06-17-11 LETTING ITEM 021

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS (8 SHEETS)
220001-05	TEMPORARY EROSION CONTROL SYSTEMS (2 SHEETS)
515001-03	NAME PLATE FOR BRIDGES (2 SHEETS)
701901-01	TRAFFIC CONTROL DEVICES (3 SHEETS)
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-6	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.
30.00	CU YD	EARTH EXCAVATION	20200100
388.00	CU YD	CHANNEL EXCAVATION	20300100
119.00	CU YD	FURNISHED EXCAVATION	20400300
14.00	FOOT	TEMPORARY DITCH CHECKS	28000305
22.00	TON	AGGREGATE (EROSION CONTROL)	28000000
440.00	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
340.00	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.00	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
50.60	CU YD	CONCRETE STRUCTURES	50300225
21.40	CU YD	CONCRETE ENCASEMENT	50300280
2544.00	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	50400305
5010.00	POUND	REINFORCEMENT BARS	50800105
210.00	FOOT	STEEL RAILING, TYPE S1	50900205 *
800.00	FOOT	FURNISHING STEEL PILES HP10X42	51201400
800.00	FOOT	DRIVING PILES	51202305
2.00	EACH	TEST PILE STEEL HP10X42	51203400
1.00	EACH	NAME PLATES	51500100
35.00	FOOT	PIPE CULVERTS, CLASS C, TYPE 1 15"	542C0220
50.00	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 24"	542D0229
1.00	L SUM	MOBILIZATION	67100100
0.30	ACRE	SEEDING, CLASS 2 (SPECIAL)	X2501000
55.00	TON	STONE LINED DITCH	Z0068900

* SPECIALTY ITEMS

DESIGN DESIGNATION:
DESIGN SPEED: 30 MPH
HIGHWAY CLASS - LOCAL ROAD
EXISTING STRUCTURE NO.: 096-3112
PROPOSED STRUCTURE NO.: 096-3455
CURRENT A.D.T. = 25
CONTRACT NO. 95650

WARNING

CALL JULIE TOLL FREE 1-800-892-0123

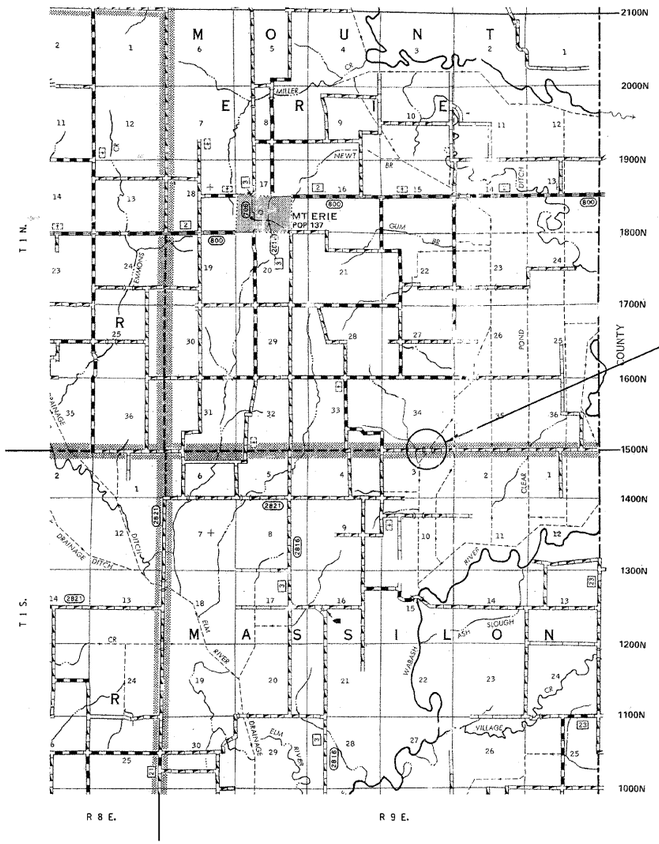
CALL 811 BEFORE YOU DIG

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
FEDERAL AID – H.B.P. PROJECT

T.R. 273 WAYNE COUNTY SECTION 09–16122–00–BR

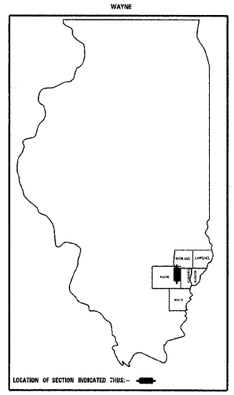
PROJECT NO. BROS–191(062) JOB NO. C–97–056–11

CONTRACT #95650 DIVERSION DITCH



LAYOUT
APPROXIMATE SCALE 1 INCH = 1 MILE
0 1 2 3
MILES

GROSS LENGTH	530.00 FT	0.100 MILES
OMISSIONS	0.00 FT	0.00 MILES
NET LENGTH	530.00 FT	0.100 MILES



PLAN 1"= 50' 0 50' 100'

PROFILE 1"= 50' 0 50' 100'

PROFILE VERT. 1"= 5' 0 5' 10'

SECTION 09-16122-00-BR
BEGINS STATION 2+35

STATION 5+00, STRUCTURE NO. 096-3455
A 106' LONG TRIF .E SPAN (33',40',33') PRECAST
PRESTRESSED CONCRETE DECK BEAM BRIDGE
(17" DEPTH), 24' ROADWAY, 35° LT. FWD. SKEW.

SECTION 09-16122-00-BR
ENDS STATION 7+65

APPROVED 4-7 20 11
Arthur J. Boebert
COUNTY ENGINEER

PASSED 4-12 20 11
Maureen Kanth
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 4-12 20 11
Roger L. Bushfield
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-CO-BR	WAYNE	16	1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
PROJECT # BROS-191(062)		CONTRACT # 95650		

LEC JOB # H0IL002WA DIVERSION DITCH

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62363
PHONE:
(618)-262-8651
FAX:
(618)-263-3327

405 W. STATE ST.
SUITE1
PRINCETON, IN
47670
PHONE:
(812)-386-7611
FAX:
(812)-385-2812

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

AARON M. MEFFORD
56284
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-7-11
DATE
11-30-11
EXPIRES

DIVERSION DITCH
TOWNSHIP ROUTE 273
WAYNE COUNTY, ILLINOIS

SHEET TITLE:
TITLE SHEET

SCALE:	VARIES
BY:	AMM
DATE:	40611
REV:	

1 OF 16 SHEETS

SHEET NO. 1

GENERAL NOTES:

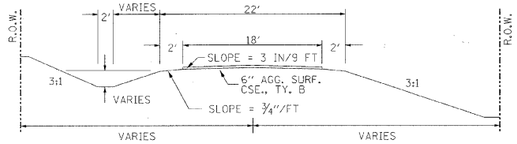
THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 106 FOOT LONG TRIPLE SPAN (33', 40', 33') PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

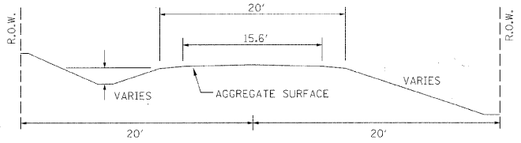
ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

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

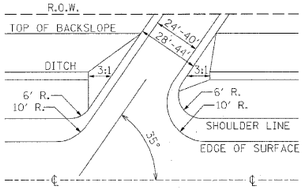
TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



FIELD ENTRANCE DETAIL



NOTE: CONSTRUCT SPECIAL DITCH

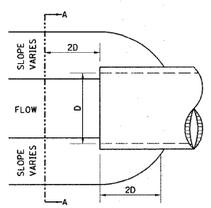
STA 2+35 TO STA 3+85 RT
STA 6+50 TO STA 7+65 RT

NOTE: CONSTRUCT STONE LINED DITCH

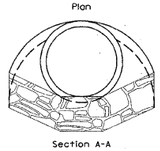
STA 3+10 17' TO 20' LT (0.62 TON/LIN FT)
STA 3+05 TO STA 3+85 RT (0.62 TON/LIN FT)
STA 4+35 TO STA 4+40 RT (0.62 TON/LIN FT)
55 TON STONE LINED DITCH ALLOWED IN PROPOSAL.

SEE STONE LINED DITCH DETAIL.

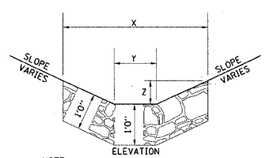
STONE LINED DITCH DESIGN



Plan



Section A-A



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	
	Z= 1 FT	1 FT	1 FT	
	0.40	0.48	0.62	TON/LIN. FT

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

NOTE: CONSTRUCTION TRANSITIONS
STA. 2+35 TO STA. 2+85
STA. 7+15 TO STA. 7+65
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

P.I. STA= 3+88.44
Δ= 00°37'34" RT

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	2
FED. ROAD DIST. NO. 7	ILLINOIS	DIVERSION DITCH		
PROJECT # BROS-1910(62)		CONTRACT # 95650		

LEC JOB # H0010029NA

GEORGE P. MANDA REVOCABLE TRUST & ANITA M. MANDA REVOCABLE TRUST

STA 3+10
PC, CL C, TY I 15"
0° SKEW, 35' LONG
UP - 388.85
DOWN - 388.67
INSTALLATION-METHOD II
CROSS SECTION SEE SHEET 3

GEORGE P. MANDA REVOCABLE TRUST & ANITA M. MANDA REVOCABLE TRUST

SECTION 09-16122-00-BR
BEGINS STA 2+35

SECTION 09-16122-00-BR
ENDS STA 7+65

EXISTING R.O.W.

PROPOSED R.O.W.

+42 FE

+87 FE

EXISTING ℄

EXISTING & PROPOSED ℄

PROPOSED R.O.W.

STA 4+17 FE
24" PC CL CL D. TY.1
32° SKEW, 50' LONG
CROSS SECTION SEE SHEET 4

+00 FE

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

JAMES RANDALL HEDRICK

MARTIN E. MAYES ETAL.

DIVERSION DITCH

EXISTING BRIDGE STA 5+03.7; STRUCTURE NUMBER: 096-3112
A 73' LONG DOUBLE SPAN BRIDGE WITH 4" STEEL DECK WITH 7-24"x7" I-BEAMS ON CONCRETE MUDWALLS WITH A WOOD PILE PIER.

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

PROPOSED STRUCTURE: NO. 096-3455, STA 5+00,
A 106' LONG TRIPLE SPAN (33',40',33') P.P.C.D.B. BRIDGE
WITH 17" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
24' WIDTH, 0% GRADE, 35° LT FWD. SKEW.

SEE SHEETS 5-16 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE

TEMPORARY DITCH CHECKS
AGGREGATE (EROSION CONTROL)

14.0 FOOT TEMPORARY DITCH CHECKS
22.0 TONS AGGREGATE (EROSION CONTROL)
0.3 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED

B.M.-I.P. ±12+54.6, 18.16' RT = 388.10

NOTE: THE PROPOSED GRADE SHOWN IS THE TOP OF THE EARTH.

