

70433

PIATT J&R

#14

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 70433		

~~9-19-08 Letting, Item 014~~

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

# PROPOSED HIGHWAY PLANS

FAP ROUTE 721 (ILLINOIS 10)  
SECTION (115BR-1)BR  
PROJECT BHF-0721(077)  
PIATT COUNTY

C-95-077-04  
SUPERSTRUCTURE REPLACEMENT  
OVER MADDEN CREEK  
0.5 MILES EAST OF LODGE

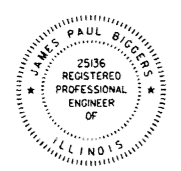
100%  
8-8-2009

FOR INDEX OF SHEETS, SEE SHEET NO. 2

074-0005



*James Paul Biceps*  
JAMES PAUL BICEPS, P.E.



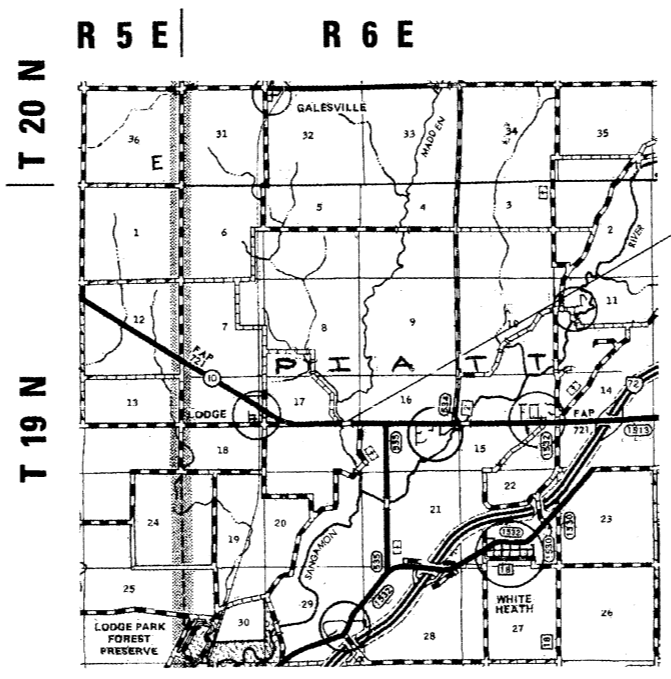
DATE 6/18/08  
LICENSE EXPIRES 11/30/09

PLANS PREPARED BY:

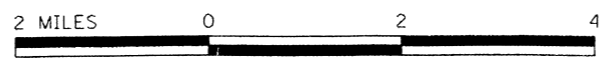


**JOHNSON, DEPP & QUISENBERRY**  
CONSULTING ENGINEERS

6450 South Sixth Street Road, Suite B Springfield, Illinois 62712  
Phone: (217) 529-4534 Fax: (217) 529-8278

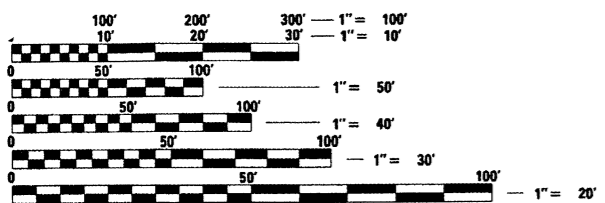


LOCATION MAP



SECTION (115BR-1)BR INCLUDES:  
EXISTING SUPERSTRUCTURE OF S.N. 074-0005 AT  
STA. 1210+90 CARRYING F.A.P. RTE. 721  
(IL. 10) OVER MADDEN CREEK  
TO BE REMOVED AND REPLACED.

RURAL MINOR ARTERIAL  
F.A.P. 721 (ILLINOIS 10)  
ADT (2006) = 1,700  
PV = 86.5% SU = 7.9% MU = 5.6%  
DESIGN SPEED = 55 MPH



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811 SANGAMON TOWNSHIP

PROJECT ENGINEER NANCY FASIG  
PROJECT MANAGER JASON STULTS  
DISTRICT 5 NO. (217)465-4181  
CONTRACT NO. 70433

074-0005

GROSS LENGTH = 800.00 FEET = 0.152 MILES  
NET LENGTH = 800.00 FEET = 0.152 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 6/25 20 08  
*Joseph K. Cromer*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 15, 20 08  
*Eric E. Harm*  
ENGINEER OF DESIGN AND ENVIRONMENT

August 15, 20 08  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

B.M. 4750-1: Chiseled square on the northeast corner of the southwest wingwall of S.N. 074-0005, Sta. 1210+13.6, 23.7' RI., Elev. 660.10.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 1  
OF 10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	12
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 70433	

EXISTING STRUCTURE: S.N. 074-0005, originally constructed in 1931 as SBI 120 Sec. 115B at Station 1210+52, reconstructed with longer superstructure and new substructures (existing west abut widened) in 1977 as SBI 120 Sec. 115BR-1 at Station 1210+89.58, using 21" PPC Deck Beams with 3/4" bituminous overlay, 3 spans, 151'-5 1/4" back-back abutments, 41'-0" out-out width, (W. Abut.) closed abutment on timber pile footings, (Pier 1) wall pier on concrete piles, (Pier 2) wall pier with footing on concrete piles, (E. Abut.) open abutment cap on concrete piles. In 2000, bituminous overlay was removed and replaced with 5" concrete wearing surface, and steel railing was replaced with Type SM railing.

Existing superstructure shall be removed and replaced using staged construction to maintain one lane of traffic.

Existing Steel Bridge Railing shall be salvaged and reused on the new superstructure.

INDEX OF SHEETS

Sheet No.	Description
1	General Plan, General Notes & Bill of Material
2	Stage Construction and Strip Seal Joint Details
3	Temporary Concrete Barrier for Stage Construction
4	Superstructure Details
5	Steel Bridge Rail, Type SM
6-7	PPC Deck Beam Details
8	West & East Abutments
9	Piers 1 & 2
10	Bar Splicer Assembly Details

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

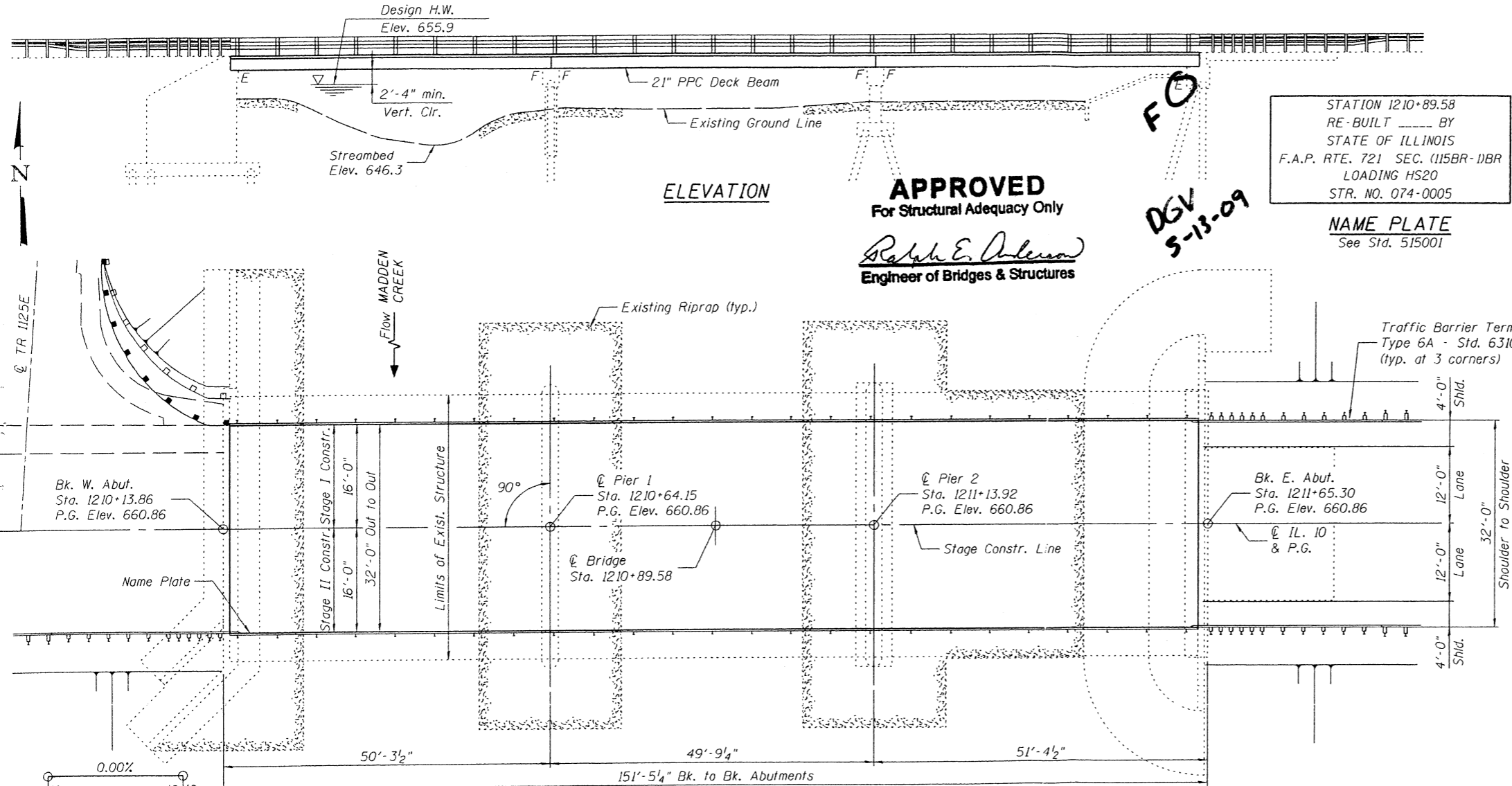
The existing bearing pads at the West and East Abutments contain asbestos. The Contractor shall take appropriate precautions to deal with the presence and disposal of asbestos on this project. See Special Provisions.

The minimum thickness of the concrete wearing surface shall be 5" and varies as required to adjust for the profile grade and beam camber.

Repair of the pier caps shall be completed prior to placement of the new deck beams.

The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new or existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads.



STATION 1210+89.58  
RE-BUILT BY  
STATE OF ILLINOIS  
F.A.P. RTE. 721 SEC. (115BR-1)BR  
LOADING HS20  
STR. NO. 074-0005

NAME PLATE  
See Std. 515001

APPROVED  
For Structural Adequacy Only

*Robert E. Anderson*  
Engineer of Bridges & Structures

FO  
DGV  
5-13-09

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal Of Existing Superstructures	Each	1	--	1
Concrete Removal	Cu Yd	--	2.0	2.0
Concrete Structures	Cu Yd	--	2.0	2.0
Bridge Deck Grooving	Sq Yd	497	--	497
Protective Coat	Sq Yd	531	--	531
Precast Prest. Conc. Deck Beams (21" Depth)	Sq Ft	4770	--	4770
Reinforcement Bars, Epoxy Coated	Pound	6530	260	6790
Bar Splicers	Each	149	4	153
Name Plates	Each	1	--	1
Preformed Joint Strip Seal	Foot	64	--	64
Epoxy Crack Injection	Foot	--	40	40
Removing and Re-erecting Existing Railing	Foot	299	--	299
Diamond Grinding (Bridge Section)	Sq Yd	782	--	782
Structural Repair Of Concrete (Depth < 5")	Sq Ft	--	172.0	172.0
Concrete Wearing Surface, 5"	Sq Yd	531	--	531
Asbestos Bearing Pad Removal	Each	--	52	52

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	643.0	645.0	648.0	655.5

PROFILE GRADE

The profile grade shows the final elevations after grinding. Up to 1/4" will be ground off the bridge slab.

<b>Johnson, Depp &amp; Quisenberry</b> CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: JDO	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD



Signed: *David Depp*  
Date: 6-16-2008  
Lic. Expires: 11-30-2008

LOADING HS20-44  
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS  
2002 AASHTO

WATERWAY INFORMATION

Existing Low Grade Elevation: 660.7 @ Sta. 1210+18.4

Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	50	3012	658	658	655.0	0.7	0.7	655.7	655.7	
Base	100	3503	712	712	655.9	1.1	1.1	657.0	657.0	
Overtopping										
Max. Calc.	500	4693	790	790	656.8	1.5	1.5	658.3	658.3	

DESIGN STRESSES  
FIELD UNITS

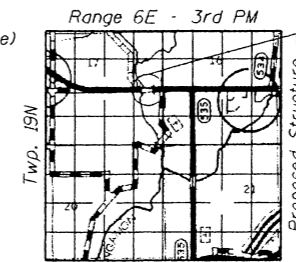
f'c = 3,500 psi  
f'c = 5,000 psi (Concrete Wearing Surface)  
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi  
f'ci = 5,000 psi  
f's = 270,000 psi (1/2" phi low lax strands)  
f'si = 201,960 psi (1/2" phi low lax strands)

SEISMIC DATA

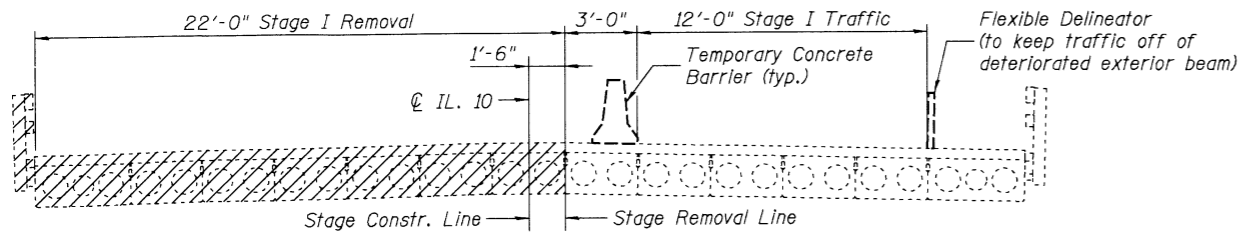
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.050g  
Site Coefficient (S) = 1.0



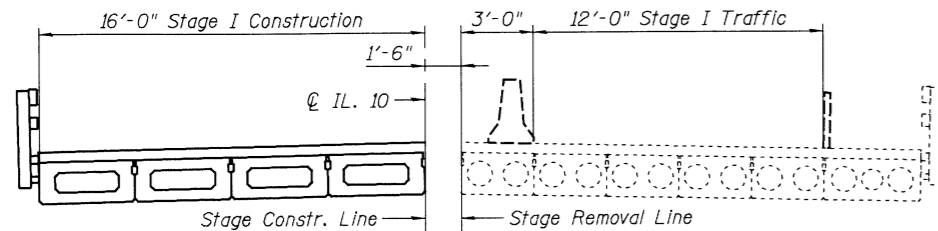
REVISOR 9/2/08

GENERAL PLAN  
ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

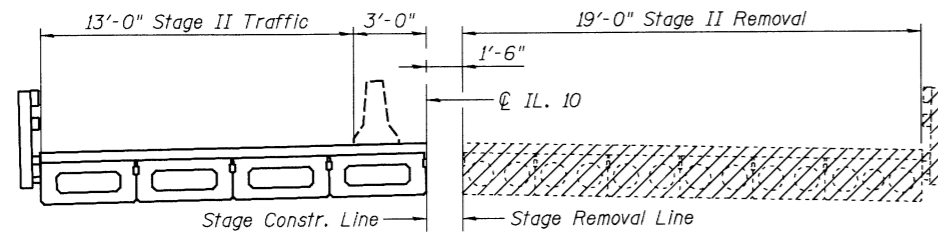
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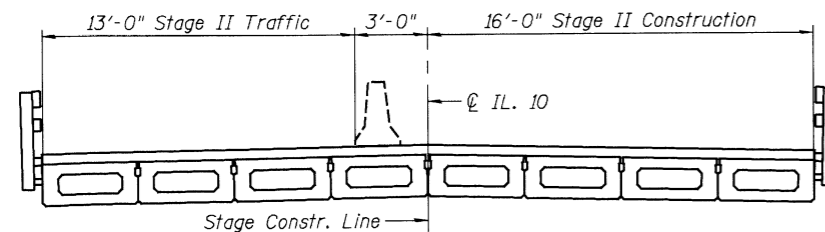
**STAGE I REMOVAL**  
(Looking East)



**STAGE I CONSTRUCTION**  
(Looking East)

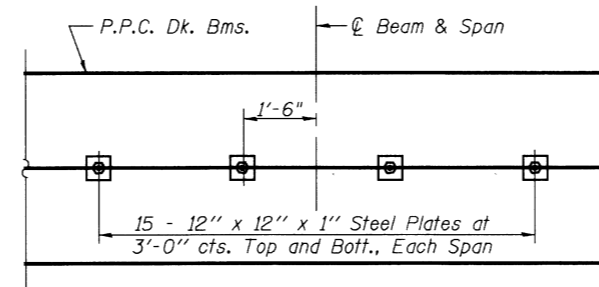


**STAGE II REMOVAL**  
(Looking East)

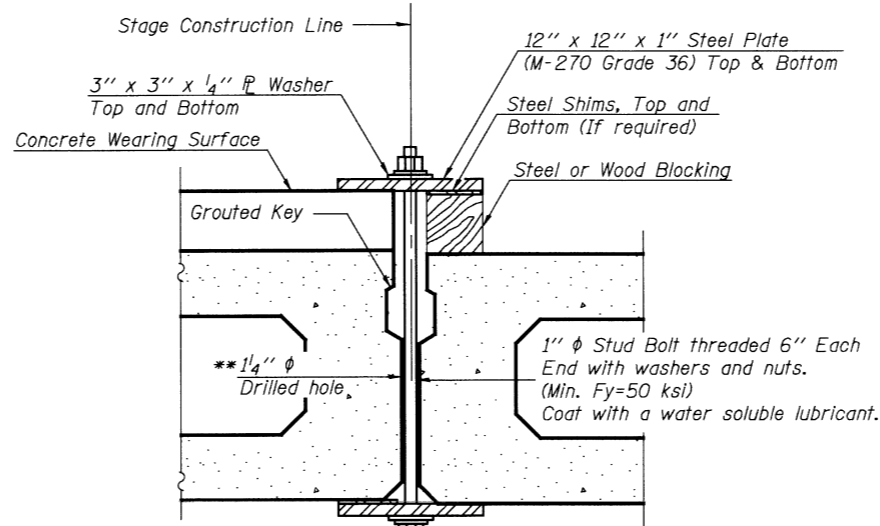


**STAGE II CONSTRUCTION**  
(Looking East)

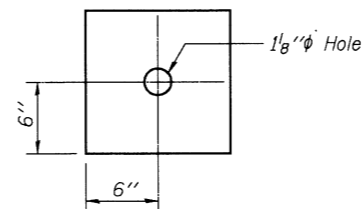
NOTES:  
Hatched area indicates Removal of Existing Superstructures.  
Removal of existing wearing surface is included with Removal of Existing Superstructures.  
Removal of existing railing is included with Remove and Re-erect Existing Bridge Rail.  
For quantity and location of Temporary Concrete Barrier, see Roadway Plans.



**PLAN**



**SECTION**



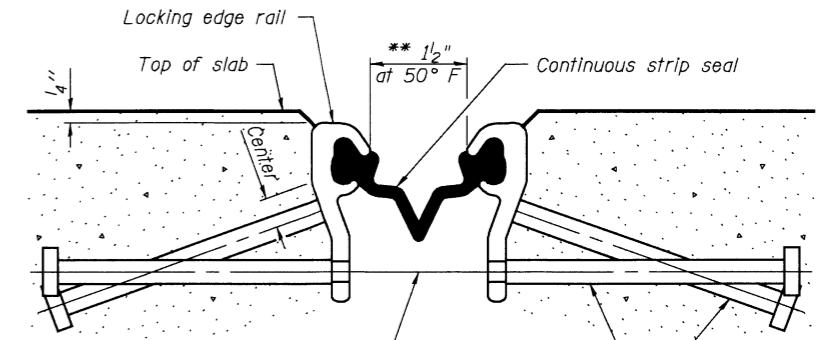
**CLAMPING PLATE**

**SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.**

Cost included with Precast Prestressed Concrete Deck Beams.  
See Stage Construction Details for traffic lanes.

\*\* As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

\* Omit weld at seal opening.  
\*\* When joint is fixed, dimension is set at 1 1/2".

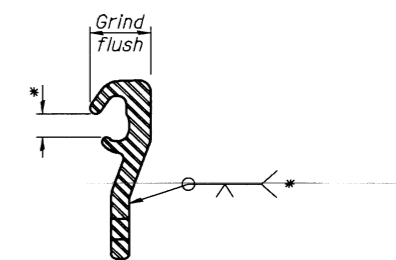


7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.  
Place 1/2" φ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS**



**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**

Notes:  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.  
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.  
The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.  
The manufacturer's recommended installation methods shall be followed.

**STAGE CONSTRUCTION AND STRIP SEAL JOINT DETAILS**

ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

**JD** Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

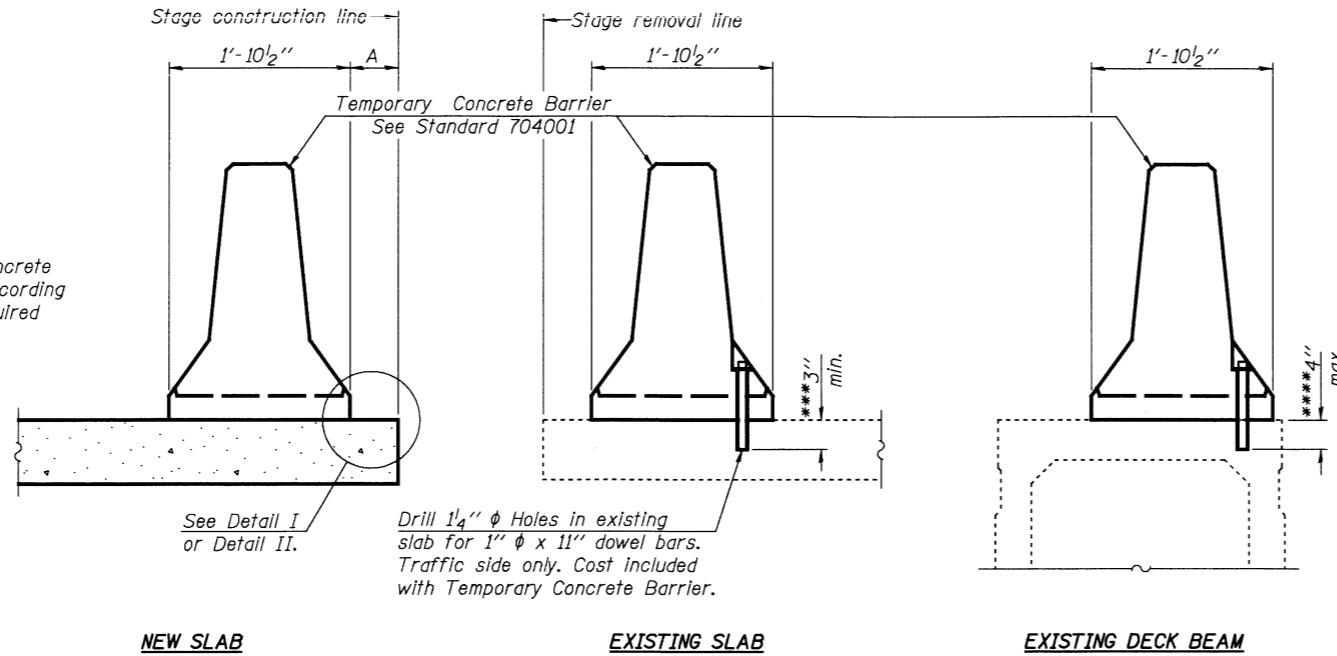
DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 3  
OF 10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	14
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 70433

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



**NOTES**

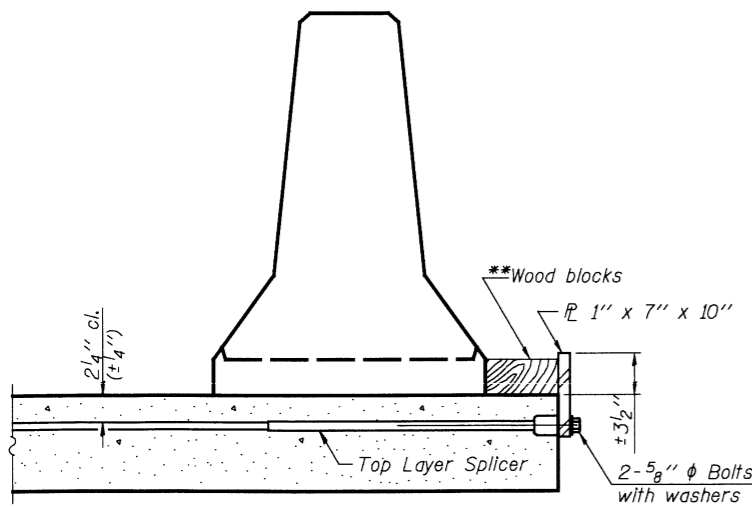
**Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2- $\frac{5}{8}$ "  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

**Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2- $\frac{5}{8}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

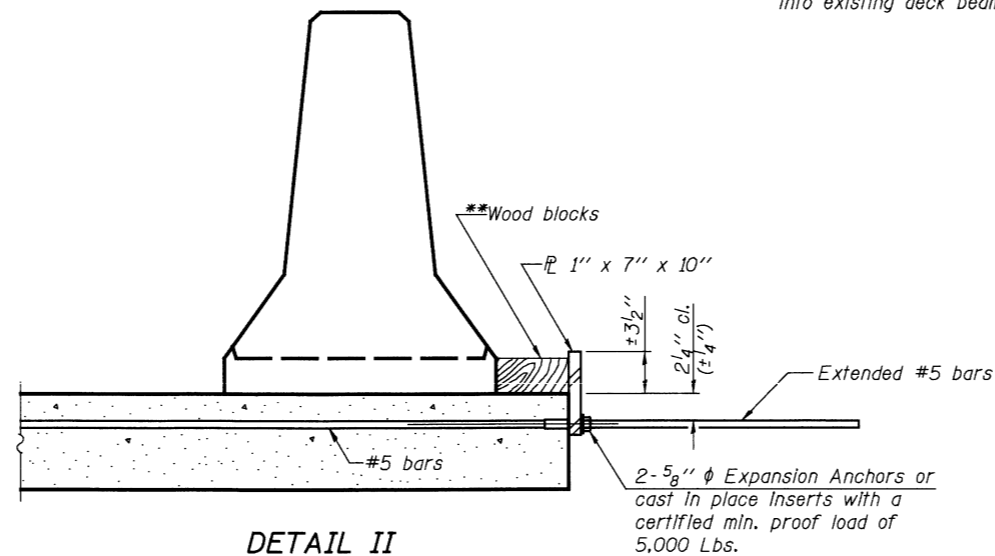
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

**SECTIONS THRU SLAB OR DECK BEAM**

\*\*\*Dimension shown is minimum required embedment into concrete.  
If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.  
\*\*\*If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

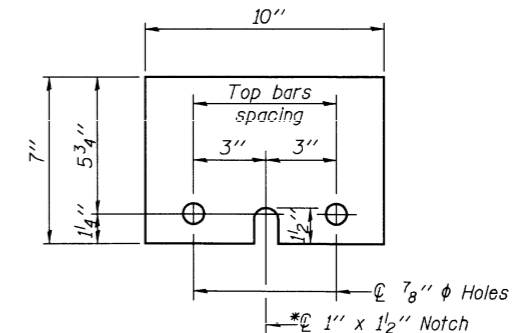


**DETAIL I**



**DETAIL II**

\*\*Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



**STEEL RETAINER  $\bar{P}$  1" x 7" x 10"**

\* Required only with Detail II

**TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION**

ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

R-27

9-3-07

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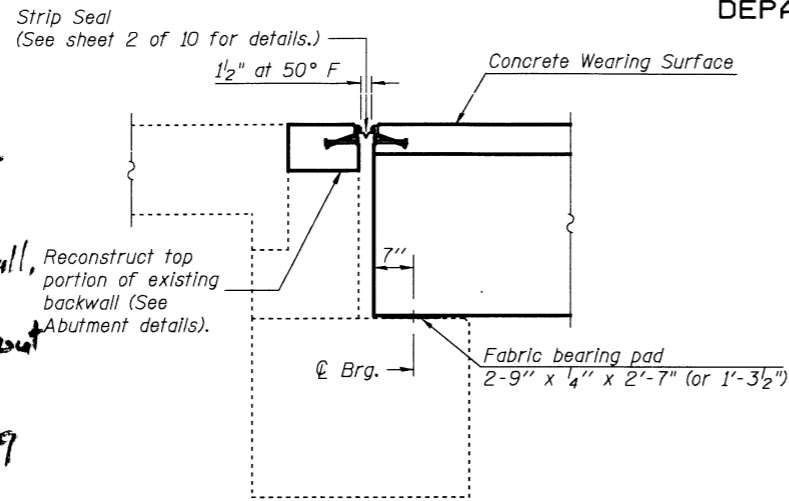
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 4  
OF 10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	15
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70433				

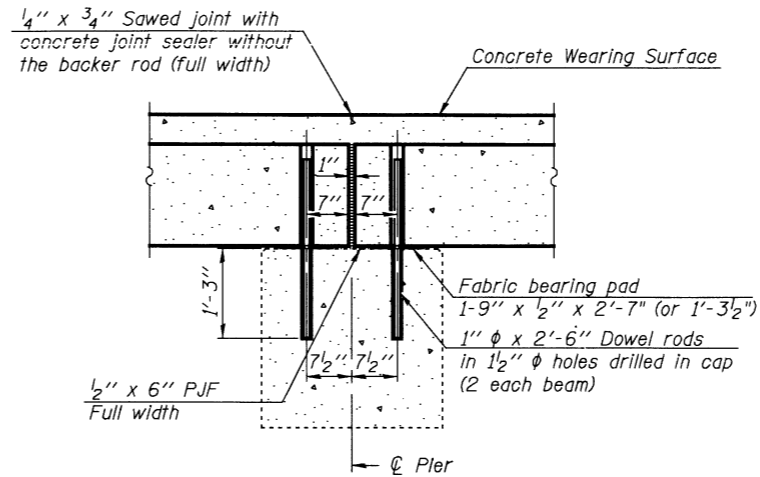
East Abut changed to fixed joint since no space between beam ends and backwall, Cored 2"  $\phi$  holes, add grout and rods.

