

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
71	(115-BR)I	FORD	11	1
FED. ROAD DIST. NO. _____		ILLINOIS	CONTRACT NO. 66801	

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

FAP ROUTE 71 (IL 54)  
SECTION (115-BR)I

FORD COUNTY  
C-93-078-08  
BRIDGE REPAIR

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTIONS
5. STAGING DETAILS
6. TEMPORARY CONCRETE BARRIER
7. TYPICAL PAVEMENT MARKING
8. PLAN AND ELEVATION
9. BEAM DETAILS
10. REPAIR DETAILS
11. RAIL DETAILS

STANDARDS

- |           |  |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS                               |
| 001006    | DECIMAL OF AN INCH AND OF A FOOT   |
| 482011-03 | HMA SHOULDER STRIPS/SHOULDERS WITH RS OR WIDENING & RS PROJECTS            |
| 701001-01 | OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY                     |
| 701006-02 | OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE |
| 701011-01 | OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY                                |
| 701201-02 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH                        |
| 701206-01 | LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS ≥ 45 MPH                      |
| 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS                                |
| 701311-02 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY                         |
| 701321-09 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER                           |
| 701326-02 | LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH               |
| 701901    | TRAFFIC CONTROL DEVICES  |
| 704001-04 | TEMPORARY CONCRETE BARRIER   |

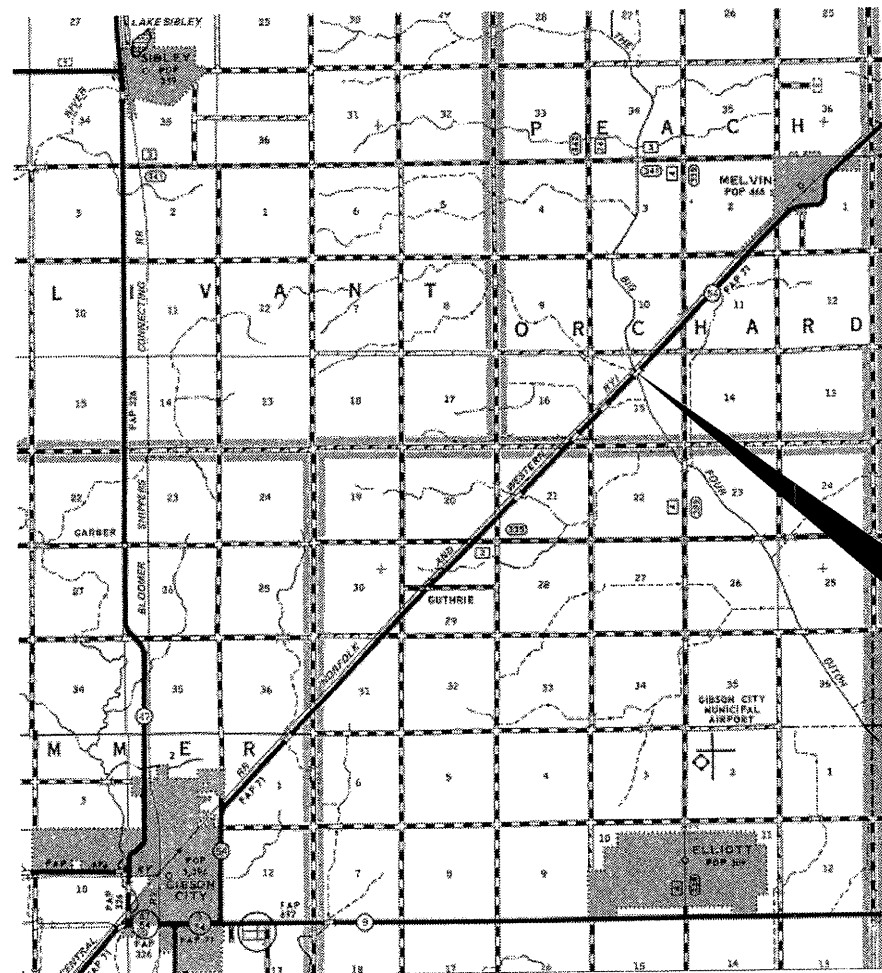
MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

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

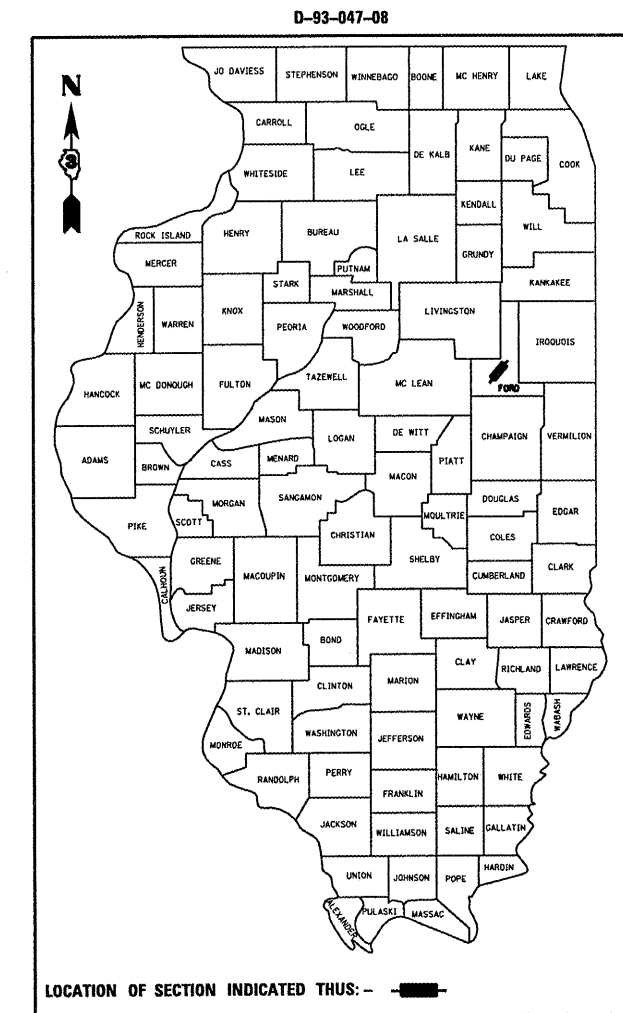
DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: JOE KANNEL  
UNIT CHIEF: RON WOODSHANK

**CONTRACT NO. 66801**



**LOCATION MAP**  
NOT TO SCALE  
POINT LOCATION



FUNCTIONAL CLASSIFICATION  
RURAL - MINOR ARTERIAL  
F.A.P. ROUTE 71 (IL 54)  
2005 ADT = 1550  
P.V = 83.5% M.U. = 11.3% S.U. = 5.2%

**PROJECT LOCATION**  
SN 027-0077  
7.67 MILES NORTH OF IL ROUTE 9

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 3/25 2008

*Debra J. Ryan*  
DEPUTY DIRECTOR OF HIGHWAYS REGION ENGINEER

May 9, 2008  
*Eric E. Hamm*  
ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 2008  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

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 THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY FURNISHED BASED UPON THE UNIT BID PRICE FOR THE WORK.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE "JULIE" NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED.

THE COST OF ANY SAW CUTS MADE TO COMPLETE THE WORK AS DESCRIBED IN PLAN DETAILS, UNLESS OTHERWISE NOTED, SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED WITH THE VARIOUS REMOVAL PAY ITEMS INVOLVED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW BITUMINOUS PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

	HMA SURFACE	HMA WIDENING
PG GRADE	PG64-22	PG64-22
MAX % RAP ALLOWABLE	15%**	25%**
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 12.5 or IL 9.5	IL 19.0
FRICTION AGGREGATE	MIXTURE D	
DENSITY CONTROL METHOD	NUCLEAR	NUCLEAR

\*\*IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

DATE: 3-25-08

PREPARED BY: *Robert K. Grogan*  
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: *Robert K. Grogan*  
DISTRICT CONSTRUCTION ENGINEER

*Joseph [Signature]*  
DISTRICT MATERIALS ENGINEER

*Bruce Tucker*  
DISTRICT OPERATIONS ENGINEER

FILE NAME = c:\projects\deck beam repl 08\sn 027-0077.dgn	USER NAME = woodshank1	DESIGNED - RLW	REVISED - ---
		DRAWN - RLW	REVISED - ---
PLOT SCALE = 103.4829' / IN.	CHECKED - ---	REVISED - ---	REVISED - ---
PLOT DATE = Mar 24, 2008 - 10:36:11 AM	DATE - ---	REVISED - ---	REVISED - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES  
SCALE: \_\_\_\_\_ SHEET NO. 1 OF 1 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE. 71	SECTION (115-BR)	COUNTY FORD	TOTAL SHEETS 11	SHEET NO. 2
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66801	

## SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE: SFTY-2A

RURAL  
100% STATE  
TOTAL  
QUANTITY

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	44
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	160
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	18.8
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	5.3
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	487
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	59.4
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	162
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	290
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	319
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	60
78300100	PAVEMENT MARKING REMOVAL	SQ FT	136
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	487
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	81
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2

