

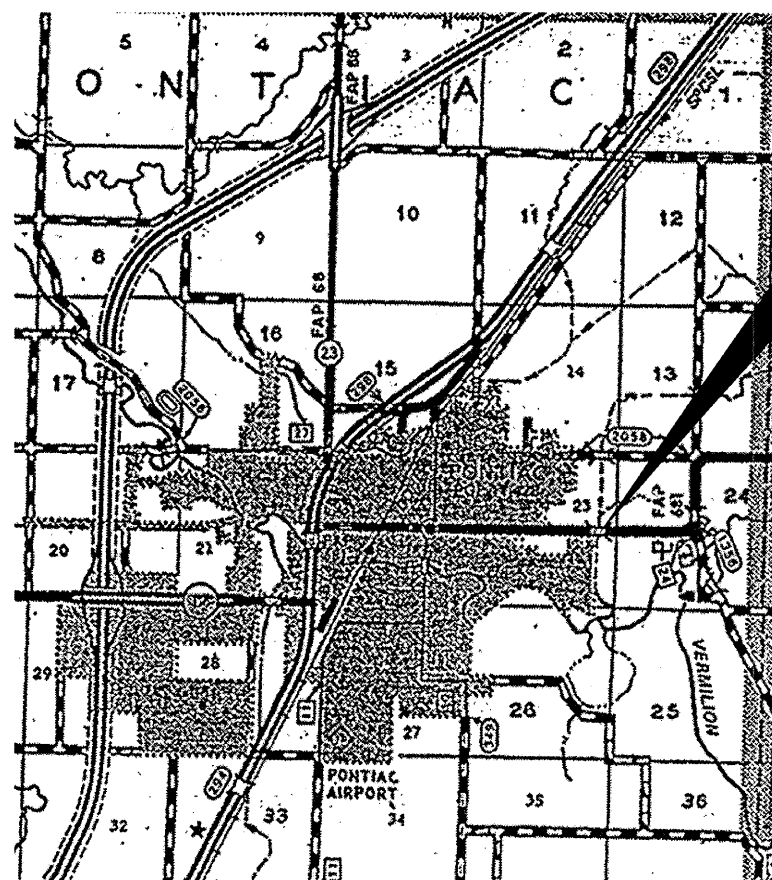
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
673	(113BR)	LIVINGSTON	15	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66821		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 673 (IL 116)
SECTION (113BR)

LIVINGSTON COUNTY
C-93-099-08
DECK BEAM REPLACEMENT



LOCATION MAP
NOT TO SCALE
POINT LOCATION

PROJECT LOCATION
SN 053-0159
1.90 MILES EAST OF IL 23



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

FUNCTIONAL CLASSIFICATION
URBAN - OTHER PRINCIPAL ARTERIAL
F.A.P. ROUTE 673 (IL 116)
2007 ADT = 3550
P.V = 88.7% M.U. = 2.8% S.U. = 8.5%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED 3125 2008
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 9, 2008
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT
May 9, 2008
[Signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

INDEX OF SHEETS

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10. TYPICAL PAVEMENT MARKING
11. PLAN AND ELEVATION
- 12 - 15. REPAIR 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
OR 811

PROJECT ENGINEER : JOE KANNEL
UNIT CHIEF : RON WOODSHANK
CONTRACT NO. 66821

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% e N50	4.0% e 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: R. P. Powell
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: Herbert K. Ang
DISTRICT CONSTRUCTION ENGINEER

Jim [Signature]
DISTRICT MATERIALS ENGINEER

Bruce Huckeray
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 08\van 053-019.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 1/8" = 103.4029' / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 24, 2008 - 10:31:37 AM		DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113BR)I	LIVINGSTON	15	2
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66821	

SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE:

SFTY-2A

RURAL
100% STATE
TOTAL
QUANTITY

CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	104
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	372
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	17
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	9.9
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	657
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	83
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	276
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1

SUMMARY OF QUANTITIES

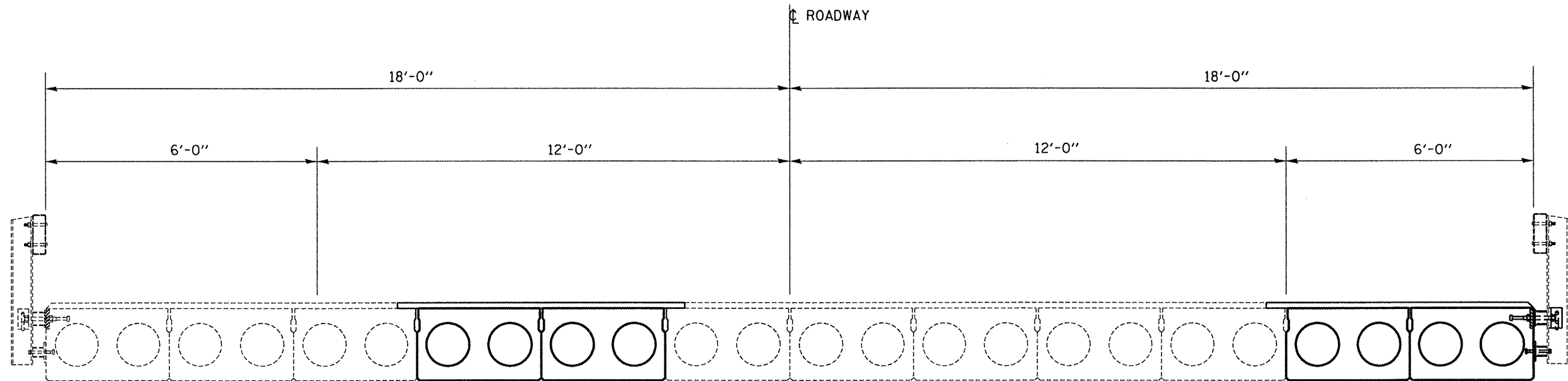
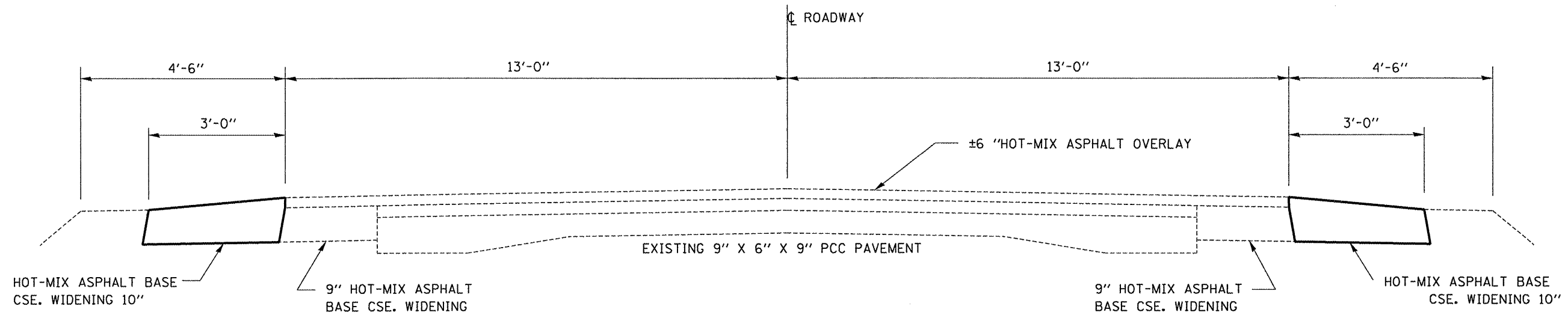
CONSTRUCTION CODE TYPE:

SFTY-2A

RURAL
100% STATE
TOTAL
QUANTITY

CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	241
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	241
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	492
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	137
78300100	PAVEMENT MARKING REMOVAL	SQ FT	231
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	661
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	59
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	4
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2

* SPECIALTY ITEM



FILE NAME =	USER NAME = woodshenkr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 08\an 053-01	rdgn	DRAWN - RLW	REVISED - ---
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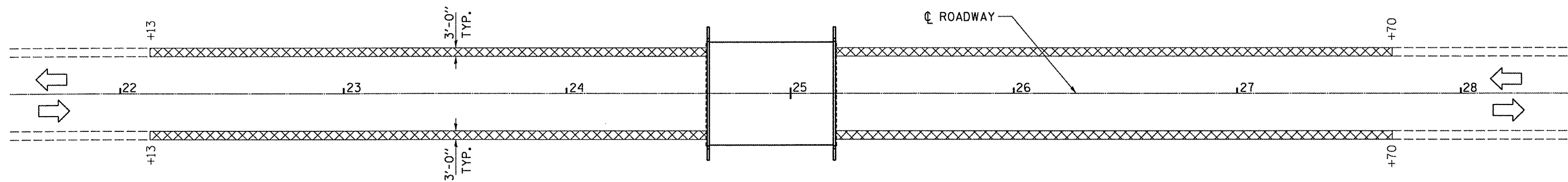
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113BR)I	LIVINGSTON	15	5
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66821	

