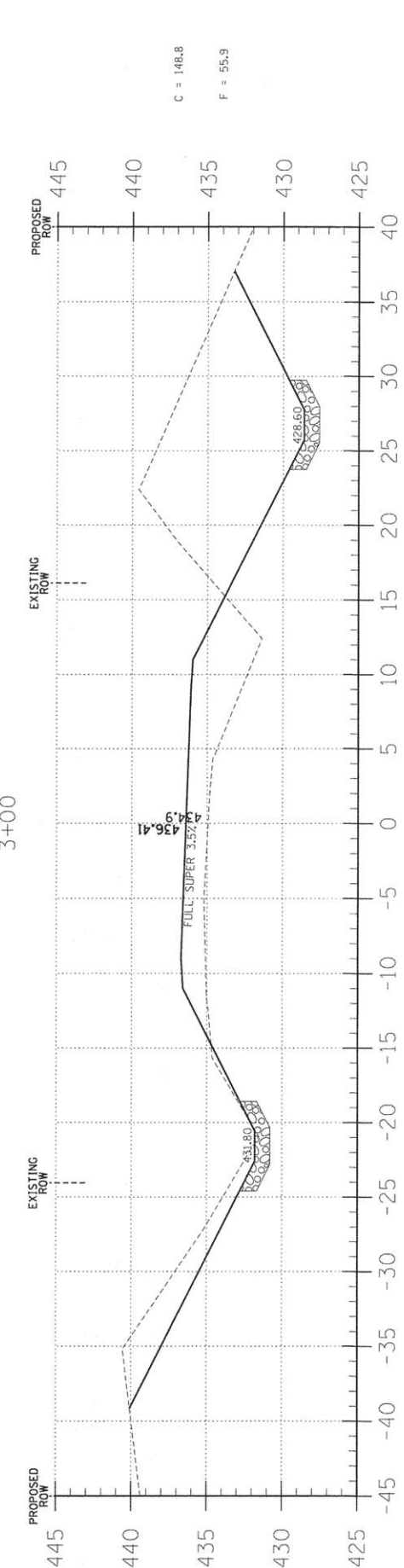
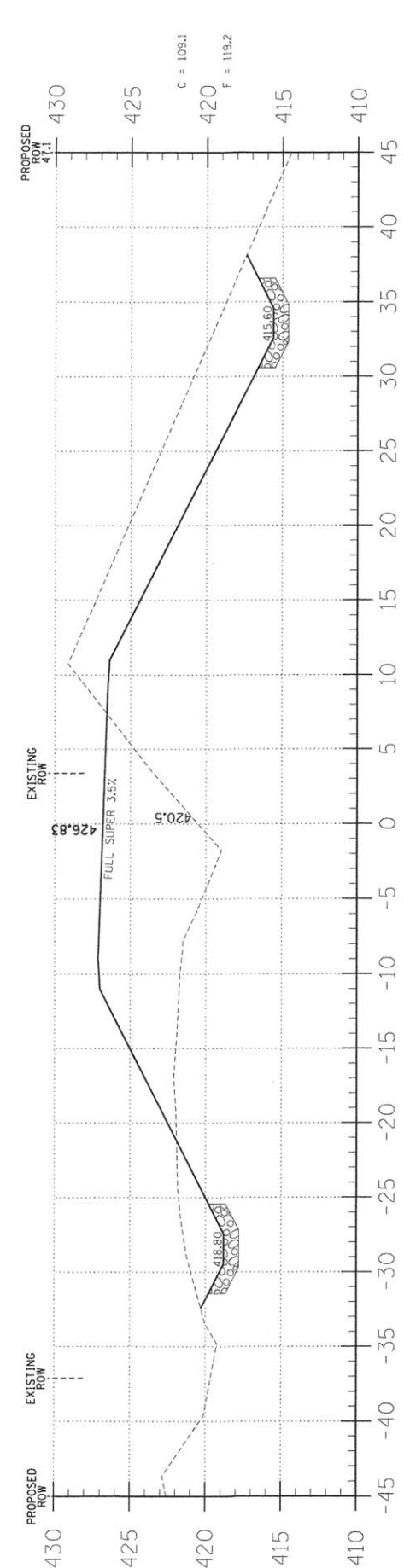
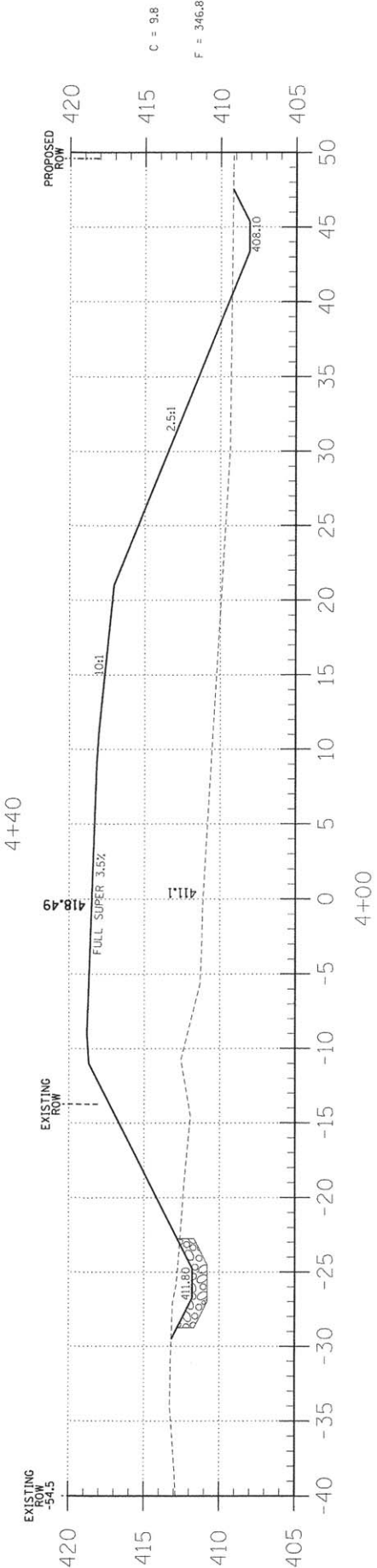
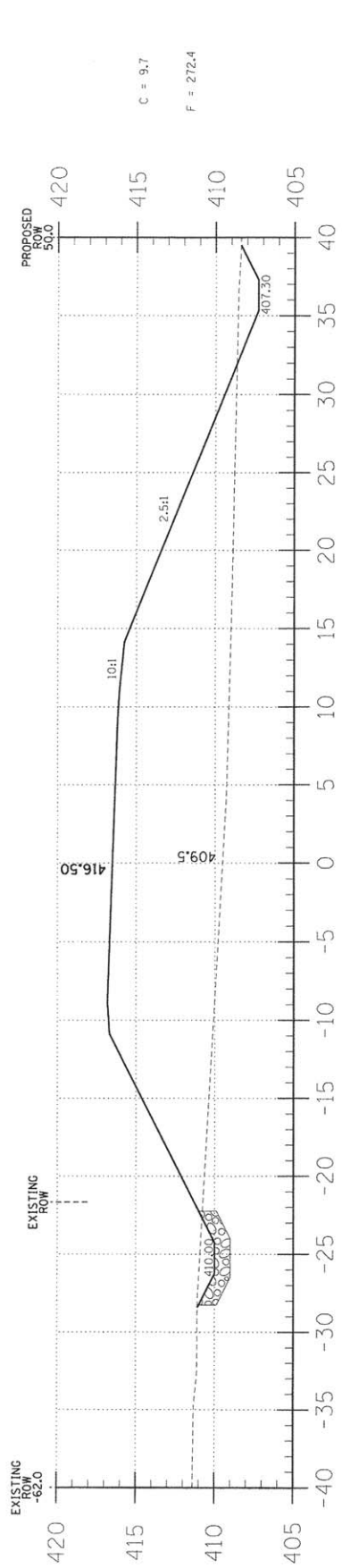
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56284
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
DATE
8-16-16
11-30-17
EXPIRES

TOWNSHIP ROUTE 353
OVER LITTLE WABASH TRIBUTARY
WHITE COUNTY, ILLINOIS

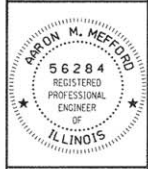
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PLAN & PROFILE
SCALE: VARIES
BY: A.M.M.
DATE: 8/16
REV:
3 OF 14
SHEETS
SHEET NO.
3



TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
114	03-07119-00-BR	WHITE	14	4
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BROS-193(031)		CONTRACT# 99550		
JOB NO. C-99-569-06		LITTLE WABASH TRIB		
HLR JOB # 15.1119		LEC JOB # H31L007WH		

323 W. 3RD ST.
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LAND SURVEY: PROFESSIONAL ENGINEERING CORPORATION
184-00859



AARON M. MEFFORD
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Signature
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11-30-17 EXPIRES

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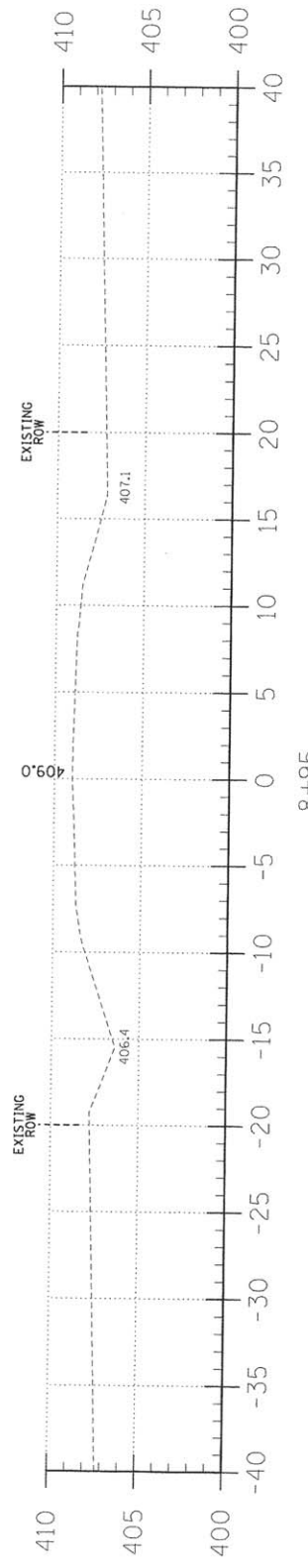
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CROSS-SECTIONS

SCALE: 1" = 5'
BY: A.M.M.
DATE: 8/16/16
REV:

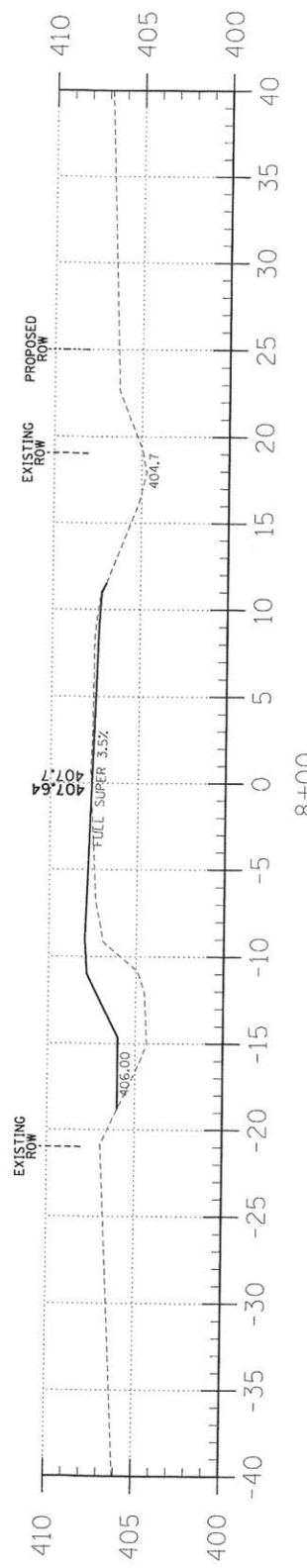
4 OF 14 SHEETS

SHEET NO. 4

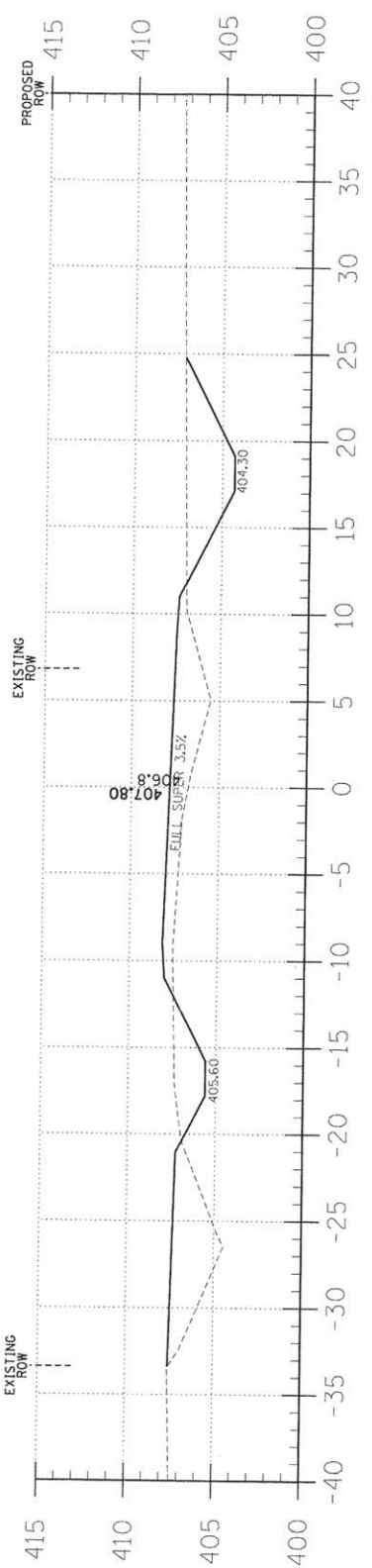


8+95

C = 11.5
F = 19.9

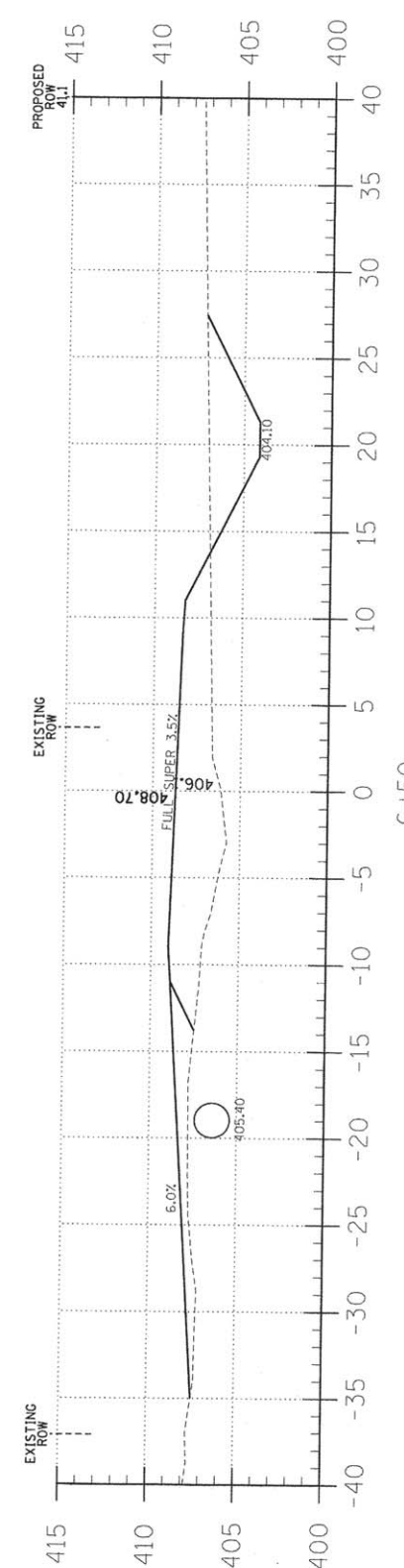


8+00



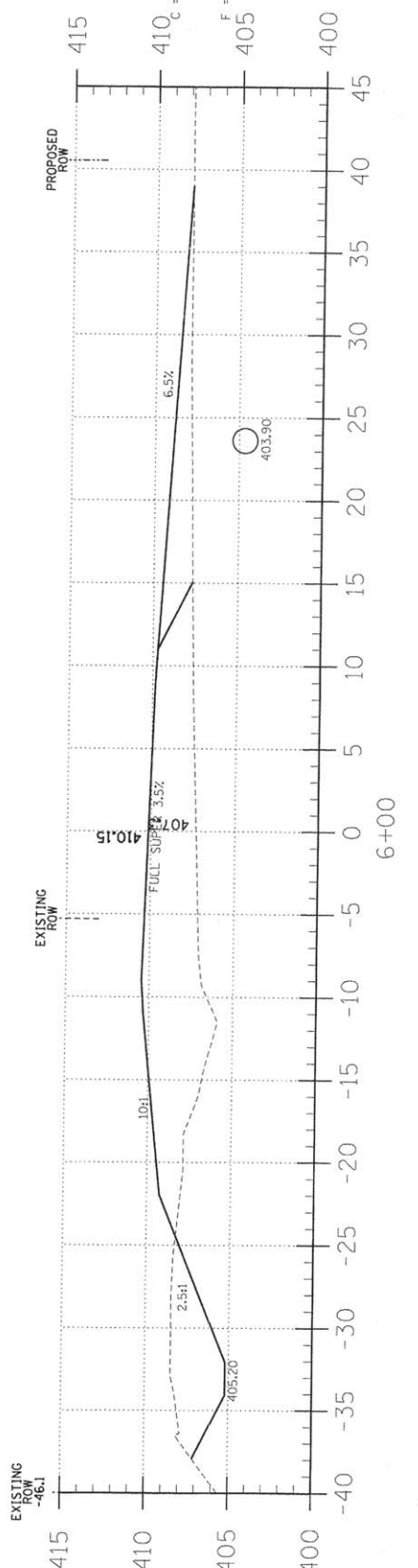
7+00

C = 29.8
F = 43.1



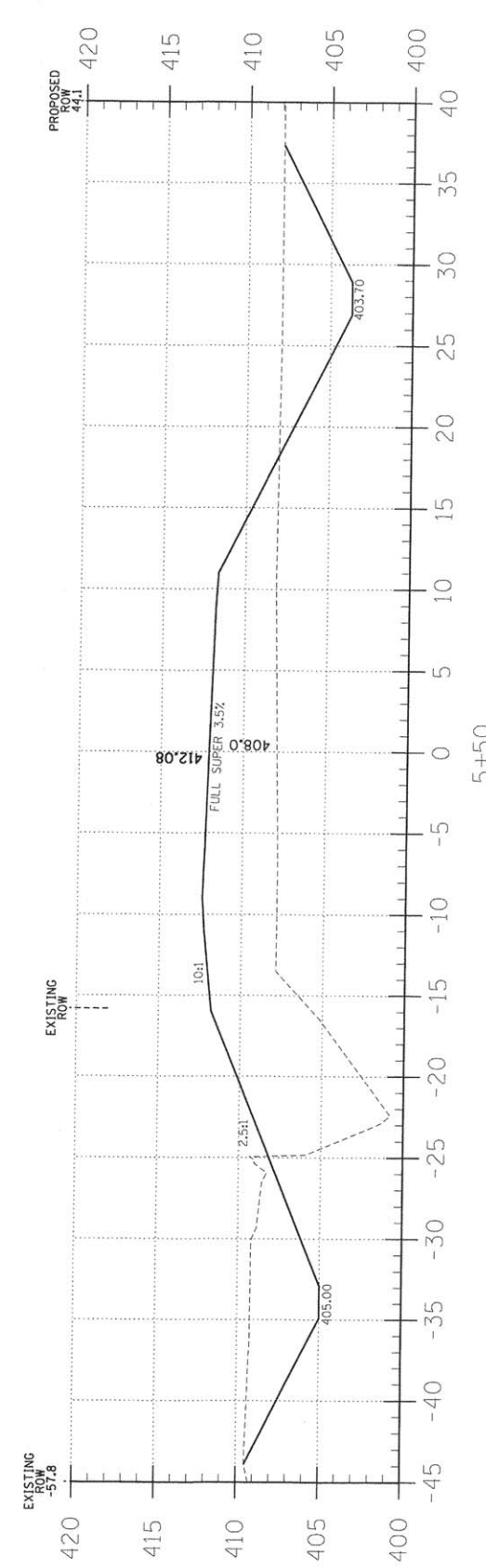
6+50

C = 22.8
F = 51.7



6+00

C = 90.8
F = 187.1



5+50

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
114	03-07119-00-BR	WHITE	14	5
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BROS-193(031)		CONTRACT# 99550		
JOB NO. C-99-569-06		LITTLE WABASH TRIB		
HLR JOB # 15.1119		LEC JOB # H31L007WH		

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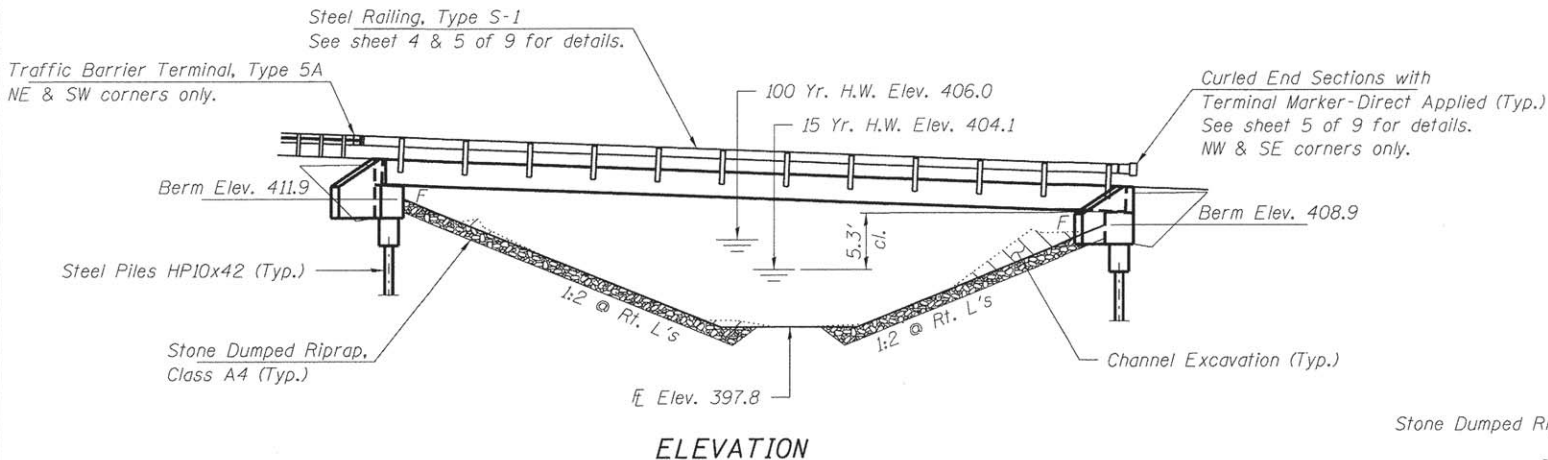


AARON M. MEFFORD
NAME
SIGNATURE
8-16-16
DATE
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EXPIRES

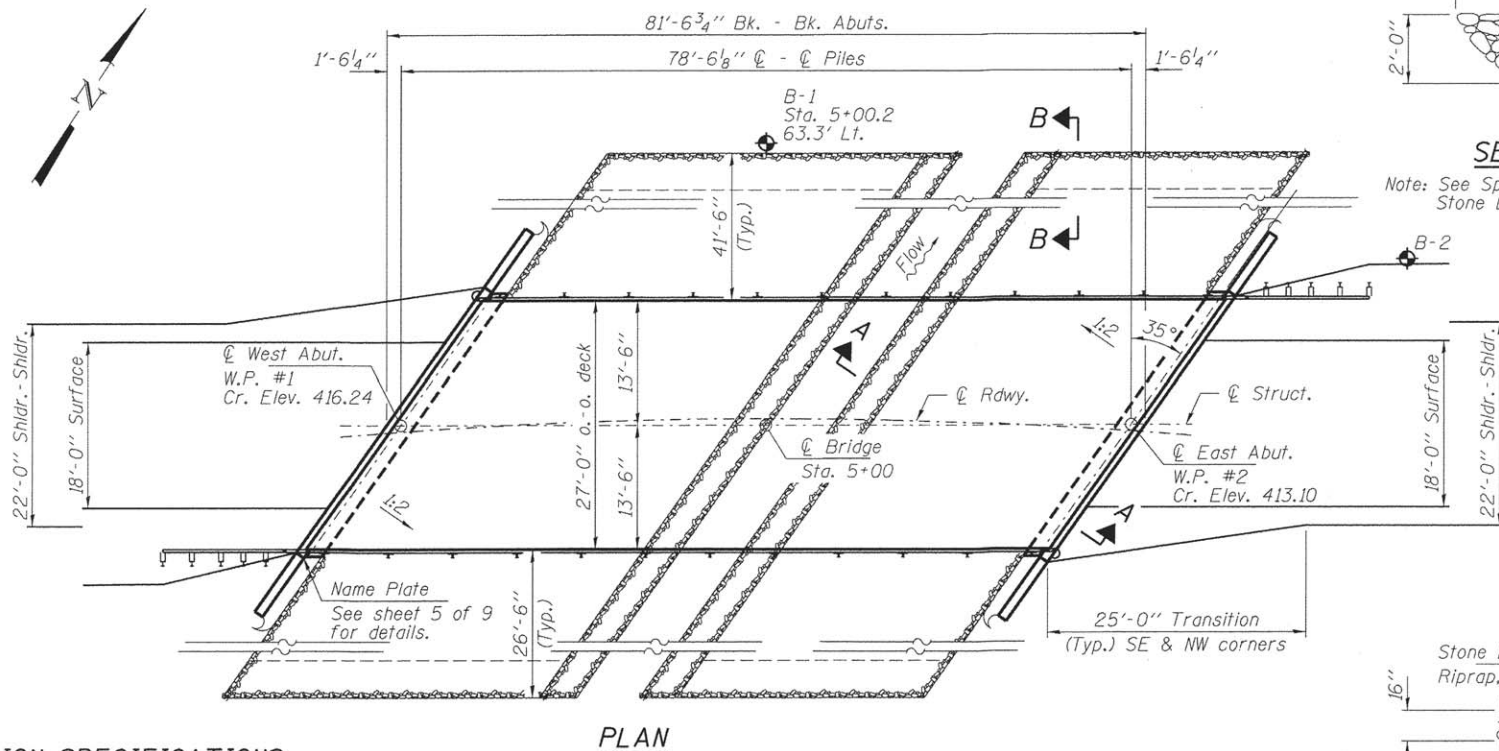
TOWNSHIP ROUTE 353
OVER LITTLE WABASH TRIBUTARY
WHITE COUNTY, ILLINOIS

SHEET TITLE:	
CROSS-SECTIONS	
SCALE:	1" = 5'
BY:	AMM
DATE:	8/16
REV:	
5	OF 14
SHEETS	
SHEET NO.	
5	

EXISTING STRUCTURE NO. 097-3134, Sta. 5+28.6; Single span precast slab bridge on closed timber abutments and wingwalls. 27.2' fc.-fc. abuts.; 22.3' o.-o. deck.
Structure closed to traffic during construction.