\* SPECIALTY  
ITEM

FILE NAME = c:\projects\deck beam repl 00\an 027-0077.dgn

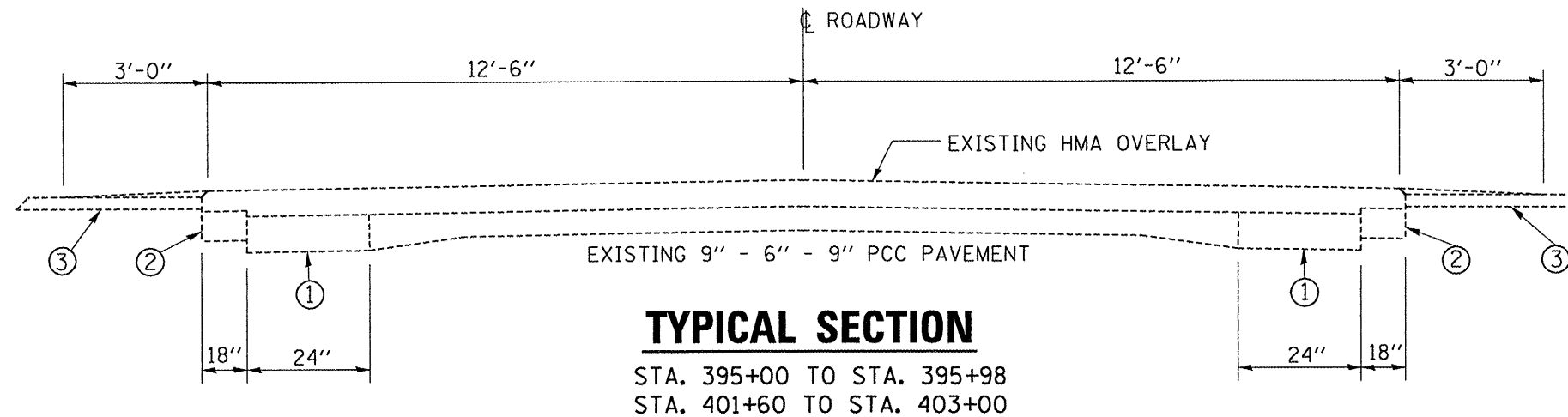
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

### SUMMARY OF QUANTITIES

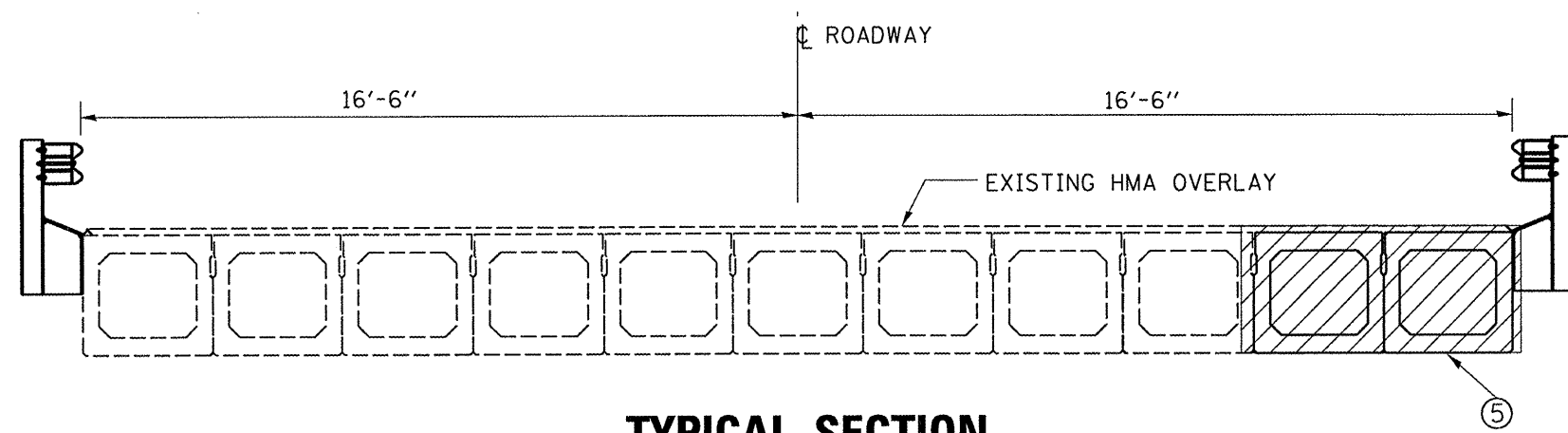
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
71	(115-BR)	FORD	11	3
CONTRACT NO. 66801				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



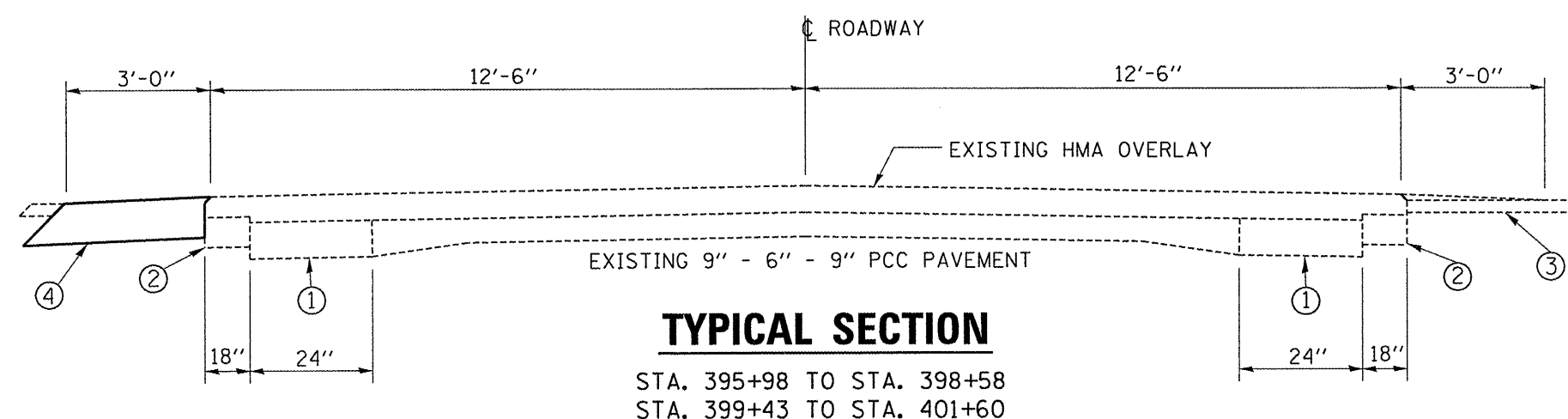
**TYPICAL SECTION**

STA. 395+00 TO STA. 395+98  
 STA. 401+60 TO STA. 403+00



**TYPICAL SECTION**

SN 027-0077  
 STA. 398+58 TO STA. 399+43



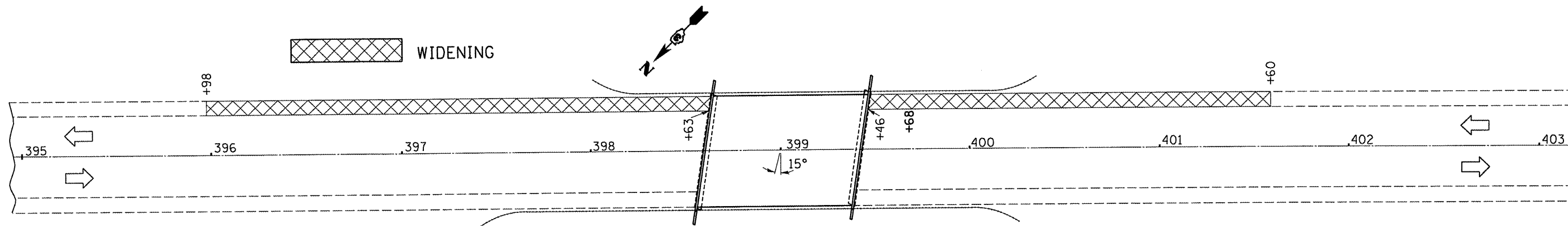
**TYPICAL SECTION**

STA. 395+98 TO STA. 398+58  
 STA. 399+43 TO STA. 401+60

**LEGEND**

- ① PCC WIDENING
- ② HOT-MIX ASPHALT WIDENING
- ③ AGGREGATE SHOULDER
- ④ HOT-MIX ASPHALT WIDENING 10"
- ⑤ BEAM REPLACEMENT

FILE NAME = c:\projects\deck beam repl 08\sn 027-0077.dgn	USER NAME = carpenterdj	DESIGNED - RLW	REVISED - ----	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL SECTIONS</b>	F.A.P. RTE. 71	SECTION (115-BR)	COUNTY FORD	TOTAL SHEETS 11	SHEET NO. 4
	PLOT SCALE = 1/8" = 1'-0"	DRAWN - RLW	REVISED - ----			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. 395+00 TO STA. 403+00	CONTRACT NO. 66801	
PLOT DATE = Mar 10, 2008 - 11:28:53 AM	CHECKED - ----	DATE - ----	REVISED - ----			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				



