

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)	LIVINGSTON	13	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66814		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

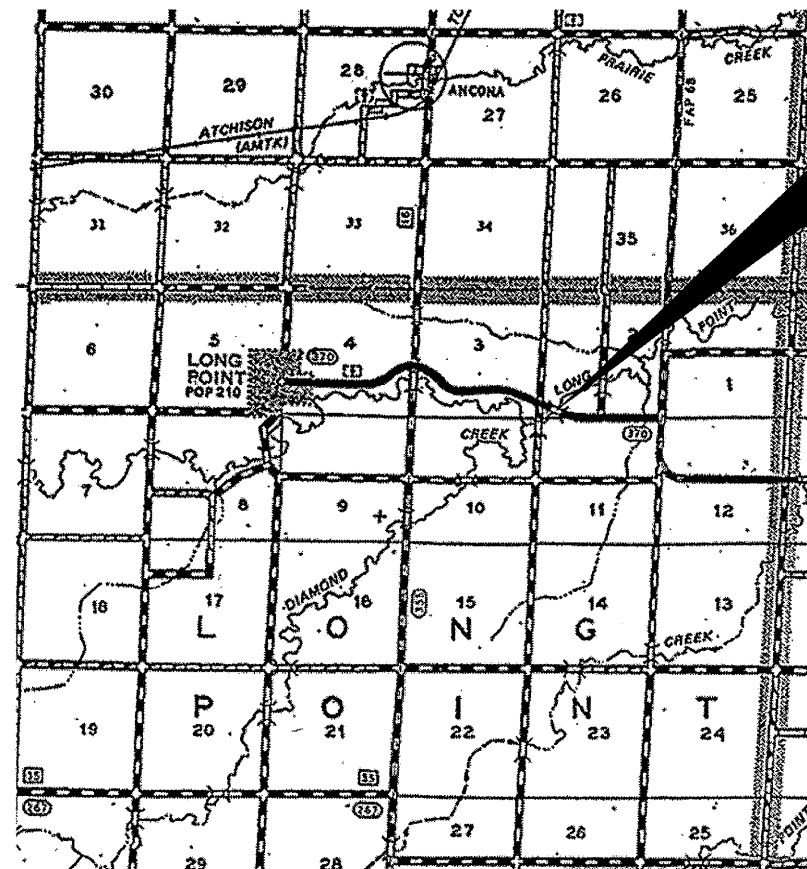
**PROPOSED
HIGHWAY PLANS**

FAS ROUTE 370 (LONG POINT ROAD)
SECTION (102BR)I

LIVINGSTON COUNTY

C-93-098-08

DECK BEAM REPLACEMENT

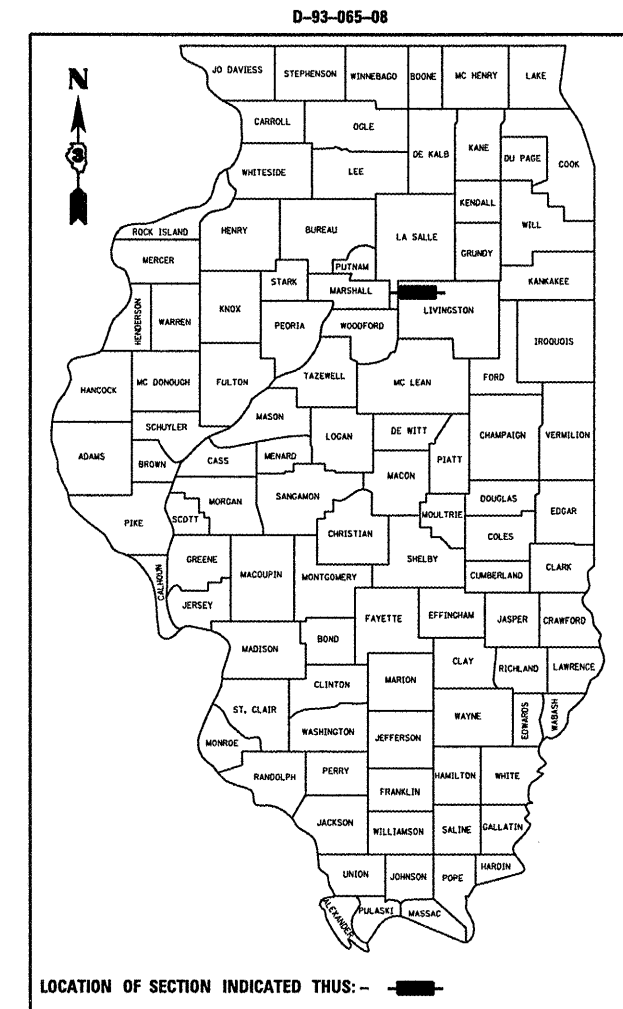


LOCATION MAP

NOT TO SCALE
POINT LOCATION

PROJECT LOCATION

SN 053-0157
0.93 MILES WEST OF IL 23



LOCATION OF SECTION INDICATED THUS: - ■ -

FUNCTIONAL CLASSIFICATION

RURAL MAJOR ARTERIAL

F.A.S. ROUTE 370

(LONG POINT ROAD)

2004 ADT = 450

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 3/27 20 08

Gene E. ...
DEPUTY DIRECTOR OF HIGHWAYS REGION ENGINEER

May 9, 20 08
Eric E. ...
ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 20 08
Christine M. ...
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTIONS
- 5 - 7. STAGING DETAILS
8. TEMPORARY CONCRETE BARRIER
9. TYPICAL PAVEMENT MARKING
10. PLAN AND ELEVATION
- 11 - 12. BEAM DETAILS
13. 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
OR 811

PROJECT ENGINEER : JOE KANNEL
UNIT CHIEF : RON WOODSHANK

CONTRACT NO. 66814

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	4.0%	4.0%
VOIDS	• N50	• N50
MIXTURE COMPOSITION	IL 12.5 or IL 9.5	IL 19.0
FRICTION		
AGGREGATE	MIXTURE C	
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:

Paul Pared
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY:

Herbert K. Lang
DISTRICT CONSTRUCTION ENGINEER

James R. Threadgill III
DISTRICT MATERIALS ENGINEER

Bruce A. Huber
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 08\sn 053-0117.dgn		DRAWN - RLW	REVISED - ---
		CHECKED - ---	REVISED - ---
		DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)	LIVINGSTON	13	2
CONTRACT NO. 66814				
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

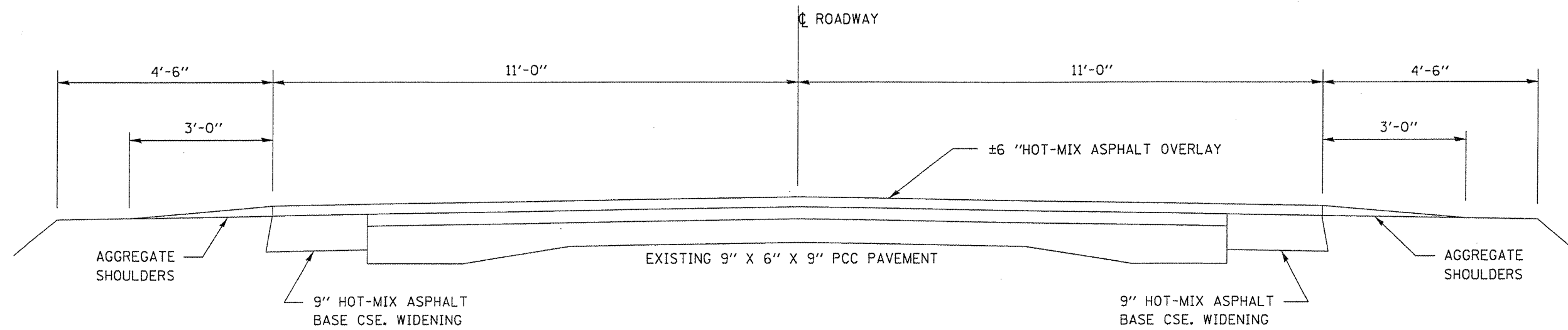
SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE: SFTY-2A

RURAL
100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	90
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	294
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	22.8
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	38.3
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	982
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	147.4
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	246
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
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	294
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	294
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	636
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	150
78300100	PAVEMENT MARKING REMOVAL	SQ FT	285
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	982
X0323078	REMOVE AND RE-ERECT EXISTING BRIDGE RAIL	FOOT	140
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2