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 (1/2" low lax. strands)
fpbt = 201,960 psi (1/2" low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.307g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.723g
Soil Site Class = D

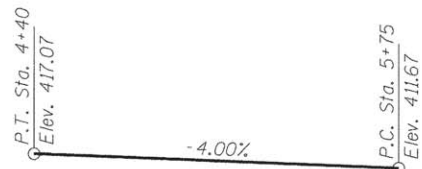
WATERWAY INFORMATION

Drainage Area = 0.98 Sq. Mi.		Existing Low Grade Elev. 406.6 @ Sta. 6+65		Proposed Low Grade Elev. 407.4 @ Sta. 7+75		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
Design	15	598	172	166	404.05	
Base	100	1070	229	252	406.04	0.39 0.36 406.43 406.40

Design Scour Elevations (ft.)		
	W. Abut.	E. Abut.
Q100	409.7	406.6

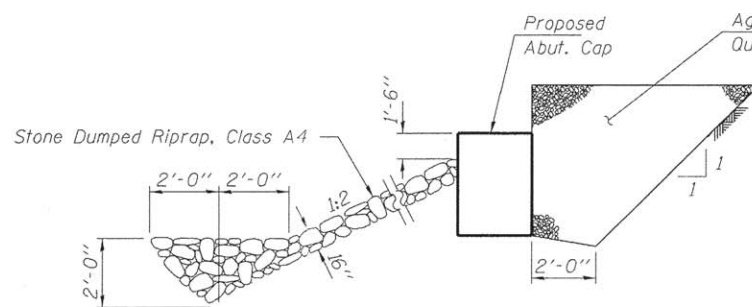
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

Steven W. Megginson 08/12/2016
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



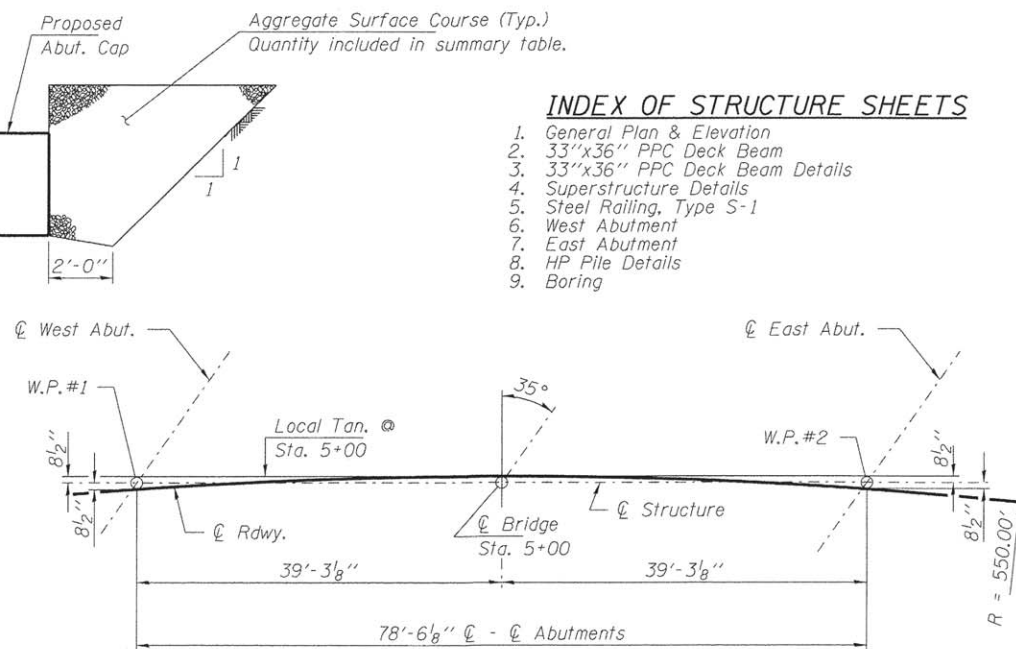
PROFILE GRADE

T.R. 353

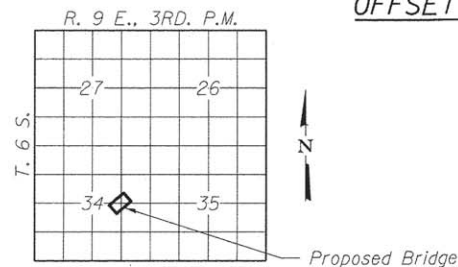


SECTION A-A

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



OFFSET SKETCH



LOCATION SKETCH

BUILT 2011 BY
WHITE COUNTY
HERALDS PRAIRIE ROAD DISTRICT
SEC. 03-07119-00-BR
STR. NO. 097-3296
LOADING HL-93

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			30
Stone Dumped Riprap, Class A4	Ton			650
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		34.6	34.6
Concrete Encasement	Cu. Yd.		4.0	4.0
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,160		2,160
Reinforcement Bars, Epoxy Coated	Pound		3,980	3,980
Steel Railing, Type S-1	Foot	163		163
Furnishing Steel HP10x42	Foot		352	352
Driving Piles	Foot		352	352
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Concrete Sealer	Sq. Ft.		118	118
Terminal Marker - Direct Applied	Each	4		4

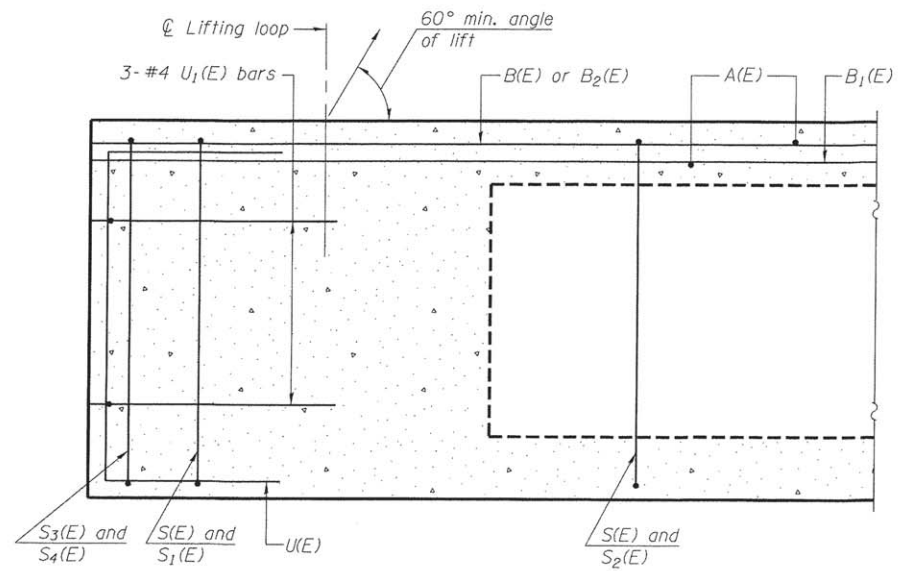
GENERAL PLAN & ELEVATION
STRUCTURE NO. 097-3296

SHEET NO. 1 OF 9 SHEETS

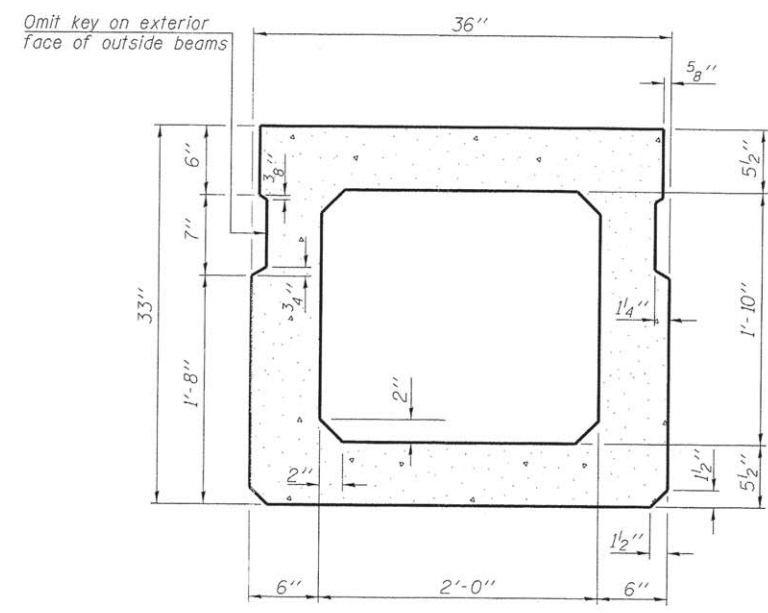
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	03-07119-00-BR	WHITE	14	6
HERALDS PRAIRIE ROAD DISTRICT			CONTRACT NO. 99550	
[ILLINOIS] FED. AID PROJECT BROS-0193031				

FILE NAME = 130271-sht-br-bridge.dgn	USER NAME = #USER#	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3015 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L6 / PE / SE CORP. 184.003959	PLDT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -
PLDT DATE = 8/15/2016		DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

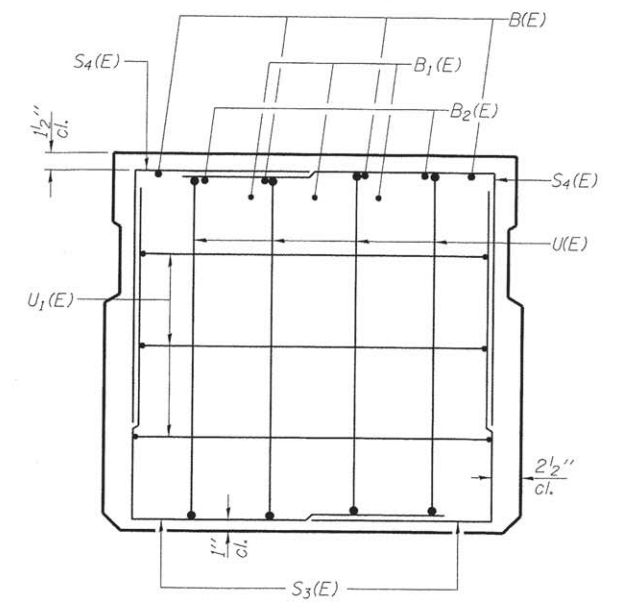
STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT



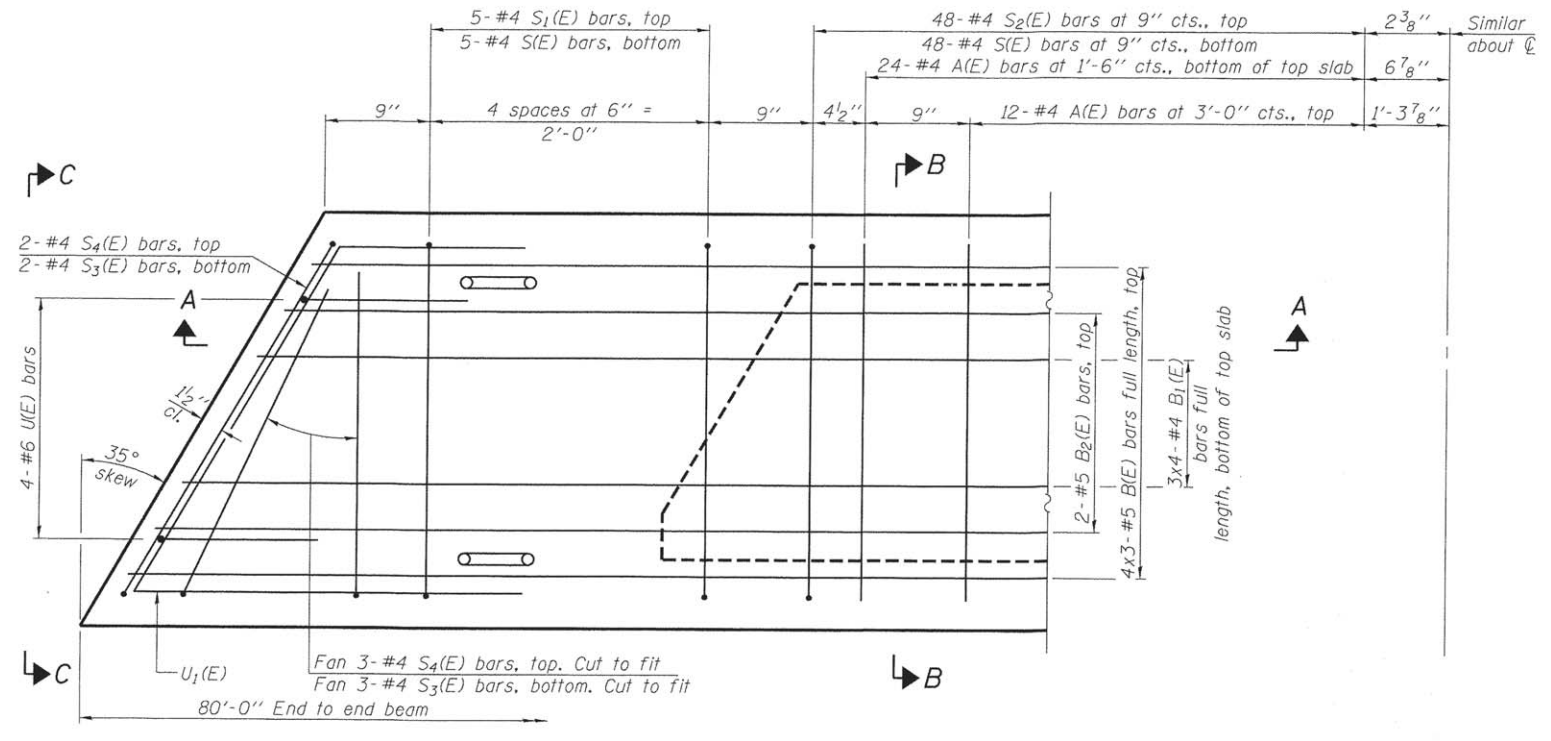
SECTION A-A



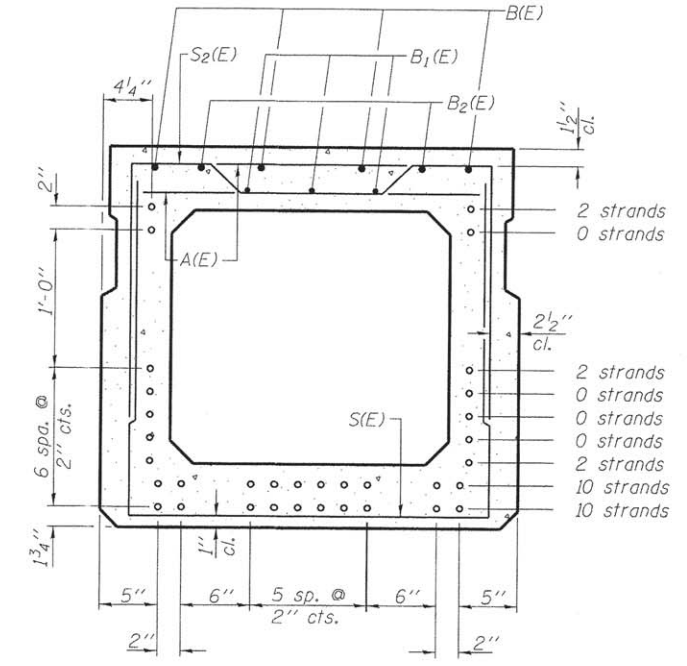
SECTION B-B (Showing dimensions)



VIEW C-C



PLAN VIEW



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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	72	#4	2'-7"	—
B(E)	12	#5	28'-3"	—
B1(E)	12	#4	21'-5"	—
B2(E)	4	#5	10'-0"	—
S(E)	106	#4	7'-8"	—
S1(E)	10	#4	6'-5"	┌
S2(E)	96	#4	6'-8"	┌
S3(E)	10	#4	4'-11"	└
S4(E)	10	#4	4'-4"	└
U(E)	8	#6	5'-0"	└
U1(E)	6	#4	7'-4"	└

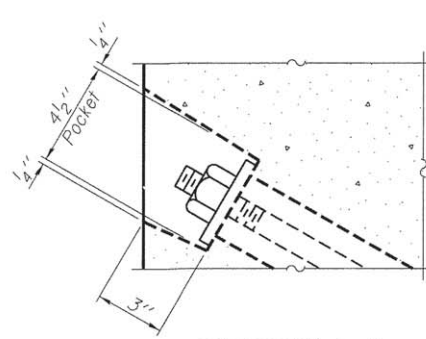
Note: See sheet 3 & 4 of 9 for additional details and Bill of Material.

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

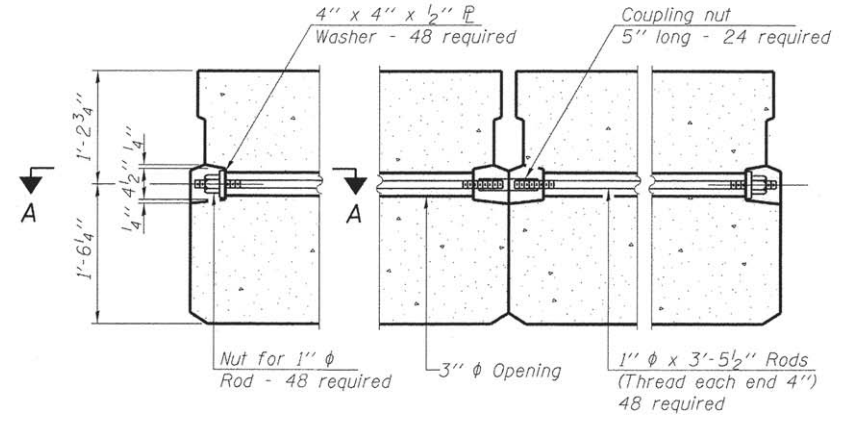
MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

PD-3336-L 6-8-15

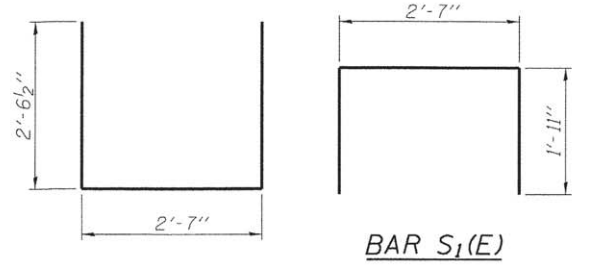
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769	PLLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISIONS -			353	03-07119-00-BR	WHITE	14	7	
ILLINOIS PROFESSIONAL DESIGN FIRM L.B./P.E. CORP. 184.000969	PLLOT DATE = 8/15/2016	DRAWN - R.D.H.	REVISIONS -			HERALDS PRAIRIE ROAD DISTRICT CONTRACT NO. 99550					
		CHECKED - S.W.M.	REVISIONS -			[ILLINOIS] FED. AID PROJECT BR05-019303D					



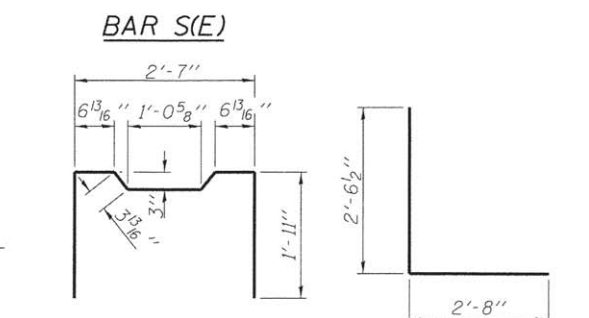
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



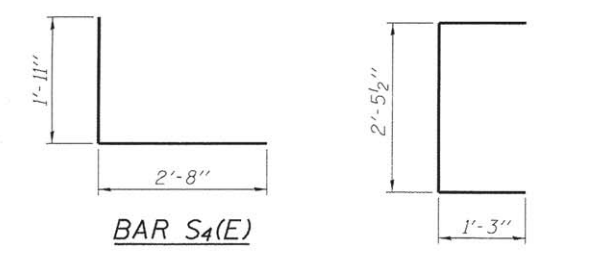
BAR S₁(E)



BAR S(E)

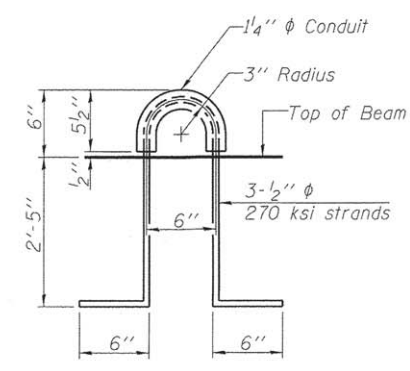
BAR S₂(E)

BAR S₃(E)

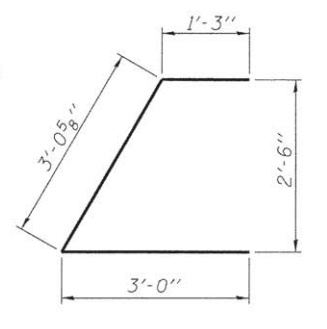


BAR S₄(E)

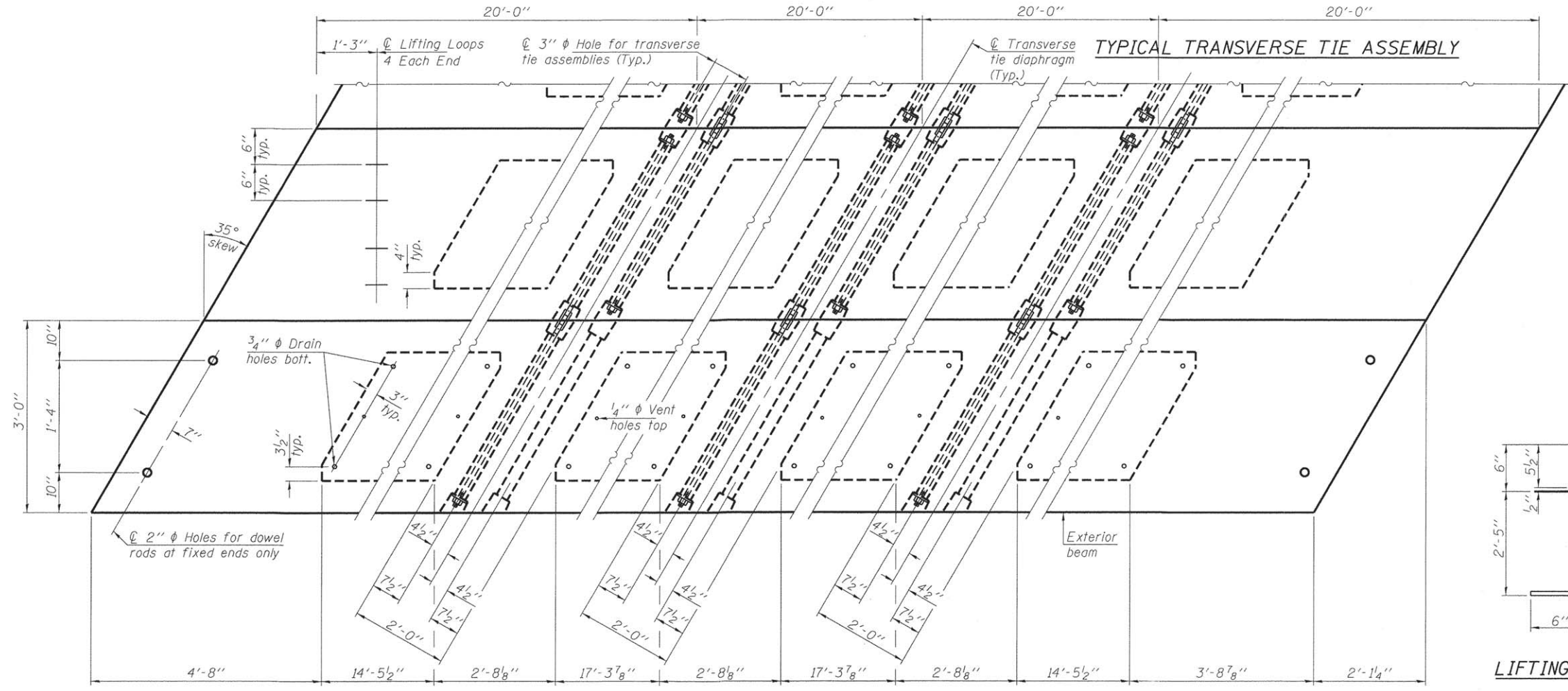
BAR U(E)



LIFTING LOOP DETAIL



BAR U₁(E)



PLAN VIEW

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" ϕ 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.