 **WIDENING LIMITS**



BILL OF MATERIAL

EARTH EXCAVATION	SQ FT	104
WIDENING		
HOT-MIX ASPHALT	FOOT	372
BASE CSE. WIDENING		

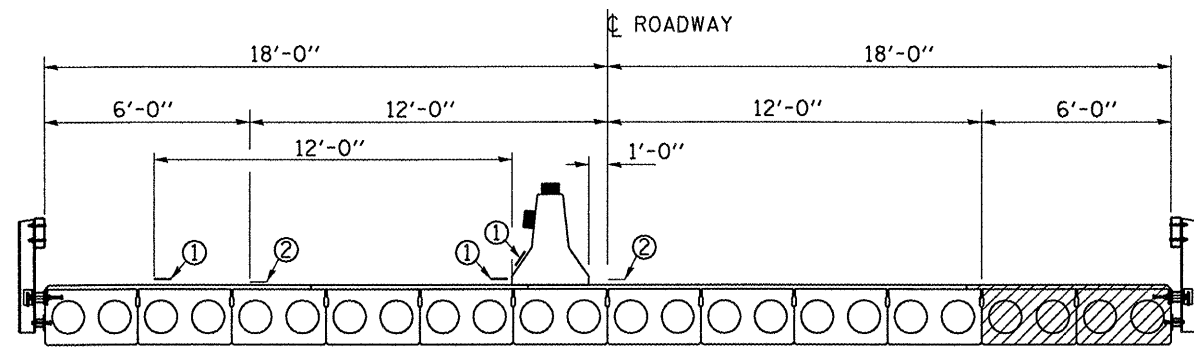
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PLOT DATE = Mar 24, 2008 - 03:58:30 PM	DATE - ---	REVISED - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE DETAILS - STAGE I

SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

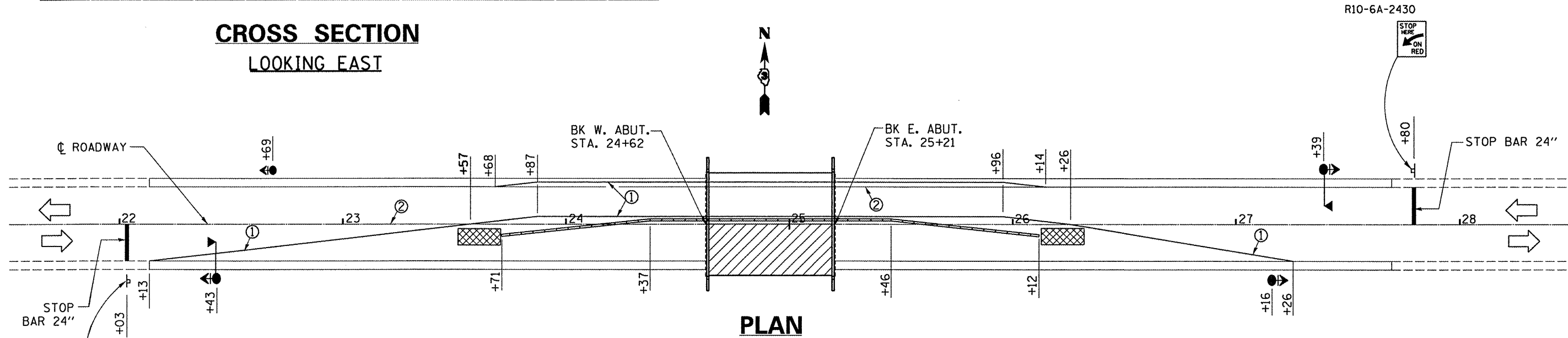
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681	(113BR1)	LIVINGSTON	15	6
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT			CONTRACT NO. 66821	



CROSS SECTION
LOOKING EAST

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



PLAN

- ① MARKING LINE 4"
- ② PAVEMENT MARKING REMOVAL

SYMBOLS

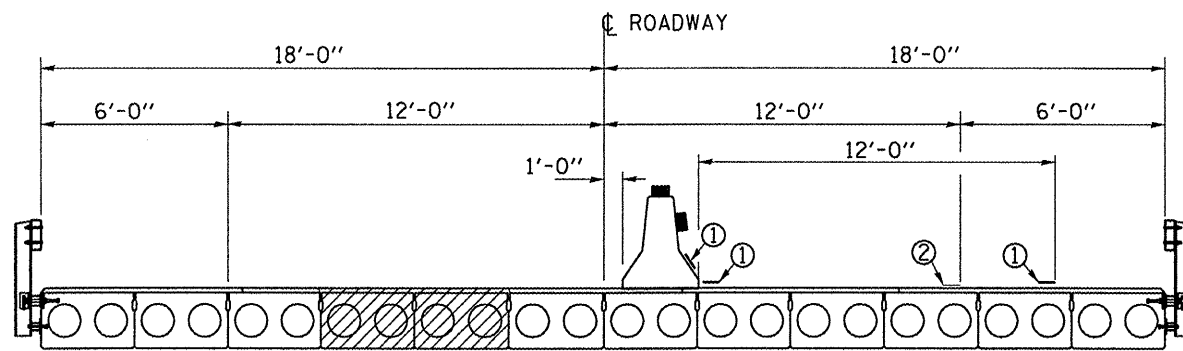
- Work area
- Sign
- Type III barricade
- Microwave detector
- Traffic signal with backplate
- Impact attenuator
- Drum with steady burning light at 25' cts.
- Temporary concrete barrier
- Double vertical panel at 25' cts.
- Crystal, bidirectional barrier wall/guardrail marker at 25' cts.

BILL OF MATERIAL

PAVEMENT MARKING REMOVAL	SQ FT	150
TEMPORARY CONCRETE BARRIER	FOOT	241
IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE, TEST LEVEL 3)	EACH	2

SEE STANDARD 701321 FOR DETAILS NOT SHOWN

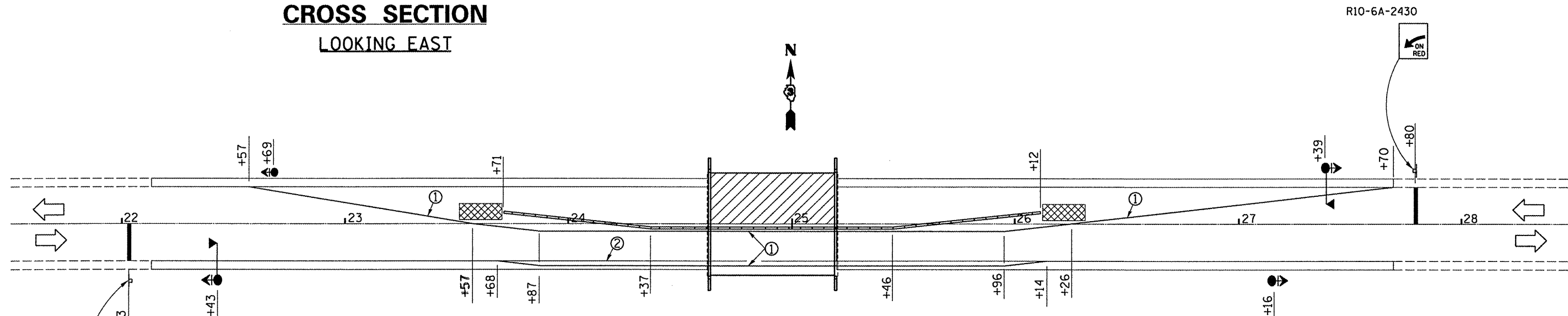
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PLOT SCALE = 1/8" = 1'-0"	CHECKED - ---	REVISED - ---	SCALE: _____			SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			
PLOT DATE = Mar 25, 2008 - 11:08:56 AM	DATE - -----	REVISED - ---									
CONTRACT NO. 66821											



CROSS SECTION
LOOKING EAST

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



- ① MARKING LINE 4"
- ② PAVEMENT MARKING REMOVAL

BILL OF MATERIAL

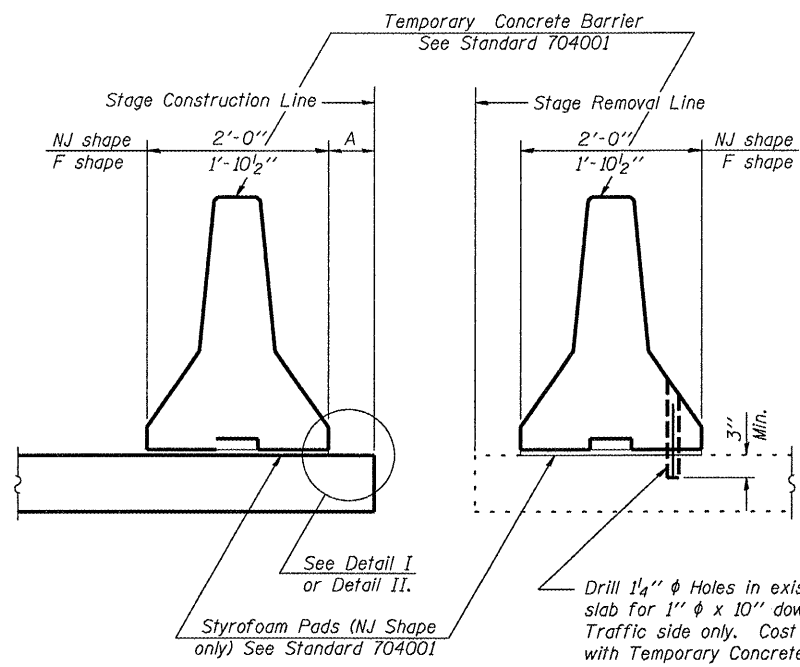
PAVEMENT MARKING REMOVAL	SQ FT	81
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	241
IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE, TEST LEVEL 3)	EACH	2
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	492
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	137

