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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)

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
468.00	CU YD	EARTH EXCAVATION	20200100
435.00	CU YD	CHANNEL EXCAVATION	20300100
549.00	CU YD	FURNISHED EXCAVATION	20400800
21.00	FOOT	TEMPORARY DITCH CHECKS	28000305
420.00	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
315.00	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.00	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
42.40	CU YD	CONCRETE STRUCTURES	50300225
13.2	CU YD	CONCRETE ENCASMENT	50300280
1800.00	SO FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	50400305
4370.00	POUND	REINFORCEMENT BARS	50800105
151.00	FOOT	STEEL RAILING, TYPE S1	50900205
1050.00	FOOT	FURNISHING STEEL PILES HP10X42	51201400
1050.00	FOOT	DRIVING PILES	51202305
2.00	EACH	TEST PILE STEEL HP10X42	51203400
1.00	EACH	NAME PLATES	51500100
40.00	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 18"	54200223
1.00	L SUM	MOBILIZATION	67100100
4.00	EACH	TERMINAL MARKER-DIRECT APPLIED	78201000
0.40	ACRE	SEEDING, CLASS 2 (SPECIAL)	X2501000
377.00	TON	STONE LINED DITCH	Z0068900

▲ SPECIALTY ITEMS

DESIGN DESIGNATION:
 DESIGN SPEED: 30 MPH
 HIGHWAY CLASS - LOCAL ROAD
 EXISTING STRUCTURE NO.: 093-3062
 PROPOSED STRUCTURE NO.: 093-3129
 CURRENT A.D.T. = 100
 CONTRACT NO. 95462



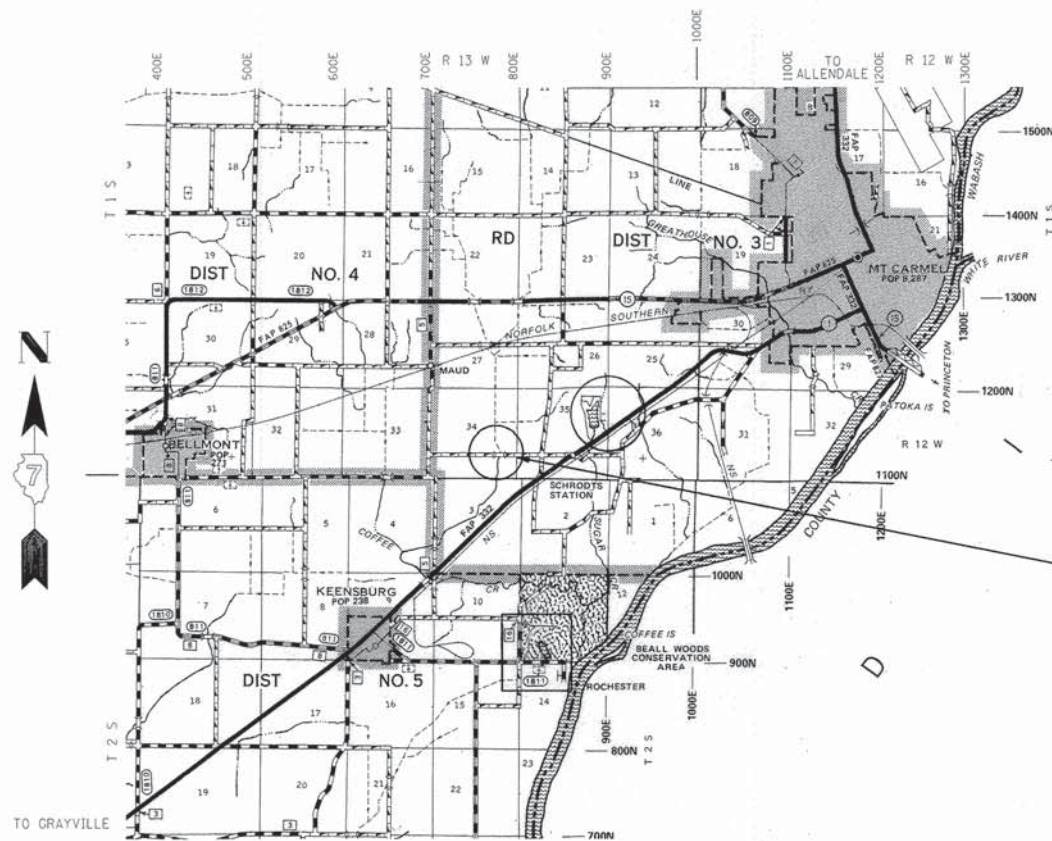
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

**PLANS FOR PROPOSED
 FEDERAL AID – S.T.P. BRIDGE**

T.R. 145 WABASH COUNTY SECTION 04-03112-00-BR

PROJECT NO. BROS-185(23) JOB NO. C-97-055-06

CONTRACT #95462 DRAINAGE DITCH



SECTION 04-03112-00-BR
 BEGINS STATION 2+39

STATION 5+00, STRUCTURE NO. 093-3129
 A 75' TRIPLE SPAN (3 @ 25') PRECAST PRESTRESSED
 CONCRETE DECK BEAM BRIDGE, (17" DEPTH)
 BEAMS, 24' ROADWAY, 0.00% GRADE, 10° LT FORWARD
 SKEW.

SECTION 04-03112-00-BR
 ENDS STATION 7+75

APPROXIMATE SCALE: 1 INCH = 1 MILE



GROSS LENGTH	536.00 FT.	0.102 MILES
OMISSIONS	0.00 FT.	0.000 MILES
NET LENGTH	536.00 FT.	0.102 MILES

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	1

323 W. 3RD ST.
 P.O. BOX 180
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 62863
 PHONE:
 (618)-262-8651
 FAX:
 (618)-263-3327

PROFESSIONAL DESIGN FIRM
 LAND SURVEY &
 PROFESSIONAL ENGINEERING CORPORATION
 184-000887
 (62-032435)(35-002769)



AARON M. MEFFORD
 NAME
 SIGNATURE
 7-16-13
 DATE
 11-30-13
 EXPIRES

TOWNSHIP ROUTE 145
 DRAINAGE DITCH
 WABASH COUNTY, ILLINOIS

APPROVED July 16th 2013
 COUNTY ENGINEER

PASSED 7-22 2013
 DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 7-22 2013
 DEPUTY DIRECTOR OF HIGHWAYS,
 REGION FOUR ENGINEER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET TITLE:
 TITLE SHEET

SCALE:	VARS
BY:	AMM
DATE:	07/13
REV:	

1 OF 14 SHEETS
 SHEET NO. 1

GENERAL NOTES:

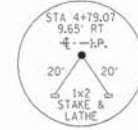
THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 75 FOOT LONG TRIPLE SPAN (3 @ 25') PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

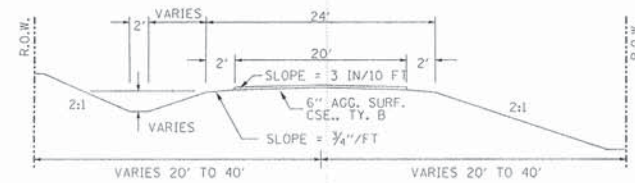
ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

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

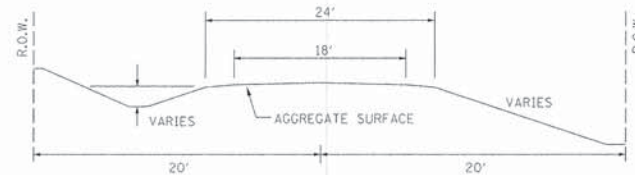
NOTE: CONSTRUCT TRANSITIONS:
STA 2+39 TO STA 2+90
STA 7+25 TO STA 7+75
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL.



TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



UTILITIES:

J.U.L.I.E. 1-800-892-0123

FRONTIER
618-395-6181

MT. CARMEL PUBLIC UTILITY
618-262-5151

COUNTRYMARK COOP
812-838-8500

NOTE: CONSTRUCT SPECIAL DITCH

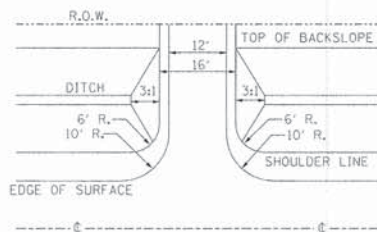
STA 2+39 TO STA 4+72 LT & RT
STA 5+30 TO STA 7+00 LT
STA 5+28 TO STA 7+50 RT

NOTE: CONSTRUCT STONE LINED DITCH

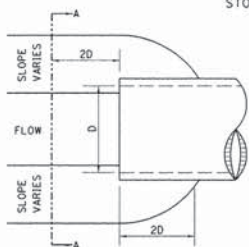
STA 2+40 TO STA 2+60 LT & RT (0.81 TON/LIN FT)
STA 3+00 TO STA 4+72 LT (0.81 TON/LIN FT)
STA 4+00 TO STA 4+72 RT (0.81 TON/LIN FT)
STA 5+30 TO STA 6+00 LT (0.81 TON/LIN FT)
STA 5+28 TO STA 6+00 RT (0.81 TON/LIN FT)
STA 7+55 TO STA 7+75 LT & RT (0.81 TON/LIN FT)
377 TON STONE LINED DITCH ALLOWED IN PROPOSAL.

SEE STONE LINED DITCH DESIGN.

FIELD ENTRANCE DETAIL



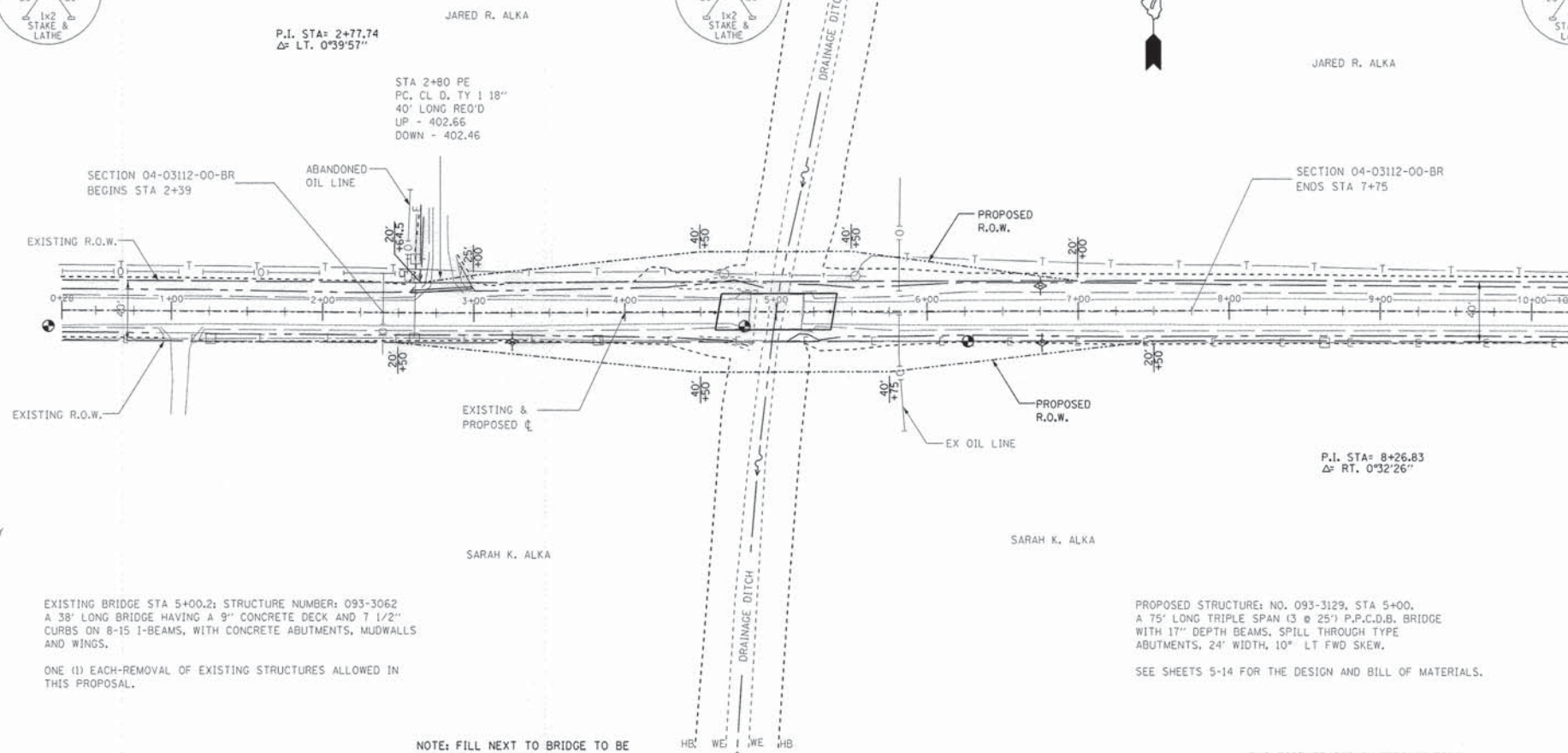
STONE LINED DITCH DESIGN



NOTE:

BOTTOM OF DITCH	SLOPE		
2 FT	1 1/2:1	2:1	3:1
	X = 8 FT	10 FT	14 FT
	Y = 2 FT	2 FT	2 FT
	Z = 2 FT	2 FT	2 FT
	0.68	0.81	1.09 TON/LIN. FT