*SPECIALTY
ITEM



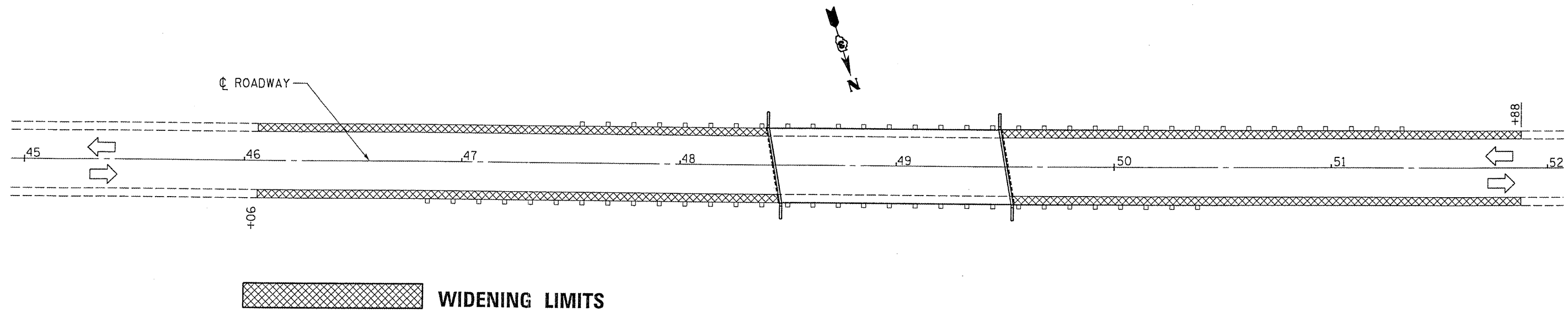
FILE NAME =	USER NAME = woodshenkrj	DESIGNED - RLW	REVISED - ---
es:\projects\deck beam repl 08\an 053-017.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 1/8" = 1' / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 25, 2008 - 03:31:19 PM		DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BRJ)	LIVINGSTON	13	4
CONTRACT NO. 66814			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



BILL OF MATERIAL

EARTH EXCAVATION	SQ FT	90
WIDENING		
HOT-MIX ASPHALT	FOOT	294
BASE CSE. WIDENING		

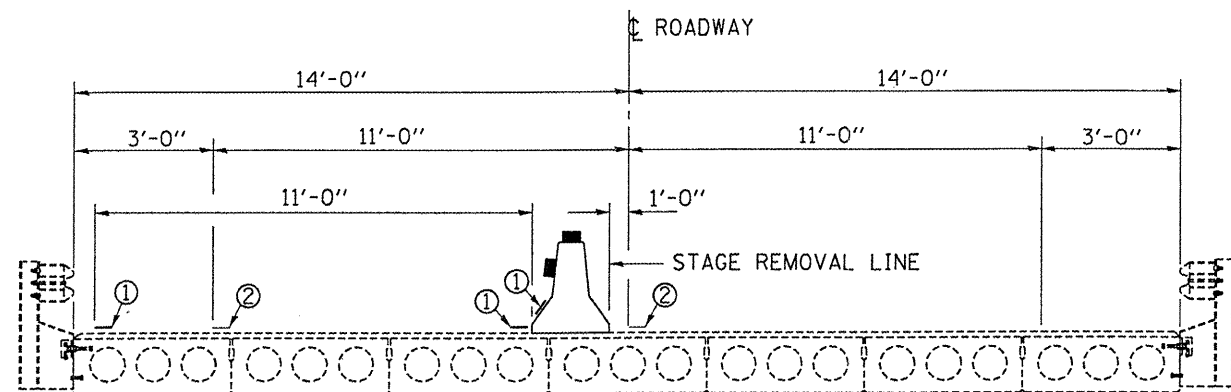
FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 08\sn 053-0157.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 103.4029' / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 26, 2008 - 11:20:05 AM		DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS - STAGE I

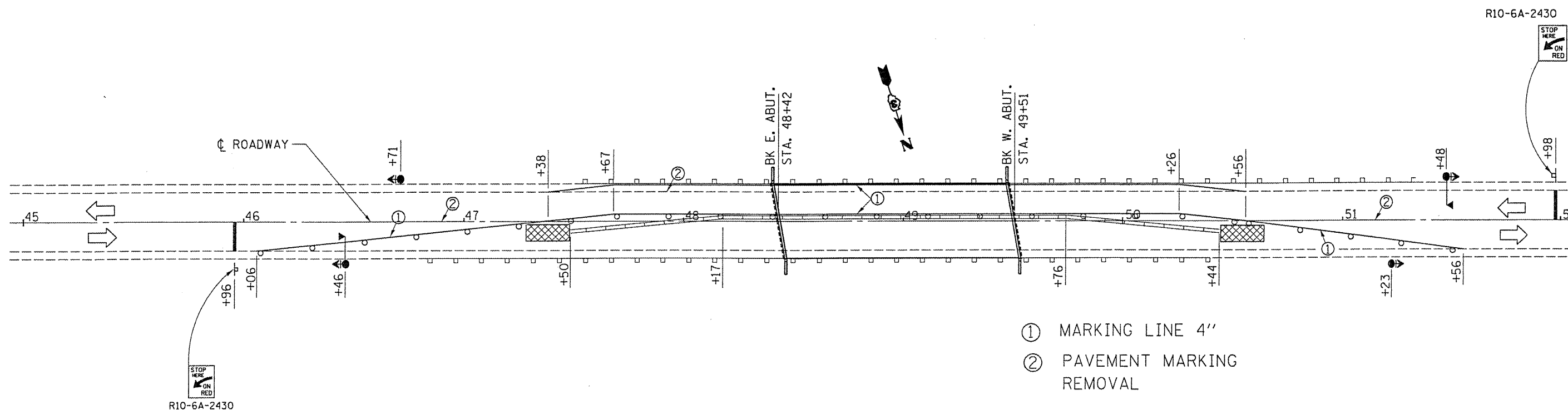
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)	LIVINGSTON	13	5
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66814	



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

SYMBOLS

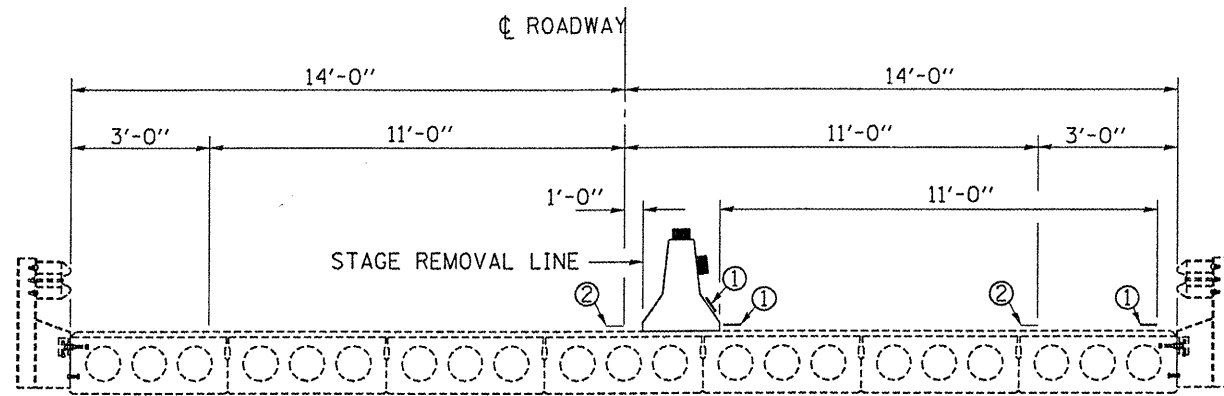
- Work area
- Sign
- Type III barricade
- Microwave detector
- Traffic signal with backplate
- Impact attenuator
- Drum with steady burning light at 25' cts.
- Temporary concrete barrier
- Double vertical panel at 25' cts.
- Crystal, bidirectional barrier wall/guardrail marker at 25' cts.

BILL OF MATERIAL

PAVEMENT MARKING REMOVAL	SQ FT	180
TEMPORARY CONCRETE BARRIER	FOOT	294

SEE STANDARD 701321 FOR DETAILS NOT SHOWN

FILE NAME = c:\projects\deck beam repl 08\an 053-017.dgn	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING DETAILS - STAGE II	F.A.S. RTE. 370	SECTION (102BR)I	COUNTY LIVINGSTON	TOTAL SHEETS 13	SHEET NO. 6	
PLOT SCALE = 1/8" = 1'-0"	CHECKED - ---	REVISOR - ---	SCALE: _____			SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. _____	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66814	
PLOT DATE = Mar 25, 2008 - 03:31:28 PM	DATE - _____	REVISOR - ---									