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

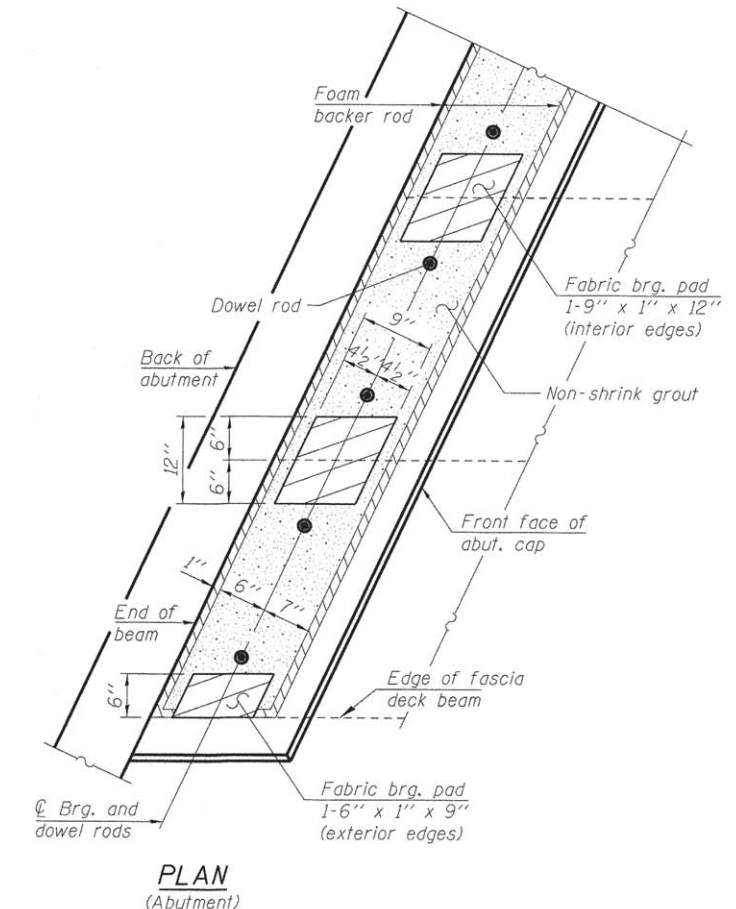
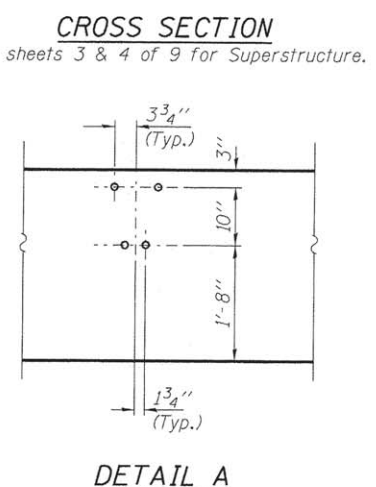
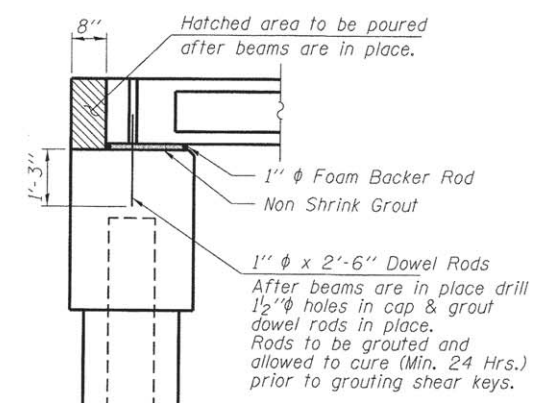
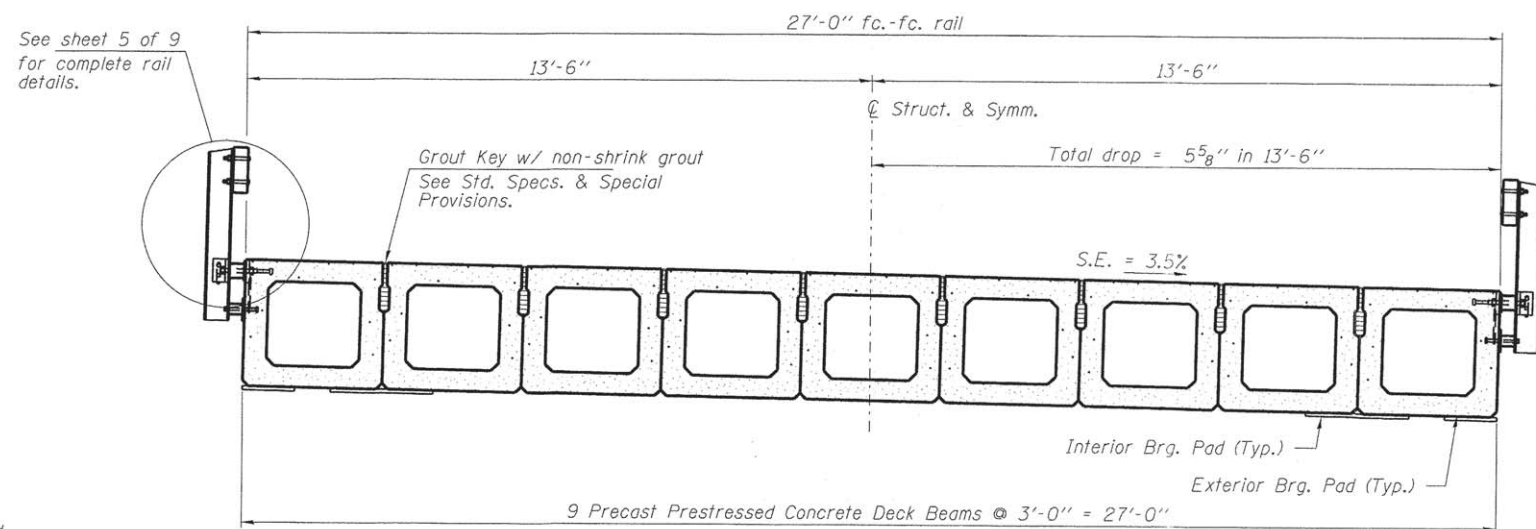
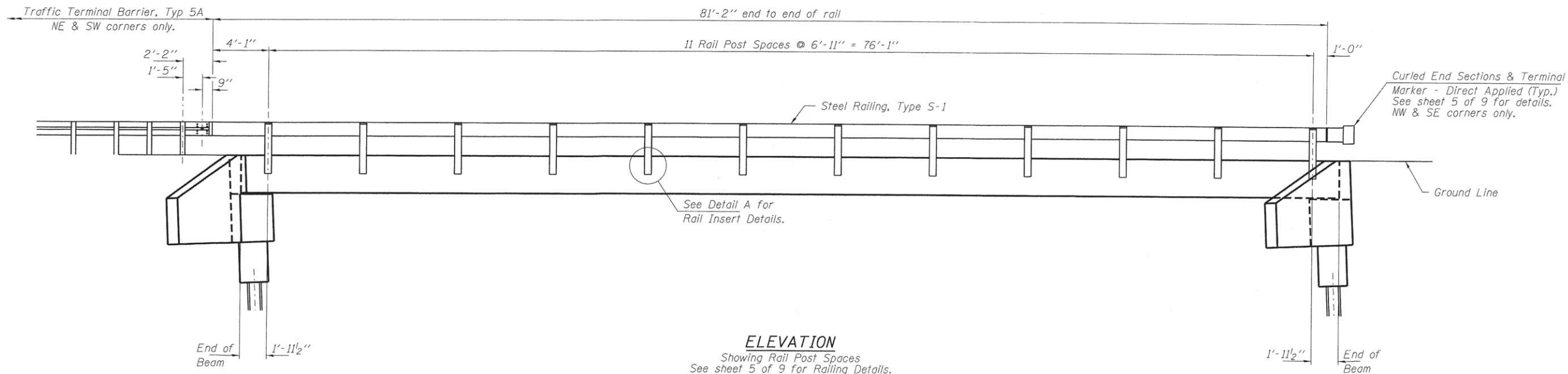
BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	2.160
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PD-3336-LD 1-28-16

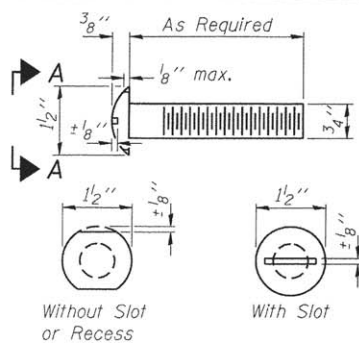
FILE NAME = 138871-sht-bridge.dgn	USER NAME = #USER#	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	33" x 36" PPC DECK BEAM DETAILS STRUCTURE NO. 097-3296	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000969	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -			353	03-07119-00-BR	WHITE	14	8	
	PLOT DATE = 8/15/2016	DRAWN - R.D.H.	REVISED -			HERALDS PRAIRIE ROAD DISTRICT	CONTRACT NO. 99550				
		CHECKED - S.W.M.	REVISED -			SHEET NO. 3 OF 9 SHEETS					

ILLINOIS FED. AID PROJECT BROS-0193031

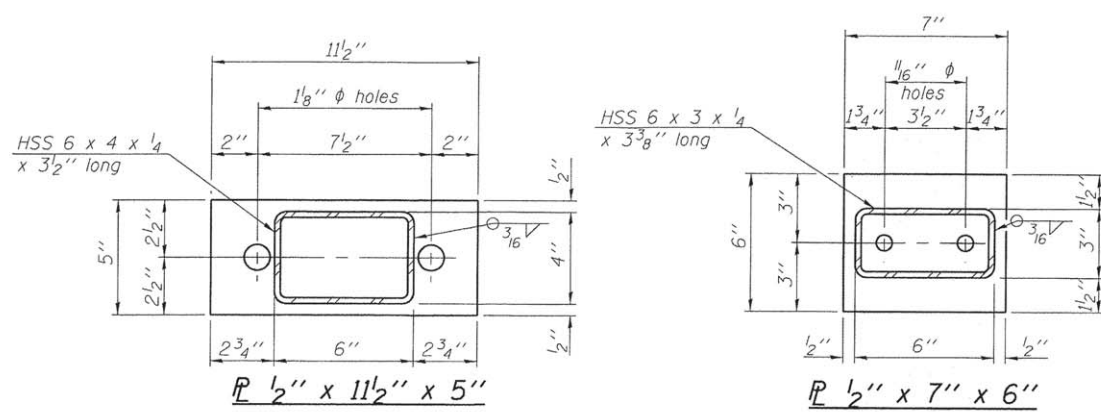


Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

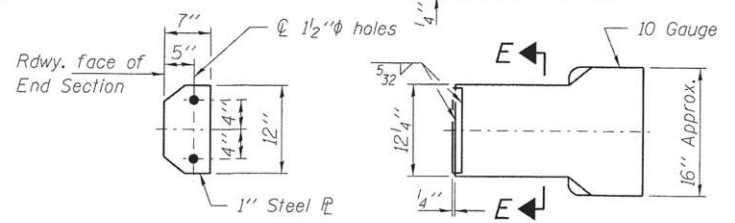
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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -			353	03-07119-00-BR	WHITE	14	9	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000099	PLOT DATE = 8/15/2016	DRAWN - R.D.J.H.	REVISED -			HERALDS PRAIRIE ROAD DISTRICT	CONTRACT NO. 99550				
		CHECKED - S.W.M.	REVISED -			[ILLINOIS] FED. AID PROJECT BR05-0193031					



