

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 PLANS FOR PROPOSED
 FEDERAL-AID HIGHWAY BRIDGE PROGRAM
 T.R.622
 WAYNE COUNTY
 SECTION 08-15143-00-BR
 STRUCTURE NO. 096-3451
 PROJECT NO. BROS-0191(060)
 JOB NO. C-97-014-10

INDEX OF SHEETS

1	COVER SHEET
2	PLAN & PROFILE
3-4	CROSS SECTIONS
5-14	BRIDGE PLANS

STANDARDS: 280001-05 - EROSION CONTROL
 515001-03 - NAME PLATE
 701901-01 - TRAFFIC
 BLR 21-8 - TRAFFIC
 BLR 22-6 - TRAFFIC

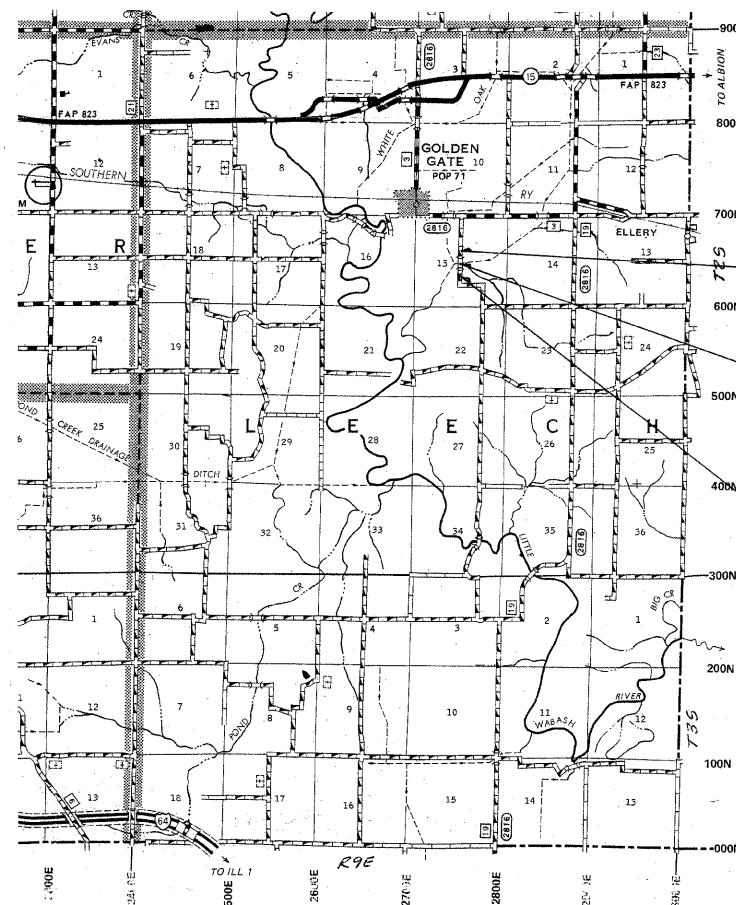
SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEMS	CODE NO.
596	CU YD	EARTH EXCAVATION	20200100
390	CU YD	CHANNEL EXCAVATION	20300100
0.6	ACRE	SEEDING, CLASS 2 (SPECIAL)	25001000
48	FOOT	TEMPORARY DITCH CHECKS	28000305
60	FOOT	PERIMETER EROSION BARRIER	28000400
140	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
48	TON	STONE RIPRAP DITCH	28102600
501	TON	AGGREGATE BASE COURSE, TYPE B	35101400
1	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
42	CU YD	CONCRETE STRUCTURES	50300225
14.6	CU YD	CONCRETE ENCASEMENT	50300280
1,800	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	50400305
4,390	POUND	REINFORCEMENT BARS	50800105
147	FOOT	STEEL RAILING, TYPE S1	50900205*
910	FOOT	FURNISHING STEEL PILES HP 10x42	51201400
910	FOOT	DRIVING PILES	51202305
2	EACH	TEST PILE STEEL HP 10x42	51203400
1	EACH	NAME PLATES	51500100
30	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 18"	542D0223
1	L SUM	MOBILIZATION	67100100
1	L SUM	TRAFFIC CONTROL AND PROTECTION	70101700

* SPECIALTY ITEMS

SCALES

PLAN 1 INCH = 50 FEET
 PROFILE HORZ. 1 INCH = 50 FEET
 PROFILE VERT. 1 INCH = 10 FEET
 CROSS SECTION 1 INCH = 5 FEET



LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE
 NET LENGTH = 600 L.F. = 0.114 MILES

FUNCTIONAL CLASS: RURAL LOCAL ROAD
 ADT = 75
 DESIGN SPEED = 30MPH

TOLL FREE JOINT UTILITY LOCATING
 INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
 TELEPHONE NO. 1-800-892-0123 OR 811

CONTRACT NO. 95607

PROFESSIONAL DESIGN FIRM #184-000832

John A. Stone
 ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55012
 LICENSE EXPIRES NOVEMBER 30, 2009

SECTION 08-15143-00-BR
 ENDS STA. 8+00

STA. 4+89 - SPECIAL BRIDGE DESIGN
 PROPOSED PRECAST PRESTRESSED
 CONCRETE DECK BEAM BRIDGE.
 3 SPANS @25' EACH, 24' RDWY., SKEW = 0'
 PROP. STR. NO. 096-3451
 EXIST. STR. NO. 096-3220

SECTION 08-15143-00-BR
 BEGINS STA. 2+00

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED: *Arthur D. Reich* 10-7-2009
 WAYNE COUNTY ENGINEER

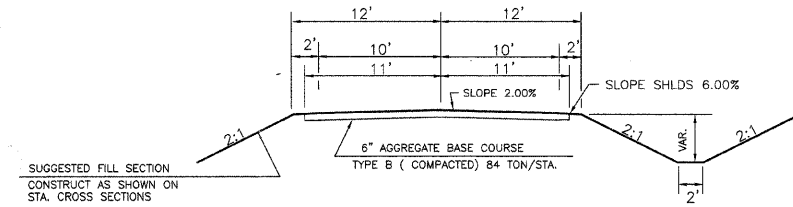
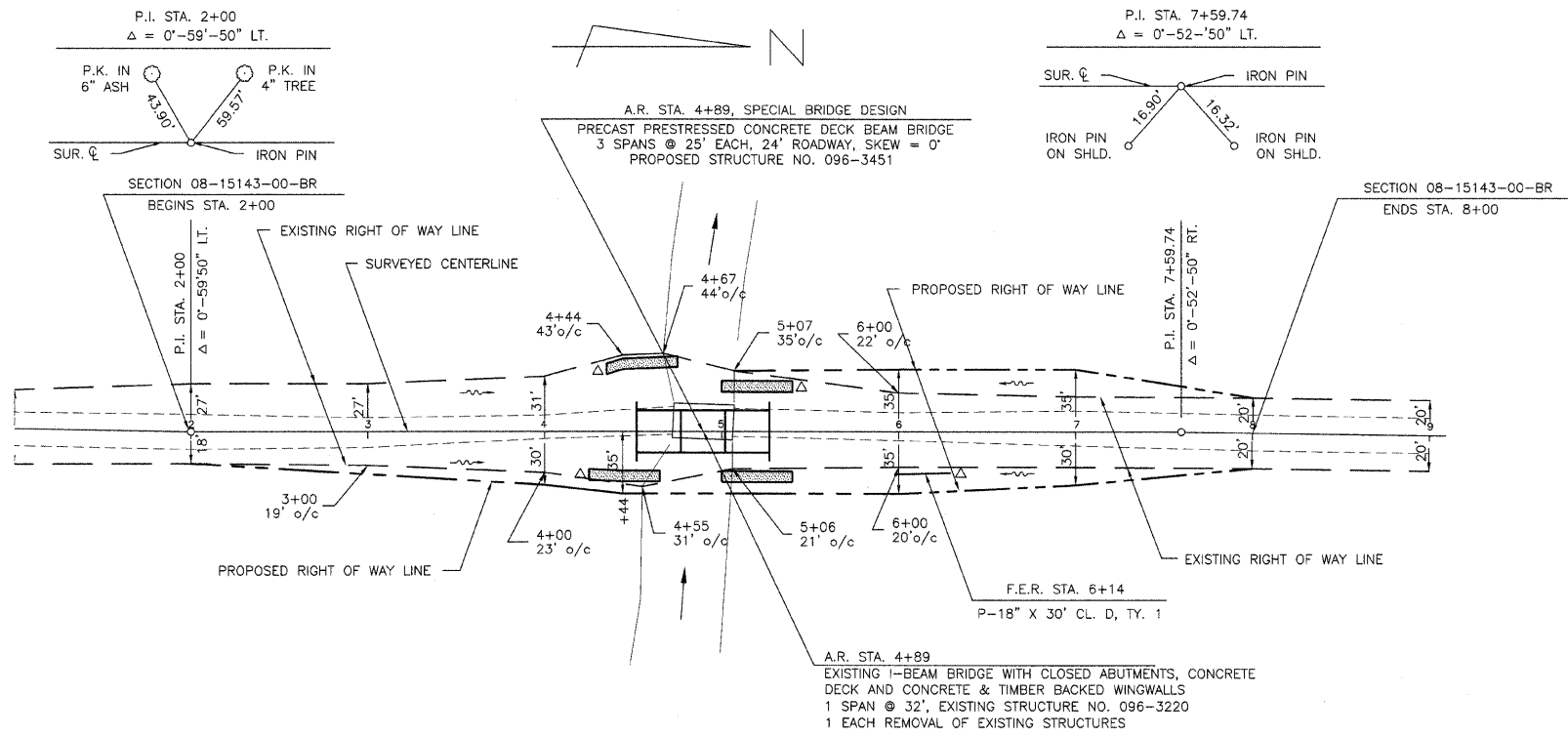
PASSED: *Maureen D. Kost* 10/22/2009
 DISTRICT SEVEN ENGINEER
 OF LOCAL ROADS & STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW: *Paul R. Anshel* 10/22/2009
 DEPUTY DIRECTOR OF HIGHWAYS,
 REGION FOUR ENGINEER

