

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

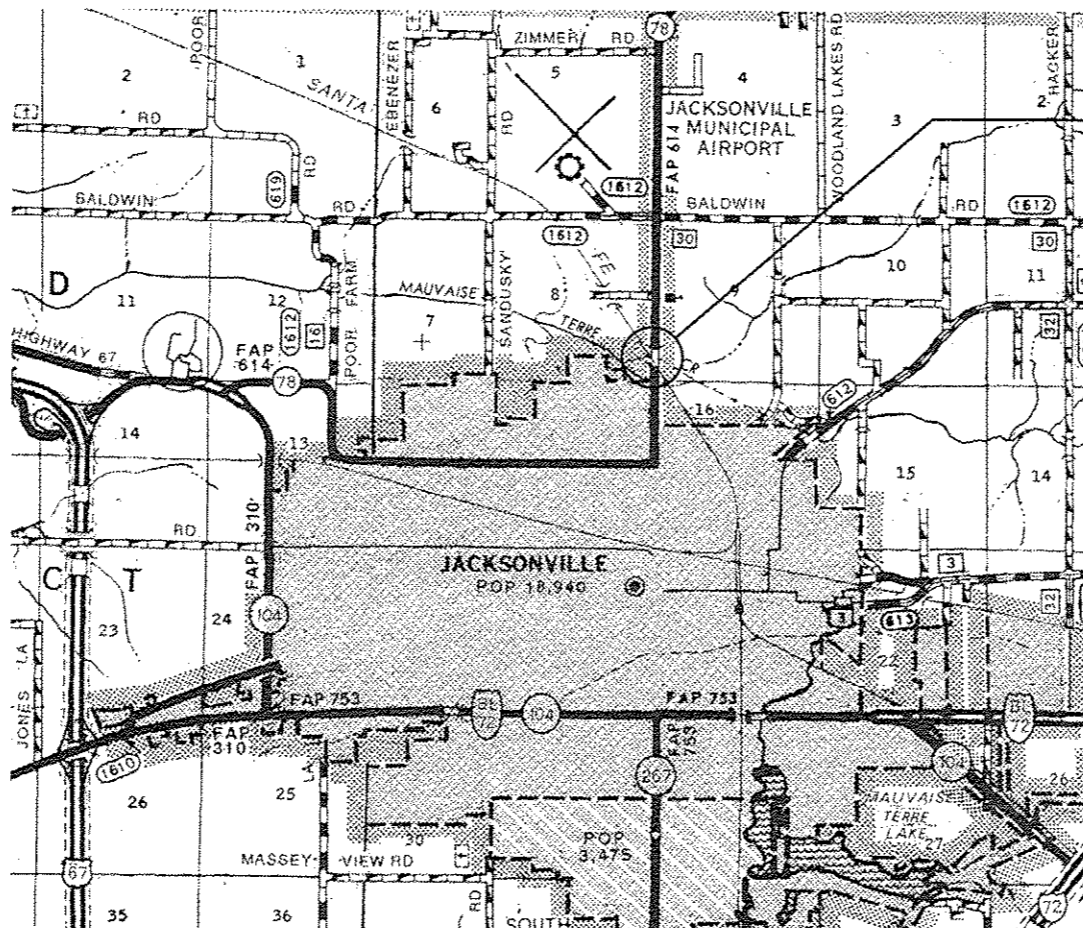
**PROPOSED  
MCHD BRIDGE REPAIR**

FAP ROUTE 614 (IL 78)  
SECTION (148 BR) I-1

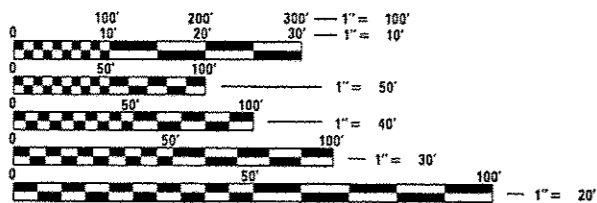
BRIDGE RAIL REPAIR  
MORGAN COUNTY

C-96-020-15

FOR INDEX OF SHEETS, SEE SHEET NO. 2



PROJECT LOCATION  
SN 069-0005  
IL 78 OVER MAUVAISSE TERRE CREEK  
0.6 MI N OF WALNUT ST, JACKSONVILLE  
N 39.7547°, W090.2291°