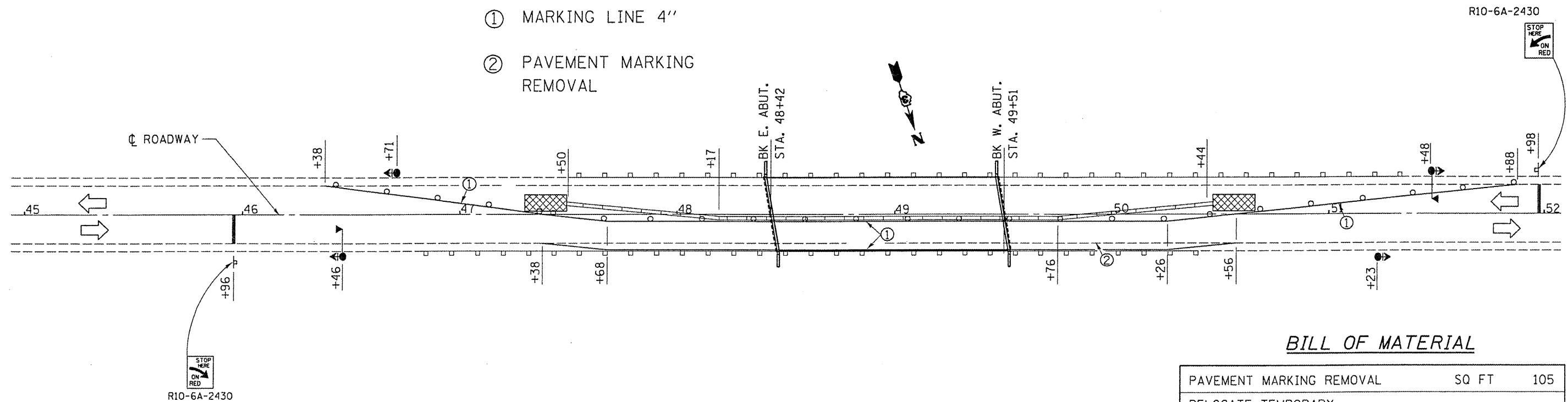


NOTES:

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	105
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	294
IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE, TEST LEVEL 3)	EACH	2
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	636
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	150

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

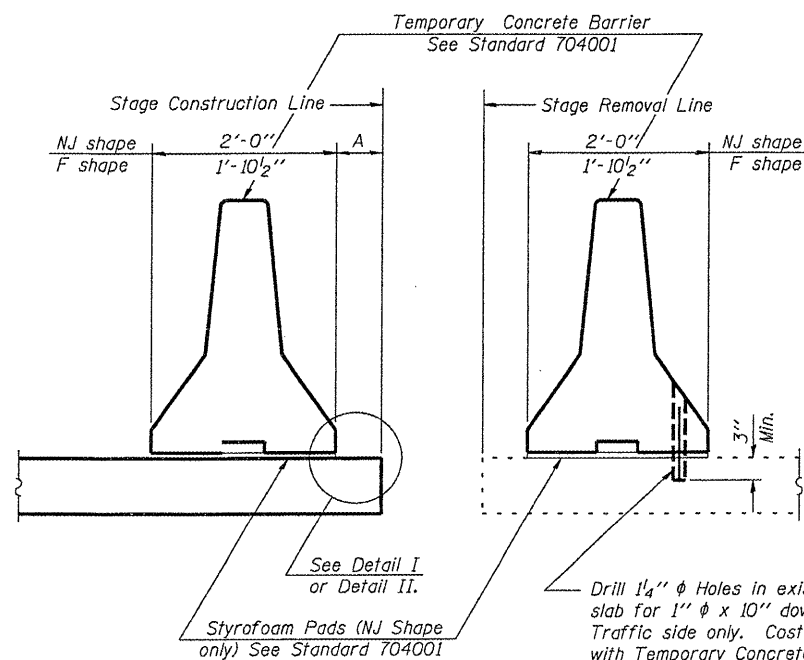
FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deck beam repl 08\sn 053-017.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 103.4829' / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 25, 2008 - 03:31:33 PM		DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS - STAGE III

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

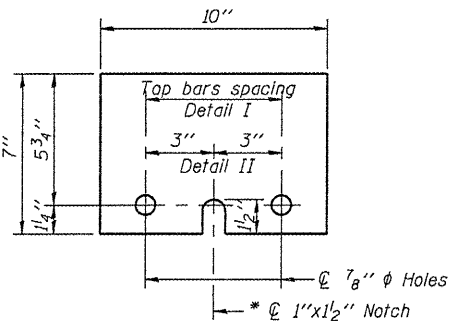
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)	LIVINGSTON	13	7
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66814	



SECTIONS THRU SLAB

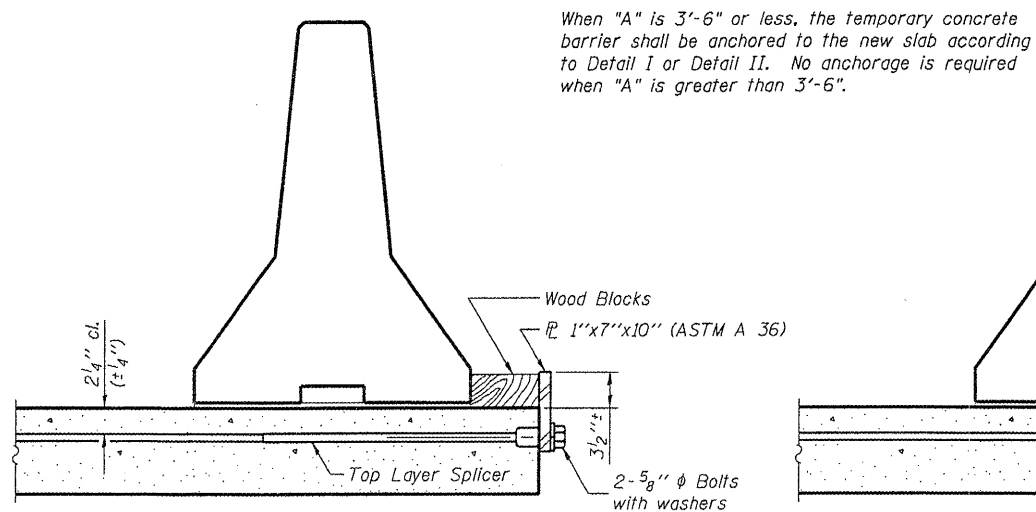
NOTES

- 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" ϕ 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" 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"

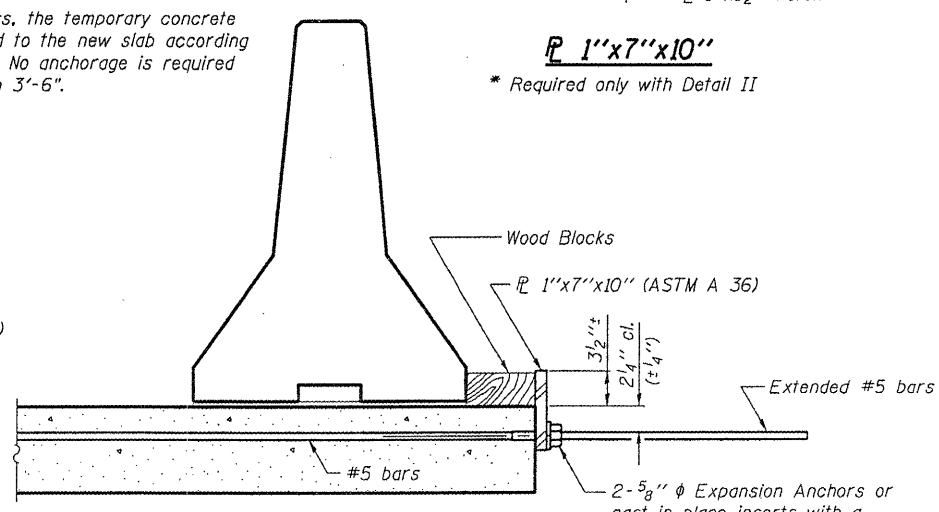
* Required only with Detail II



DETAIL I

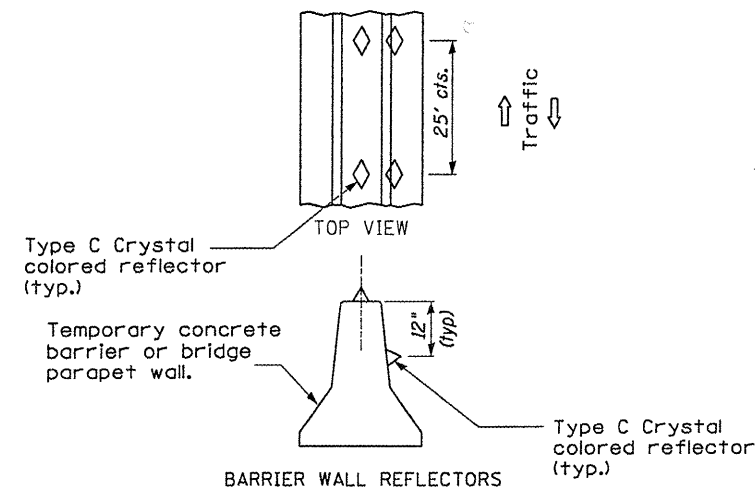
The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.

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".