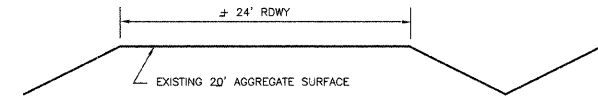
HERMAN M. KLEMICK III & CHRISTOPHER SIMPSON & JUANITA SIMPSON

SECTION	08-15143-00-BR	TOTAL SHEETS	14	SHEET NO.	2
COUNTY	WAYNE				
ROAD DIST.	LEECH				
STA.	1+00	TO STA.	9+00		

CONTRACT NO. 95607



TYPICAL CROSS SECTION OF PROPOSED IMPROVEMENT



TYPICAL CROSS SECTION OF EXISTING ROADWAY

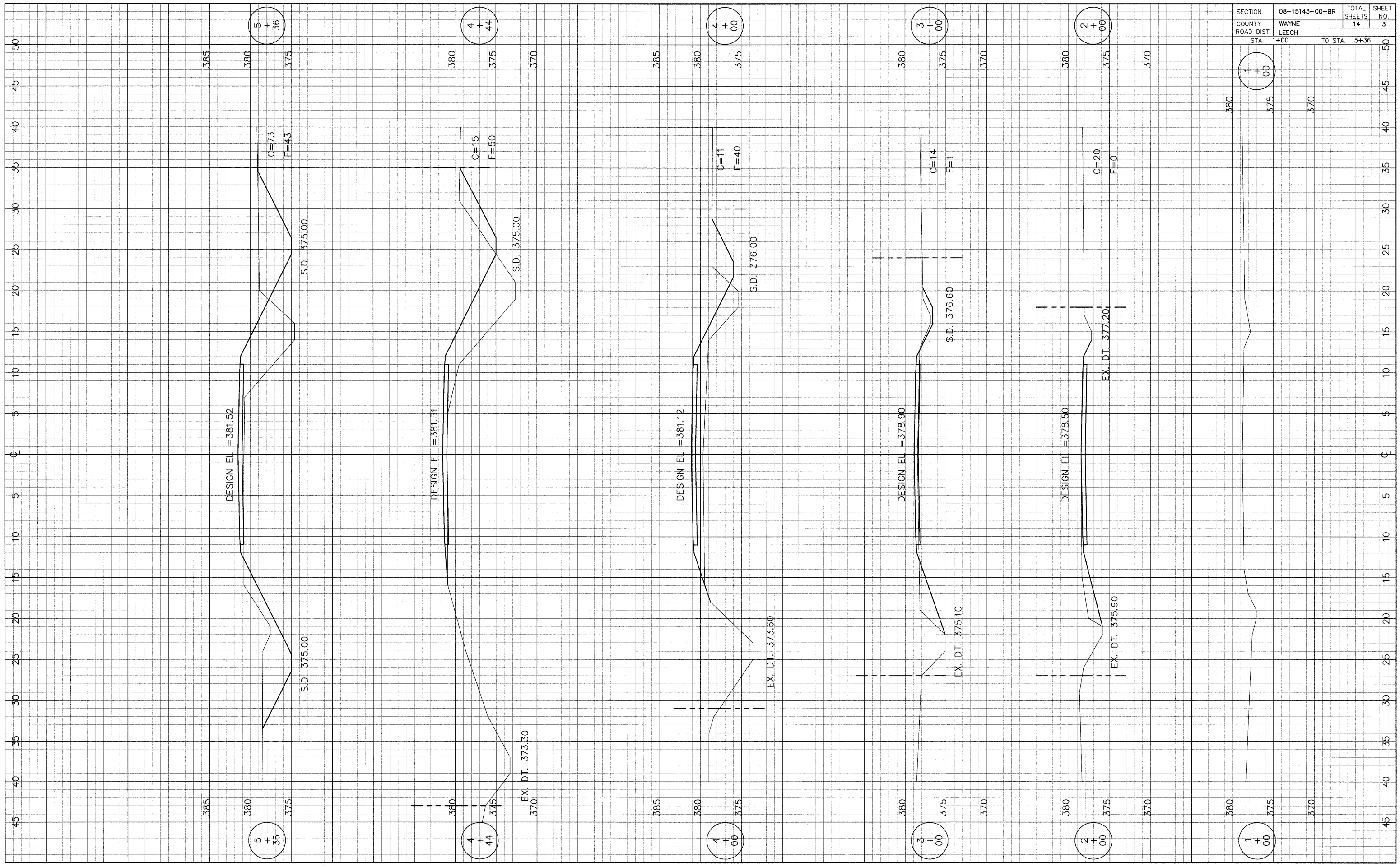
SCALES:
1" = 50' HOR
1" = 10' VER

INA LEE SAMPLE & DELMAR SAMPLE,
TRUSTEES OF REVOCABLE TRUST

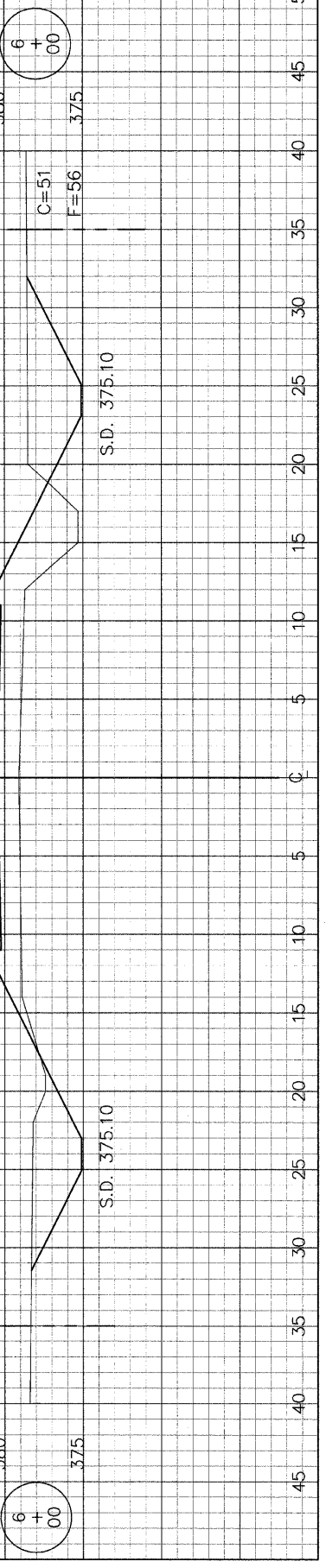
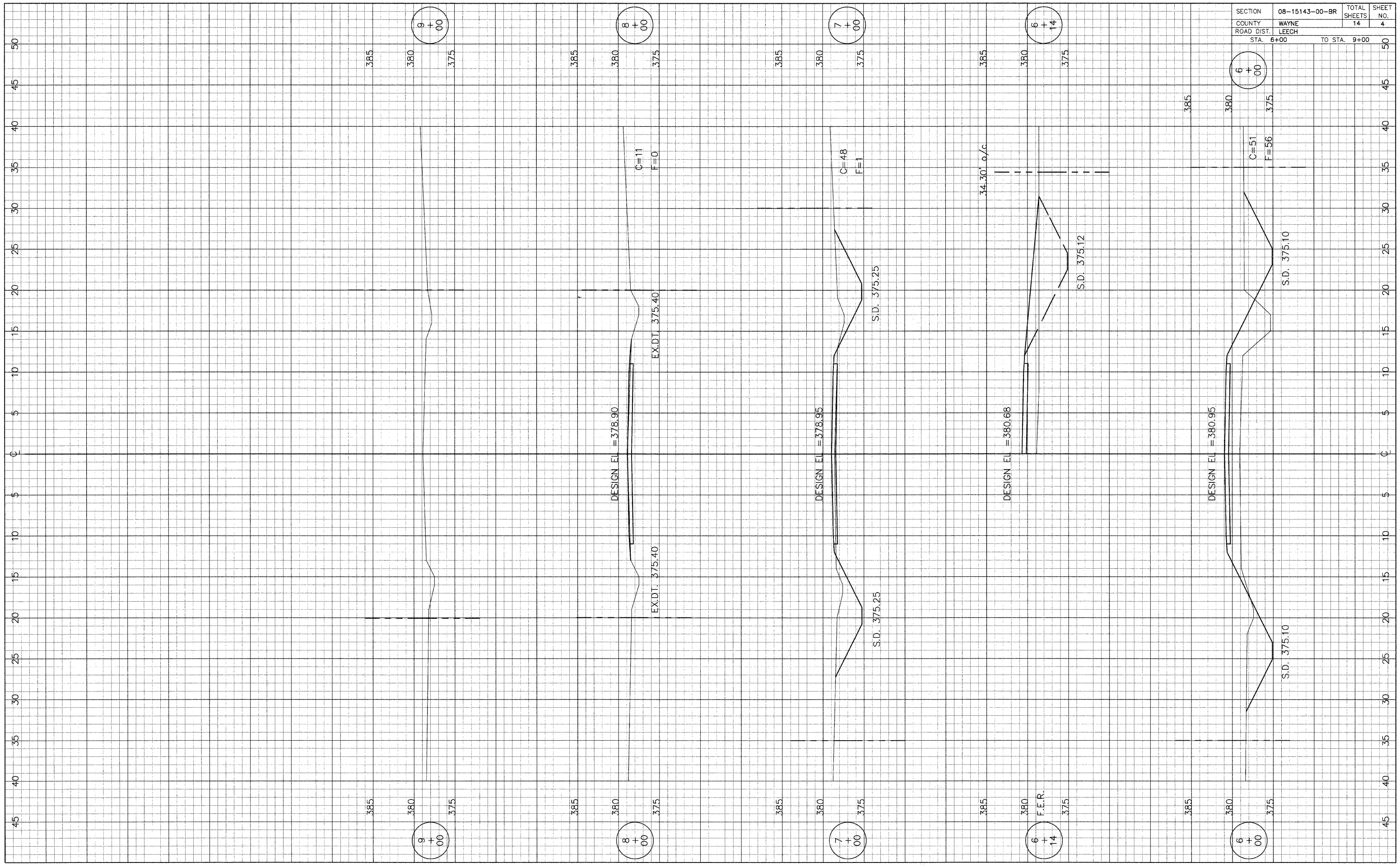
PAULINE FELIX, TRUSTEE OF THE
PAULINE FELIX REVOCABLE TRUST

Station	Elevation	Notes	Earthwork Schedule	Aggregate Base Course	Construct Transitions	Other
410	377.10	B.M. #1 ELEVATION 379.35 P.K. NAIL IN 8" MAPLE ± 80' LT. STA. 5+40	596 CU YD EARTH EXCAVATION 447 CU YD EARTH EXCAVATION ADJUSTED 25% 404 CU YD EMBANKMENT 390 CU YD CHANNEL EXCAVATION 293 CU YD CHANNEL EXCAVATION ADJUSTED 25%	STA. 1+50 TO BRIDGE = 252 TON BRIDGE TO STA. 8+50 = 239 TON F.E.R. STA. 6+14 = 10 TON TOTAL = 501 TON	FROM EXIST. RDWY. @ STA. 1+50 TO PROP. 24' RDWY. @ STA. 2+00 FROM PROP. 24' RDWY. @ STA. 8+00 TO EXIST. RDWY. @ STA. 8+50 EARTHWORK QUANTITIES INCLUDED IN THOSE LISTED	
400	377.80		STONE RIPRAP DITCH RT. STA. 4+25 TO STA. 4+65 = 12 TON LT. STA. 4+35 TO STA. 4+75 = 12 TON LT. STA. 5+00 TO STA. 5+40 = 12 TON RT. STA. 5+00 TO STA. 5+40 = 12 TON TOTAL = 48 TON	TEMPORARY DITCH CHECKS Δ RT. STA. 4+20 = 1 EACH LT. STA. 4+30 = 1 EACH LT. STA. 5+45 = 1 EACH RT. STA. 6+35 = 1 EACH TOTAL = 4 EACH	PERIMETER EROSION BARRIER 15' AT EACH CORNER OF BRIDGE ON TOE OF CHANNEL SLOPE = 60 FEET	SEEDING, CLASS 2 (SPECIAL) STA. 1+50 TO STA. 8+50 = 0.6 ACRES
390	375.90					
380	376.60					
370	375.10					
360	375.10					
350	375.10					UTILITIES NONE
340	375.10					
330	375.8					