P.I. STA. 2+85, 100' V.C., M.O.=0.28
P.I. STA. 3+85, 100' V.C., M.O.=-0.22
P.I. STA. 6+15, 100' V.C., M.O.=-0.33
P.I. STA. 7+15, 100' V.C., M.O.=0.25

STA 2+35
STA 7+65

PROPOSED ℄ GRADE

BK. ABUT. STA 4+46.19
BK. ABUT. STA 5+53.81

0.50%
1.72%
0.00%
2.61%
0.63%
2.00% RT
1.65% RT
1.00% RT
EXISTING ℄ GRADE

100 YR. H.W.E. = 388.04
15 YR. H.W.E. = 385.63

STA 2+35 390.1 RT
STA 3+05 386.38 RT
STA 3+85 387.31 RT
STA 6+50 389.15 RT
STA 7+65 386.6 RT

℄ = 375.8

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 = 30.0 CU YD
CHANNEL EXCAVATION = 388.0 CU YD
FURNISHED EXCAVATION = 119.0 CU YD
AGG SURF CSE, TY B = 340.0 TONS

SEE SHEET 3 FOR EARTHWORK SCHEDULE

PROFILE

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

405 W. STATE ST
SUITE1
PRINCETON, IN
47670
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AARON M. MEFFORD
56284
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-7-11
DATE
11-30-11
EXPIRES

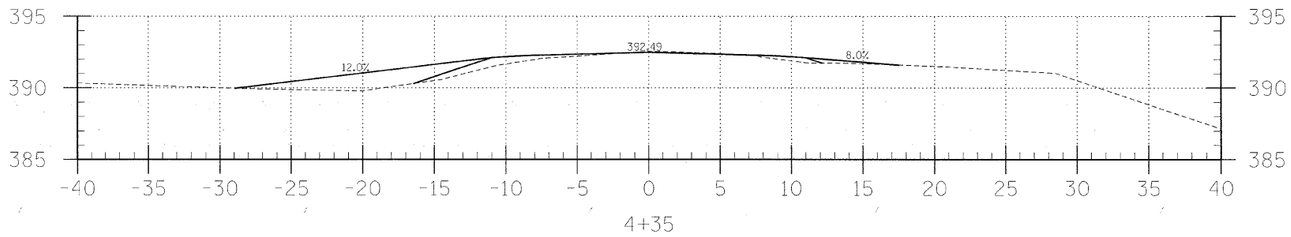
DIVERSION DITCH
TOWNSHIP ROUTE 273
WAYNE COUNTY, ILLINOIS

SHEET TITLE:
PLAN & PROFILE

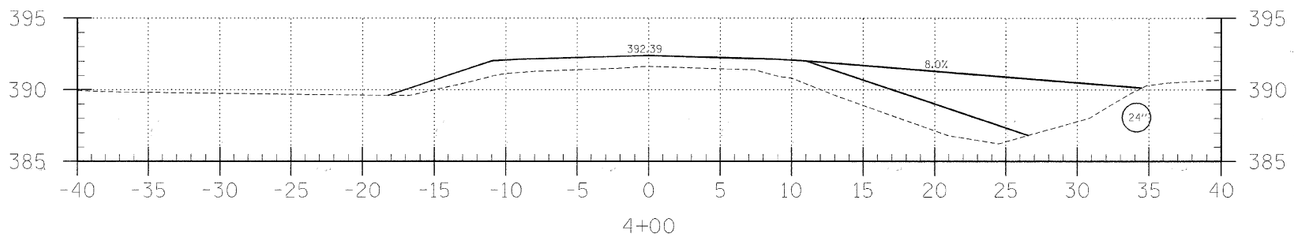
SCALE:	VARIES
BY:	AMM
DATE:	4/2011
REV:	

2 OF 16 SHEETS

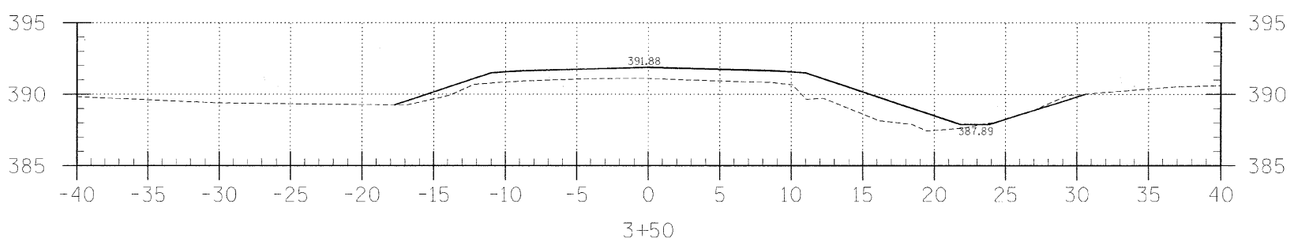
SHEET NO.
2



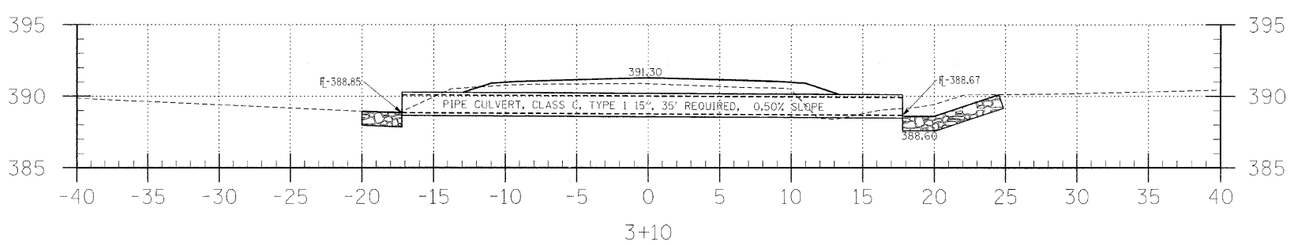
4+35



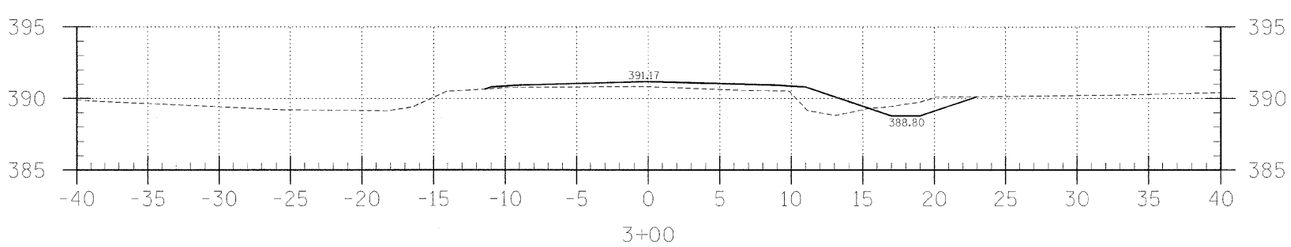
4+00



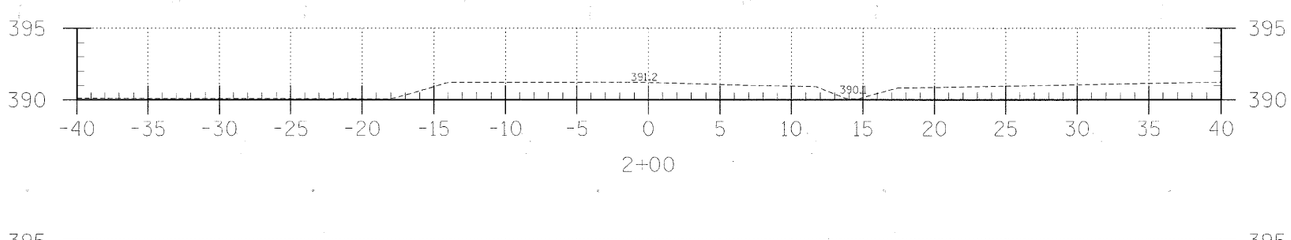
3+50



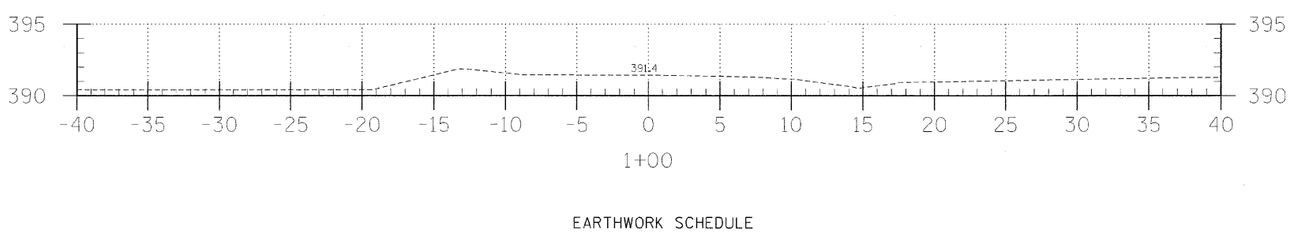
3+10



3+00



2+00



1+00

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+46.2	13.3	0.0	0.0	9.9	183.7	-173.8
STA 4+46.2 TO 5+53.8	0.0	388.0	194.0	145.5	0.0	+145.5
STA 5+53.8 TO 10+00	16.8	0.0	0.0	12.6	95.3	-82.7
4 FIELD ENTRANCE	0.0	0.0	0.0	0.0	8.0	-8.0
TOTAL	30.1	388.0	194.0	168.0	287.0	-119.0

I.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
273	09-16122-00-BR	WAYNE	16	3	
FED. ROAD DIST. NO. 7	ILLINOIS	DIVERSION DITCH			
PROJECT # BRRS-1910(62)		CONTRACT # 56660			
LOC ORE # H010020WA					

SHEET NO. 3 | SHEETS 3 OF 16

REV: | DATE: 4/6/11 | BY: AMM | SCALE: 1" = 5'

CROSS-SECTIONS

SHEET TITLE:

DIVERSION DITCH
TOWNSHIP ROUTE 273
WAYNE COUNTY, ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-7-11
DATE
EXPIRES

AARON M. MEFFORD
062-056284
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

PROFESSIONAL DESIGN FIRM
LAMAC ENGINEERING CO.
PROFESSIONAL ENGINEERING CORPORATION
184.002430(184-002769)

LAMAC ENGINEERING CO.