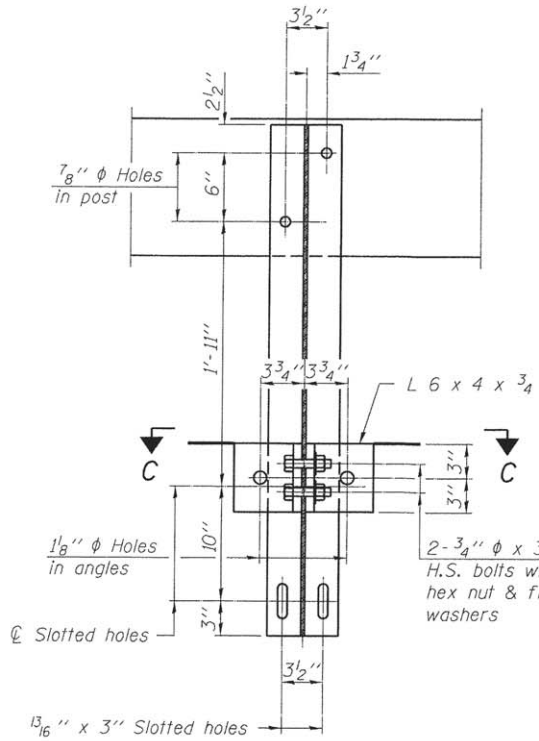
**VIEW A-A
ROUND HEAD BOLT**



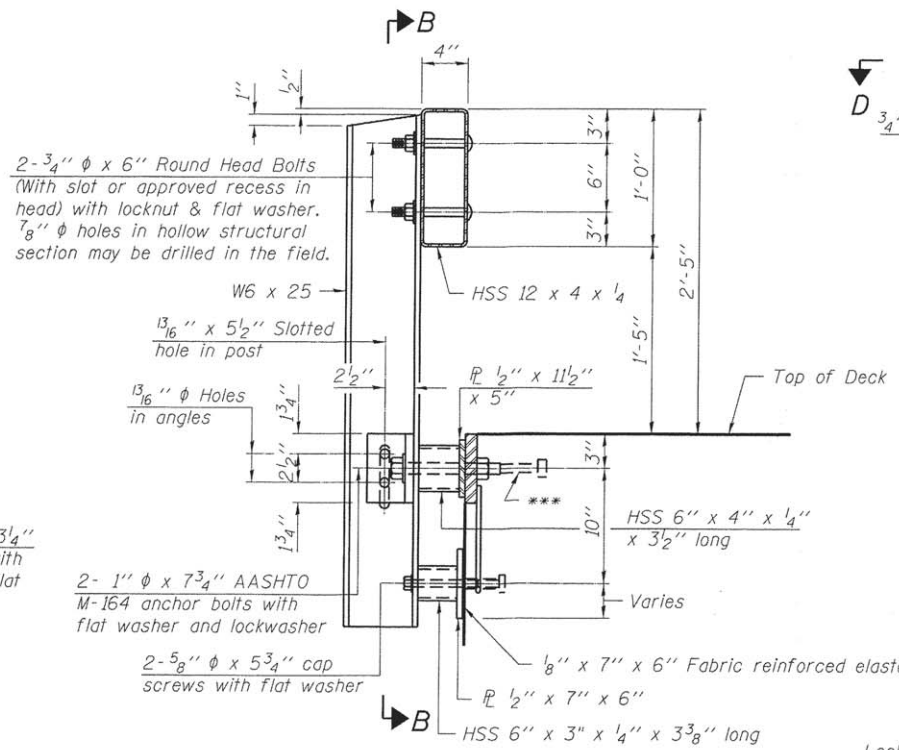
Note: Cost of curled end sections shall be included with the Steel Railing. (2 Required) NW & SE corners only.



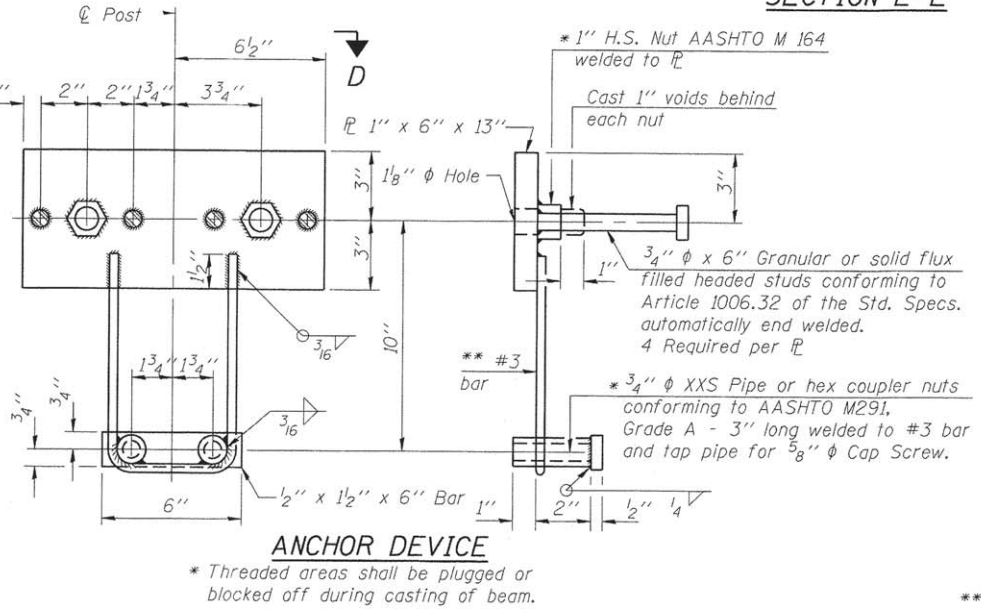
**SECTION E-E
CURLED END SECTION DETAILS**



SECTION B-B

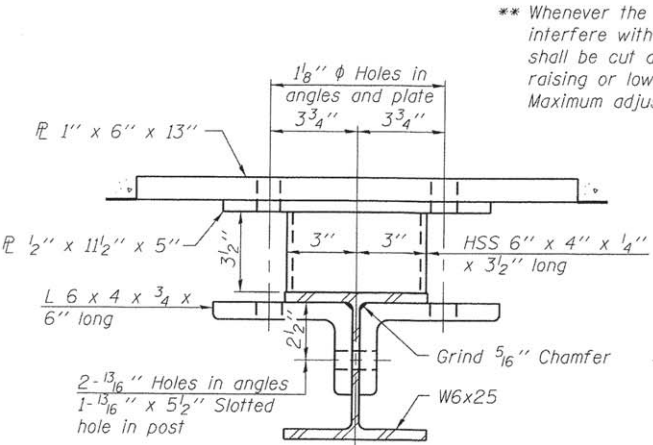


SECTION AT RAILING POST

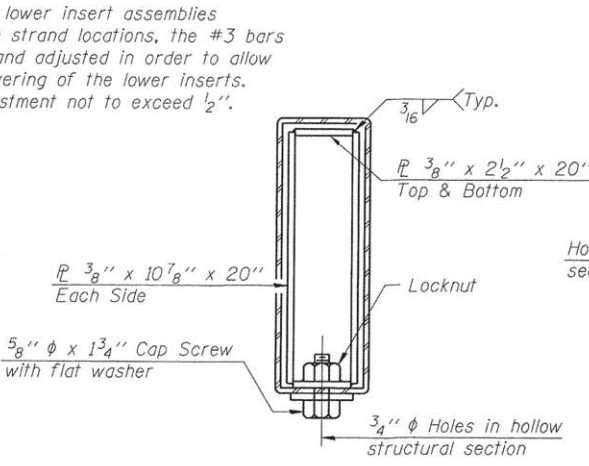


ANCHOR DEVICE

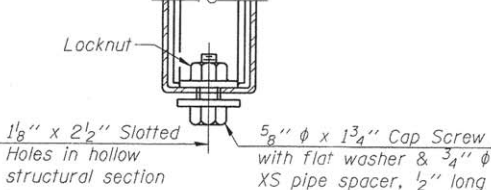
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



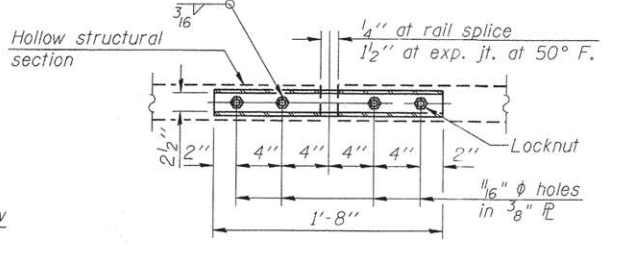
SECTION C-C



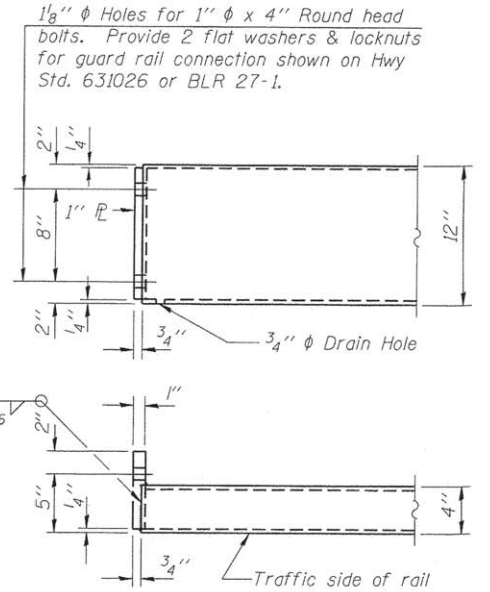
SECTIONS AT RAIL SPLICE



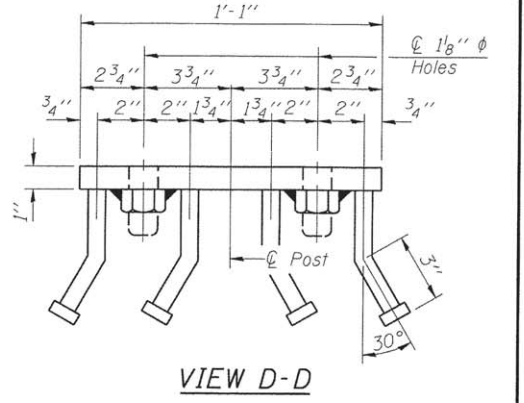
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	163

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

HAMPTON, LENZINI AND RENWICK, INC.
208 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
13 / PE / SE CORP. 184.000999

USER NAME = #USER#
DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - R.D.H.
CHECKED - S.W.M.

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

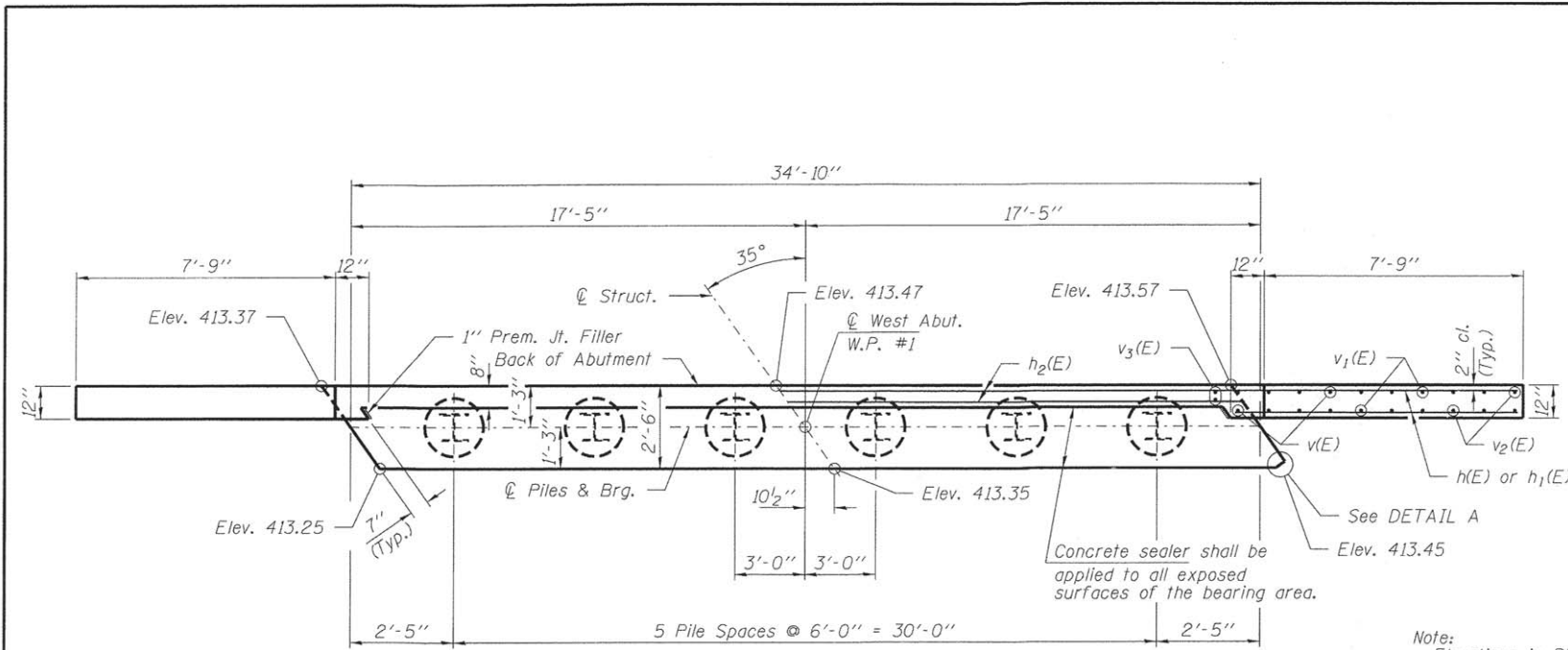
DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - R.D.H.
CHECKED - S.W.M.