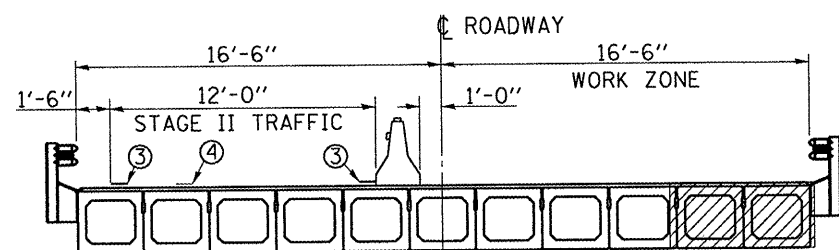
**STAGE I**  
SN 027-0077

**BILL OF MATERIAL**

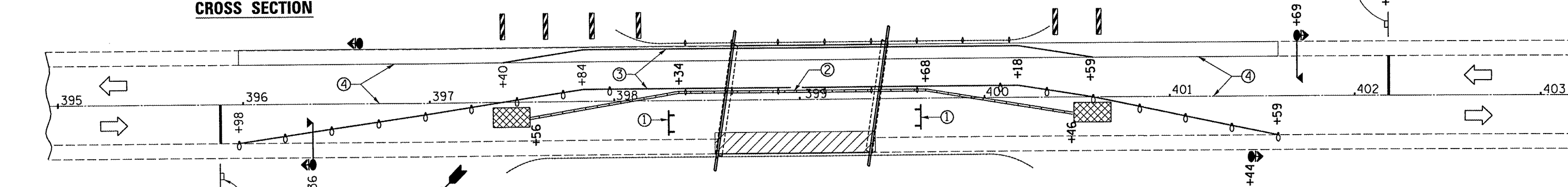
EARTH EXCAVATION WIDENING	CU YD	44
HOT-MIX ASPHALT BASE	SQ YD	160
CSE WIDENING 10"		

NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COST OF THE REFLECTORS AND THE BARRIER/PAVEMENT MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.
3. THE COST OF THE TEMPORARY PAVEMENT MARKING IS INCLUDED IN THE COST OF STANDARD 701321



**CROSS SECTION**

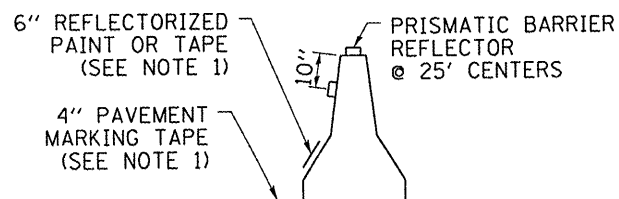


**STAGE II**  
SN 027-0077

**BILL OF MATERIAL**

PAVEMENT MARKING REMOVAL	SQ FT	136
TEMPORARY CONCRETE BARRIER	FOOT	290
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	319
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	60

- ① TYPE III BARRICADE TO BE PLACED WHEN NO WORK BEING PERFORMED.
- ② BARRIER WALL/GUARDRAIL MARKERS AT 25' CTS.
- ③ TEMPORARY PAVEMENT MARKING LINE 4"
- ④ PAVEMENT MARKING REMOVAL



**TEMPORARY CONCRETE BARRIER DETAIL**

- SYMBOLS**
- Work area
  - Sign
  - Type III barricade
  - Microwave detector
  - Traffic signal with backplate
  - Impact attenuator
  - Drum with steady burning light at 25' cts.
  - Temporary concrete barrier
  - Double vertical panel at 25' cts.
  - Crystal, bidirectional barrier wall/guardrail marker at 25' cts.

SEE STANDARD 701321 FOR DETAILS NOT SHOWN

FILE NAME = c:\projects\deck beam repl 08\sn 027-0077.dgn

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	DRAWN - RLW	REVISED - ---
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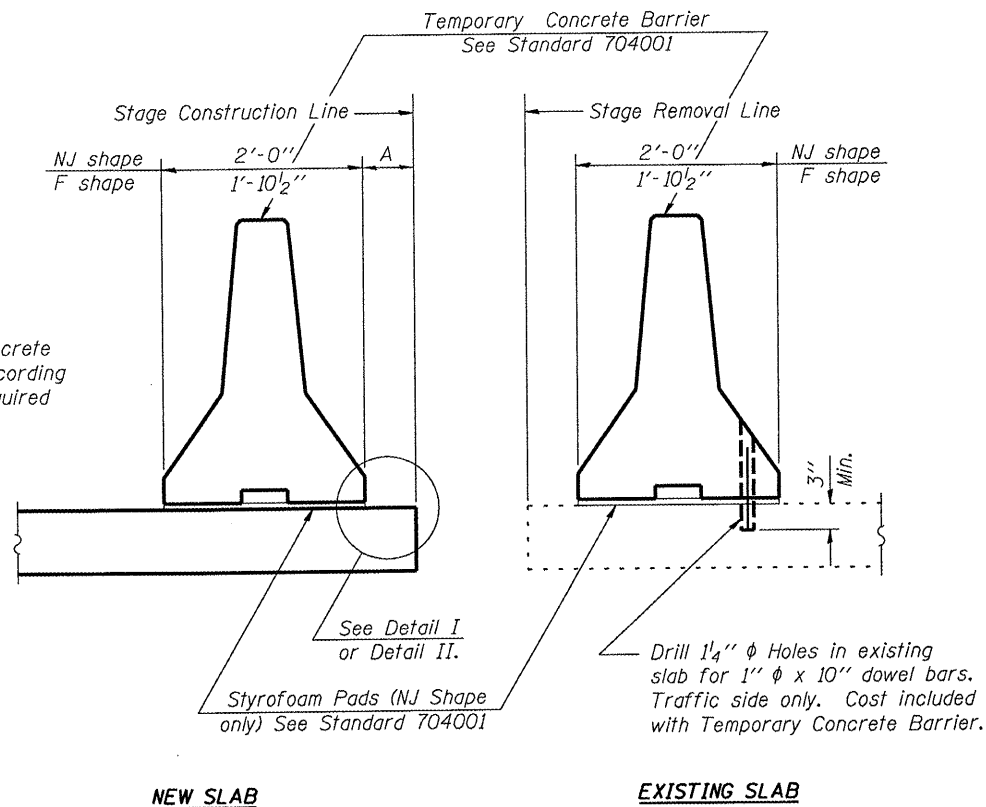
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL STAGING**

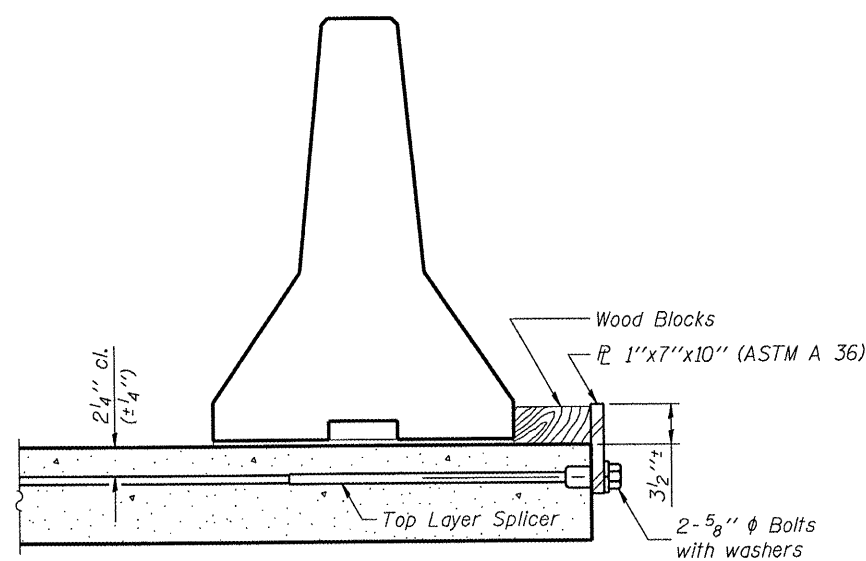
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F.A.P. RTE. 71	SECTION (115-BR)I	COUNTY FORD	TOTAL SHEETS 11	SHEET NO. 5
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66801	

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".

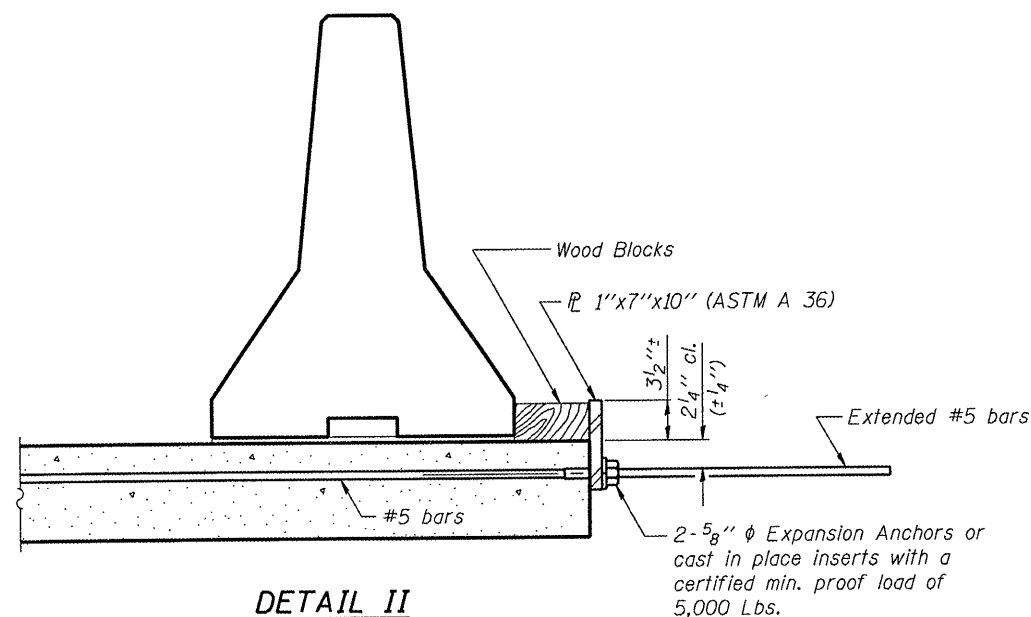


**SECTIONS THRU SLAB**



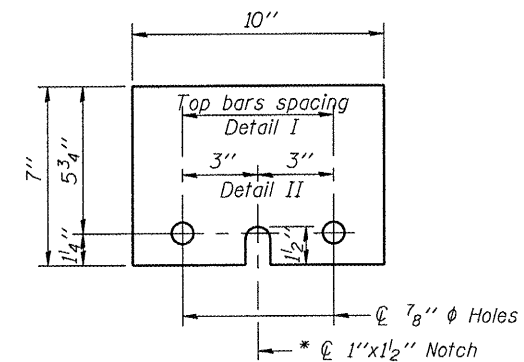
**DETAIL I**

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



**DETAIL II**

The 1"x7"x10" 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.