405 W. STATE ST
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FAX:
(812)-385-2812

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62863
PHONE:
(618)-262-8661
FAX:
(618)-263-3327

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	4
FED. ROAD DIST. NO. 7	ILLINOIS	DIVERSION DITCH		
PROJECT # BROS-1911(062)		CONTRACT # 95650		

LEC JOB # H10IL002WA

323 W. 3RD ST.
P.O. BOX 160
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62863
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(618)-262-8651
FAX:
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ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-7-11
DATE
11-30-11
EXPIRES

DIVERSION DITCH
TOWNSHIP ROUTE 273
WAYNE COUNTY, ILLINOIS

SHEET TITLE:

CROSS-SECTIONS

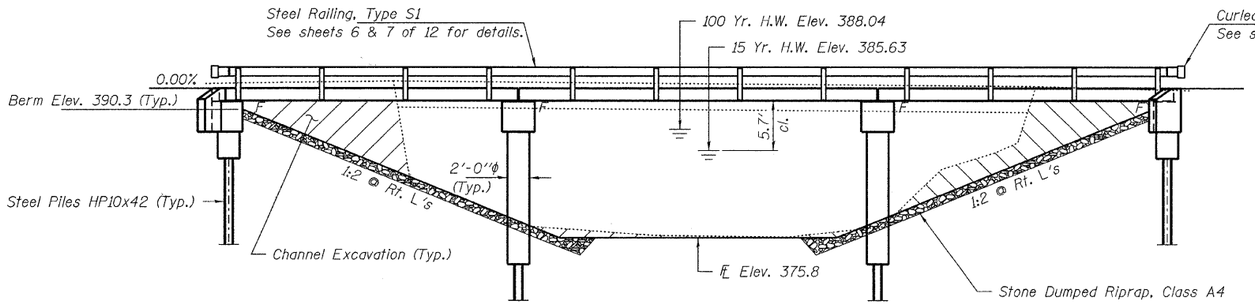
SCALE:	1" = 5'
BY:	AMM
DATE:	4/2011
REV:	

4 OF 16
SHEETS

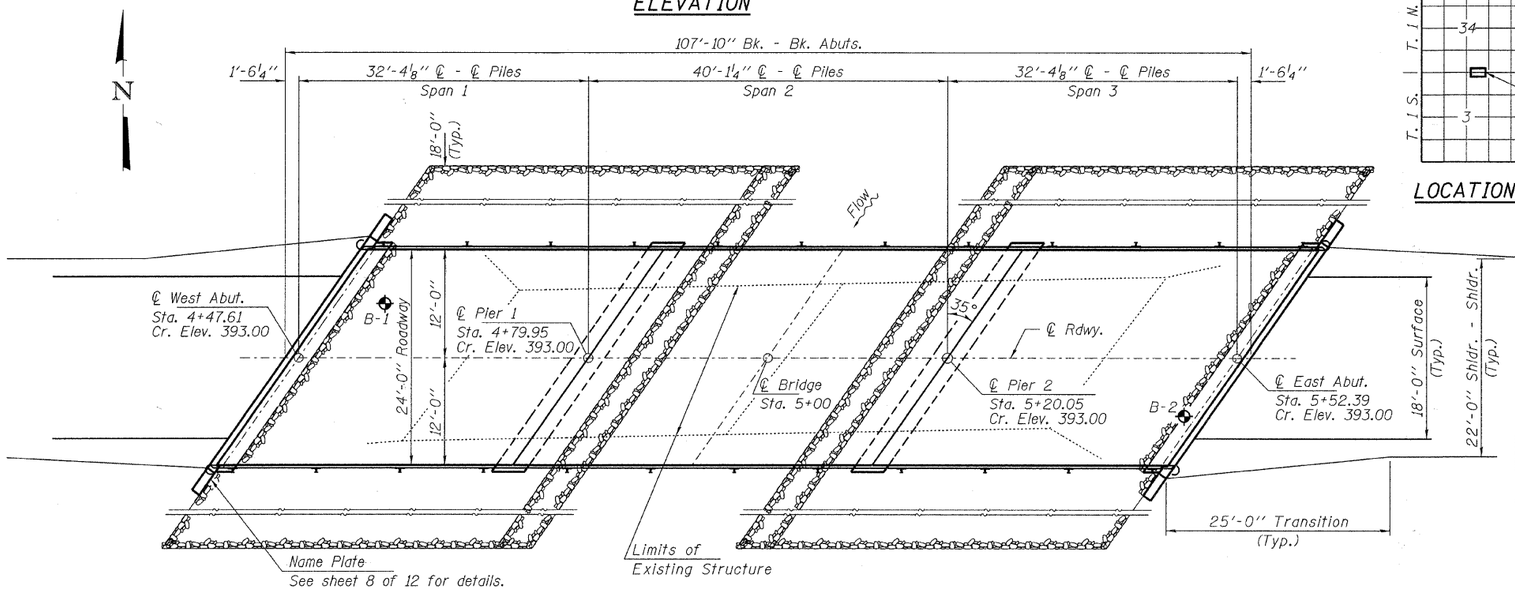
SHEET NO.
4

EXISTING STRUCTURE: Two span bridge with steel deck on I beams with concrete mudwalls and timber pile piers. 73.0' bk.-bk. abuts. Str. No. 096-3112
Structure closed to traffic.

No Salvage



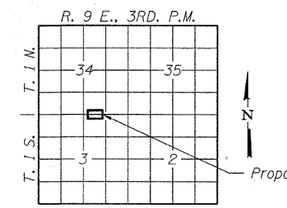
ELEVATION



PLAN

BUILT 201_ BY
WAYNE COUNTY
SEC. 09-16122-00-BR
MASSILON ROAD DISTRICT
STR. NO. 096-3455
LOADING HL-93

NAME PLATE



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.

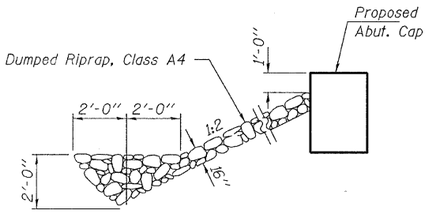
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment and Pier 2 or approved by the Engineer before ordering the remainder of piles.

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



SECTION A-A

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			388
Stone Dumped Riprap, Class A4	Ton			440
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		50.6	50.6
Concrete Encasement	Cu. Yd.		21.4	21.4
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,544		2,544
Reinforcement Bars	Pound		5,010	5,010
Steel Railing, Type S1	Foot	210		210
Furnishing Steel Piles HP10x42	Foot		800	800
Driving Piles	Foot		800	800
Test Pile Steel HP10x42	Each		2	2
Name Plates	Each		1	1

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

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

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD with all applicable inferims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 12
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.268g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.645g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 10.6 Sq. Mi.
Existing Low Grade Elev. 388.7 @ Sta. 10+00
Proposed Low Grade Elev. 388.7 @ Sta. 10+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	1507	395	420	385.63	0.1	0.1	385.73	385.73
Base	100	2470	525	581	388.04	0.1	0.1	388.14	388.14
Max. Calc.	500	-	-	-	-	-	-	-	-

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."

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

Steven W. Megginson 4/5/11

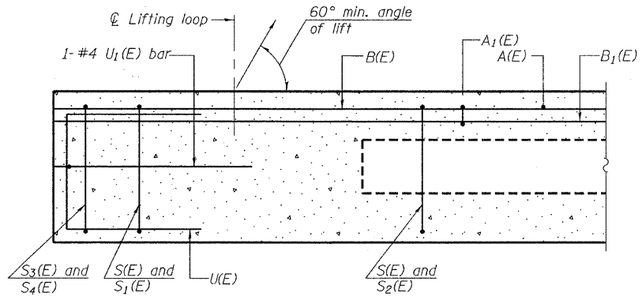
ILLINOIS STRUCTURAL NO. 081-6064 Expires 11-30-2012

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

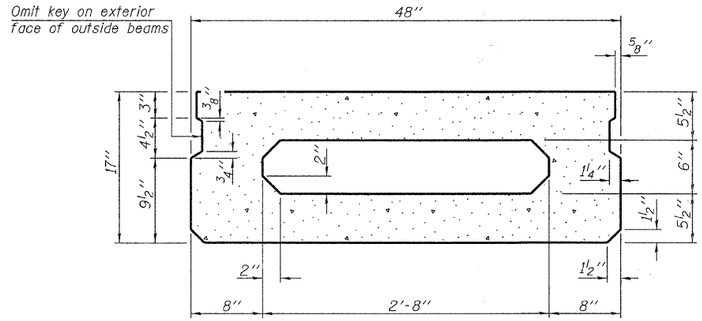
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 096-3455
SHEET NO. 1 OF 12 SHEETS

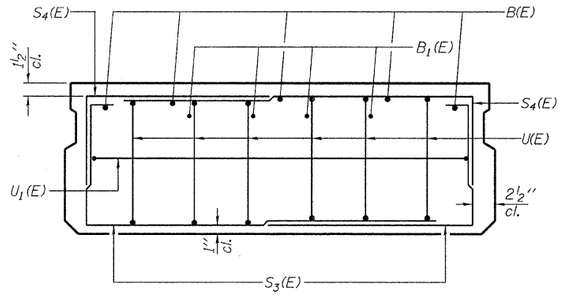
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	5
MASSILON TOWNSHIP		CONTRACT NO. 95650		
		ILLINOIS FED. AID PROJECT		



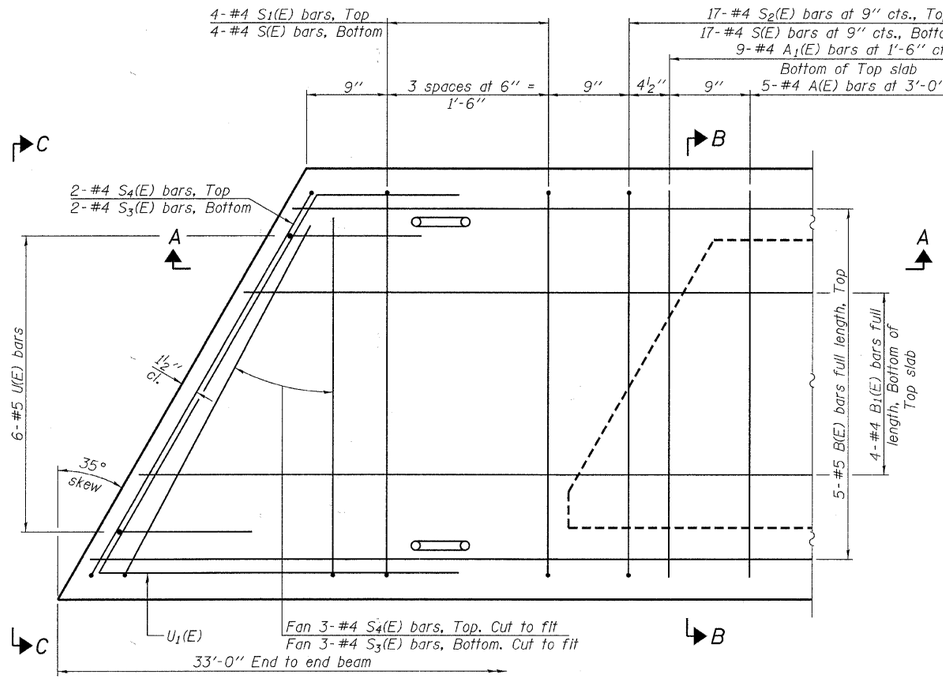
SECTION A-A



SECTION B-B
(Showing dimensions)

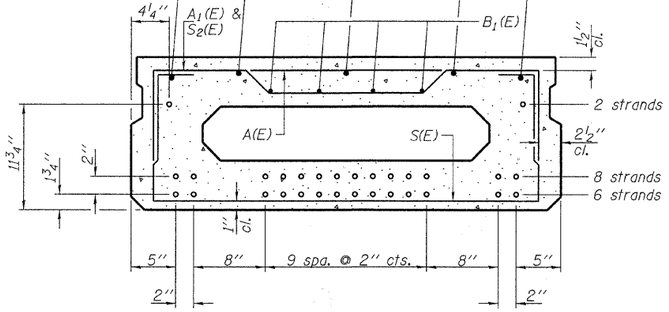


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ 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.



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.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	10	#4	3'-7"	—
$A_1(E)$	18	#4	3'-10"	~
B(E)	5	#5	32'-8"	—
$B_1(E)$	4	#4	32'-8"	—
S(E)	42	#4	6'-9"	⊐
$S_1(E)$	8	#4	5'-3"	⊐
$S_2(E)$	34	#4	5'-6"	⊐
$S_3(E)$	10	#4	4'-8"	⊐
$S_4(E)$	10	#4	3'-11"	⊐
U(E)	12	#5	3'-8"	⊐
$U_1(E)$	2	#4	9'-3"	⊐

Note: See sheets 3 & 6 of 12 for additional details and Bill of Material.