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

BRIDGE MAINTENANCE ENGINEER (ACTING): BRANDON DUDLEY (217) 785-9290  
BRIDGE INSPECTION ENGINEER: DAVE COPENBARGER (217) 785-5306

LOCATION MAP

NET LENGTH = 202.5 FT = 0.038 MILE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	(148 BR) I-1	MORGAN	4	1
		ILLINOIS	CONTRACT NO. 72H47	

D-96-020-15



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

F.A.P. 614 (IL 78)  
ADT (2013) : 2750  
% TRUCKS : 8%

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED October 17 20 14  
Rog Z...  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Jan 30 20 15  
Dan D. Baranowski, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 20 15  
Omer Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

CONTRACT NO. 72H47

**INDEX OF SHEETS**

1. COVER SHEET
2. INDEX OF SHEETS, STANDARDS, GENERAL NOTES, SIGNATURES AND SUMMARY OF QUANTITIES
- 3-4. REPAIR DETAILS

**STANDARDS**

- 701001-02
- 701006-05
- 701201-04
- 701901-04


**GENERAL NOTES**

1. DURING CONSTRUCTION, THE BRIDGE RAIL IN THE REPAIR AREA WILL BE ALLOWED TO SPAN THE REPAIR AREA WITHOUT ATTACHMENT TO THE POSTS BEING REPAIRED. THE RAIL SHALL BE RE-ATTACHED TO THESE POSTS AT THE CONCLUSION OF THE REPAIR WORK.
2. THE CONTRACTOR MAY ELECT TO REMOVE THE SECTION OF AFFECTED BRIDGE RAIL IN ORDER TO FACILITATE HIS CONSTRUCTION ACTIVITIES. RAIL WILL ONLY BE ALLOWED TO BE DETACHED WHILE THE ADJACENT LANE IS CLOSED TO TRAFFIC AND THE CONTRACTOR IS WORKING. AT ALL OTHER TIMES, THE RAIL SHALL BE RE-INSTALLED AND BE SECURELY ATTACHED AT BOTH ENDS. REMOVING AND REINSTALLING BRIDGE RAIL SHALL BE THE CONTRACTOR'S OPTION AND NO COMPENSATION WILL BE ALLOWED FOR SAID WORK.

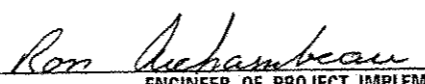
MIXTURE USE(S)	HMA SURFACE COURSE
AC/PG	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5
FRICITION AGGREGATE	MIX "C"
QUALITY MANAGEMENT	QC/QA