SECTION	08-15143-00-BR	TOTAL SHEETS	14	SHEET NO.	3
COUNTY	WAYNE				
ROAD DIST.	LEECH				
STA.	1+00	TO STA.	5+36		



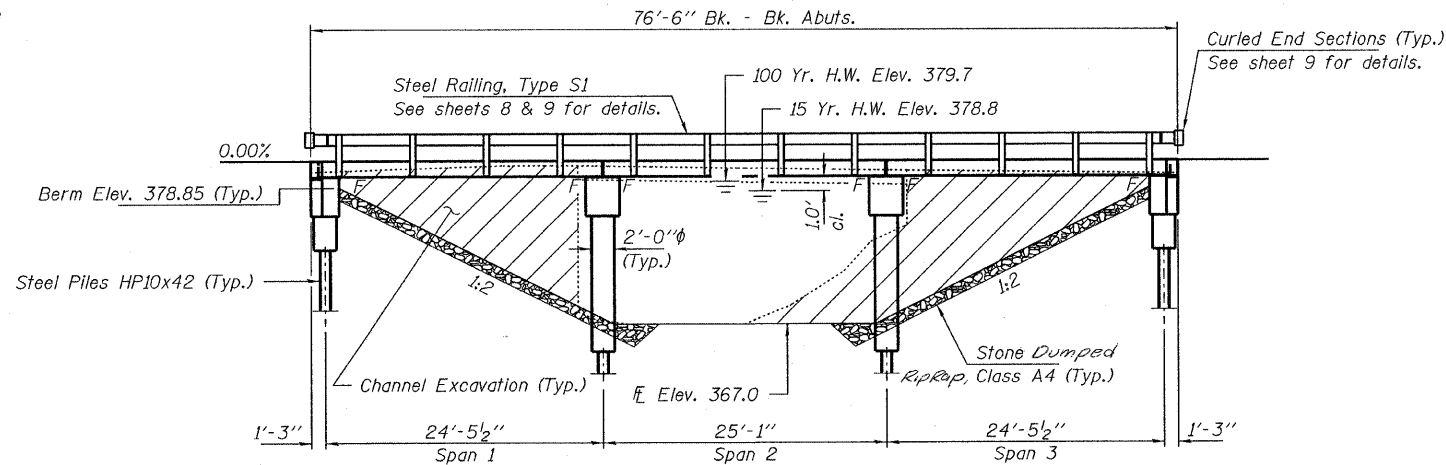
SECTION	08-15143-00-BR	TOTAL SHEETS	14	SHEET NO.	4
COUNTY	WAYNE				
ROAD DIST.	LEECH				
STA. 6+00		TO STA. 9+00			



BENCHMARK: PK Nail in 8" maple tree. ±80' Lt., Sta. 5+40, Elev. 379.35

EXISTING STRUCTURE: A single span I-beam bridge on closed concrete abutments, concrete deck and concrete and timber backed wingwalls. Structure closed to traffic.

No Salvage



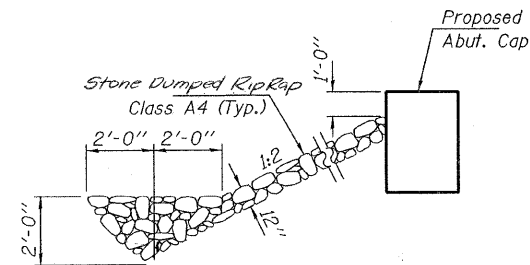
ELEVATION

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 South Abutment or approved by the Engineer before ordering the remainder of piles.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). 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. See Sheets 13 & 14 for Borings.

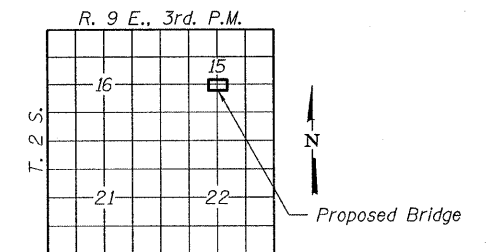
BUILT 200_ BY
WAYNE COUNTY
SEC. 08-15143-00-BR
LEECH ROAD DISTRICT
STR. NO. 096-3451
LOADING HL-93

NAME PLATE
See Std. 515001

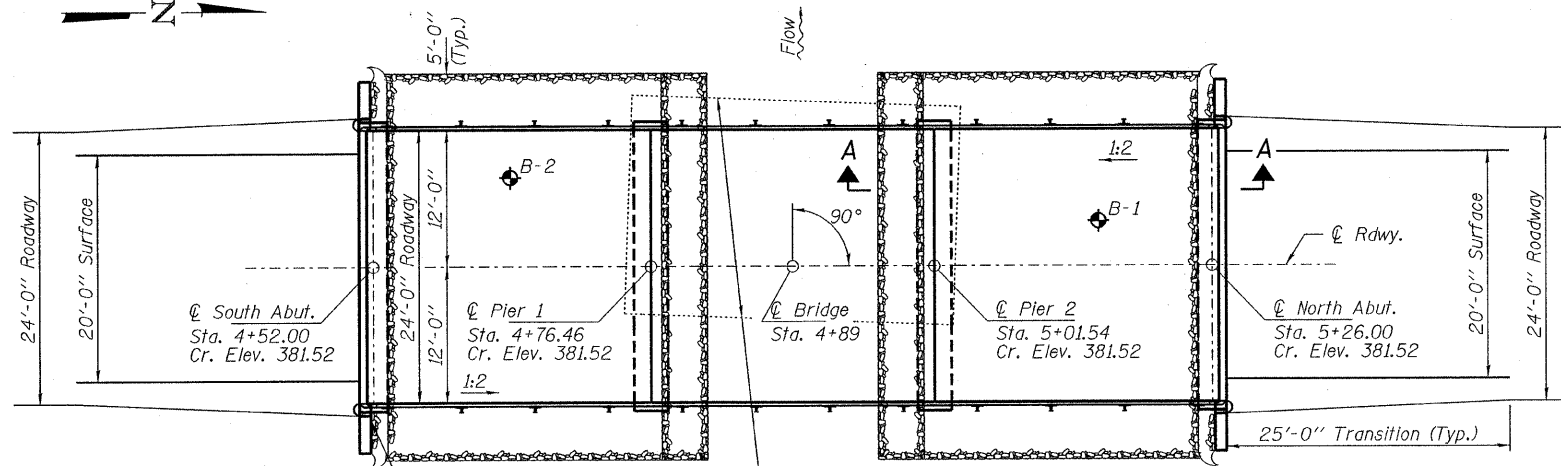


SECTION A-A

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



LOCATION SKETCH



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			390
Stone Dumped Riprap, Class A4	Ton			140
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		42.0	42.0
Concrete Encasement	Cu. Yd.		14.6	14.6
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,800		1,800
Reinforcement Bars	Pound		4,390	4,390
Steel Railing, Type S1	Foot	147		147
Furnishing Steel Piles HP10x42	Foot		910	910
Driving Piles	Foot		910	910
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 (1/2" φ low lax. strands)
fpbt = 201,960 psi (1/2" φ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2007 AASHTO LRFD with all applicable Interims.
50#/Sq. Ft. Included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.278g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.666g
Soil Site Class = D

WATERWAY INFORMATION

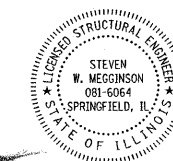
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	15	1,723	289	458	378.8	0.2	0.0	379.0	378.8
Base	100	2,960	316	510	379.7	0.0	0.1	379.7	379.8
Max. Calc.	500	4,060	321	528	380.0	0.0	0.1	380.0	380.1

Existing Low Grade Elev. 378.5 @ Sta. 3+00
Proposed Low Grade Elev. 378.5 @ Sta. 2+50

Drainage Area = 6.20 Sq. Mi.

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. Meigs
ILLINOIS STRUCTURAL NO. 081-6064 Expires 11-30-2010