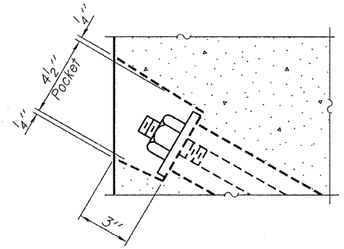
PD-1748-L 7-1-10

FILE NAME = 100230-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002959		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

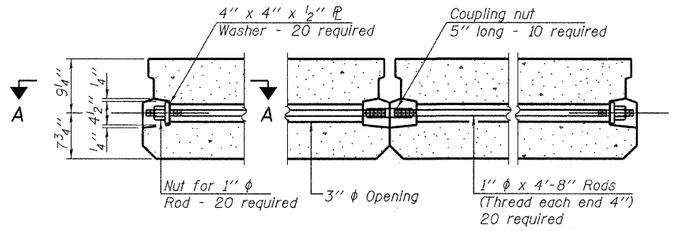
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM – SPANS 1 & 3
STRUCTURE NO. 096-3455
SHEET NO. 2 OF 12 SHEETS

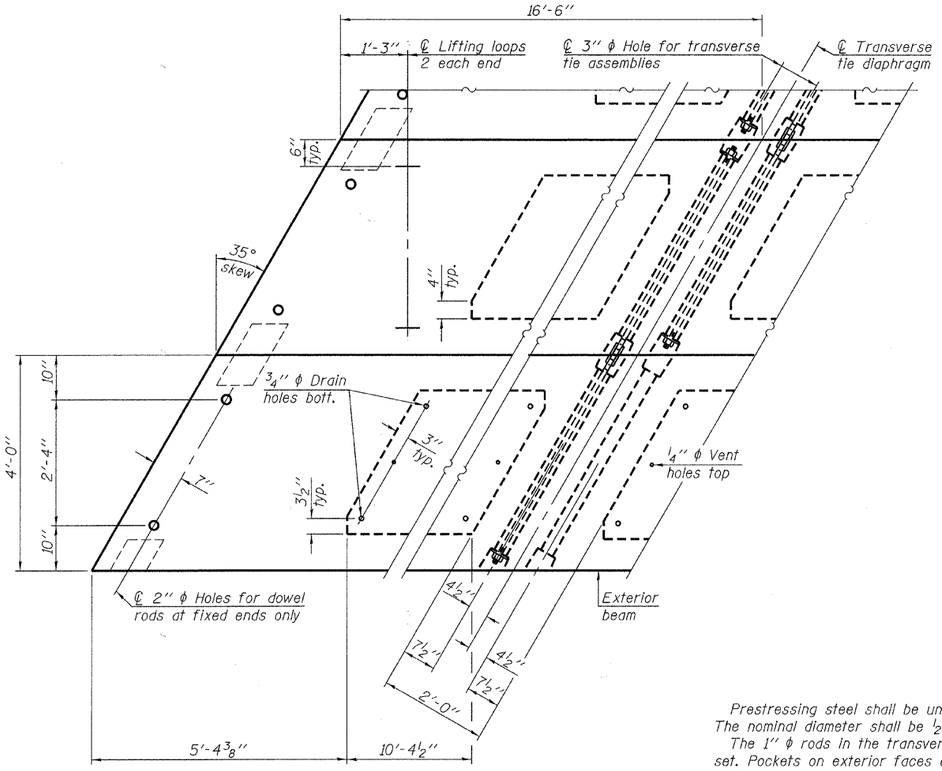
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	6
MASSILON TOWNSHIP		CONTRACT NO. 95650		
ILLINOIS	FED. AID PROJECT			



SECTION A-A

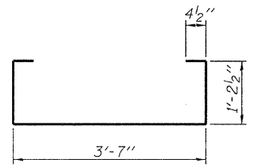


TYPICAL TRANSVERSE TIE ASSEMBLY

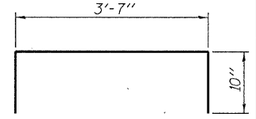


PLAN VIEW

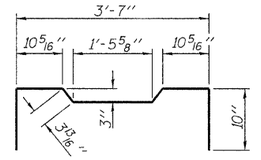
Note: Connect beams in pairs with the transverse tie configuration shown.



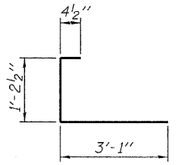
BAR S(E)



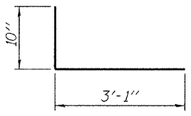
BAR S_1(E)



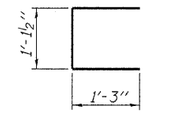
BAR S_2(E)



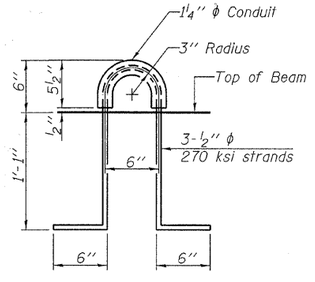
BAR S_3(E)



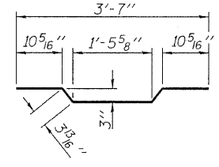
BAR S_4(E)



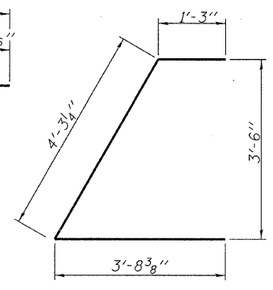
BAR U(E)



LIFTING LOOP DETAIL



BAR A_1(E)



BAR U_1(E)

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)(12) and 1021.06 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.

All bars shall be epoxy coated.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,584

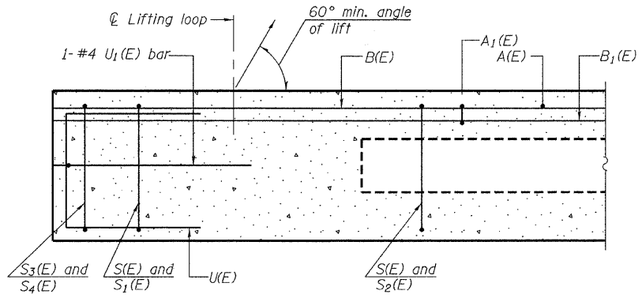
PD-1748-LD 7-1-10

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / FE / SE CORP. 184.000969		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

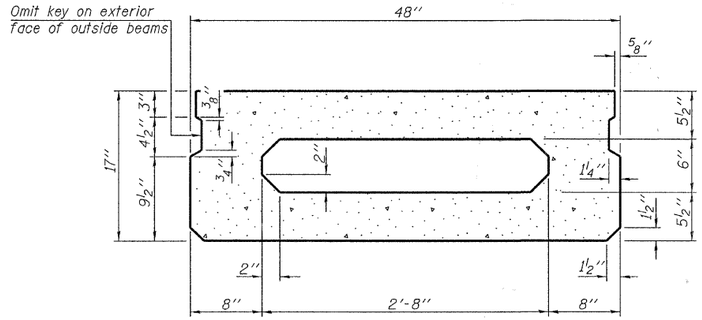
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM DETAILS – SPANS 1 & 3
STRUCTURE NO. 096-3455
SHEET NO. 3 OF 12 SHEETS

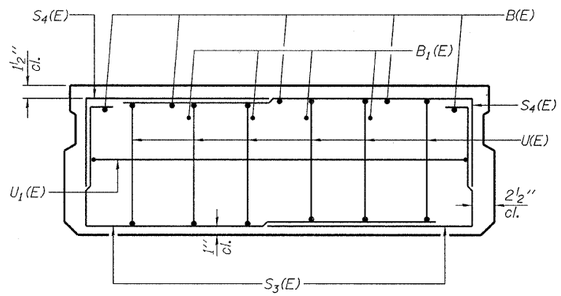
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	7
MASSILON TOWNSHIP		CONTRACT NO. 95650		
		ILLINOIS FED. AID PROJECT		



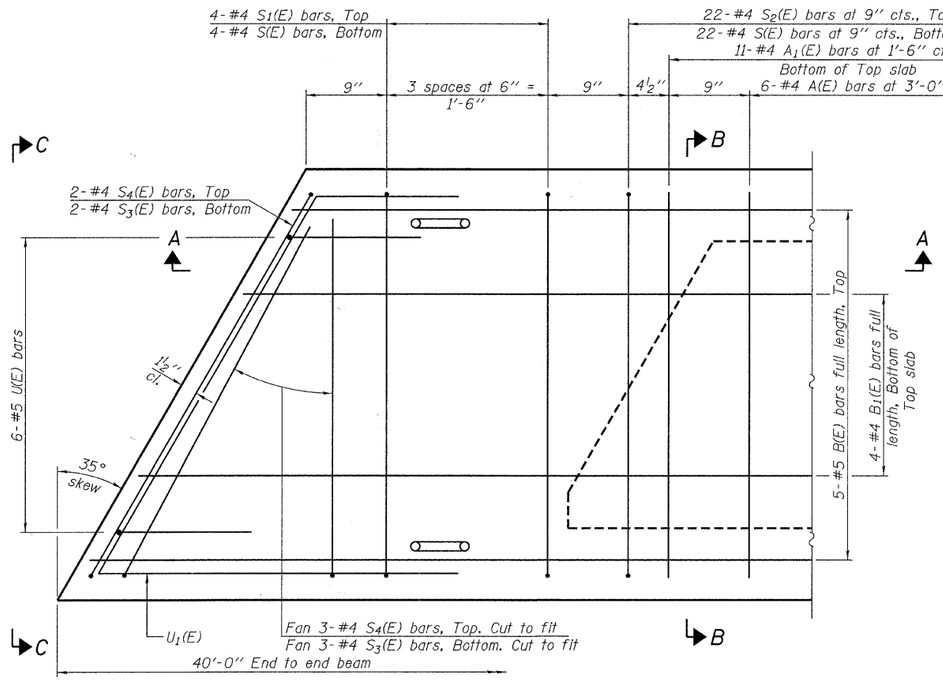
SECTION A-A



SECTION B-B
(Showing dimensions)

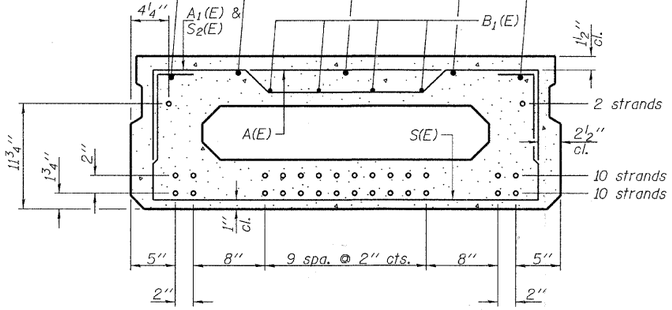


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ 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.