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



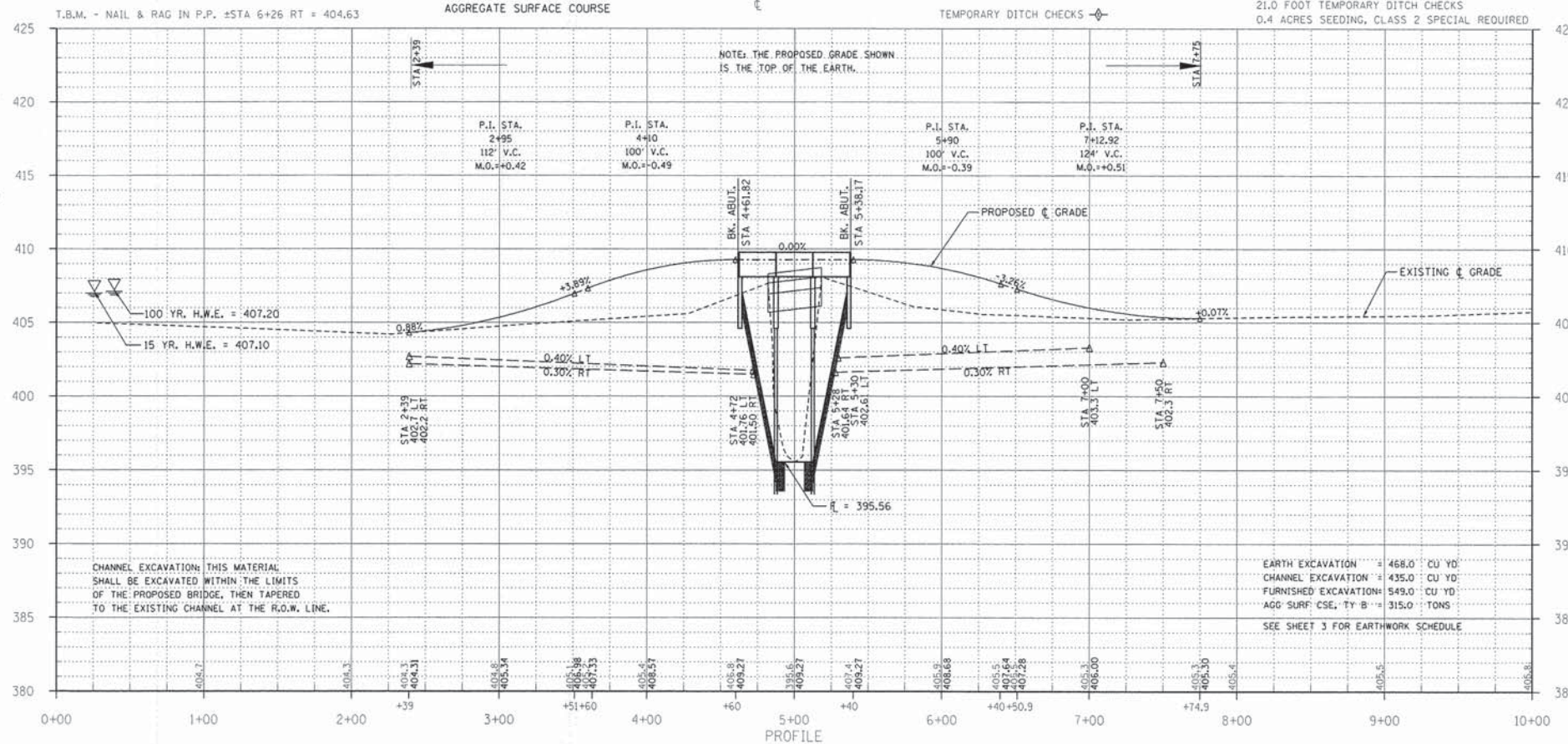
EXISTING BRIDGE STA 5+00.2; STRUCTURE NUMBER: 093-3062
A 38' LONG BRIDGE HAVING A 9" CONCRETE DECK AND 7 1/2" CURBS ON 8-15 I-BEAMS, WITH CONCRETE ABUTMENTS, MUDWALLS AND WINGS.

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

PROPOSED STRUCTURE: NO. 093-3129, STA 5+00.
A 75' LONG TRIPLE SPAN (3 @ 25') P.P.C.O.B. BRIDGE WITH 17" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS, 24' WIDTH, 10" LT FWD SKEW.

SEE SHEETS 5-14 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE



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.

EARTH EXCAVATION = 468.0 CU YD
CHANNEL EXCAVATION = 435.0 CU YD
FURNISHED EXCAVATION = 549.0 CU YD
AGG SURF. CSE., TY B = 315.0 TONS

SEE SHEET 3 FOR EARTHWORK SCHEDULE

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	2
FED. ROAD DIST. NO. 7 ILLINOIS		DRAINAGE DITCH		
PROJECT * BR05-185023		CONTRACT * 95462		
LEC JOB * H11015WB				

323 W. 3RD ST.
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PROFESSIONAL DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
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184-00087
(62-032435)(35-002769)

LAMAC
ENGINEERING CO.

AARON M. MEFFORD
56284
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
DATE
7-6-13
11-30-13
EXPIRES

TOWNSHIP ROUTE 145
DRAINAGE DITCH
WABASH COUNTY, ILLINOIS

SHEET TITLE:
PLAN & PROFILE

SCALE: VARIES
BY: AMM
DATE: 03/13
REV:

2 OF 14
SHEETS

SHEET NO.
2

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	3
FED. ROAD DIST. NO. 7		ILLINOIS	DRAINAGE DITCH	
PROJECT * BR05-185(023)		CONTRACT * 95462		
LEC JOB * H11L015WB				

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(62-032435)(35-002769)



AARON M. MEFFORD
NAME
Aaron Mefford
SIGNATURE
7-16-91
DATE
11-30-13
EXPIRES

TOWNSHIP ROUTE 145
DRAINAGE DITCH
WABASH COUNTY, ILLINOIS

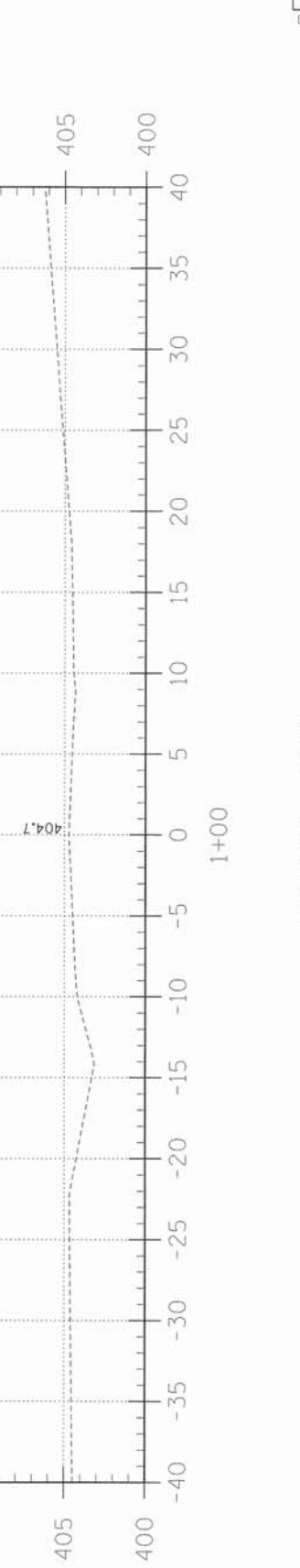
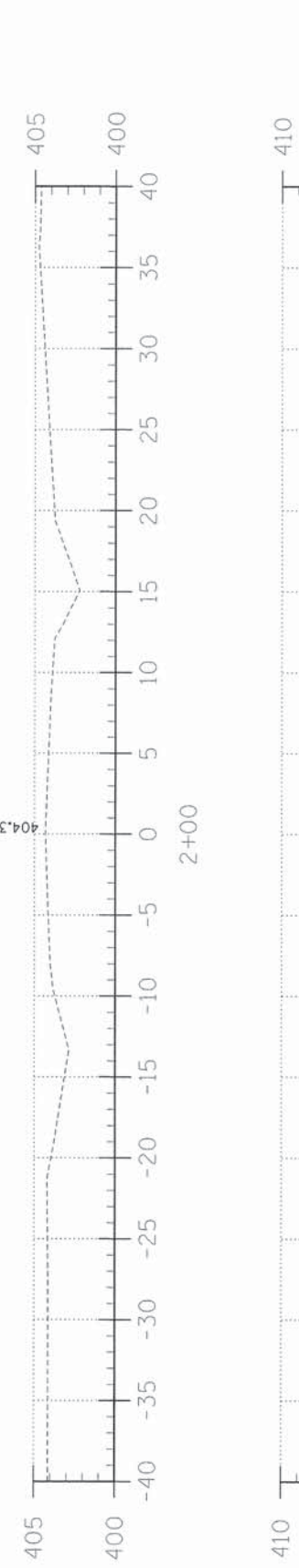
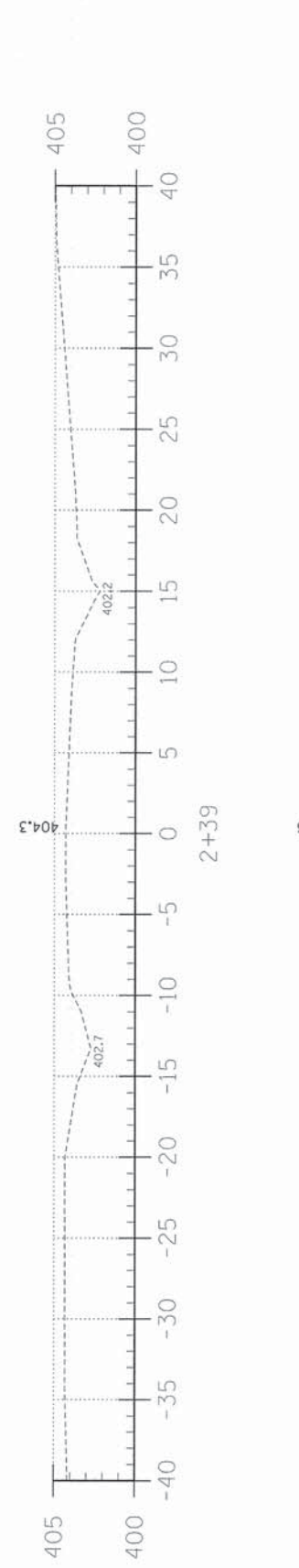
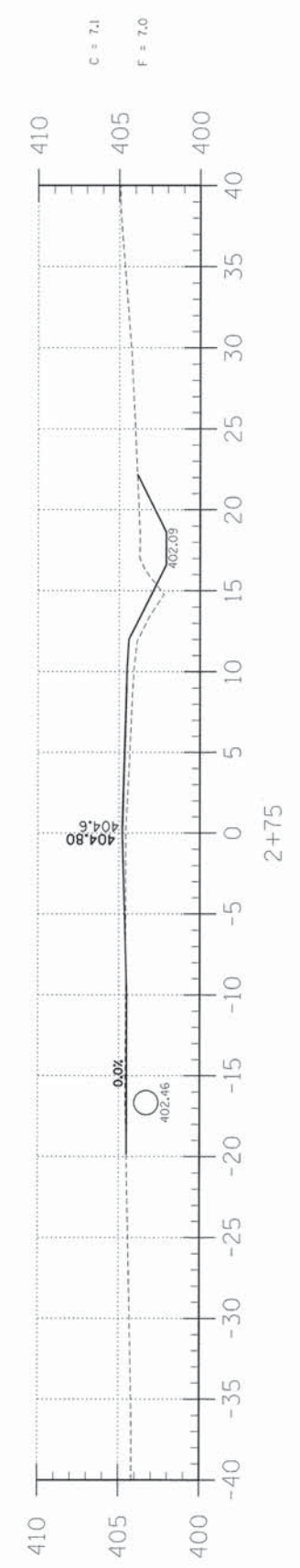
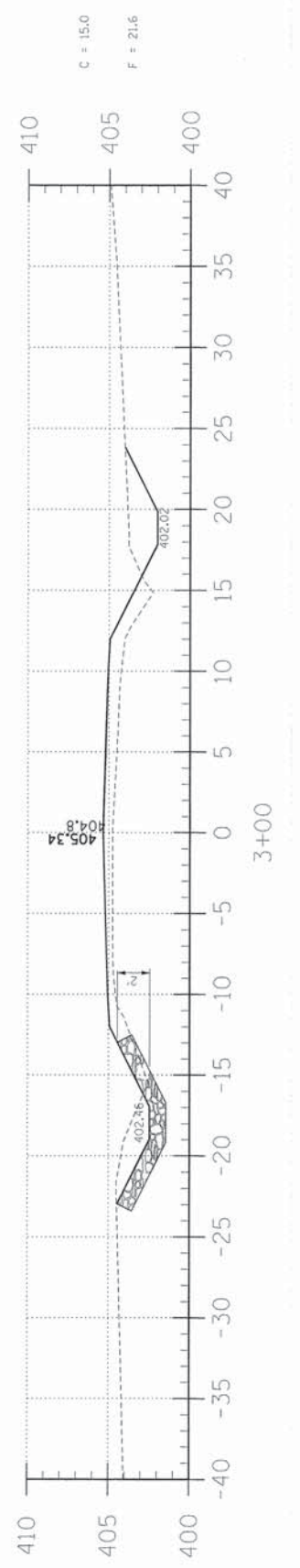
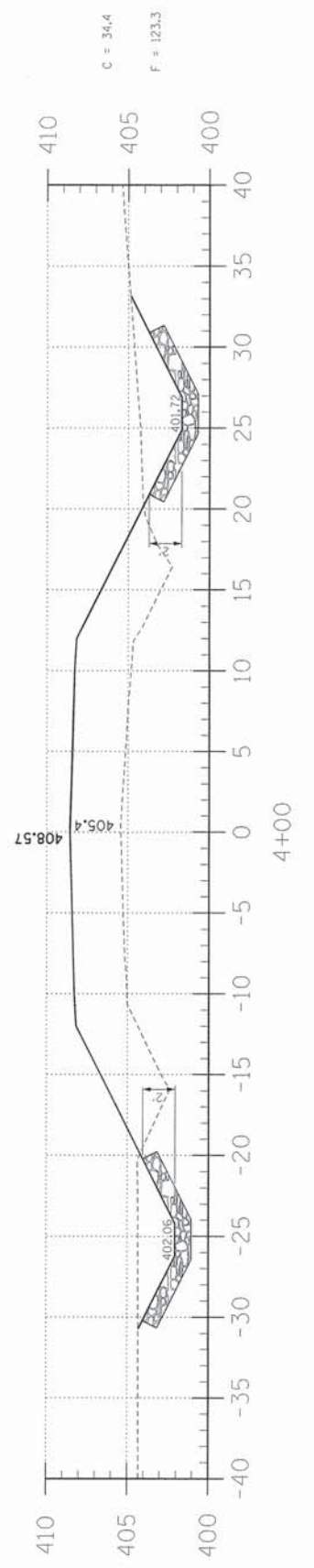
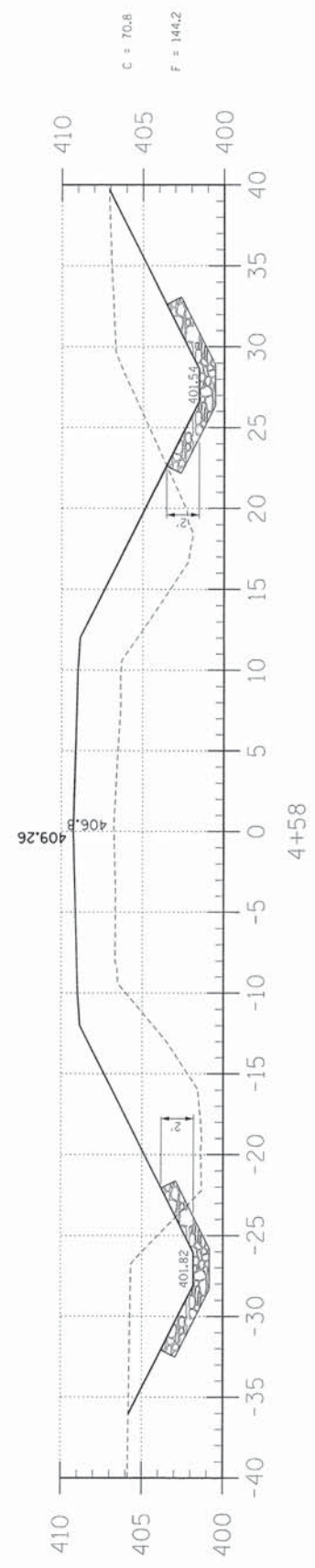
SHEET TITLE:

CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 7/93
REV:

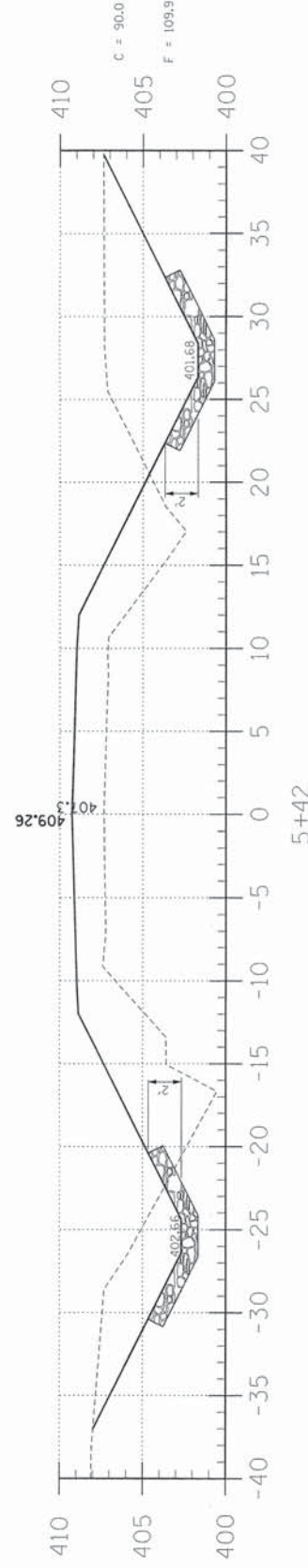
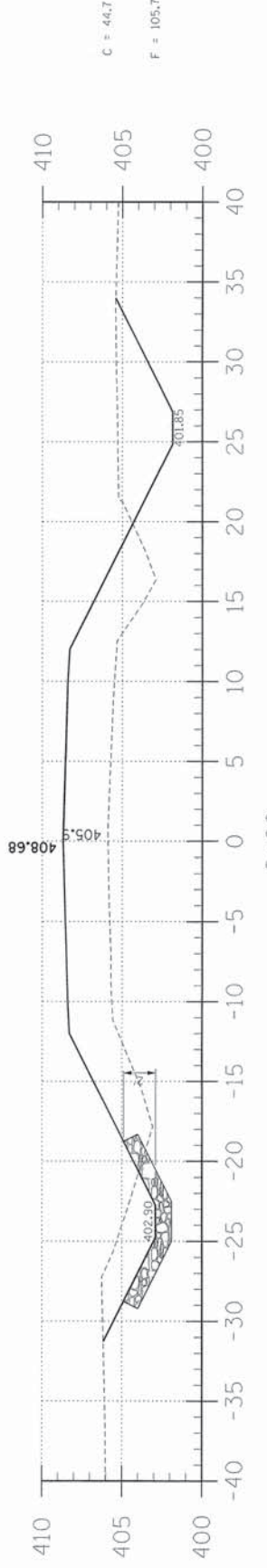
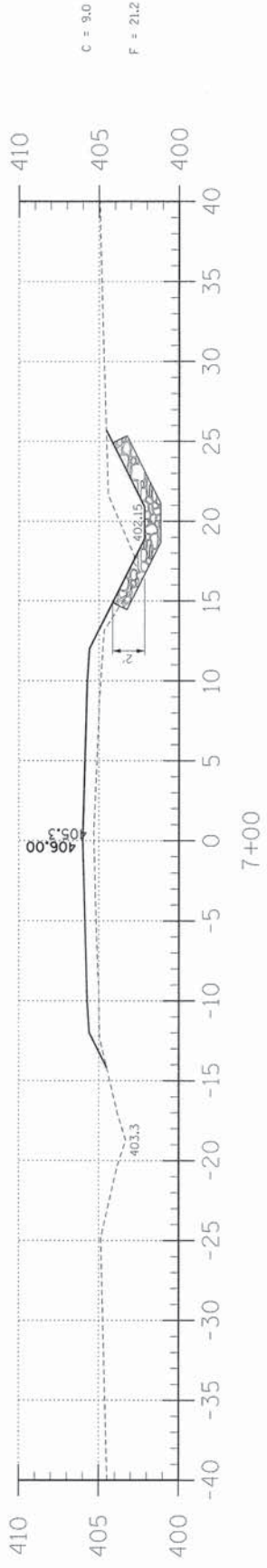
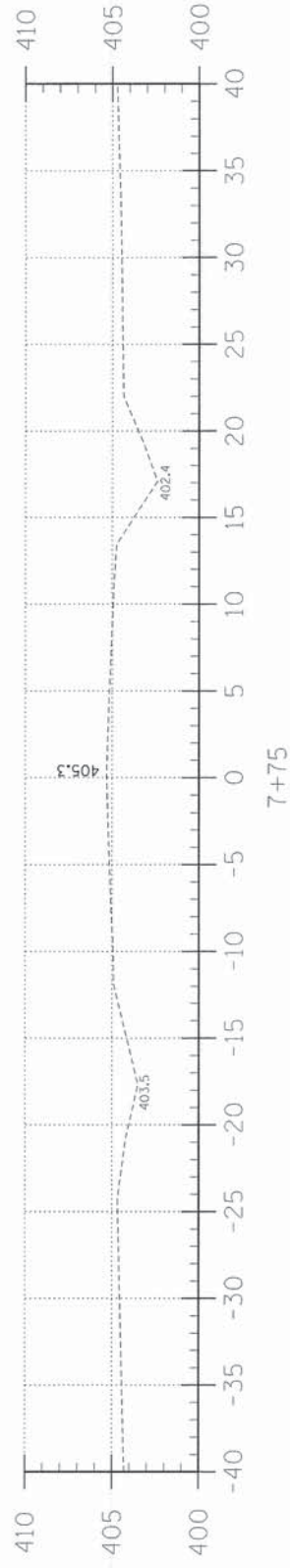
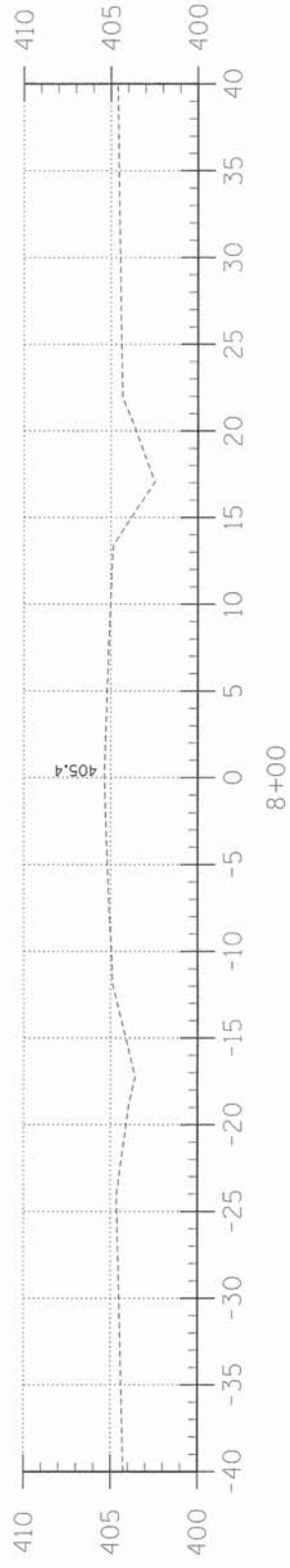
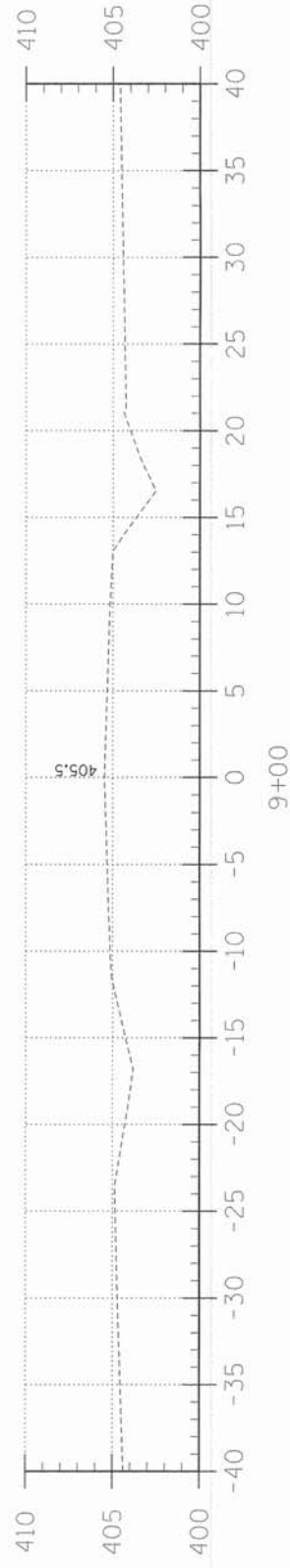
3 OF 14
SHEETS

SHEET NO.
3



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+61.8	218.0	0.0	0.0	163.4	573.8	-410.4
STA 4+61.8 TO 5+38.2	0.0	435.0	217.0	163.4	0.0	+163.4
STA 5+38.2 TO 10+00	250.0	0.0	0.0	187.4	489.1	-301.7
1 PRIVATE ENTRANCE	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	468.0	435.0	217.0	514.2	1062.9	-548.7



C = 0.0
F = 3.3

C = 9.0
F = 21.2

C = 44.7
F = 105.7

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	4
FED. ROAD DIST. NO. 7 ILLINOIS		DRAINAGE DITCH		
PROJECT • BR05-1850231		CONTRACT • 95462		

LEC JOB # H111015WB

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LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
[Signature]
SIGNATURE
7-16-15
DATE
11-30-15
EXPIRES

TOWNSHIP ROUTE 145
DRAINAGE DITCH
WABASH COUNTY, ILLINOIS

SHEET TITLE:

CROSS-SECTIONS

SCALE:	1" = 5'
BY:	AMM
DATE:	7/15/15
REV:	