OGV 5-13-2009



SECTION THRU ABUTMENT

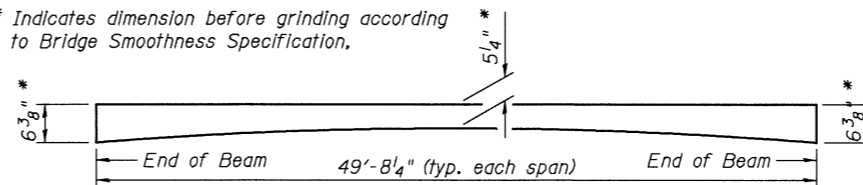
Notes:  
All horizontal dimensions are at right angles to beam ends.  
See sheet 7 of 10 for bearing pad details.



SECTION THRU FIXED PIER

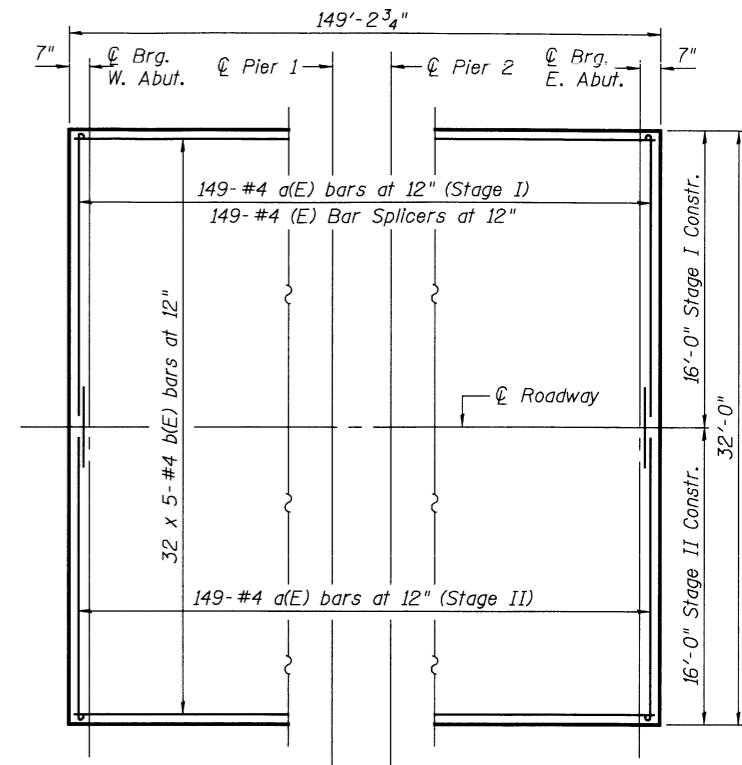
1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

\* Indicates dimension before grinding according to Bridge Smoothness Specification.

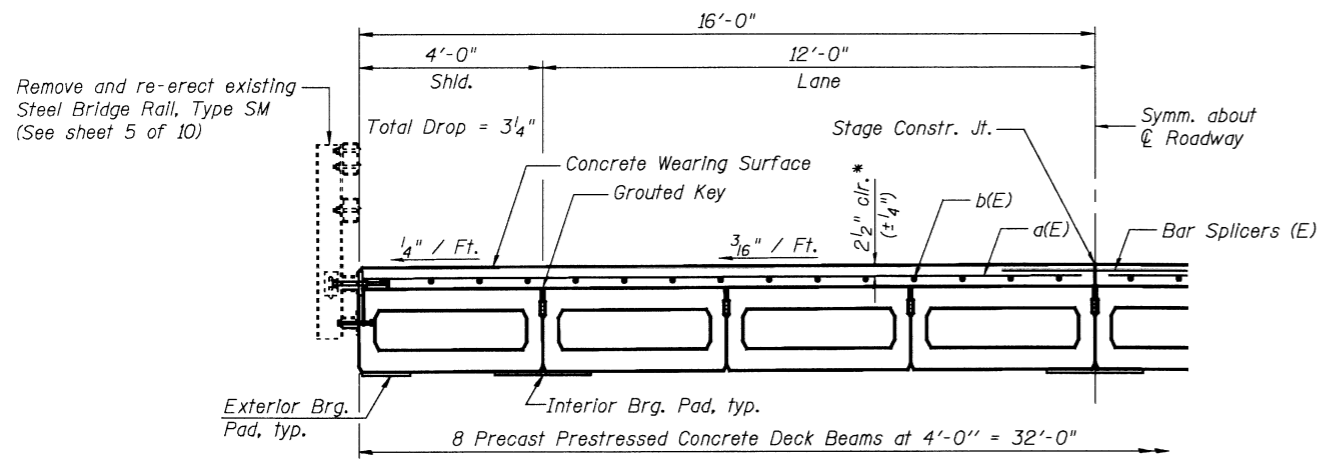


CONCRETE WEARING SURFACE PROFILE

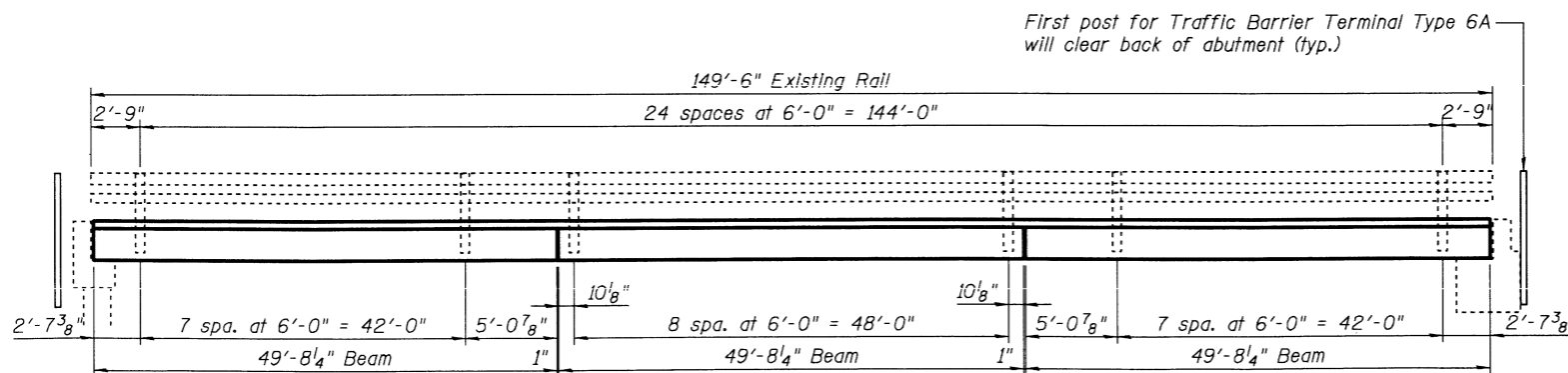
Notes:  
The estimated midspan deflection due to weight of the concrete wearing surface is 1/4".



PLAN - CONCRETE WEARING SURFACE

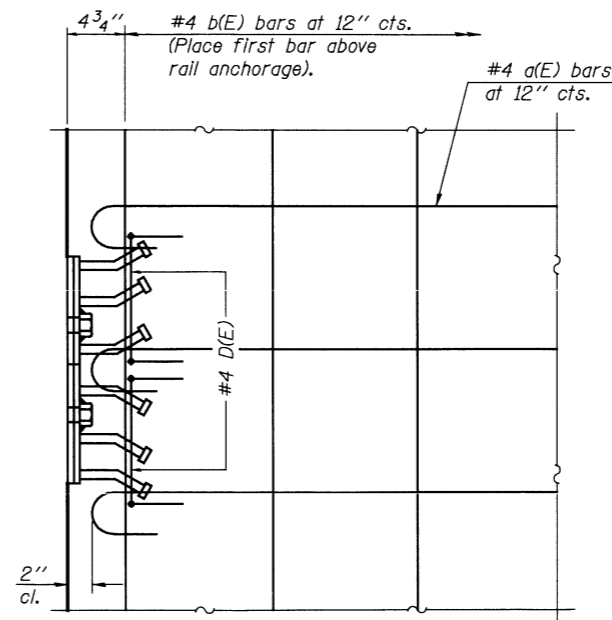


HALF CROSS SECTION



RAIL POST SPACING

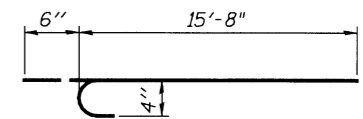
Notes:  
The 6'-0" existing rail post spacing shown is based on field measurements, rounded within a tolerance of about 1/2". The Contractor shall verify the existing post spacing prior to preparing the shop drawings for the beams.



PLAN AT RAIL POST ANCHOR

Notes:  
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.

MIN. BAR LAP  
#4 = 1'-4"



BAR a(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	298	#4	16'-2"	
b(E)	160	#4	30'-11"	
Reinforcement Bars, Epoxy Coated			Pound	6530
Concrete Wearing Surface, 5"			Sq. Yd.	531
Preformed Joint Strip Seal			Foot	64

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

SUPERSTRUCTURE DETAILS

ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

**JD** Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

FILE: J:\JDDQ\101019 IL-051V1\*4 IL 10 Madden Creek\1-MaddenCreek\04superstr.dgn

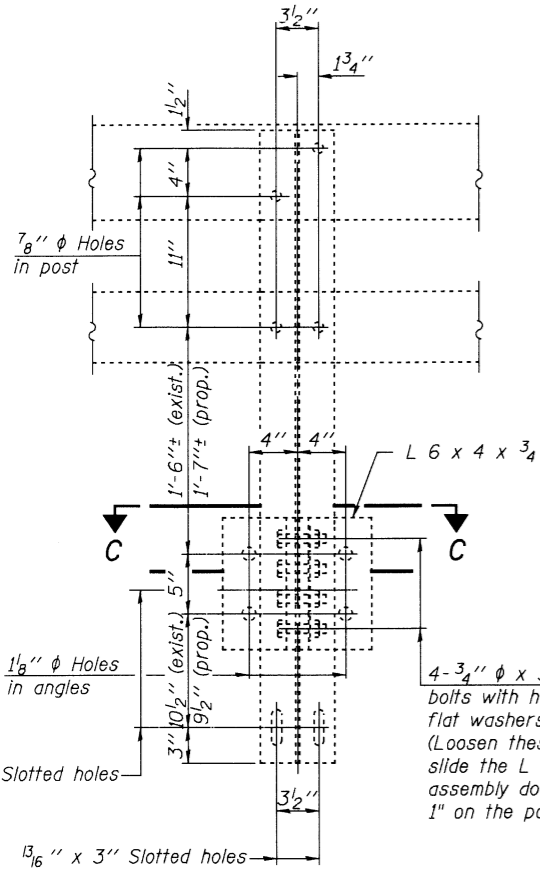
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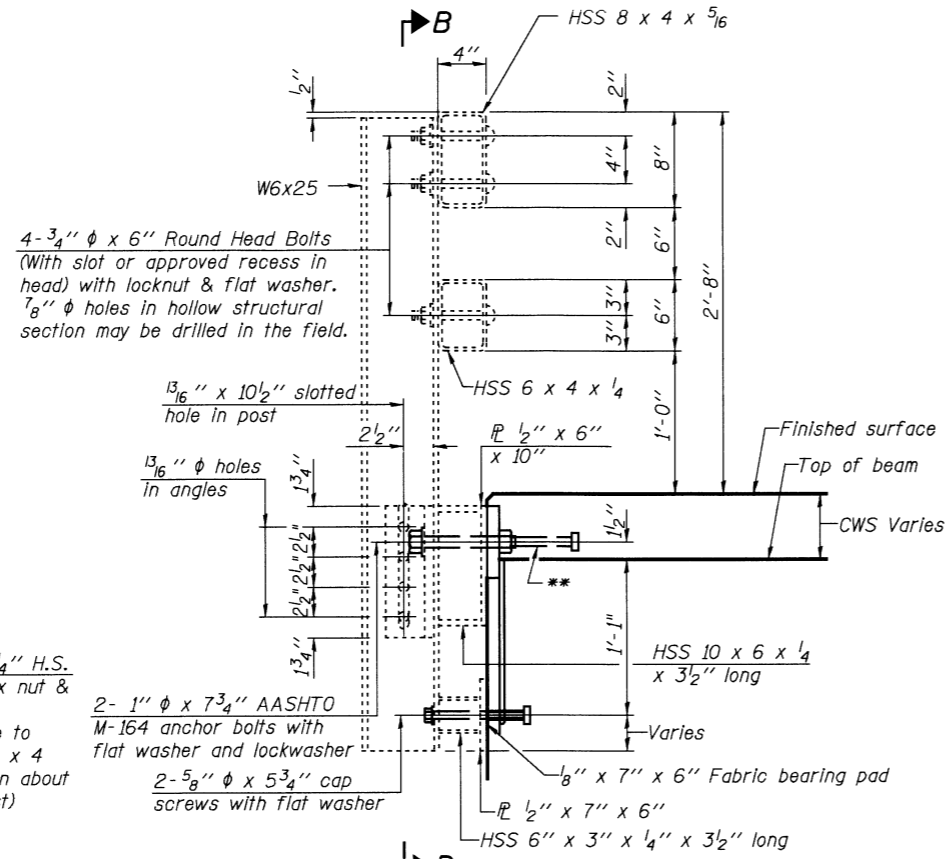
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 5  
OF 10

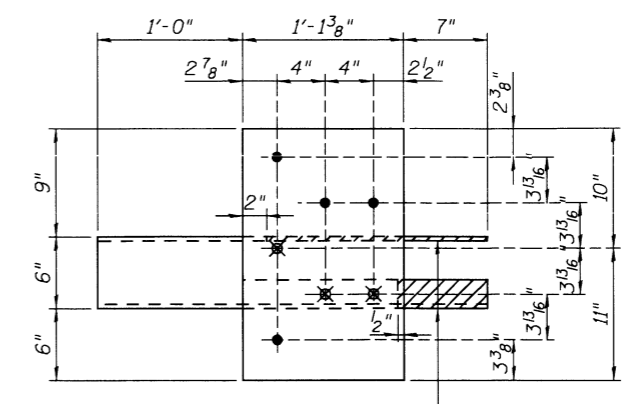
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	16
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70433				



SECTION B-B



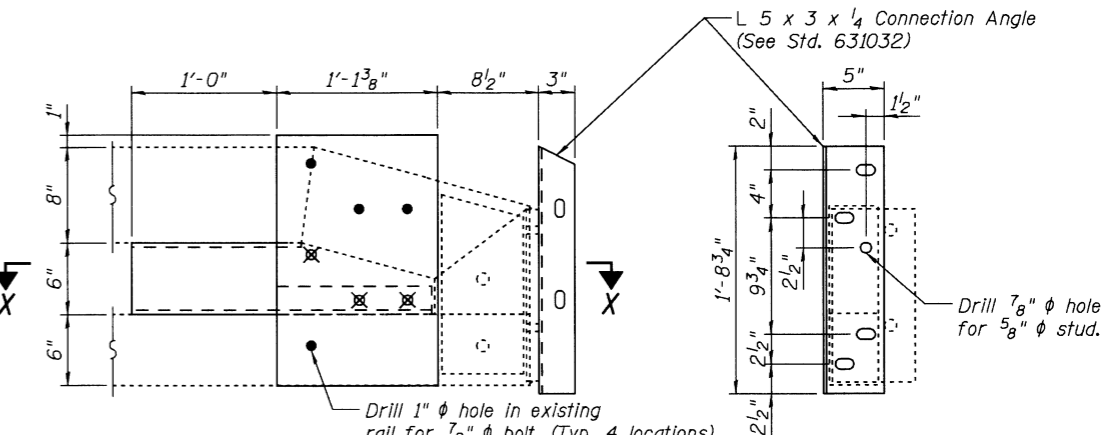
SECTION AT RAIL POST



GUARDRAIL CONNECTION PLATE ASSEMBLY

(Modified from Std. 631032)

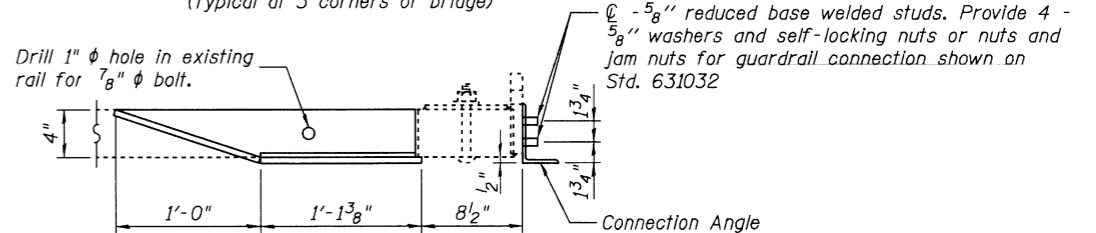
Hatched portions of  $\frac{3}{8}$ " Plate and L 4 x 4 x  $\frac{3}{8}$  shall be removed or omitted. If removed after galvanizing, the exposed bare metal shall be coated with an approved zinc rich paint.



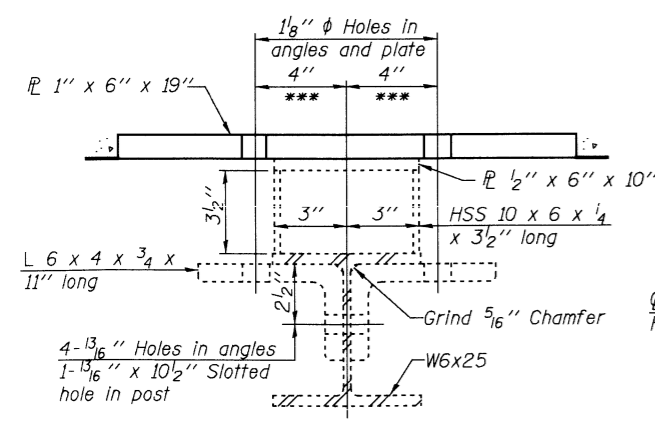
END OF RAIL DETAILS

(Typical at 3 corners of bridge)

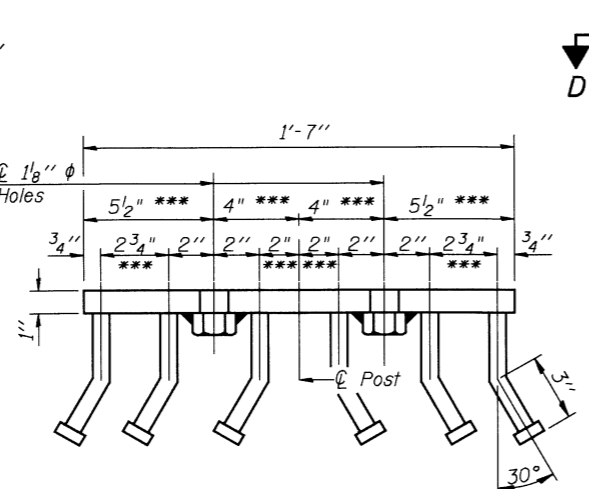
END VIEW



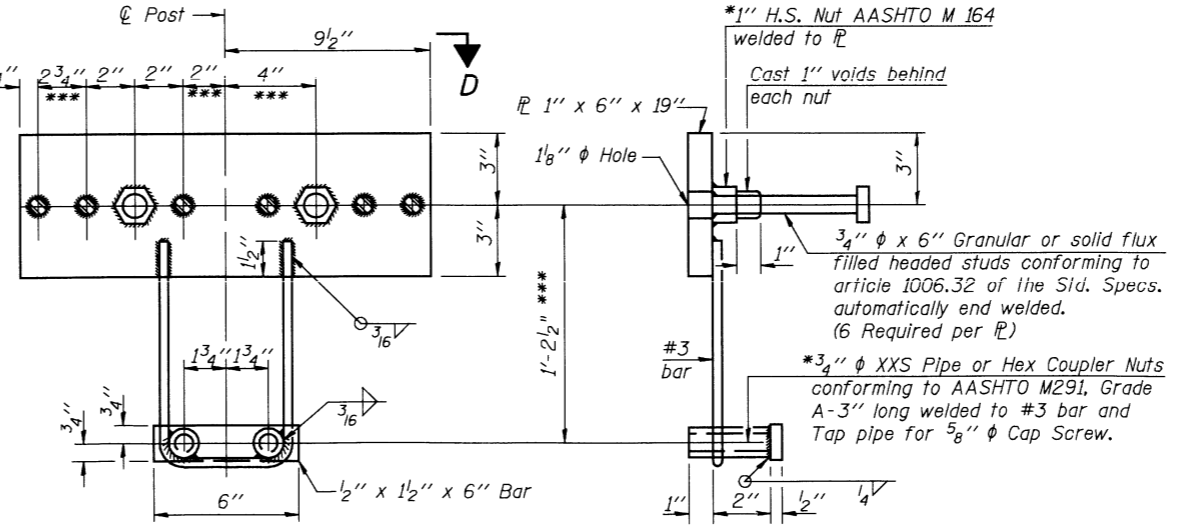
SECTION X-X



SECTION C-C



VIEW D-D



ANCHOR DEVICE

Notes:  
Existing railing assembly shall be removed and reinstalled. 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 Remove and Re-erect Existing Bridge Rail. 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.

BILL OF MATERIAL

Item	Unit	Quantity
Remove and Re-erect Existing Bridge Rail	Foot	299

**STEEL RAILING, TYPE SM  
WITH CONCRETE WEARING SURFACE**  
ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

\*\*\*Indicates dimensions are modified from "standard" to fit existing post assembly.

\*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

(6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

FILE: J:\JDQ\1049 IL-05VY4 IL 10 Madden Creek\1-MaddenCreek\05steel\dl.dgn  
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DATE: 06/13/2008 10:38:37

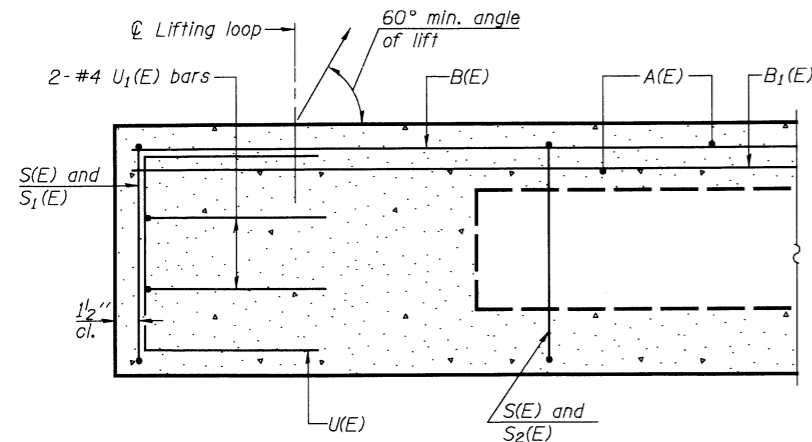
**JD** Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED:	JDQ	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	DCD

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

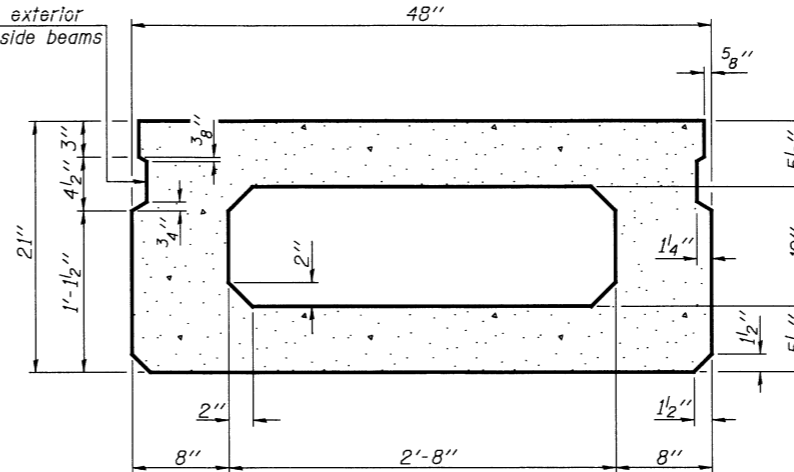
SHEET 6  
OF 10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	17
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 70433

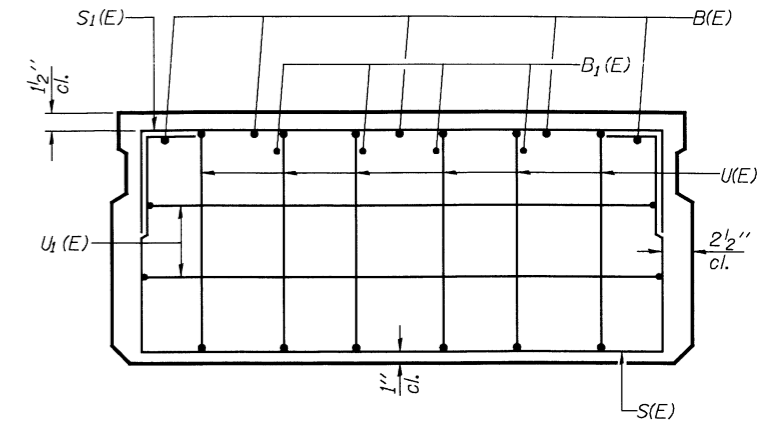


SECTION C-C

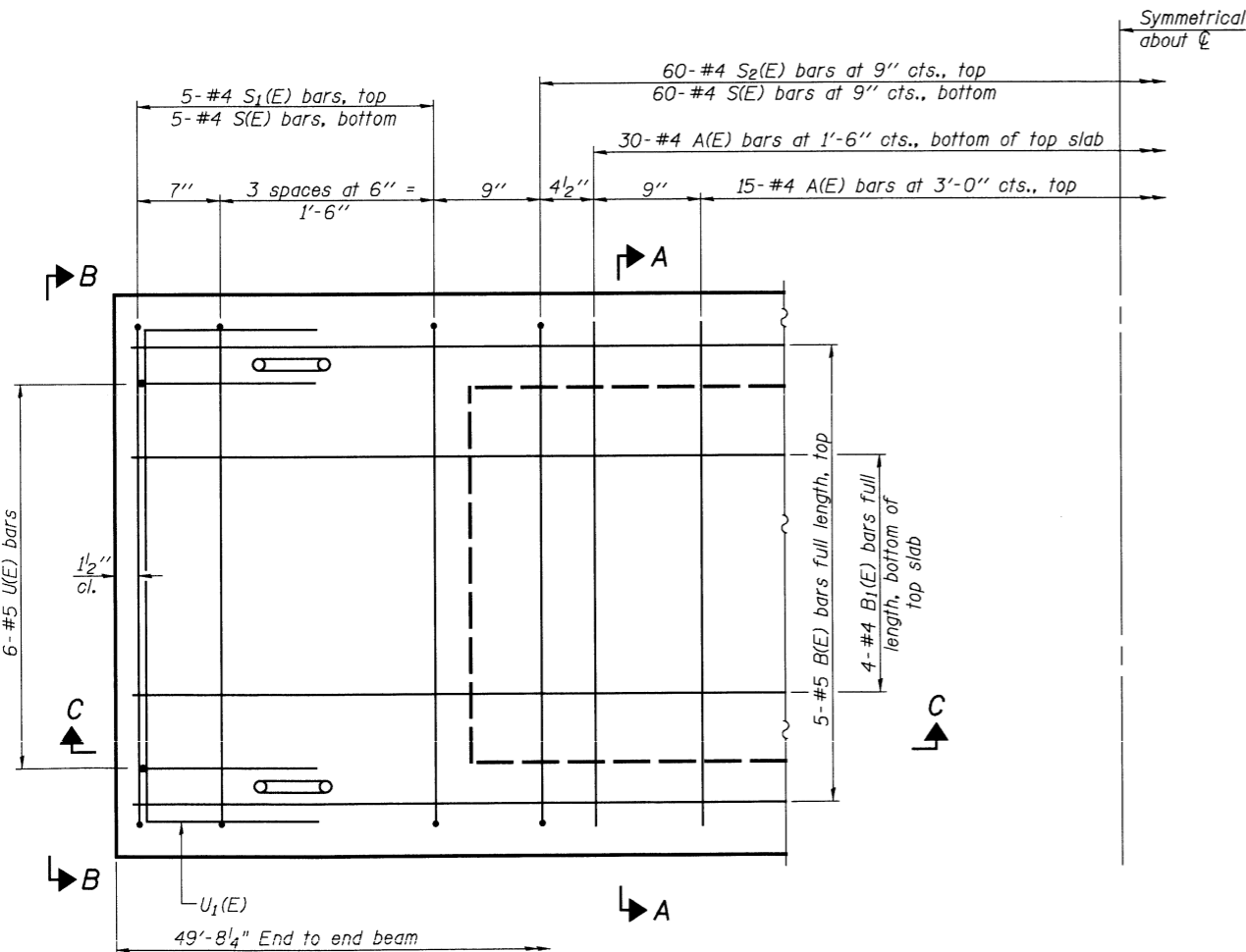
Omit key on exterior face of outside beams



SECTION A-A  
(Showing dimensions)

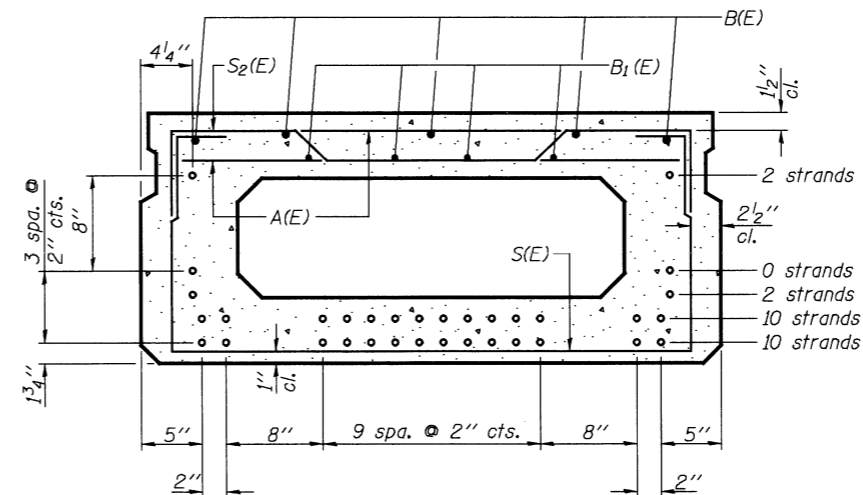


VIEW B-B



PLAN VIEW

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.