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.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

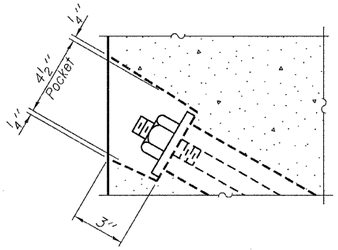
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	12	#4	3'-7"	—
$A_1(E)$	22	#4	3'-10"	~
B(E)	5	#5	39'-8"	—
$B_1(E)$	4	#4	39'-8"	—
S(E)	52	#4	6'-9"	⊐⊏
$S_1(E)$	8	#4	5'-3"	⊐⊏
$S_2(E)$	44	#4	5'-6"	⊐⊏
$S_3(E)$	10	#4	4'-8"	⊔
$S_4(E)$	10	#4	3'-11"	⊔
U(E)	12	#5	3'-8"	⊓
$U_1(E)$	2	#4	9'-3"	⊂

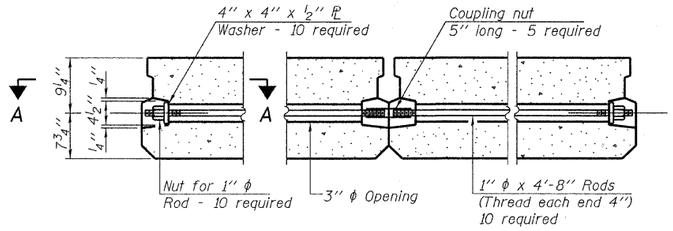
Note: See sheets 5 & 6 of 12 for additional details and Bill of Material.

PD-1748-L 7-1-10

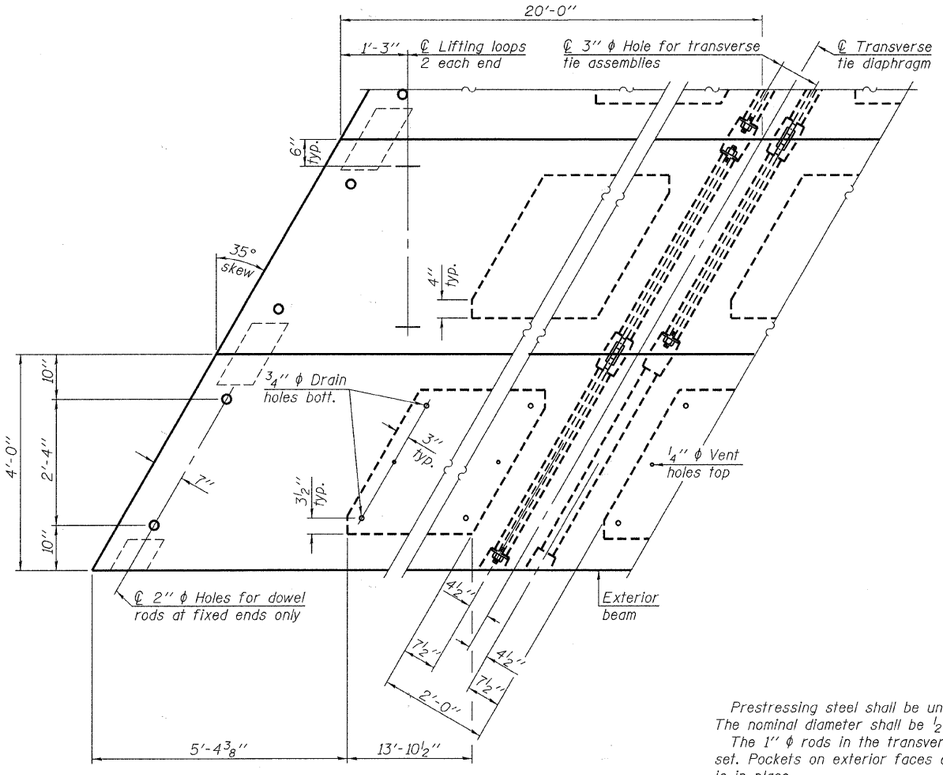
FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM – SPAN 2 STRUCTURE NO. 096-3455	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3365 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -			273	09-16122-00-BR	WAYNE	16	8
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			MASSILON TOWNSHIP		CONTRACT NO. 95650		
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -		SHEET NO. 4 OF 12 SHEETS			ILLINOIS FED. AID PROJECT		



SECTION A-A

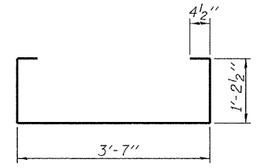


TYPICAL TRANSVERSE TIE ASSEMBLY

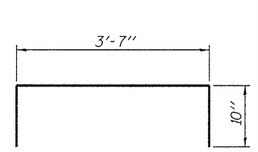


PLAN VIEW

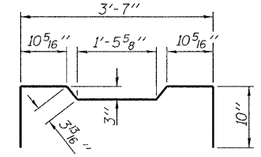
Note: Connect beams in pairs with the transverse tie configuration shown.



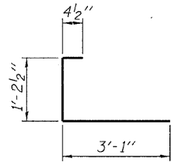
BAR S(E)



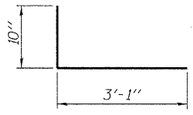
BAR S_1(E)



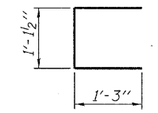
BAR S_2(E)



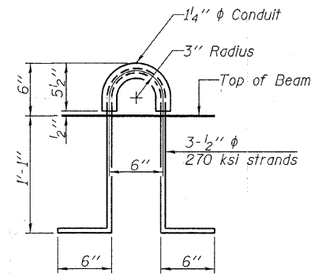
BAR S_3(E)



BAR S_4(E)

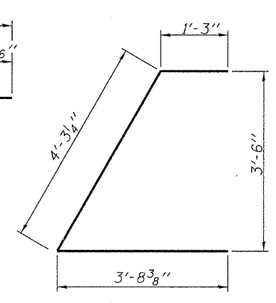


BAR U(E)



LIFTING LOOP DETAIL

BAR A_1(E)



BAR U_1(E)

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)(12) and 1021.06 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.

All bars shall be epoxy coated.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	960

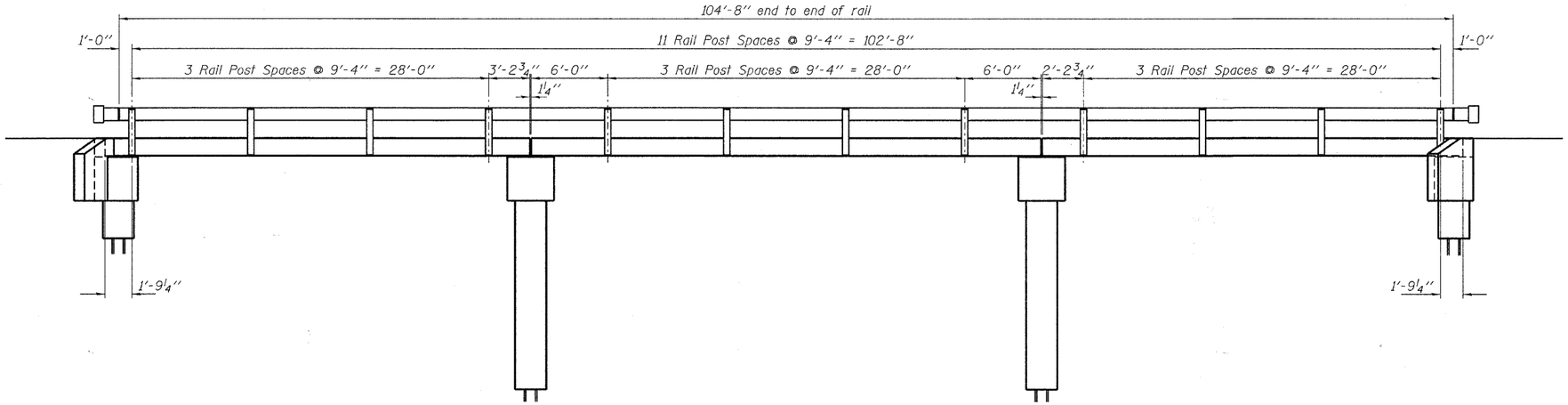
PD-1748-LD 7-1-10

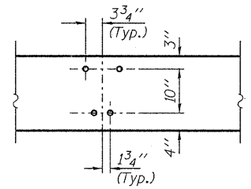
FILE NAME = 100230-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM DETAILS – SPAN 2
STRUCTURE NO. 096-3455
SHEET NO. 5 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	9
MASSILON TOWNSHIP		CONTRACT NO. 95650		
	ILLINOIS FED. AID PROJECT			

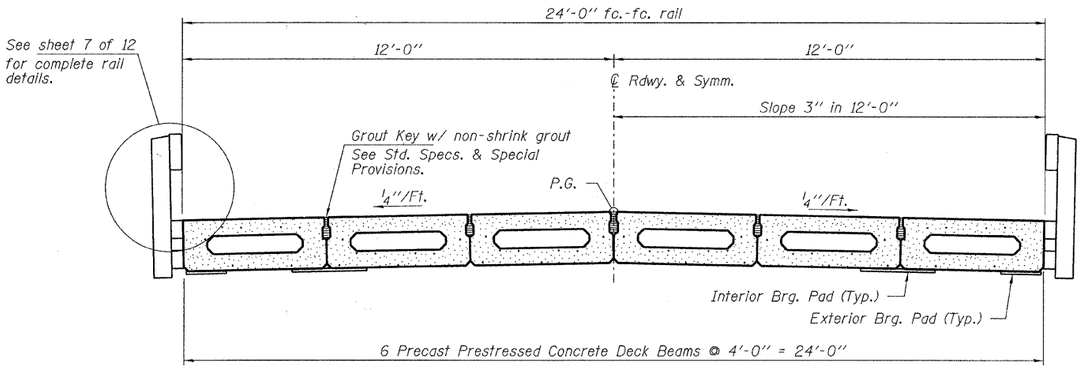




DETAIL A

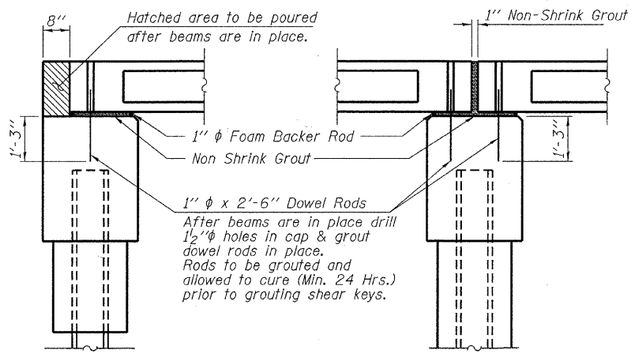
ELEVATION

Showing Rail Post Spaces
See sheet 7 of 12 for Railing Details.



CROSS SECTION

See sheets 2 thru 5 of 12 for Superstructure.