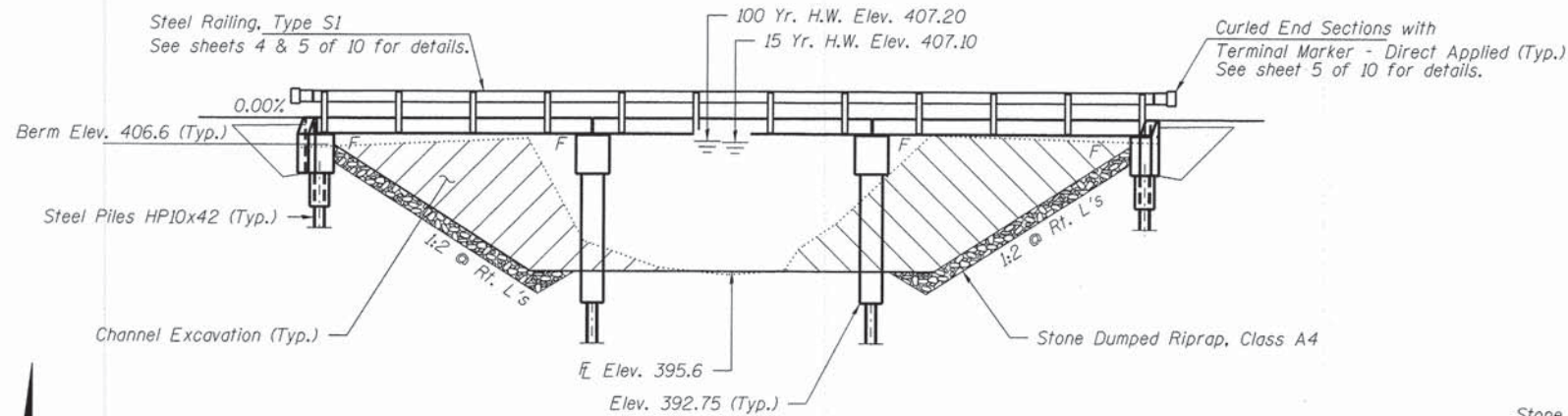
4 OF 14
SHEETS

SHEET NO.
4

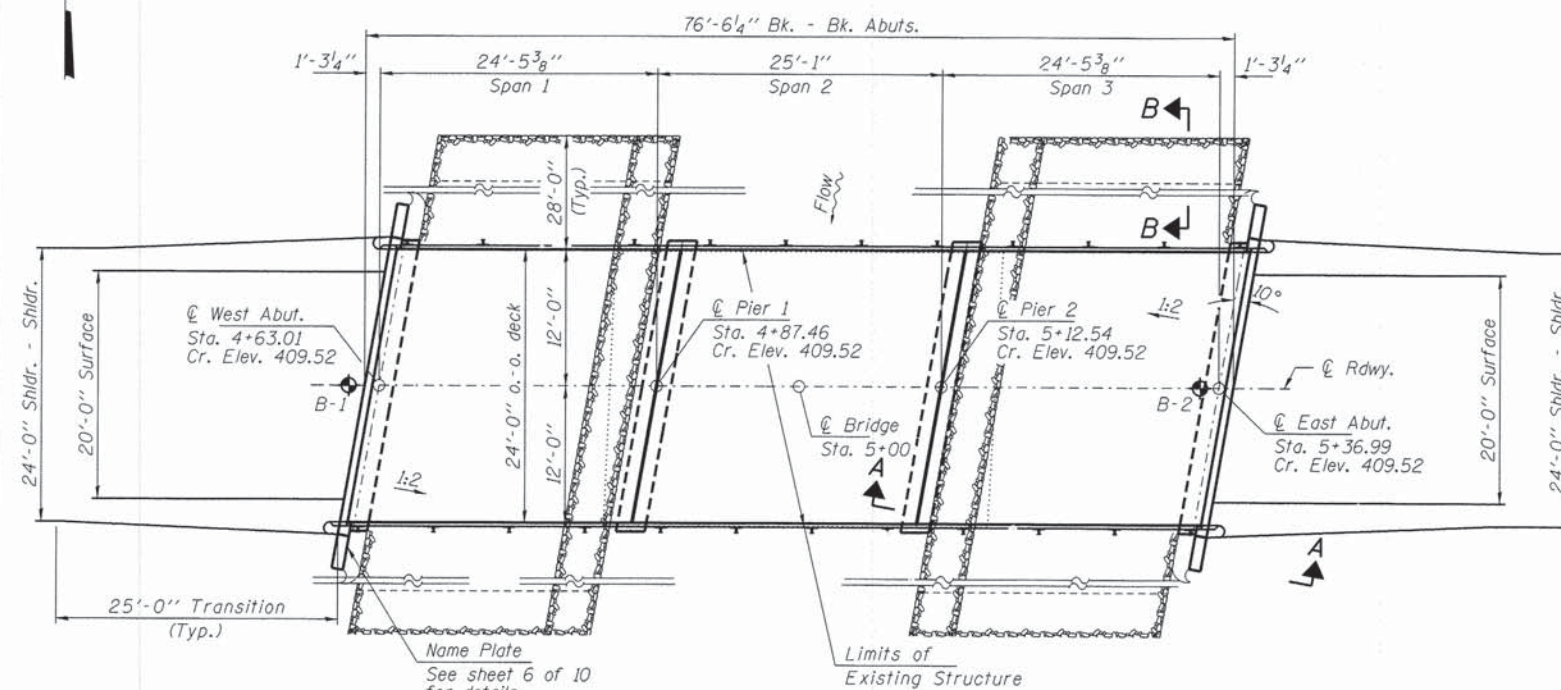
EXISTING STRUCTURE NO. 093-3062: Sta. 5+00 Single Span 38' long Bridge having a 9" Concrete Deck and 7 1/2" Curbs on Steel I-Beams, with Concrete Pile Bent Abutments, Mudwalls and Wings.

Structure closed to traffic during construction.

No Salvage.



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with all applicable 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) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.258g
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.611g
Soil Site Class = D

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	1650	240	466	407.10					
Base/Max. Calc.	100	2605	240	473	407.20	3.29	0.88	410.49	408.08	

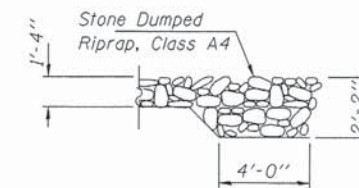
Q100	Design Scour Elevations (ft.)			
	West Abut.	Pier 1	Pier 2	East Abut.
0.100	404.3	378.8	378.8	404.3

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."

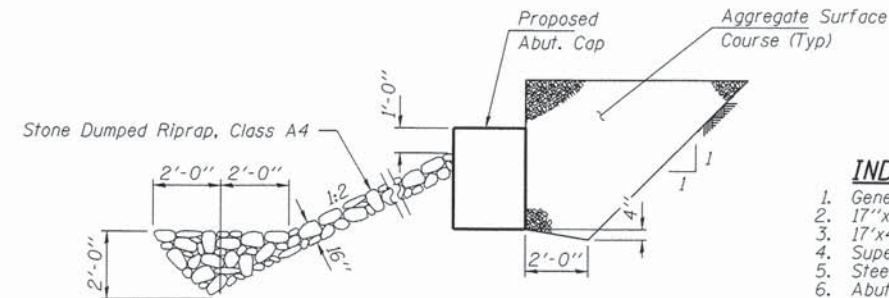
Steven W. Megginson 07/12/2013
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2014

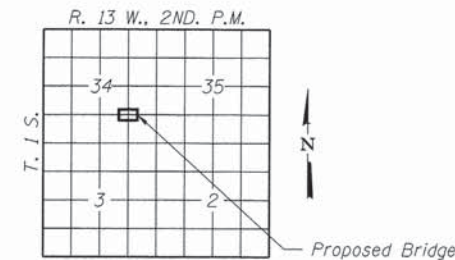


SECTION B-B



SECTION A-A

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



LOCATION SKETCH

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the West Abutment and Pier 2 or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Excavation required to construct the Abutments and Piers 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

1. General Plan & Elevation
2. 17"x48" PPC Deck Beam
3. 17"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. Piers
8. HP Pile Details
- 9-10. Borings

BUILT 2011 BY
WABASH COUNTY
SEC. 04-03112-00-BR
ROAD DISTRICT #3
STR. NO. 093-3129
LOADING HL-93

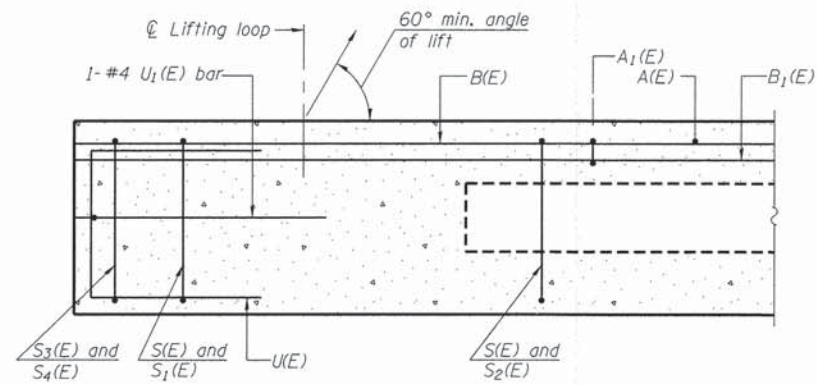
NAME PLATE

See Std. 515001

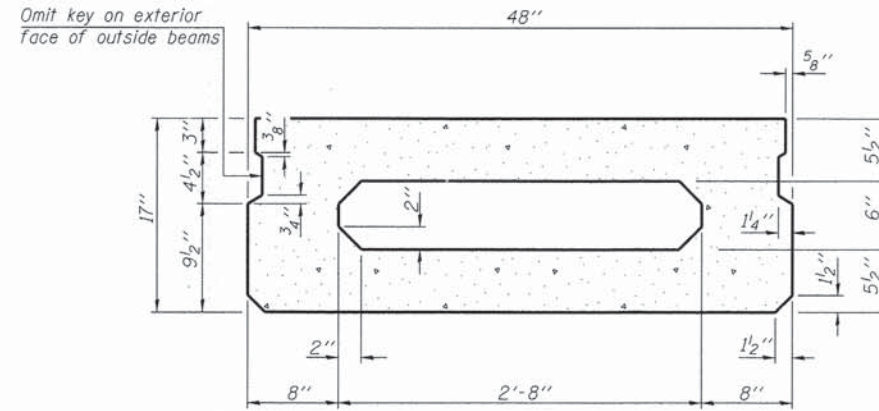
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			435
Stone Dumped Riprap, Class A4	Ton			420
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		42.4	42.4
Concrete Encasement	Cu. Yd.		13.2	13.2
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,800		1,800
Reinforcement Bars	Pound		4,370	4,370
Steel Railing, Type S-1	Foot	151		151
Furnishing Steel Piles HP10x42	Foot		1,050	1,050
Driving Piles	Foot		1,050	1,050
Test Pile Steel HP10x42	Each		2	2
Name Plates	Each		1	1
Terminal Marker - Direct Applied	Each		4	4

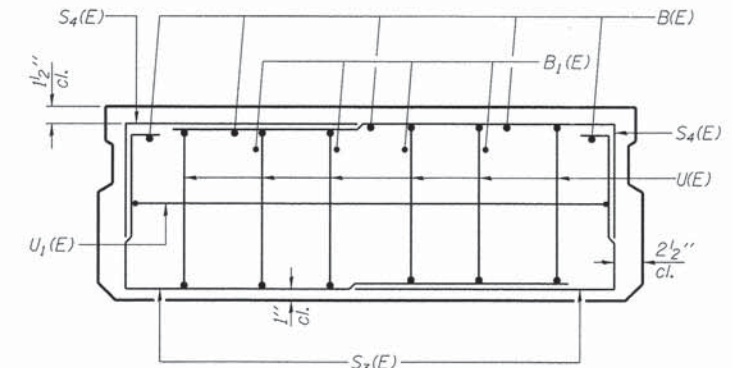
FILE NAME = 130148-sh1-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	GENERAL PLAN & ELEVATION STRUCTURE NO. 093-3129 SHEET NO. 1 OF 10 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			145	04-C3112-00-BR	WABASH	14	5
ILLINOIS PROFESSIONAL DESIGN FIRM L3/P/E/SE CORP. 184-000009	PLOT DATE = 7/12/2013	DRAWN - R.D.J.H.	REVISED -			ROAD DISTRICT #3				CONTRACT NO. 95462
		CHECKED - S.W.M.	REVISED -							ILLINOIS FED. AID PROJECT



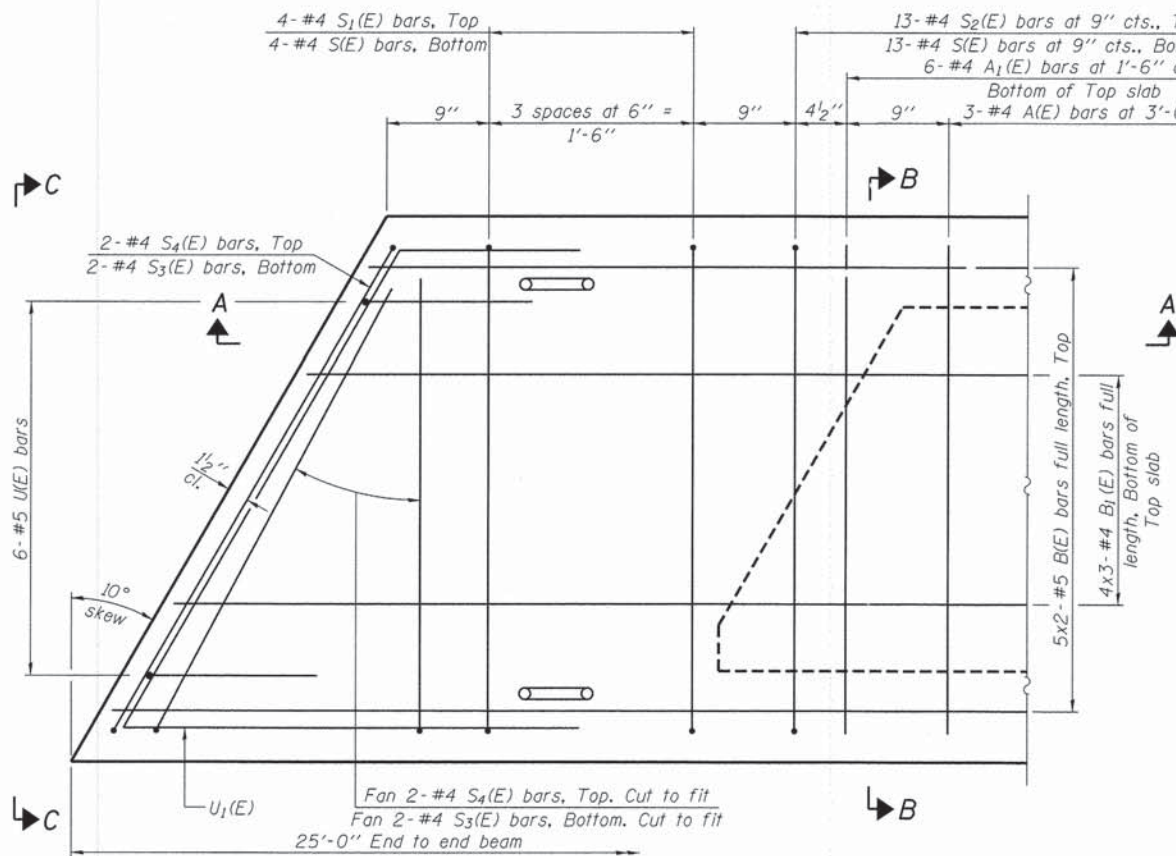
SECTION A-A



SECTION B-B
(Showing dimensions)

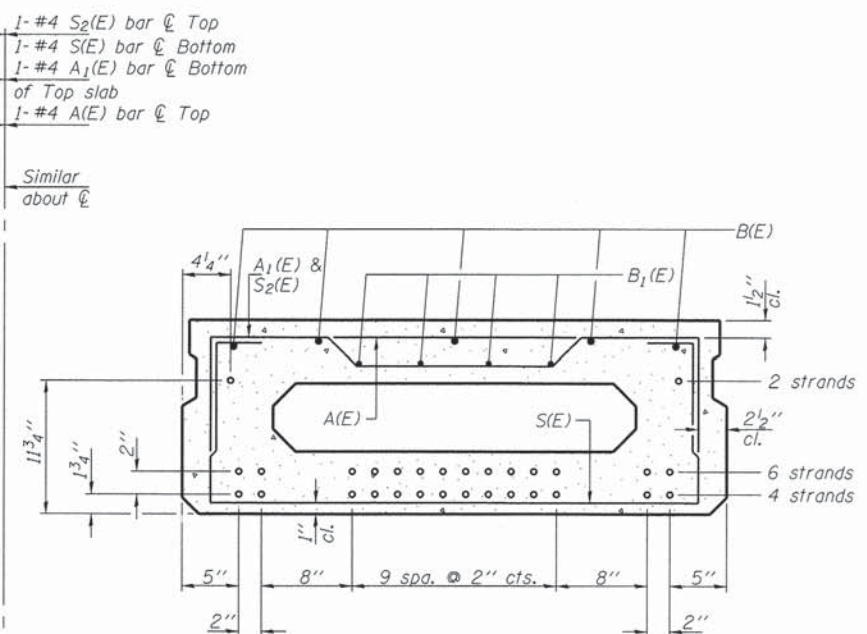


VIEW C-C



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 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.