**1" x 7" x 10"**

\* Required only with Detail II

**NOTES**

- Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{r}$  to the top layer of couplers with 2-5/8"  $\phi$  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  $\bar{r}$  to the concrete slab with 2-5/8"  $\phi$  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.

FILE NAME =	USER NAME = carpenterd
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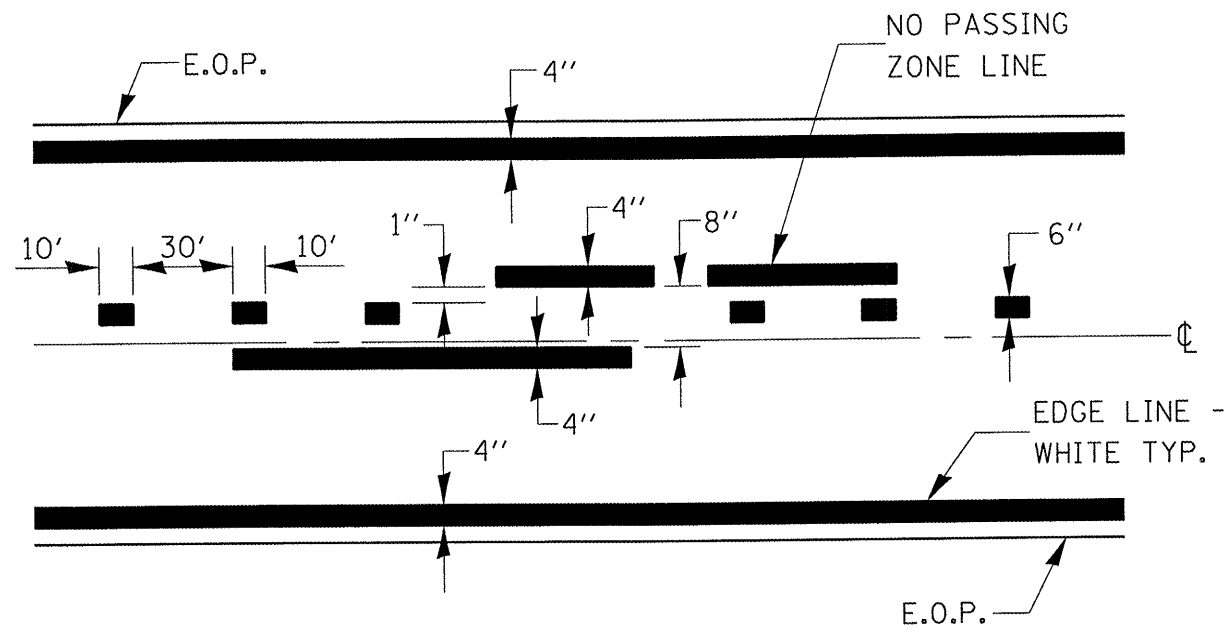
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DRAWN - RLW	REVISD - ---
CHECKED - ---	REVISD - ---
DATE - ---	REVISD - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CONCRETE BARRIER**

SCALE: \_\_\_\_\_ SHEET NO. 1 OF 1 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
71	(115-BR1)	FORD	11	6
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66801	



CENTERLINE & NO PASSING  
ZONE LINES - YELLOW

(SEE TYPICAL SECTIONS)

## PAVEMENT MARKING

FILE NAME =  
c:\projects\deck beam repl 08\en 027-0077.dgn

USER NAME = carpentardj

DESIGNED - RLW

REVISED - ---

DRAWN - RLW

REVISED - ---

PLOT SCALE = 103.4029' / IN.

CHECKED - ---

REVISED - ---

PLOT DATE = Mar 10, 2008 - 11:29:16 AM

DATE - ---

REVISED - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

## TYPICAL PAVEMENT MARKING

SCALE: \_\_\_\_\_ SHEET NO. 1 OF 1 SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
71	(115-BR)I	FORD	11	7
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66801	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 4 SHEETS
FAP 71	*	Ford	11	8	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
		Contract Number: 66801		* (115-BR)1	

**GENERAL NOTES**

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.

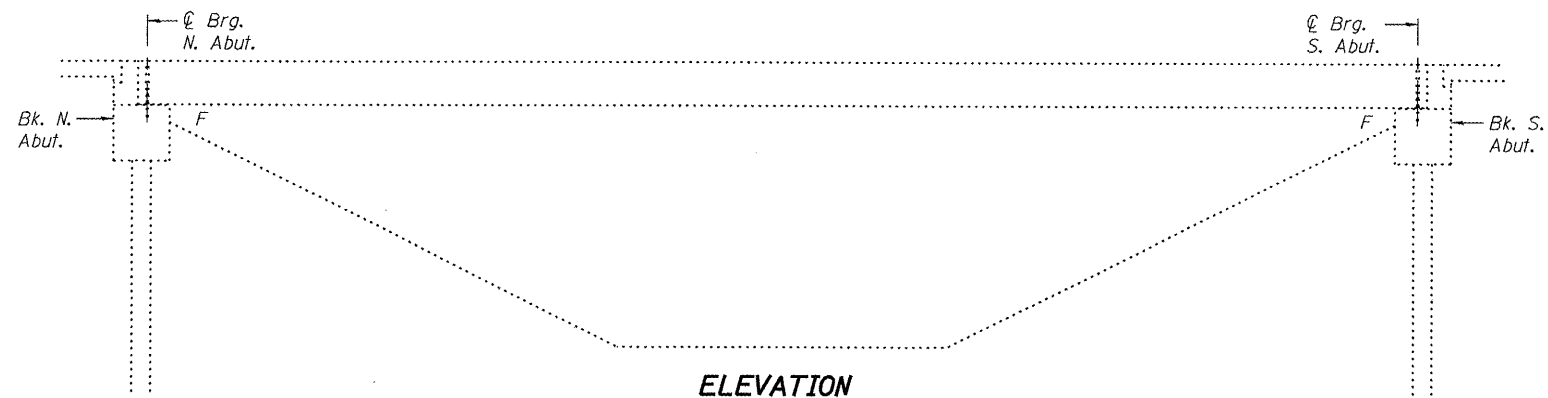
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new or existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

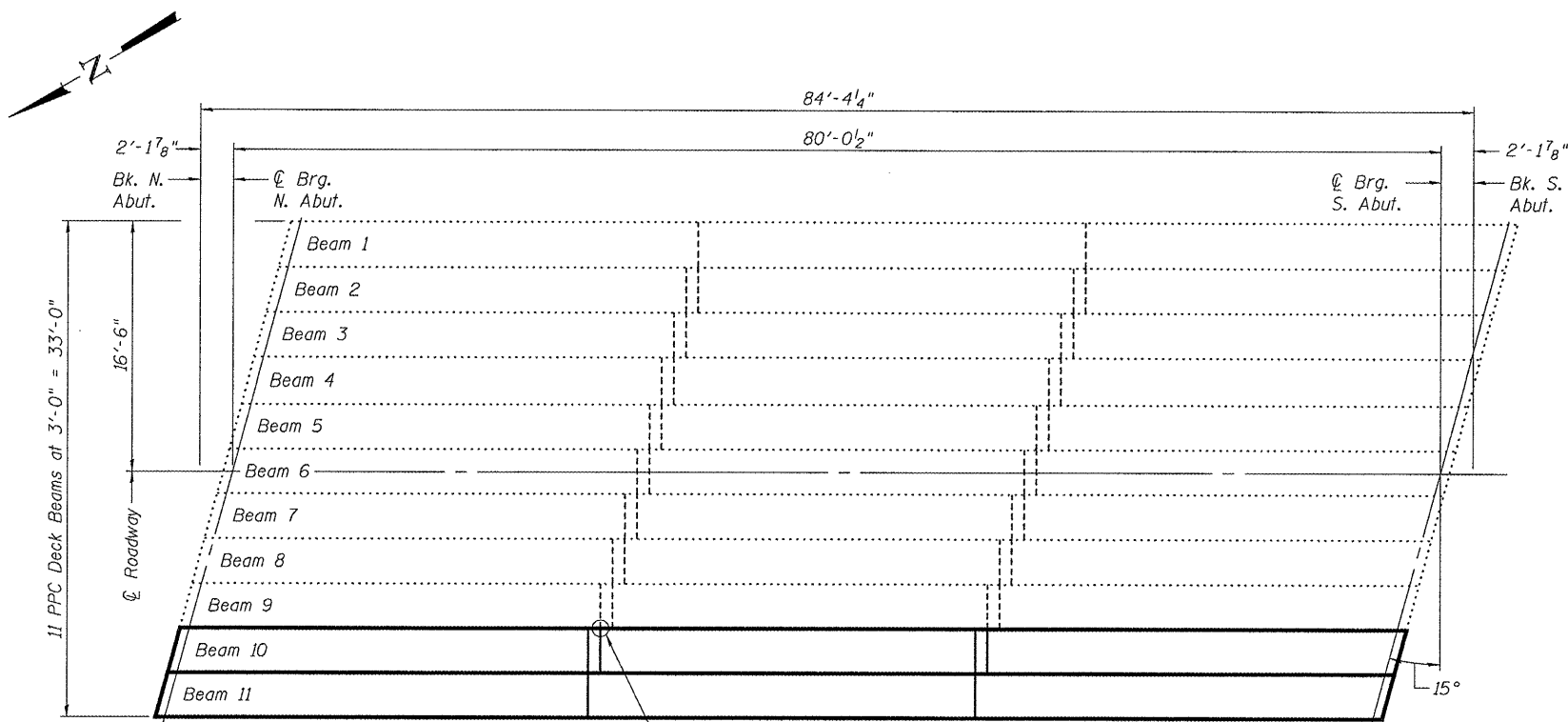
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