SECTION A-A

(Showing reinforcement and permissible strand locations)

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

BAR LIST  
ONE BEAM ONLY  
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	46	#4	3'-7"	—
B(E)	5	#5	49'-5"	—
B1(E)	4	#4	49'-5"	—
S(E)	70	#4	7'-5"	□
S1(E)	10	#4	6'-7"	□
S2(E)	60	#4	6'-10"	□
U(E)	12	#5	4'-0"	□
U1(E)	4	#4	6'-0"	□

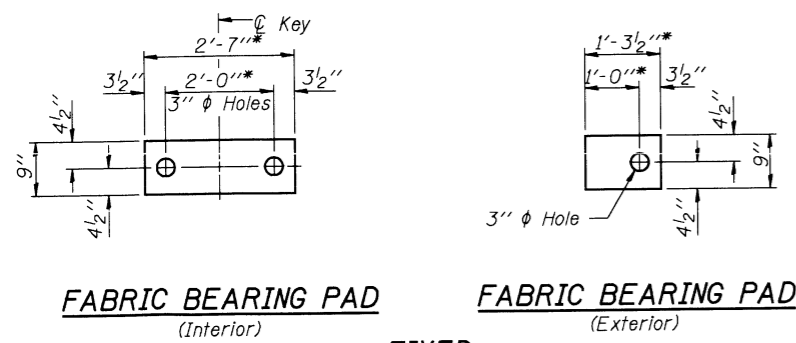
Note: See sheet 7 of 10 for additional details and Bill of Material.

**JD** Johnson, Depp & Qulsenberg  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

PD-2148-0 8-29-07

21" X 48" PPC DECK BEAM  
ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

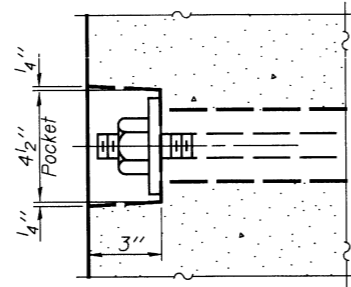


**FABRIC BEARING PAD**  
(Interior)

**FABRIC BEARING PAD**  
(Exterior)

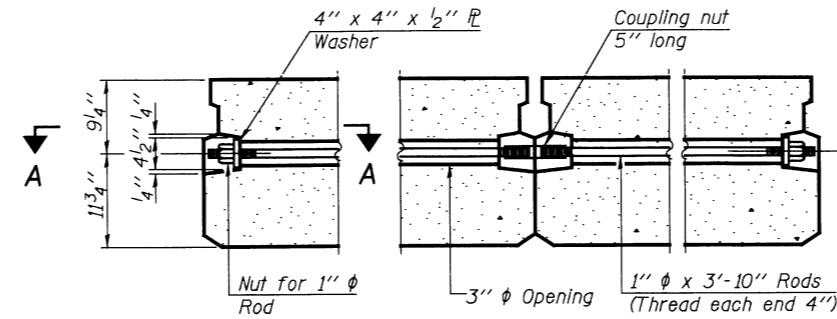
**FIXED**

Note: Omit holes when using expansion bearings.

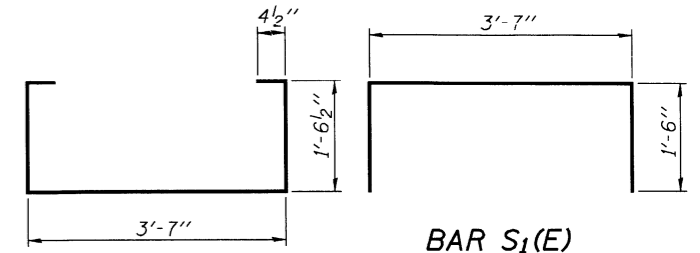


**SECTION A-A**

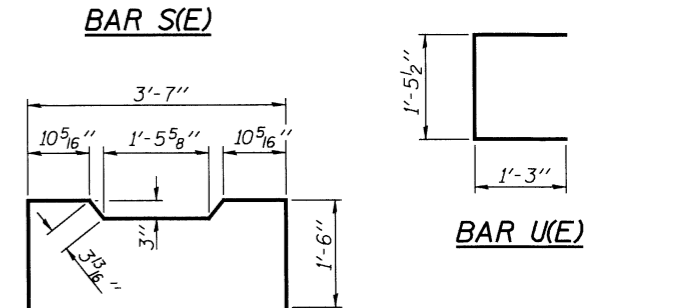
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**TYPICAL TRANSVERSE TIE ASSEMBLY**  
(21 required)

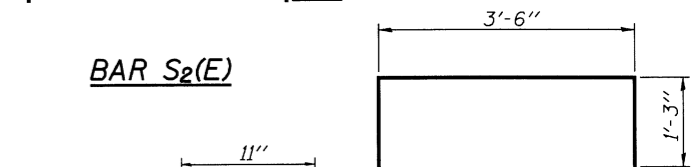


**BAR S<sub>1</sub>(E)**

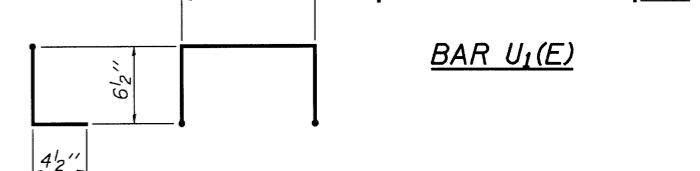


**BAR S(E)**

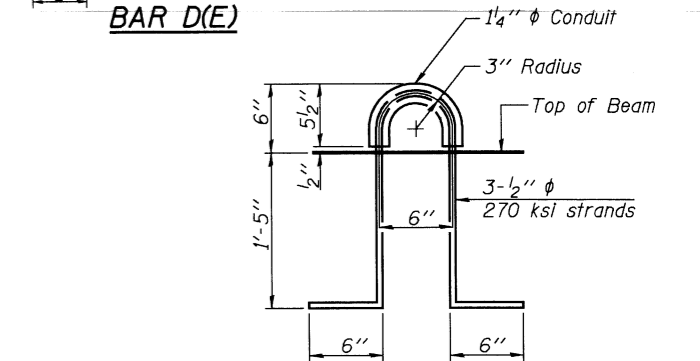
**BAR UE(E)**



**BAR S<sub>2</sub>(E)**

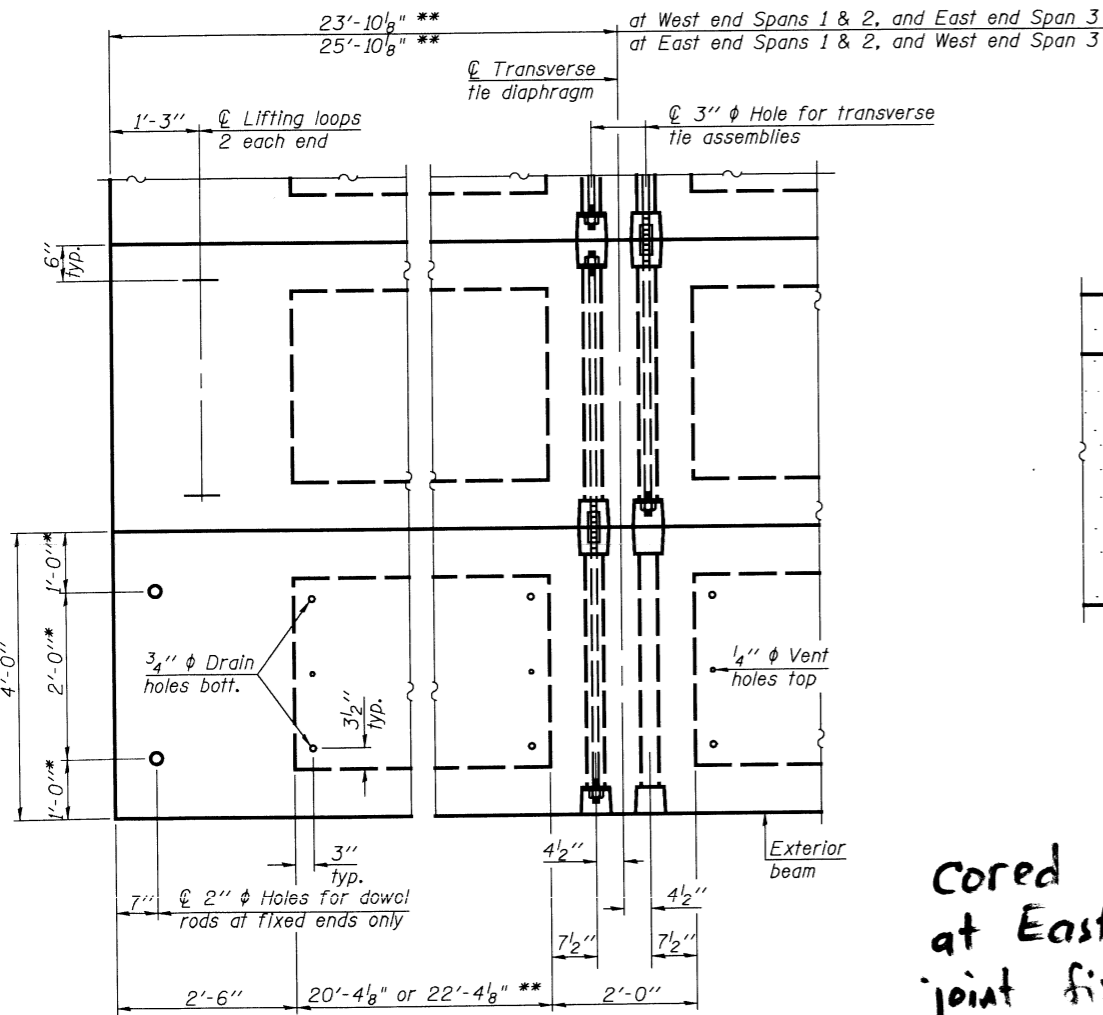


**BAR U<sub>1</sub>(E)**



**BAR D(E)**

**LIFTING LOOP DETAIL**



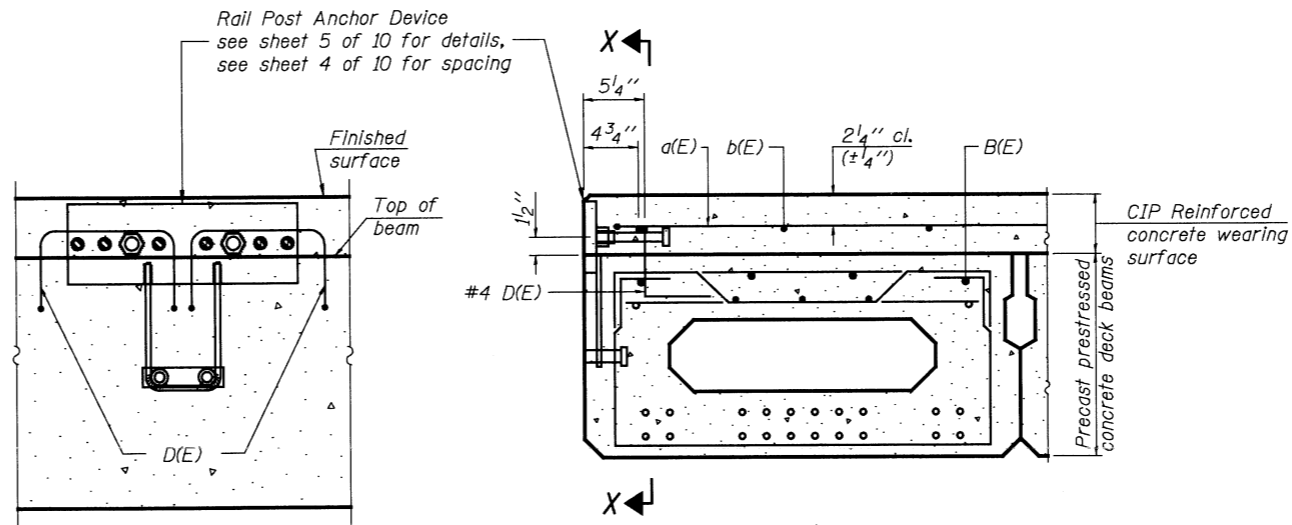
**PLAN VIEW**

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

NOTES:

\* Dowel Rod locations and Bearing Pad dimensions are "non-standard". In order to avoid conflicts with existing dowel rods at the piers.

\*\* Transverse Tie locations are staggered to avoid conflict with Rail Post Anchors for existing bridge rail.



**SECTION X-X**

**CROSS SECTION**

**RAIL POST ANCHOR DEVICE**

*Cored 2" diameter holes in beams at East Abutment to make joint fixed due to lack of space between beam and backwall.*

*OGV 5-13-2009*

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" diameter 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 (IL MOD), 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.

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	4770
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**21" X 48" PPC DECK BEAM DETAILS**  
ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

**JD Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

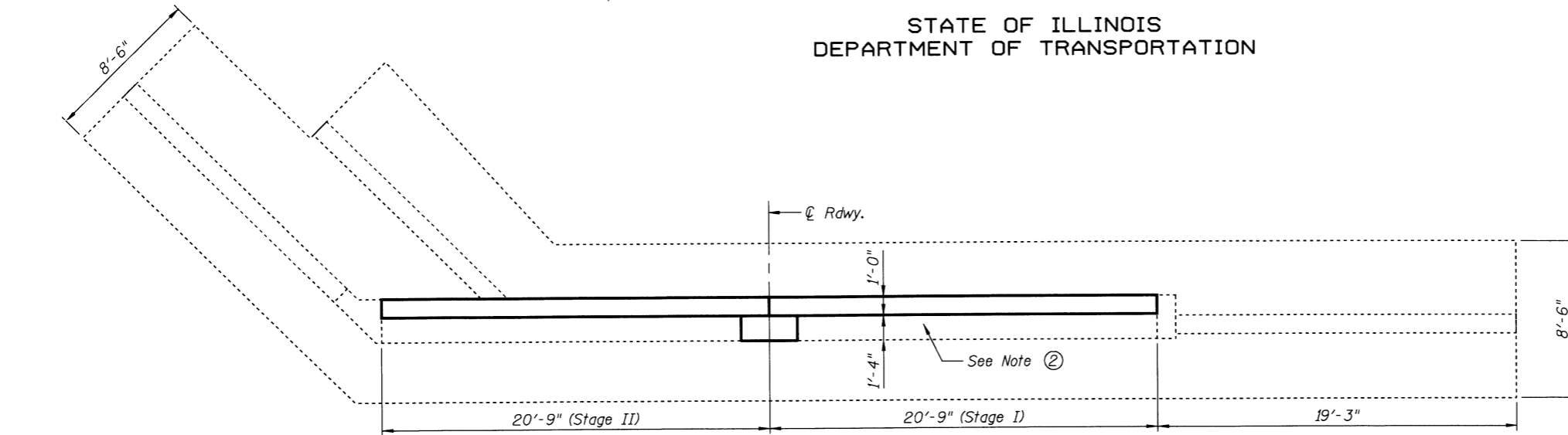
PD-2148-OD 8-29-07



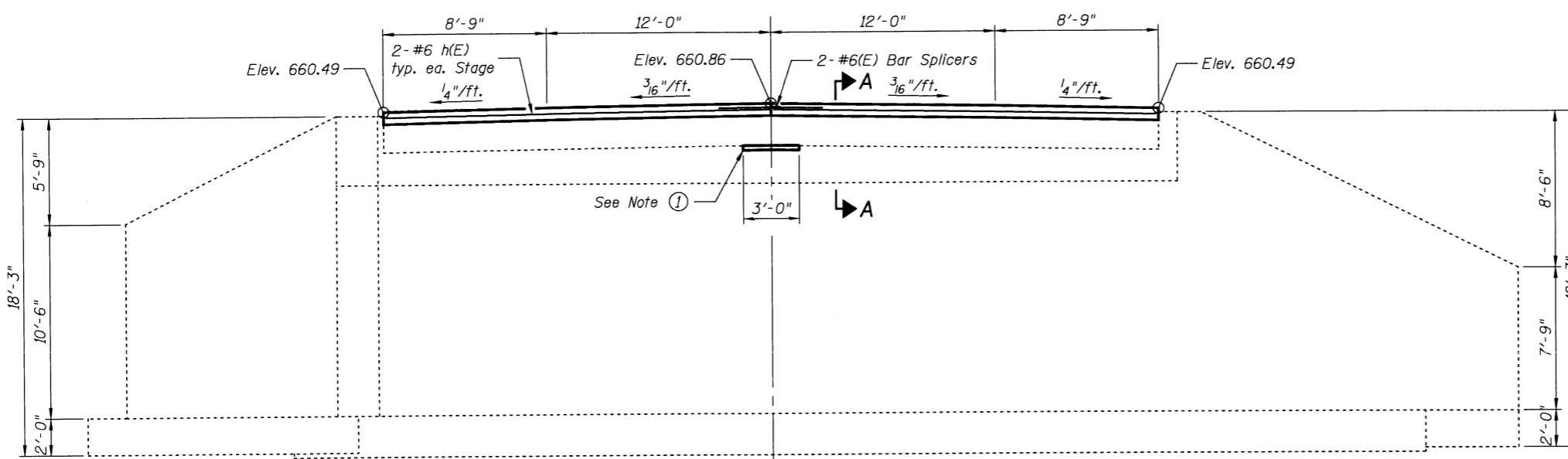
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 8  
OF 10

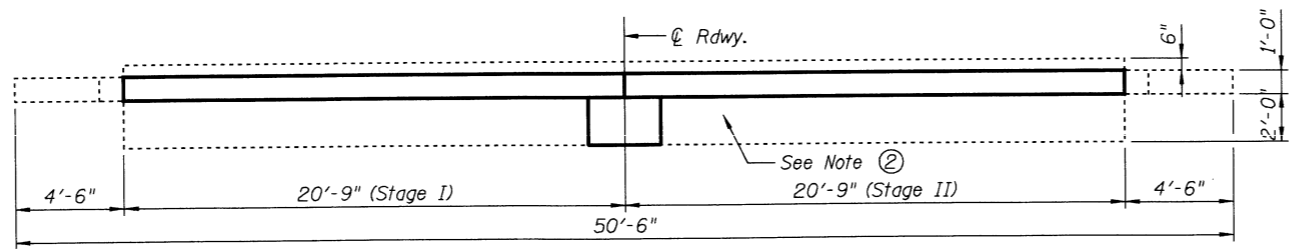
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	19
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
			CONTRACT NO. 70433	



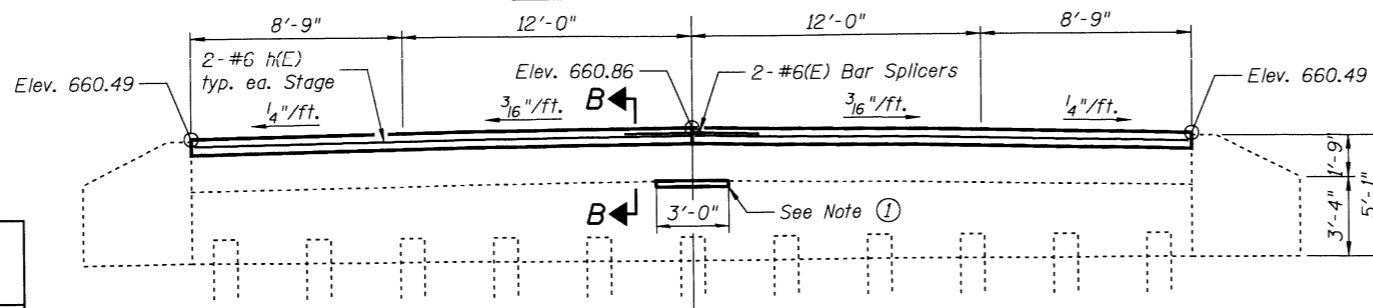
PLAN - WEST ABUTMENT



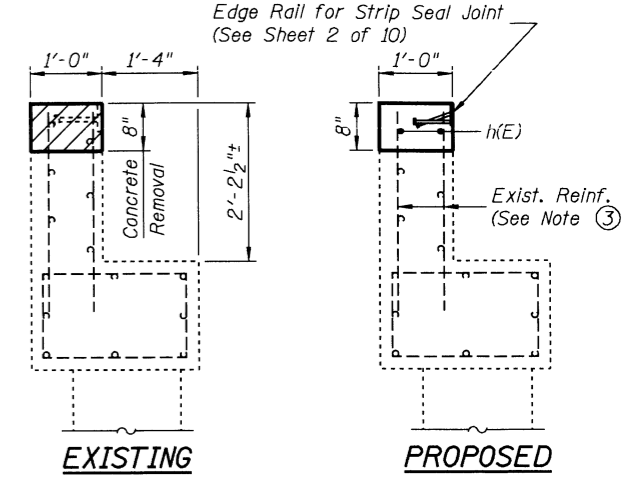
ELEVATION - WEST ABUTMENT  
(Facing West)



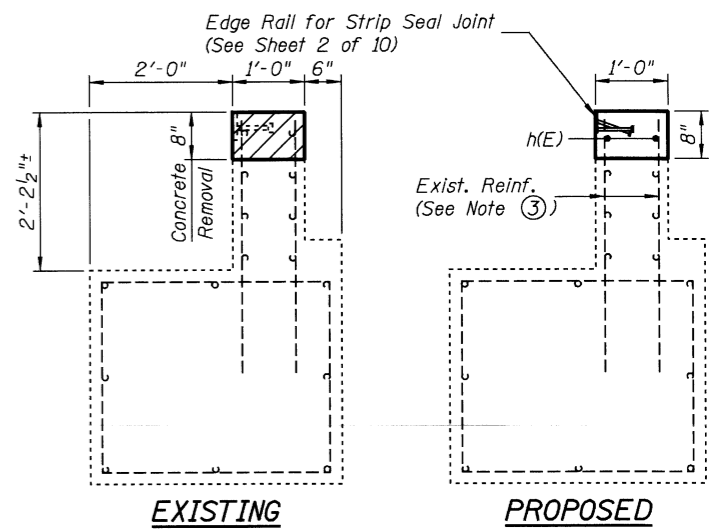
PLAN - EAST ABUTMENT



ELEVATION - EAST ABUTMENT  
(Facing East)



SECTION A-A  
(West Abutment)



SECTION B-B  
(East Abutment)

- Notes:
- Use Structural Repair of Concrete to reconstruct existing level portion of cap to provide a crowned surface for new beam configuration.
  - Existing bearing seat area shall be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired (estimated 10 S.F. per abutment) and cracks 1/16" or larger shall be sealed (estimated 10 FT. per abutment).
  - Existing vertical reinforcement bars in the abutment backwall are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#6	20'-5"	—
Reinforcement Bars, Epoxy Coated		Pound	130	W. Abut. E. Abut.
Concrete Removal		Cu. Yd.	1.0	W. Abut. E. Abut.
Concrete Structures		Cu. Yd.	1.0	W. Abut. E. Abut.
Structural Repair of Concrete (Depth < 5")		Sq. Ft.	14.0	W. Abut. E. Abut.
Epoxy Crack Injection		Foot	10	W. Abut. E. Abut.

Bill of Material for 1 Abutment only, except as noted.