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 097-3296

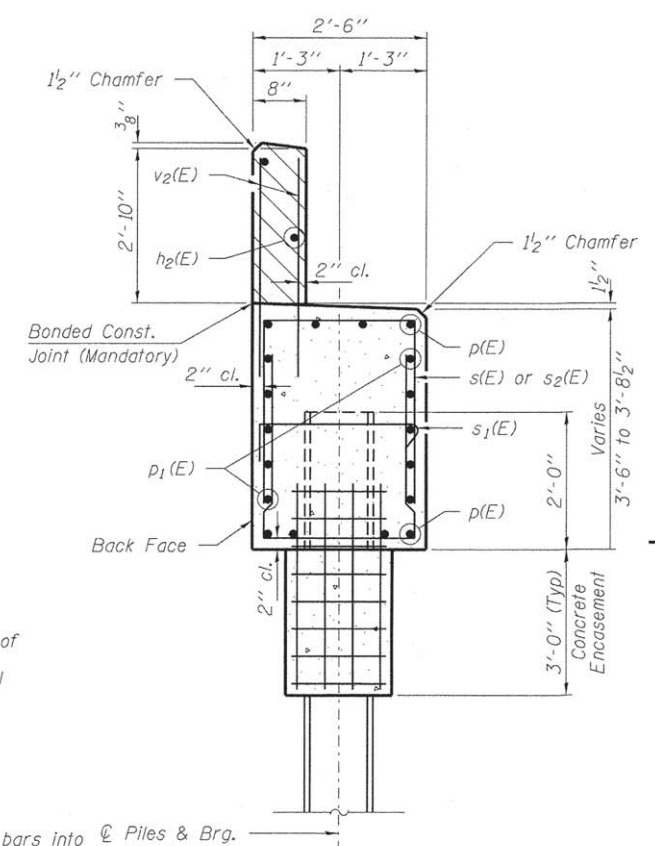
SHEET NO. 5 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	03-07119-00-BR	WHITE	14	10
HERALDS PRAIRIE ROAD DISTRICT			CONTRACT NO. 99550	
[ILLINOIS] FED. AID PROJECT BROS-0193(031)				



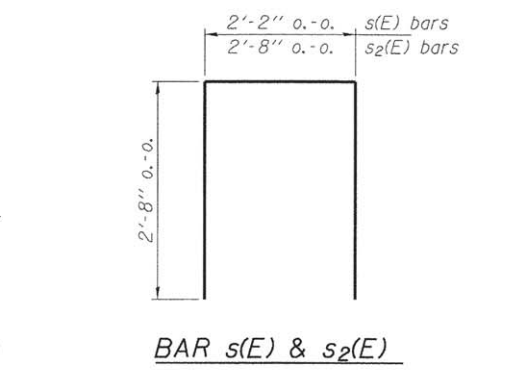
PLAN

Note: Elevations in PLAN are to top of concrete cap. Top of wing and backwall elevations in ELEVATION are to top of beam.

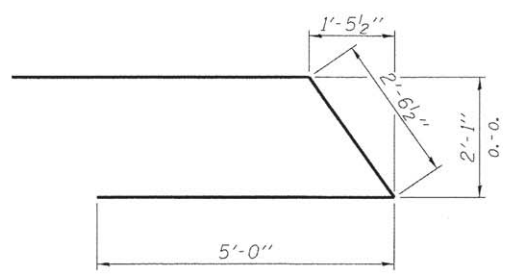


SECTION A-A

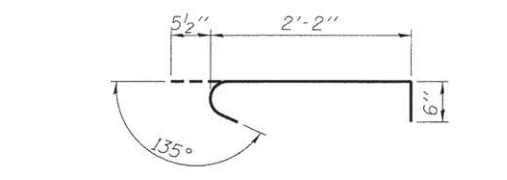
Hatched area to be poured after beams are in place.



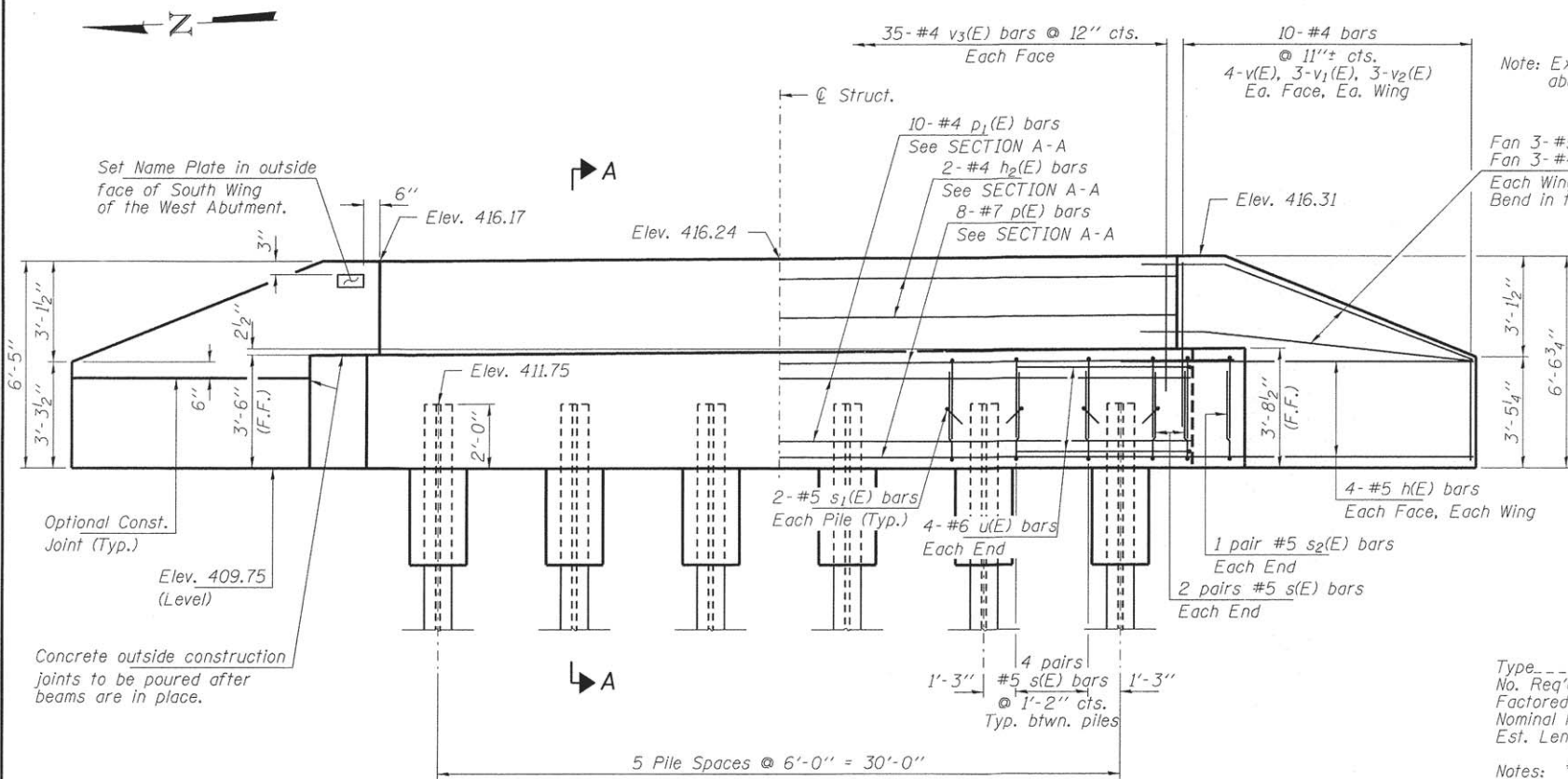
BAR s(E) & s2(E)



BAR u(E)



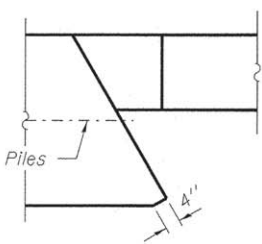
BAR s1(E)



ELEVATION
(Looking West)

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

Fan 3-#5 h(E) bars (B.F.)
Fan 3-#4 h1(E) bars (F.F.)
Each Wing
Bend in field.



DETAIL A

PILE DATA

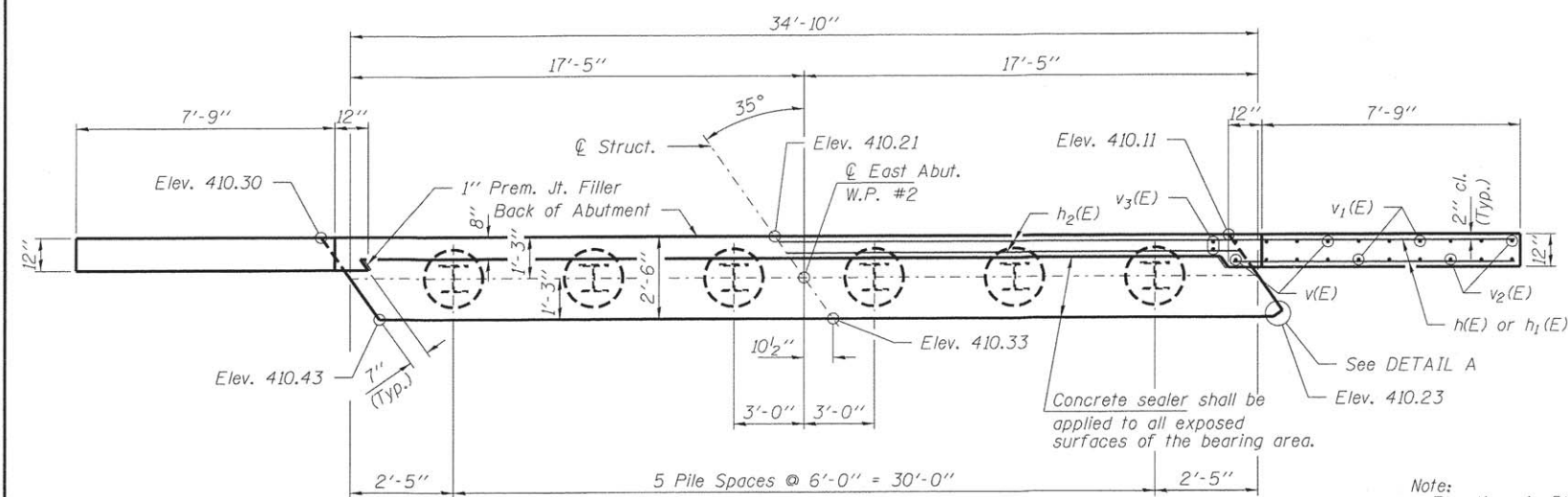
Type ----- Steel HP10x42
No. Req'd. (W. Abut.) ----- *6
Factored Resistance Available (Rf) ----- 184 Kips/Pile
Nominal Required Bearing (Rn) ----- 335 Kips/Pile
Est. Length ----- 32 Ft/Pile

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

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

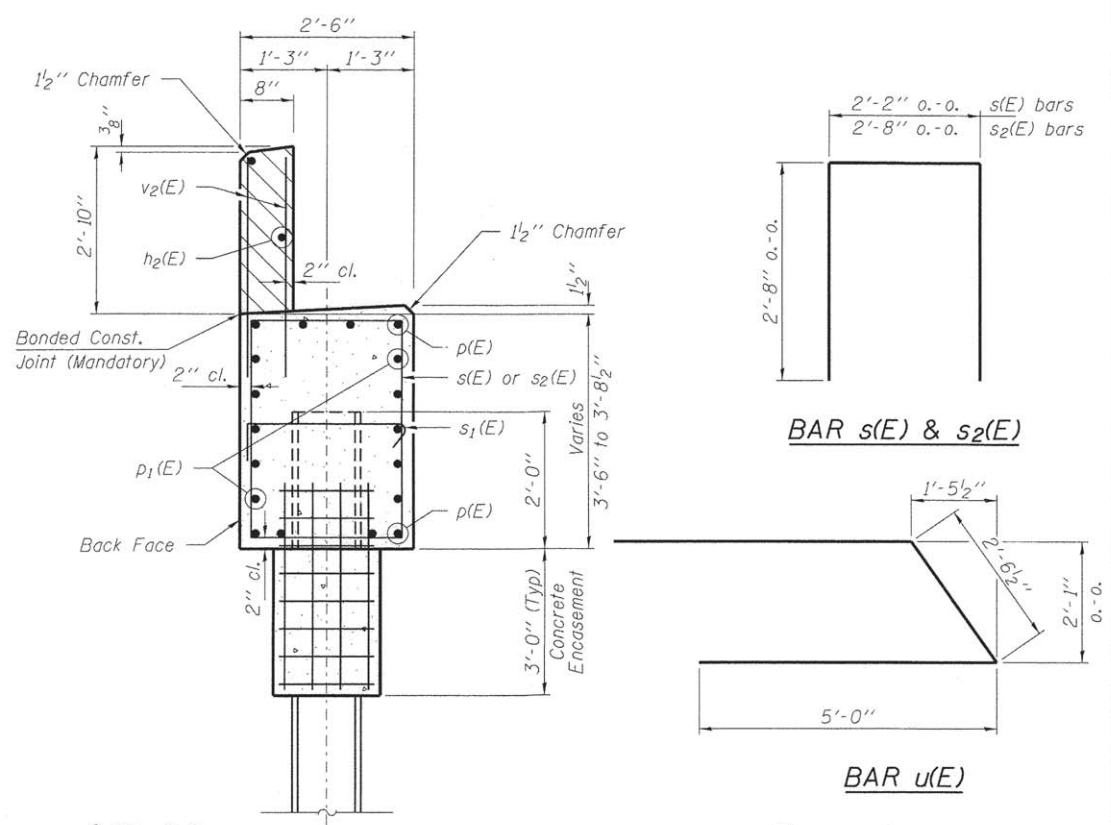
BILL OF MATERIAL - W. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	22	#5	10'-0"	—
h1(E)	6	#4	8'-6"	—
h2(E)	2	#4	34'-6"	—
p(E)	8	#7	34'-6"	—
p1(E)	10	#4	34'-6"	—
s(E)	48	#5	7'-6"	U
s1(E)	12	#5	3'-2"	U
s2(E)	4	#5	8'-0"	U
u(E)	8	#6	12'-7"	U
v(E)	16	#4	5'-3"	—
v1(E)	12	#4	4'-2"	—
v2(E)	12	#4	3'-0"	—
v3(E)	70	#4	3'-8"	—
Concrete Structures		Cu. Yd.	17.3	
Concrete Encasement		Cu. Yd.	2.0	
Reinforcement Bars, Epoxy Coated		Pound	1,990	
Steel Piles HP10x42		Foot	160	
Test Pile Steel HP10x42		Each	1	
Name Plates		Each	1	
Concrete Sealer		Sq. Ft.	59	