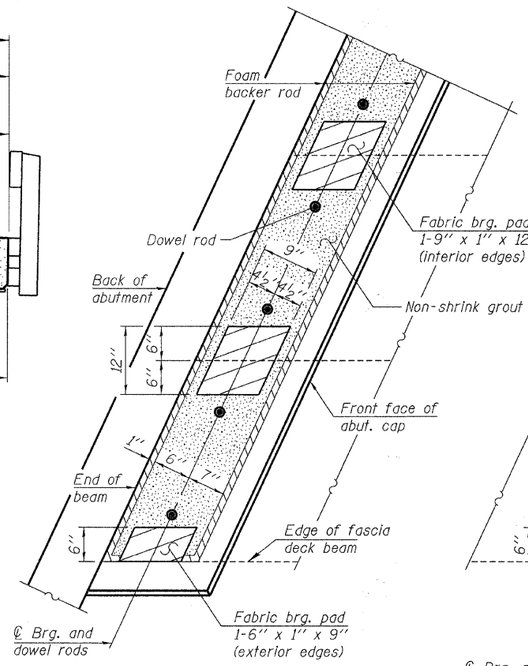


SECTION AT ABUTMENTS

℄ Rt. L's

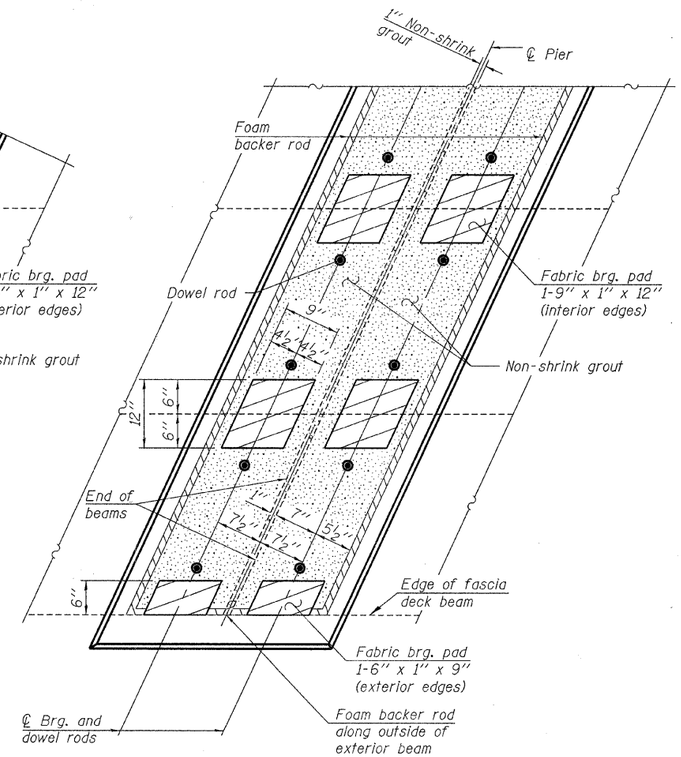
SECTION AT PIERS

℄ Rt. L's



PLAN

(Abutment)



PLAN

(Pier)

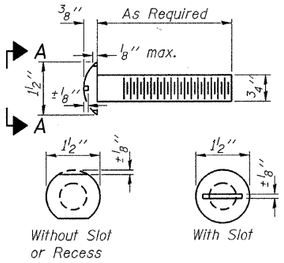
Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

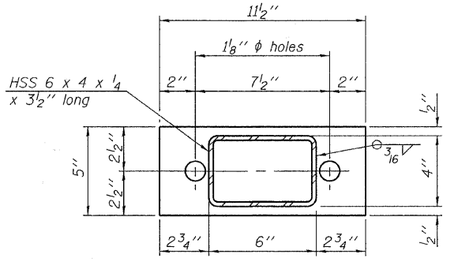
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 096-3455
SHEET NO. 6 OF 12 SHEETS

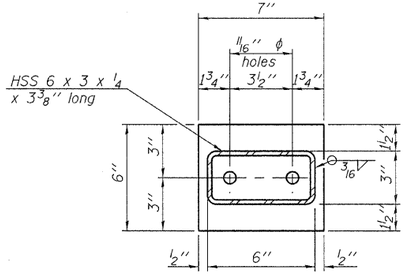
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	10
MASSILON TOWNSHIP		CONTRACT NO. 95650		
ILLINOIS FED. AID PROJECT				



VIEW A-A
ROUND HEAD BOLT

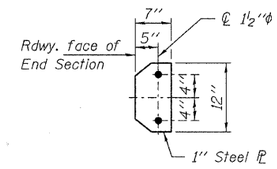


PL 1/2" x 11 1/2" x 5"

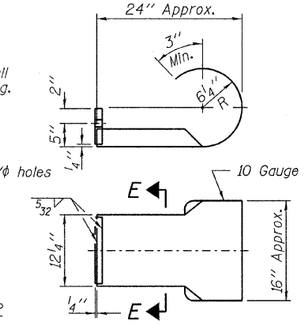


PL 1/2" x 7" x 6"

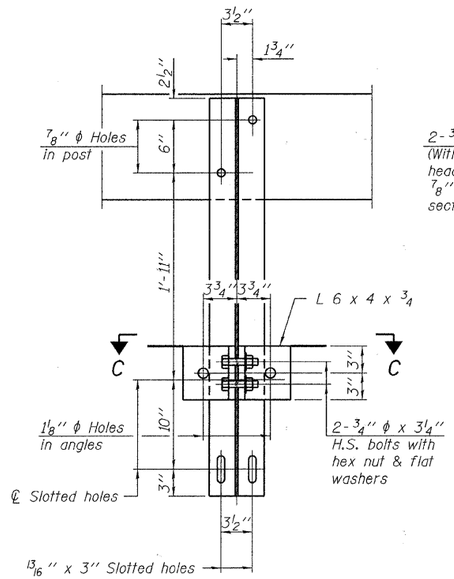
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



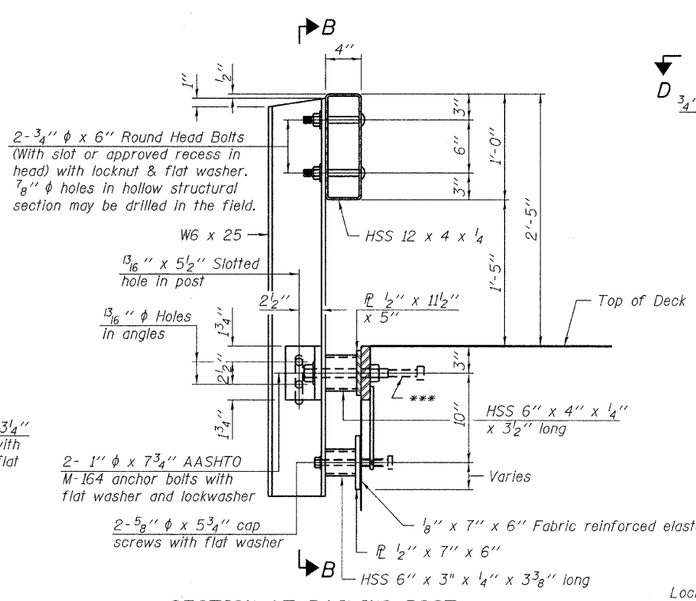
SECTION E-E



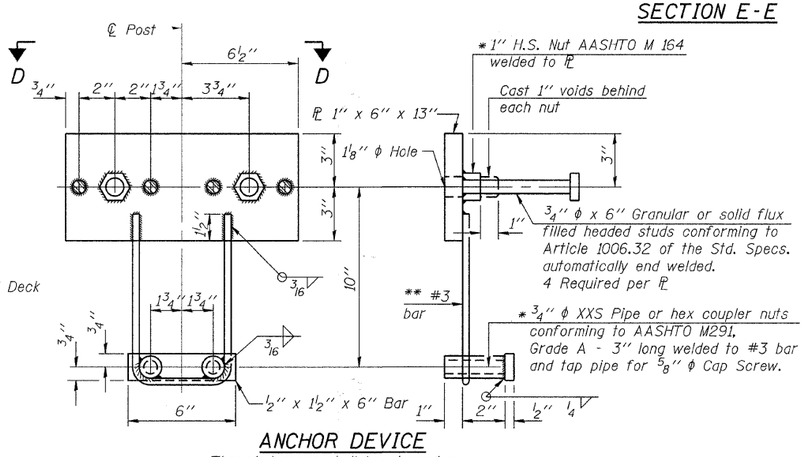
CURLED END SECTION DETAILS



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

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

Notes:

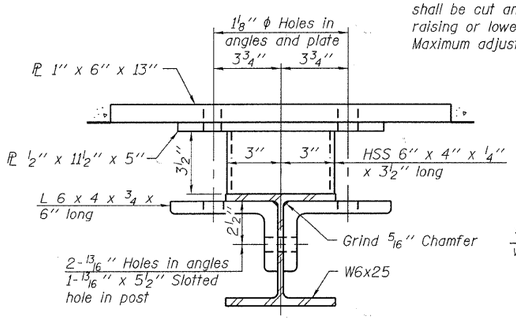
All field drilled holes shall be coated with an approved zinc rich paint before erection.

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.

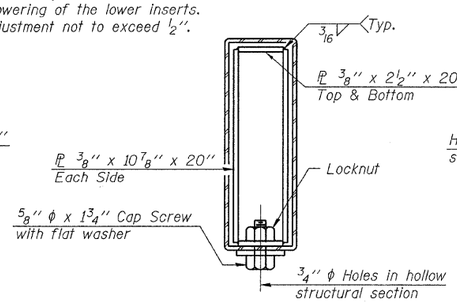
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

*** 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.

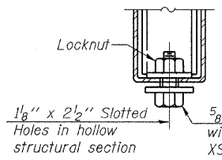
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



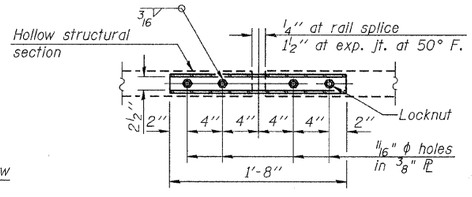
SECTION C-C



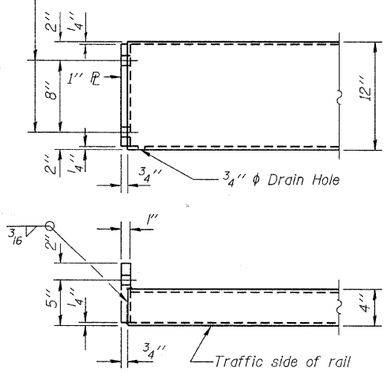
SECTIONS AT RAIL SPLICE



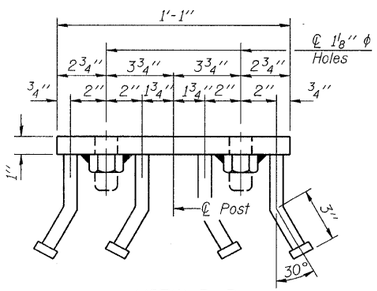
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL 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	210

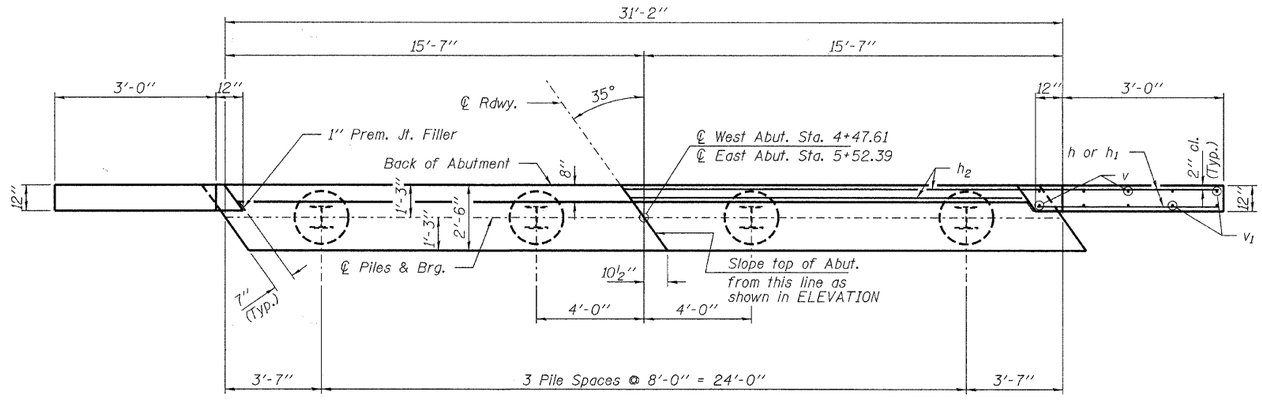
7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