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.

Temporary concrete barrier shall only be anchored into the overlay and not into the PPC Deck Beams.

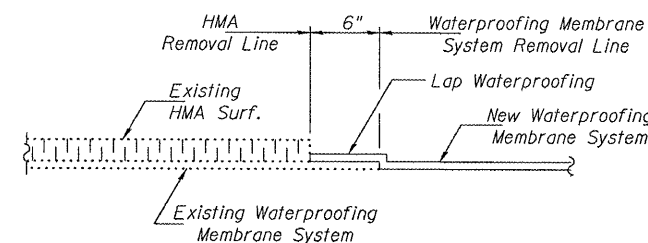


**ELEVATION**

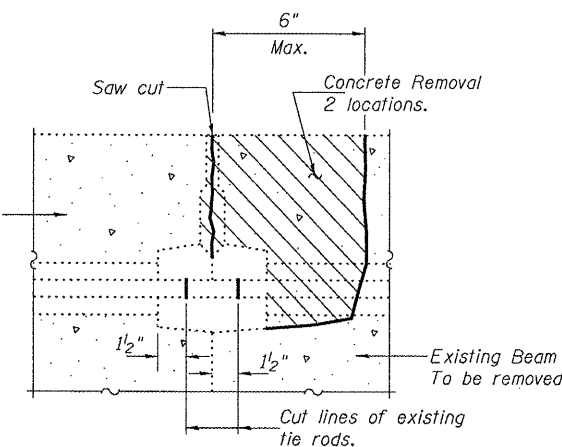


**PLAN**

Existing tie rod to be cut see detail this sheet (Typ.)



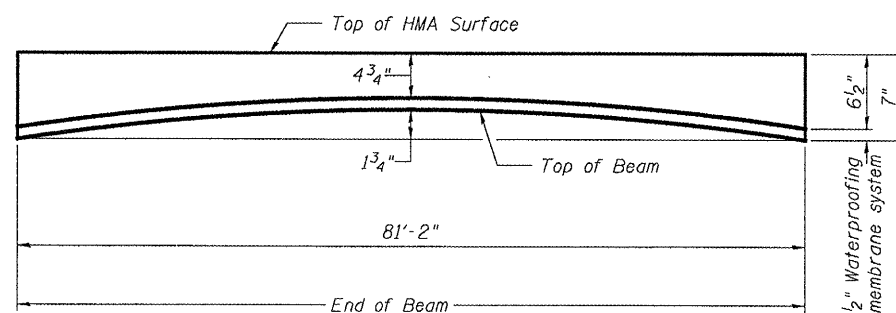
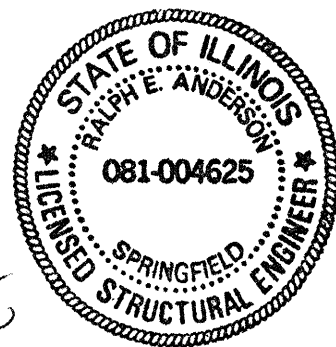
**WATERPROOFING TREATMENT**



**BEAM REMOVAL DETAIL AT TRANSVERSE TIES**

**DESIGN STRESSES  
PRECAST 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)



**ANTICIPATED INITIAL CAMBER DIAGRAM**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
HMA Surface Removal	Sq. Yd.	5.3
HMA Surface Course Mix D, N50	Tons	18.8
Removal of Existing PPC Deck Beams	Sq. Ft.	487
PPC Deck Beams (33" Depth)	Sq. Ft.	487
Waterproofing Membrane System	Sq. Yd.	59.4
PC Mortar Fairing Course	Foot	162
Removing and Re-erecting Existing Railing	Foot	81

**PLAN AND ELEVATION**  
F.A.P. RT. 71  
FORD COUNTY  
SN 027-0077

DESIGNED	<i>[Signature]</i>
CHECKED	<i>Alan T. Halloway</i>
DRAWN	<i>Drew Christopher</i>
CHECKED	<i>AJB ATH</i>

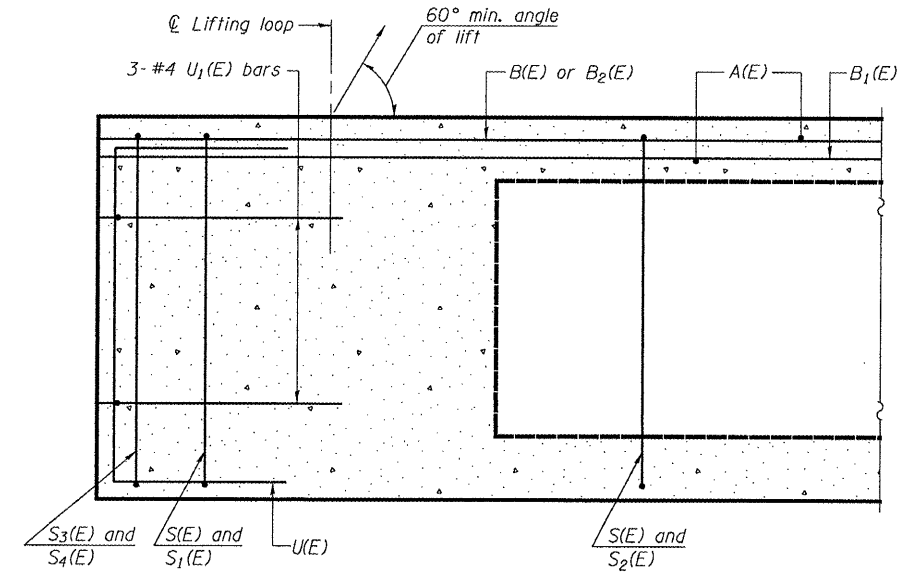
EXAMINED	<i>[Signature]</i> MAY 8, 2008
PASSED	<i>[Signature]</i>

Expires: November 30, 2008

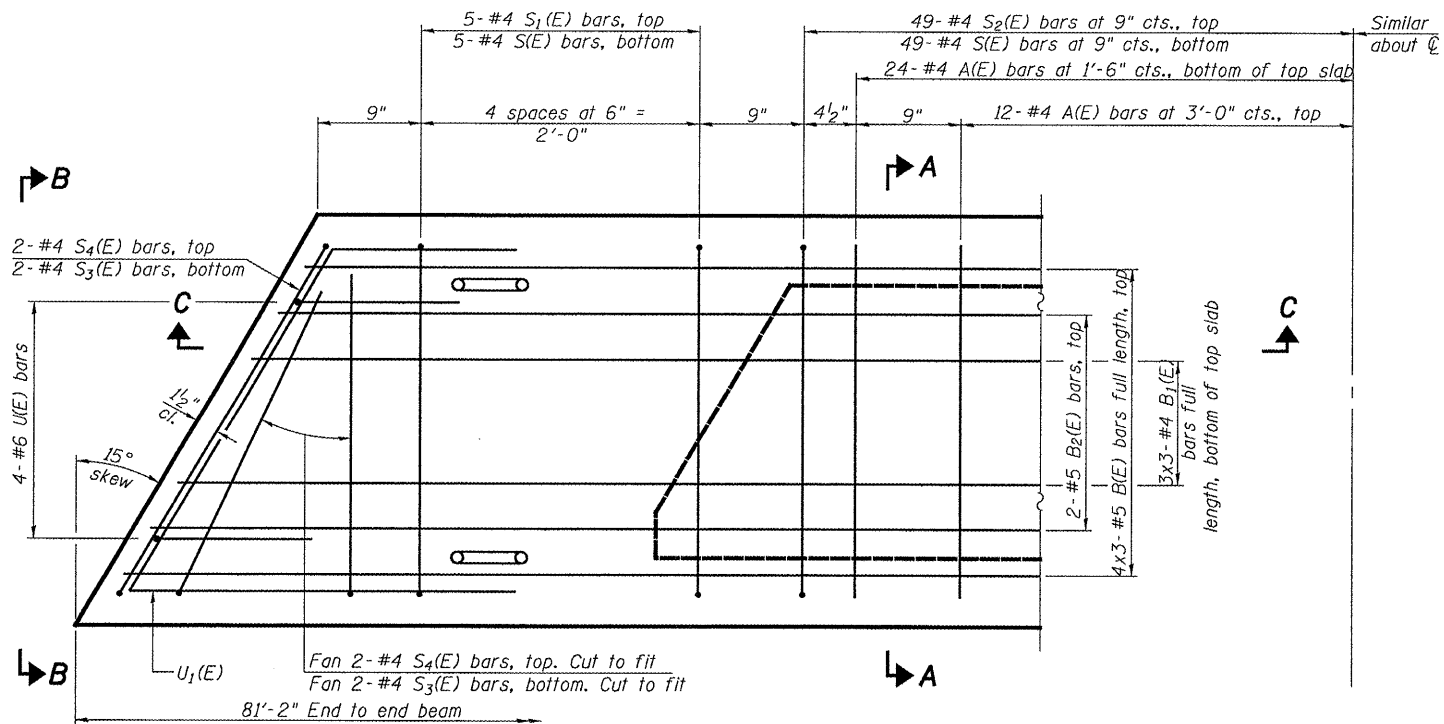


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 4 SHEETS
FAP 71	*	Ford	11	9	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 66801 * (115-BR)I		