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)	7	#4	3'-7"	—
A1(E)	13	#4	3'-10"	—
B(E)	10	#5	13'-8"	—
B1(E)	12	#4	9'-7"	—
S(E)	35	#4	6'-9"	U
S1(E)	8	#4	5'-3"	U
S2(E)	27	#4	5'-6"	U
S3(E)	8	#4	4'-4"	U
S4(E)	8	#4	3'-7"	U
U(E)	12	#5	3'-8"	C
U1(E)	2	#4	6'-8"	C

Note: See sheet 3 of 10 for additional details and Bill of Material.

MINIMUM BAR LAP

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

PD-1748-L 7-1-10

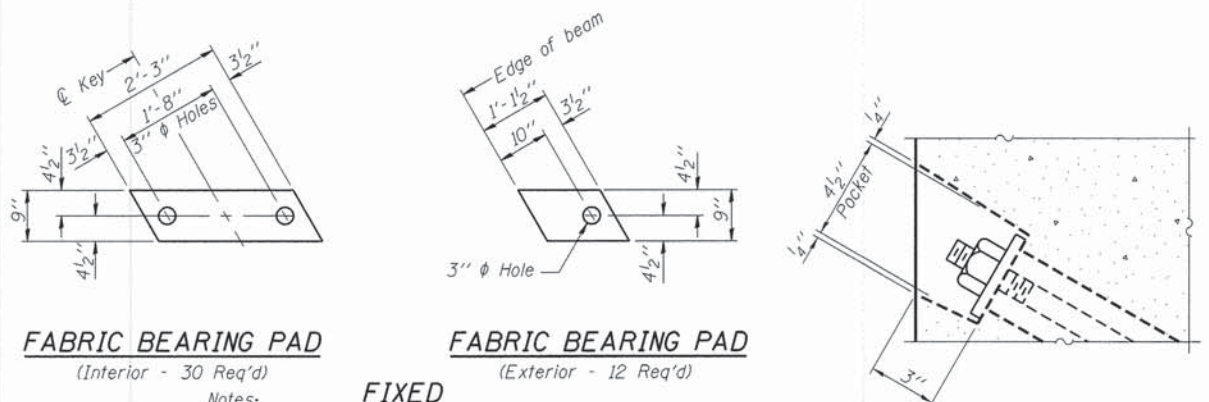
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62753	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 194.00058	PLOT DATE = 7/12/2013	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM
STRUCTURE NO. 093-3129

SHEET NO. 2 OF 10 SHEETS

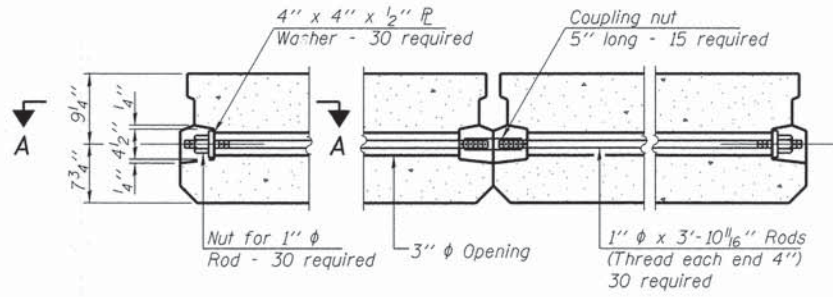
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	6
ROAD DISTRICT #3		CONTRACT NO. 95462		
ILLINOIS FED. AID PROJECT				



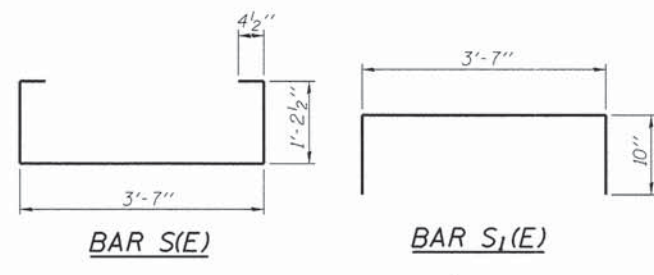
FABRIC BEARING PAD
(Interior - 30 Req'd)

FABRIC BEARING PAD
(Exterior - 12 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.



TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S1(E)

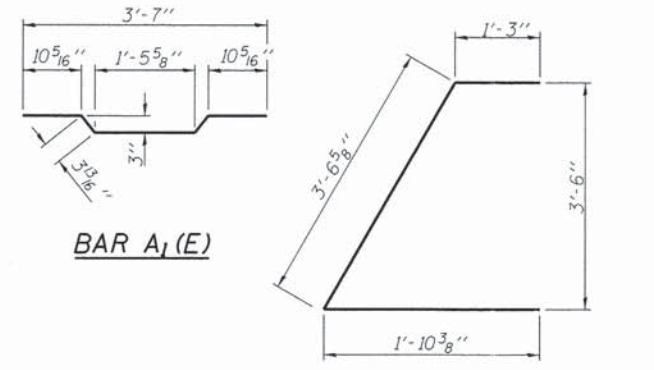
BAR S1(E)

BAR S2(E)

BAR S3(E)

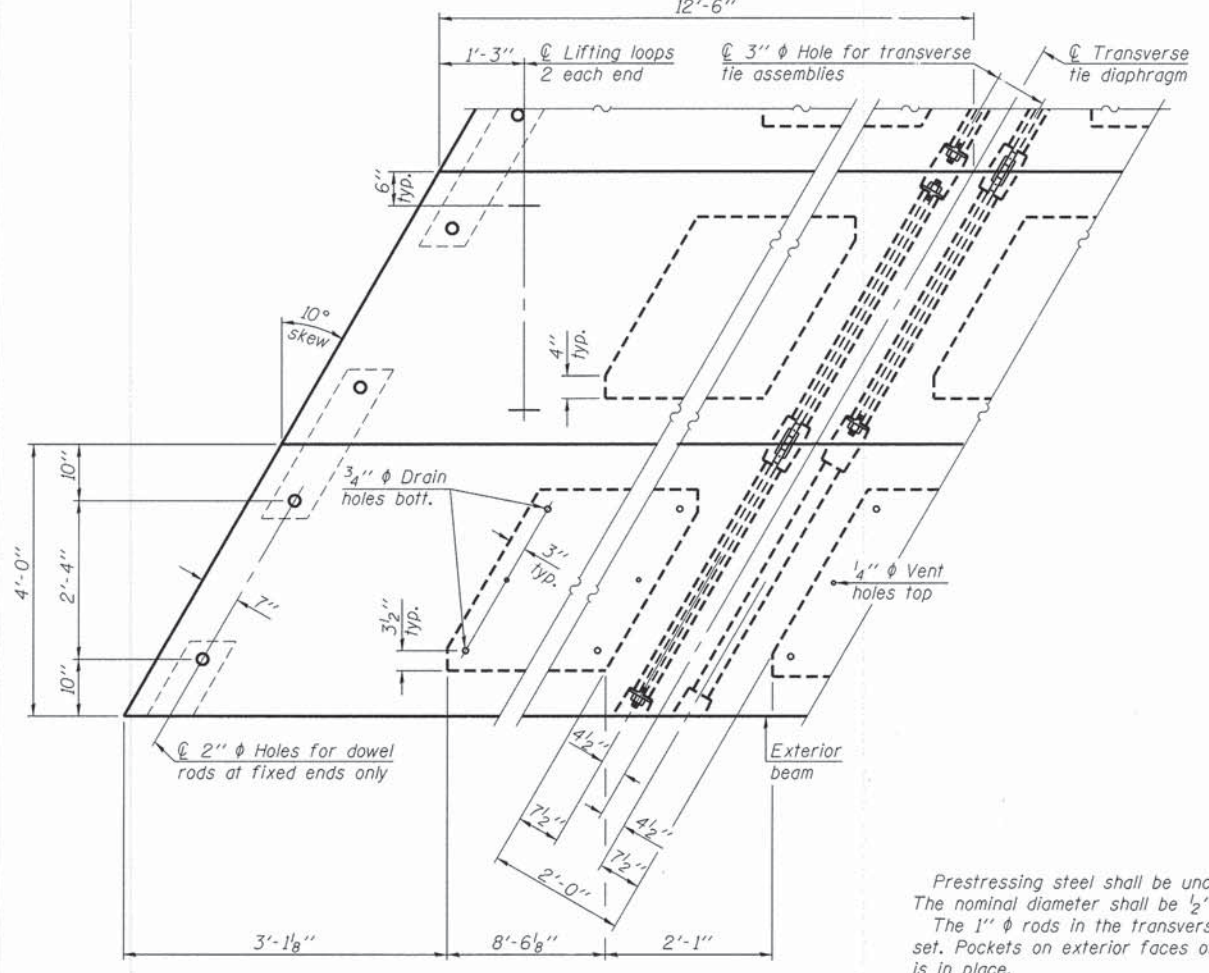
BAR S4(E)

BAR U1(E)



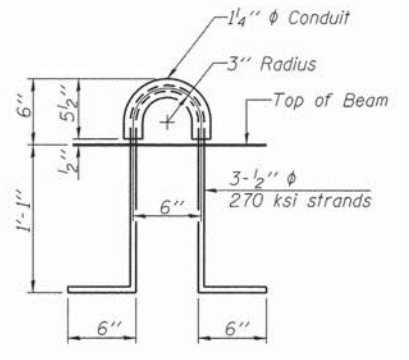
BAR A1(E)

BAR U1(E)



PLAN VIEW

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



LIFTING LOOP DETAIL

NOTES

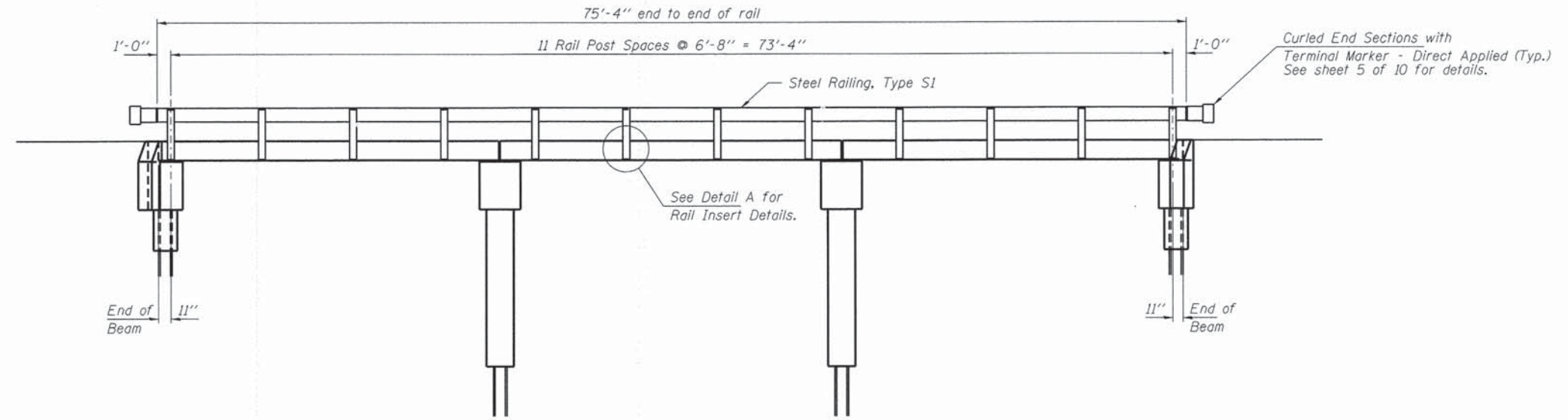
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

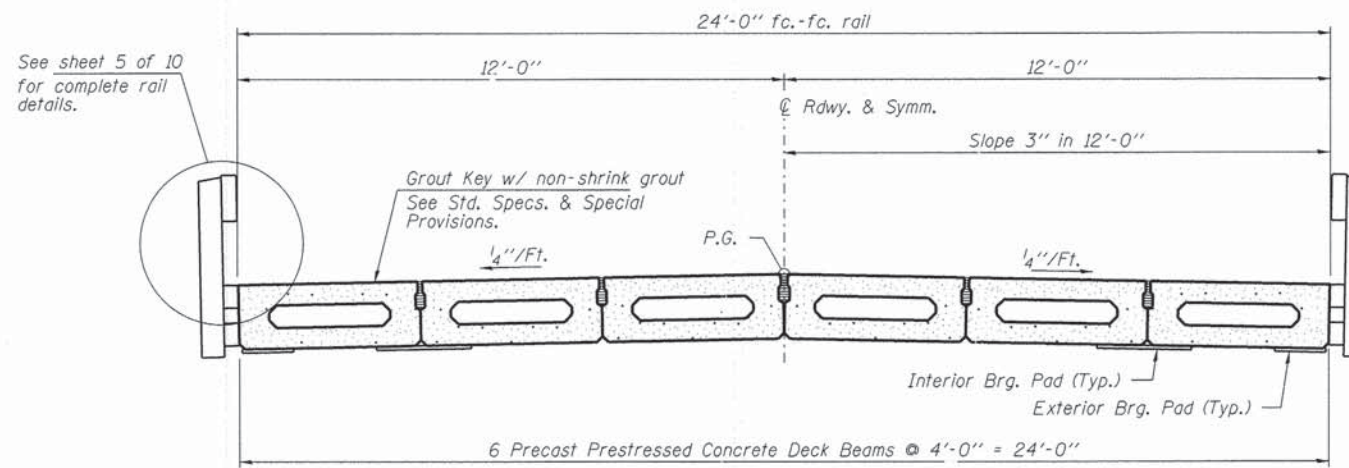
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,800
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PD-1748-LD 7-1-10