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT 6**


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EXAMINED OCTOBER 17th 2014  
  
 ENGINEER OF OPERATIONS

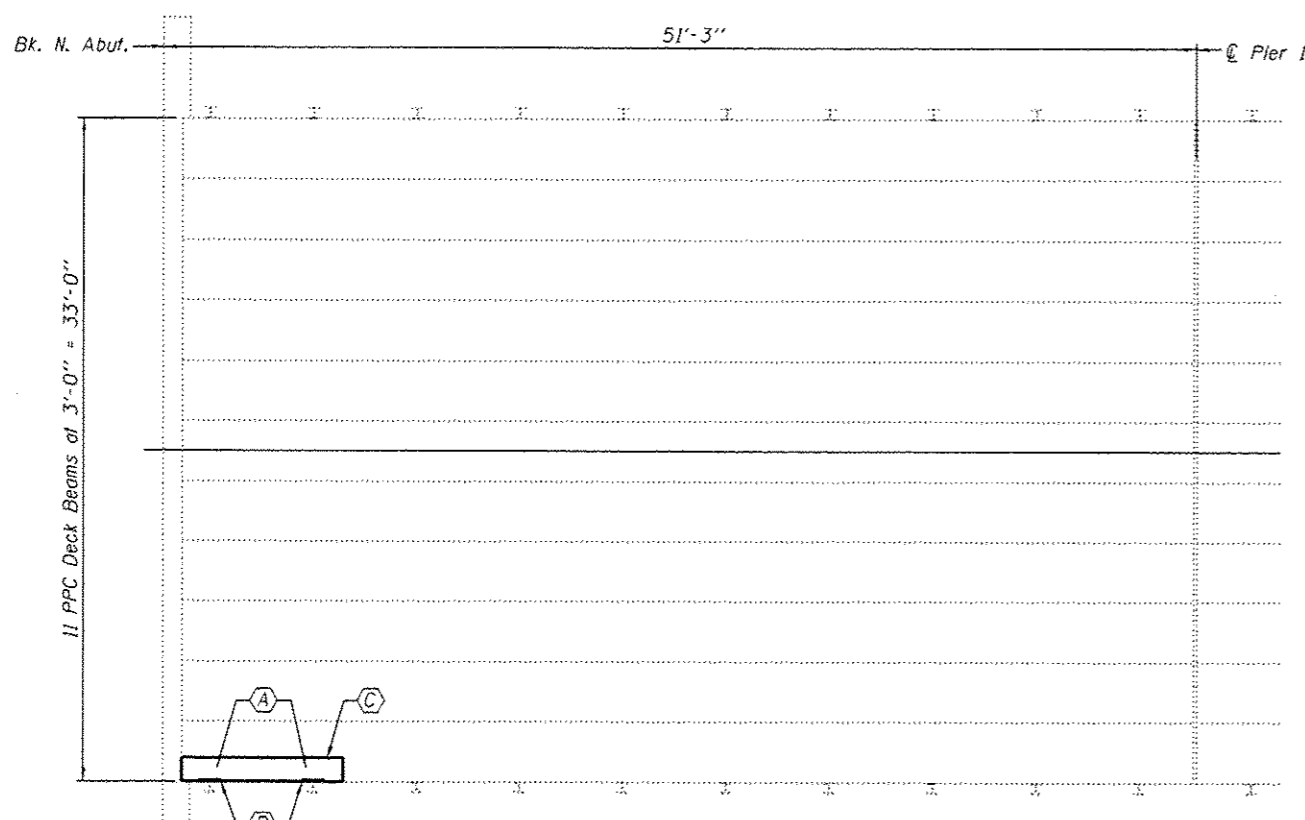
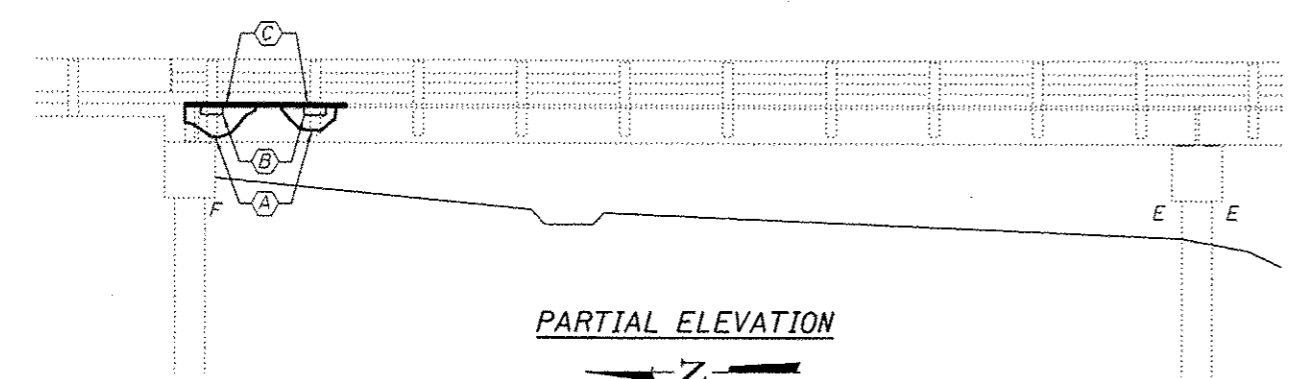
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EXAMINED October 10 2014  
  
 ENGINEER OF PROJECT IMPLEMENTATION

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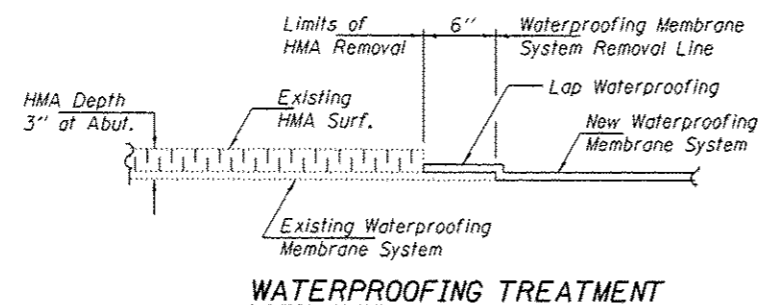
EXAMINED October 10 2014  
  