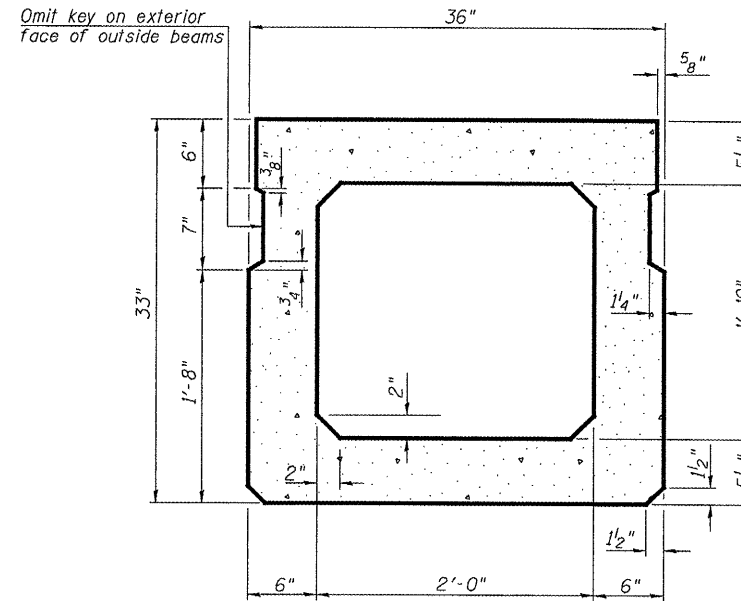


SECTION C-C

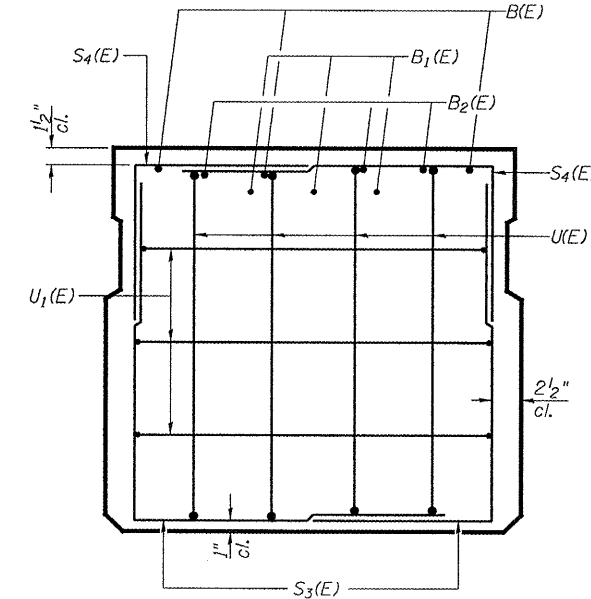


PLAN VIEW

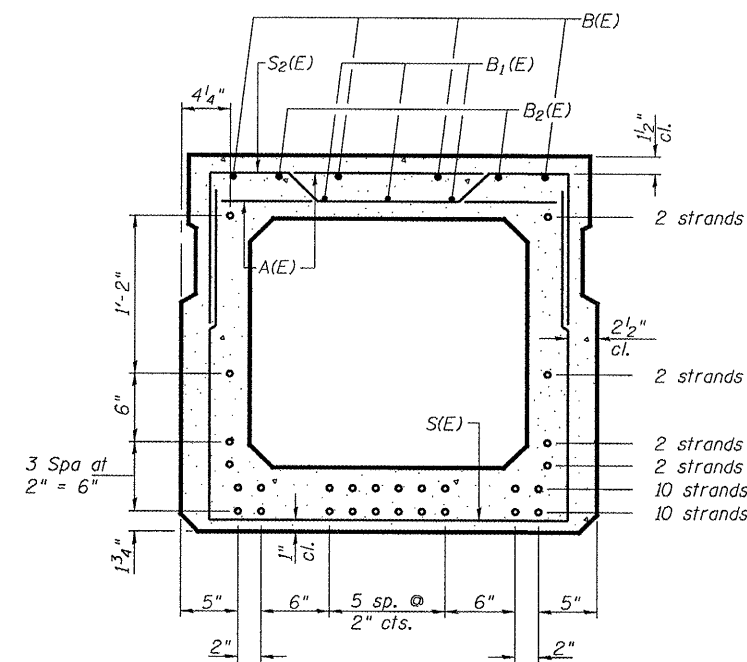
Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A  
(Showing dimensions)



VIEW B-B



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)	72	#4	2'-7"	—
B(E)	12	#5	28'-5"	—
B1(E)	9	#4	28'-1"	—
B2(E)	4	#5	16'-3"	—
S(E)	108	#4	7'-5"	—
S1(E)	10	#4	6'-3"	—
S2(E)	98	#4	6'-6"	—
S3(E)	4	#4	5'-1"	—
S4(E)	4	#4	5'-6"	—
U(E)	8	#6	5'-0"	—
U1(E)	6	#4	5'-9"	—

Notes:  
See sheet 3 of 4 for additional details and Bill of Material.  
Bars indicated thus 4 x 3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAPS

#4 bar = 1'-8"  
#5 bar = 2'-2"

BEAM DETAILS  
F.A.P. RT. 71  
FORD COUNTY  
SN 027-0077

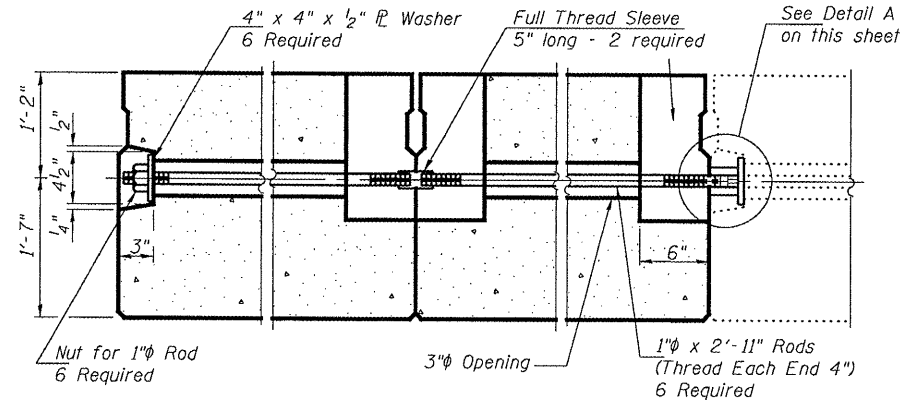
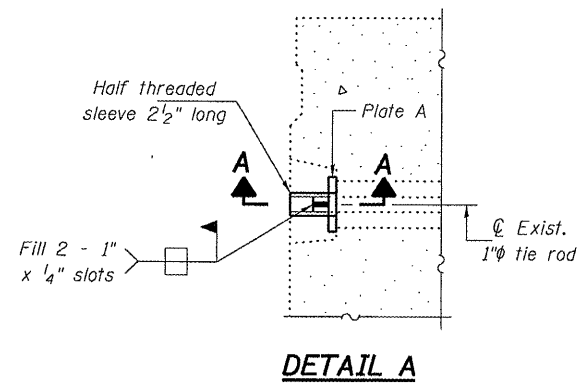
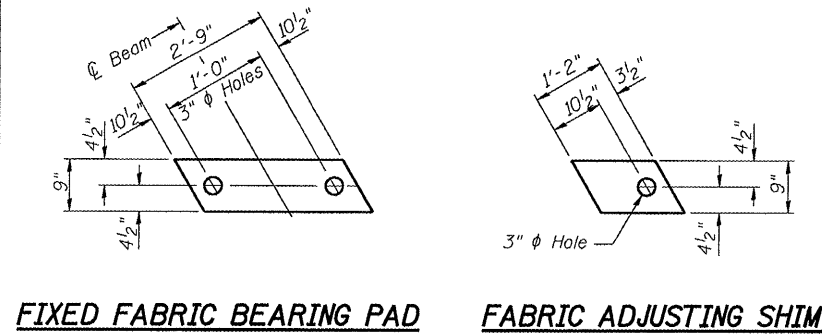
DESIGNED	A.J.B.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	A.J.B. A.T.H.