GENERAL PLAN AND ELEVATION
STRUCTURE NO. 096-3451

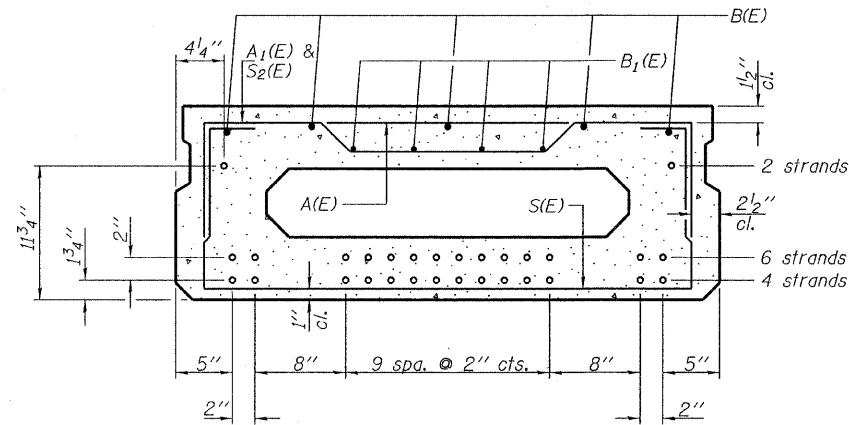
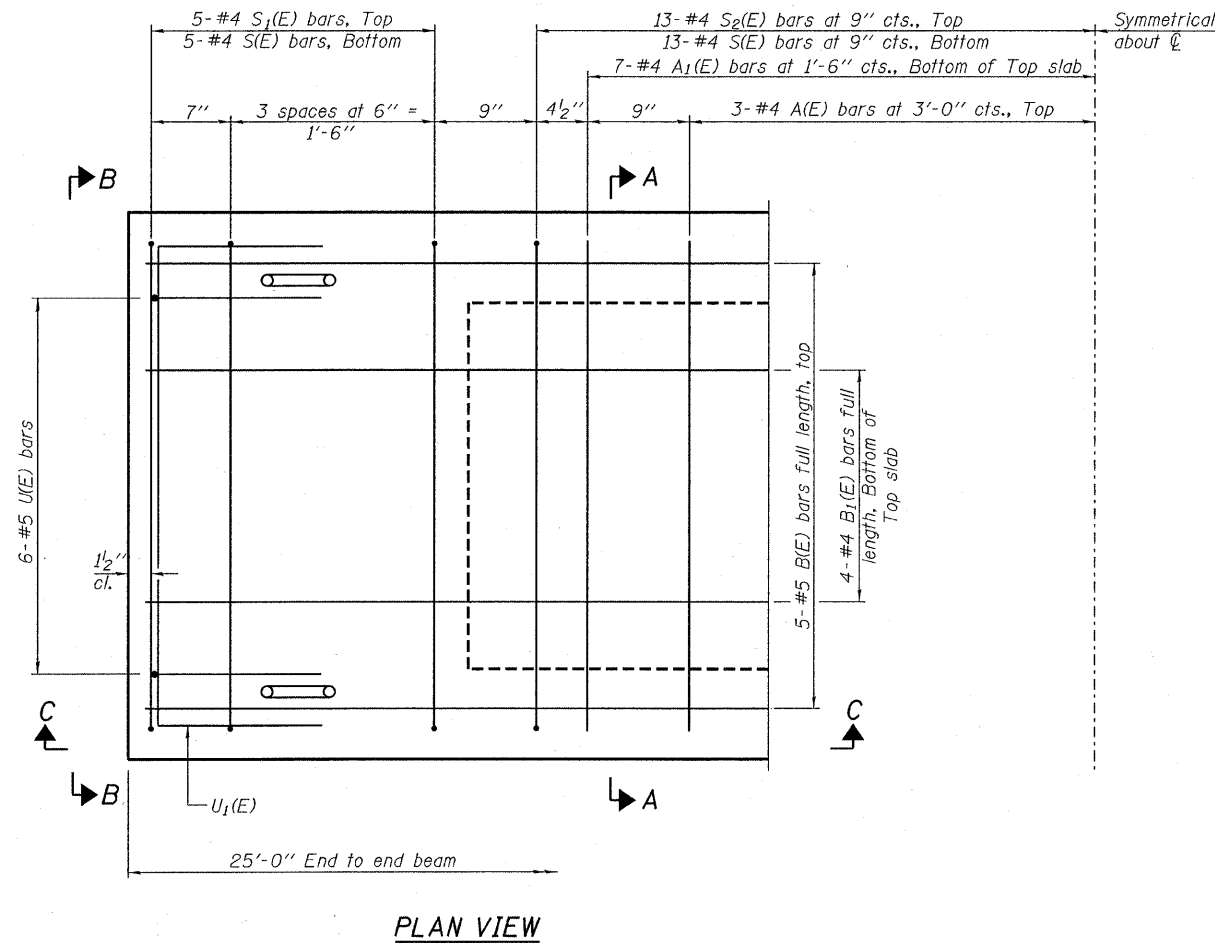
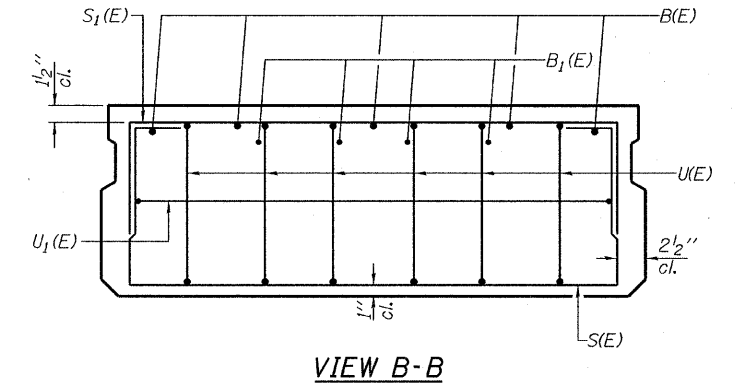
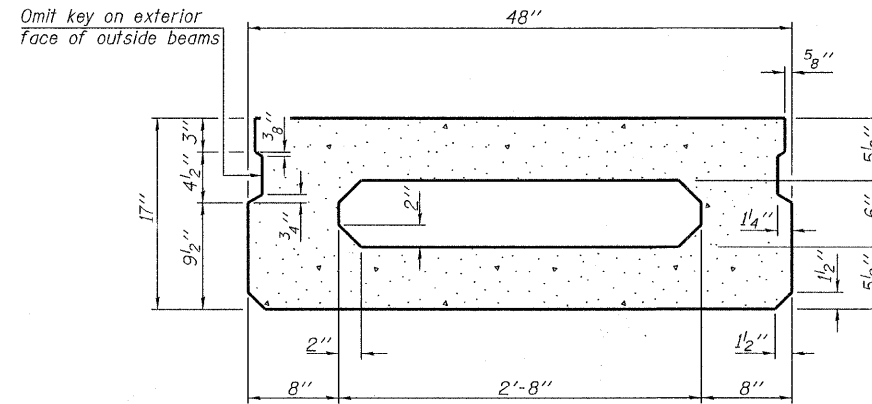
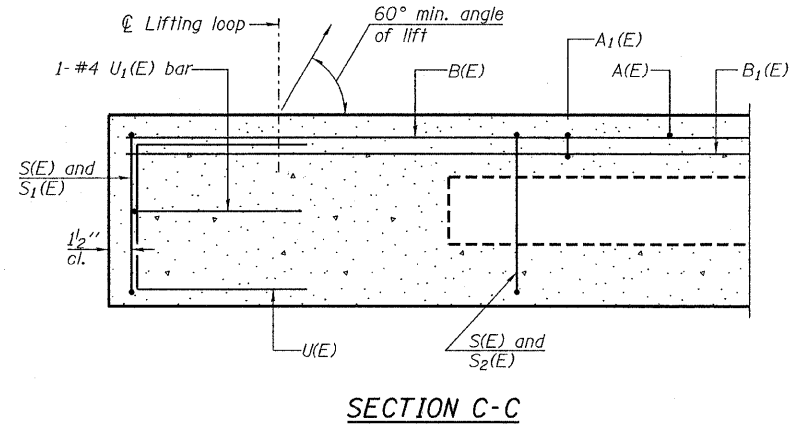
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

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

184.000950
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 09.0060.130 DATE: 06/22/09

SHEET NO. 1 10 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	622	08-15143-00-BR	WAYNE	14	5
LEECH ROAD DISTRICT			CONTRACT NO. 95607		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



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)	6	#4	3'-7"	—
A1(E)	14	#4	3'-10"	~
B(E)	5	#5	24'-8"	—
B1(E)	4	#4	24'-8"	—
S(E)	36	#4	6'-9"	□
S1(E)	10	#4	5'-3"	□
S2(E)	26	#4	5'-6"	□
U(E)	12	#5	3'-8"	□
U1(E)	2	#4	6'-0"	□

Note: See sheets 3 & 4 of 10 for additional details and Bill of Material.

Note: 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.

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-1748-0 10-1-08

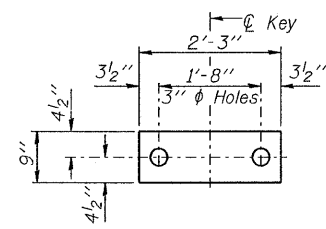
HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com

HLR
184.000950
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
PROJECT NUMBER: 09.0060.130 DATE: 08/22/09

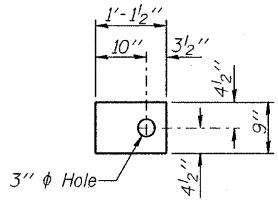
SHEET NO. 2
10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
622	08-15143-00-BR	WAYNE	14	6
LEECH ROAD DISTRICT		CONTRACT NO. 95607		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUPERSTRUCTURE
17" X 48" PPC DECK BEAM
STRUCTURE NO. 096-3451



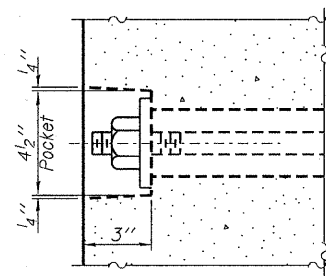
FABRIC BEARING PAD
(Interior 30 - Req'd.)



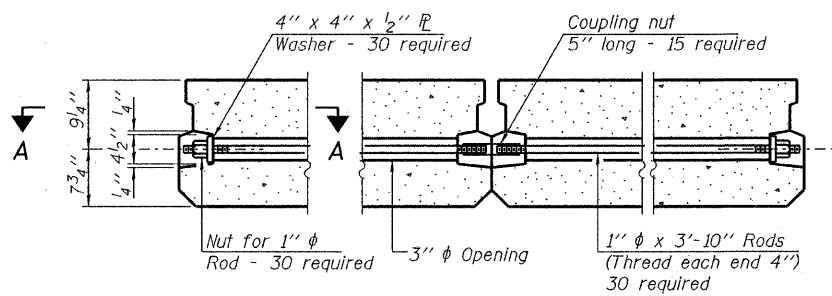
FABRIC BEARING PAD
(Exterior - 12 Req'd.)

FIXED

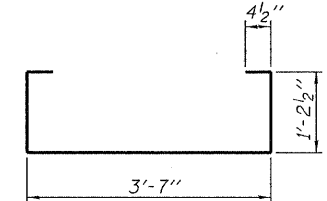
Note: Omit holes when using expansion bearings.



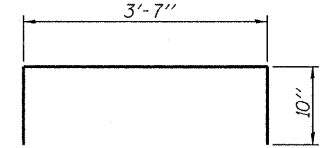
SECTION A-A



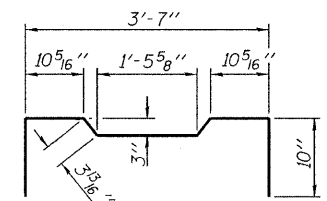
TYPICAL TRANSVERSE TIE ASSEMBLY



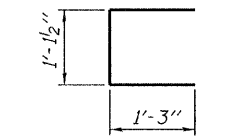
BAR S(E)



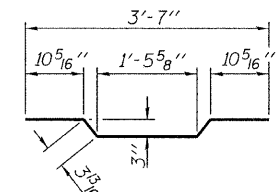
BAR S1(E)



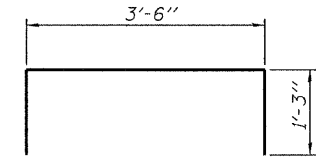
BAR S2(E)



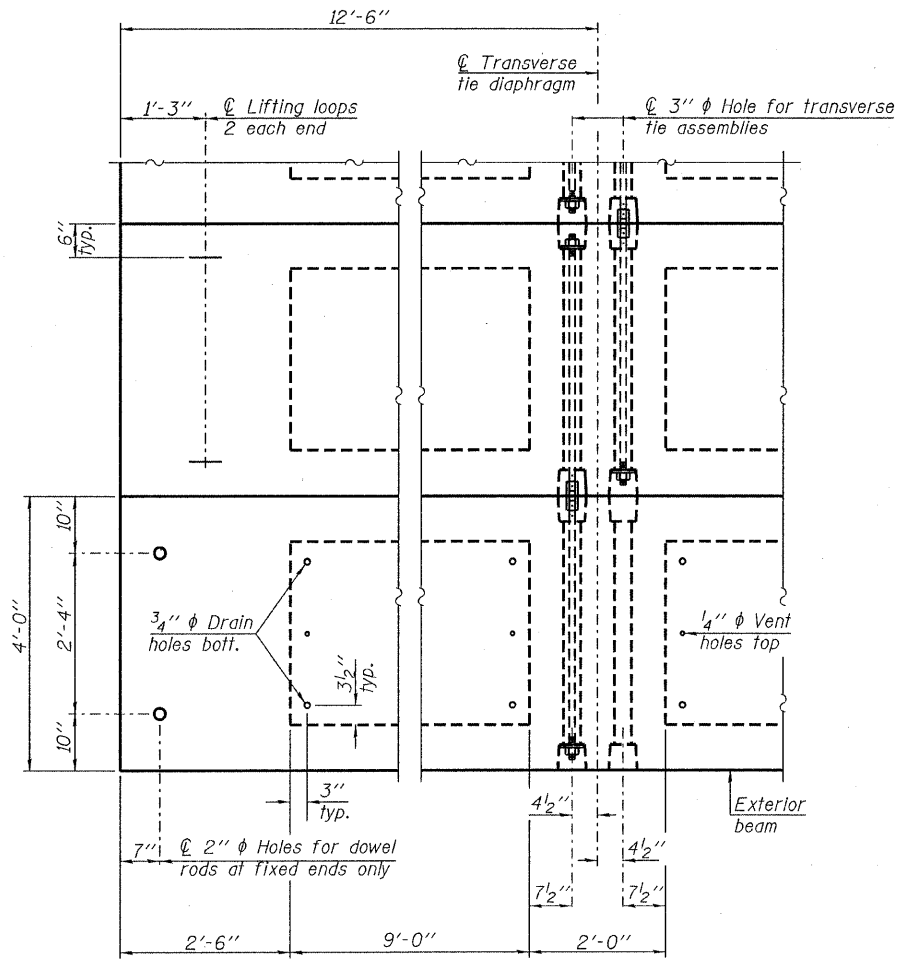
BAR U(E)



BAR A1(E)



BAR U1(E)



PLAN VIEW

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

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-1748-0D 10-1-08

NOTES

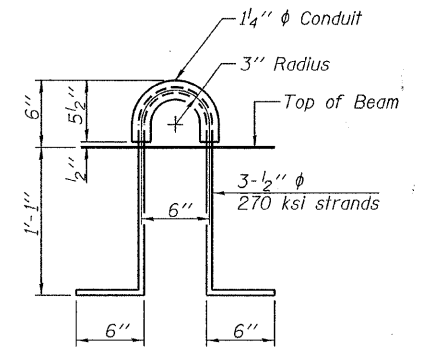
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior 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 1021.06 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.