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 =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING DETAILS - STAGE III	F.A.P. RTE. 681	SECTION (113BR)I	COUNTY LIVINGSTON	TOTAL SHEETS 15	SHEET NO. 8		
c:\projects\deek beam repl 08\sn 053-019.dgn	PLOT SCALE = 1/8" = 1' / IN.	DRAWN - RLW	REVISED - ---			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. _____ [ILLINOIS] FED. AID PROJECT			
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		DATE - _____	REVISED - ---									

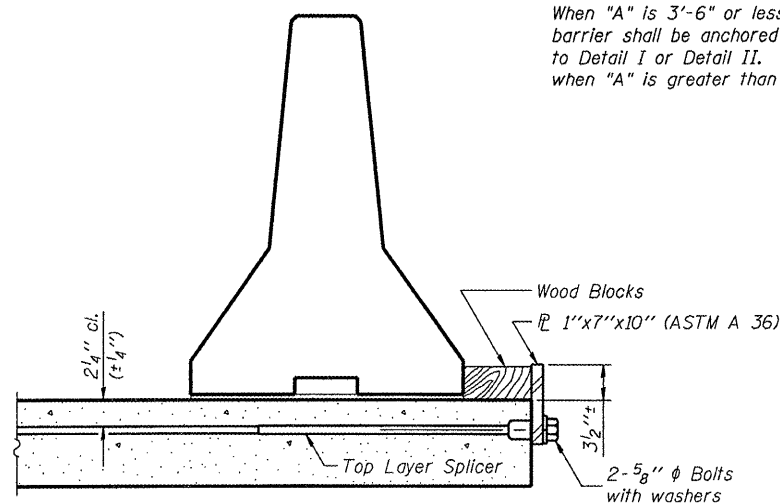


NEW SLAB

EXISTING SLAB

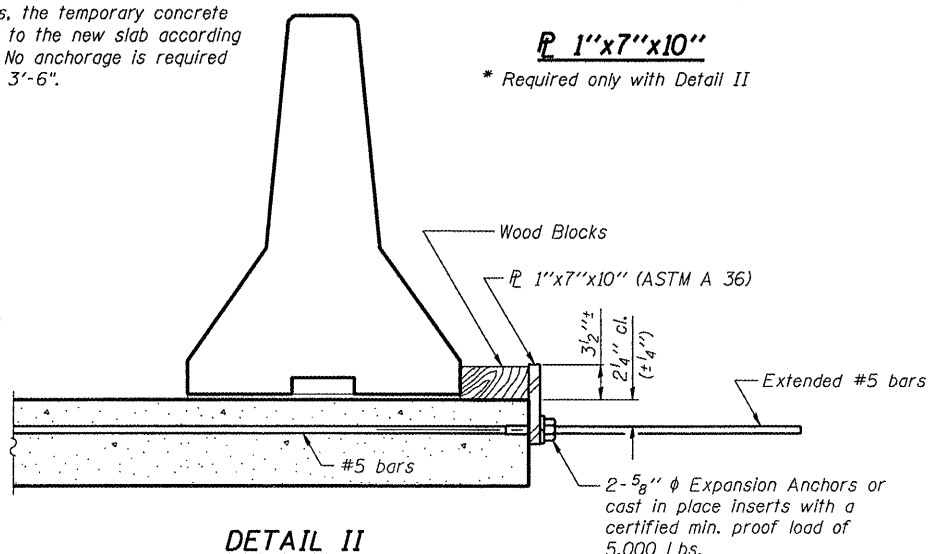
SECTIONS THRU SLAB

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".



DETAIL I

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.

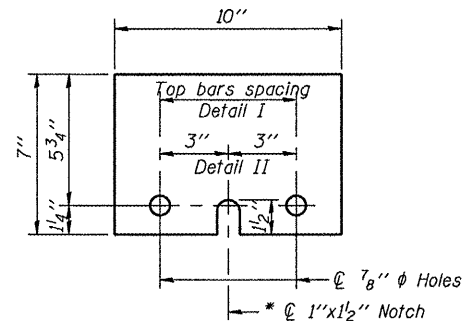


DETAIL II

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.

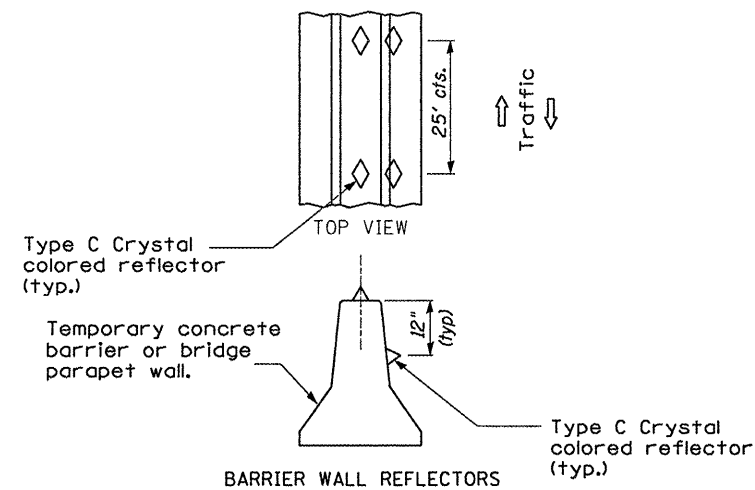
NOTES

- Detail I - With Bar Splicer or Couplers: Connect one (1) 1" x 7" x 10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
 - Detail II - With Extended Reinforcement Bars: Connect one (1) 1" x 7" x 10" steel \bar{L} to the concrete slab with 2-5/8" ϕ 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.

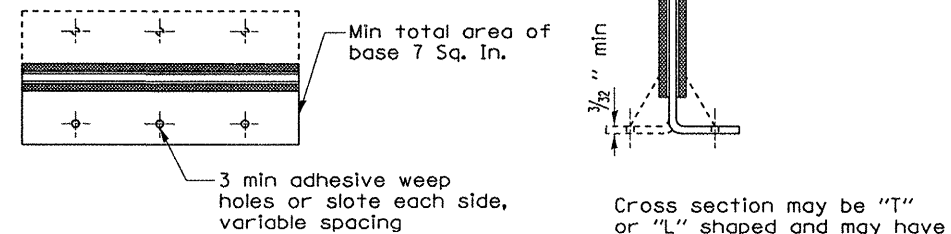
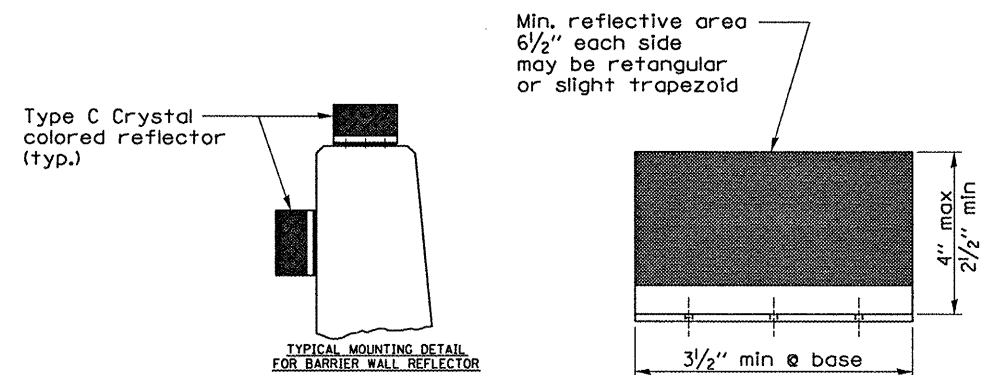


1" x 7" x 10"

* Required only with Detail II



DETAIL A



TYPE C REFLECTOR

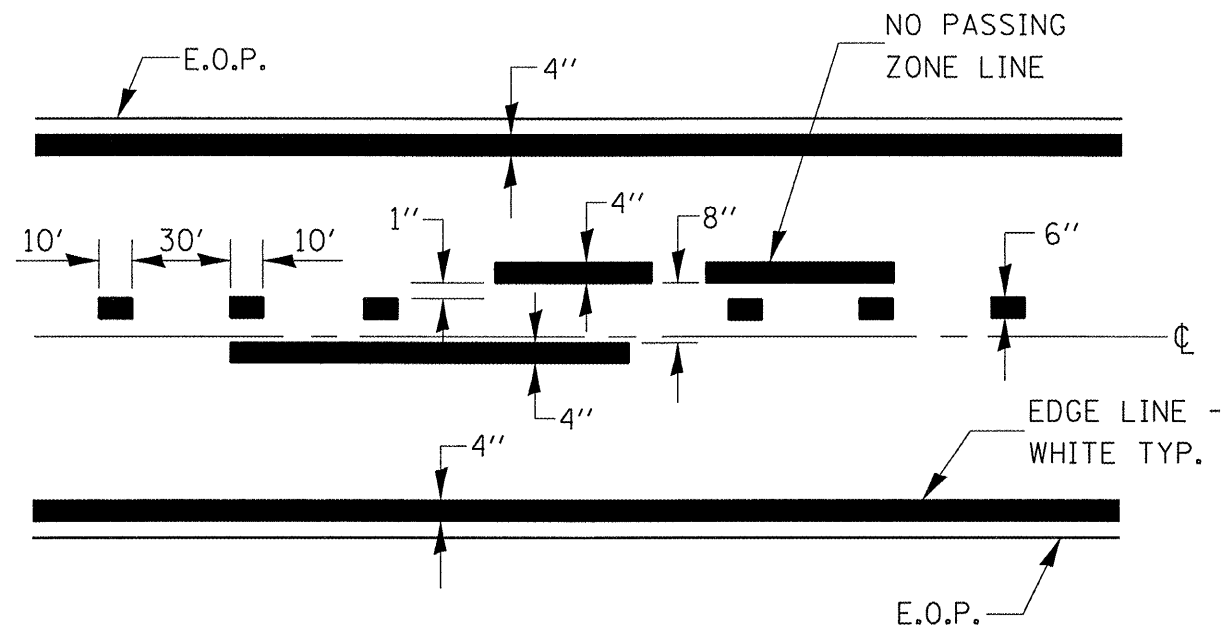
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	PLOT DATE = Mar 20, 2008 - 10:42:38 AM	DATE -	REVISED - ---