WEST & EAST ABUTMENTS

ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005



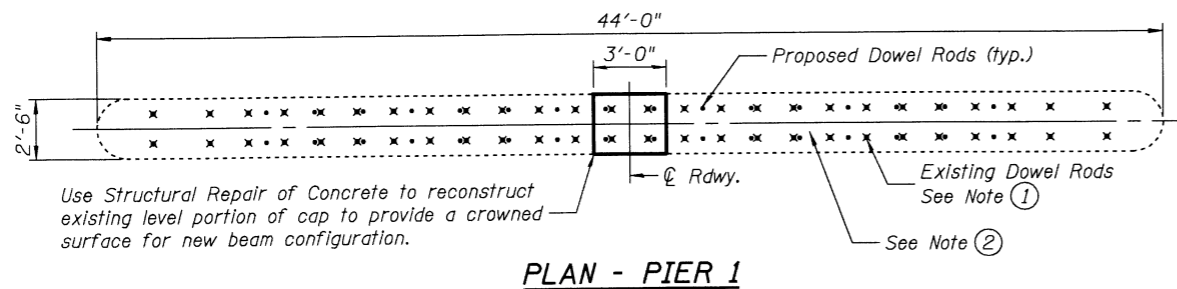
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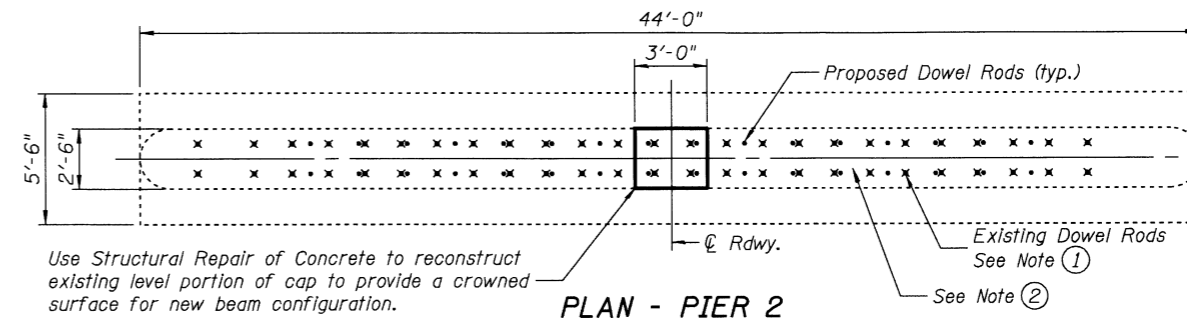
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 9  
OF 10

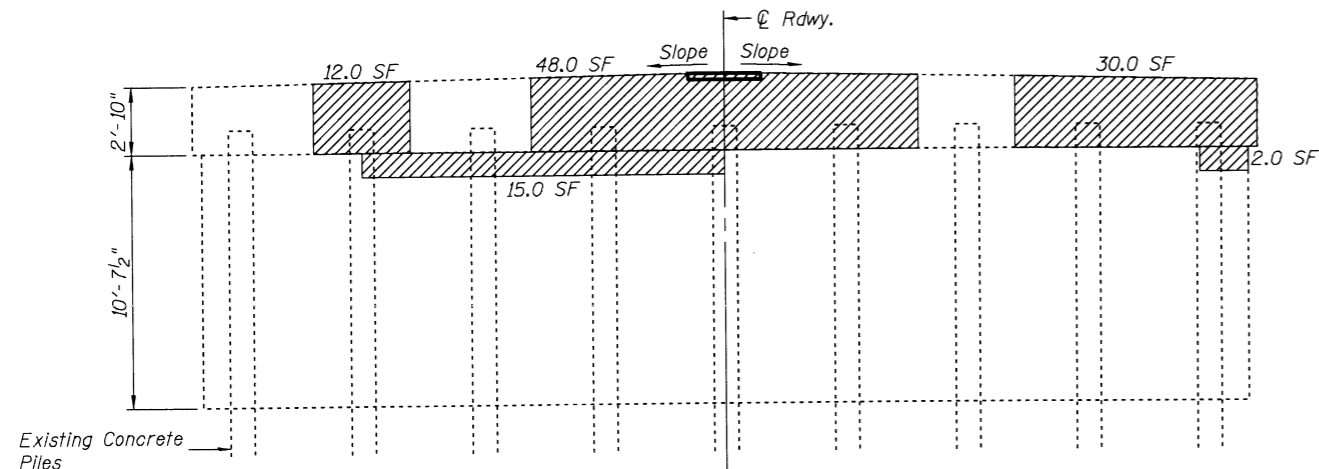
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	20
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70433				



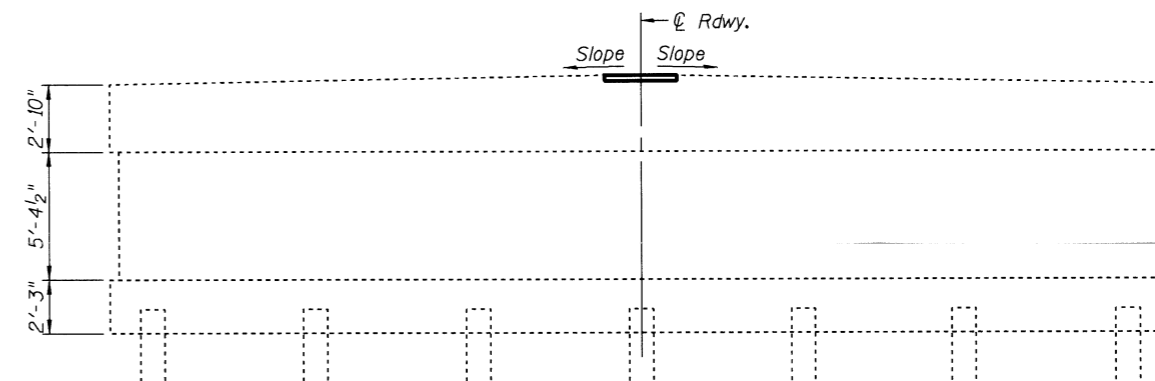
PLAN - PIER 1



PLAN - PIER 2



ELEVATION - PIER 1  
(Looking East)



ELEVATION - PIER 2  
(Looking East)

LEGEND

Delaminated Area  
(use Structural Repair of Concrete, Depth < 5")

Inspection Date: 8-1-2007

- Notes:
- ① Burn existing dowel rods flush with existing concrete, grind smooth and seal with epoxy. Prior to installing new beams, the proposed dowel locations shall be measured, and any existing dowel rods interfering with the new dowel locations shall be removed by coring. Cost is included with Removal of Existing Superstructures.
  - ② Existing bearing seat area shall be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired (estimated 10 S.F. per pier) and cracks 1/16" or larger shall be sealed (estimated 10 FT. per pier).

BILL OF MATERIAL

Structural Repair of Concrete (Depth < 5")	Sq. Ft.	124.5	Pier 1
		17.5	Pier 2
Epoxy Crack Injection	Foot	10	Pier 1
		10	Pier 2

PIERS 1 & 2  
ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005

Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 10  
OF 10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)BR	PIATT	32	21
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 70433

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

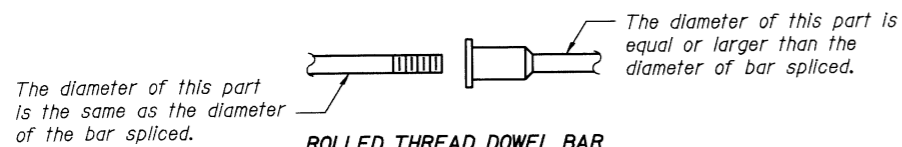
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity =  $1.25 \times f_y \times A_f$   
(Tension in kips)
- ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_f$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_f$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

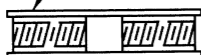


**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

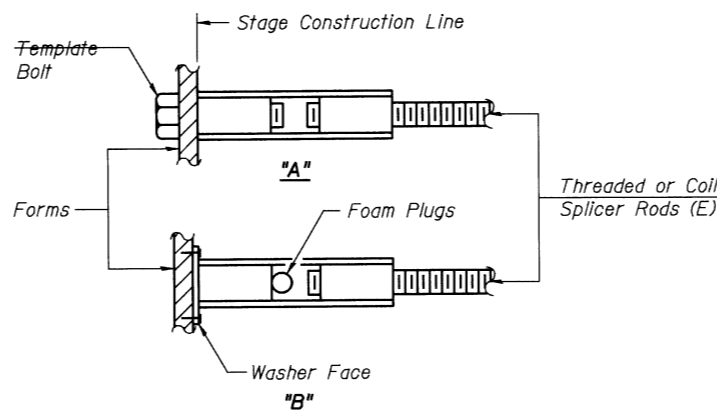
Wire Connector



**WELDED SECTIONS**

**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



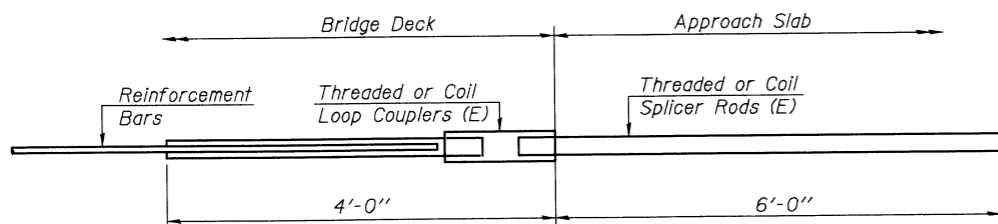
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

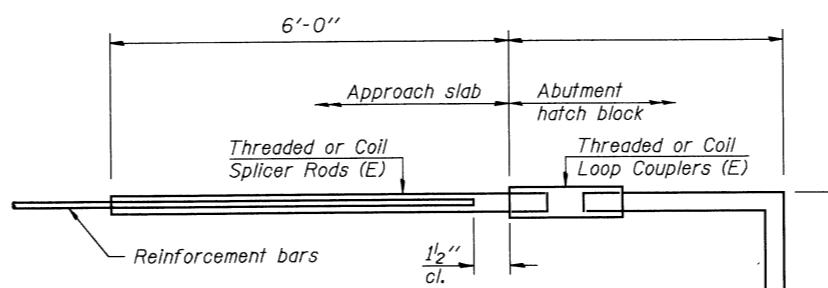
(E) : Indicates epoxy coating.

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



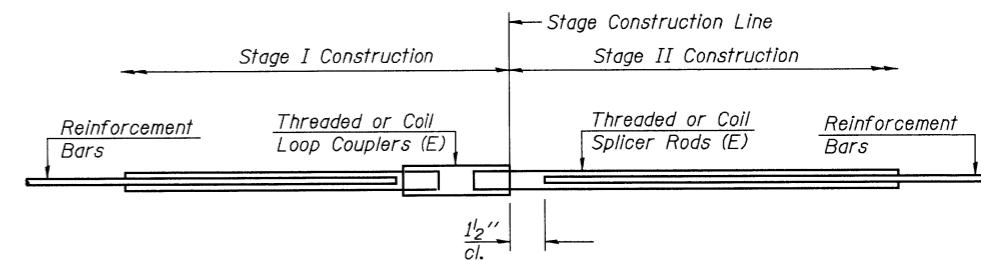
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	



**STANDARD**

Bar Size	No. Assemblies Required	Location
#4	149	Wearing Surf.
#6	2	W. Abut.
#6	2	E. Abut.

**BAR SPLICER ASSEMBLY DETAILS**

ILLINOIS 10 OVER  
MADDEN CREEK  
FAP ROUTE 721 SECTION (115BR-1)BR  
PIATT COUNTY  
STATION 1210+89.58  
STRUCTURE NO. 074-0005



DESIGNED: JDQ	DRAWN: SJS
CHECKED: DCD	CHECKED: DCD

BSD-1

11-1-06

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#32 #90840 01-19-2001 FAP RTE 721 PIATT County Section (115BR, 115BR-1) I I BR Copy #32

32

**INDEX OF SHEETS**

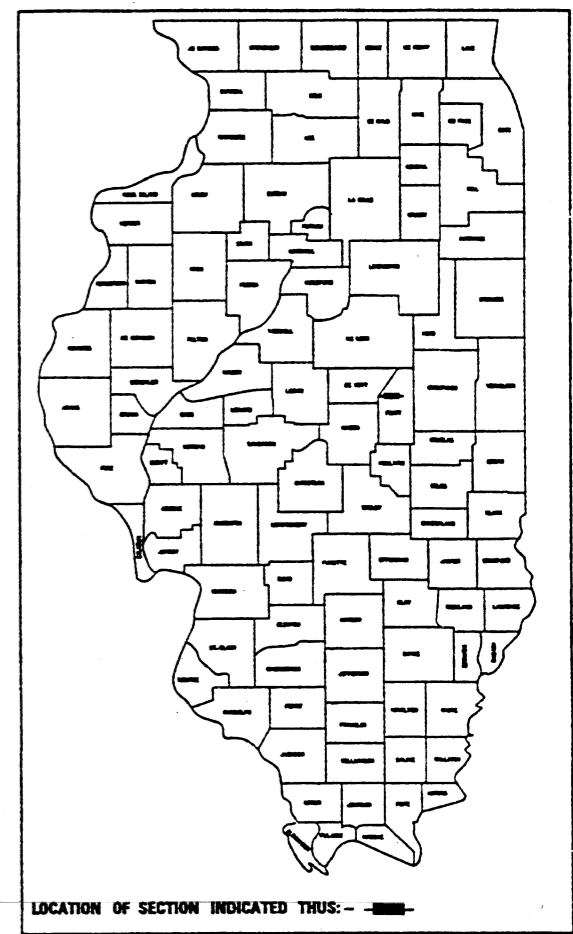
- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL CROSS SECTIONS S.N. 074-0003 (115BR)
- 5 STAGING DETAILS
- 6 PLAN VIEW S.N. 074-0003 (115BR)
- 7 PLAN VIEW OF GUARDRAIL S.N. 074-0003 (115BR)
- 8 DETAIL OF RUNDOWN S.N. 074-0003 (115BR)
- 9 REINFORCED CONCRETE OVERLAY DETAIL S.N. 074-0003 (115BR)
- 10 DETAIL OF OVERLAY PROFILE
- 11 DETAIL OF KEYWAY REPAIR S.N. 074-0003 (115BR)
- 12 CRACK SEALING LOCATIONS
- 13 DETAIL OF JOINTS S.N. 074-0003 (115BR)
- 14 TYPICAL CROSS SECTIONS S.N. 074-0005 (115BR-1)
- 15 STAGING DETAILS S.N. 074-0005 (115BR-1)
- 16 PLAN VIEW S.N. 074-0005 (115BR-1)
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- 18 DETAIL OF RUNDOWNS S.N. 074-0005 (115BR-1)
- 19 DETAIL OF SIDE ROAD CLOSURE
- 20 DETAIL OF JOINTS S.N. 074-0005 (115BR-1)
- 21 REINFORCED CONCRETE OVERLAY DETAIL S.N. 074-0005 (115BR-1)
- 22 DETAIL OF OVERLAY PROFILE
- 23 DETAIL OF KEYWAY REPAIR S.N. 074-0005 (115BR-1)
- 24 CRACK SEALING LOCATIONS
- 25 RIPRAP DETAILS S.N. 074-0005 (115BR-1)
- 26 BAR PLACEMENT DETAILS
- 27 BONDED PREFORMED JOINT SEAL
- 28 BAR SPLICER DETAILS
- 29 BRIDGE RAIL DETAILS

99.9%  
9-23-2001

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
HIGHWAY IMPROVEMENT**

FAP ROUTE	CROSSING	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR, 115BR-1)	PIATT	28	1

D-95-030-96



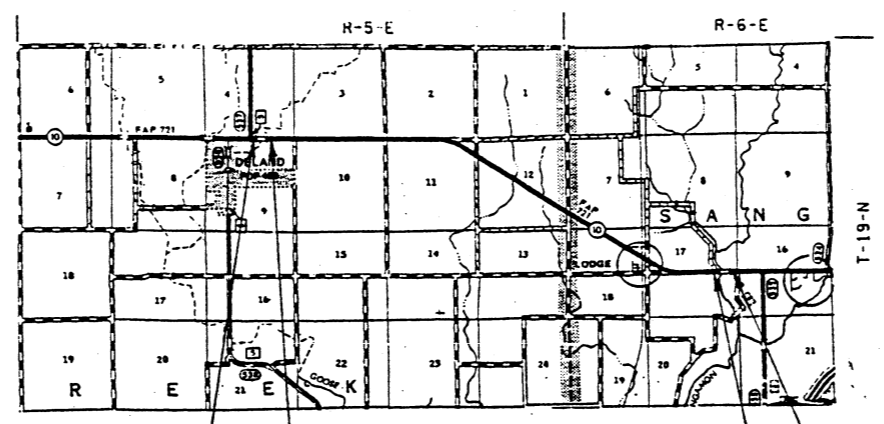
LOCATION OF SECTION INDICATED THUS:

**FAP ROUTE 721 (ILL-10)  
SECTION (115BR, 115BR-1) I  
PIATT COUNTY  
PROJECT F-721 (14)  
KEYWAY REPAIR  
C-95-055-96**

SCALES ( PLAN PROFILE HORIZ. H.A. PROFILE VERT. H.A. CROSS SECTIONS H.A. HORIZONTAL H.A. VERTICAL H.A.

**STANDARDS**

000001-03	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
630001-02	STEEL PLATE BEAM GUARD RAIL
630301-01	SHOULDER WIDENING FOR TYPE 1 GUARD RAIL TERMINALS
631026-02	TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
631031-03	TRAFFIC BARRIER TERMINAL TYPE 6
635006	REFLECTOR & TERMINAL PLACEMENT
635011-01	REFLECTOR MARKER & MOUNTING DETAILS
701201-01	TRAFFIC CONTROL
701321-04	TRAFFIC CONTROL
702001-02	TRAFFIC CONTROL DEVICES
704001	TEMPORARY CONCRETE BARRIERS
780001-01	TYPICAL PAVEMENT MARKINGS



SECTION (115BR, 115BR-1) I BEGINS STATION 923+65.06  
OMISSION FROM IMPROVEMENT STATION 928+06.93 TO STATION 1208+28.86  
SECTION (115BR, 115BR-1) I END STATION 1213+50.30

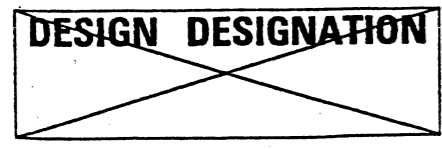
**INCLUDED IN SECTION (115BR, 115BR-1) I**

S.N. 074-0003 SECTION 115BR STATION 925+86 1 SPAN 41'-10 1/2" BK/BK ABUT. SKEW = 0°	S.N. 074-0005 SECTION 115BR-1 STATION 1210+89.58 3 SPANS 151'-5 1/4" BK/BK ABUT. SKEW = 0°
--	---

TOTAL LENGTH OF SECTION & PROJECT = 28,985.24 FEET = 5.5 MILES  
NET LENGTH OF SECTION & PROJECT = 963.31 FEET = 0.2 MILES

**AS BUILT**

5-200



CONTRACT NO. 90840 074-0005

PIATT COUNTY SECTION (115BR, 115BR-1) I FAP ROUTE 721

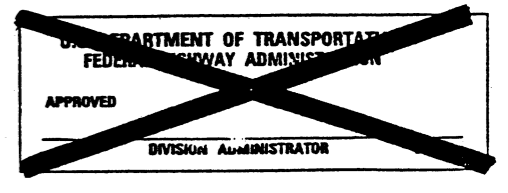
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Oct 19 2000  
*H.S.* DISTRICT ENGINEER

EXAMINED DECEMBER 1, 2000  
*Michael Klein* CHIEF OF DESIGN AND ENVIRONMENT

APPROVED DECEMBER 1, 2000  
*James B. St. John* SUPERVISOR OF HIGHWAYS

FOR UNDERGROUND UTILITY LOCATIONS CALL  
TOLL FREE J.U.L.I.E. TELEPHONE NO.  
1-800-832-0123  
GOOSE CREEK TWP. - PIATT CO.  
SANGAMON TWP. - PIATT CO.



PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

DESIGNER: **ILZ. BIRDSONG**

PROJECT ENGINEER: **GEORGE A. MORGAN** (217)465-4181

**074-0005**

DRAWN BY: **ILZ. BIRDSONG**

### SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	115BR, 115BR-1	PIATT	20	3

LOCATION OF WORK:

**DELAND**  
 IL-10, RURAL  
 S.N. 074-0003  
 SEC. 115BR  
 80% FED  
 20% STATE  
 BRIDGE  
 SAFETY WORK  
 SFTY - 2A

**LOGGE**  
 IL-10, RURAL  
 S.N. 074-0005  
 SEC. 115BR-1  
 80% FED  
 20% STATE  
 BRIDGE  
 SAFETY WORK  
 SFTY - 2A

CONSTRUCTION TYPE CODE:

CODE NO	ITEM	UNIT	TOTAL QUANTITY	DELAND	LOGGE
20200500	EARTH EXCAVATION (WIDENING)	CU YD	170.59	99.94	70.65
20500150	EMBANKMENT	CU YD	72.1		180
25000210	SEEDING, CLASS 2A	ACRE	0.25	0.15	0.13
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	12 16.8	9	7.8
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	10 56	26	30.0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	12 16.8	9	7.8
25100115	MULCH, METHOD 2	ACRE	0.28	0.15	0.13
28100107	STONE RIPRAP, CLASS A4	SQ YD	546.09		546.09
28200100	FILTER FABRIC FOR USE WITH RIPRAP	SQ YD	546.09		546.09
35650500	BASE COURSE WIDENING 10"	SQ YD	0	240 0	240 0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	47 98.9	58 44	39 54.9
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	426.66	213.33	213.33
40600990	TEMPORARY RAMP	SQ YD	220.8	114	106.8
40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	5 3.1		5 3.1
40800040	INCIDENTAL BITUMINOUS SURFACING	TON	4.1		4.1
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	873 878.74	194.45	684.29
48101200	AGGREGATE SHOULDERS, TYPE B	TON	32.05	18.7	13.35
50102400	CONCRETE REMOVAL	CU YD	626.58	207	419.58
50300225	CONCRETE STRUCTURES	CU YD	8.9	2.74	6.16
50300260	BRIDGE DECK GROOVING	SQ YD	873 840.23	184.47	655.76
50300300	PROTECTIVE COAT	SQ YD	0	0	0
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3272 3276.35	1086.31	2190.04
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11630 12200.95	2819.92	9380.03
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	384 382.79	84.18	298.61
59000100	EPOXY CRACK SEALING	FOOT	27 26.5	14.5	12
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	126 824.15	375	449.15
63100041	TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	1		1
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	8	4	4
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	7	4	3
63200310	GUARDRAIL REMOVAL	FOOT	982.91	577.51	407.2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3.7	1.7	2
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0	0.5	0.5
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	58 16	8	48 8
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	336 1030.69	102 243.09	234 787.6
70400100	TEMPORARY CONCRETE BARRIER	FOOT	889 860	388 340	511 520
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	327 888	102 384	225 504
70400300	TEMPORARY CONCRETE BARRIER, TERMINAL SECTION	EACH	4	2	2
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2472 4290.0	2112.6	2177.4
78200405	GUARDRAIL MARKERS	EACH	24	10	14
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	7	4	3
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	76	44	32
X0322391	BONDED PREFORMED JOINT SEAL 2 INCH	FOOT	0	0	0
X0953300	BRIDGE RAIL REMOVAL	FOOT	384 382.97	85 84.53	299 298.44
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", NS0	TON	80 84.8	38 41.68	42 43.12
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE NS0	TON	27 54.12	11 33.3	16 20.82
X4067400	OC/OA BITUMINOUS	TON	386 143.02	184 74.98	202 68.04
Z0002600	BAR SPLICERS	EACH	207 208	48	160
50301200	CONCRETE WEARING SURFACE	SQ YD	873 882.74	185 85	688.89
Z0032700	KEYWAY REPAIR	FOOT	655 119.75	264 27.0	391 92.75
Z0056200	SAND MODULE IMPACT ATTENUATOR (RELOCATE)	EACH	48	24	24
Z0056400	SAND MODULE IMPACT ATTENUATOR (TEMPORARY)	EACH	48	24	24

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DISTRICT FIVE

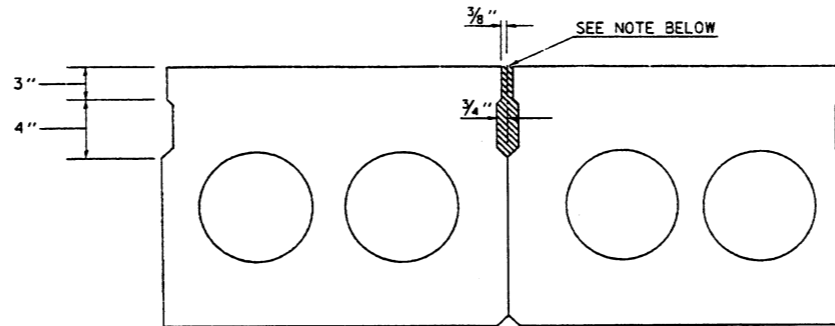
REVIEWED BY: David L. Marshall  
 DISTRICT ENGINEER OF PROGRAM DEVELOPMENT

DATE: 10/19/00

EXAMINED BY: James W. Paulsen  
 DISTRICT ENGINEER OF PROJECT IMPLEMENTATION

James W. Paulsen  
 DISTRICT ENGINEER OF BUREAU OF OPERATIONS

**DETAIL OF KEYWAY REPAIR  
S.N. 074-0005 (115BR-1)**

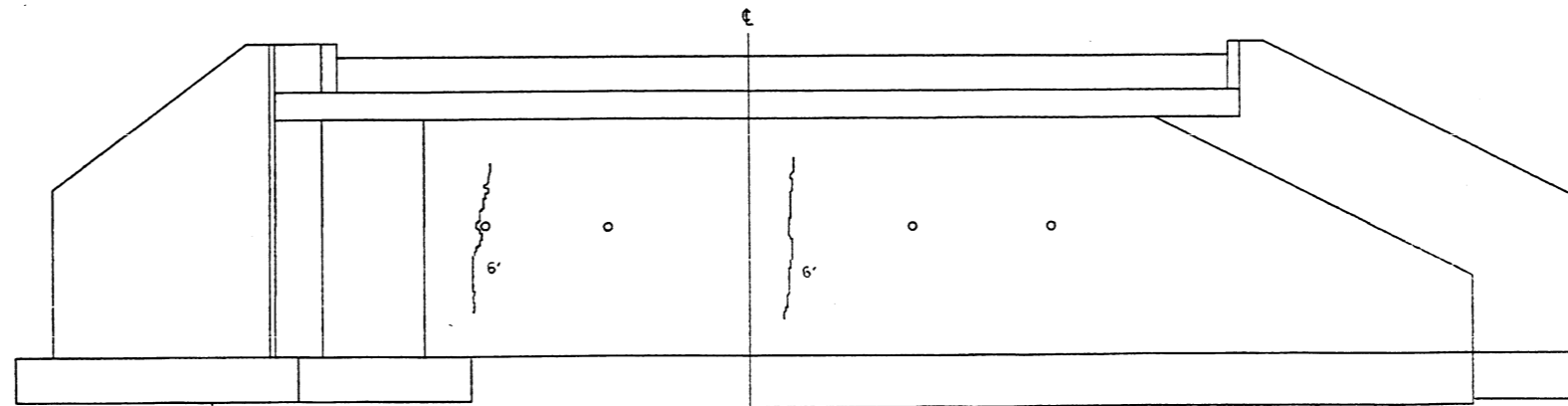


LEAKING KEYWAY LOCATIONS

SPAN 1 : BEAM LENGTH = 49'-8 1/4"	
HALF KEYWAY+ FULL KEYWAY+ ONE THIRD KEYWAY	= 91.10'
SPAN 2 : BEAM LENGTH = 49'-8 1/4"	
HALF KEYWAY+ 10'+ FULL KEYWAY+ FULL KEYWAY	= 134.23'
SPAN 3 : BEAM LENGTH = 49'-8 1/4"	
FULL KEYWAY+ HALF KEYWAY 20'+ 6'+ 15'+ FULL KEYWAY	= 165.23'
<b>TOTAL</b>	<b>= 390.56'</b>

NOTE: ALL DETERIORATED GROUT SHALL BE REMOVED AND REPLACED WITH EPOXY GROUT. IN AREAS WHERE THE EXISTING GROUT IS CRACKED BUT OTHERWISE SOUND, THE CRACKS SHALL BE FILLED WITH EPOXY. THE GROUTING AND SEALING SHALL NOT BE DONE UNTIL ALL P.C.C. DECK BEAM REPAIRS HAVE BEEN COMPLETED.  
*COST INCLUDED WITH KEYWAY REPAIR.*