MAY 8, 2008  
EXAMINED *R. Carl Perry*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

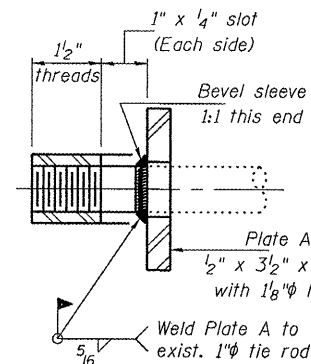
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LISTING SHEETS	SHEET NO.	SHEET NO. 3
FAP 71	*	Ford	11	10	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 66801 * (115-BR1)		

6" x 6" x 16 1/2" Blockout to be filled with Class BS Concrete after Beams have been installed. Cost shall be included in the cost of PPC Deck Beams. Omit on exterior of fascia beam.



TYPICAL TRANSVERSE TIE ASSEMBLY



SECTION A-A  
(2 Required)

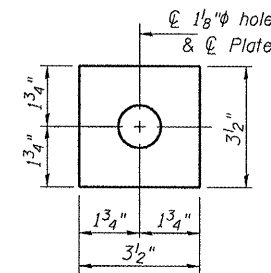
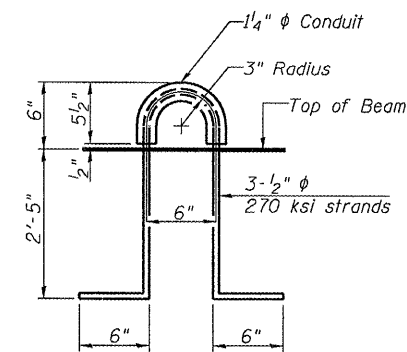
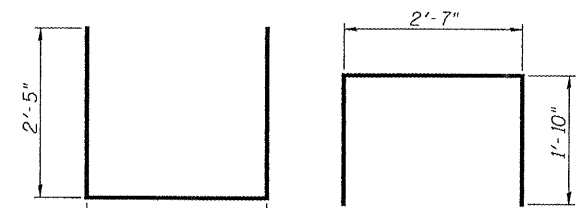


PLATE A  
(2 Required)

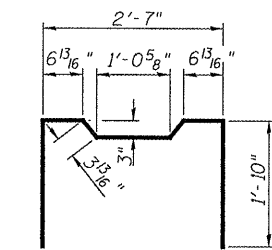


LIFTING LOOP DETAIL

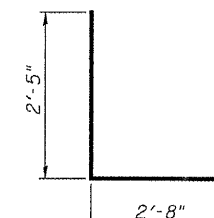


BAR S1(E)

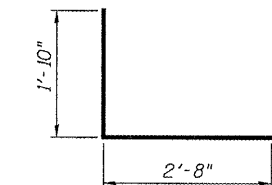
BAR S(E)



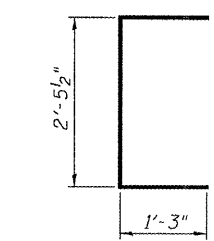
BAR S2(E)



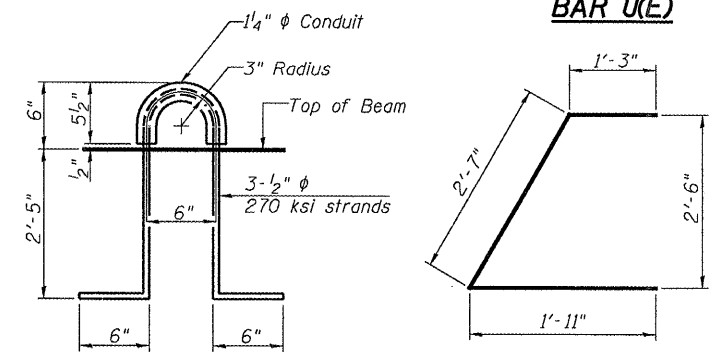
BAR S3(E)



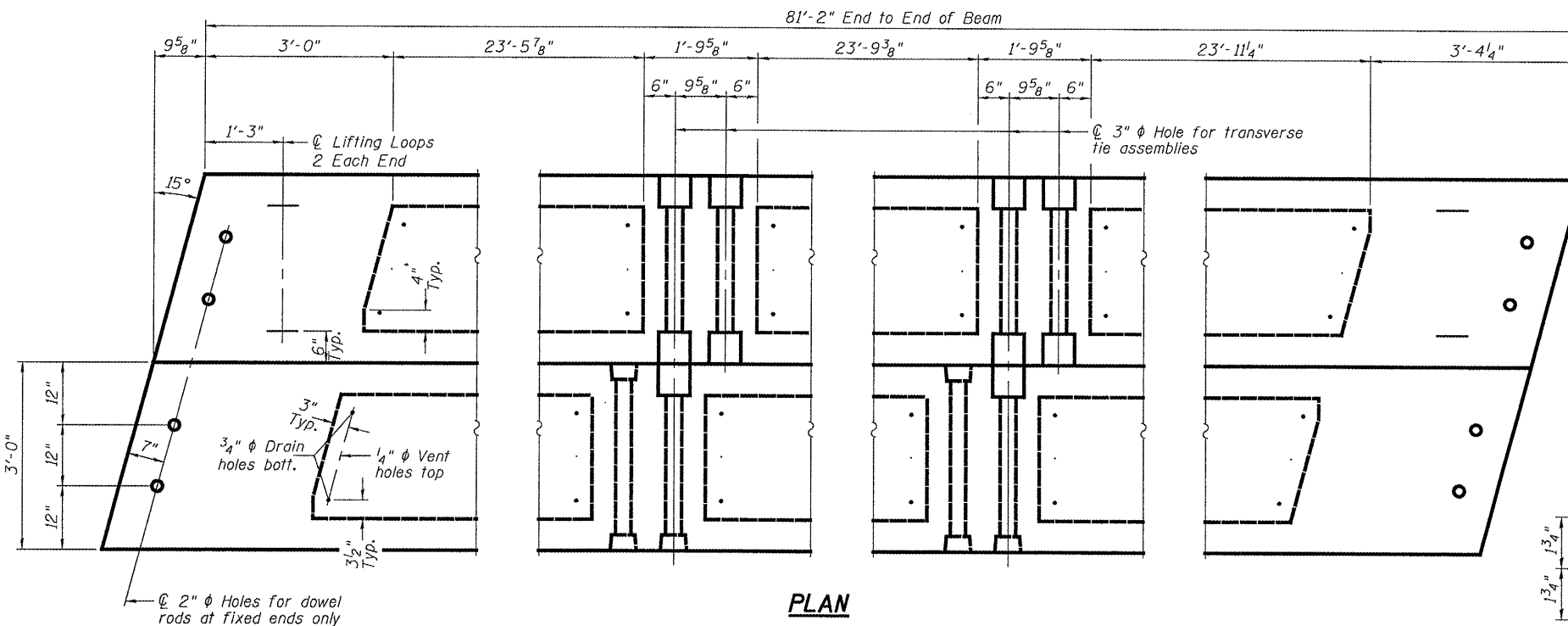
BAR S4(E)



BAR U(E)



BAR U1(E)



PLAN

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706 (IL MOD), Grade 60. (See Special Provisions) Two 1/8" fabric adjusting shims of the dimensions shown 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. (33" depth)	Sq. Ft.	487
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BEAM DETAILS  
F.A.P. RT. 71  
FORD COUNTY  
SN 027-0077

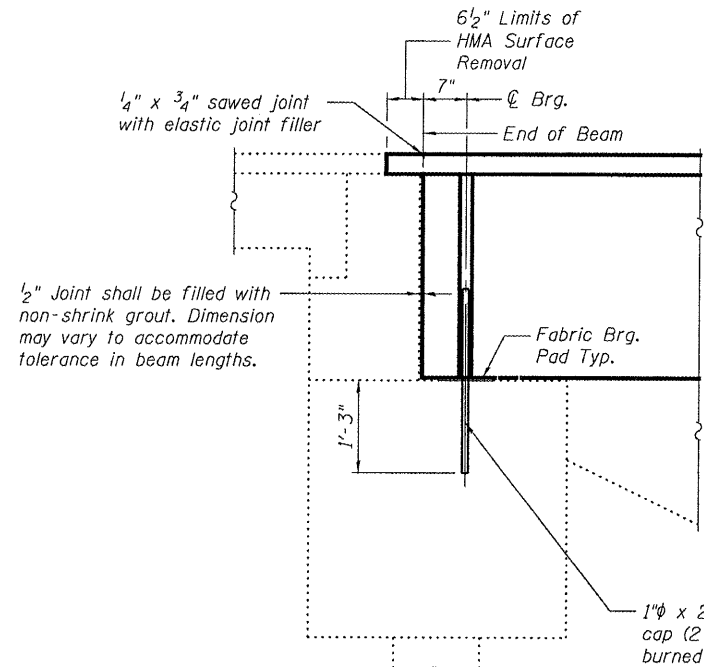
DESIGNED	A.J.B.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	A.J.B. A.T.H.