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.
681	(113BR1)	LIVINGSTON	15	9
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT			CONTRACT NO. 66821	



CENTERLINE & NO PASSING
ZONE LINES - YELLOW

(SEE TYPICAL SECTIONS)

PAVEMENT MARKING

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 00\lan 053-01.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 1/32" = 1/8" / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 20, 2008 - 10:42:44 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.
681	(113BR)	LIVINGSTON	15	10
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66821	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(13BR)1	LIVINGSTON	15	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
5 SHEETS

Contract Number: 66821

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.

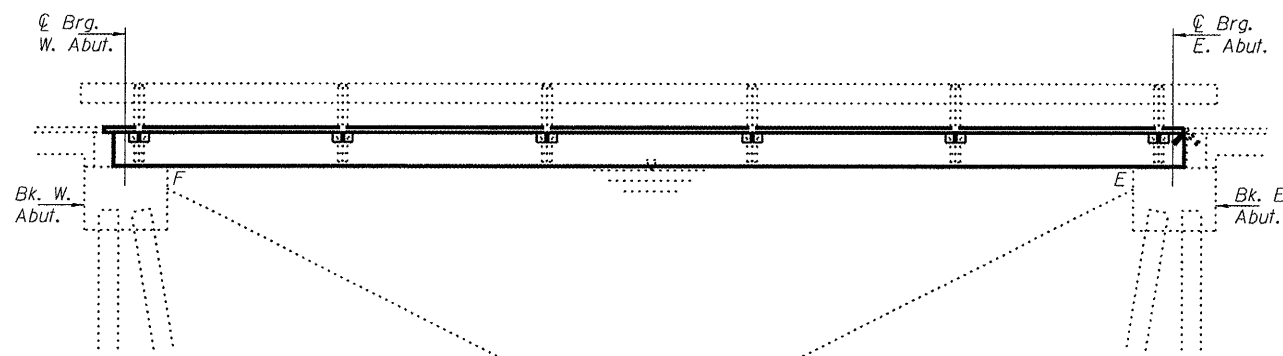
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed 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.

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

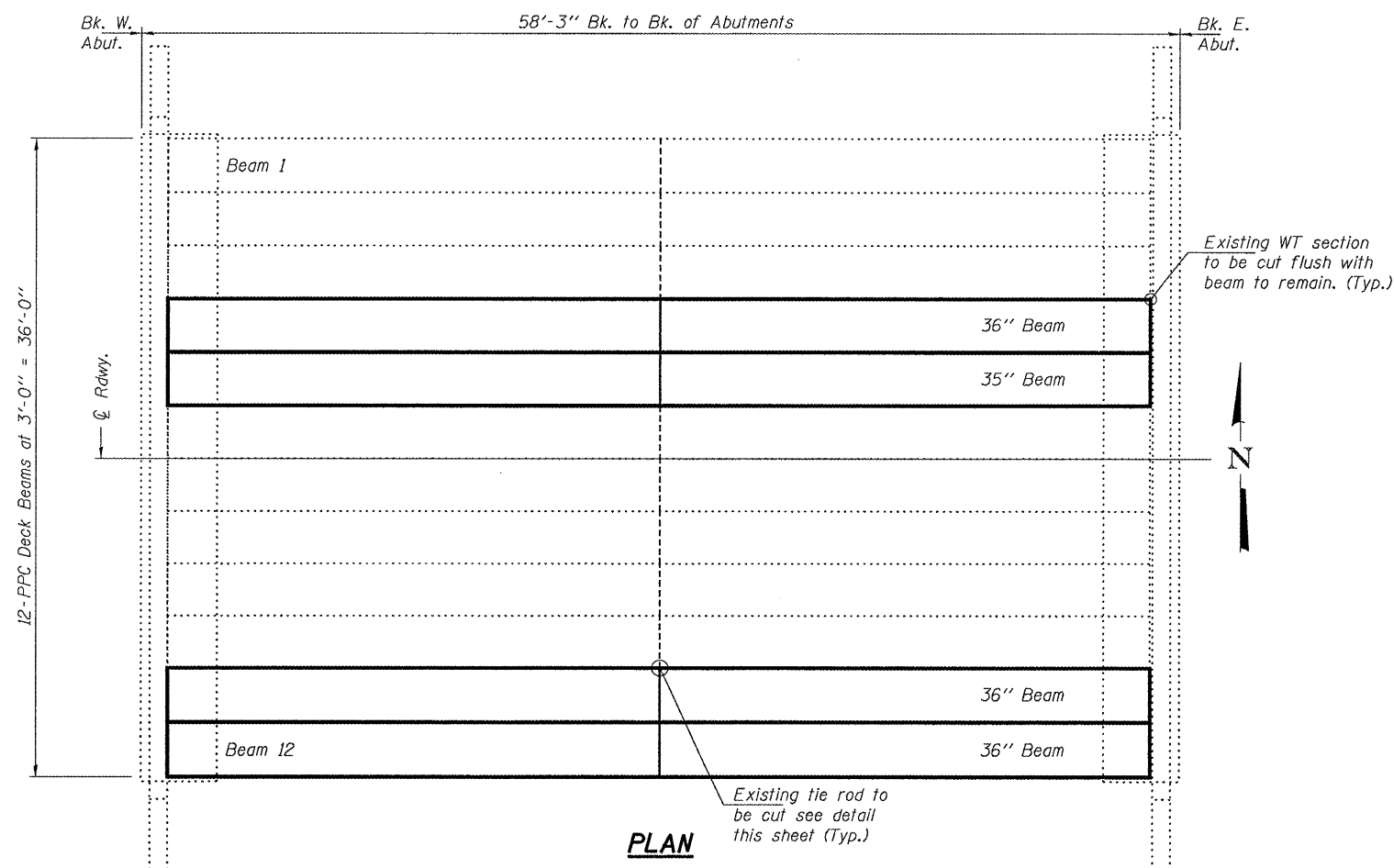
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause 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.

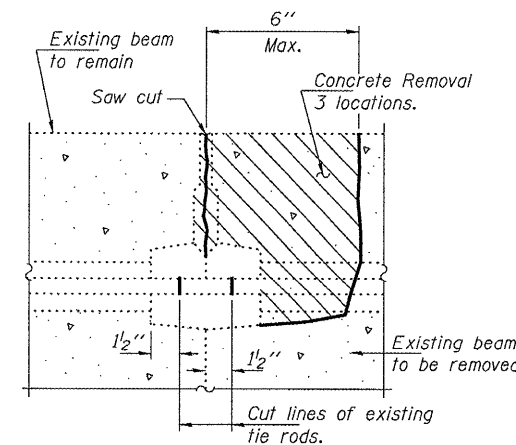
Any damage done to the bridge during beam removal shall be repaired by the contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.



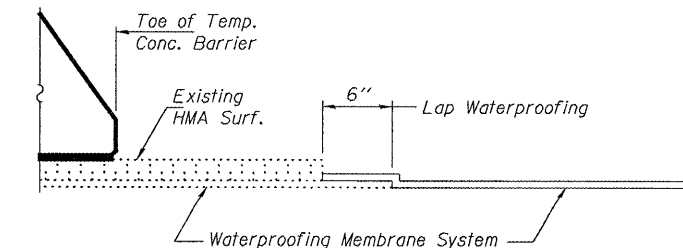
ELEVATION



PLAN



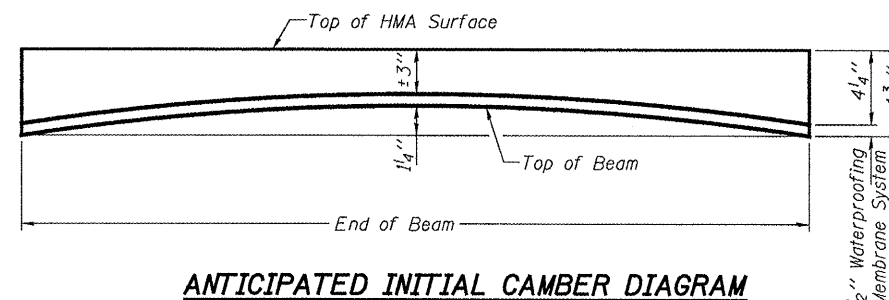
BEAM REMOVAL DETAIL AT TRANSVERSE TIES



WATERPROOFING TREATMENT

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	661
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	657
Hot-Mix Asphalt Surface Removal	Sq. Yd.	9.9
HMA Surface Course Mix "C" N50	Tons	17.0
PC Mortar Fairing Course	Foot	276
Asbestos Bearing Pad Removal	Each	4
Removing & Re-erecting Existing Railing	Foot	59
Waterproofing Membrane System	Sq. Yd.	83.4