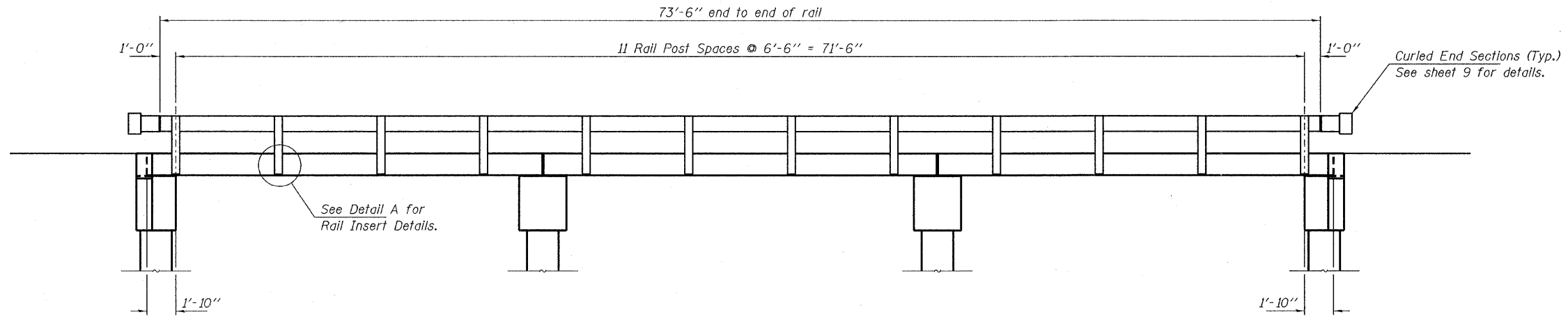
LIFTING LOOP DETAIL

BILL OF MATERIAL

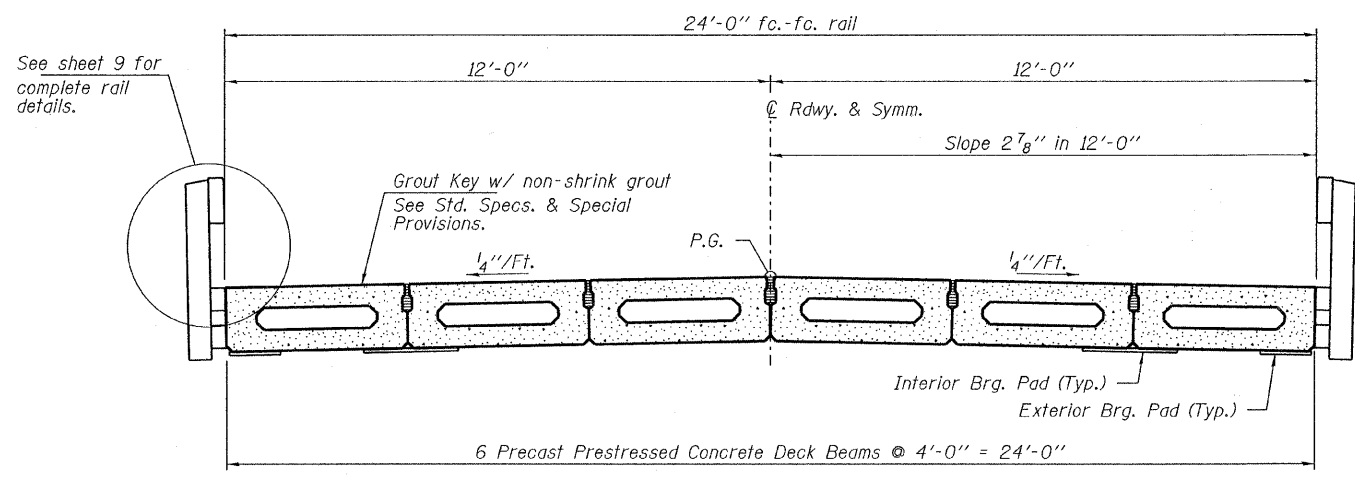
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,800
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SUPERSTRUCTURE
17" X 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 096-3451

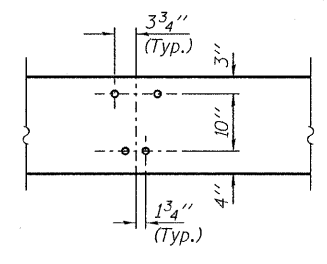
HAMPTON, LENZINI AND RENWICK, INC. CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrenwicking.com 184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION PROJECT NUMBER: 09.0060.130 DATE: 06/22/09	SHEET NO. 3	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	10 SHEETS	622	08-15143-00-BR	WAYNE	14	7
LEECH ROAD DISTRICT			CONTRACT NO. 95607			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT			



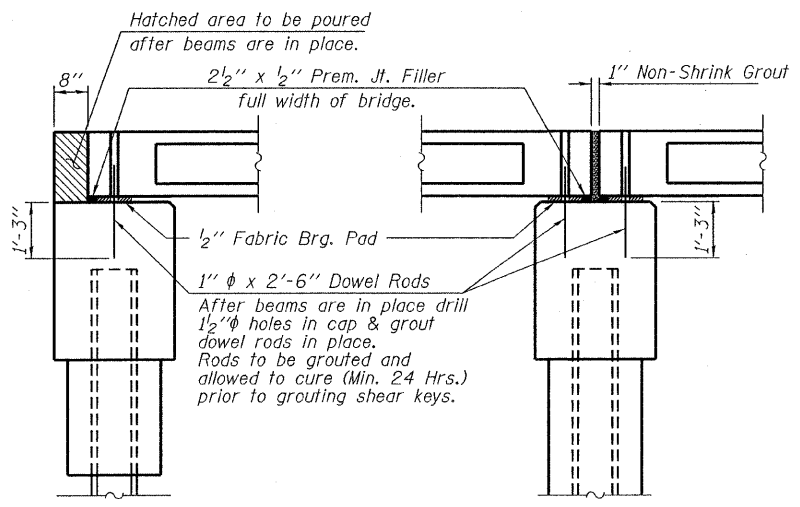
ELEVATION
Showing Rail Post Spaces
See sheet 5 of 10 for Railing Details.