	MAY 8, 2008
EXAMINED	<i>Carl Perry</i>
PASSED	<i>Ralph E. Anderson</i>
	ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAP 71	*	Ford	11	11
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT -				
Contract Number: 66801 * (115-BR)1				

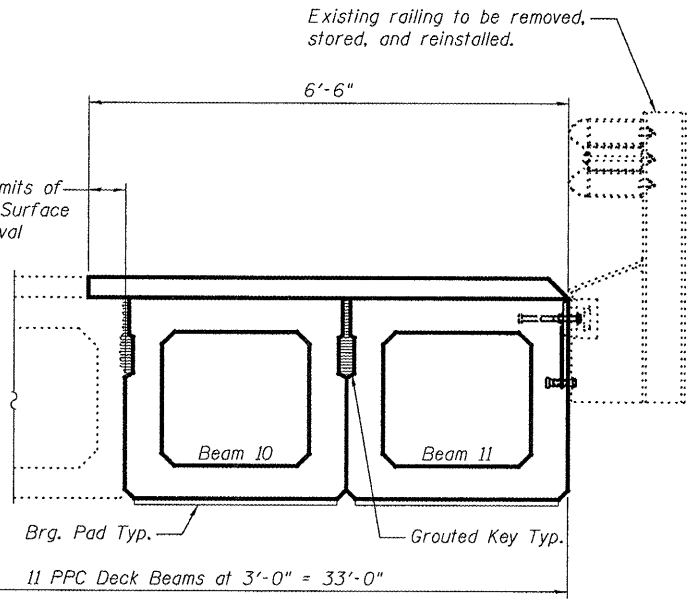
SHEET NO. 4  
4 SHEETS



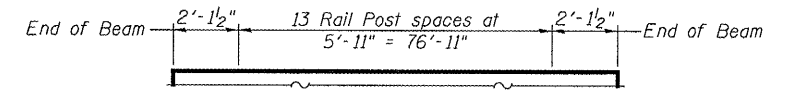
**TYPICAL ABUTMENT SECTION**

1"  $\phi$  x 2'-6" dowel rods in 1 1/2"  $\phi$  holes drilled in cap (2 Each Beam. Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

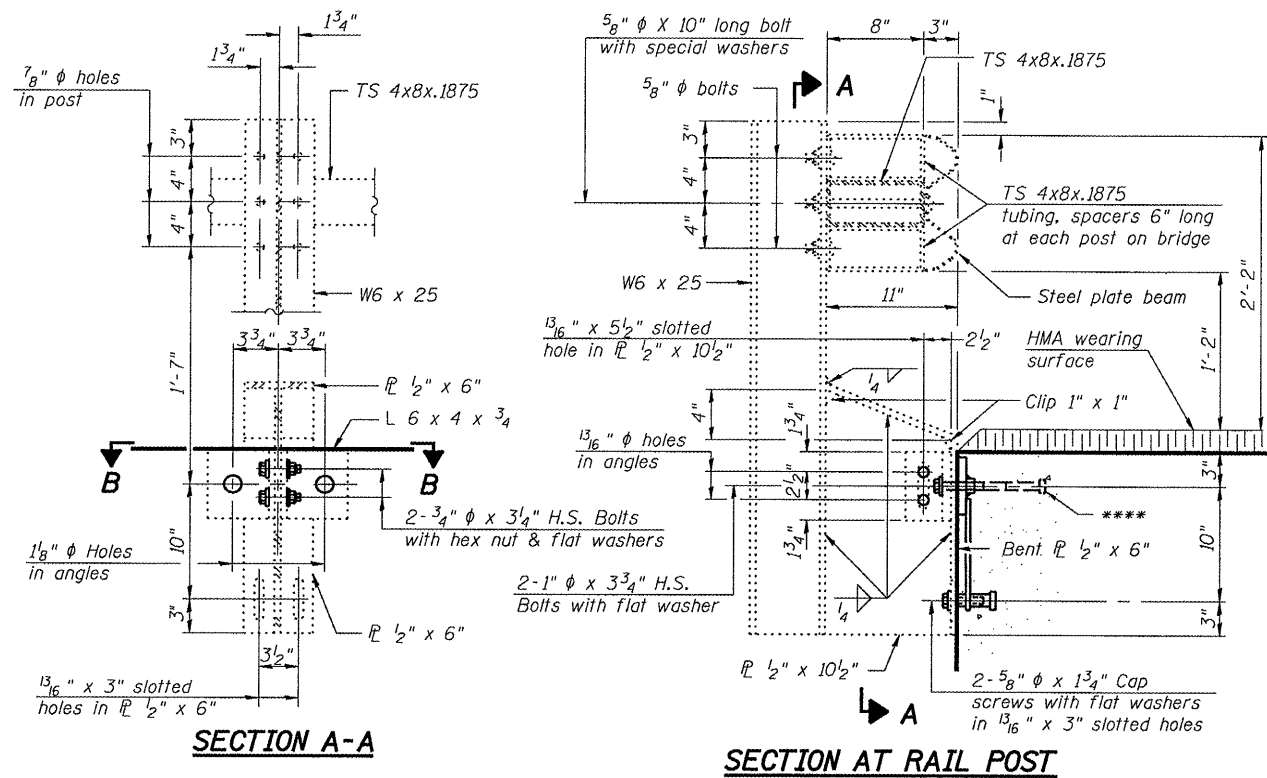
1/2" Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.



**PARTIAL DECK CROSS SECTION**

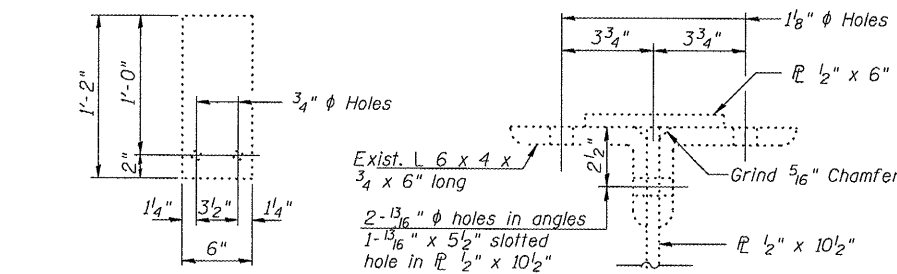


**RAIL POST SPACING**



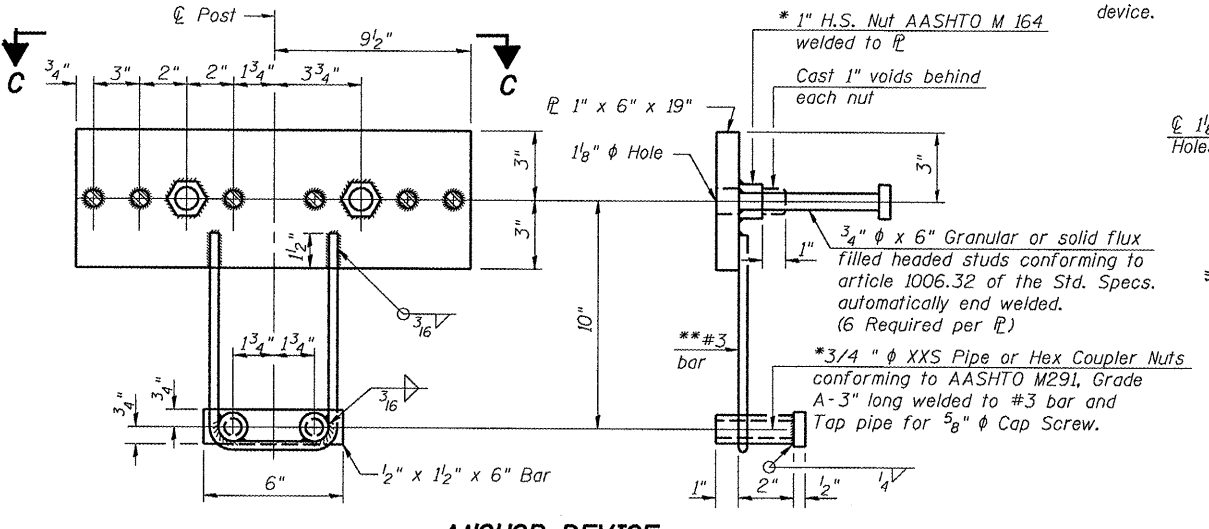
**SECTION A-A**

**SECTION AT RAIL POST**

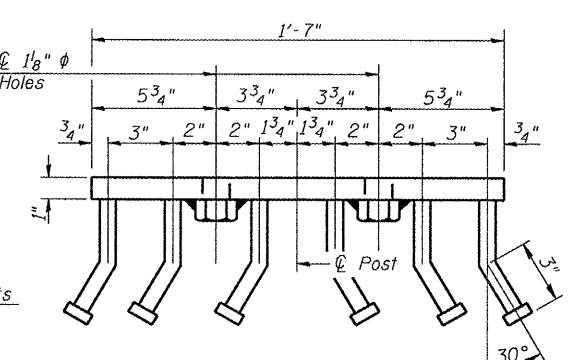


**EXISTING 1/4 SHIM PLATE**

**SECTION B-B**



**ANCHOR DEVICE**



**VIEW C-C**

**RAIL & REPAIR DETAILS**

**F.A.P. RT. 71  
FORD COUNTY  
SN 027-0077**

**Notes:**  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
Cost included with Steel Railing, Type WT.  
All steel rail members 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.

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

\*\*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".

DESIGNED	A.J.B.	EXAMINED	May 8, 2008
CHECKED	A.T.H.	PASSED	Ralph E. Anderson
DRAWN Drew Christopher		ENGINEER OF BRIDGES AND STRUCTURES	
CHECKED	A.J.B. A.T.H.		