 ENGINEER OF PROGRAM DEVELOPMENT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				URBAN	
				100% STATE	ROADWAY
				0014	S.N. 069-0005
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	0.2	0.2	
44000161	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SO YD	1	1	
58100200	WATERPROOFING MEMBRANE SYSTEM	SO YD	1	1	
67100100	MOBILIZATION	L SUM	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	4	4	
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SO FT	2	2	
7					

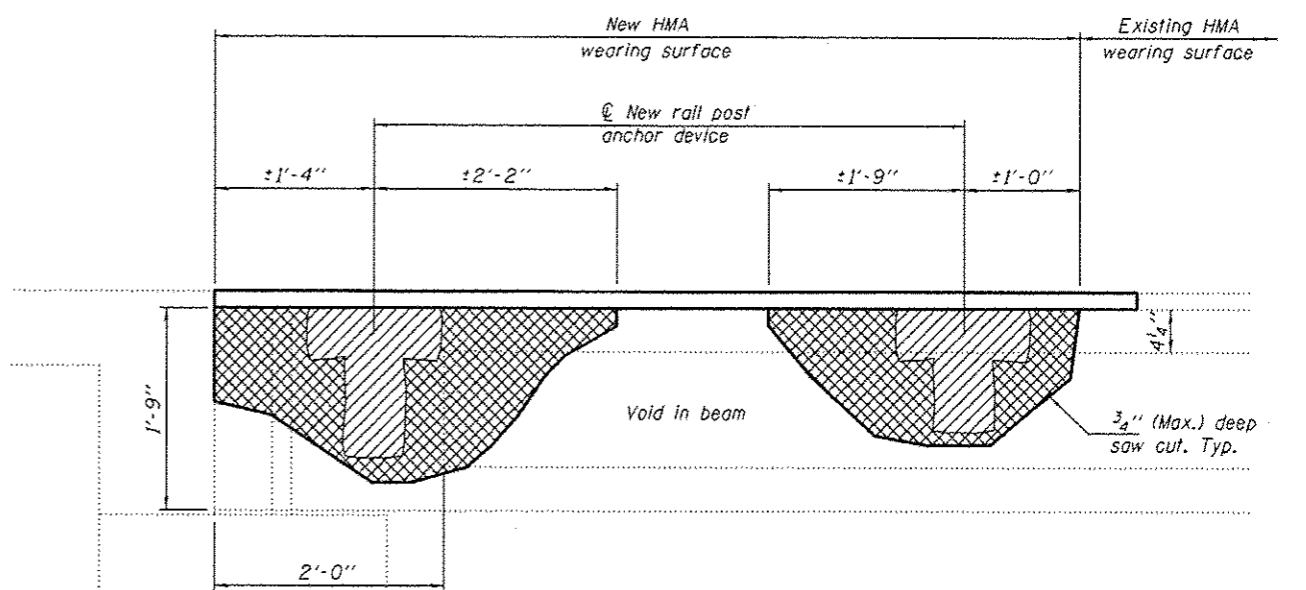


**PARTIAL PLAN**

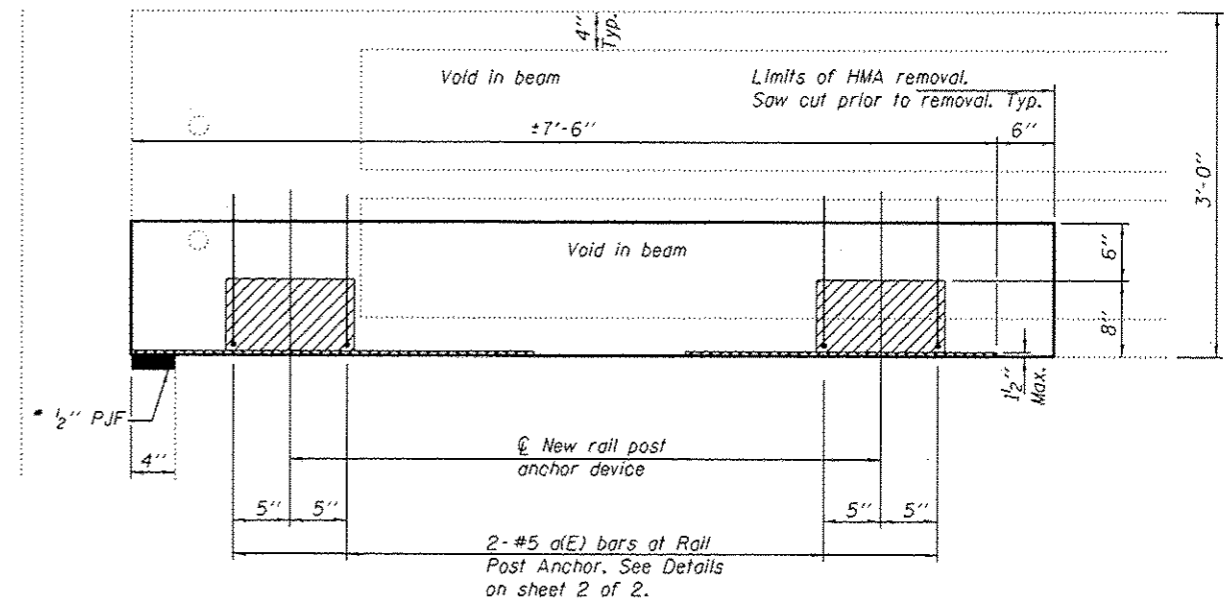
- (A) - Area of Structural Repair of Concrete ( $f'c = 5000$  psi)
- (B) - New Bridge Rail Post Anchor Device
- (C) - Remove and Replace HMA Wearing Surface & Waterproofing Membrane System



**WATERPROOFING TREATMENT**



**ELEVATION VIEW**



**PLAN VIEW**

**NOTES**

All loose concrete in the removal area to be chipped away to sound concrete. Concrete attached to reinforcing steel but not to the concrete of the beam shall also be removed.

Contractor is to ensure that there are no penetrations into the void in the beam during repair operations.