**CRACK SEALING LOCATIONS  
S.N. 074-0005 (115BR-1)**



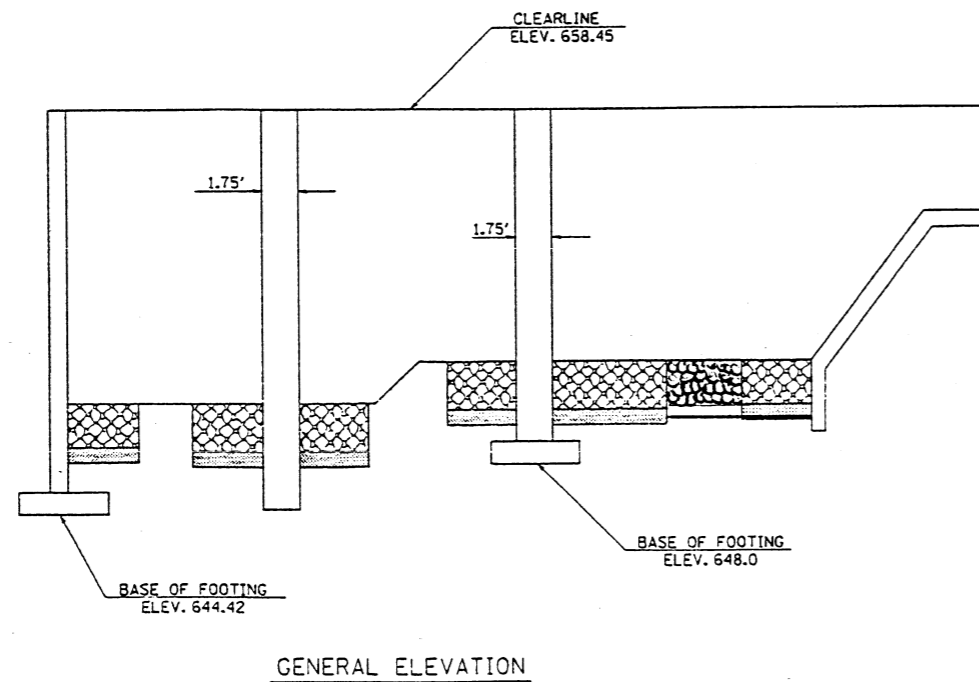
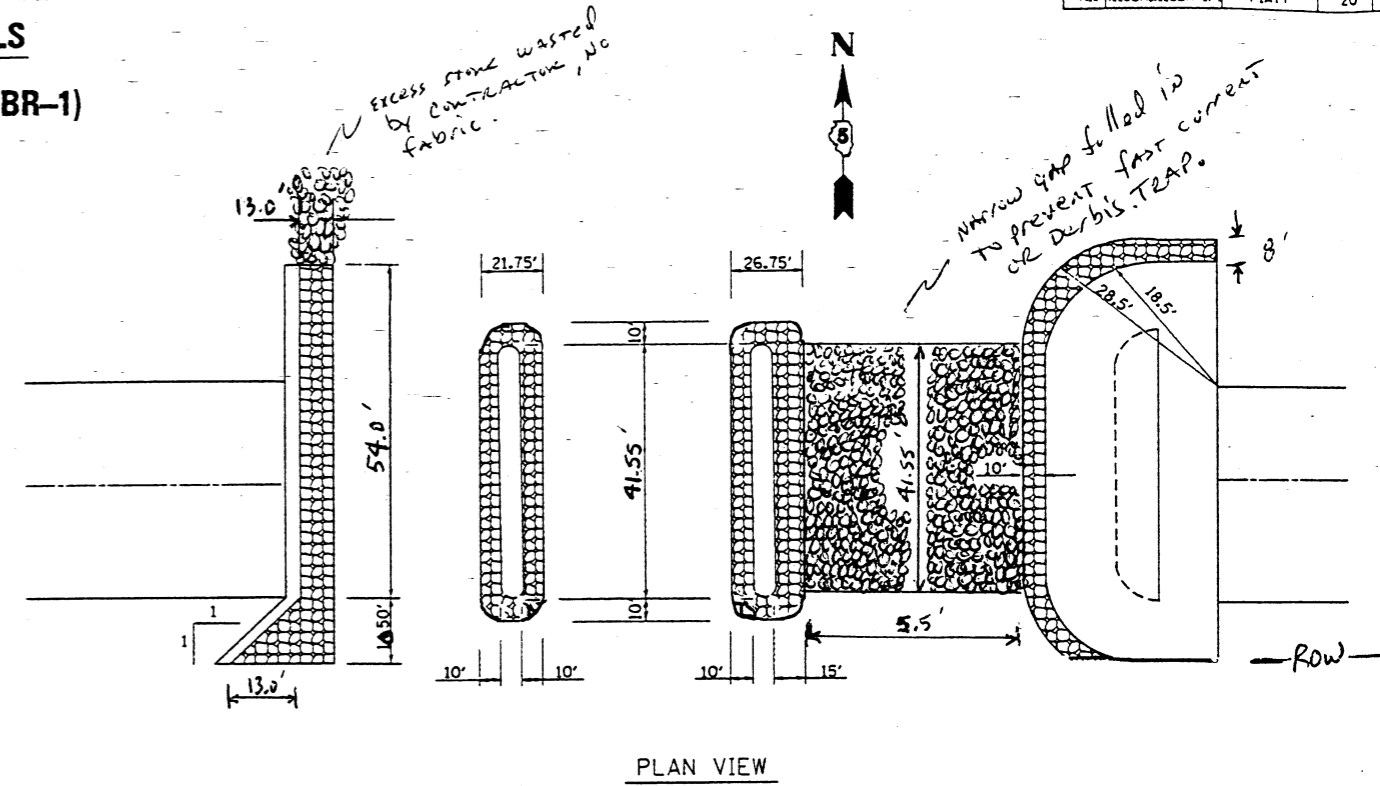
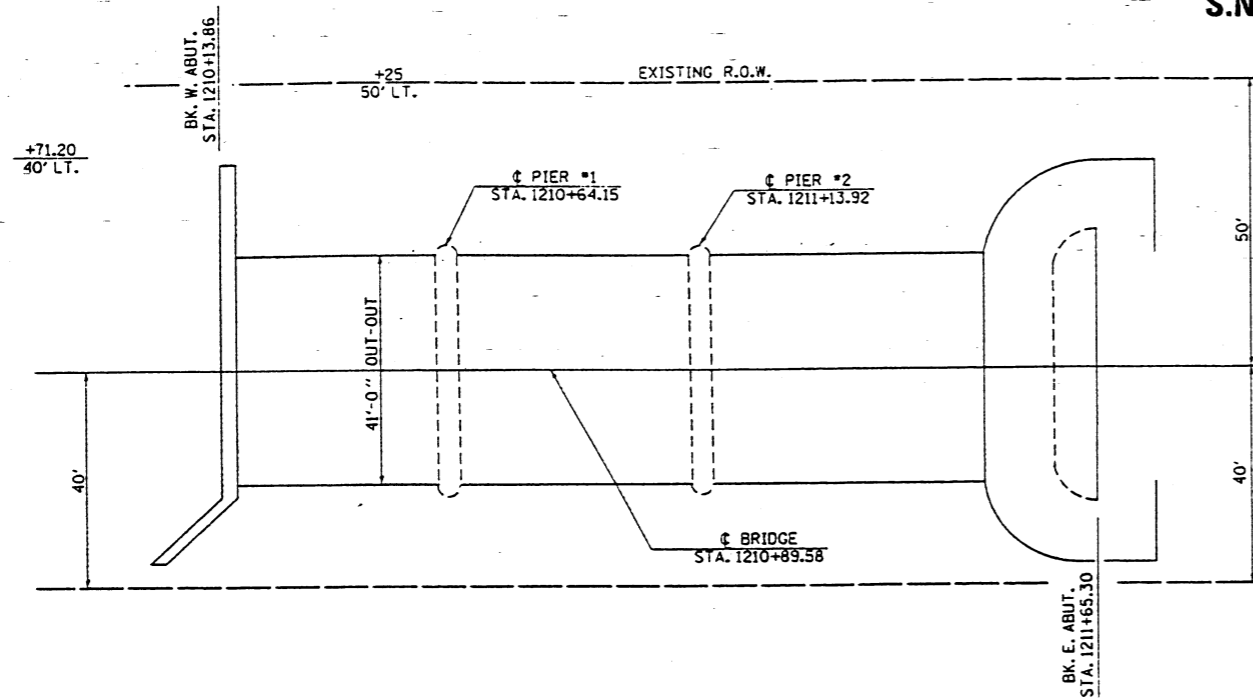
WEST ABUTMENT  
(LOOKING WEST)

NOTE: THE AREAS INDICATED ARE TO BE SEALED. ADDITIONAL CRACKING MAY BE EVIDENT. THE ENGINEER SHALL DETERMINE IF ADDITIONAL AREAS WILL BE REPAIRED.  
*COST INCLUDED WITH EPOXY CRACK SEALING (12 FT.)*

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	(115BR-1)	PIATT	20	17

### RIPRAP DETAILS

S.N. 074-0005 (115BR-1)



**NOTES:**

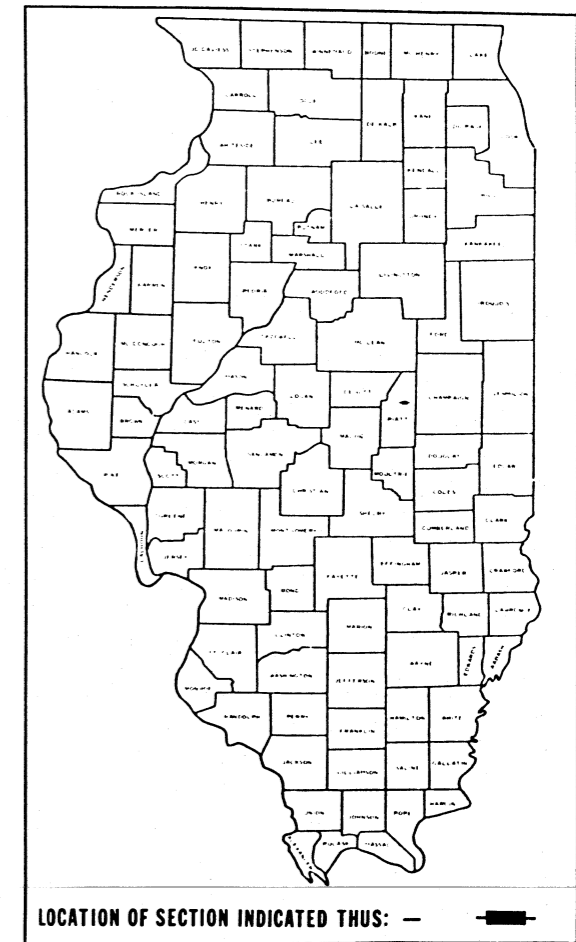
- 1) CLASS A-4 STONE RIPRAP TO BE PLACED AT LOCATIONS SHOWN.
- 2) THE THICKNESS OF THE MAT AT THE ABUTMENTS IS 22".  
THE A-4 RIPRAP IS 16" THICK. THE BEDDING OF A-1 MATERIAL IS 6" THICK. THE THICKNESS OF THE MAT AT THE PIERS IS 25".  
THE A-4 RIPRAP IS 19" THICK. THE A-1 BEDDING IS 6" THICK.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

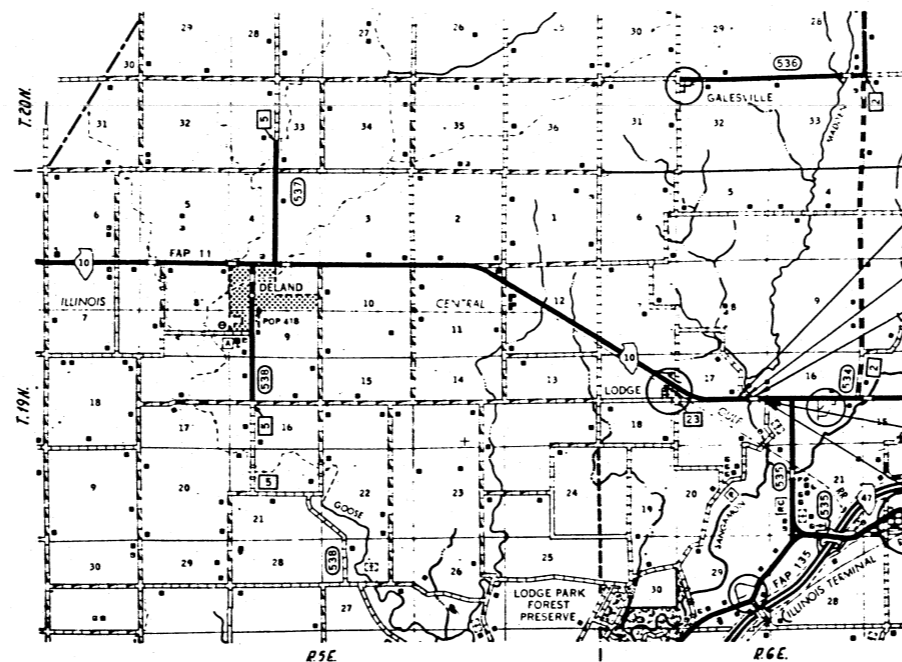
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY  
F.A. ROUTE 721, SECTION 115BR-1  
PROJECT BR-F-721( 6 )  
PIATT COUNTY  
C-95-208-76  
BRIDGE REPLACEMENT

SCALES { PLAN 1" = 50'  
PROFILE HOR. 1" = 50'  
PROFILE VERT. 1" = 5'  
CROSS-SECTIONS 1" = 5' VERT.; 1" = 10' HOR.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	115BR-1	PIATT	22	1
P.H.W.A. REG.		ILLINOIS	PROJECT	
P-95-211-69				



FOR SUMMARY OF QUANTITIES &  
INDEX OF SHEETS, SEE SHEET NO. 3 & 4



SECTION 115 BR-1  
BEGINS STA. 1205+00.00  
PROJ. BEGINS  
STA. 1208+90  
STRUCTURE 115 BR-1  
PRECAST PRESTRESSED CONCRETE DECK  
ON CONCRETE ABUTMENTS & PIERS  
3 SPANS - 1@ 50'-3", 1@ 49'-9", 1@ 51'-4 1/2"  
43'-0" WIDTH - 0° SKEW  
STA. 1210+89.58

SECTION 115 BR-1  
ENDS STA. 1216+35.00  
PROJ. ENDS  
STA. 1215+00

SCALE: 1" = 1 MILE

TOTAL & NET LENGTH OF SECTION = 1,135.00 FEET = 0.215 MILE  
PROJECT LENGTH = 610 FEET = 0.116 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED: March 30, 1977  
Robert E. Krone, DISTRICT ENGINEER

EXAMINED: April 18, 1977  
D. H. Salas, ENGINEER OF PLANS AND CONTRACTS

PASSED: April 18, 1977  
Thomas P. Blythe, ENGINEER OF DESIGN

APPROVED: April 18, 1977  
H. B. Hasty, DIRECTOR, DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_  
DIVISION ADMINISTRATOR DATE

5-17

CONTRACT NO. 32644



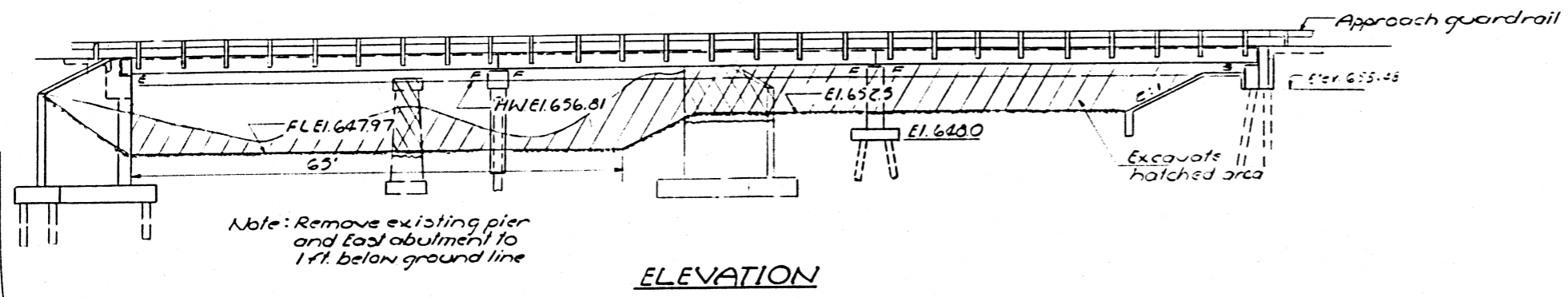
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
721	BR-1	PLATT	10	1

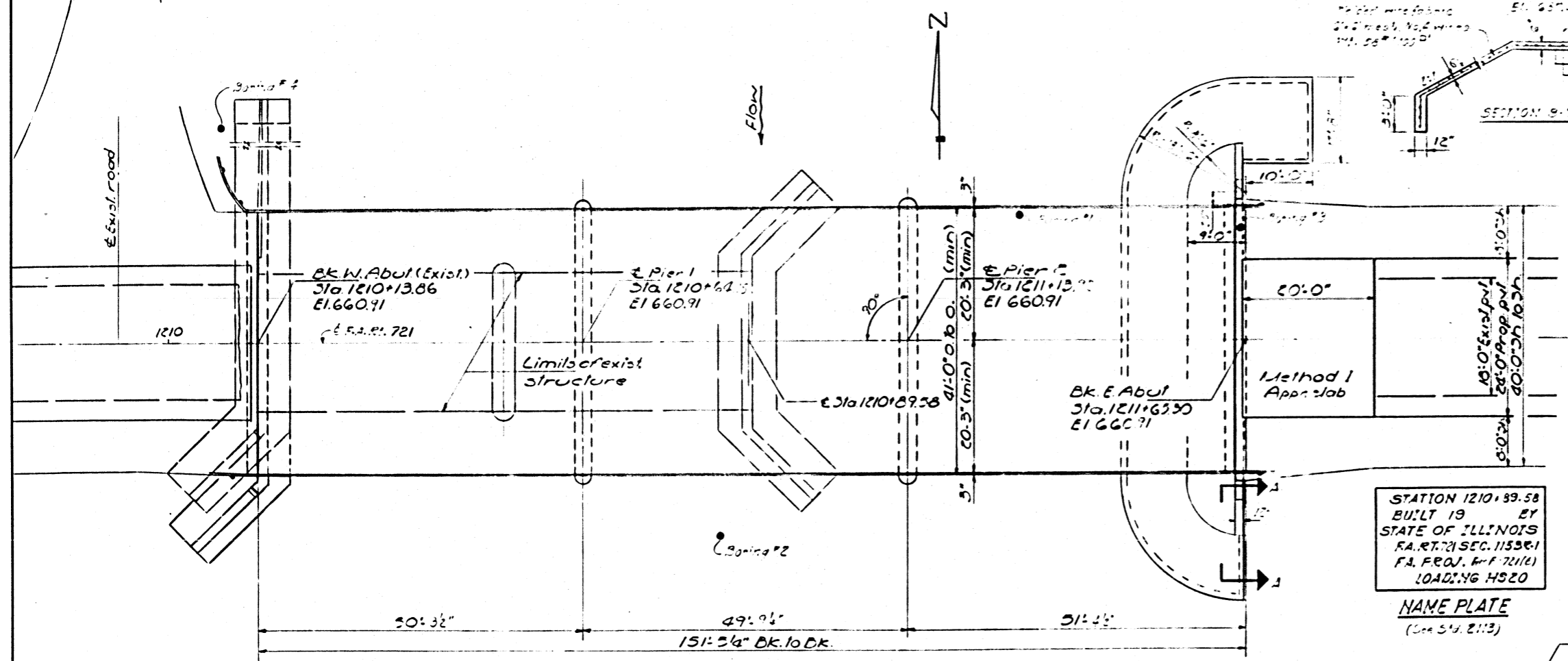
Bench Mark Chiseled "B" Sta. 1216+49 25' RI. on culvert headwall  
CS #1 E1.662.43  
Existing structure No. 074.005 built in 1931 as SBIRte.120, Section 115B  
of Sta. 1210+52.0 Two Span RC deck girders with solid conc.  
pier and RC closed abutments. Superstr. and portions of pier  
and East abutment to be removed as necessary by Bridge  
Contractor. No salvage. Traffic to be maintained on a  
detour as determined by District.

GENERAL NOTES

- See Section 115 for details.
- It shall be the responsibility of the Contractor to verify dimensions and conditions existing in the field prior to construction and ordering of materials.
- The top surface of the beams shall be finished in accordance with Article 503.06 of the Standard Specifications except that the surface shall not be completed by brooming. The finished surface shall be free of longitudinal high spots with a maximum of 1/8" in 10'.
- Expansion bolts shall consist of self-drilling expansion bolts with 1/2" x 12" hooked bolts.
- All structural steel shall be shop painted with two coats of basic lead silico chromate paint.
- Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq ft.
- Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive 2 concrete test piles in a permanent location at the West Abut. as directed by the Engineer before ordering the remainder of piles.
- Each pile of minimum length and end wall shall be the same as from top of footing to 2' below top.
- Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.



Note: Remove existing pier and East abutment to 1 ft. below ground line



STATION 1210+89.58  
BUILT 19 BY  
STATE OF ILLINOIS  
FA. RT. 721 SEC. 115B(1)  
FA. PROJ. # F-721(1)  
LOADING HS20  
NAME PLATE  
(See S.D. 2113)

TOTAL BILL OF MATERIALS

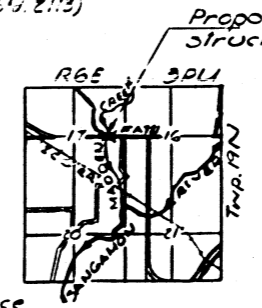
Item	Unit	Quantity	Price	Total
Removal of Existing Structure	Each	1	0.00	0.00
Structural Steel	Sq. Ft.	1000	1.50	1500.00
Reinforcing Bars	Lbs.	10000	0.15	1500.00
Welding	Man-Hrs.	100	15.00	1500.00
Formwork	Sq. Yds.	100	1.50	150.00
Concrete	Cu. Yds.	100	6.00	600.00
Excavation	Sq. Yds.	100	0.50	50.00
Structural Steel	Sq. Ft.	1000	1.50	1500.00
Precast Prestressed Units	Sq. Ft.	1000	6.00	6000.00
Steel Rolling Time	Man-Hrs.	100	5.99	599.00
Portland Cement Mortar	Sq. Yds.	100	1.00	100.00
Excavation	Sq. Yds.	100	0.50	50.00
Concrete Piles	Each	2	100.00	200.00
6"x6" Piles (Concrete)	Each	2	100.00	200.00
Concrete Formwork	Sq. Yds.	100	1.50	150.00
Structure Excavation	Sq. Yds.	100	0.50	50.00

DESIGN STRESSES

FIELD UNITS  
fc = 1400 psi  
fy = 60,000 psi (Reinf.)  
fs = 20,000 psi (Struct.)

PRECAST PRESTRESSED UNITS  
fc = 5000 psi  
fci = 4000 psi  
fs = 270,000 psi (7/16" Strands)  
fci = 188,700 psi (7/16" Strands)

Allow 25% for future wearing surface  
Design Specifications: 1973 AASHTO  
1974 & 1975 interim specs.



WATERWAY INFORMATION

Drainage Area - 16,500 Acres  
Discharge (50 Yr.) - 4600 cfs  
Required Opening - 870 Sq Ft  
Present Opening - 395 Sq Ft  
Proposed Opening - 870 Sq Ft  
Created Head (50 Yr.) - 0.75 Ft.  
Discharge (100 Yr.) - 5630 cfs.  
Highwater El. (100 Yr.) - 637.35

LOADING HS20-44 (New Construction)

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: [Signature]  
CHECKED: [Signature]

EXAMINED: [Signature]  
PASSED: [Signature]  
APPROVED: [Signature]

PROJECT BR-F-721(6)  
GENERAL PLAN & ELEVATION  
FA. ROUTE 11 (SBIRTE.120) OVER MADDEN CREEK  
FA. ROUTE 721  
SECTION 115 BR-1  
PLATT COUNTY  
STATION 1210+89.58



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

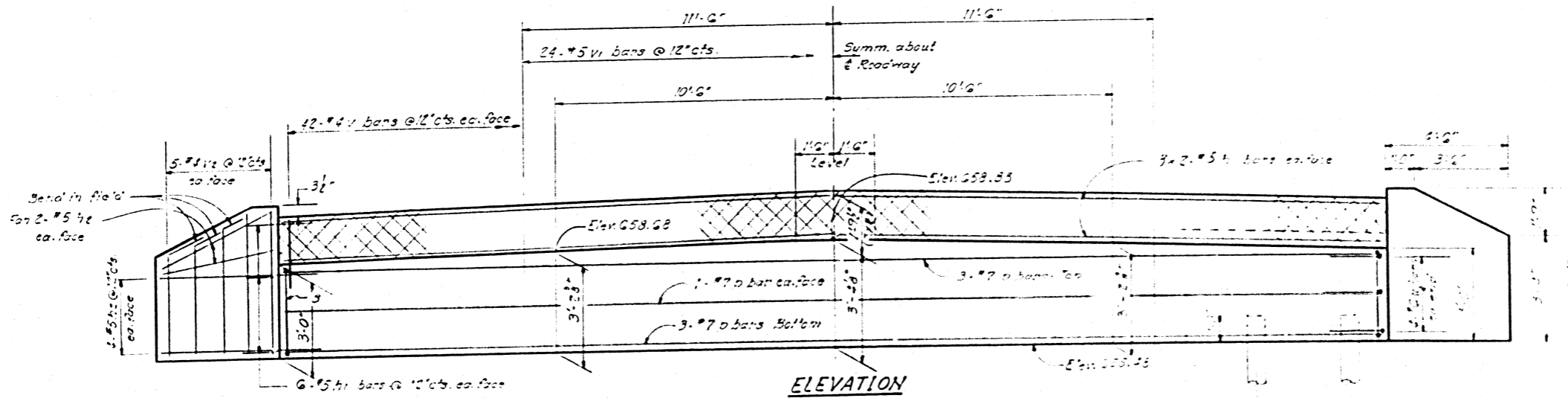
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
P.A.-721	1584-	PLATT	22	4	12 SHEETS
FBI ROAD DIST. NO. 7		BLANCK	FBI AD PROJECT		

WEST ABUTMENT - BILL OF MATERIAL

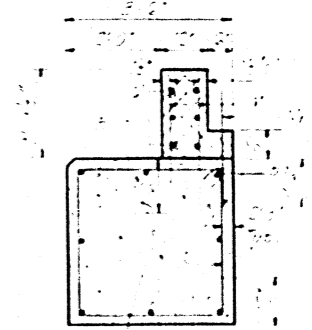
Bar	No.	Size	Length	Stake	Bar	No.	Size	Length	Stake
h8	8	#2	3'-0"		h4	4	#2	5'-0"	
h6	22	#2	2'-3"		h5	5	#2	5'-0"	
h5	17	#2	5'-0"		h4	5	#2	5'-0"	
h6	15	#5	7'-0"		h5	27	#2	2'-3"	
h7	7	#2	6'-3"		h6	10	#5	5'-0"	
h8	15	#5	5'-0"		h7	3	#2	5'-0"	
h9	15	#5	5'-0"		h8	2	#5	5'-0"	
h10	22	#2	5'-0"		h9	2	#2	5'-0"	
g	15	#2	5'-0"						
h	15	#2	3'-6"						
i	15	#2	6'-5"						
j	15	#2	4'-0"						
k	15	#2	7'-3"						
l	15	#2	4'-0"						
m	15	#2	2'-11"						
n	15	#2	5'-10"						
o	15	#2	5'-10"						
p	15	#2	5'-10"						
q	15	#2	5'-10"						
r	15	#2	5'-10"						
s	15	#2	5'-10"						
t	15	#2	5'-10"						
u	15	#2	5'-10"						
v	15	#2	5'-10"						
w	15	#2	5'-10"						
x	15	#2	5'-10"						
y	15	#2	5'-10"						
z	15	#2	5'-10"						
aa	15	#2	5'-10"						
ab	15	#2	5'-10"						
ac	15	#2	5'-10"						
ad	15	#2	5'-10"						
ae	15	#2	5'-10"						
af	15	#2	5'-10"						
ag	15	#2	5'-10"						
ah	15	#2	5'-10"						
ai	15	#2	5'-10"						
aj	15	#2	5'-10"						
ak	15	#2	5'-10"						
al	15	#2	5'-10"						
am	15	#2	5'-10"						
an	15	#2	5'-10"						
ao	15	#2	5'-10"						
ap	15	#2	5'-10"						
aq	15	#2	5'-10"						
ar	15	#2	5'-10"						
as	15	#2	5'-10"						
at	15	#2	5'-10"						
au	15	#2	5'-10"						
av	15	#2	5'-10"						
aw	15	#2	5'-10"						
ax	15	#2	5'-10"						
ay	15	#2	5'-10"						
az	15	#2	5'-10"						
ba	15	#2	5'-10"						
bb	15	#2	5'-10"						
bc	15	#2	5'-10"						
bd	15	#2	5'-10"						
be	15	#2	5'-10"						
bf	15	#2	5'-10"						
bg	15	#2	5'-10"						
bh	15	#2	5'-10"						
bi	15	#2	5'-10"						
bj	15	#2	5'-10"						
bk	15	#2	5'-10"						
bl	15	#2	5'-10"						
bm	15	#2	5'-10"						
bn	15	#2	5'-10"						
bo	15	#2	5'-10"						
bp	15	#2	5'-10"						
bq	15	#2	5'-10"						
br	15	#2	5'-10"						
bs	15	#2	5'-10"						
bt	15	#2	5'-10"						
bu	15	#2	5'-10"						
bv	15	#2	5'-10"						
bv	15	#2	5'-10"						
bw	15	#2	5'-10"						
bx	15	#2	5'-10"						
by	15	#2	5'-10"						
bz	15	#2	5'-10"						
ca	15	#2	5'-10"						
cb	15	#2	5'-10"						
cc	15	#2	5'-10"						
cd	15	#2	5'-10"						
ce	15	#2	5'-10"						
cf	15	#2	5'-10"						
cg	15	#2	5'-10"						
ch	15	#2	5'-10"						
ci	15	#2	5'-10"						
cj	15	#2	5'-10"						
ck	15	#2	5'-10"						
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ct	15	#2	5'-10"						
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gq	15	#2	5'-10"						
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hw	15	#2	5'-10"						
hx	15	#2	5'-10"						
hy	15	#2	5'-10"						
hz	15	#2	5'-10"						
ia	15	#2	5'-10"						
ib	15	#2	5'-10"						
ic	15	#2	5'-10"						
id	15	#2	5'-10"						
ie	15	#2	5'-10"						
if	15	#2	5'-10"						
ig	15	#2	5'-10"						
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ii	15	#2	5'-10"						
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in	15	#2	5'-10"						
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ip	15	#2	5'-10"						
iq	15	#2	5'-10"						
ir	15	#2	5'-10"						
is	15	#2	5'-10"						
it									