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



DETAIL A



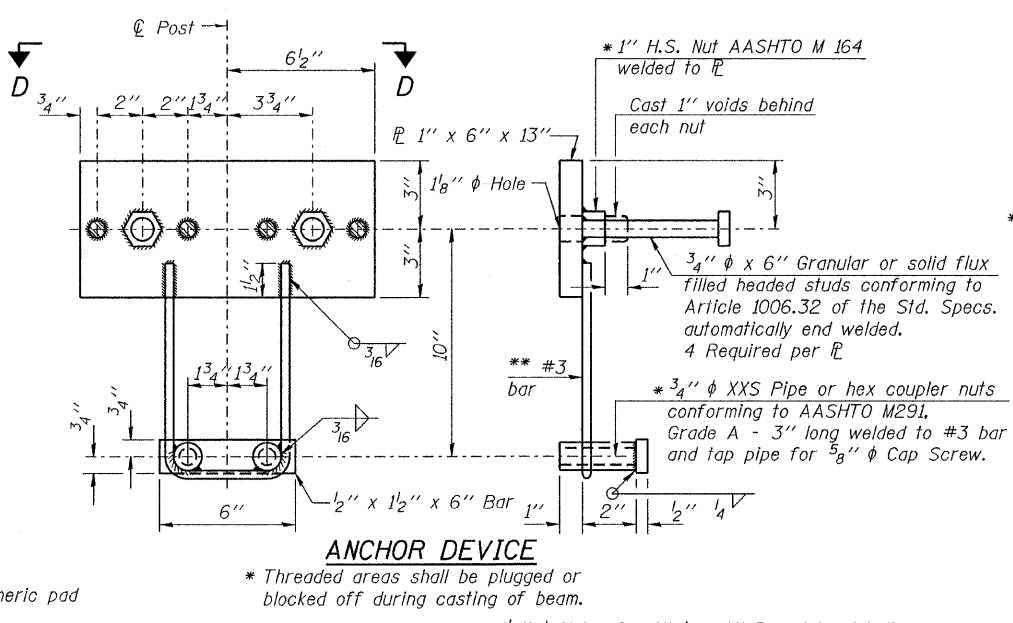
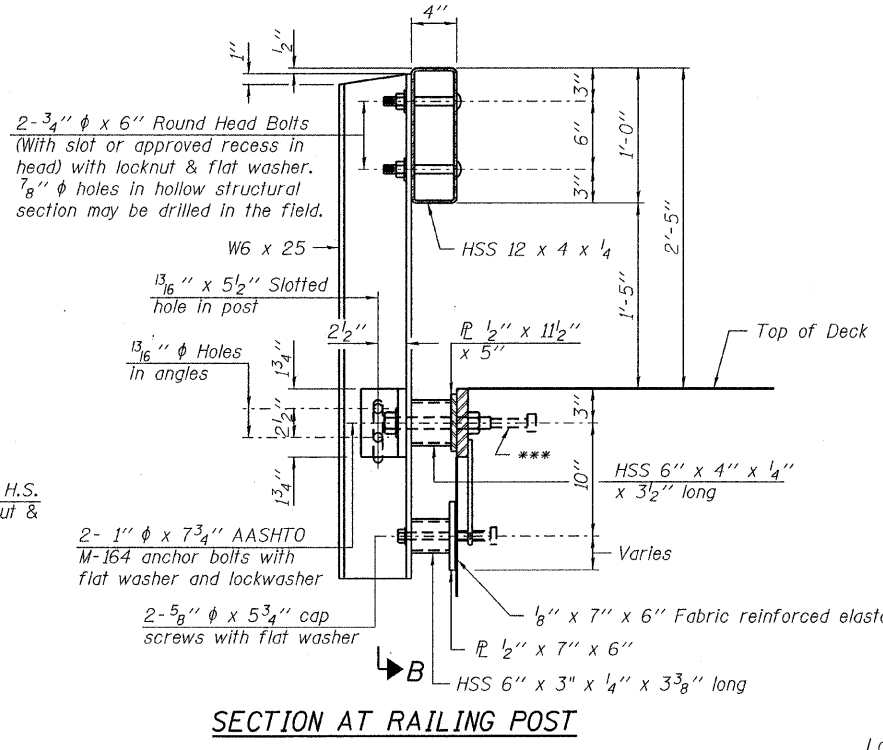
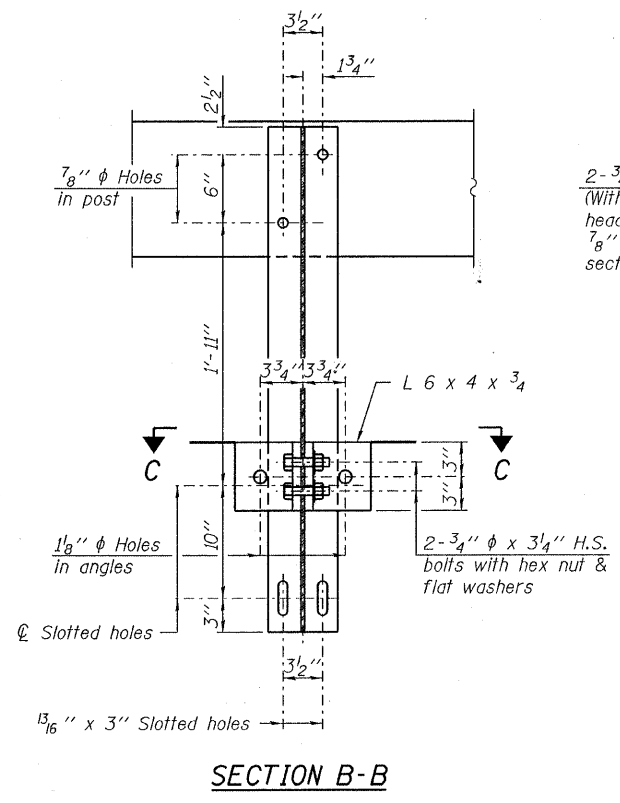
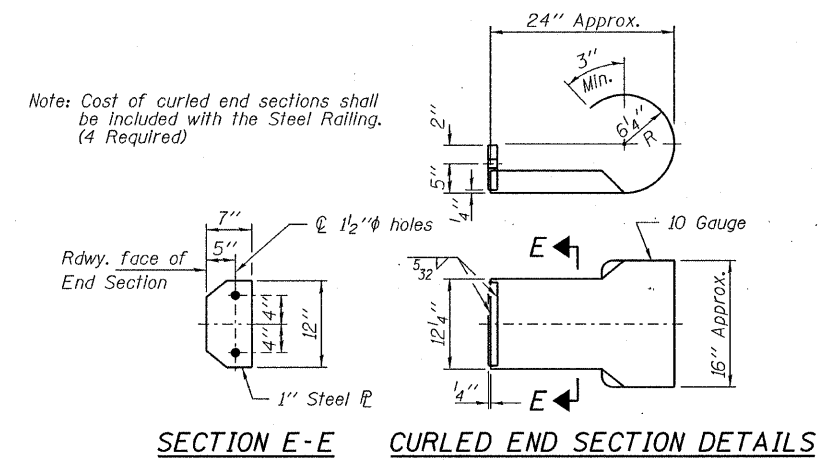
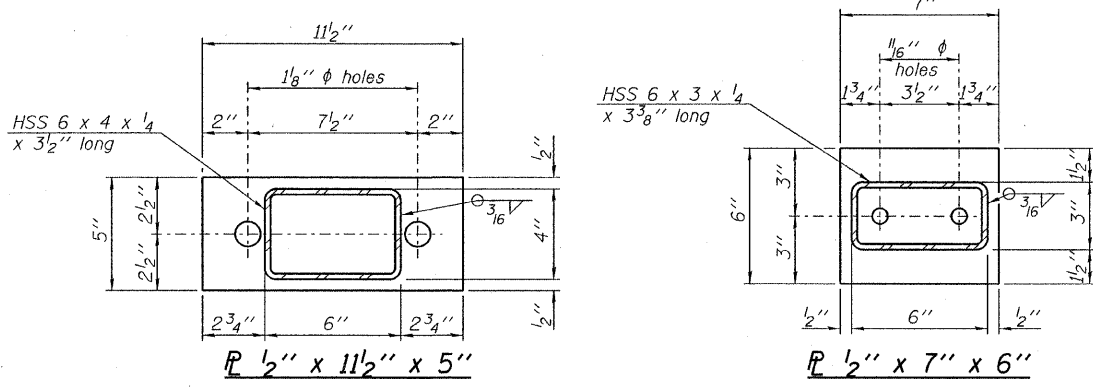
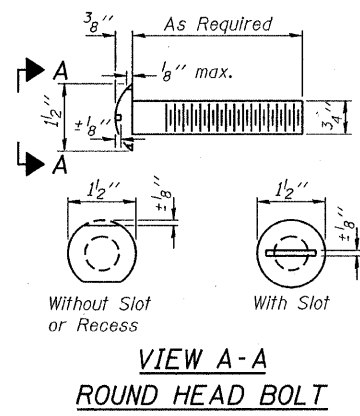
SECTION AT ABUTMENTS
© Rt. L's

SECTION AT PIERS
© Rt. L's

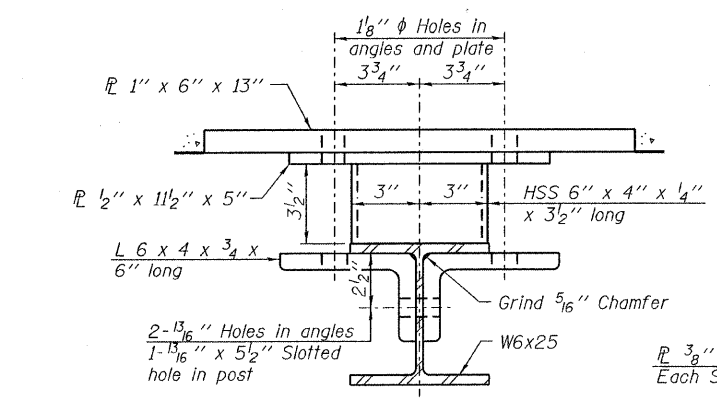
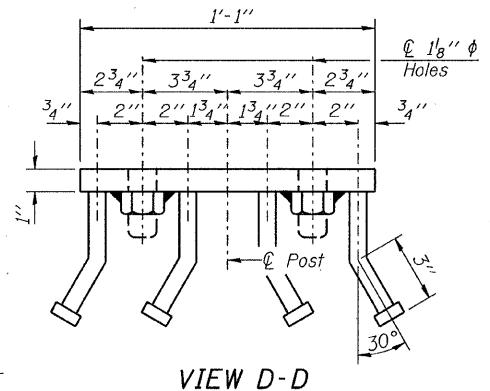
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 096-3451

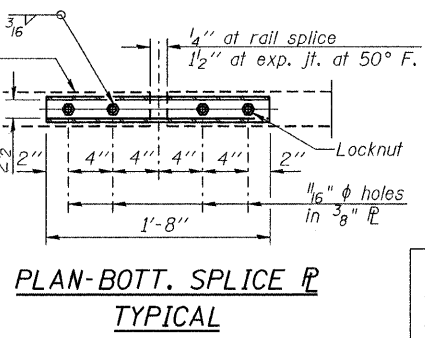
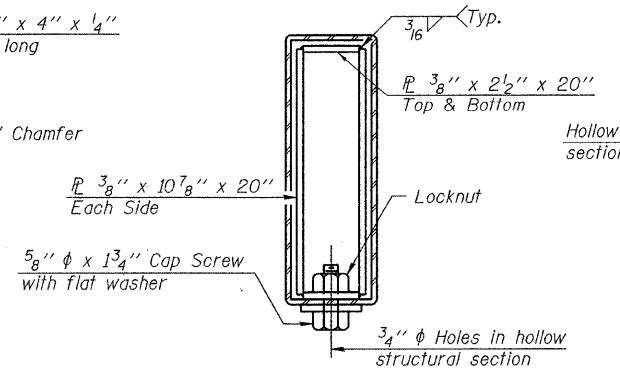
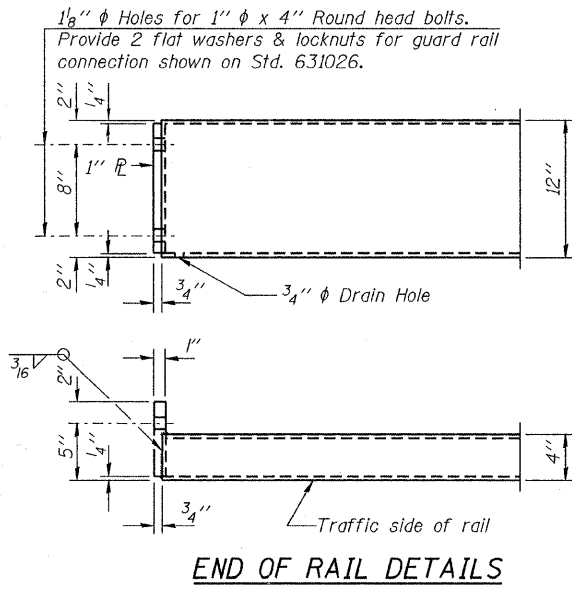
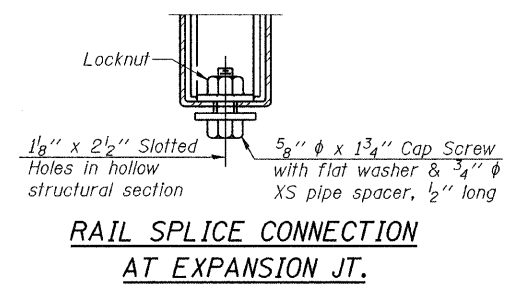
HAMPTON, LENZINI AND RENWICK, INC. CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.00059 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION PROJECT NUMBER: 09.0060.130 DATE: 06/22/09	SHEET NO. 4	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	10 SHEETS	622	08-15143-00-BR	WAYNE	14	8
			LEECH ROAD DISTRICT	CONTRACT NO. 95607		
			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	



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.