Existing reinforcement extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Structural Repair of Concrete (Depth > 5").

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 designated (E) shall be epoxy coated.

\* Cost included with Structural Repair of Concrete (Depth ≤ 5")

- Indicates area of Structural Repair of Concrete Depth = 8" (Max.)
- Indicates area of Structural Repair of Concrete Depth = 3/4" (Min.) to 1 1/2" (Max.)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth > 5")	Sq. Ft.	2
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	4
Hot-Mix Asphalt Surface Removal, 3"	Sq. Yd.	1
HMA Surface Course Mix "C" N50	Ton	0.2
Waterproofing Membrane System	Sq. Yd.	1



EXPIRES 11-30-2016

DESIGNED: <i>Victor H. Velazquez</i>	EXAMINED: <i>Timothy A. D'Amico</i>	DATE: FEBRUARY 9, 2015
CHECKED: <i>Victor H. Velazquez</i>	PASSED: <i>David Carl Puzey</i>	REVISED:
DRAWN: <i>David Carl Puzey</i>	ACTING ENGINEER OF STRUCTURAL SERVICES	REVISED:
CHECKED: <i>Victor H. Velazquez</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED:

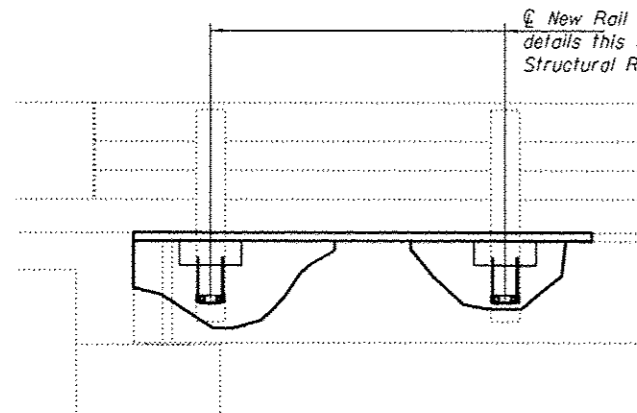
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION  
IL ROUTE 78 OVER MAUVAISE TERRE CREEK  
SN 069-0005