PLAN

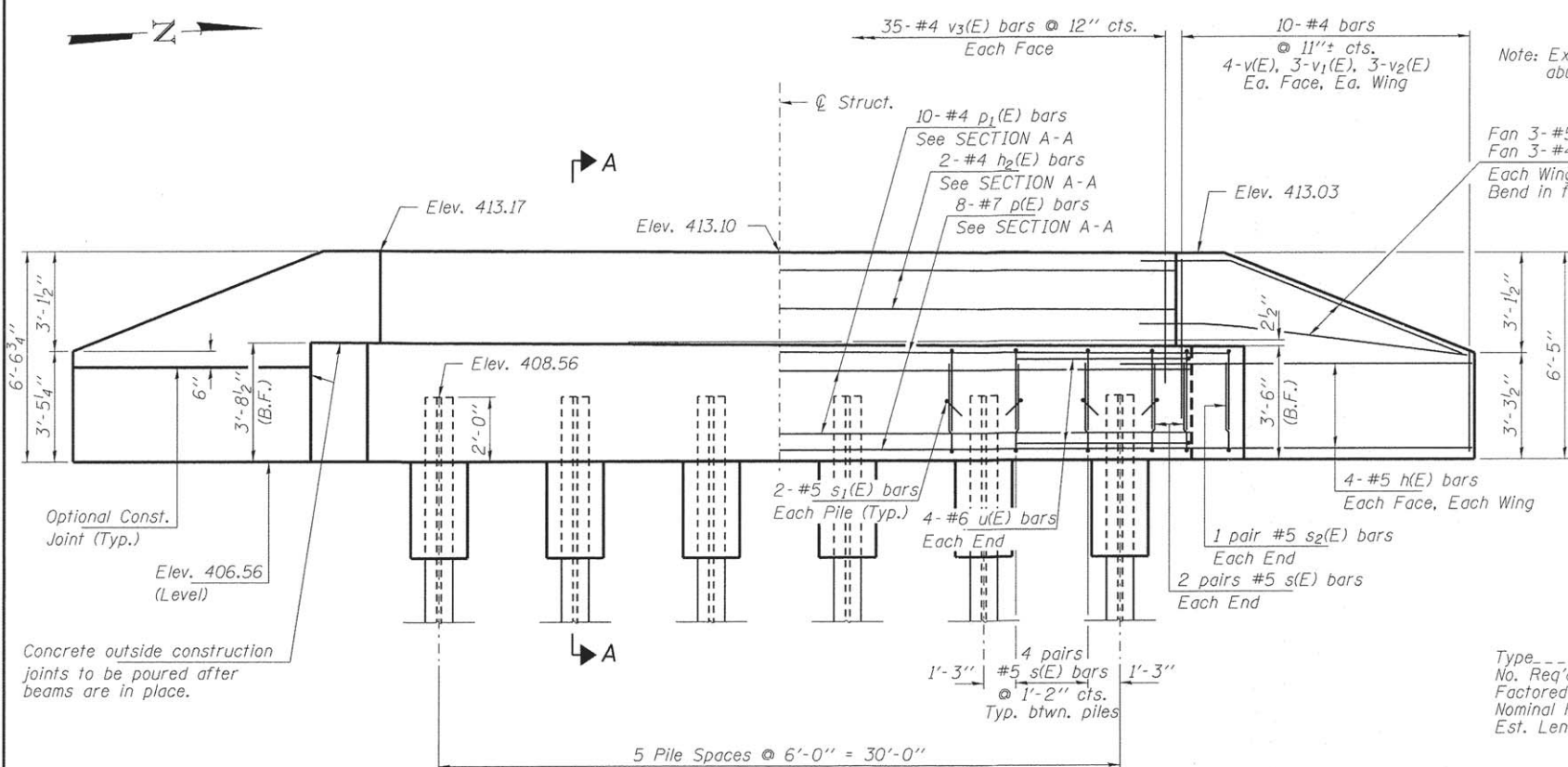
Note:
Elevations in PLAN are to top of concrete cap. Top of wing and backwall elevations in ELEVATION are to top of beam.



SECTION A-A

Hatched area to be poured after beams are in place.

DETAIL A



ELEVATION
(Looking East)

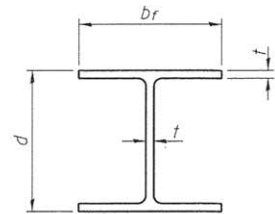
Note: Extend h(E) bars into abutment cap.
Fan 3-#5 h(E) bars (B.F.)
Fan 3-#4 h1(E) bars (F.F.)
Each Wing
Bend in field.

PILE DATA

Type ----- Steel HP10x42
No. Req'd. (E. Abut.) ----- 6
Factored Resistance Available (Rf) ----- 184 Kips/Pile
Nominal Required Bearing (Rn) ----- 335 Kips/Pile
Est. Length ----- 32 Ft/Pile

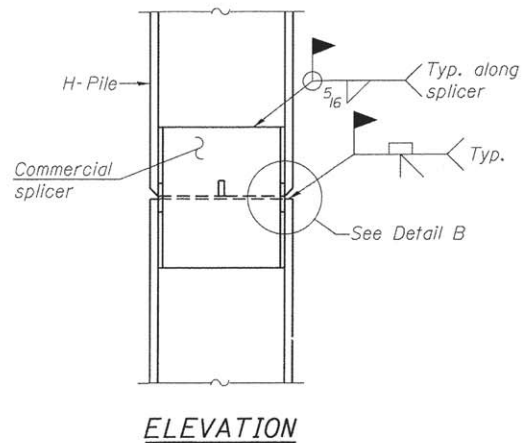
BILL OF MATERIAL - E. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	22	#5	10'-0"	—
h1(E)	6	#4	8'-6"	—
h2(E)	2	#4	34'-6"	—
p(E)	8	#7	34'-6"	—
p1(E)	10	#4	34'-6"	—
s(E)	48	#5	7'-6"	U
s1(E)	12	#5	3'-2"	U
s2(E)	4	#5	8'-0"	U
u(E)	8	#6	12'-7"	U
v(E)	16	#4	5'-3"	—
v1(E)	12	#4	4'-2"	—
v2(E)	12	#4	3'-0"	—
v3(E)	70	#4	3'-8"	—
Concrete Structures			Cu. Yd.	17.3
Concrete Encasement			Cu. Yd.	2.0
Reinforcement Bars, Epoxy Coated			Pound	1,990
Steel Piles HP10x42			Foot	192
Concrete Sealer			Sq. Ft.	59

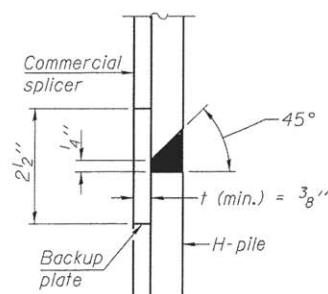


STEEL PILE TABLE

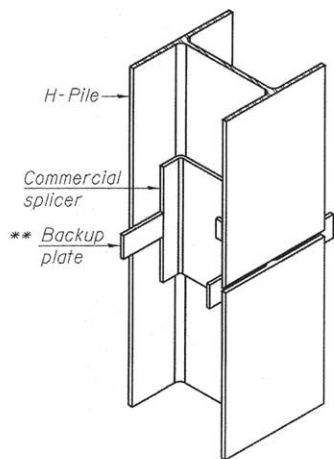
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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

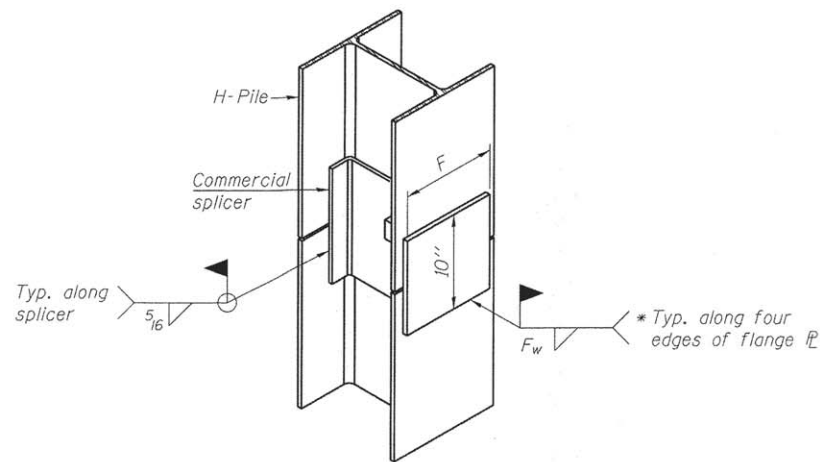


DETAIL "B"



ISOMETRIC VIEW

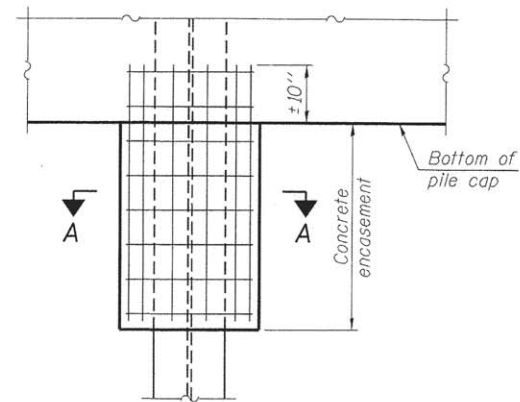
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

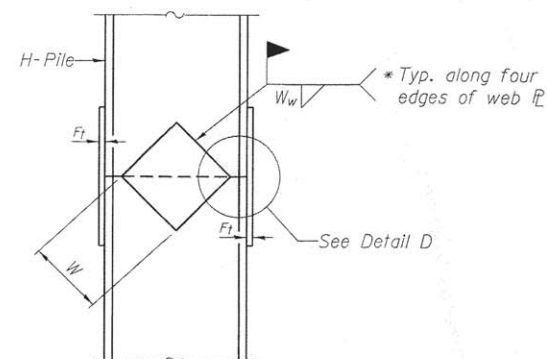
WELDED COMMERCIAL SPLICE ALTERNATE

- * 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.).

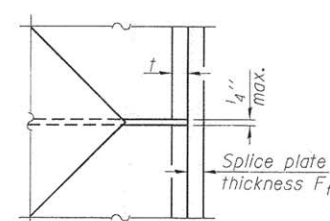


ELEVATION

PILE ENCASEMENT

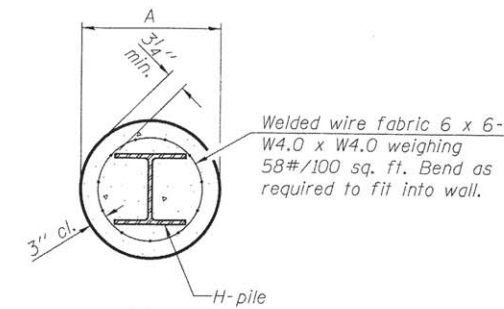


ELEVATION



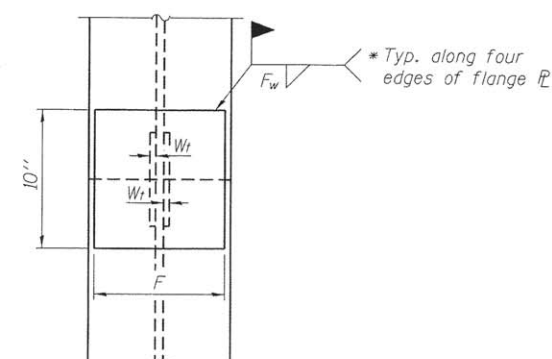
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

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



END VIEW

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"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

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

F-HP 1-27-12

FILE NAME = 130071-sht-br-bridge.dgn	USER NAME = #USER#	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 097-3296	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L5 / P/E / SE CORP. 184.000059	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -			353	03-07119-00-BR	WHITE	14	13	
	PLOT DATE = 8/15/2016	DRAWN - R.D.H.	REVISED -			HERALDS PRAIRIE ROAD DISTRICT CONTRACT NO. 99550					
		CHECKED - S.W.M.	REVISED -			[ILLINOIS] FED. AID PROJECT BR05-0193(031)					

SHEET NO. 8 OF 9 SHEETS