ANTICIPATED INITIAL CAMBER DIAGRAM

DESIGN STRESSES

PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)
 $f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)

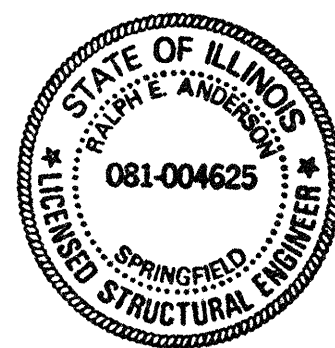
PLAN AND ELEVATION

FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	Adrian T. Holloway
CHECKED	[Signature]
DRAWN	baliva
CHECKED	AFH ASB

EXAMINED MAY 12, 2008
 [Signature]
 ENGINEER OF STRUCTURAL SERVICES

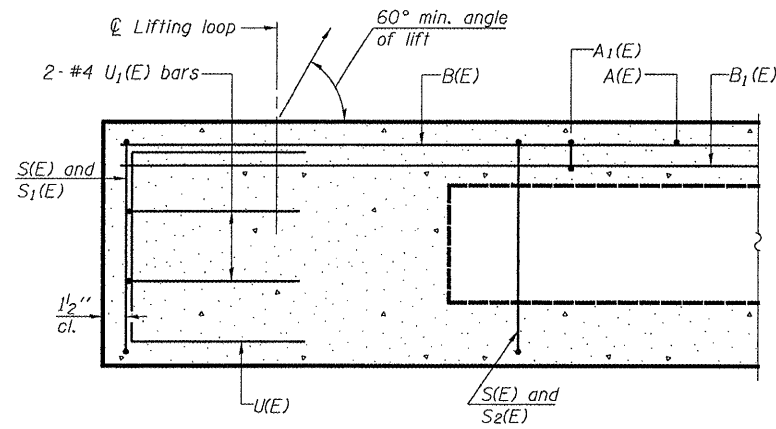
PASSED [Signature]
 ENGINEER OF BRIDGES AND STRUCTURES



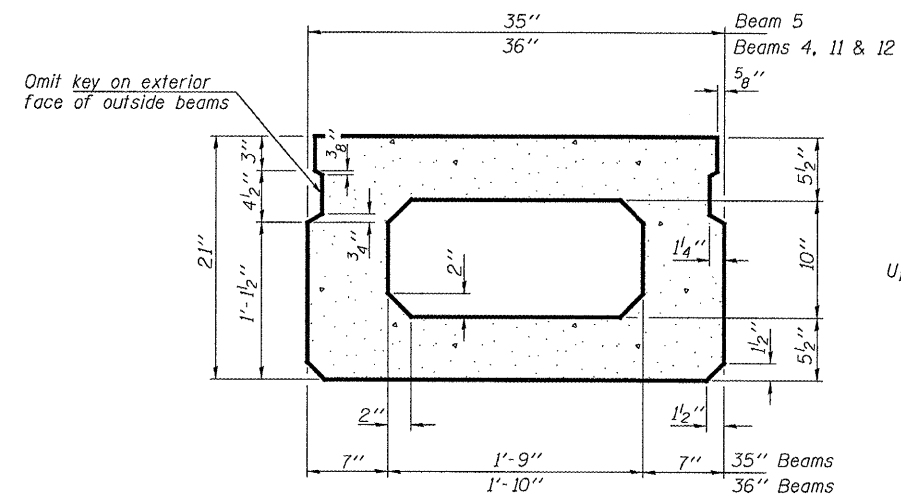
Expires: November 30, 2008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

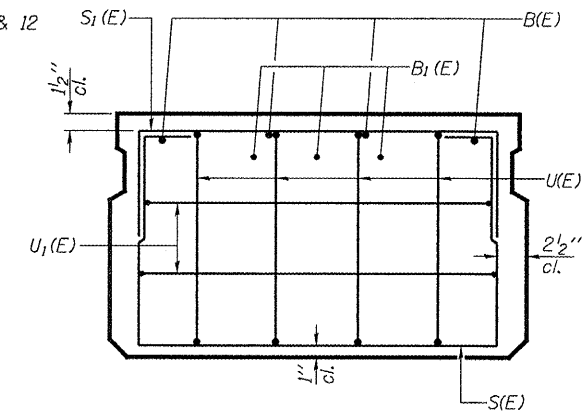
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FAP 681	(13BR)	LIVINGSTON	15	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 66821		



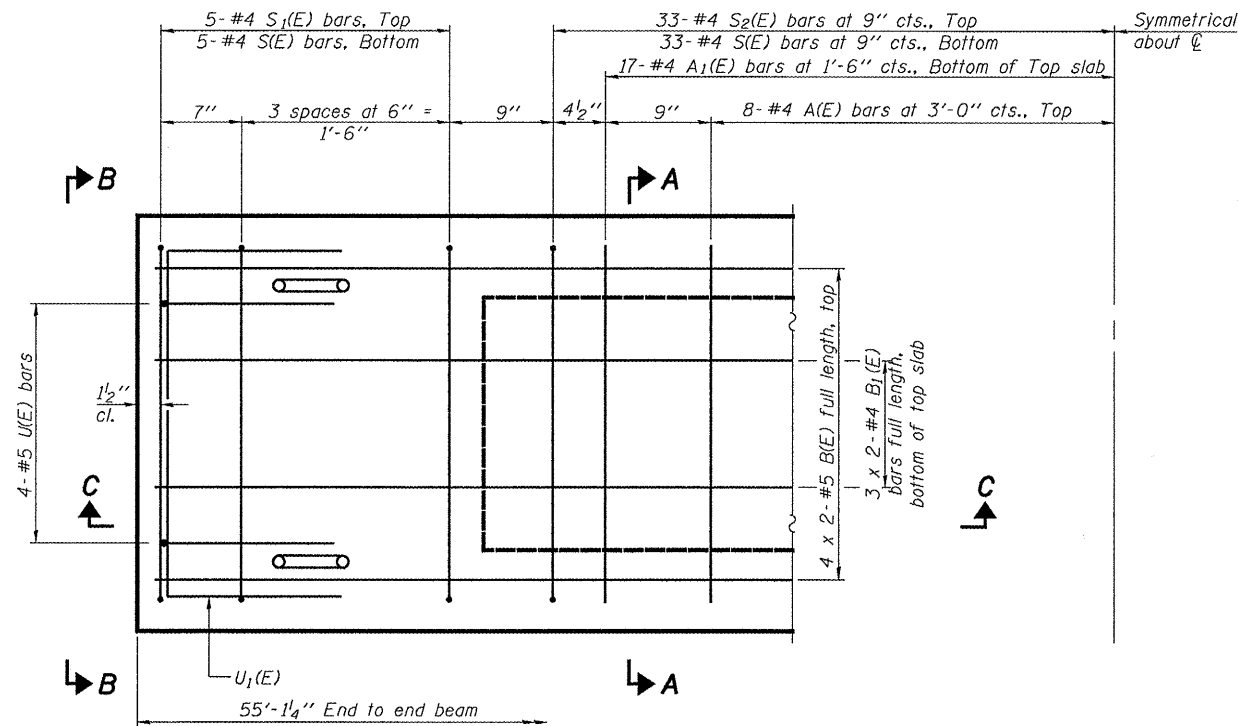
SECTION C-C



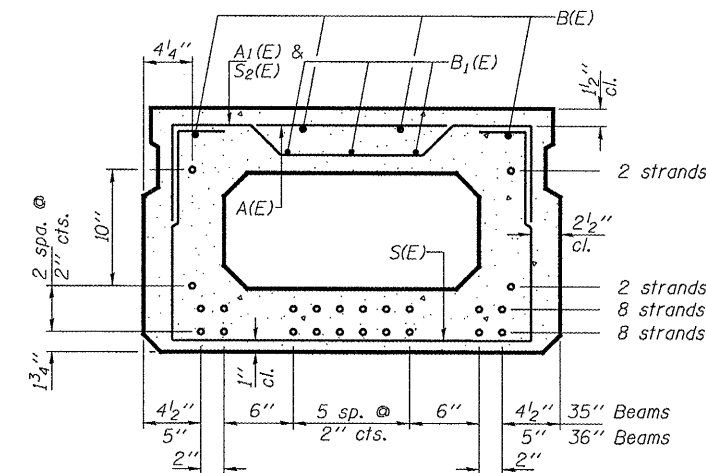
SECTION A-A
(Showing dimensions)



VIEW B-B



PLAN VIEW



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 35" BEAM ONLY

(For information only)

Bar No.	Size	Length	Shape
A(E)	#4	2'-6"	—
A1(E)	#4	2'-10"	—
B(E)	#5	28'-7"	—
B1(E)	#4	28'-4"	—
S(E)	#4	6'-4"	□
S1(E)	#4	5'-6"	□
S2(E)	#4	5'-9"	□
U(E)	#5	4'-0"	□
U1(E)	#4	4'-11"	□

BAR LIST 36" BEAM ONLY

(For information only)

Bar No.	Size	Length	Shape
A(E)	#4	2'-7"	—
A1(E)	#4	2'-11"	—
B(E)	#5	28'-7"	—
B1(E)	#4	28'-4"	—
S(E)	#4	6'-5"	□
S1(E)	#4	5'-7"	□
S2(E)	#4	5'-10"	□
U(E)	#5	4'-0"	□
U1(E)	#4	5'-0"	□

MINIMUM BAR LAPS

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

Note:

See sheet 3 of 5 for additional details and Bill of Material.

Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

REPAIR DETAILS

FAP 681
LIVINGSTON COUNTY
SN 053-0159

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

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

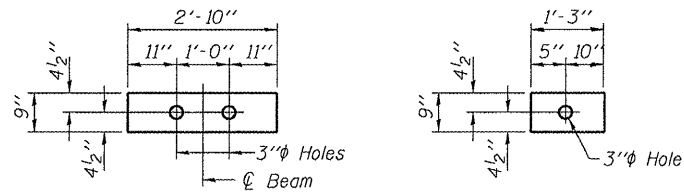
PD-2136-0

8-29-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 5 SHEETS
FAP 681	(13BR)	LIVINGSTON	15	13	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

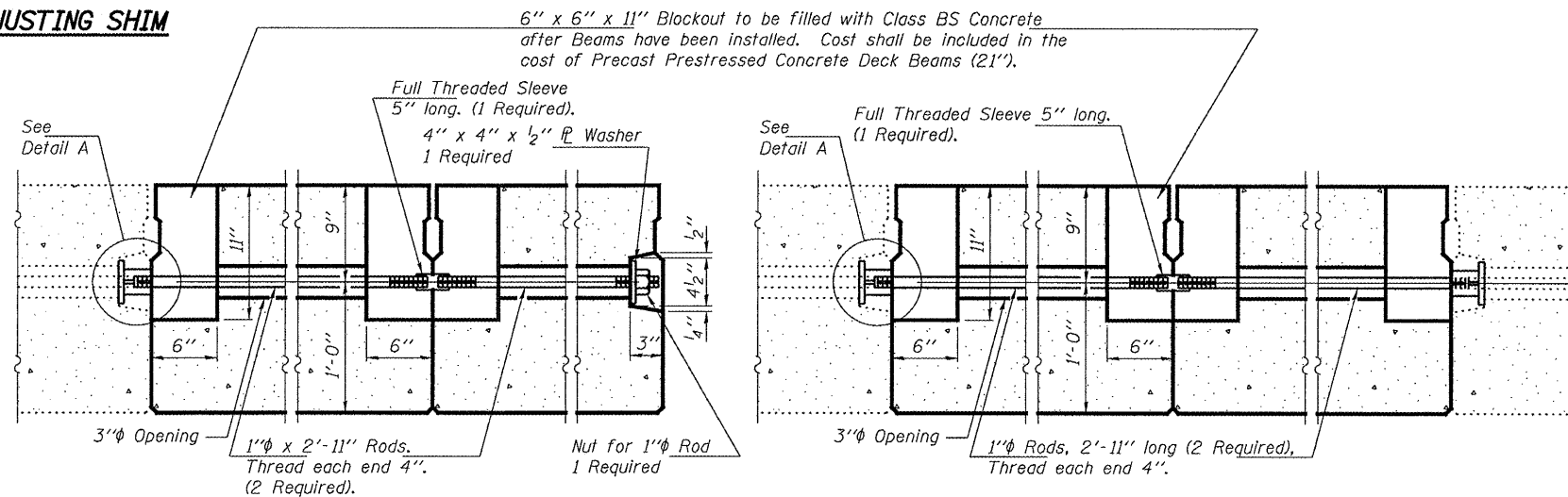
Contract Number: 66821



FABRIC BEARING PAD FABRIC ADJUSTING SHIM

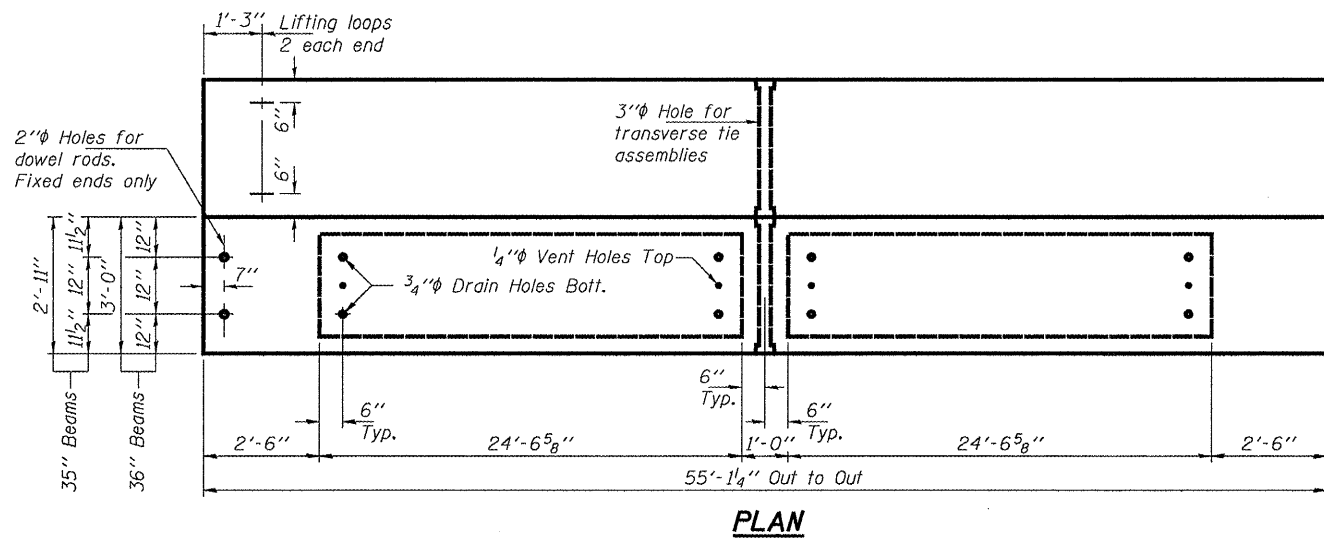
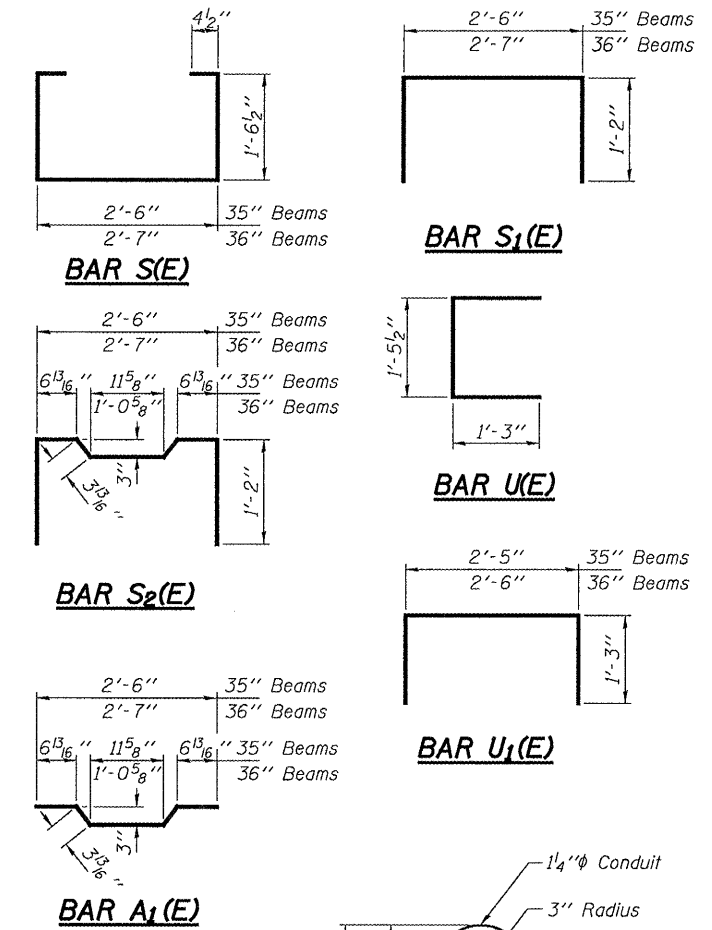
FIXED

Note: Omit holes when using expansion bearings.



TRANSVERSE TIE ASSEMBLY
(Typ. beam 11 & 12 replacement)

TRANSVERSE TIE ASSEMBLY
(Typ. beam 4 & 5 replacement)



PLAN

See Detail A on sheet 4 of 5 for expansion details.