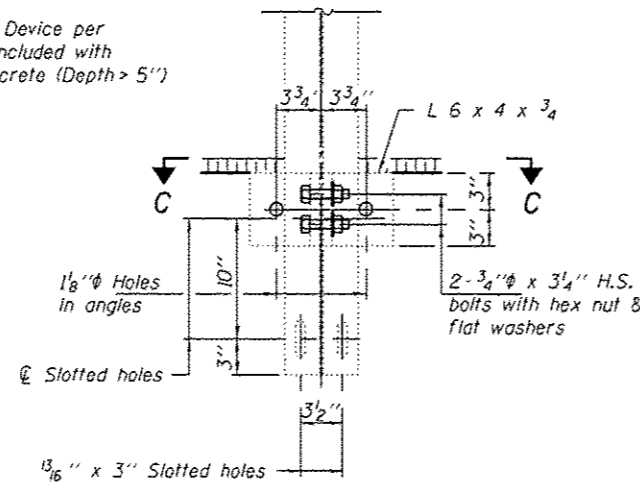
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE. 614	SECTION (149BR)-1	COUNTY WOODRIF	TOTAL SHEETS 4	SHEET NO. 3
CONTRACT NO. 72H47			ILLINOIS FED. AID PROJECT	

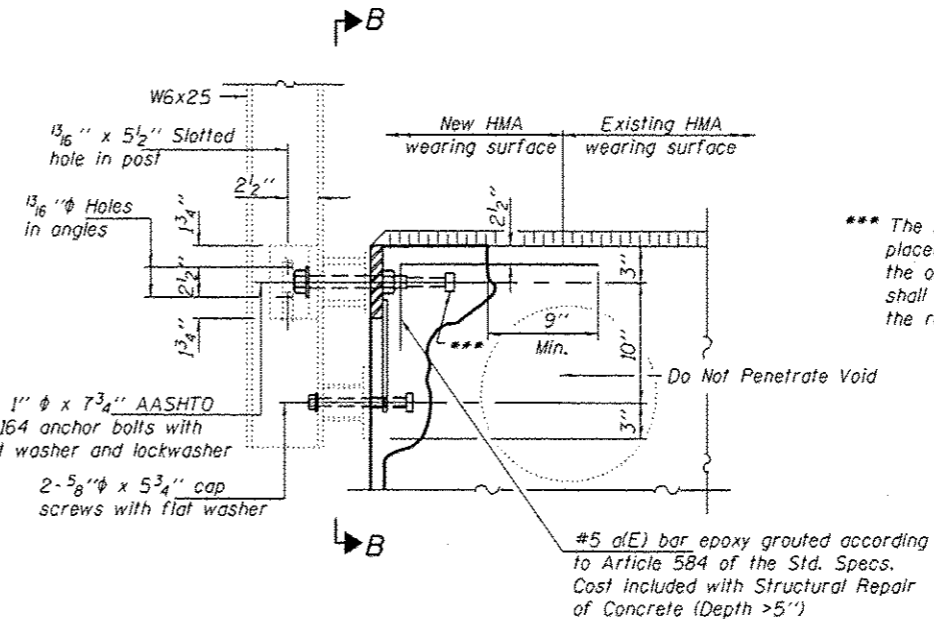
Notes:  
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