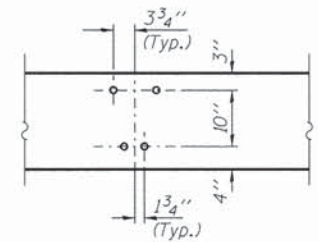
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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			145	04-03112-00-BR	WABASH	14	7
ILLINOIS PROFESSIONAL DESIGN FIRM 131 PE / BE CORP. 184.000809	PLOT DATE = 7/12/2013	DRAWN - R.D.J.H.	REVISED -			ROAD DISTRICT #3	CONTRACT NO. 95462			
						SHEET NO. 3 OF 10 SHEETS		ILLINOIS FED. AID PROJECT		



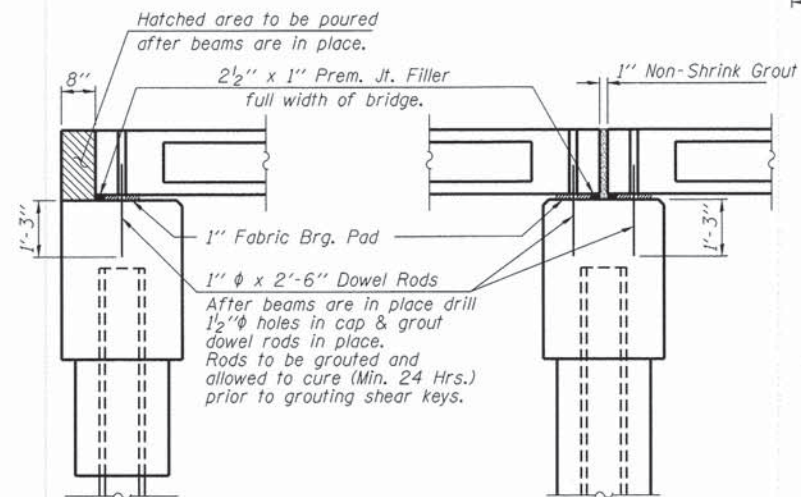
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 10 for Railing Details.



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



DETAIL A



SECTION AT ABUTMENTS

© Rt. L's

SECTION AT PIERS

© Rt. L's

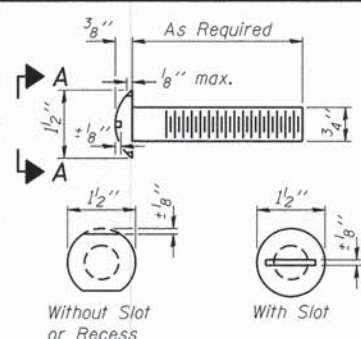
FILE NAME = 130148-shr-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-020889	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
	PLOT DATE = 7/12/2013	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

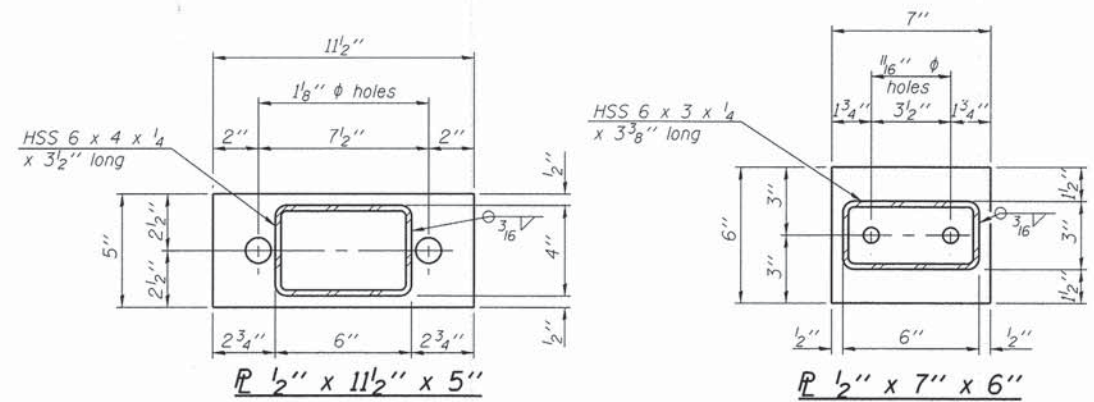
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 093-3129

SHEET NO. 4 OF 10 SHEETS

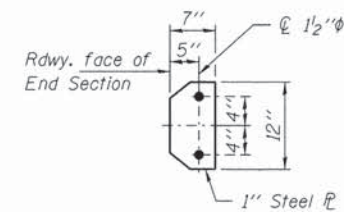
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	8
ROAD DISTRICT #3			CONTRACT NO. 95462	
ILLINOIS FED. AID PROJECT				



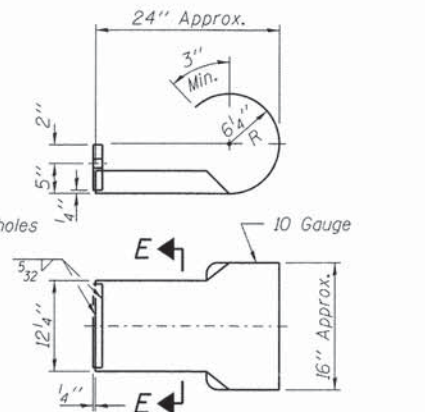
**VIEW A-A
ROUND HEAD BOLT**



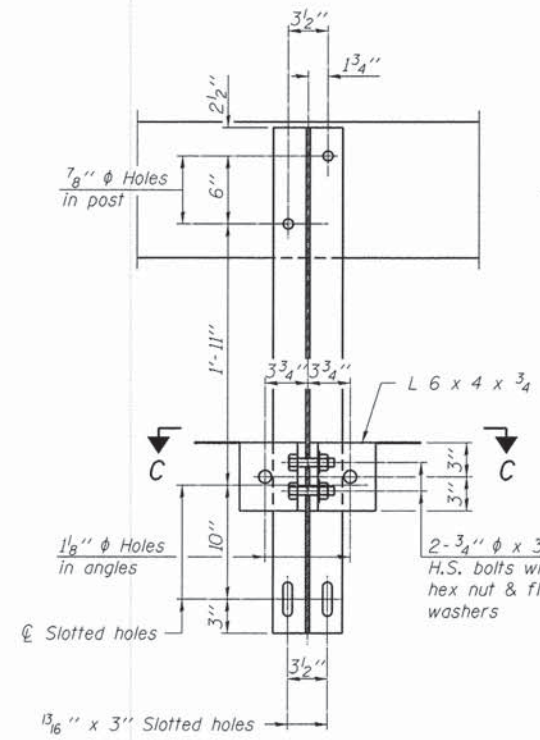
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



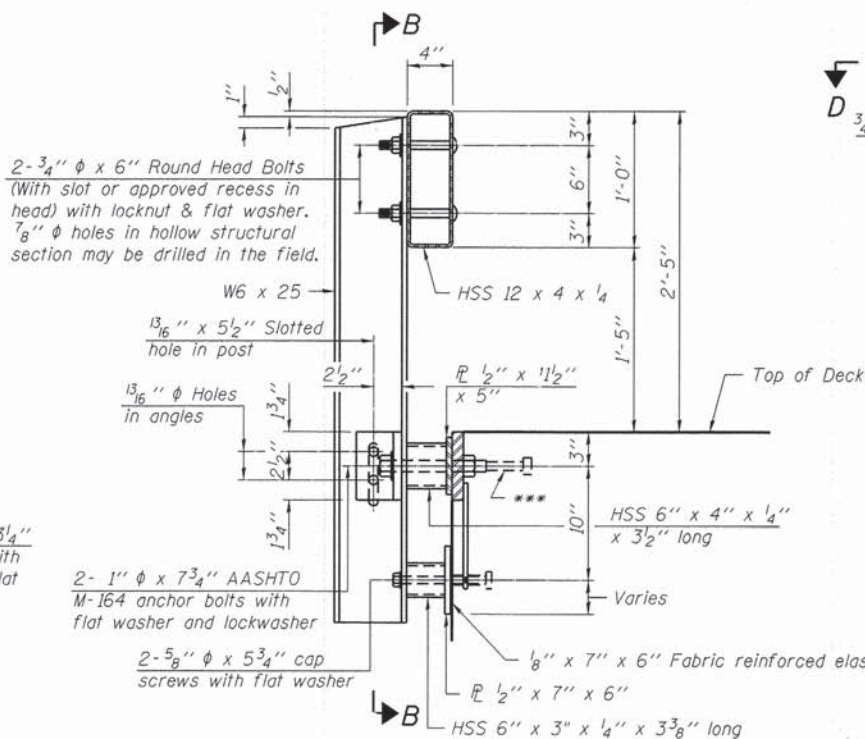
SECTION E-E



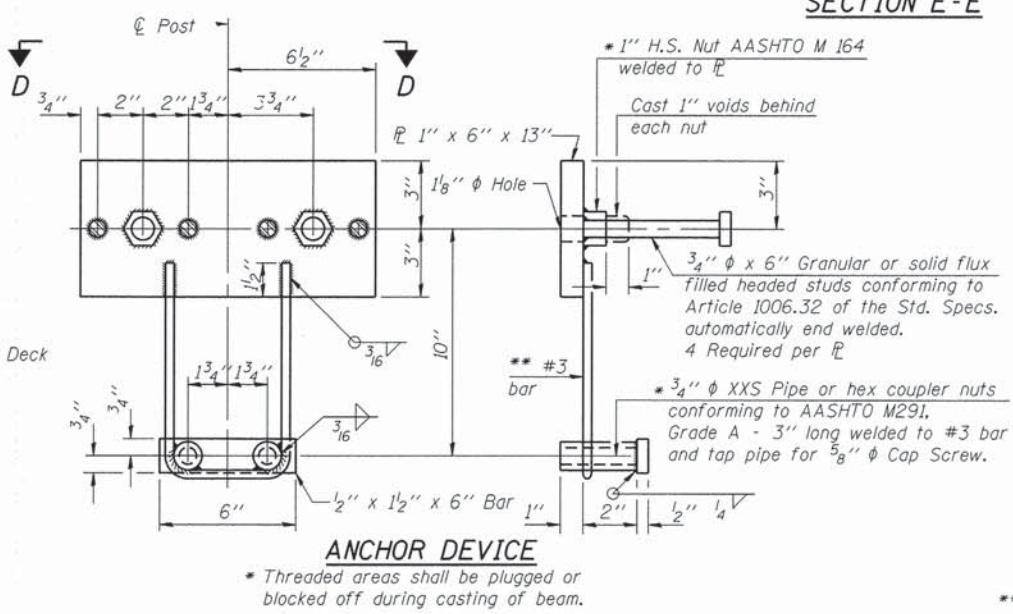
CURLED END SECTION DETAILS



SECTION C-C

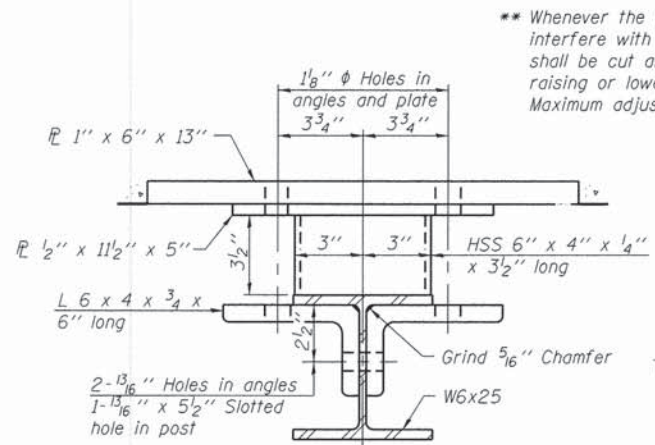


SECTION AT RAILING POST

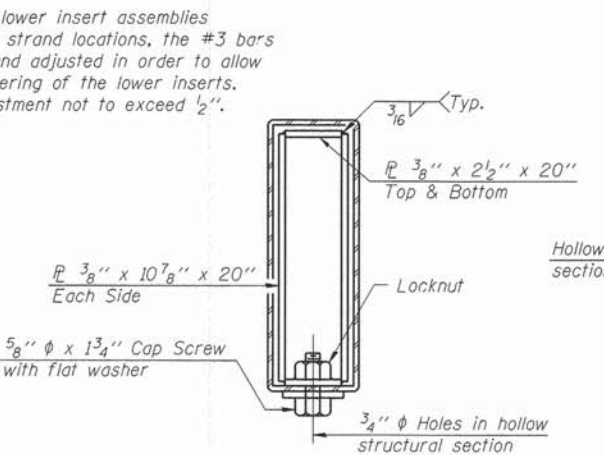


ANCHOR DEVICE

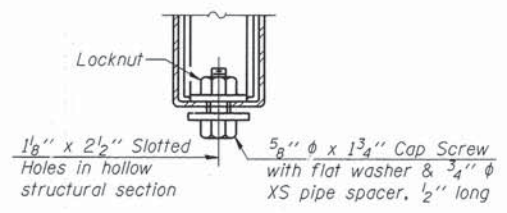
Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
 All steel rail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