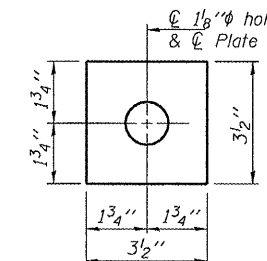
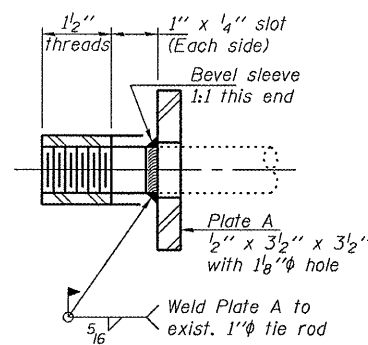


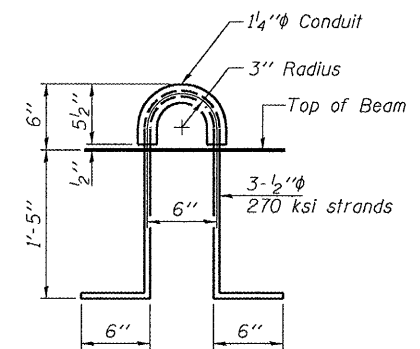
PLATE A
(3 Required)



SECTION A-A
(3 Required)

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 3/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing pad location. A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	657
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REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

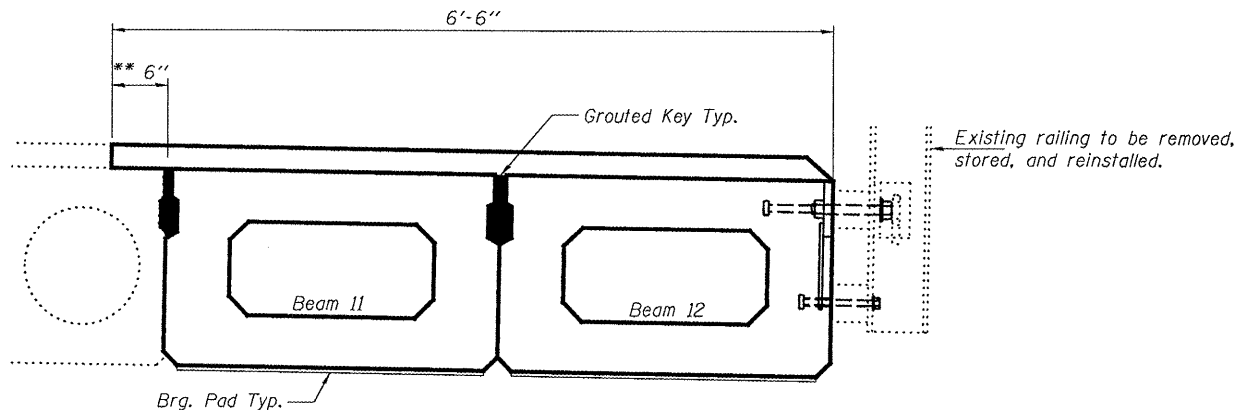
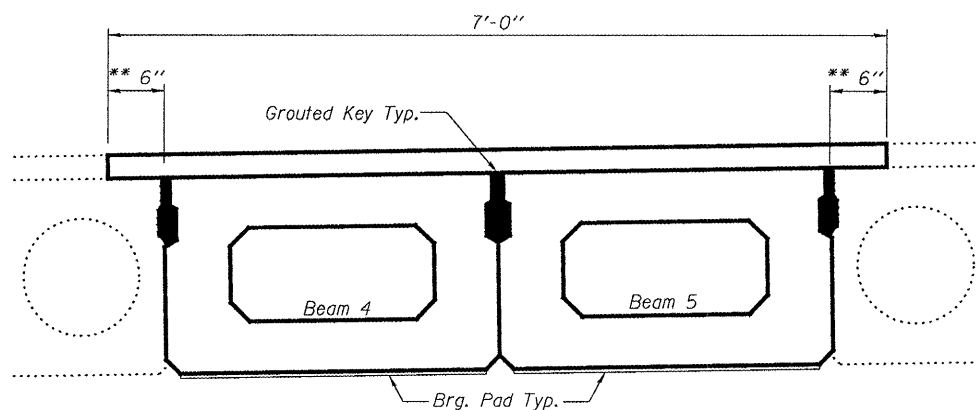
MAY 12, 2008
EXAMINED *Carl Perry*
PASSED *Ralph E. Anderson*
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

PD-2136-0D 8-29-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

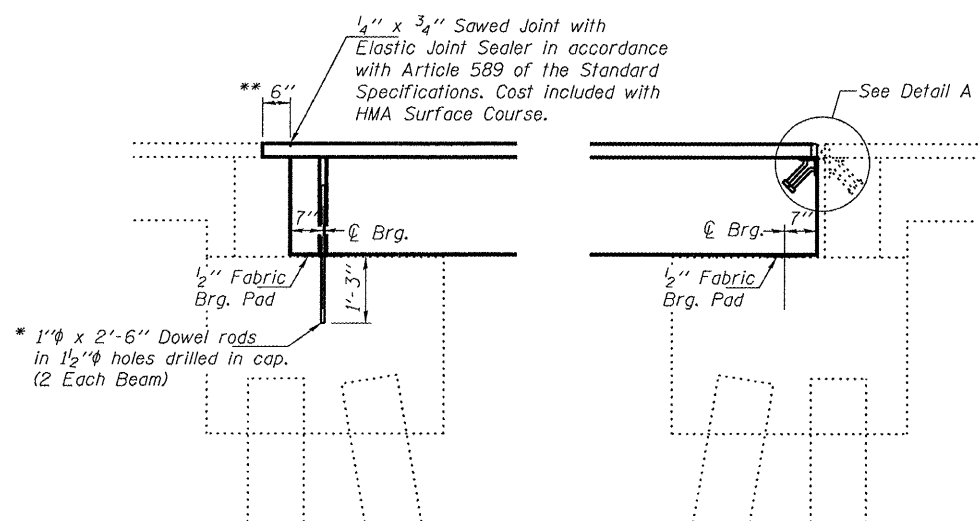
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FAP 681	(13BR)1	LIVINGSTON	15	14	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract Number: 66821



PARTIAL DECK CROSS SECTION

** Limits of HMA Surface Removal.
Existing waterproofing to remain.
Lap new waterproofing 6" over
existing.

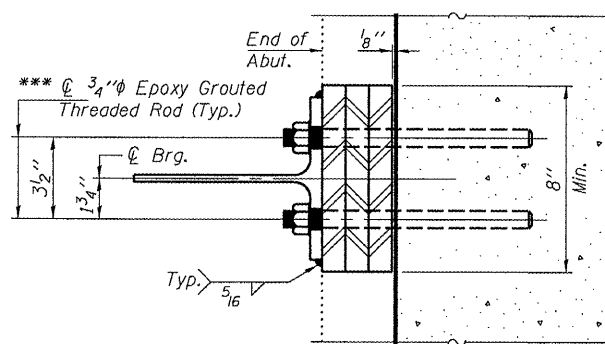


**TYPICAL SECTION
AT W. ABUTMENT**

**TYPICAL SECTION
AT E. ABUTMENT**

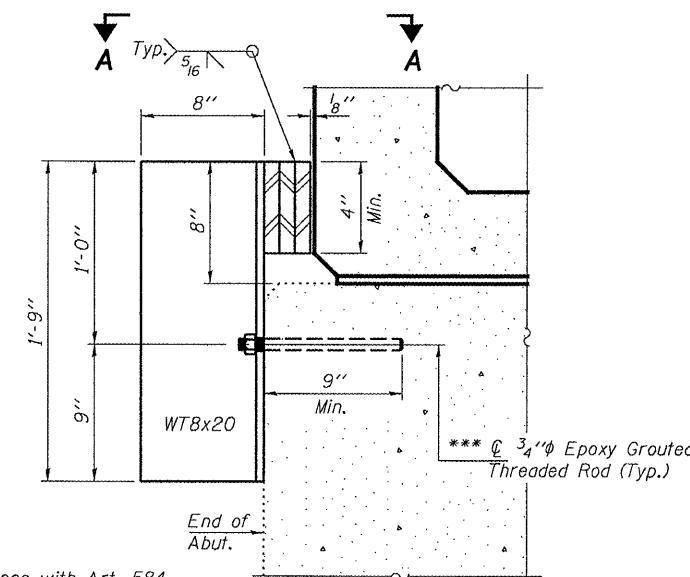
* 1"φ x 2'-6" Dowel rods
in 1 1/2"φ holes drilled in cap.
(2 Each Beam)

* 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.

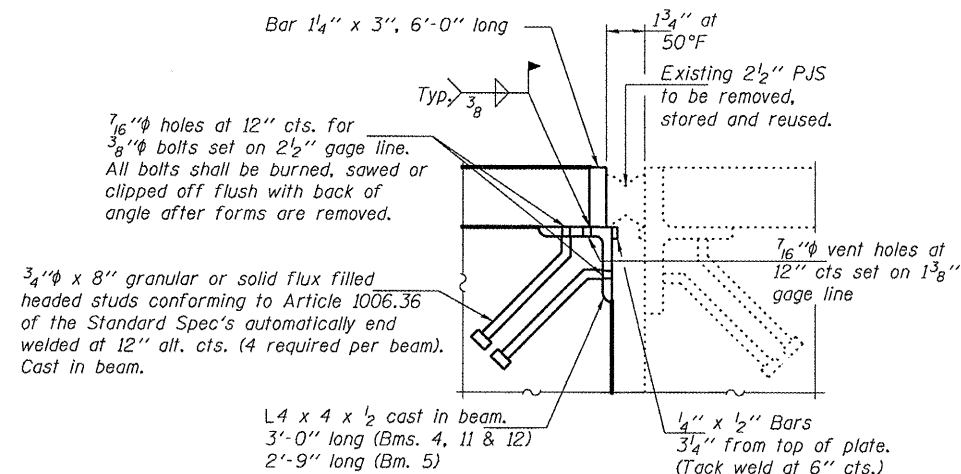


SECTION A-A

*** In accordance with Art. 584
of the Standard Specifications.



RETAINER AT BEAM 12, C. BRG E. ABUT.
(Outside face only)
(Cost included with PPC Deck Beams)