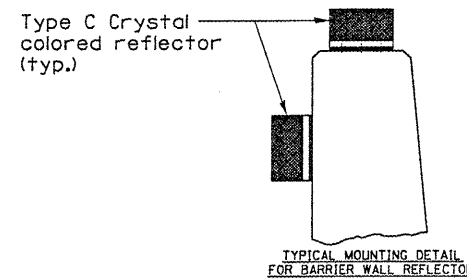


DETAIL II

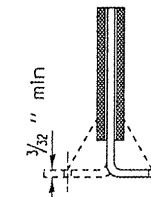
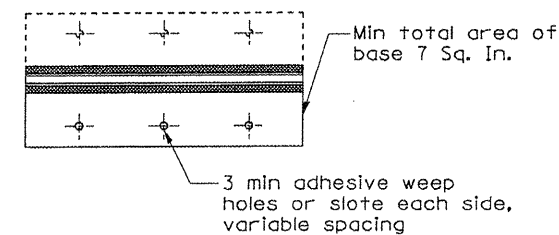
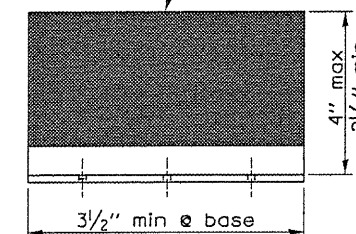
The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



DETAIL A



Min. reflective area 6 1/2" each side may be rectangular or slight trapezoid



Cross section may be "T" or "L" shaped and may have side supports at ends.

TYPE C REFLECTOR

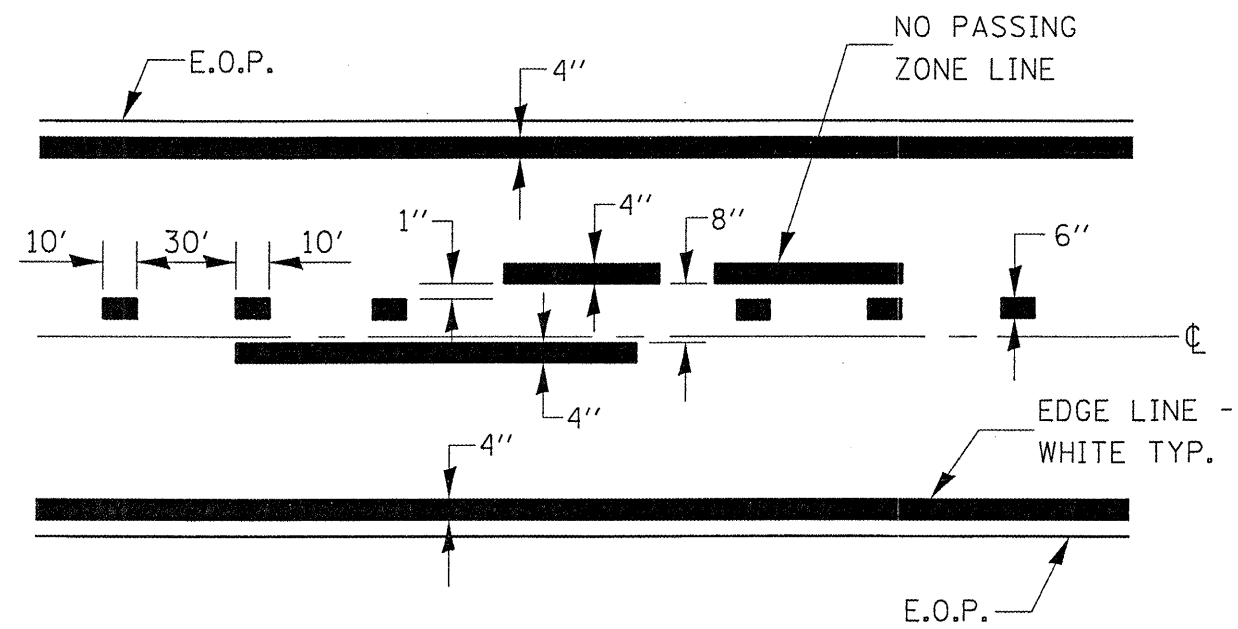
FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED -
c:\projects\deck beam repl 08\sn 053-0157.dgn		DRAWN - RLW	REVISED -
PLOT SCALE = 103.4829 / IN.		CHECKED -	REVISED -
PLOT DATE = Mar 25, 2008 - 03:31:37 PM		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	(102BR)	LIVINGSTON	13	8
CONTRACT NO. 66814				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



CENTERLINE & NO PASSING
ZONE LINES - YELLOW

(SEE TYPICAL SECTIONS)

PAVEMENT MARKING

FILE NAME = c:\projects\deck beam repl 08\an 053-017.dgn	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
		DRAWN - RLW	REVISED - ---
		CHECKED - ---	REVISED - ---
		DATE - ---	REVISED - ---
PLOT SCALE = 103.4829' / IN.			
PLOT DATE = Mar 25, 2008 - 03:31:42 PM			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKING

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

F.A.S. RTE. 370	SECTION 102BR01	COUNTY LIVINGSTON	TOTAL SHEETS 13	SHEET NO. 9
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT			CONTRACT NO. 66814	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATES SHEETS	SHEET NO.
FAS 370	1102 BR11	Livingston	13	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
4 SHEETS

Contract Number: --- 66814

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.

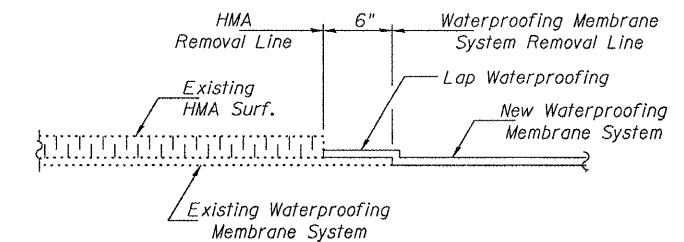
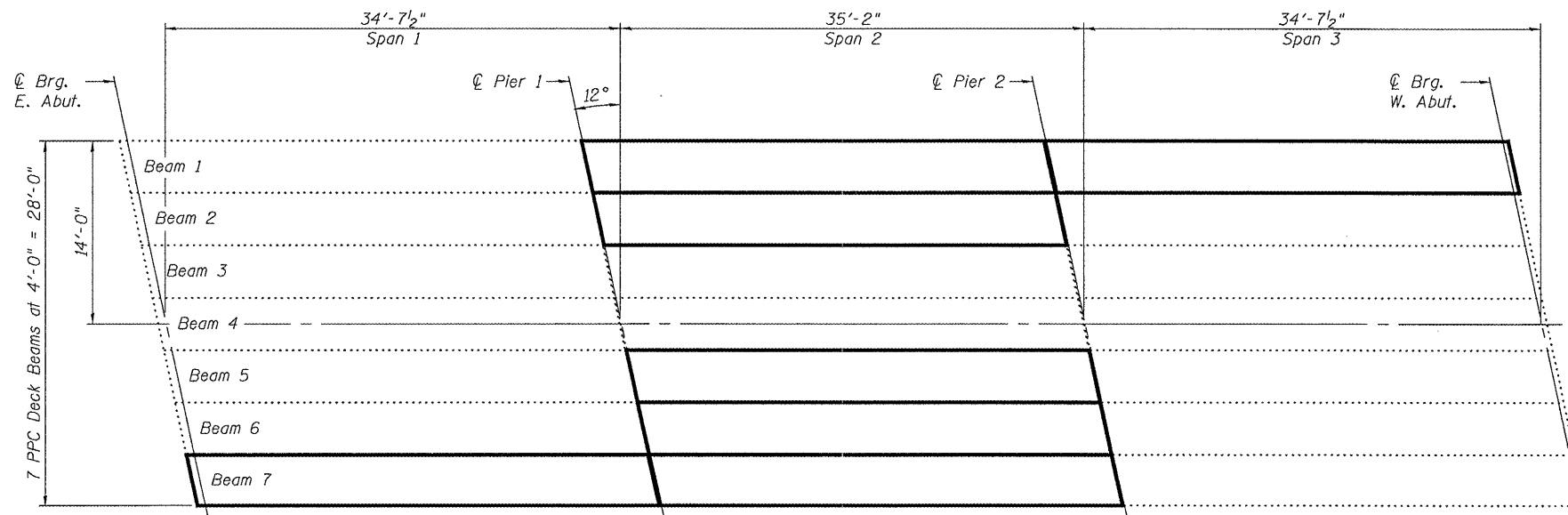
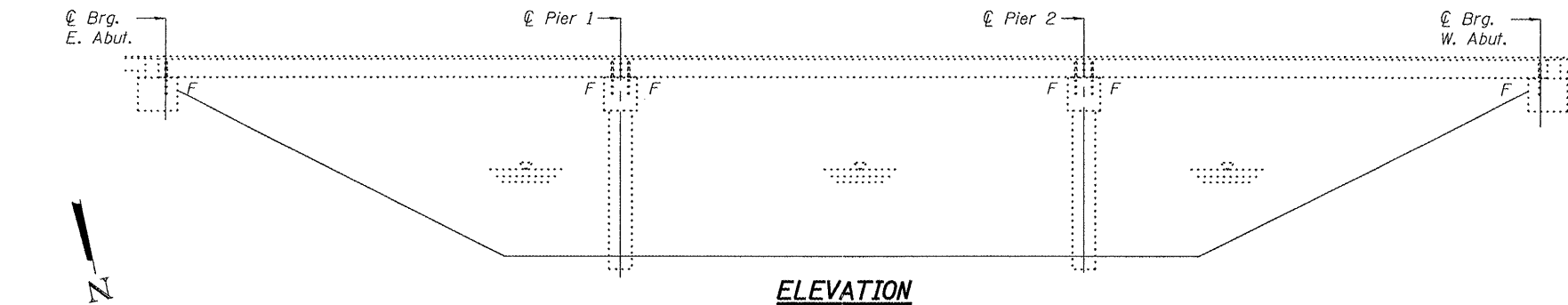
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed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