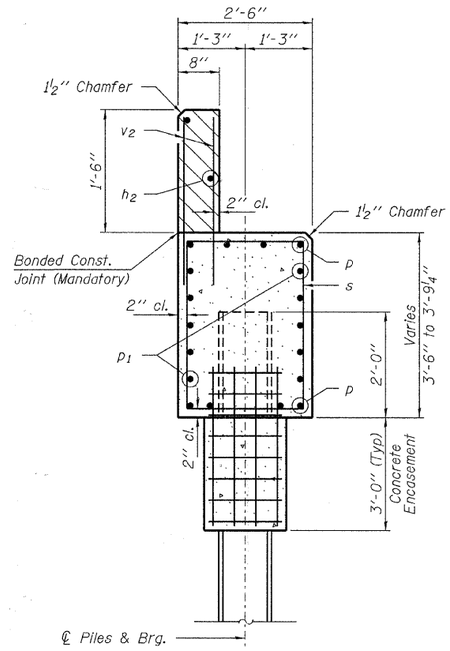
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 096-3455
SHEET NO. 7 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	11
MASSILON TOWNSHIP		CONTRACT NO. 95650		
		ILLINOIS FED. AID PROJECT		

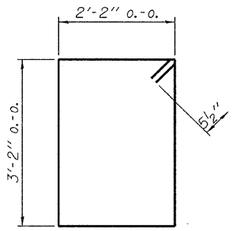


PLAN

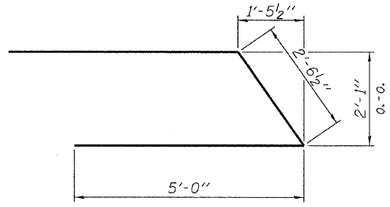


SECTION A-A

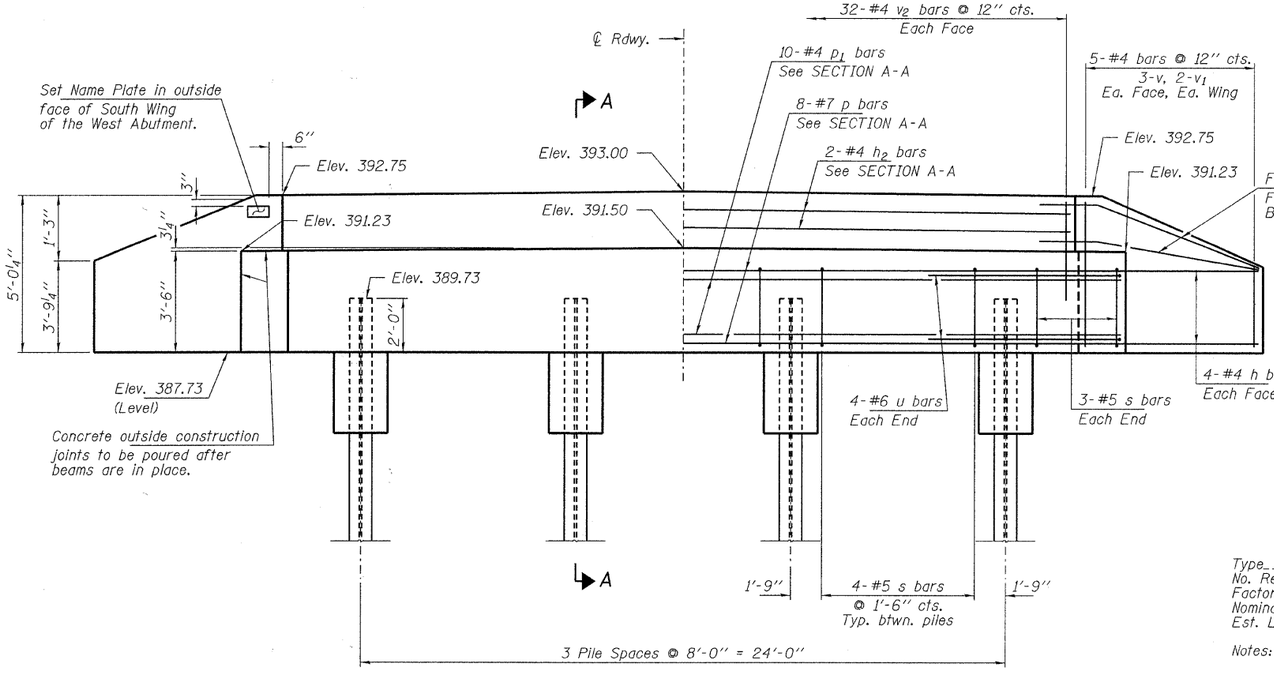
Hatched area to be poured after beams are in place.



BAR s



BAR u



ELEVATION

Note: Extend h bars into abutment cap.

PILE DATA

Type	Steel HP10x42
No. Req'd. (2 Abuts.)	*8
Factored Resistance Available (Rf)	167 Kips/Pile
Nominal Required Bearing (Rn)	335 Kips/Pile
Est. Length	50 Ft/Pile

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

The Steel H-Piles shall be according to AASHTO M270 Grade 50.

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

See sheet 10 of 12 for pile details.

BILL OF MATERIAL - 2 ABUTS.

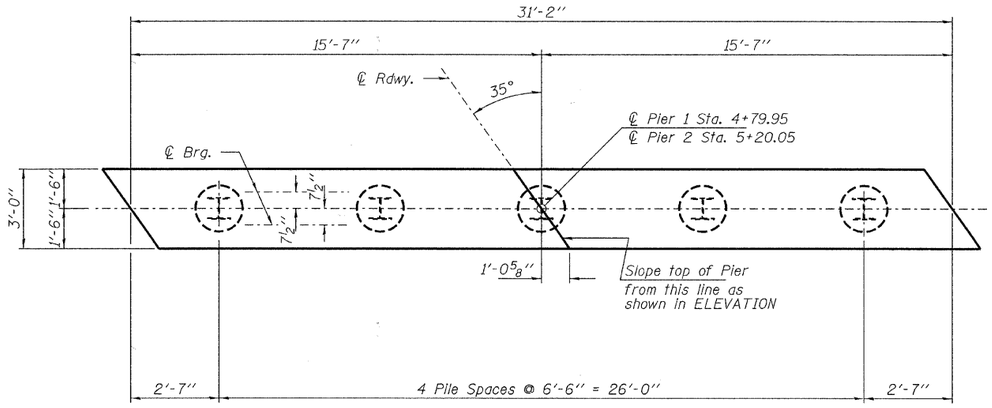
BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	5'-3"	
h_1	8	#4	3'-9"	
h_2	4	#4	30'-10"	
p	16	#7	30'-10"	
p_1	20	#4	30'-10"	
s	36	#5	11'-7"	
u	16	#6	12'-7"	
v	24	#4	4'-4"	
v_1	16	#4	3'-6"	
v_2	124	#4	2'-4"	
Concrete Structures			Cu. Yd.	25.4
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,700
Steel Piles HP10x42			Foot	350
Test Piles Steel HP10x42			Each	1
Name Plates			Each	1

FILE NAME = 100030-sht-bridge.dgn | USER NAME = | DESIGNED - A.S.L. | REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 5085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | | CHECKED - S.W.M. | REVISED -
PLOT SCALE = | DRAWN - D.A.B. | REVISED -
PLOT DATE = 4/5/2011 | CHECKED - S.W.M. | REVISED -

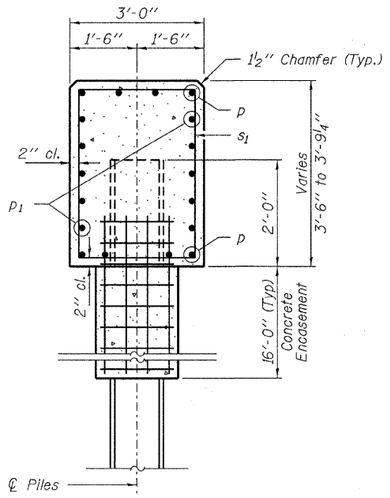
STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

ABUTMENTS
STRUCTURE NO. 096-3455
SHEET NO. 8 OF 12 SHEETS

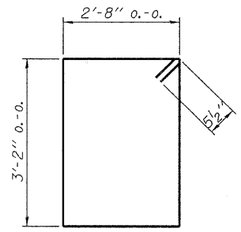
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	12
MASSILON TOWNSHIP		CONTRACT NO. 95650		
	ILLINOIS	FED. AID PROJECT		



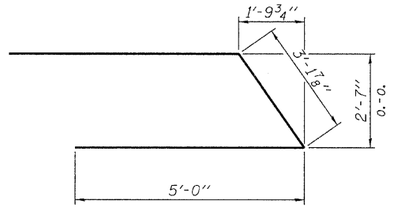
PLAN



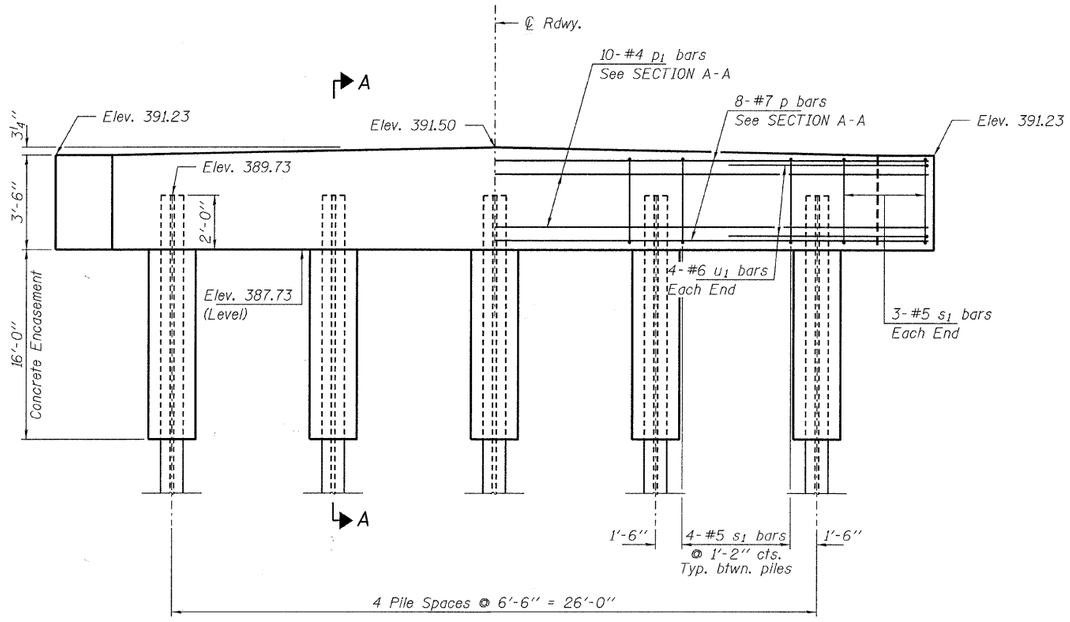
SECTION A-A



BAR s_1



BAR u_1



ELEVATION

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
p	16	#7	30'-10"	——
p_1	20	#4	30'-10"	——
s_1	44	#5	12'-7"	□
u_1	16	#6	13'-2"	▱
Concrete Structures			Cu. Yd.	25.2
Concrete Encasement			Cu. Yd.	18.6
Reinforcement Bars			Pound	2,310
Steel Piles HP10x42			Foot	450
Test Pile Steel HP10x42			Each	1

PILE DATA

Type _____ Steel HP10x42
No. Req'd. (2 Piers) _____ *10
Factored Resistance Available ___ 167 Kips/Pile
Nominal Req'd Bearing _____ 335 Kips/Pile
Est. Length _____ 50 Ft/Pile

Notes: * Includes one test pile to be driven in permanent location at Pier 2.