DETAIL A

(Cost included with PPC Deck Beams)

**ELEVATION NEW JOINT P
TO EXISTING JOINT P**

**REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159**

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

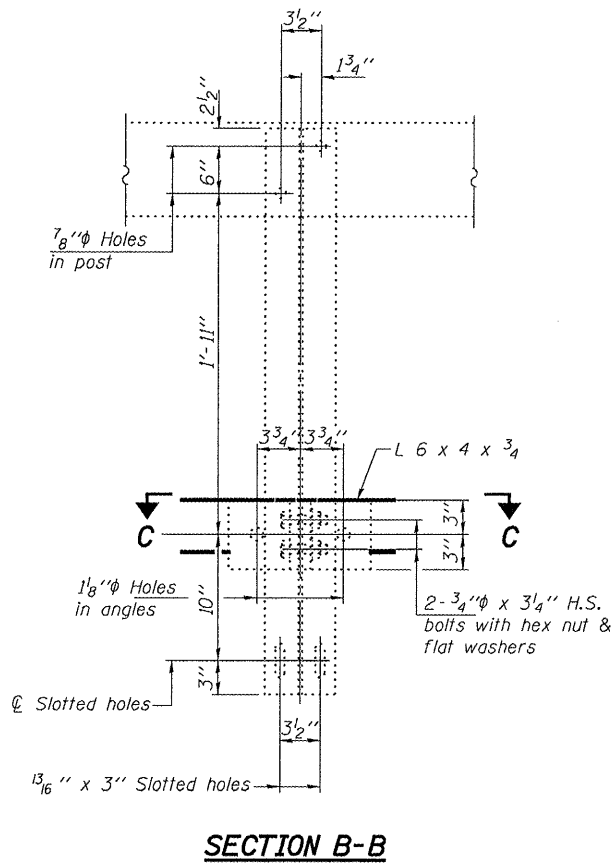
MAY 12, 2008
EXAMINED *Carl Perry*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

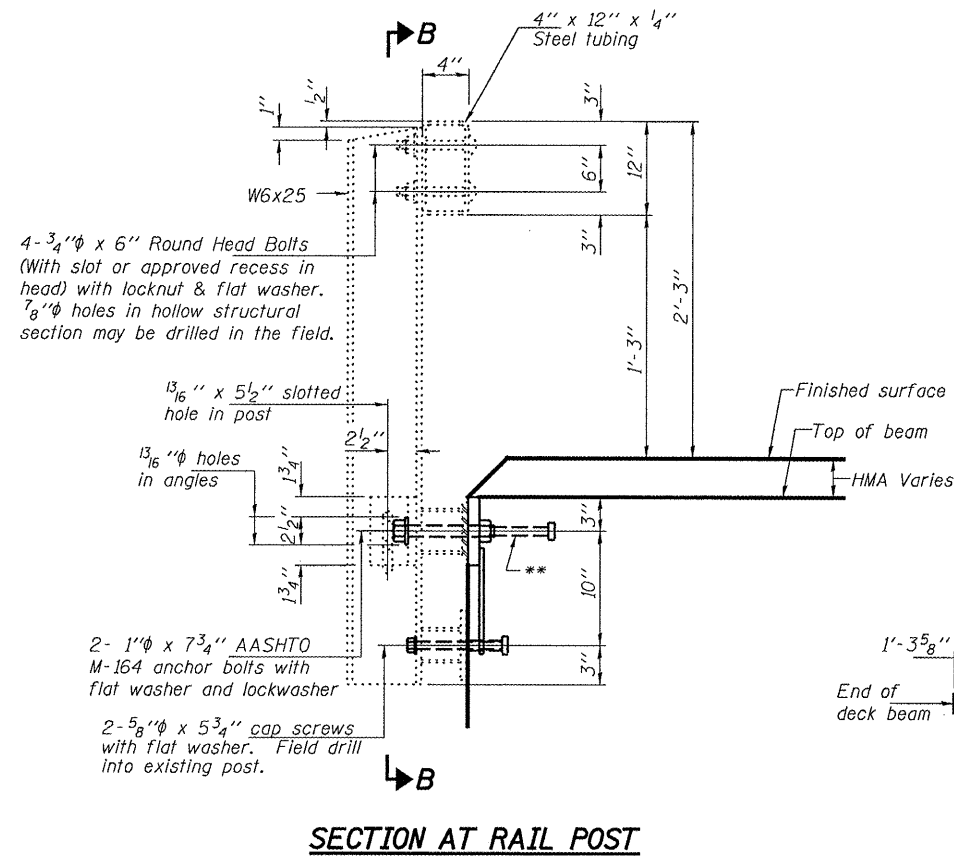
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 681	(13BR)1	LIVINGSTON	15	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
5 SHEETS

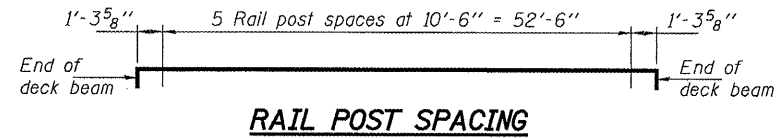
Contract Number: 66821



SECTION B-B



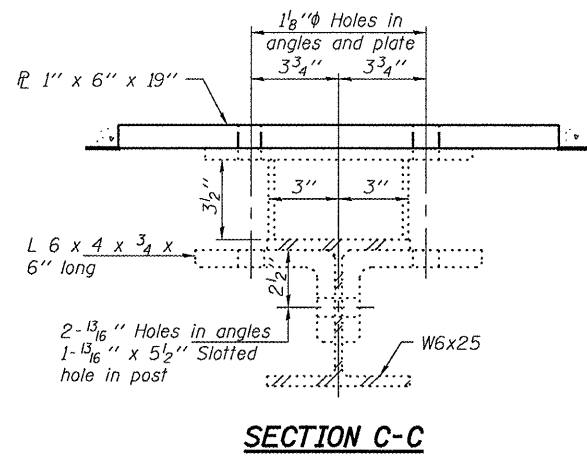
SECTION AT RAIL POST



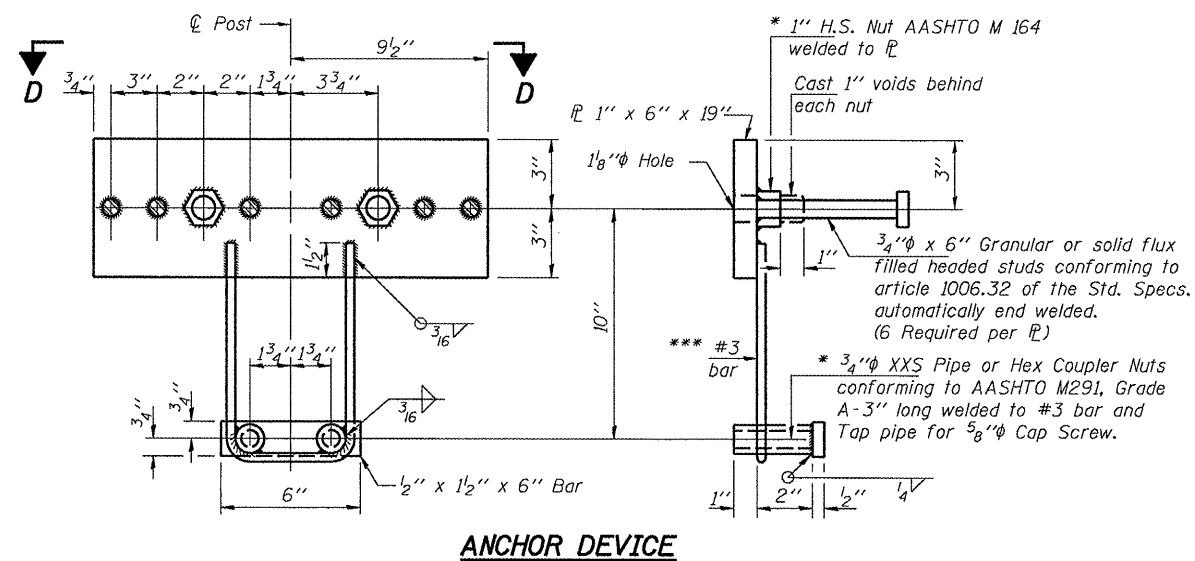
RAIL POST SPACING

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

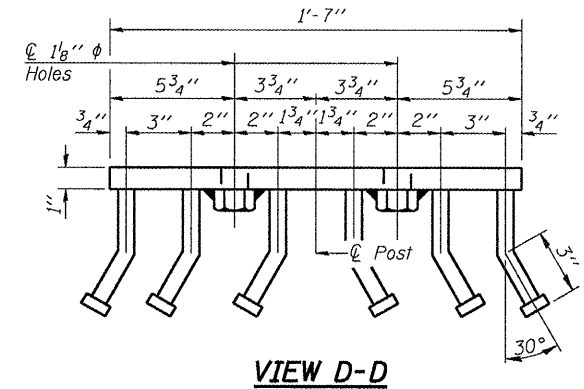
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION C-C



ANCHOR DEVICE



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Removing & Re-erecting Existing Railing	Foot	59

REPAIR DETAILS

FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

EXAMINED
MAY 12, 2008
Ralph E. Anderson
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

* 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 inch.