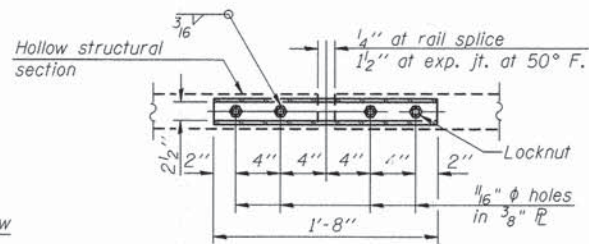
SECTION C-C



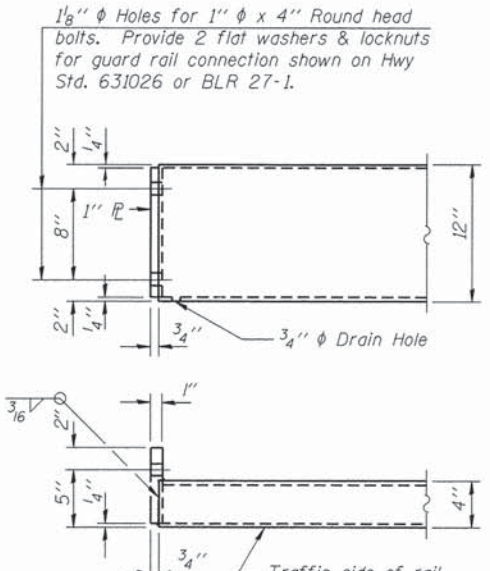
SECTIONS AT RAIL SPLICE



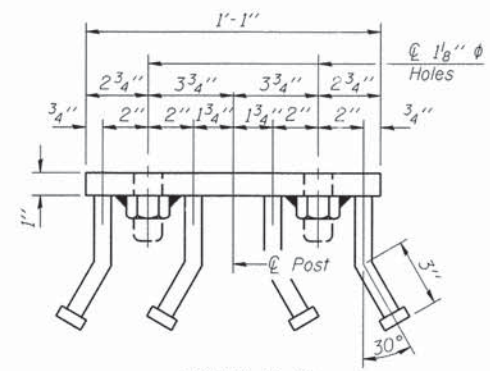
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE AT TYPICAL



STEEL RAILING, TYPE S-1 END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	151

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

FILE NAME = 130148-shr-br-bridge.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3045 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS/P/E/SE COMP. 184 000000

DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 PLOT SCALE =
 PLOT DATE = 7/12/2013

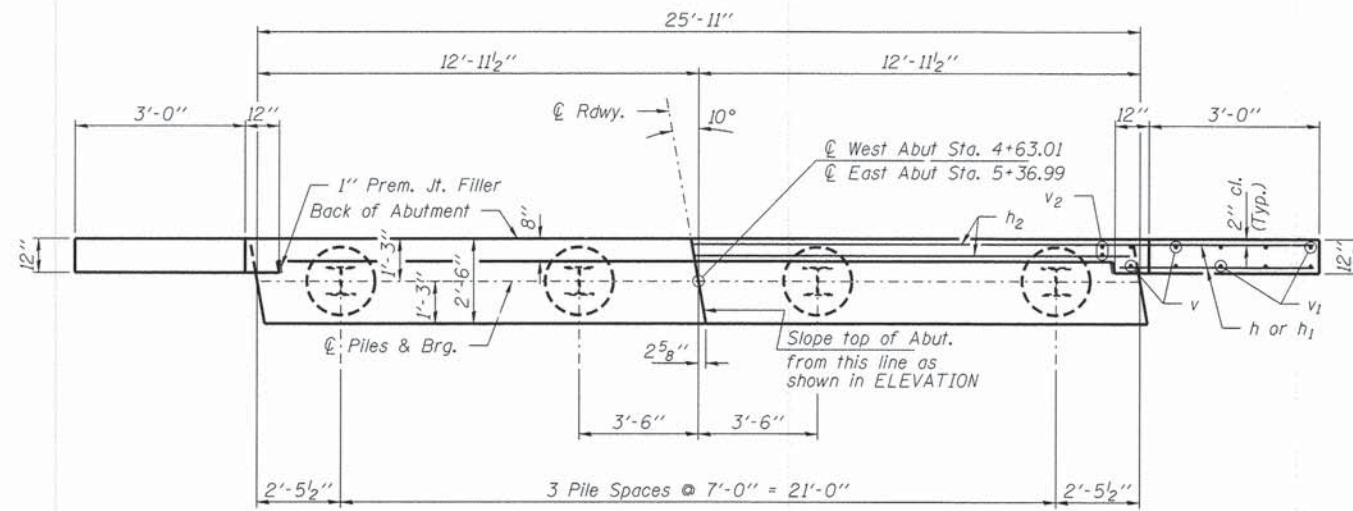
REVISOR -
 REVISOR -
 REVISOR -
 REVISOR -
 REVISOR -

**STATE OF ILLINOIS
 WABASH COUNTY HIGHWAY DEPARTMENT**

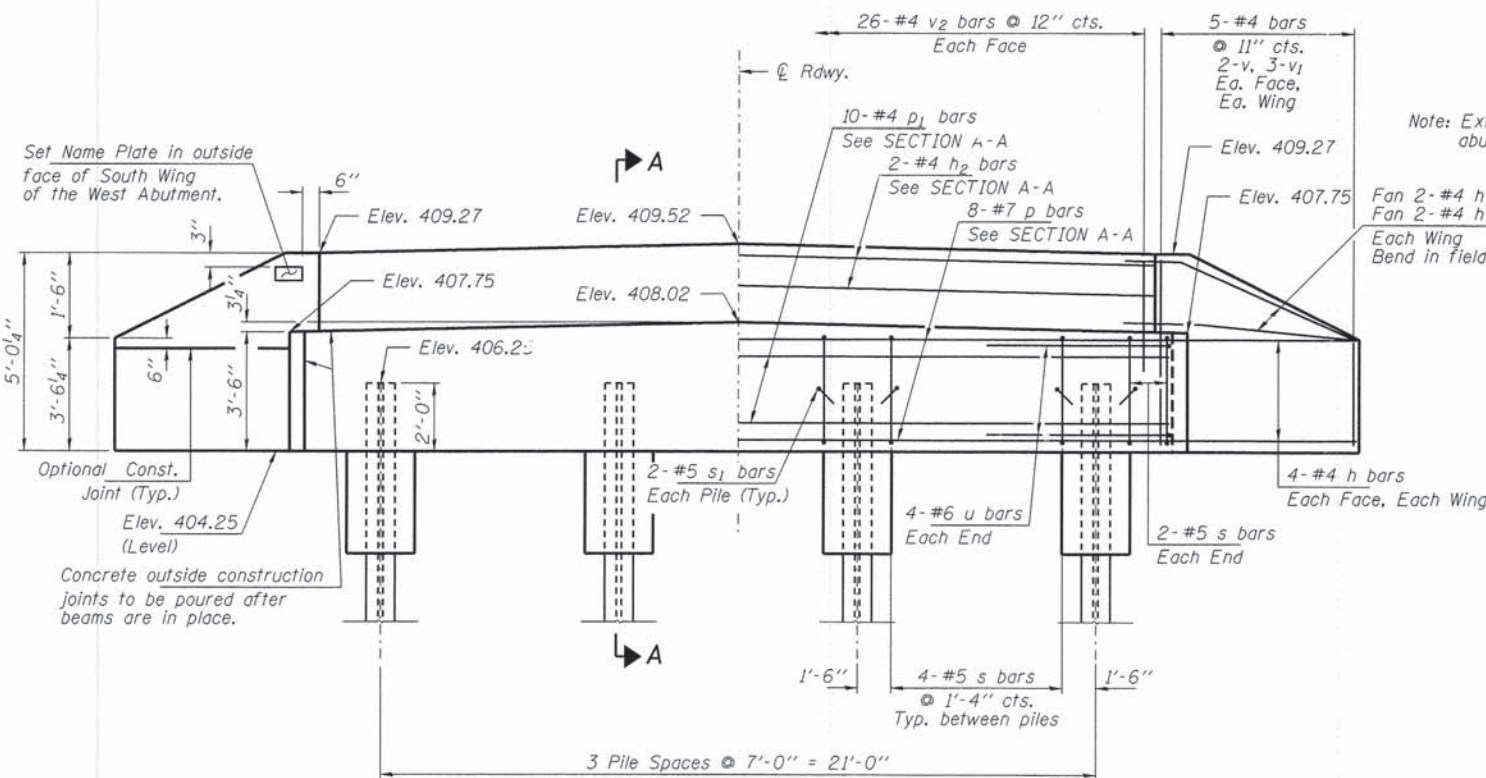
**STEEL RAILING, TYPE S-1
 STRUCTURE NO. 093-3129**

SHEET NO. 5 OF 10 SHEETS

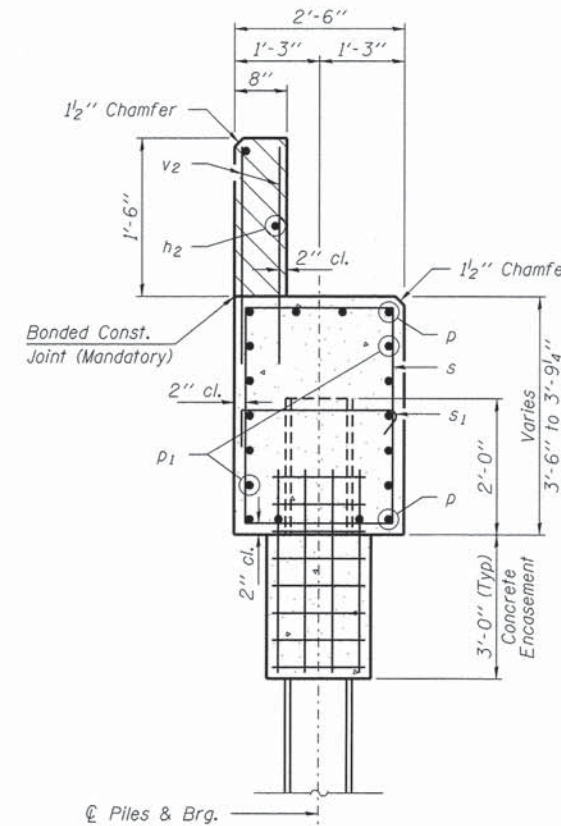
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	9
ROAD DISTRICT #3			CONTRACT NO. 95462	
ILLINOIS FED. AID PROJECT				



PLAN

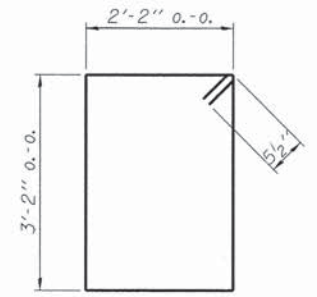


ELEVATION

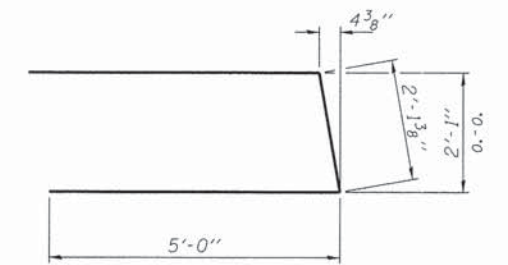


SECTION A-A

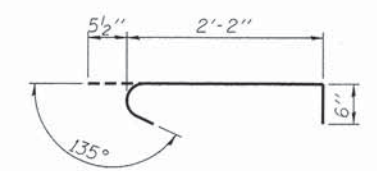
Hatched area to be poured after beams are in place.



BAR s



BAR u



BAR s1

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	5'-6"	—
h1	8	#4	4'-0"	—
h2	4	#4	25'-7"	—
p	16	#7	25'-7"	—
p1	20	#4	25'-7"	—
s	32	#5	11'-7"	□
s1	16	#5	3'-2"	U
u	16	#6	12'-2"	U
v	24	#4	4'-7"	—
v1	16	#4	3'-3"	—
v2	104	#4	2'-4"	—
Concrete Structures			Cu. Yd.	21.4
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,420
Steel Piles HP10x42			Foot	525
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (2 Abuts.) ----- 8
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 75 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.