** 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 inch.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	147

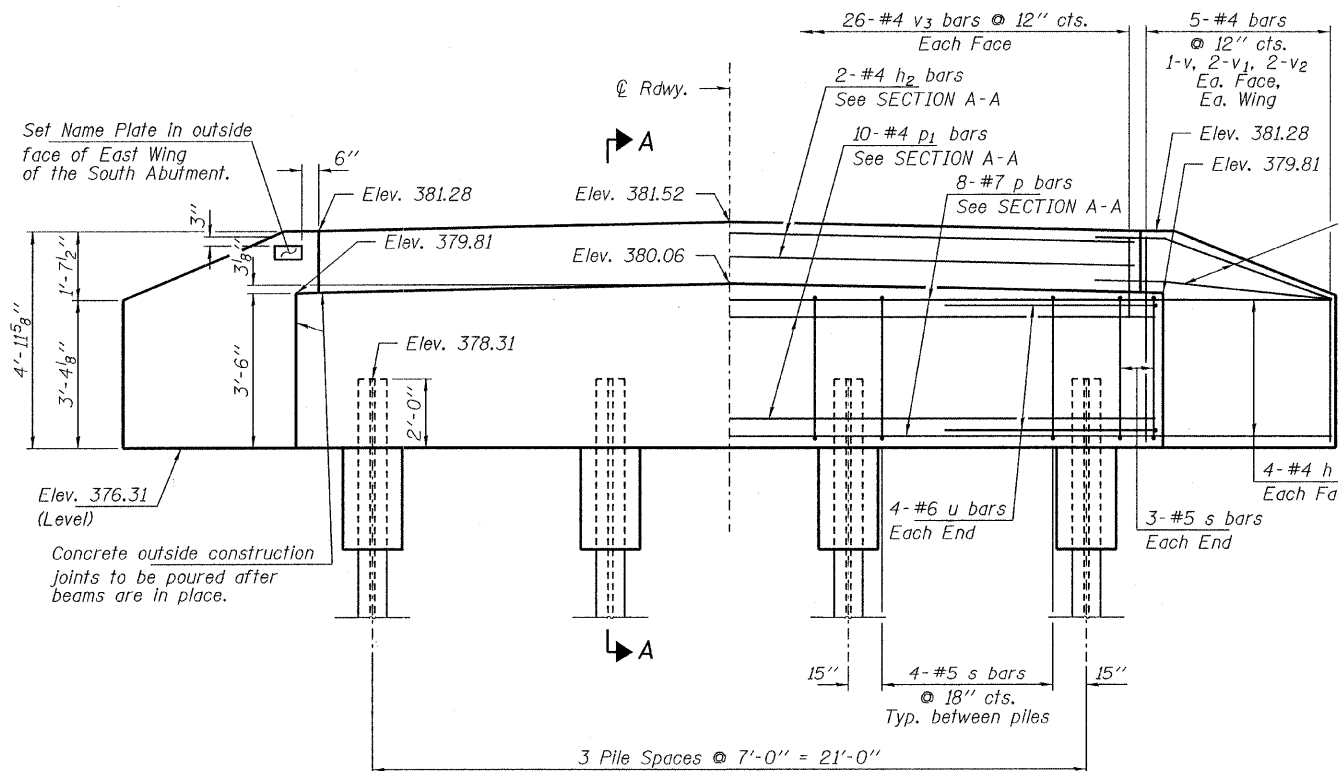
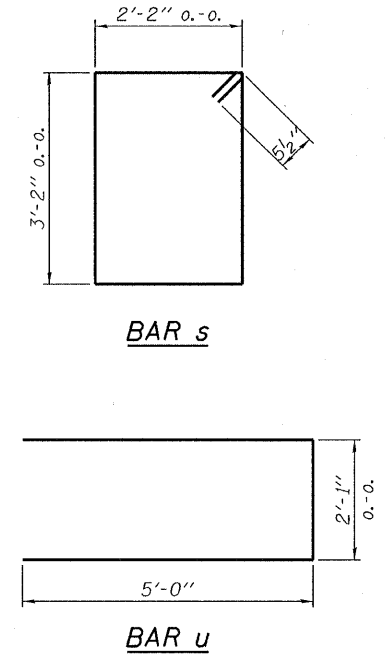
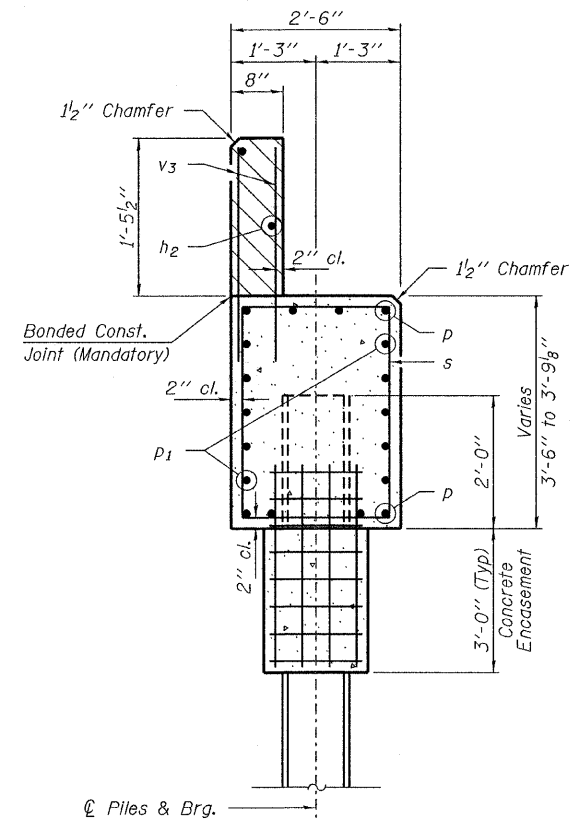
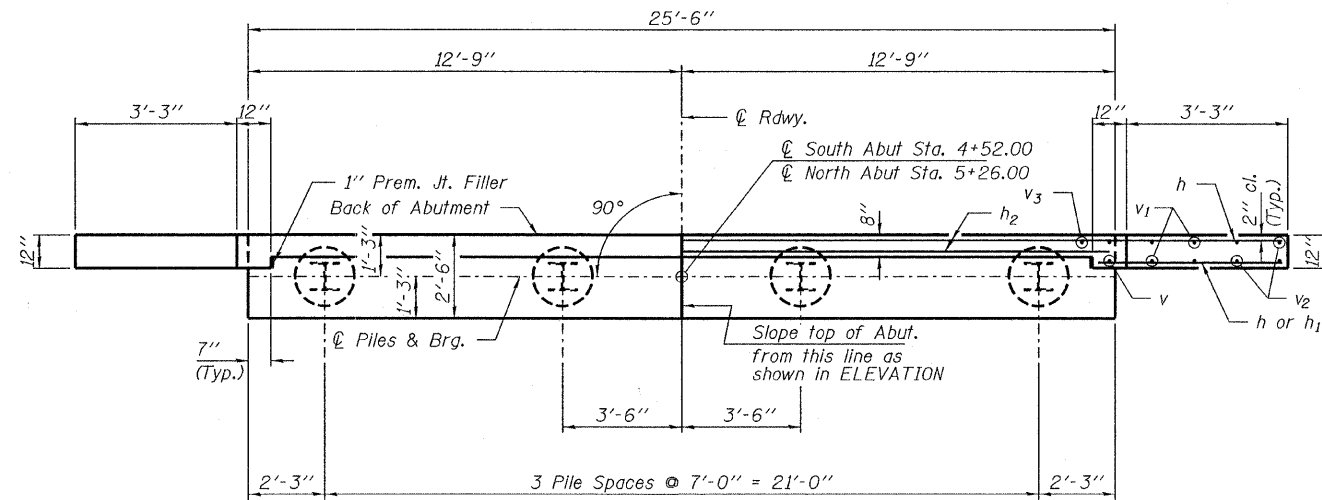
DESIGNED - A.S.L.
 CHECKED - S.W.M.
 DRAWN - D.T.M.
 CHECKED - D.A.B.
 R-23A

10-1-08 (10'-9" Maximum Post Spacing)

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 184.00050
 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION
 PROJECT NUMBER: 09.0080.130 DATE: 06/22/09

SHEET NO. 5 10 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	622	08-15143-00-BR	WAYNE	14	9
LEECH ROAD DISTRICT			CONTRACT NO. 95607		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

**STEEL RAILING, TYPE S-1
STRUCTURE NO. 096-3451**



Note: Extend h bars into abutment cap.

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

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: 65 Ft/Pile

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

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	5'-6"	—
h ₁	8	#4	4'-0"	—
h ₂	4	#4	25'-2"	—
p	16	#7	25'-2"	—
p ₁	20	#4	25'-2"	—
s	36	#5	11'-7"	□
u	16	#6	12'-1"	—
v	8	#4	4'-6"	—
v ₁	16	#4	4'-0"	—
v ₂	16	#4	3'-0"	—
v ₃	104	#4	2'-4"	—
Concrete Structures			Cu. Yd.	21.4
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,380
Steel Piles HP10x42			Foot	455
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

ABUTMENTS
STRUCTURE NO. 096-3451

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

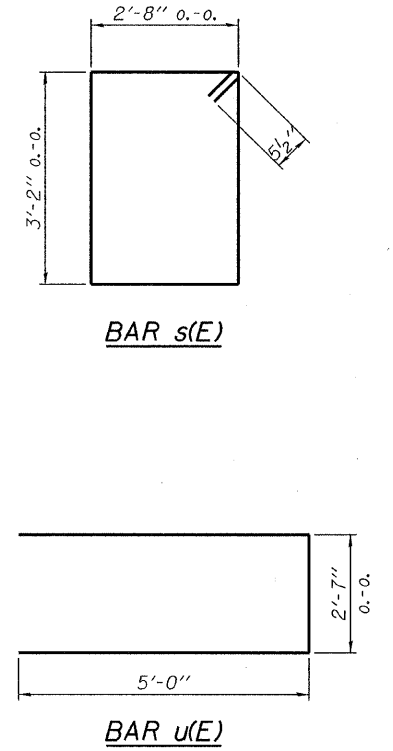
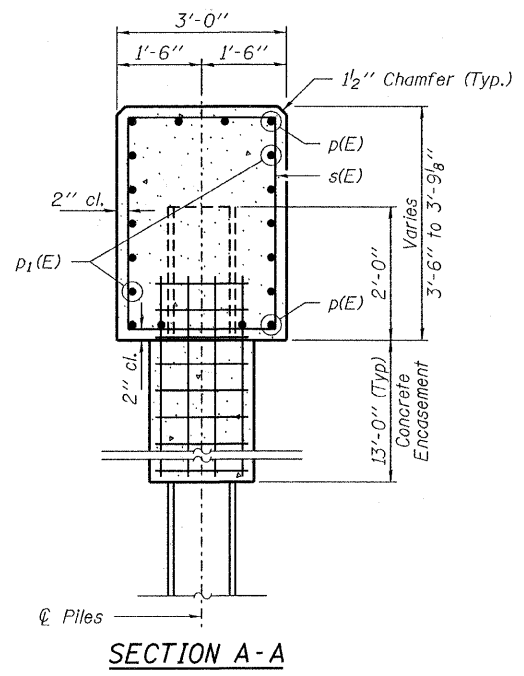
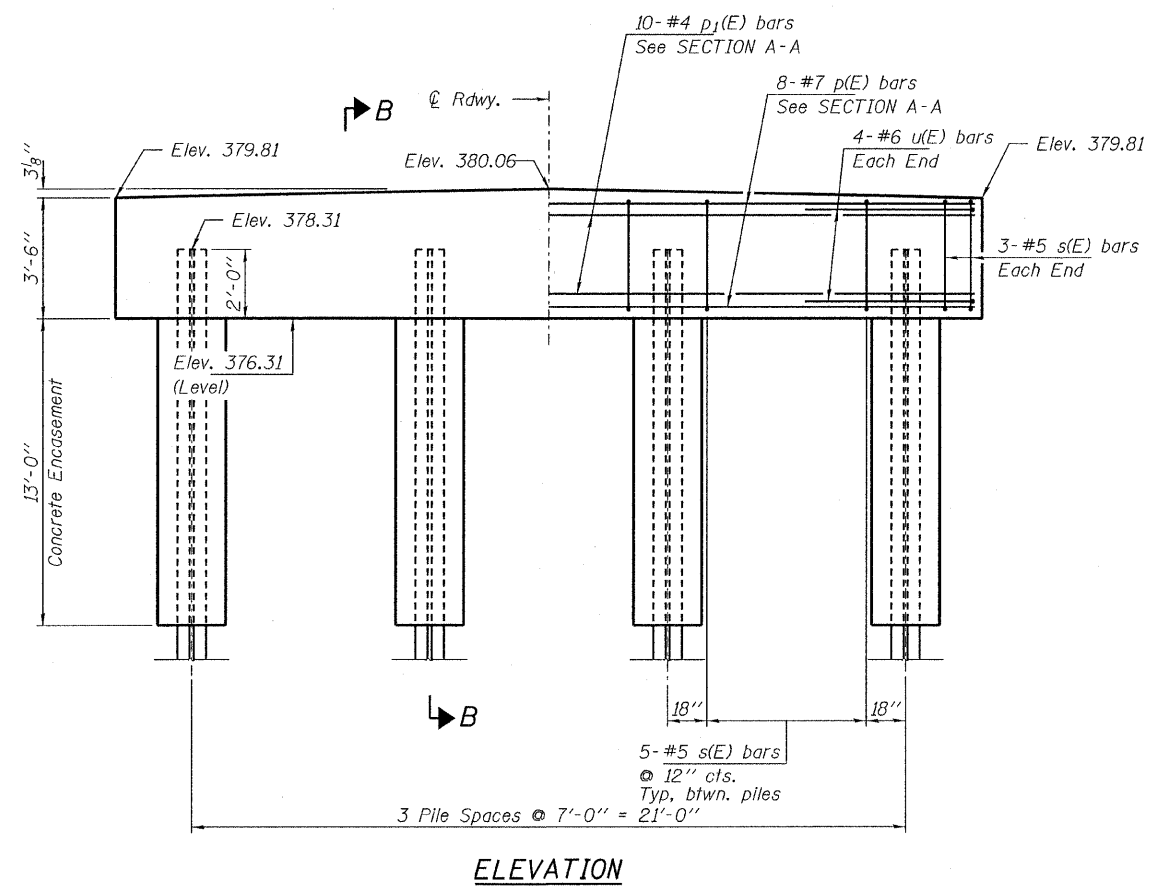
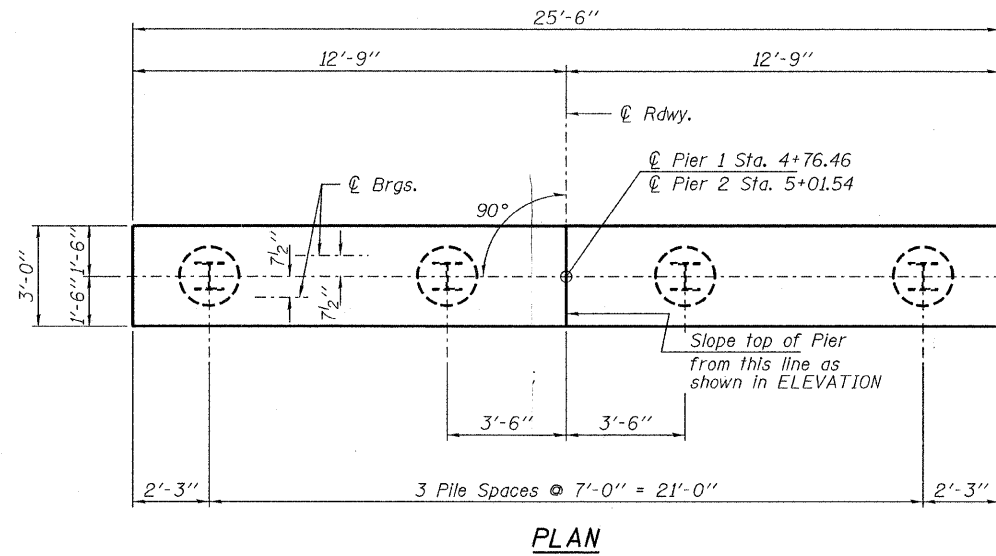
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217.546.3400 www.hlrenwicking.com