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

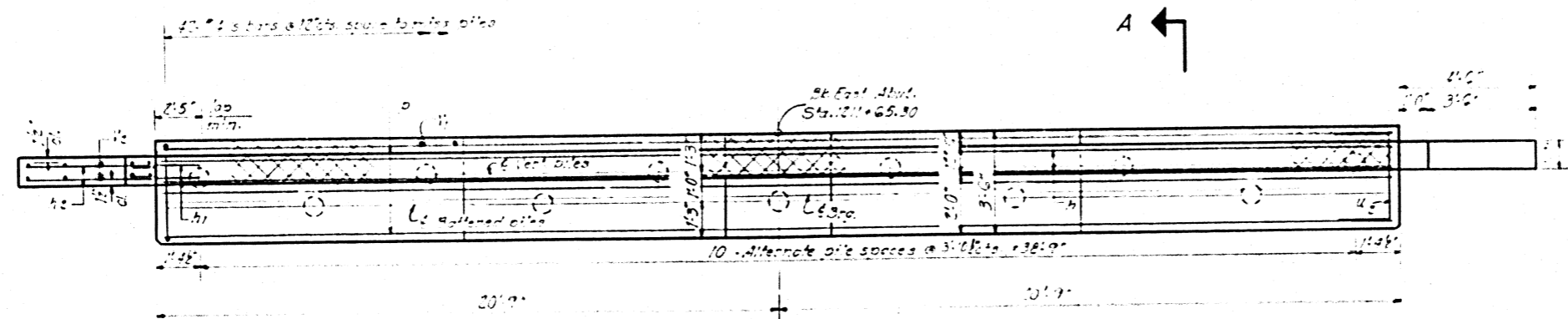
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 5 SHEETS
F.A.R.T. 115	15BR	PIATT	22	5	
FEB. ROAD DIST. NO. 7		ILLINOIS	FEB. AID PROJECT		



ELEVATION

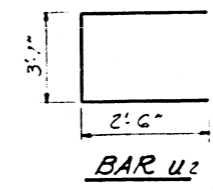


SEC. A-A

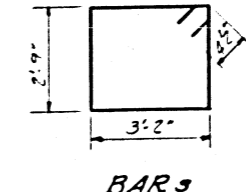


PLAN

**FILE DATA**  
Type: Concrete piles  
Capacity: 35 tons  
Est. Length: 25'-0"  
No. Required: 10 piles / Test pile



BAR U2



BAR S

EAST ABUTMENT  
BILL OF MATERIAL

Item	No.	Size	Length	Shape
1	2	#6	25'	
2	24	#5	25'	
3	24	#5	25'	
4	3	#4	25'	
5	5	#7	25'	
6	42	#4	25'	
7	3	#6	25'	
8	34	#5	25'	
9	24	#5	25'	
10	20	#6	25'	
11	10	#6	25'	
12	10	#6	25'	
Class A Concrete				220
Reinforcement Bars				2100
Concrete Piles				250
Test Piles (Concrete)				1

\* Includes Piling extension  
See Sheet #1.

EAST ABUTMENT  
F.A.R.T. 115 BR-1  
PIATT COUNTY  
STA. 1210+89.58

DESIGNED	<i>Jim M. Lee</i>
CHECKED	<i>Greg S. Smith</i>
DRAWN	<i>Jim M. Lee</i>
CHECKED	<i>Lee GSW</i>

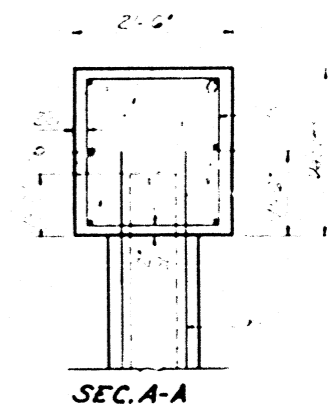
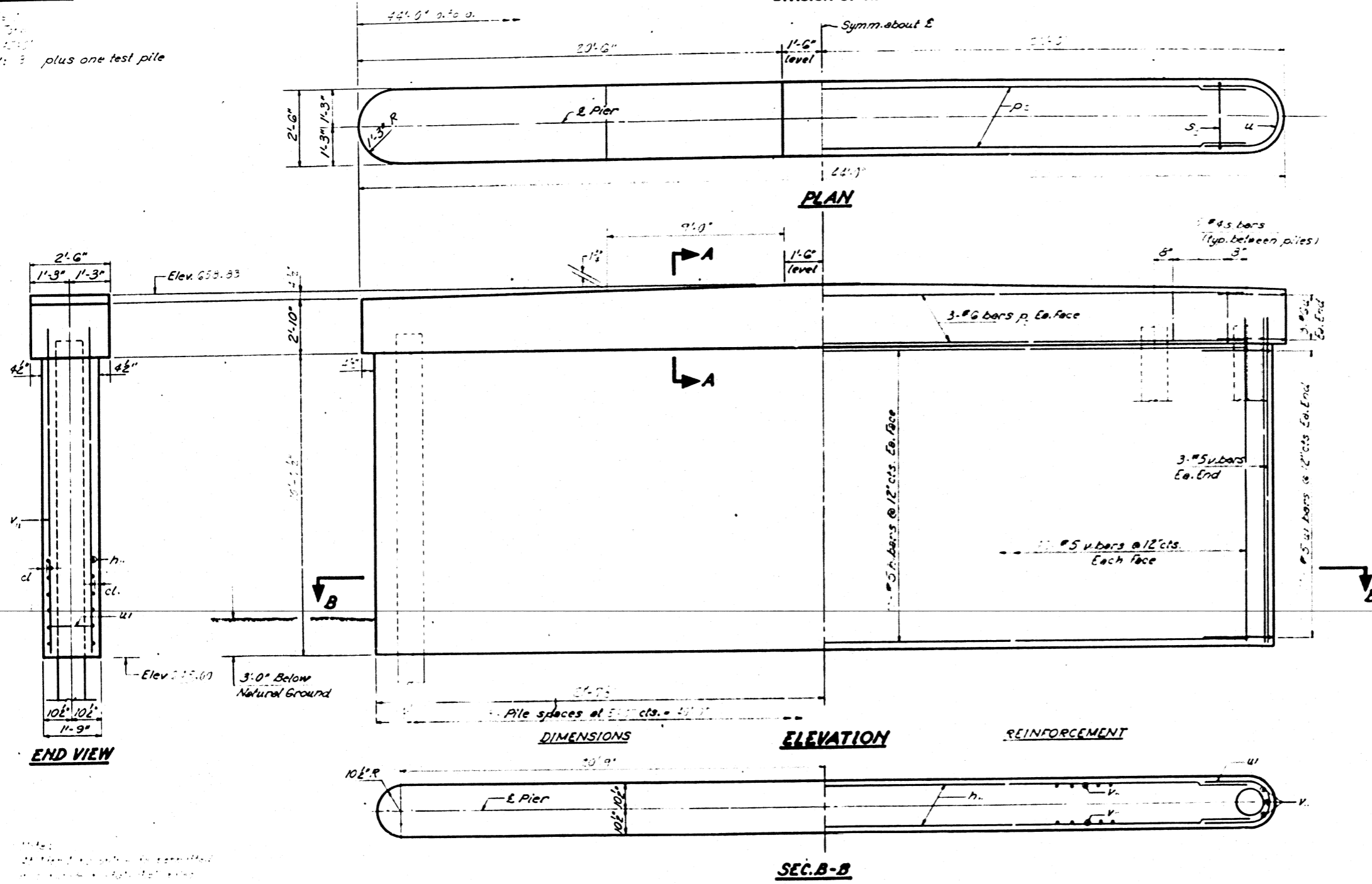
EXAMINED	<i>[Signature]</i>	SEPT 24 1976
PASSED		
APPROVED		

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1				
SHEET NO. SHEETS				

**PILE DATA**

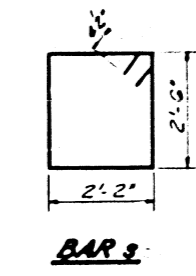
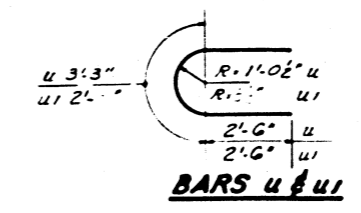
Type: *...*  
Capacity: *...*  
Est. length: *...*  
No. Required: *3 plus one test pile*



Note:  
All edges shall have 3/4" chamfers

**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
1	#5		—
2	#6		—
3	#6	10'-11"	□
4	#6	8'-3"	U
41	#5	7'-11"	U
5	#5		—
Class A Concrete Cu. Yds.			
Reinforcement Bars Lbs.			
Est. Piles Each			



DESIGNED <i>...</i>	EXAMINED <i>...</i>
CHECKED <i>...</i>	PASSED <i>...</i>
DRAWN <i>...</i>	APPROVED <i>...</i>
CHECKED <i>...</i>	

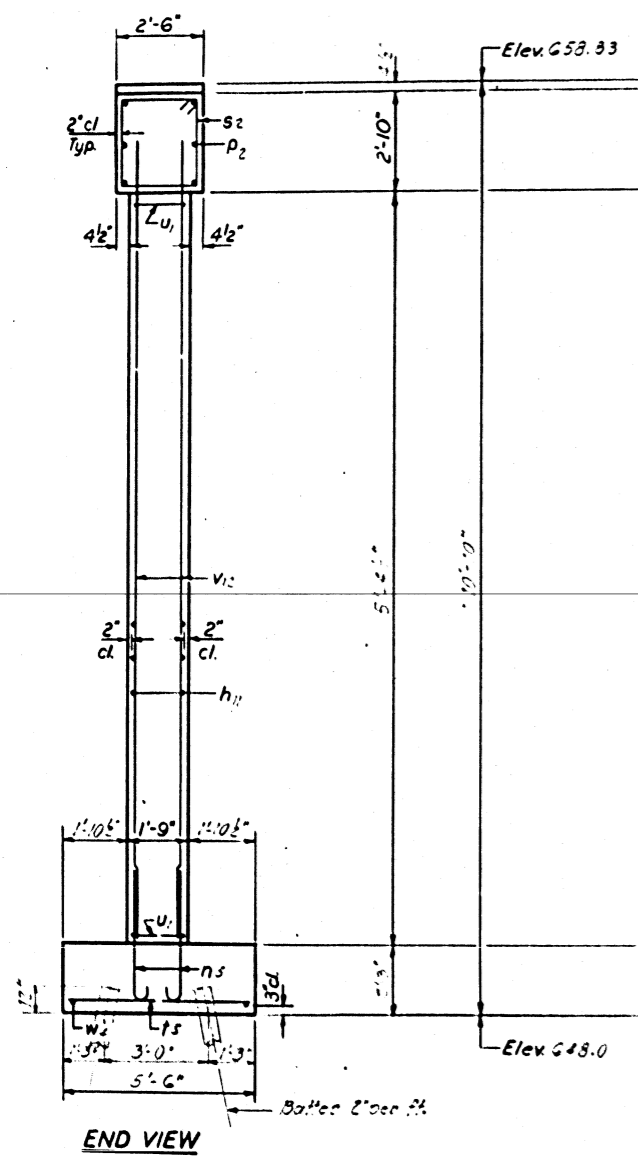
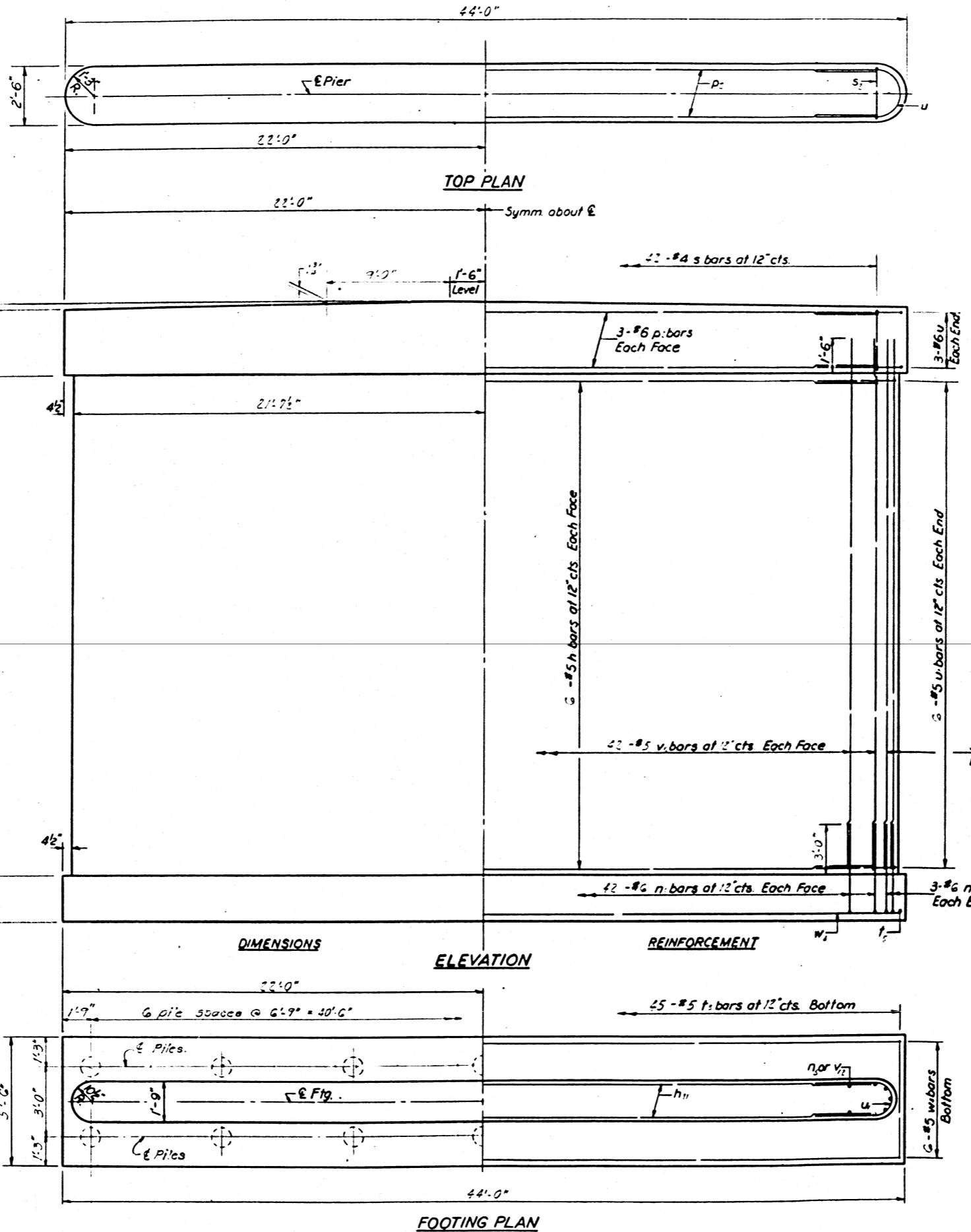
PIER #1  
PARTIAL SECTION #1  
PIATT COUNTY  
STA. 1210+39.53

NOTE: All edges shall have standard 3/4" chamfer.

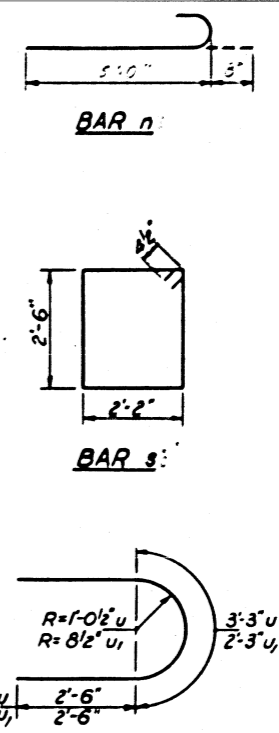
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. 711	5BR-1	PIATT	22	17
ILLINOIS		P.O. BOX 100, JEFFERSON		

SHEET NO. 9  
15 SHEETS



PILE DATA  
Type: Concrete Piles  
Capacity: 20 tons  
Embedment: 25'-0"  
No. Required: 22



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n	12	#5	6'-5"	—
ns	20	#6	5'-3"	—
pr	6	#6	6'-6"	—
s	42	#4	10'-1"	□
t	45	#5	5'-3"	—
u	6	#6	8'-3"	—
u	12	#5	7'-5"	—
v	20	#5	6'-7"	—
Wc	6	#5	43'-9"	—
Class X Concrete		Cu Yds	66.7	
Reinforcement Bars		Lbs	3260	
Concrete Piles		Lin. Ft.	392	

DESIGNED: *[Signature]*  
CHECKED: *[Signature]*  
DRAWN: S.U.  
CHECKED: *[Signature]*

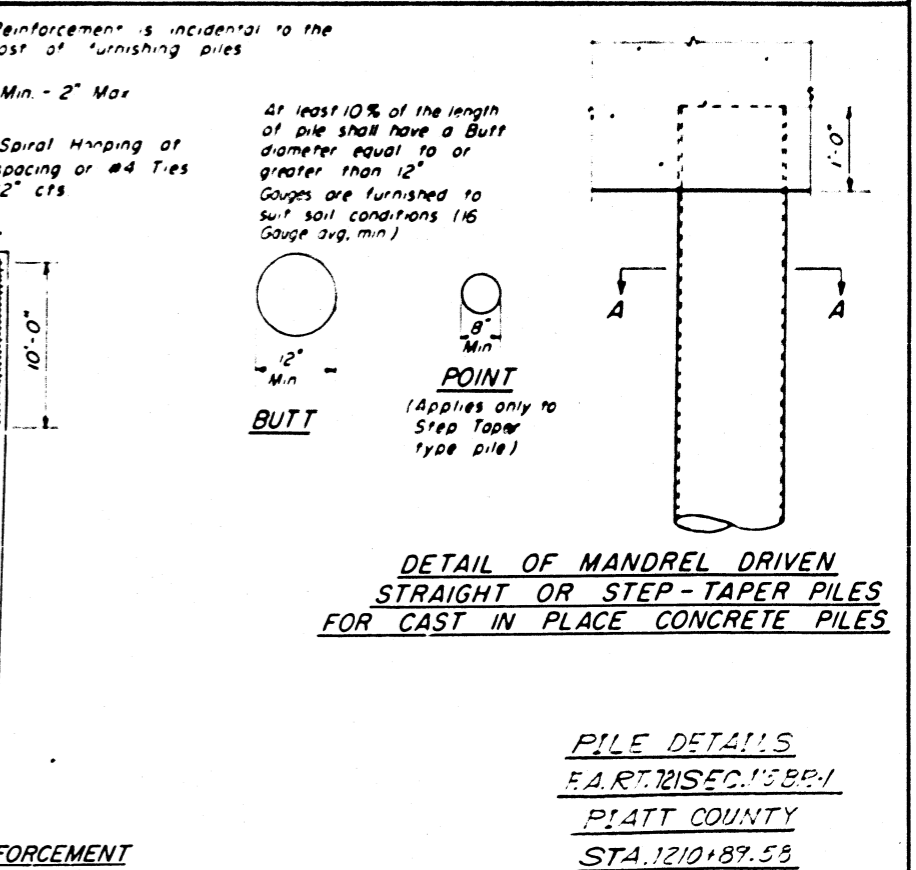
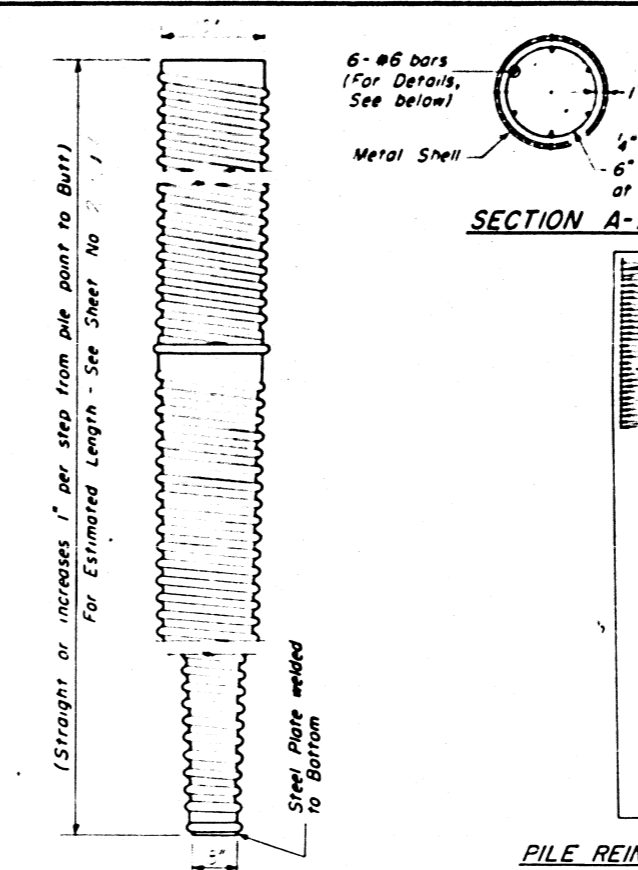
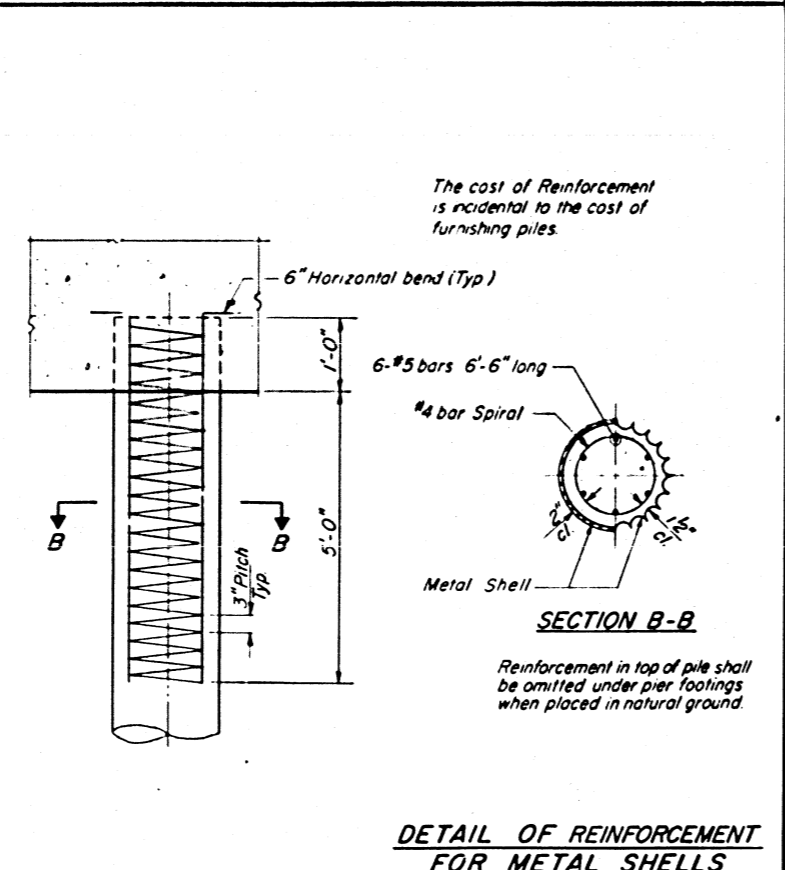
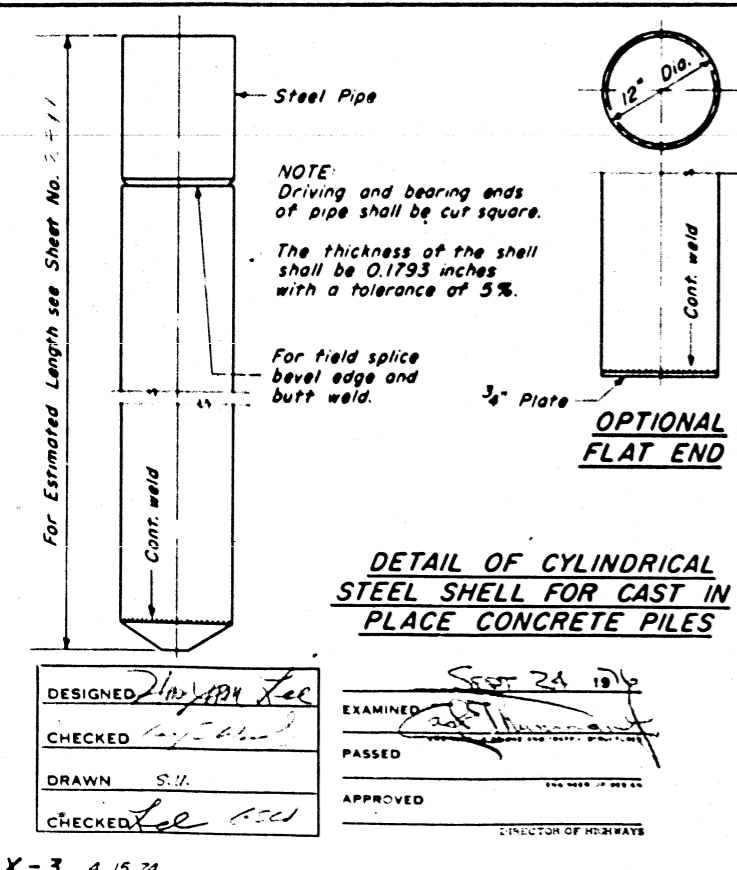
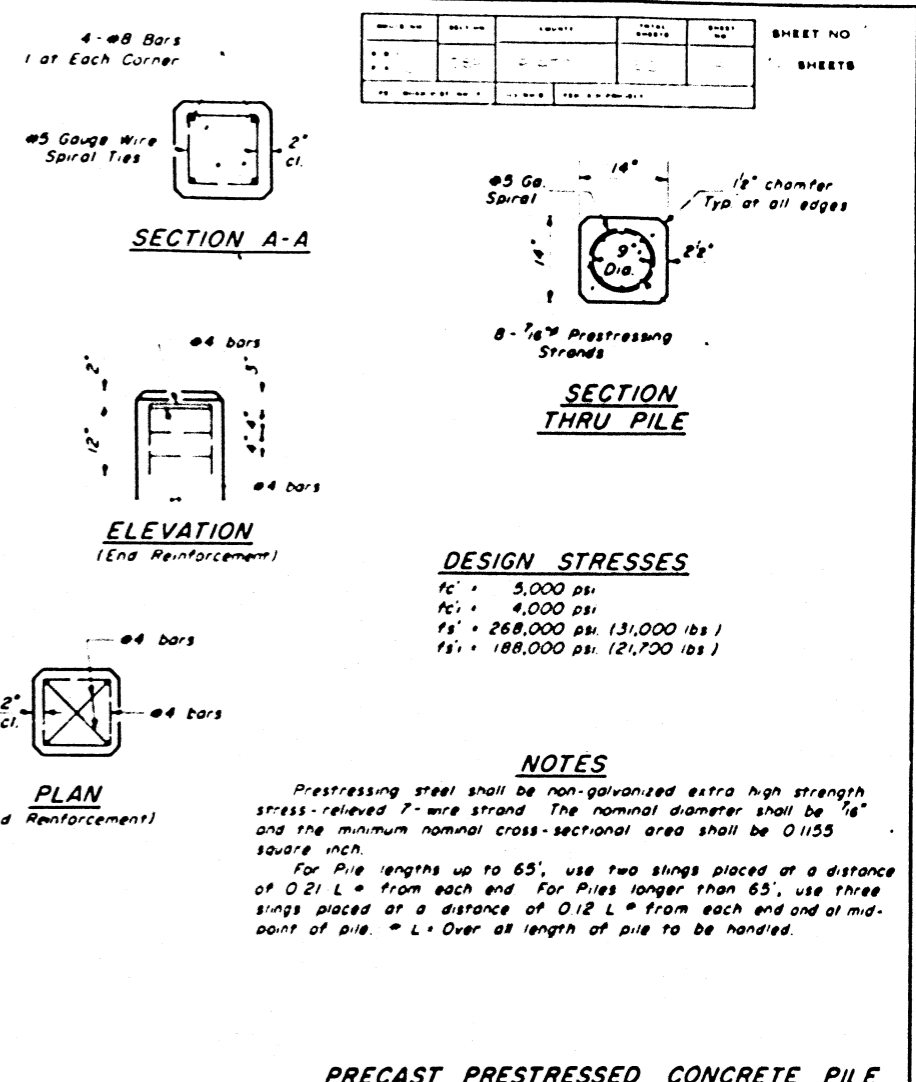
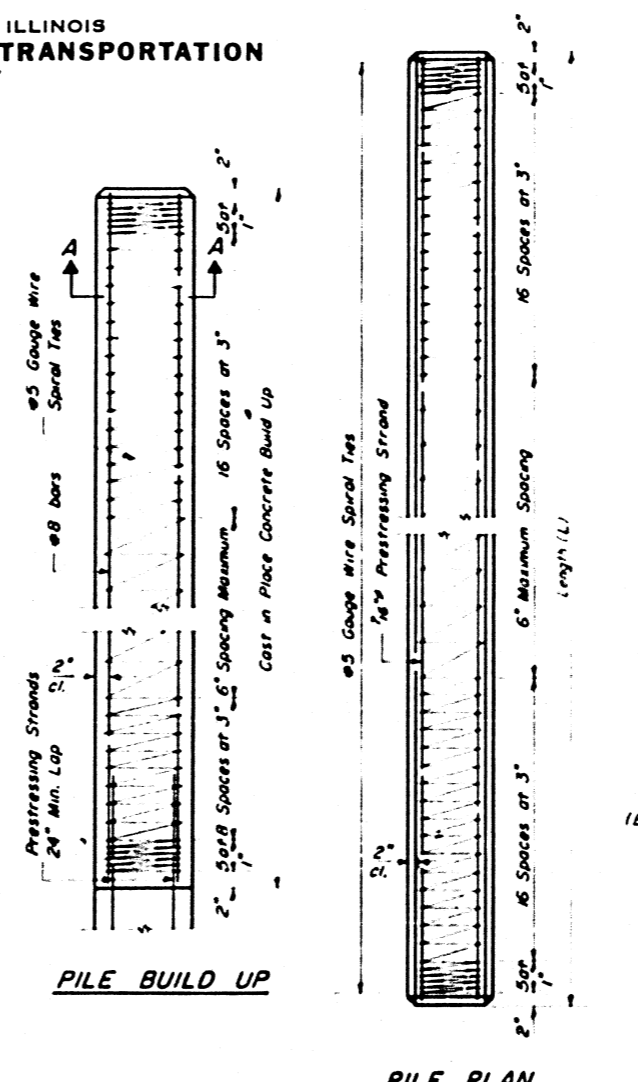
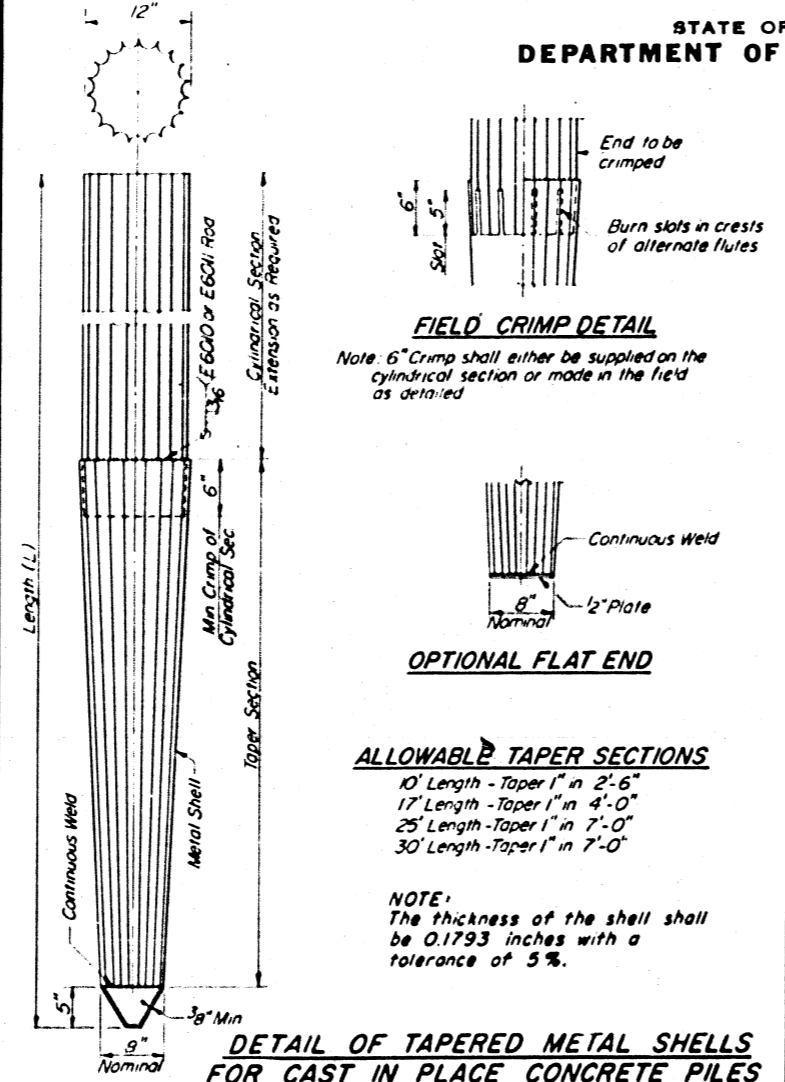
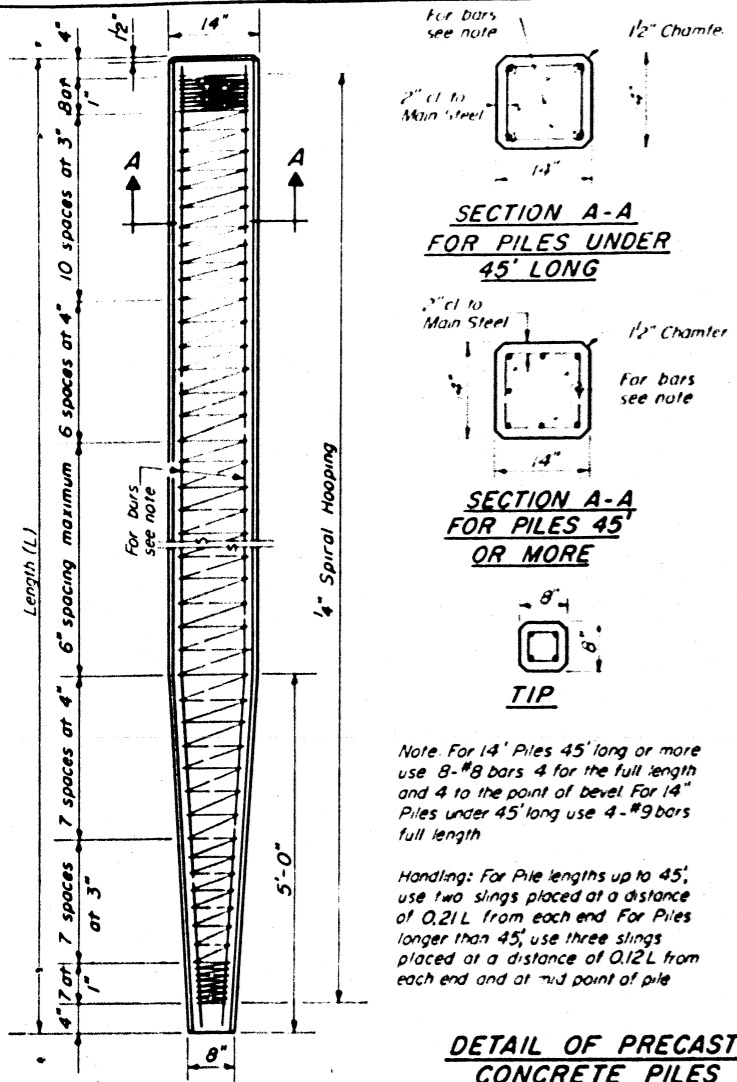
EXAMINED: *[Signature]*  
PASSED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