**PARTIAL RAIL ELEVATION**  
 (East Rail Looking West)

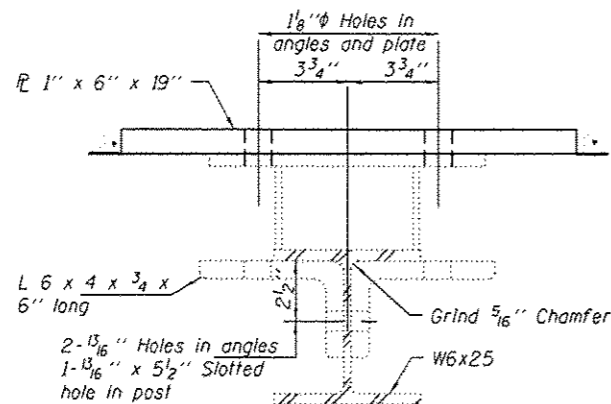


**SECTION B-B**

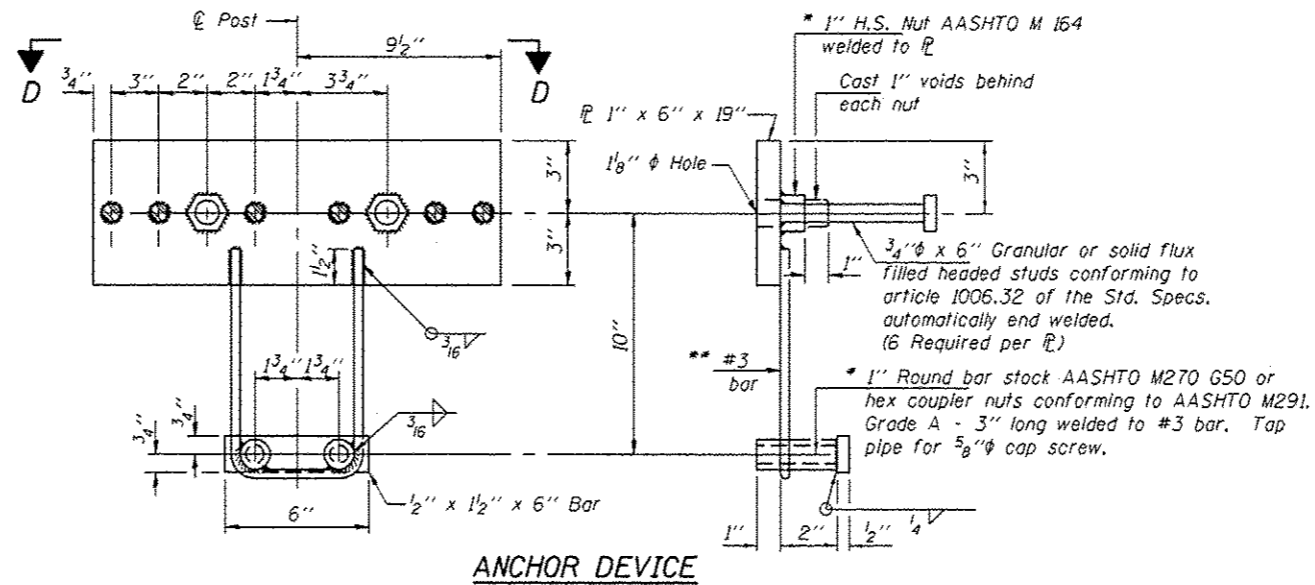


**SECTION AT RAILING POST**

\*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



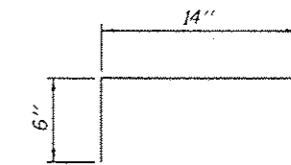
**SECTION C-C**



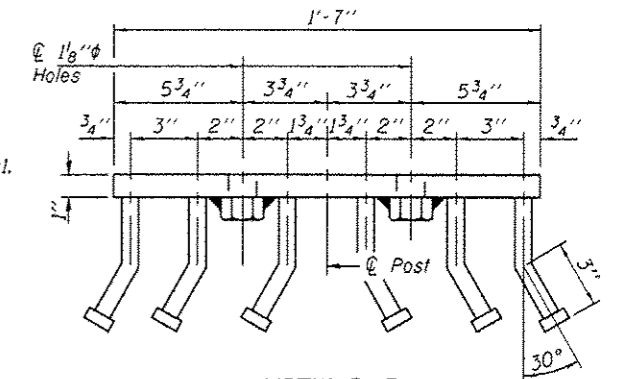
**ANCHOR DEVICE**

\* Threaded areas shall be plugged or blocked off during Structural Repair of Concrete.

\*\* 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".



**BAR d(E)**  
 Cost included with Structural Repair of Concrete (Depth > 5")



**VIEW D-D**

DESIGNED *DAB*  
 CHECKED *VHV*  
 DRAWN *baliva*  
 CHECKED *DAB VHV*

EXAMINED *Timothy A. Ancelet*  
 PASSED *Carl Perry*  
 ACTING ENGINEER OF STRUCTURAL SERVICES  
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE **FEBRUARY 9, 2015**  
 REVISED  
 REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**RAILING DETAILS**  
**SN 069-0005**

SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	148BR1-1	MORGAN	4	4
CONTRACT NO. 72H47			ILLINOIS FED. AID PROJECT	