184.000950
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 09.0060.130 DATE: 08/22/09

SHEET NO. 6
10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
622	08-15143-00-BR	WAYNE	14	10
LEECH ROAD DISTRICT		CONTRACT NO. 95607		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PILE DATA

Type: Steel HP10x42
 No. Req'd. (2 Piers): *8
 Factored Resistance Available (R_f): 167 Kips/Pile
 Nominal Required Bearing (R_n): 335 Kips/Pile
 Est. Length: 65 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.

BILL OF MATERIAL - 2 PIERS

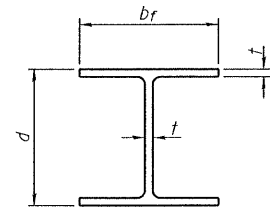
BAR	NO.	SIZE	LENGTH	SHAPE
p(E)	16	#7	25'-2"	—
p ₁ (E)	20	#4	25'-2"	—
s(E)	42	#5	12'-7"	□
u(E)	16	#6	12'-7"	▭
Concrete Structures			Cu. Yd.	20.6
Concrete Encasement			Cu. Yd.	11.8
Reinforcement Bars			Pound	2,010
Steel Piles HP10x42			Foot	455
Test Pile Steel HP10x42			Each	1

**PIERS
STRUCTURE NO. 096-3451**

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

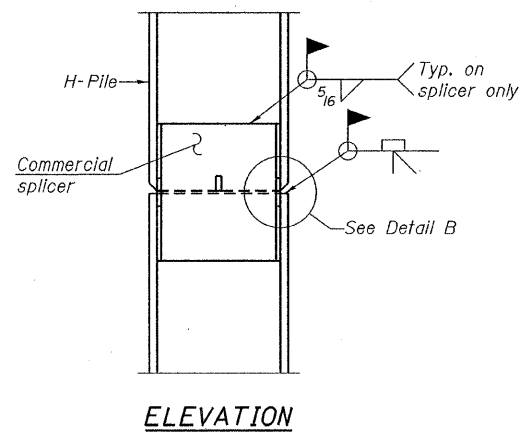
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SHEET NO. 7 10 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	622	08-15143-00-BR	WAYNE	14	11
LEECH ROAD DISTRICT			CONTRACT NO. 95607		
PROJECT NUMBER: 09.0060.130		DATE: 08/22/09		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

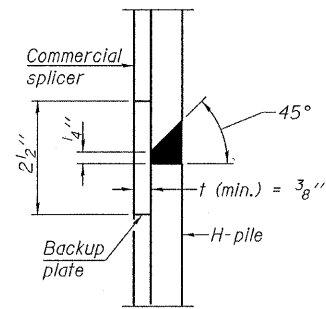


STEEL PILE TABLE

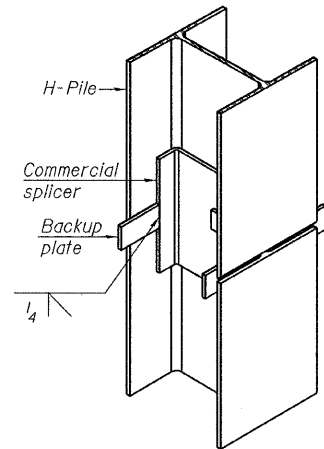
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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

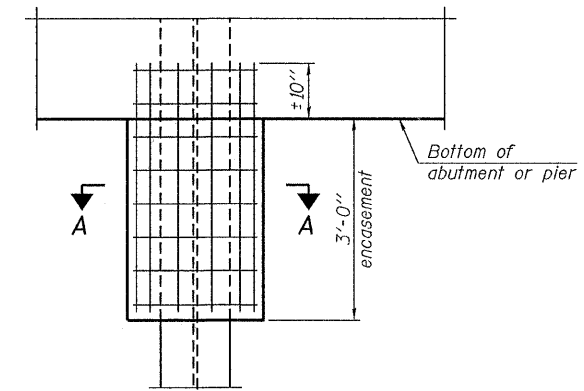


DETAIL "B"



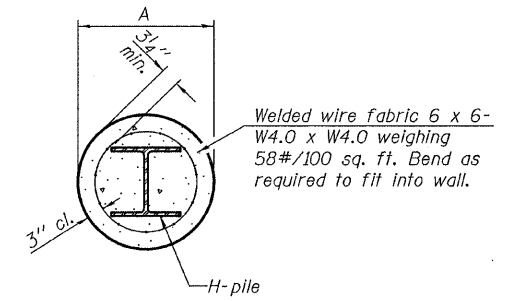
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



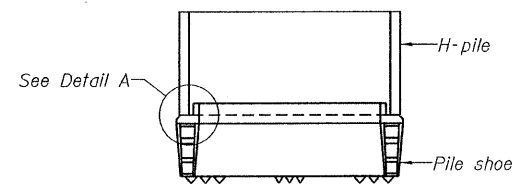
ELEVATION

PILE ENCASEMENT

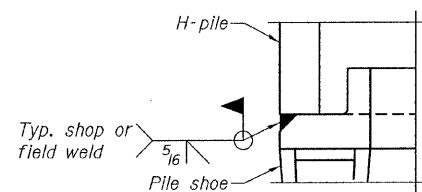


SECTION A-A

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

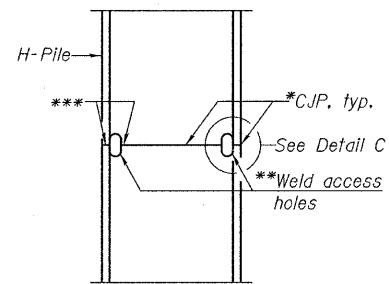


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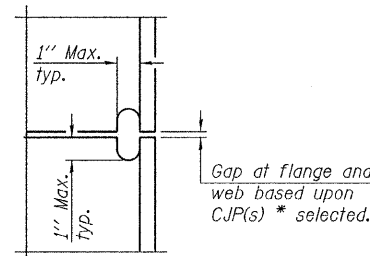


DETAIL A

H-PILE SHOE ATTACHMENT

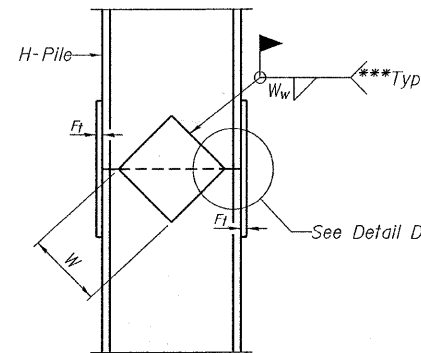


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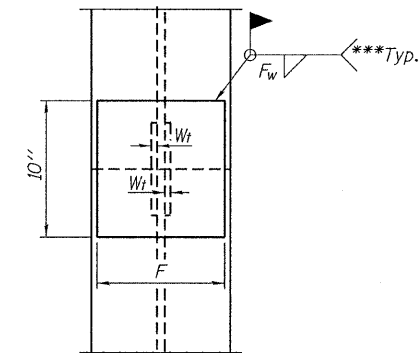


DETAIL C

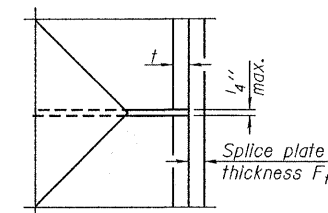
COMPLETE PENETRATION WELD SPLICE



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

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

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

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

F-HP 10-1-08

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184.000989
 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORPORATION
 PROJECT NUMBER: 09.0080.130 DATE: 06/22/09

SHEET NO. 8

10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
622	08-15143-00-BR	WAYNE	14	12
LEECH ROAD DISTRICT		CONTRACT NO. 95607		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

**HP PILE DETAILS
STRUCTURE NO. 096-3451**