SECT 24 12/6

PIER # 2  
F.A.R.T. 715EC. 115BR-1  
PIATT COUNTY  
STA. 1210+87.58

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DATE	SCALE	SHEET NO.
			1



X-3 4-15-74

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: S.V.  
CHECKED: [Signature]

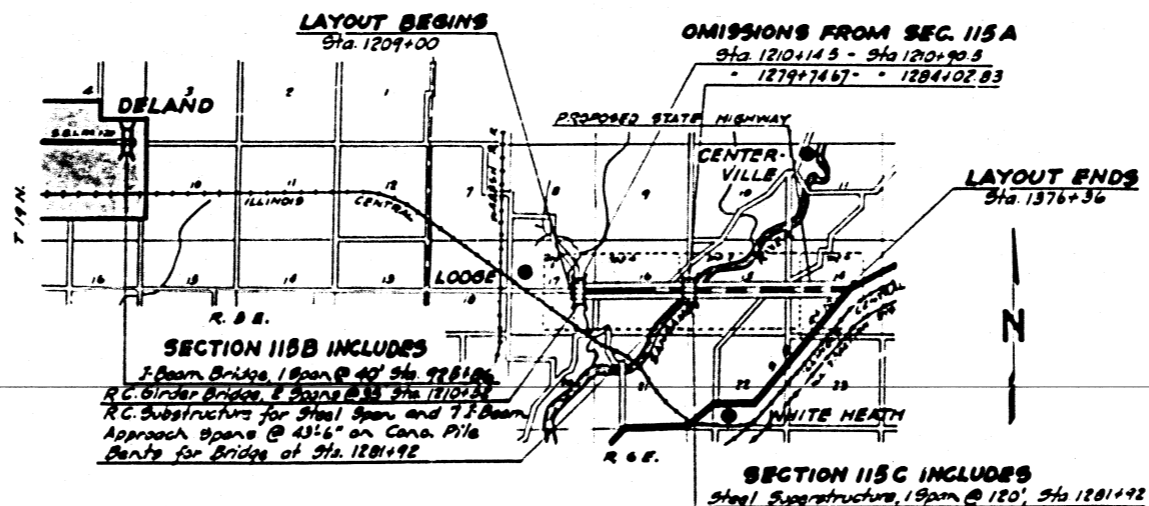
EXAMINED: [Signature]  
PASSED: [Signature]  
APPROVED: [Signature]  
DIRECTOR OF HIGHWAYS

**INDEX TO SHEETS**

Sheet No.	Title Page
2	Details of Typical Cross Sections
3	Plan & Profile Sta. 1209+00 to Sta. 1211+00
4	1211+00 - 1275+00
5	1275+00 - 1339+00
6	1339+00 - 1376+36
7-16	Inclusive Cross Sections
17	Standard Culvert Design 828-1, 828-6
17	Special Culvert Design Sta. (1236+00, 1372+50), 1248+45
18	1257+90, 1264+64, 1305+00, 1313+00
19	1329+75, 1330+30, 1333+75, 1362+00
20	Bridges 925+86 (Sheet 1 of 2 Sheets)
21	1210+52 (1 - 4)
22	1210+52 (4 - 4)
23	1281+92 (1 - 4)
24	1281+92 (2 - 4)
25	1281+92 (3 - 4)
26	1281+92 (4 - 4)
27	925+86 (2 - 2)
27	1210+52 (2+3 - 4)
28	Standard 1162, 1177

**PROJ. 170, SEC'S 115A, B, C, PIATT CO.**

From a point near the N.W. Corner of the N.E. 1/4 of the S.E. 1/4 of Sec. 17, T.19N., R.6E. of the 3rd P.M.  
To a point near the center of Section 14, T.19N., R.6E. of the 3rd P.M.



**SECTION 115B INCLUDES**  
I-Beam Bridge, 1 span @ 40', Sta. 925+86  
R.C. Girder Bridge, 2 spans @ 35', Sta. 1210+52  
R.C. Substructure for Steel Span and I-Beam  
Approach Spans @ 43'-6" on Cast Pile  
Bents for Bridge at Sta. 1281+92

**SECTION 115C INCLUDES**  
Steel Superstructure, 1 span @ 120', Sta. 1281+92

**LAYOUT**

Approximate Scale: - 1 inch = 1 mile  
Net Length of Layout = 16779.0 feet = 3.1778 miles

Contract No's  
Sec. 115A - 4387  
Sec. 115B - 4388  
Sec. 115C - 4389

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS

APPROVED

CH. APPR.

EDDufford  
J. H. ...  
J. H. ...  
H. H. Cleveland

074-0005

PIATT 115A,B,C 170

Reel 5-17

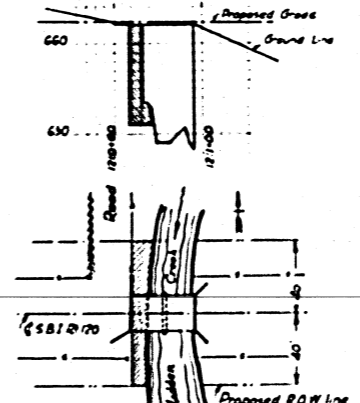
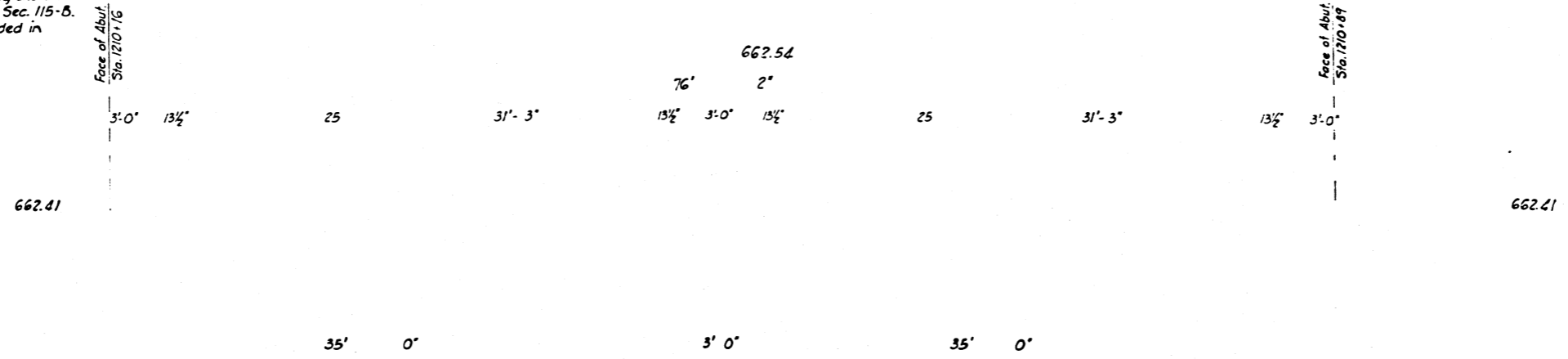
1210+52 JAT 115B



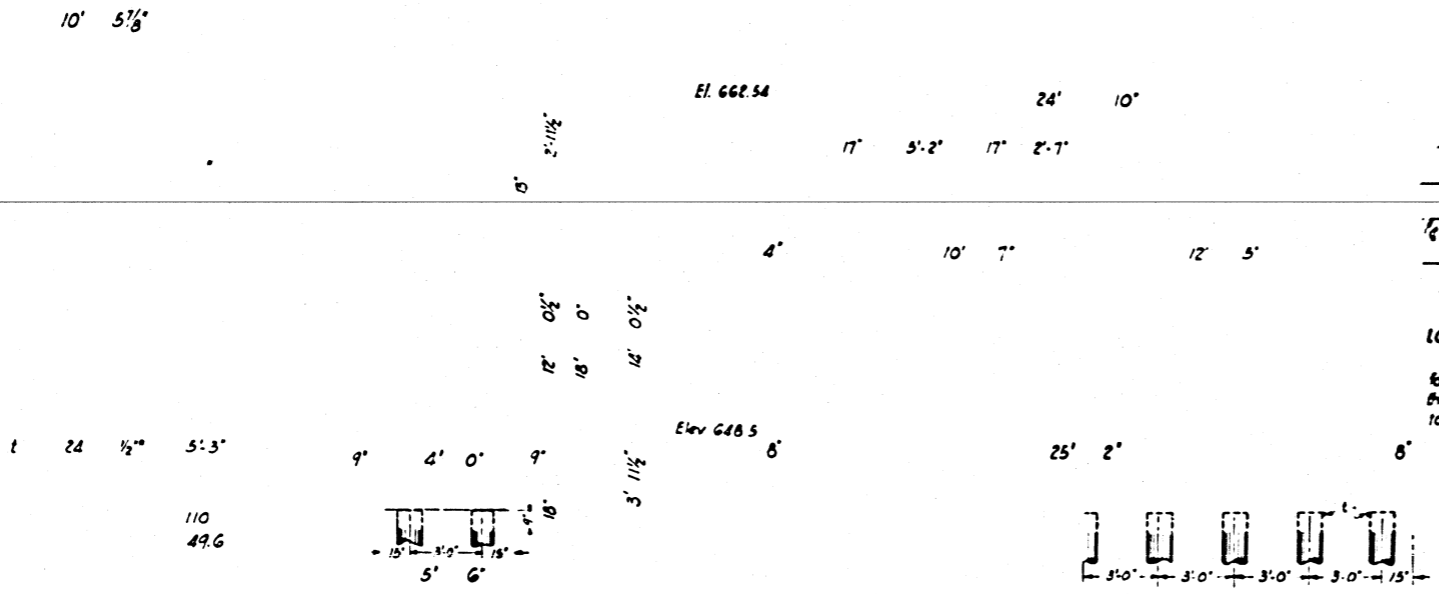
B.M. - Nail & Washer in oak tree - Left of Sta. 1211+80 - Elev. 656.29  
 Existing Bridge - Steel Pin Connected Pony Truss, 60 Ft. span, Roadway 16 Ft.  
 Existing truss, west abutment & concrete block on bridge seat of east  
 abutment to be removed by Contractor for Sec. 115-B. - Cost to be included  
 in unit price bid for Class X Concrete.  
 Excavation of West Abutment (as shown by sketch on  
 this sheet) to be done by Contractor for Sec. 115-B.  
 500 Cu. Yds. Class A Excavation to be included in  
 proposal.

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
120	E115B	Piatt	20	21
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT 170	

4



**LOCATION SKETCH SHOWING EXCAV. DETAILS**  
 Cross-hatched area to be excavated by Contractor for Sec. 115-B. - 4 placed in fill at direction of the Engineer. Approx 500 Cu Yds. Class A Excavation to be included in proposal.



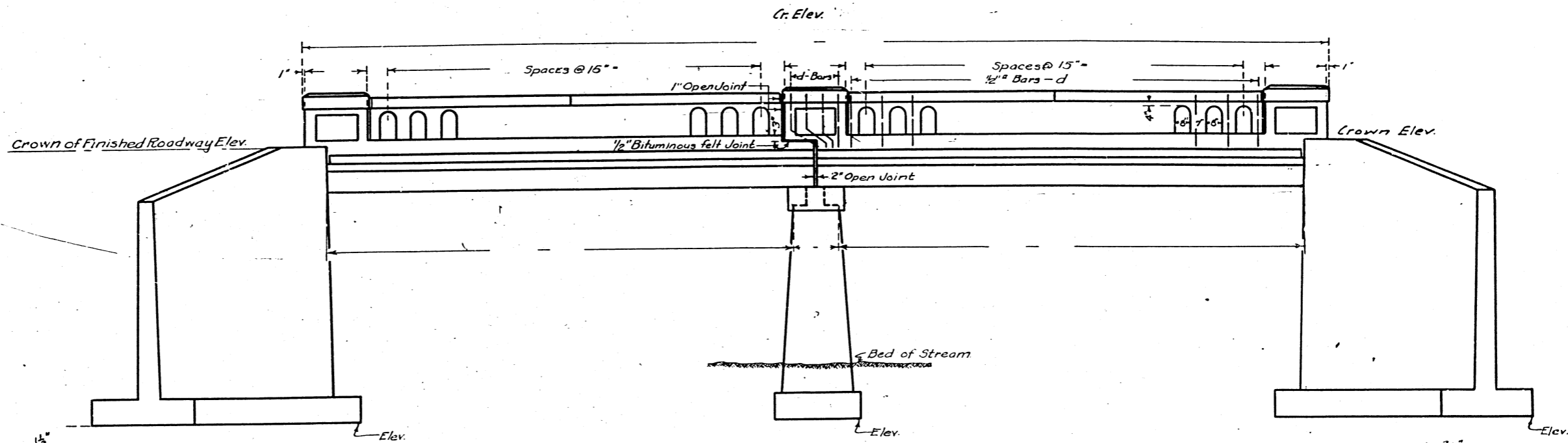
15 Ton Unit Diles - 12" Butt - 8" Tip  
 18 Required - Est. Length - 360 Lin. Ft.  
 All reinforcing steel shall be wired securely in place before concrete is poured.

Jan. 23, 31  
 H. J. Bunch  
 H. E. Surman  
 Frank D. Keety

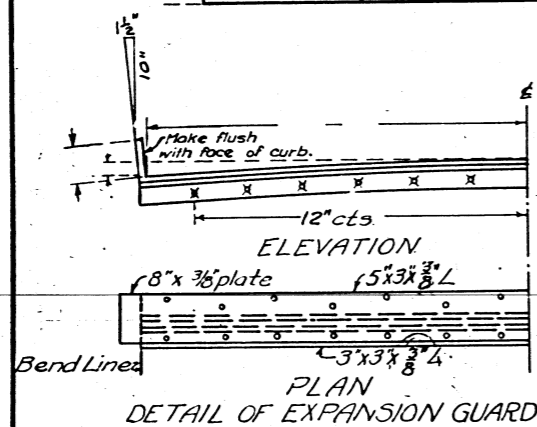
Am. J. Mackay  
 F. P. Zath

174.8		174.8
93.8	840	177.8
		49.6
		49.6
24070	5700	110
2028		2028
550		550
	1000	360
		1360

GENERAL ELEVATION AS PIER  
 BRIDGE OVER MADDEN CREEK  
 S.B.I. ROUTE 120 - SECTION 115-B  
 PIATT COUNTY - STA. 1210+52



GENERAL ELEVATION

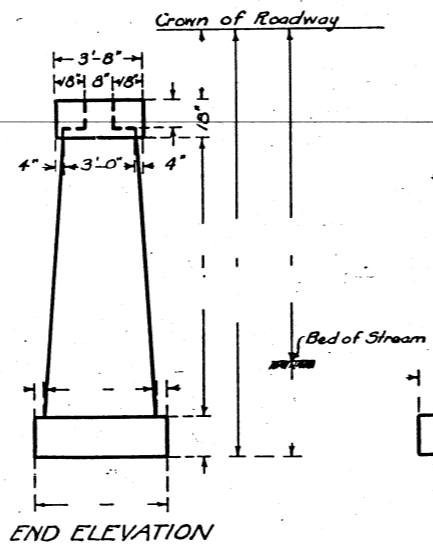


DETAIL OF EXPANSION GUARD

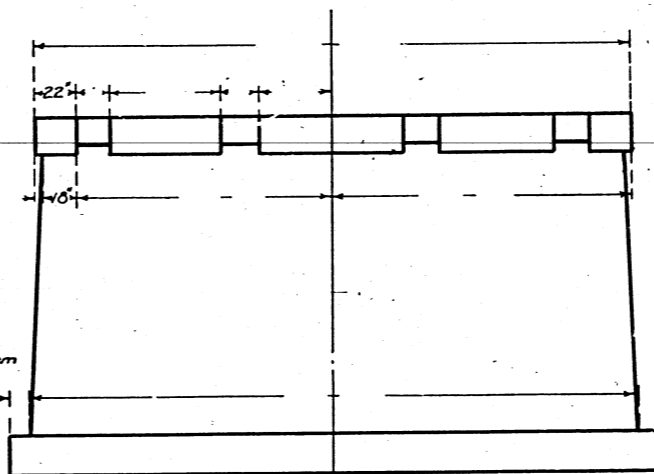
Bill of Material - 1 Pier.

Bars	No.	Size	Length
Steel - Lbs			
Concrete - Cu Yds			

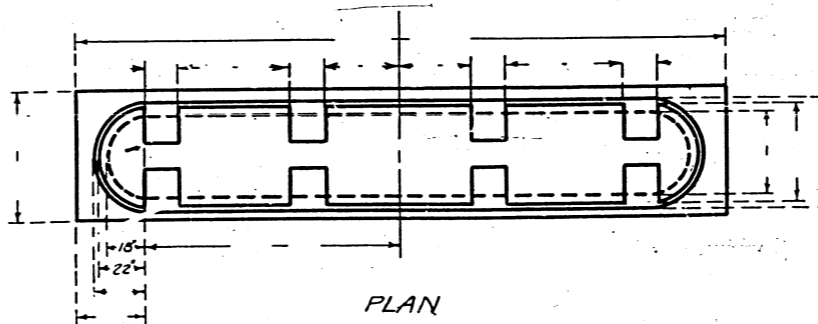
Class A concrete to be used throughout.



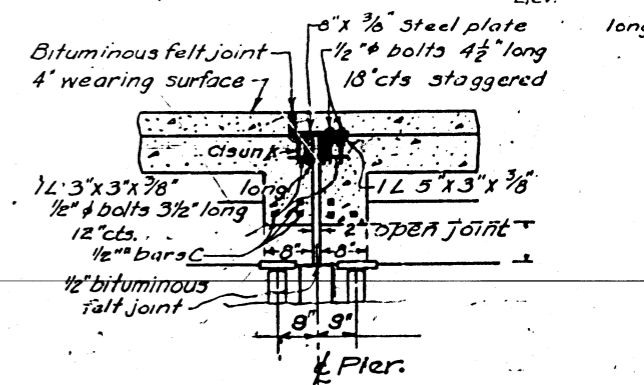
END ELEVATION



ELEVATION



PLAN



EXPANSION DETAILS

Items	Total Bill of Material			
	Super.	Abutts.	Pier.	Total.
4\" P.C. Pavement - Sq. Yds.				
Class X Concrete - Cu. Yds.				
Class A Concrete - Cu. Yds.				
Hand Roll Concrete - Cu. Yds.				
Reinforcing Steel Lbs				
Rockers & Plates Lbs				
Structural Steel (Exp) Lbs				
Name Plate				
Untreated Piling - Up to 20ft. Lin. Ft.				
Untreated Piling - 20ft to 35ft. Lin. Ft.				
Untreated Piling Over 35ft. Lin. Ft.				