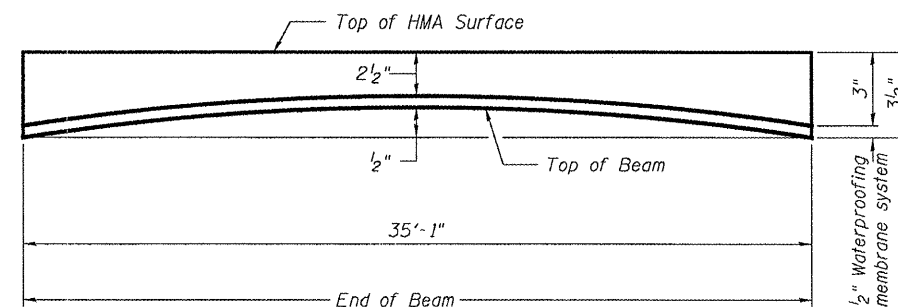
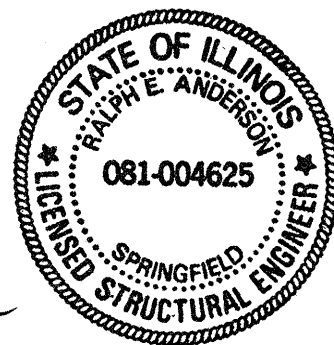
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause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

Concrete barriers are to be anchored into overlay and not into existing PPC Deck Beams.



**DESIGN STRESSES
PRECAST UNITS**

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



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	982.0
PPC Deck Beams (17" Depth)	Sq. Ft.	982.0
HMA Surface Removal	Sq. Yd.	38.3
HMA Surface Course Mix "C" N50	Tons	22.8
PC Mortar Fairing Course	Foot	245.5
Removing and Re-erecting Existing Railing	Foot	140.5
Waterproofing Membrane System	Sq. Yd.	147.4

**PLAN AND ELEVATION
F.A.S. RT. 370
LIVINGSTON COUNTY
SN 053-0157**

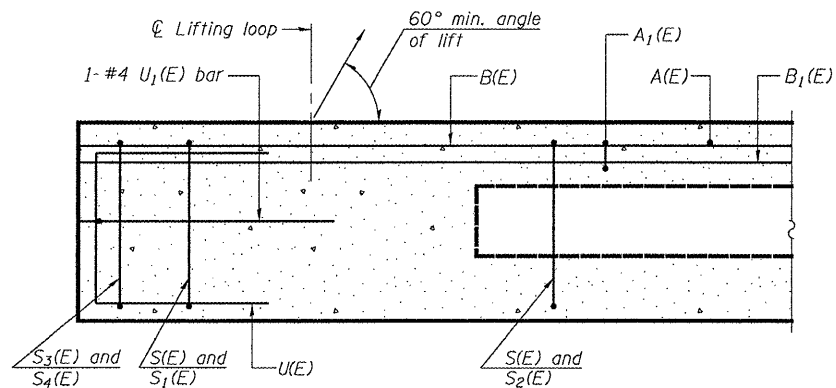
DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	<i>[Signature]</i>
CHECKED	AJB U#U

May 9, 2008
EXAMINED *[Signature]*
PASSED *[Signature]*
ENGINEER OF BRIDGES AND STRUCTURES

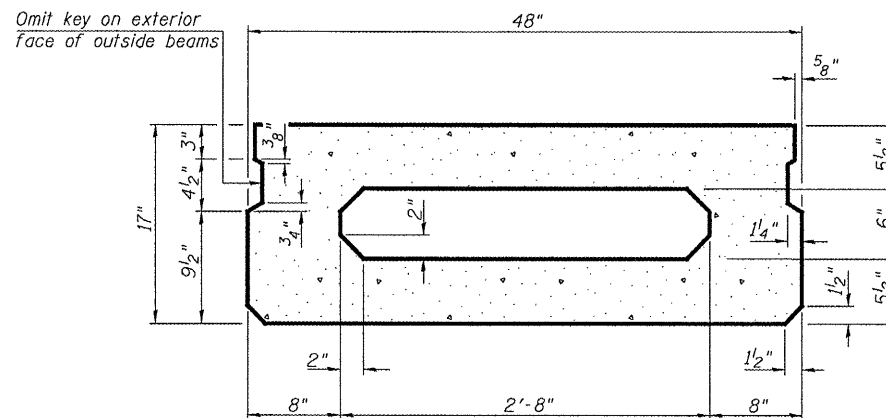
Expires: November 30, 2008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

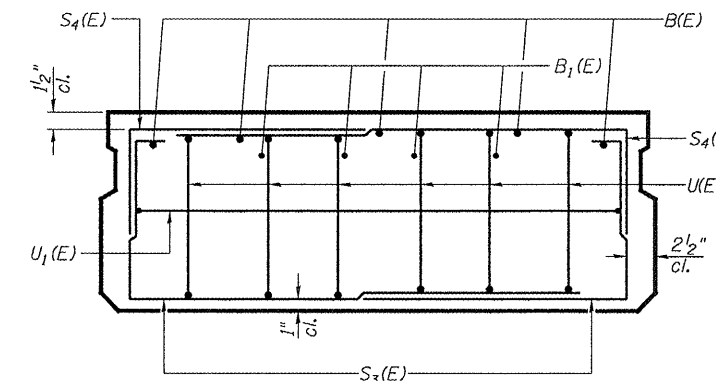
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 4 SHEETS
FAS 370	102 BRJ	Livingston	13	11	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	Contract Number: --- 66814		