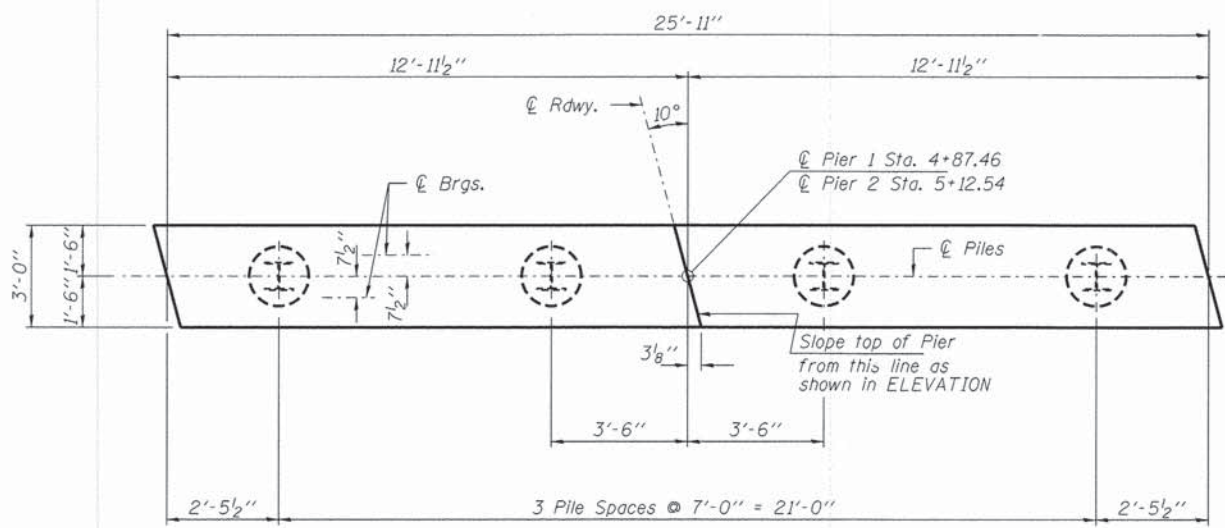
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HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000009	PLOT DATE = 7/12/2013	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT**

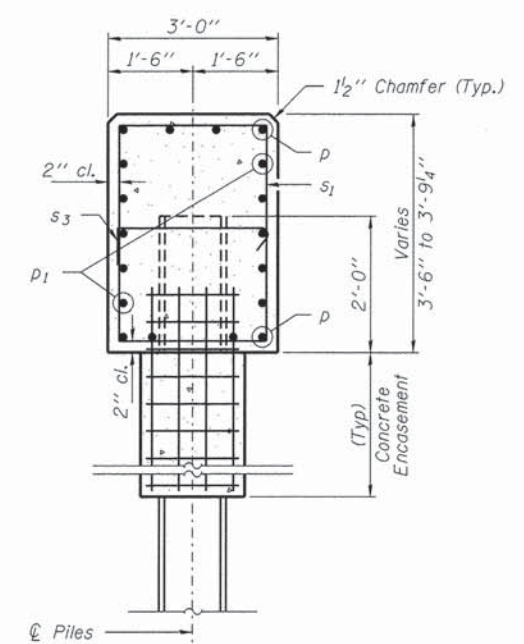
**ABUTMENTS
STRUCTURE NO. 093-3129**

SHEET NO. 6 OF 10 SHEETS

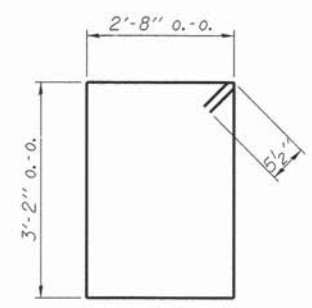
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145	04-03112-00-BR	WABASH	14	10
ROAD DISTRICT #3			CONTRACT NO. 95462	
ILLINOIS FED. AID PROJECT				



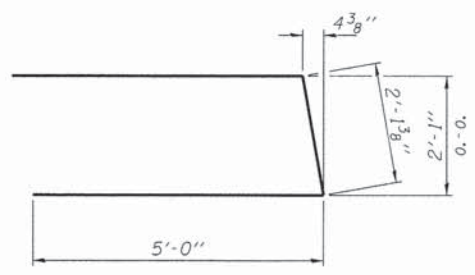
PLAN



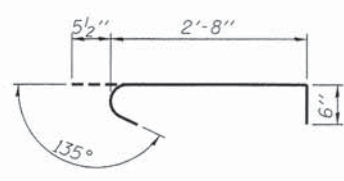
SECTION A-A



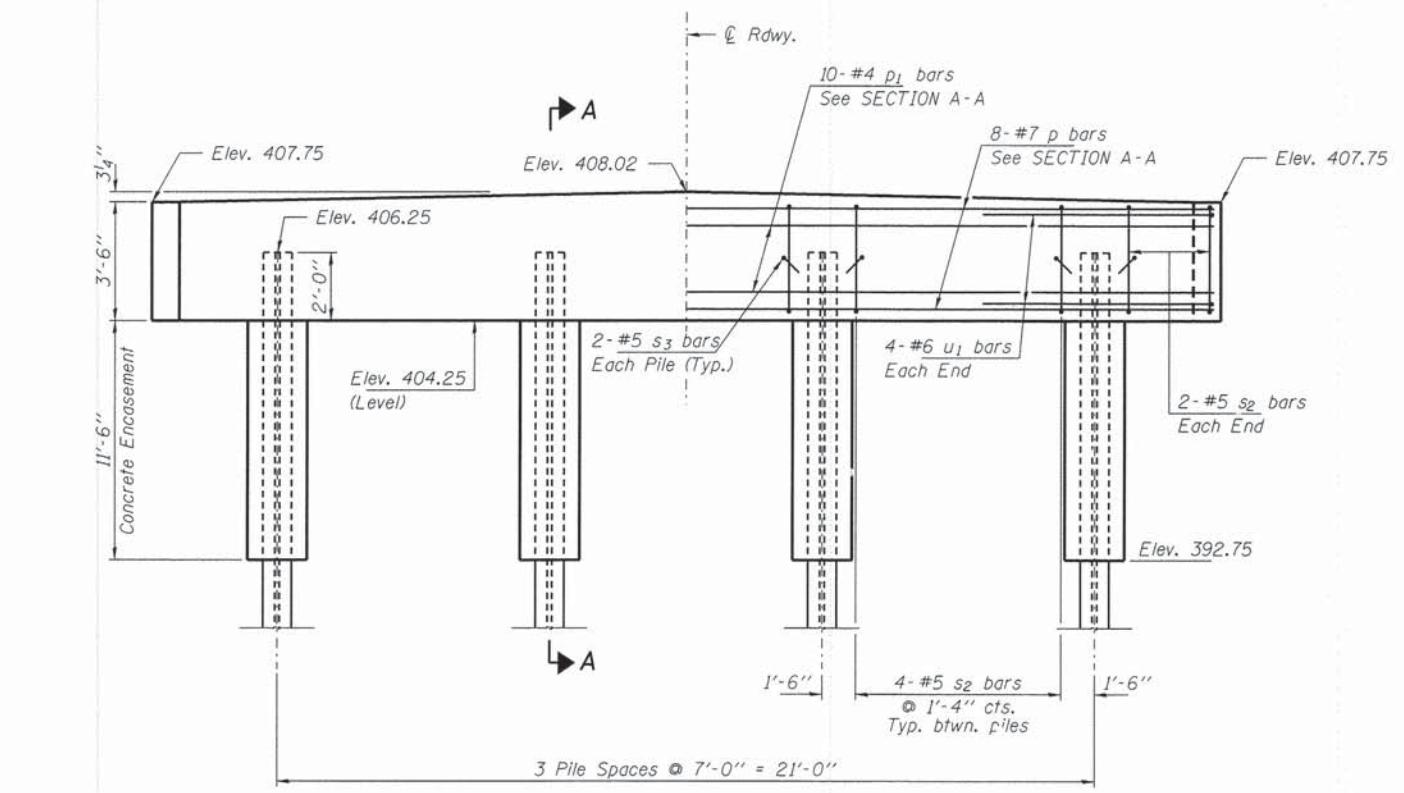
BAR s2



BAR u



BAR s3



ELEVATION

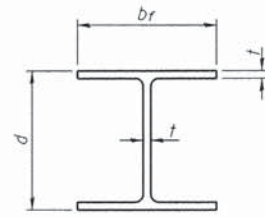
PILE DATA

Type ----- Steel HPI0x42
 No. Req'd. (2 Piers) ----- *8
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 75 Ft/Pile

Notes *Includes one test pile to be driven in a permanent location at Pier 2.
 The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

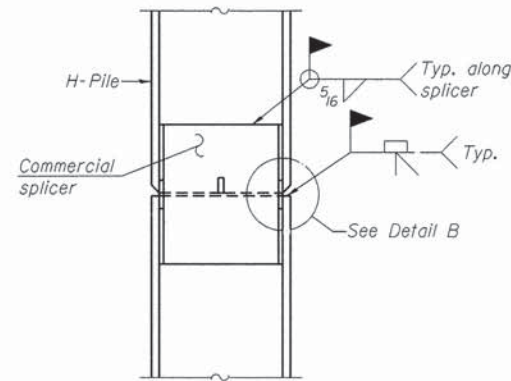
BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE	
p	16	#7	25'-7"	—	
p1	20	#4	25'-7"	—	
s2	32	#5	12'-7"	□	
s3	16	#5	3'-8"	⌒	
u1	16	#6	12'-2"	U	
Concrete Structures				Cu. Yd.	21.0
Concrete Encasement				Cu. Yd.	10.4
Reinforcement Bars				Pound	1,950
Steel Piles HPI0x42				Foot	525
Test Pile Steel HPI0x42				Each	2

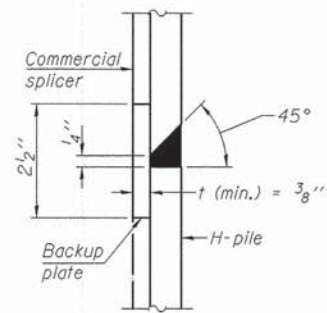


STEEL PILE TABLE

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"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	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"

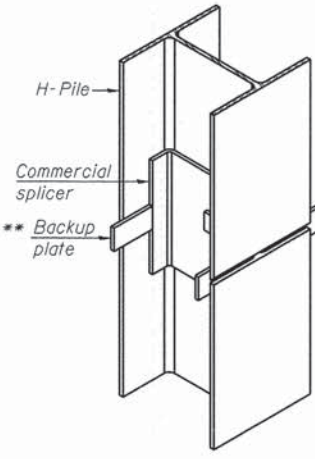


ELEVATION

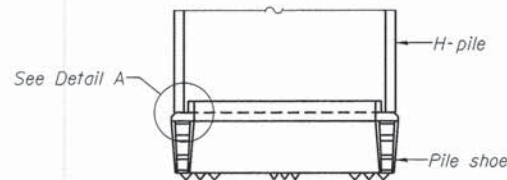


DETAIL "B"

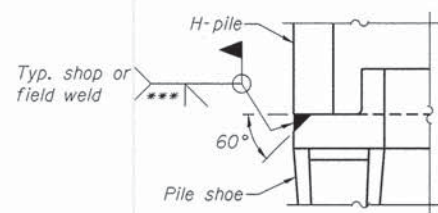
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

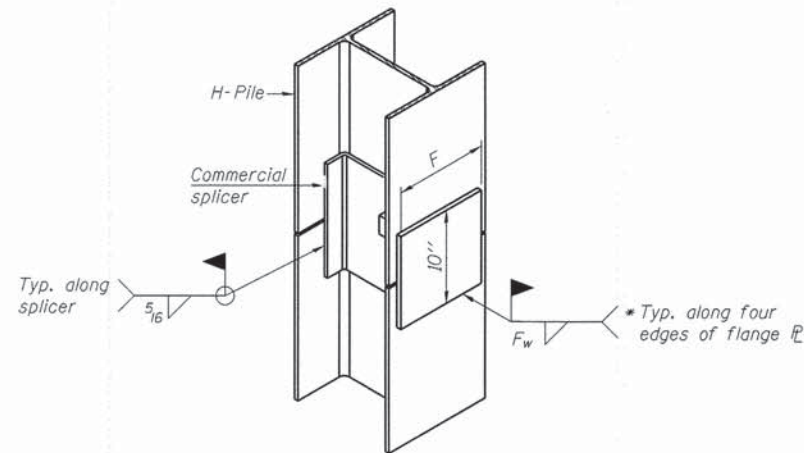


ELEVATION



DETAIL A

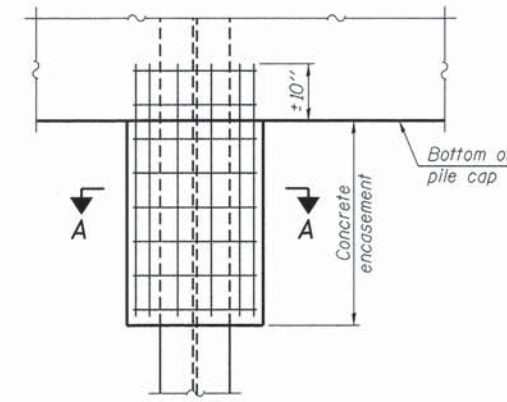
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

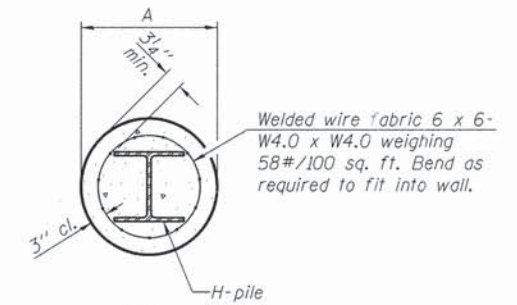
WELDED COMMERCIAL SPLICE ALTERNATE

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



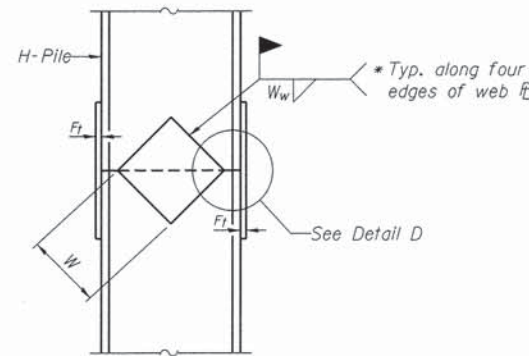
ELEVATION

PILE ENCASEMENT

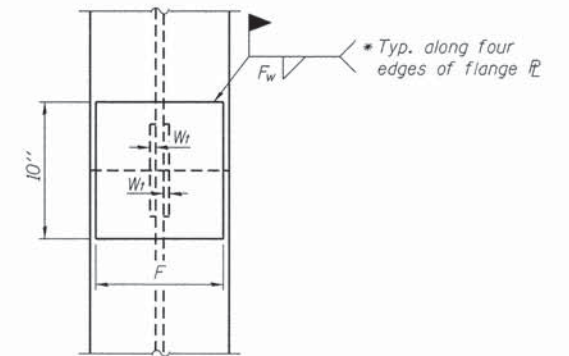


SECTION A-A

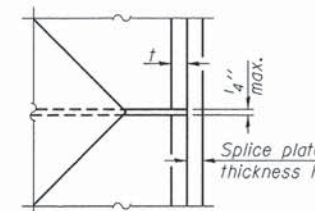
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 1/2"	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 : 138148-shr-bridge.dgn	USER NAME :	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 093-3129	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 388 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	DESIGNED - S.W.M.	REVISED -	145			04-03112-00-BR	WABASH	14	12	
PLLOT SCALE :	DRAWN - R.D.H.	REVISED -	ROAD DISTRICT #3			CONTRACT NO. 95462				
PLLOT DATE : 7/12/2013	CHECKED - S.W.M.	REVISED -	SHEET NO. 8 OF 10 SHEETS			ILLINOIS FED. AID PROJECT				