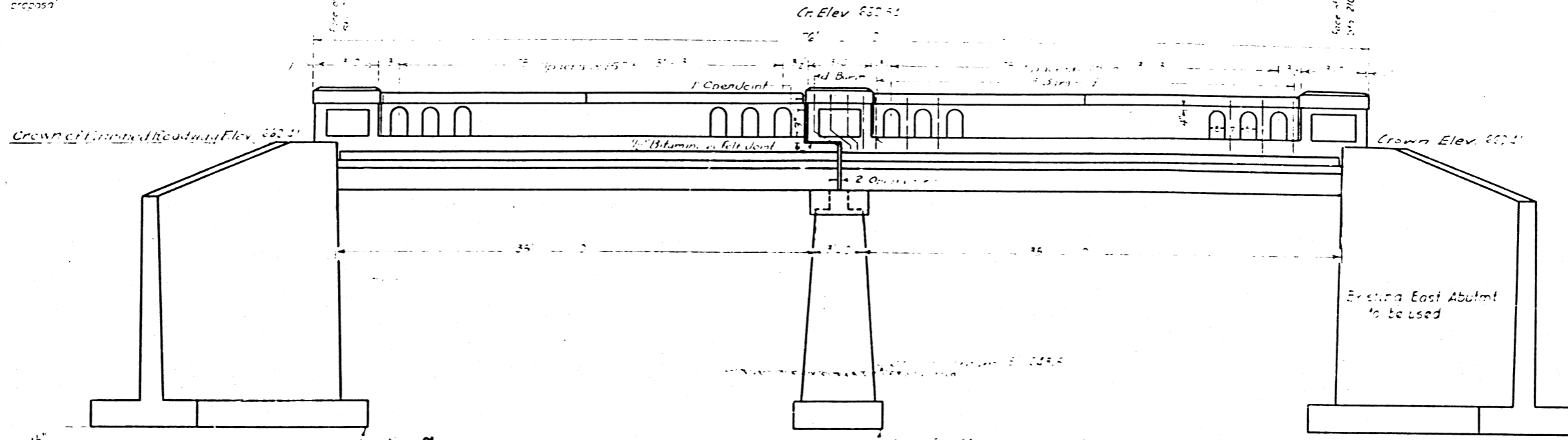
STANDARD	COMPUTED - <i>E.P. Slepco</i>	EXAMINED - _____	19
	CHECKED - <i>H.H. Deane</i>	BRIDGE ENGINEER	
	DRAWN - <i>E.P. Slepco</i>	PASSED	
	CHECKED - <i>H.H. Deane</i>	ENGINEER OF DESIGN	
SPECIAL	ASSEMBLED - _____	APPROVED	
	CHECKED - _____	CHIEF HIGHWAY ENGINEER	

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

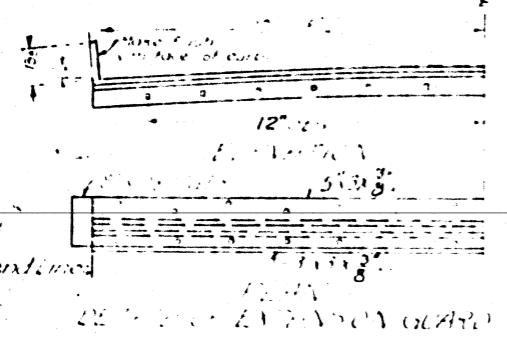
SEC	COUNTY	TOTAL SHEETS	SHEET NO.
120	Piatt	26	21

SHEET NO. 1  
4 SHEETS

BM - Nail in Asher in oak tree west of Sta. 120+80. Elev. 655.29  
Existing Brass Steel Pin Connected Dwy. Truss 60' span, Roadway 120'  
Existing West abutment to concrete block in the seat of east  
abutment to be removed by Contractor for Sec. 115-B. Cost to be included  
in unit price bid for Class X Concrete.  
Excavation of West Abutment (as shown by sketch on  
this sheet) to be done by Contractor for Sec. 115-B.  
500 C. Yes Class A Excavation to be included in  
proposal.



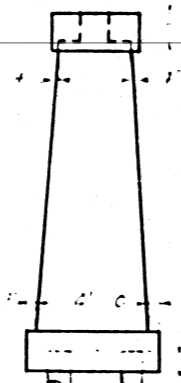
GENERAL ELEVATION



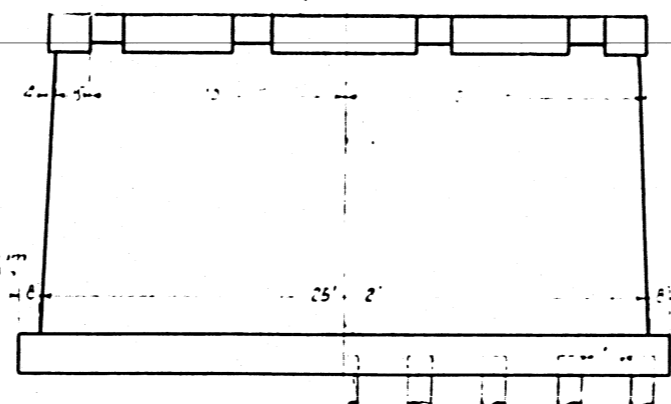
SECTION THROUGH GUARD

Material	Quantity	Unit	Notes
Concrete			
Reinforcing Steel			
Gravel			
Asphalt			

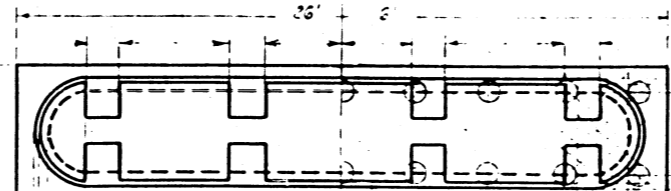
Class A concrete to be used throughout.



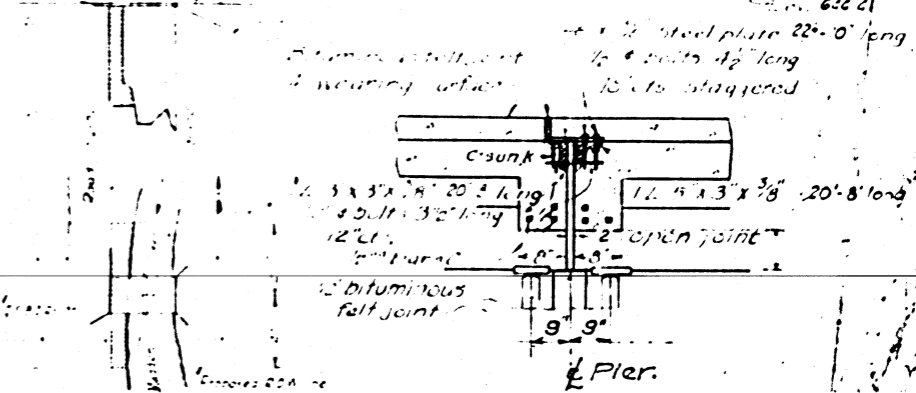
ELEVATION OF PIER



ELEVATION



PLAN



LOCATION SKETCH SHOWING EXCAV DETAILS

Excavation to be done by Contractor for Sec. 115-B. Proposed in final proposal of the first year. Approx. 500 C. Yes Class A Excavation to be included in proposal.

EXPANSION DETAILS

Items	Super	Abutts	Pier	Total
Concrete	172.8			172.8
Class X Concrete Curb	25.8	820		177.8
Class A Concrete Curb			49.6	49.6
Struct. Rein. Concrete Curb				
Reinforcing Steel	235.0	5700	10	2980
Struct. Steel (Super)	228			228
Struct. Steel (Abutts)	440			440
Untreated Piling up to 20ft Lin Ft		1000	360	1360
Untreated Piling 20ft to 35ft Lin Ft				
Untreated Piling Over 35ft Lin Ft				

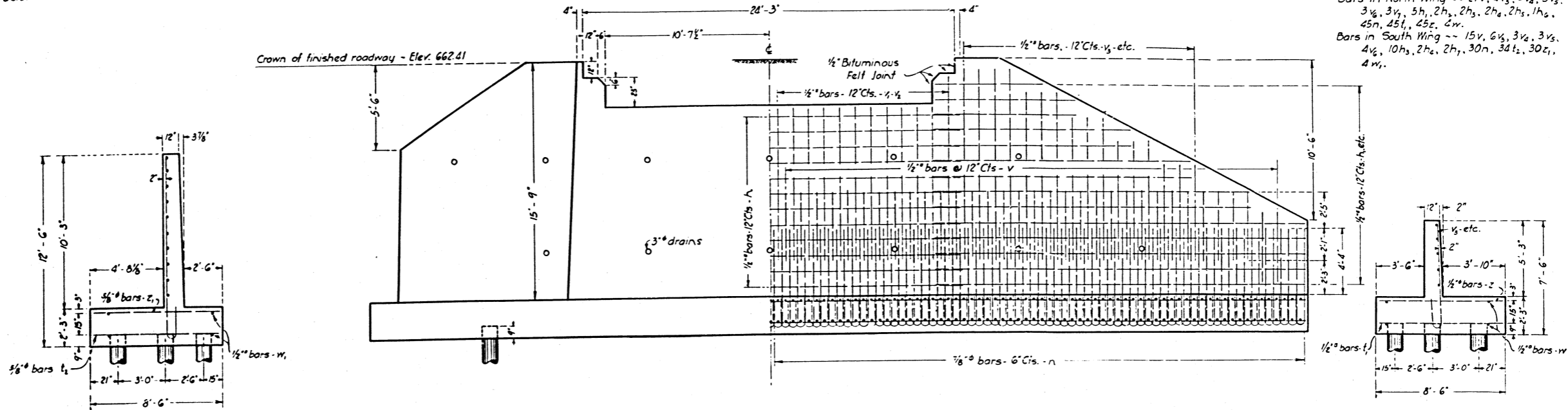
COMPUTED	E. L. Styles
CHECKED	
DRAWN	E. L. Styles
CHECKED	
SPECIAL ASSEMBLED	
CHECKED	

EXAMINED Jan 25, 1931  
L. J. Burch  
BRIDGE ENGINEER  
PASSED  
APPROVED  
CHIEF HIGHWAY ENGINEER

GENERAL ELEVATION OF PIER  
BRIDGE OVER MADDEN CREEK  
S.B.I. ROUTE 120 - SECTION 115-B  
PIATT COUNTY - STA. 120+52

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

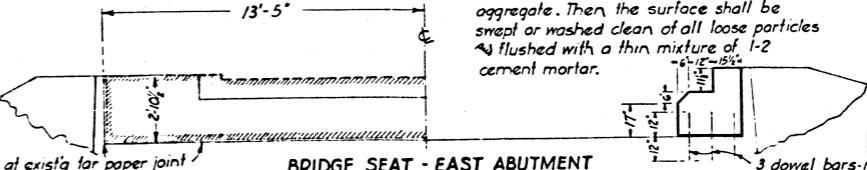
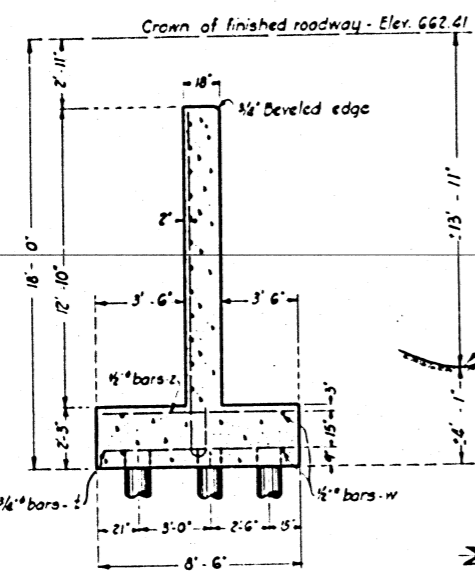
~ B.M.-Nail  $\frac{1}{4}$  Washer in oak tree - Left of Sta. 1211+80 - Elev. 656.29  
~ Existing Bridge - Steel Pin Connected Pony Truss, 60 Ft. span, Roadway 16 Ft.  
Existing truss, west abutment  $\frac{1}{4}$  concrete block on bridge seat of east abutment to be removed by Contractor for Sec. 115-B. - Cost to be included in unit price bid for Class X Concrete.  
Excavation at West Abutment (as shown by sketch on Sheet 1) to be done by Contractor for Sec. 115-B - 500 Cu. Yds. Class A Excavation to be included in proposal.



Bars in North Wing -- 21v, 4v<sub>3</sub>, 3v<sub>4</sub>, 3v<sub>5</sub>, 3v<sub>6</sub>, 3v<sub>7</sub>, 5h, 2h<sub>2</sub>, 2h<sub>3</sub>, 2h<sub>4</sub>, 2h<sub>5</sub>, 1h<sub>6</sub>, 45n, 45t, 45z, 4w.  
Bars in South Wing -- 15v, 6v<sub>2</sub>, 3v<sub>3</sub>, 3v<sub>4</sub>, 4v<sub>5</sub>, 10h<sub>3</sub>, 2h<sub>4</sub>, 2h<sub>5</sub>, 30n, 3d<sub>2</sub>, 30z<sub>1</sub>, 4w.

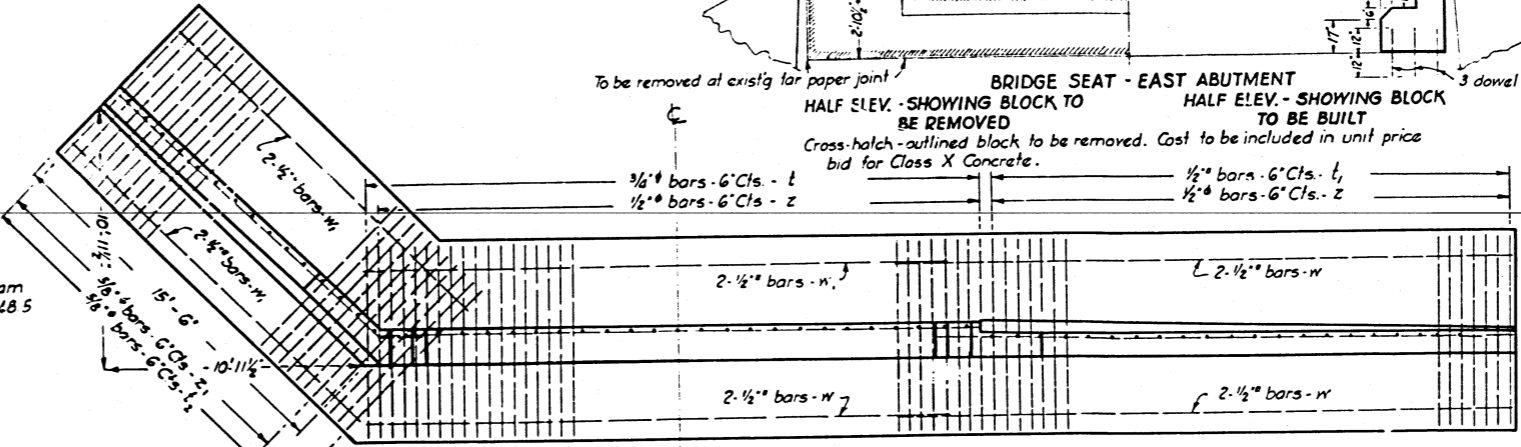
Class X Concrete shall be used throughout.  
All reinforcing steel shall be wired securely in place before concrete is poured.

In bonding new concrete to old, the surface shall be chipped, exposing coarse aggregate. Then the surface shall be swept or washed clean of all loose particles and flushed with a thin mixture of 1-2 cement mortar.



**BILL OF MATERIAL EAST ABUTMENT-NEW BLOCKS**

Bars	N <sup>o</sup>	Size	Length
m	6	1/2"	2'-0"
Reinforcing Steel - Lbs. 10			
Class X Concrete - Cu. Yds. 0.7			



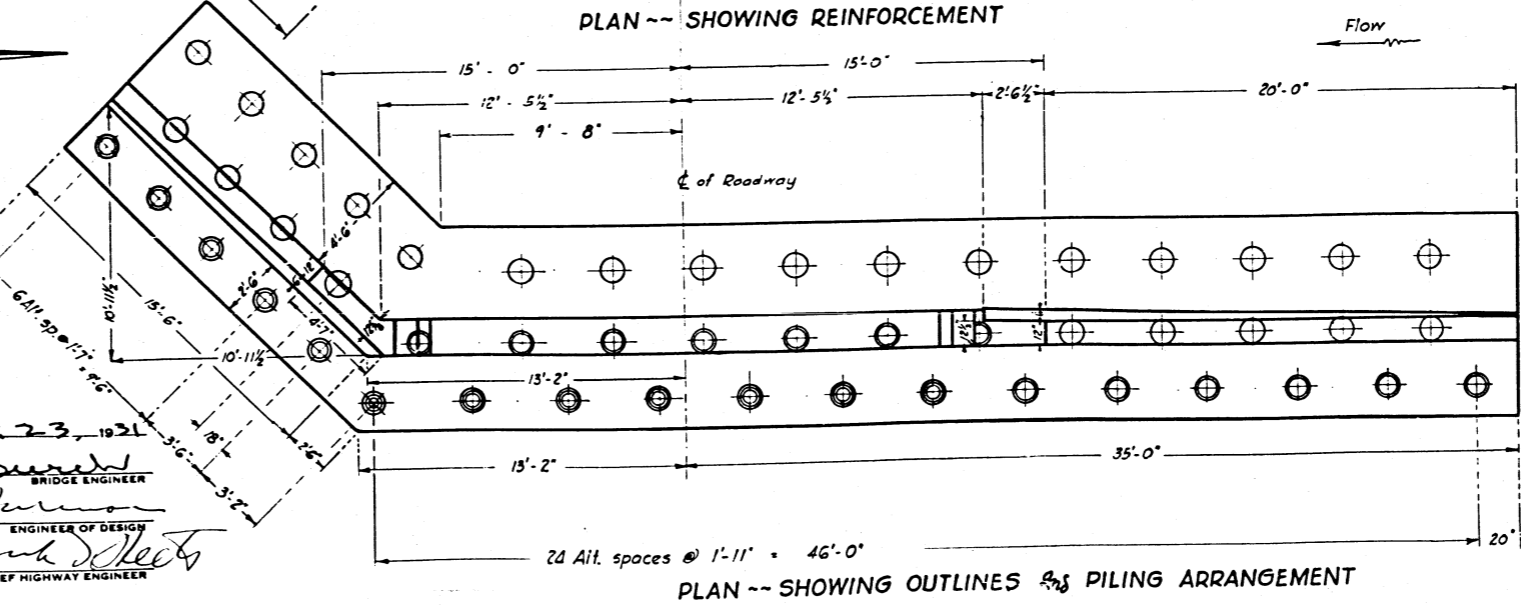
**BILL OF MATERIAL WEST ABUTMENT**

Bars	N <sup>o</sup>	Size	Length
v	61	1/2"	4'-6"
v <sub>1</sub>	22	1/2"	10'-6"
v <sub>2</sub>	2	1/2"	12'-3"
v <sub>3</sub>	10	1/2"	12'-9"
v <sub>4</sub>	6	1/2"	11'-3"
v <sub>5</sub>	6	1/2"	9'-9"
v <sub>6</sub>	7	1/2"	8'-3"
v <sub>7</sub>	4	1/2"	4'-9"
h	12	1/2"	25'-0"
h <sub>1</sub>	5	1/2"	24'-3"
h <sub>2</sub>	2	1/2"	21'-0"
h <sub>3</sub>	12	1/2"	17'-3"
h <sub>4</sub>	4	1/2"	13'-3"
h <sub>5</sub>	2	1/2"	9'-6"
h <sub>6</sub>	1	1/2"	7'-3"
h <sub>7</sub>	2	1/2"	8'-6"
n	125	3/8"	8'-0"
t	52	3/4"	8'-3"
t <sub>1</sub>	45	1/2"	8'-3"
t <sub>2</sub>	34	3/8"	8'-3"
z	96	1/2"	8'-3"
z <sub>1</sub>	30	3/8"	8'-3"
w	8	1/2"	25'-0"
w <sub>1</sub>	4	1/2"	16'-9"
Reinforcing Steel - Lbs. 5690			
Class X Concrete - Cu. Yds. 83.3			

- ⊕ 10 Ton Untreated Piles - 12" Butt - 8" Tip, 25 Required - Estimated Length - 500 Lin. Ft.
- ⊕ 12 Ton Untreated Piles - 12" Butt - 8" Tip, 18 Required - Estimated Length - 360 Lin. Ft.
- ⊕ 15 Ton Untreated Piles - 12" Butt - 8" Tip, 7 Required - Estimated Length - 140 Lin. Ft.

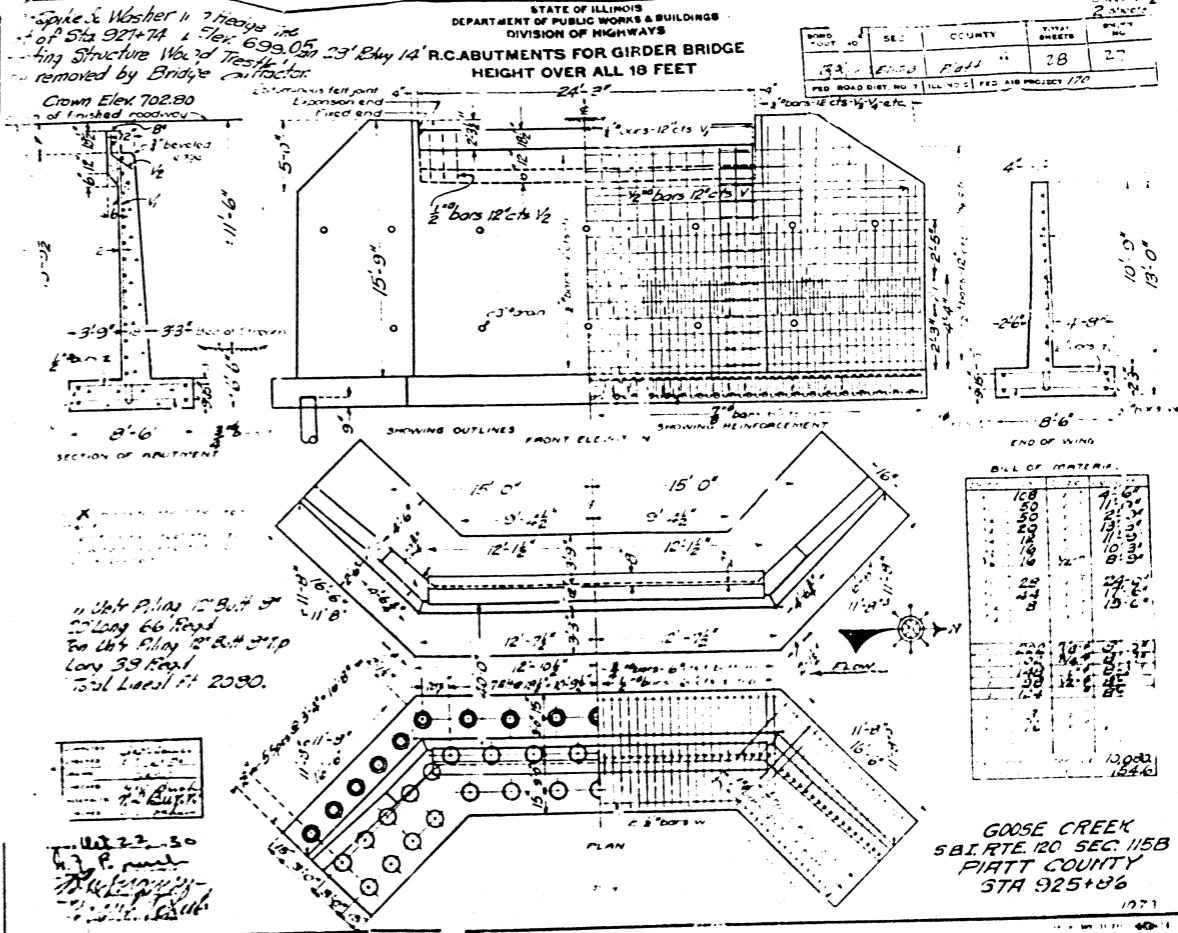
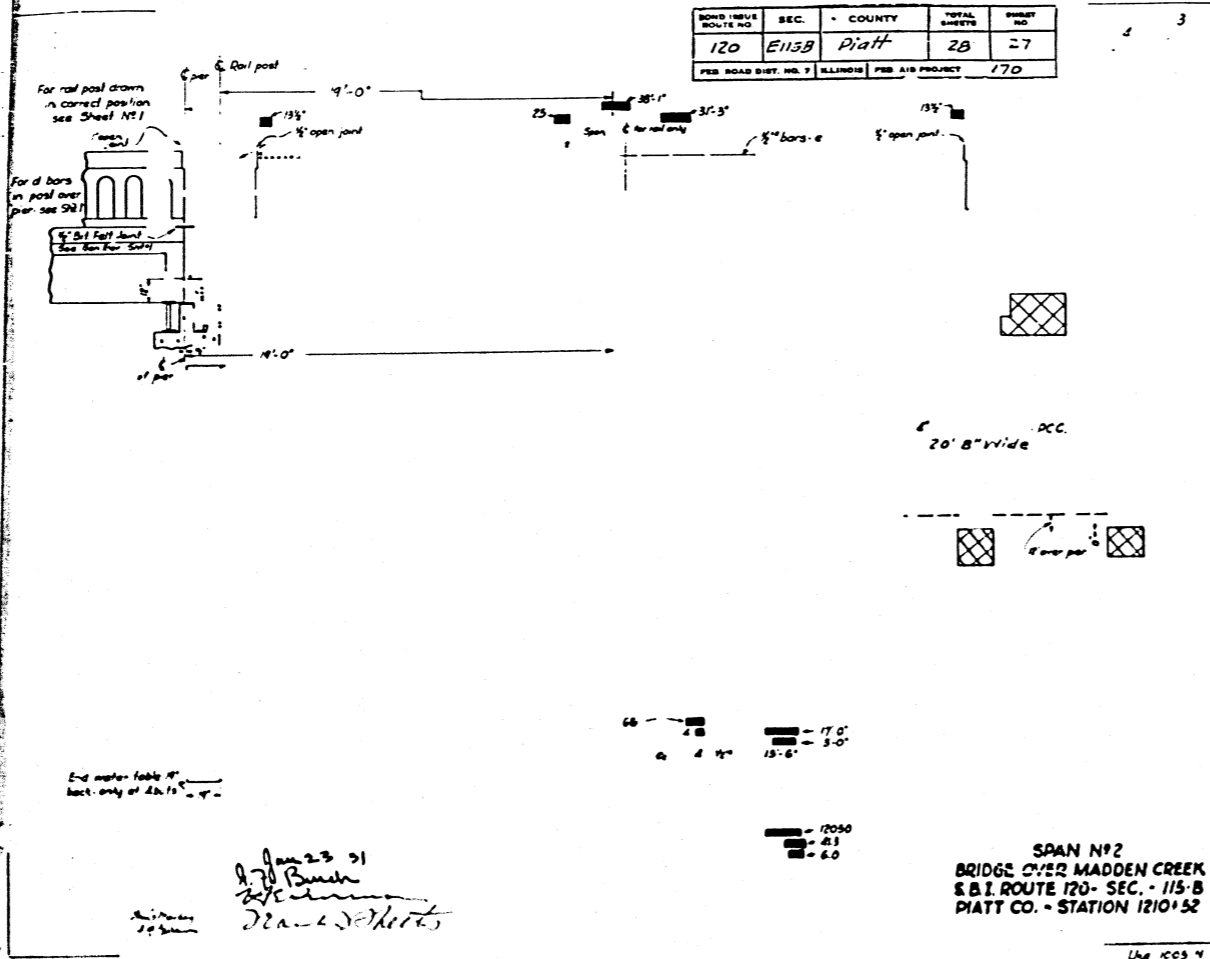
COMPUTED	—	John J. Mackay
CHECKED	—	J. J. Mackay
DRAWN	—	John J. Mackay
CHECKED	—	J. J. Mackay
ASSEMBLED	—	J. J. Mackay
SPECIAL CHECKED	—	J. J. Mackay

EXAMINED Jan 23, 1921  
H. J. Burchell  
BRIDGE ENGINEER  
PASSED  
E. J. Johnson  
ENGINEER OF DESIGN  
APPROVED Frank Deets  
CHIEF HIGHWAY ENGINEER



**NEW WEST ABUTMENT NEW BLOCKS ON EAST ABUTMENT BRIDGE OVER MADDEN CREEK S.B.I. ROUTE 120 - SEC. 115-B PIATT COUNTY - STA. 1210+52**

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
120	E115B	Piatt	28	27



ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
120	E115B	Piatt	28	27