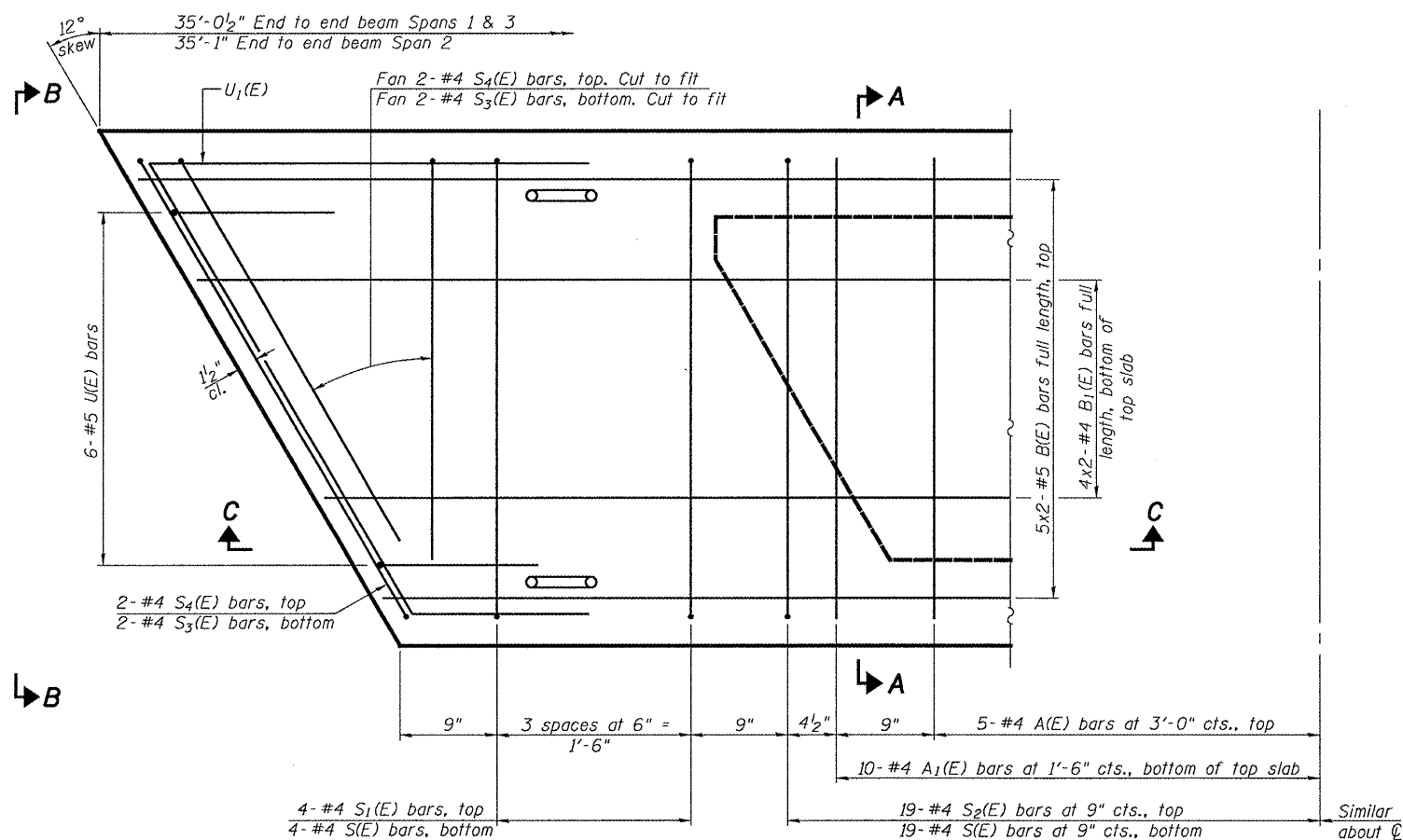
SECTION C-C



TYPICAL ABUTMENT SECTION

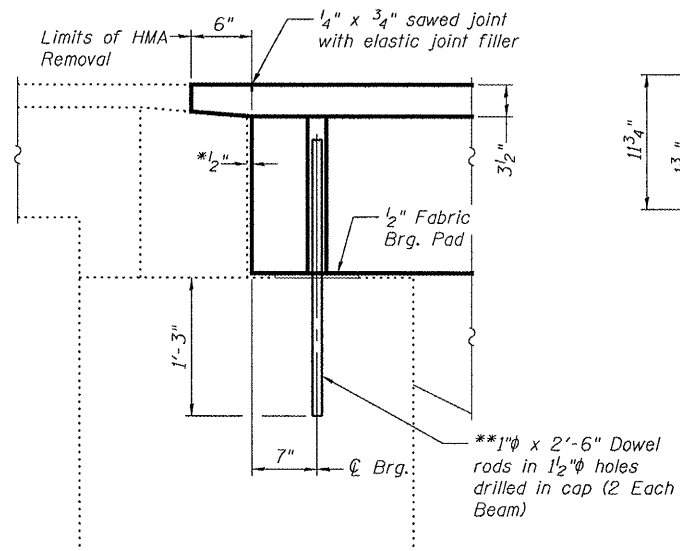


VIEW B-B



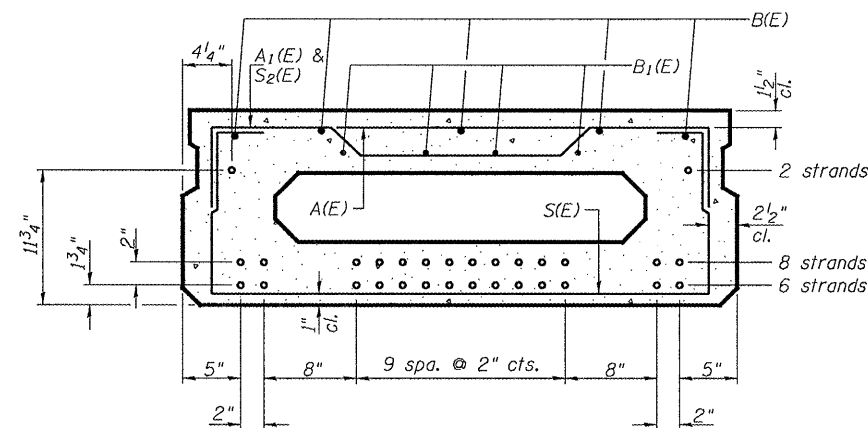
PLAN VIEW

SECTION A-A
(Showing dimensions)



Min. Bar Lap

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



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)	10	#4	3'-7"	—
A1(E)	20	#4	3'-10"	—
B(E)	10	#5	18'-6"	—
B1(E)	8	#4	18'-3"	—
S(E)	46	#4	6'-9"	⌈
S1(E)	8	#4	5'-3"	⌈
S2(E)	38	#4	5'-6"	⌈
S3(E)	8	#4	5'-3"	⌈
S4(E)	8	#4	4'-10"	⌈
U(E)	12	#5	3'-8"	⌈
U1(E)	2	#4	6'-10"	⌈

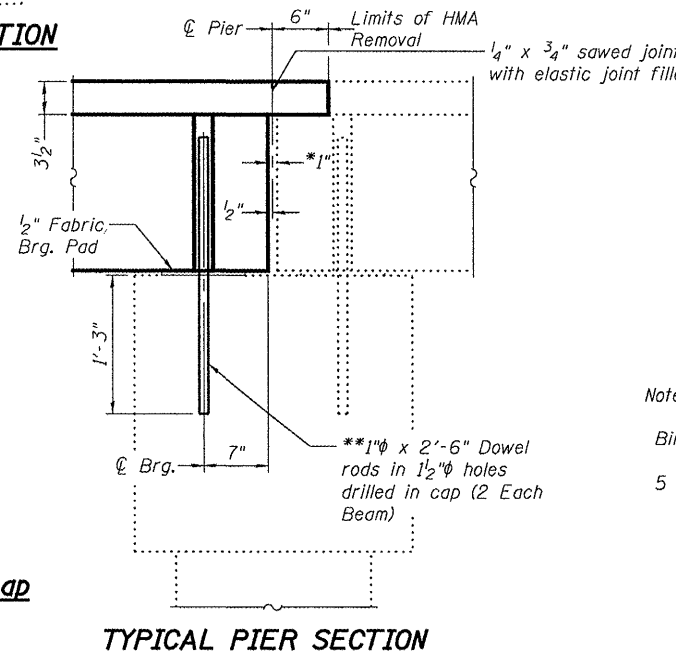
Notes:
See sheet 3 of 4 for additional details and Bill of Material.
Bars indicated thus 5 x 2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

BEAM DETAILS
F.A.S. RT. 370
LIVINGSTON COUNTY
SN 053-0157

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

EXAMINED	May 9, 2008
PASSED	8-29-07

*Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.
**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.



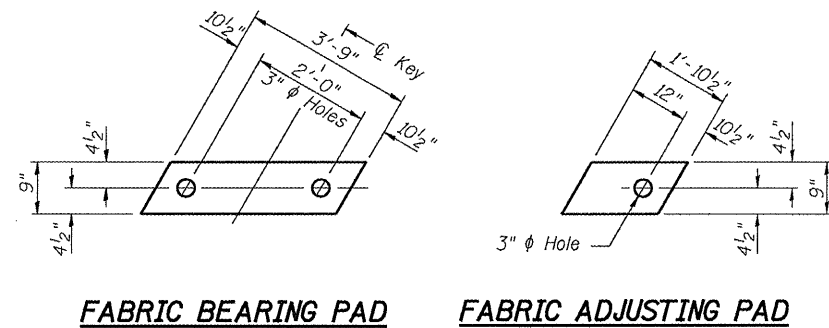
TYPICAL PIER SECTION

PD-1748-R 8-29-07

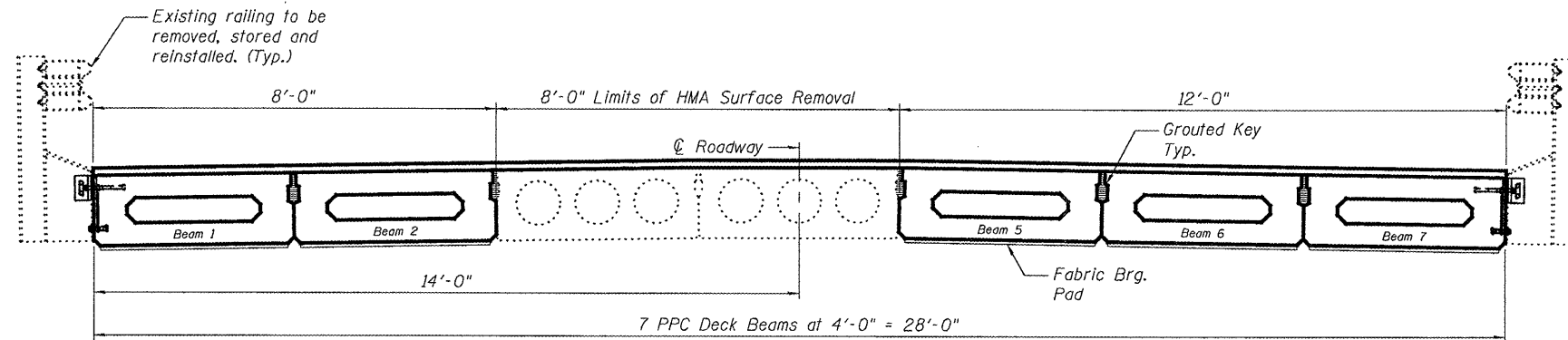
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 370	102 BR1	Livingston	13	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
Contract Number: --- 60814				