The Steel H-Piles shall be according to AASHTO M270 Grade 50.

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

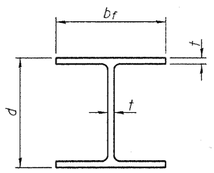
See sheet 10 of 12 for pile details.

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3385 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000969		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

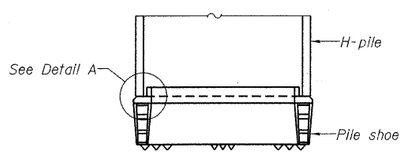
PIERS
STRUCTURE NO. 096-3455
SHEET NO. 9 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	13
MASSILON TOWNSHIP		CONTRACT NO. 95650		
		ILLINOIS FED. AID PROJECT		

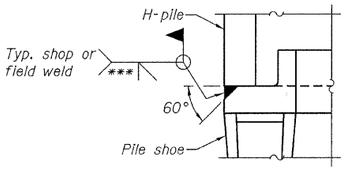


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	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"

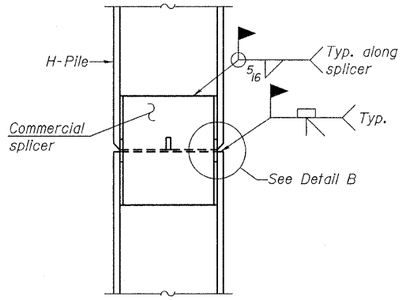


ELEVATION

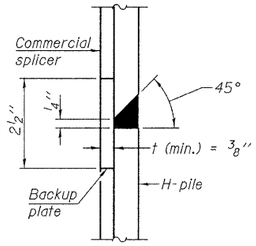


DETAIL A

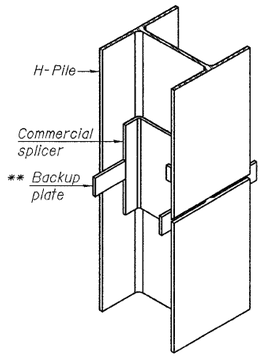
H-PILE SHOE ATTACHMENT



ELEVATION

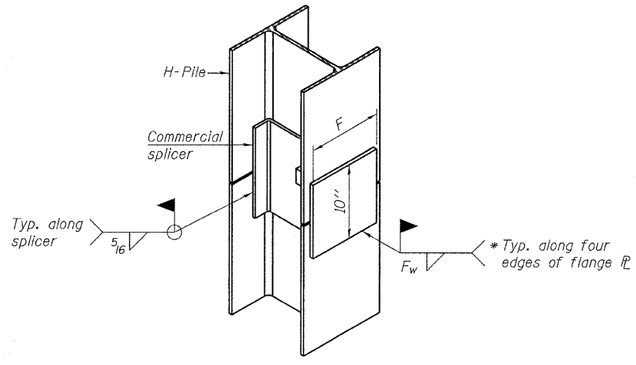


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



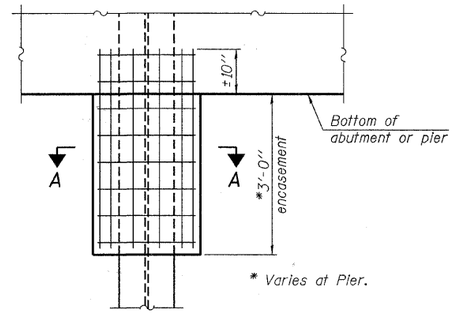
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.

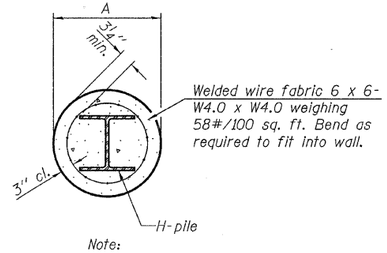
** Remove portions of backup plates that extend outside the flanges.

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



* Varies at Pier.

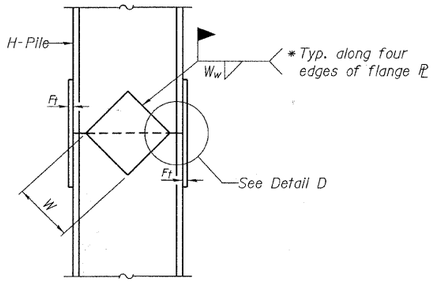
ELEVATION



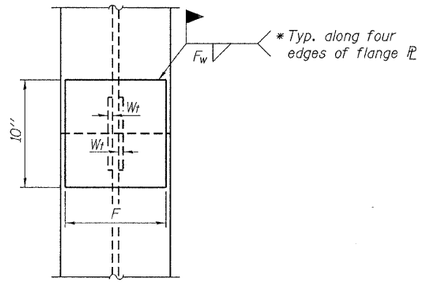
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

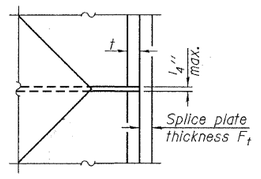
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
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"

WELDED PLATE FIELD SPLICE

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

F-HP 7-1-10

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000969		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

HP PILE DETAILS
STRUCTURE NO. 096-3455
SHEET NO. 10 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	14
MASSILON TOWNSHIP		CONTRACT NO. 95650		
	ILLINOIS FED. AID PROJECT			

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Page 1 of 2

Bridge Foundation Boring Log

Project: H-10082 Bridge Co Rd 1500 N Drainage Ditch Date: 4/21/2010
Section: 09-16122-00-BR Station Bored by: J. Carter
Structure: 096-3112 Checked By: T. Holcomb
County: Wayne

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 369.0
Upon Completion 389.0

Description	Elevation	N	Qu tsf	w %
Ground Surface	393.0			
4" Soil and Gravel Road Surface	0			
Gray Mottled Brown Silty CLAY (A-6)		10	1.4S	17
	-5	4	0.7B	18
		4	0.9B	23
	-10	7	1.8S	23
		6	1.4B	18
	379.5			
Gray Mottled Brown Silty CLAY (A-6) with sand	-15	6	1.9B	18
		10	2.1B	15
	374.5			
Brown Mottled Gray Sandy CLAY (A-6)	-20	9	1.8B	17
		6	1.9B	22
	370.5			
Brown Clayey SAND (A-2-4)	-25	3	--	27
		6	--	22
	364.5			
Brown Fine to Medium SAND (A-2-4)	-30	9	--	20
	359.5			
Gray Silty CLAY to Clayey SILT (A-6 to A-4)	-35	13	1.5S	25
	354.5			
Gray Silty CLAY (A-6) with sand and pebbles	-40	20	5.7S	10

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.
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Carbondale, Il. 62903 618-457-8991 fax

Page 2 of 2

Bridge Foundation Boring Log

Project: H-10082 Bridge Co Rd 1500 N Drainage Ditch Date: 4/21/2010
Section: 09-16122-00-BR Station Bored by: J. Carter
Structure: 096-3112 Checked By: T. Holcomb
County: Wayne

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 369.0
Upon Completion 389.0

Description	Elevation	N	Qu tsf	w %
silty clay (continued)	-45	26	6.0S	9
	346.0			
Gray SHALE	-50	100/3"	--	10
		100/2	--	8
	339.0	100/3"	--	11
End of Boring @ -54.0'	-55			
	-60			
	-65			
	-70			
	-75			
	-80			
	-85			

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

BORING 1

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000969		CHECKED - S.W.M.	REVISED -	
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -	

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

BORINGS
STRUCTURE NO. 096-3455
SHEET NO. 11 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	15
MASSILON TOWNSHIP		CONTRACT NO. 95650		
	ILLINOIS FED. AID PROJECT			

HOLCOMB FOUNDATION ENGINEERING INC.
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Page 1 of 2

Bridge Foundation Boring Log

Project: H-10082 Bridge Co Rd 1500 N Drainage Ditch Date: 4/21/2010
Section: 09-16122-00-BR Station
Structure: 096-3112 Bored by: J. Carter
County: Wayne Checked By: T. Holcomb

Boring No: 2
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 373.1
Upon Completion 390.6

Description	Elevation	N	Qu tsf	w %
Ground Surface	392.6			
5" Soil and Gravel Road Surface	0			
Gray Mottled Brown Silty CLAY (A-6)		8	1.2B	19
	-5	10	1.3S	19
		5	1.3B	22
	-10	6	2.1S	20
	381.1			
Brown Mottled Gray Silty CLAY (A-6) with sand		6	1.4B	18
	-15	7	2.1S	17
	376.1			
Brown Mottled Gray Clayey SAND (A-2-4)		11	0.5S	15
	-20	12	--	19
	370.6	5	0.9B	24
Brown Mottled Gray Sandy CLAY (A-6)	368.6			
Brown Mottled Gray Clayey SAND (A-2-4) with clay seams	-25	8	--	20
		13	1.7S	29
	363.1			
Gray Sandy CLAY (A-6) with trace gravel and sand lenses	-30	26	5.3S	11
		39	2.7B	10
	-35			
	353.1			
Gray Medium SAND (A-2-4) with trace gravel	-40	24	5.2S	10

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure S = Shear Failure E = Estimated Value P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.
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Page 2 of 2

Bridge Foundation Boring Log

Project: H-10082 Bridge Co Rd 1500 N Drainage Ditch Date: 4/21/2010
Section: 09-16122-00-BR Station
Structure: 096-3112 Bored by: J. Carter
County: Wayne Checked By: T. Holcomb

Boring No: 2
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 373.1
Upon Completion 390.6

Description	Elevation	N	Qu tsf	w %
sond (continued)	-45	26	--	13
	345.6			
Gray Sandy SHALE to SHALE		100/3"	--	8
	-50			
		100/3"	--	7
	338.6			
		100/4"	3.1S	11
End of Boring @ -54.0'	-55			
	-60			
	-65			
	-70			
	-75			
	-80			
	-85			

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"

Qu-Unconfined Compressive Strength in tons/sq.ft. w-Water Content-percentage of oven dry weight-%

B = Bulge Failure S = Shear Failure E = Estimated Value P = Penetrometer

BORING 2

FILE NAME = 100030-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002959		CHECKED - S.W.M.	REVISED -	
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	
	PLOT DATE = 4/5/2011	CHECKED - S.W.M.	REVISED -	

STATE OF ILLINOIS
WAYNE COUNTY HIGHWAY DEPARTMENT

BORINGS
STRUCTURE NO. 096-3455
SHEET NO. 12 OF 12 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
273	09-16122-00-BR	WAYNE	16	16
MASSILON TOWNSHIP		CONTRACT NO. 95650		
	ILLINOIS FED. AID PROJECT			