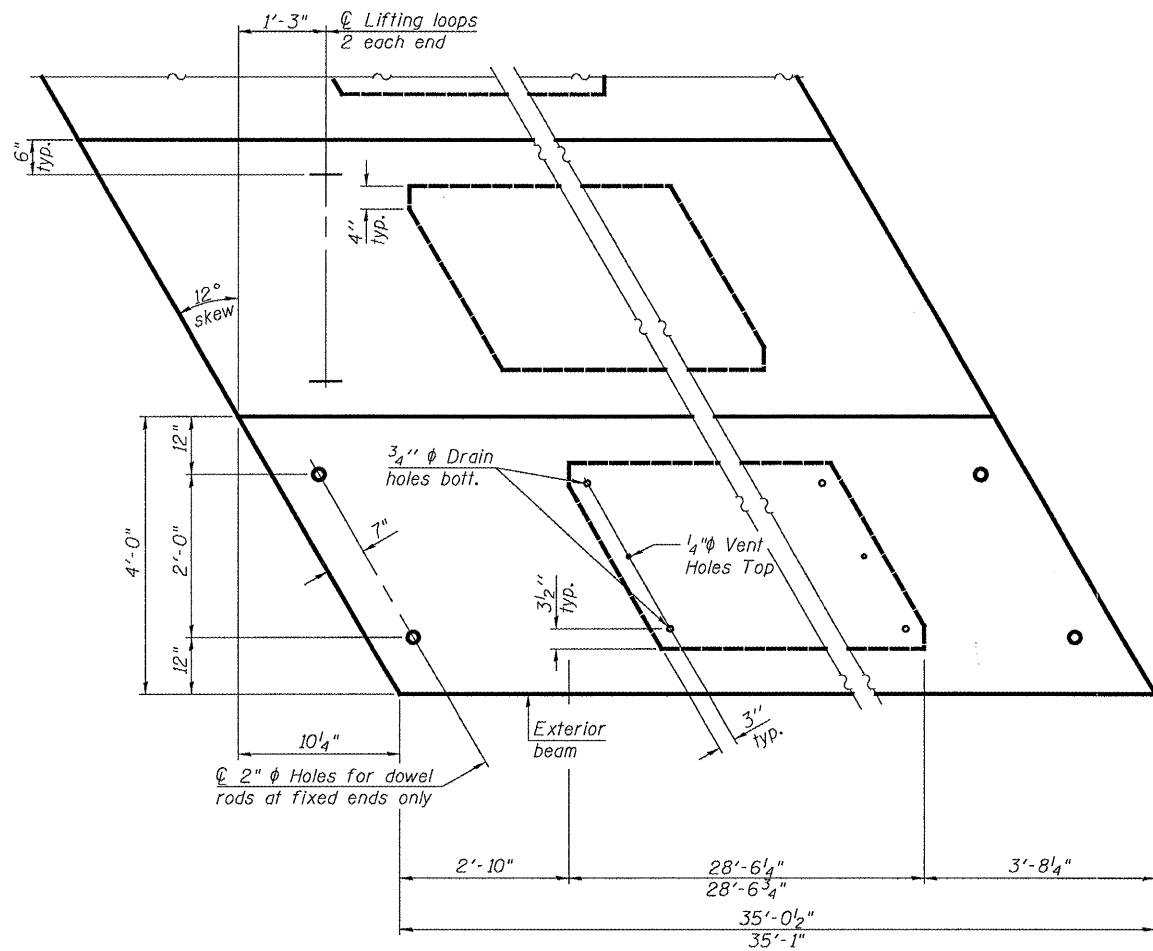
SHEET NO. 3
4 SHEETS



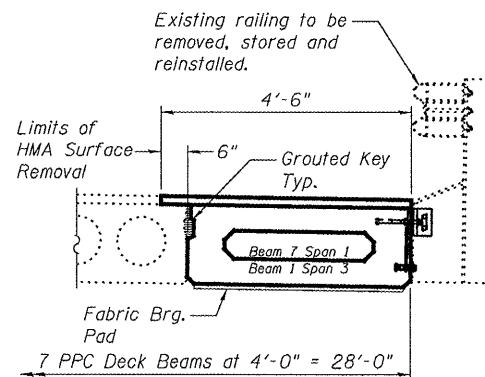
FABRIC BEARING PAD FABRIC ADJUSTING PAD
FIXED



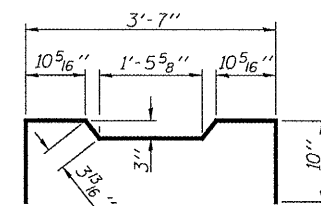
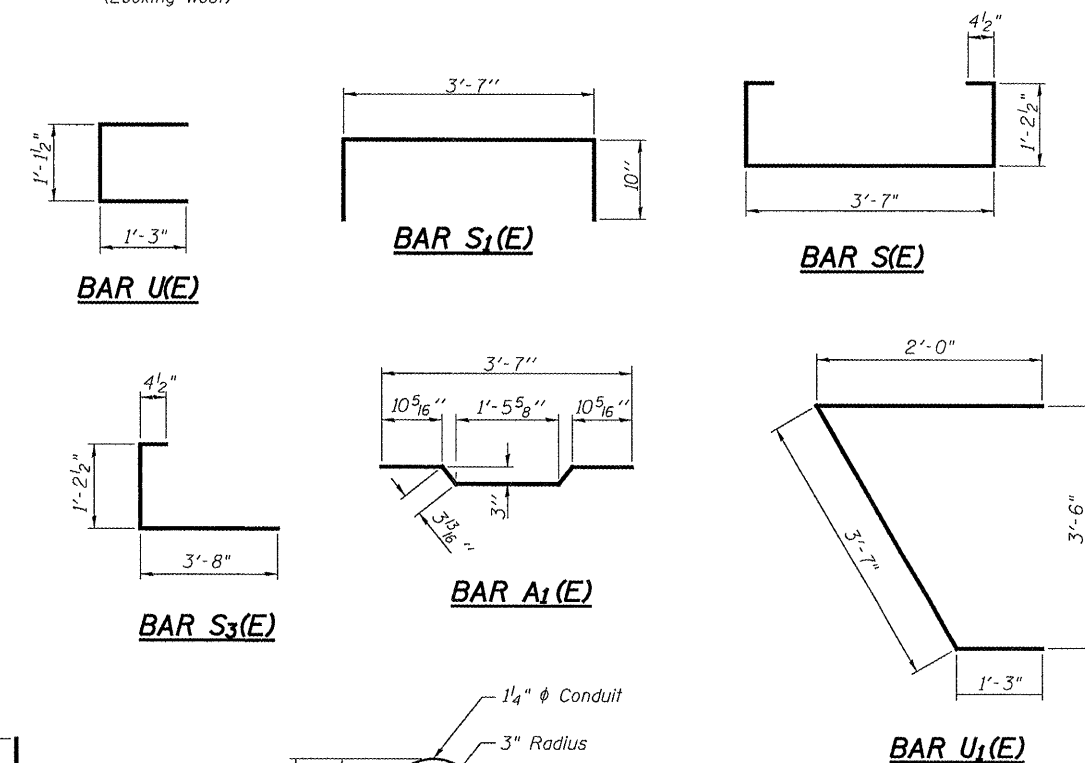
SPAN 2 CROSS SECTION
(Looking West)



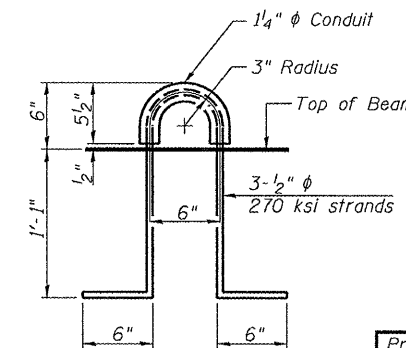
PLAN VIEW



SPAN 1 AND SPAN 3 CROSS SECTION
(Span 1 Looking West)
(Span 3 Looking East)



BAR S₂(E)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	982.0
---	---------	-------

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. Reinforcement bars shall conform to ASTM A 706 (IL MOD), Grade 60. (See Special Provisions) Two 1/2" 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.

BEAM DETAILS
F.A.S. RT. 370
LIVINGSTON COUNTY
SN 053-0157

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

May 9, 2008
EXAMINED *A. Carl Hovary*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

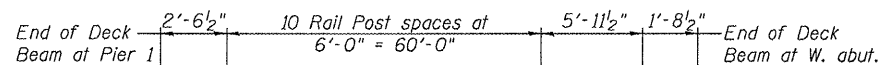
PD-1748-RD 8-29-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 370	102 BRJ	Livingston	13	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

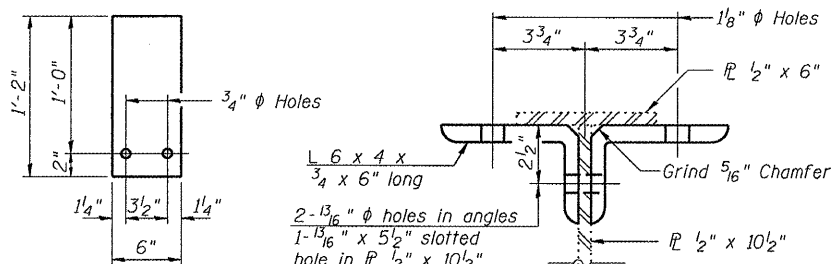
SHEET NO. 4
4 SHEETS

Contract Number: --- 66814



RAIL POST SPACING ON SOUTH RAIL

(Looking South)
North rail similar by rotation



1/4" SHIM PLATE

SECTION B-B

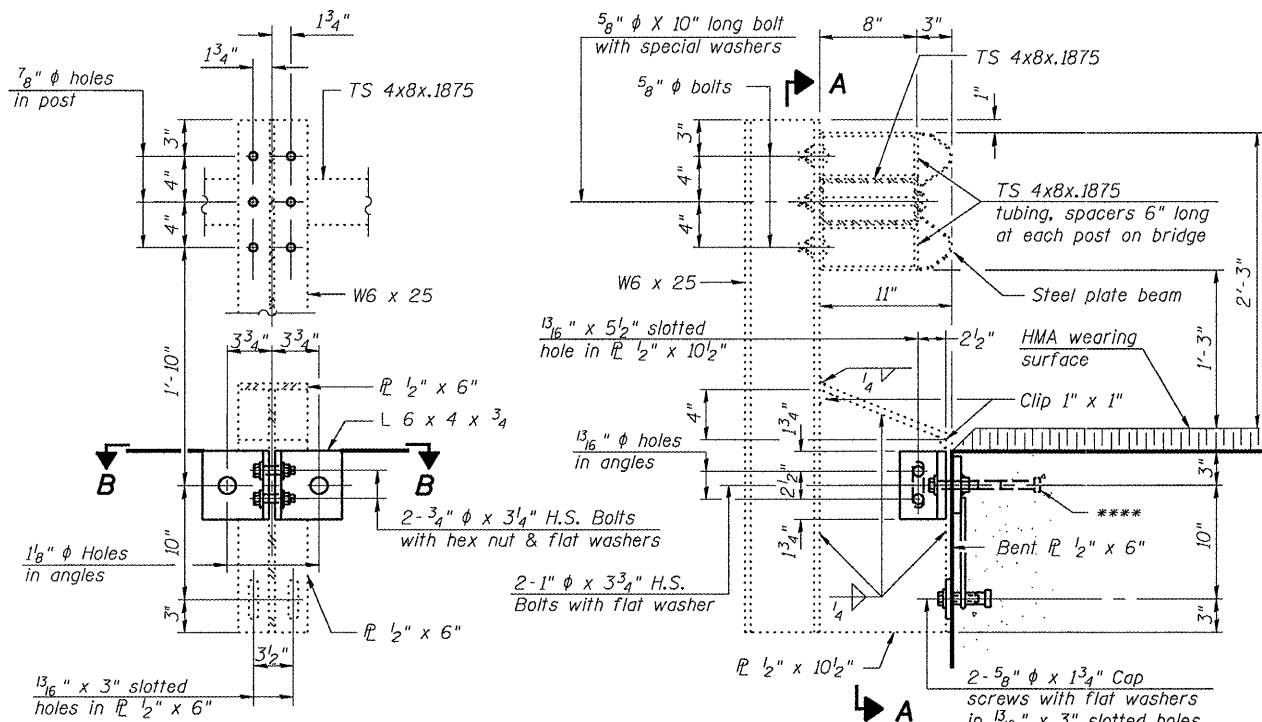
Notes:

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 Removing and Re-erecting Existing Railing.

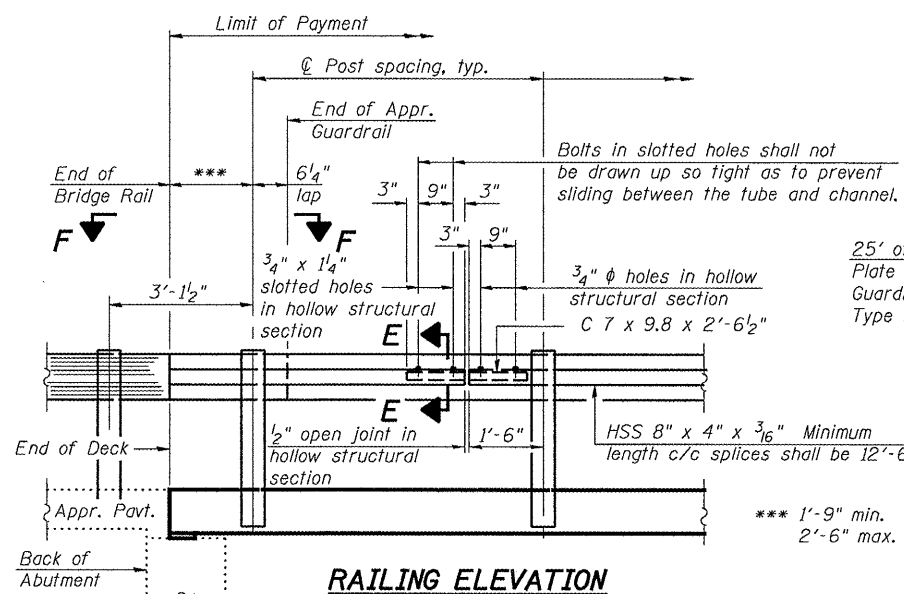
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

**** 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.

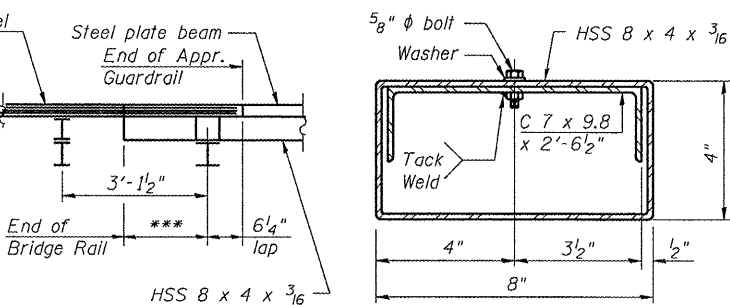


SECTION A-A

SECTION AT RAIL POST

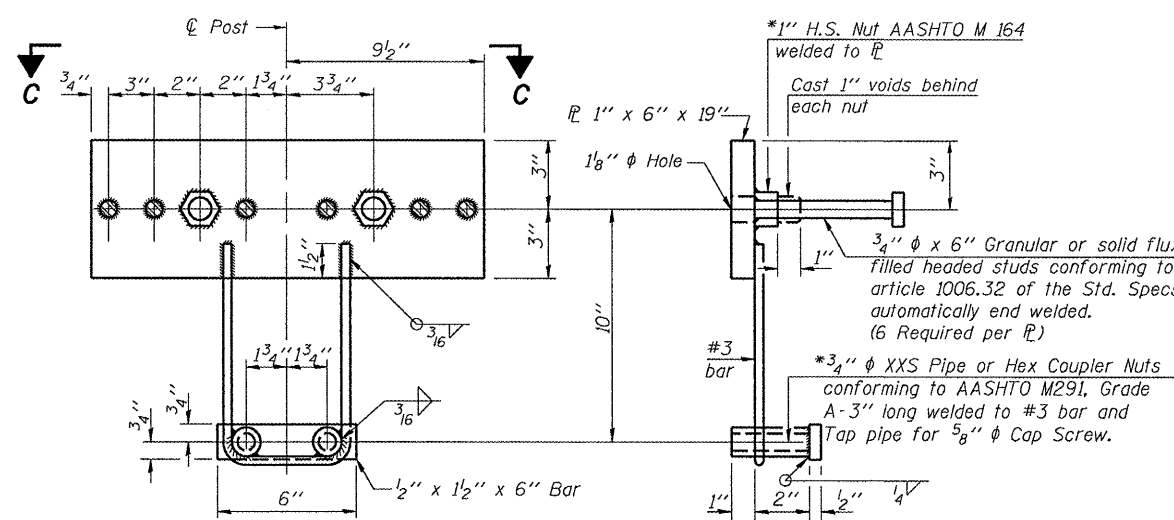


RAILING ELEVATION

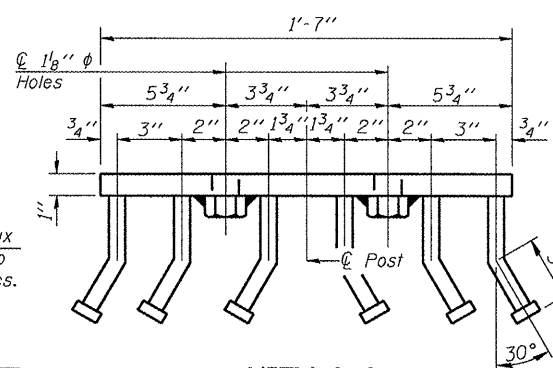


VIEW F-F

SECTION E-E



ANCHOR DEVICE



VIEW C-C

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

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

May 9, 2008
 EXAMINED *Carl Prosky*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

RAIL DETAILS
F.A.S. RT. 370
LIVINGSTON COUNTY
SN 053-0157