4-25-08 Letting, Item 136

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	D5 BEAM REPLACE 2008-2	PIATT	18	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 70699		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAS ROUTE 1517 (US 150)
SECTION D5 BEAM REPLACE 2008-2
PIATT COUNTY

C-95-078-07

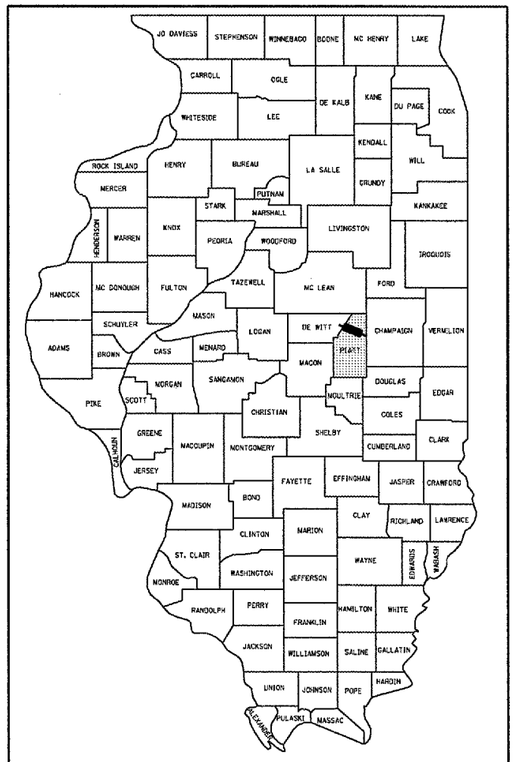
BRIDGE REPAIR

SOUTH BRANCH OF SALT CREEK 1.0 MILE EAST OF FARMER CITY

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4

CURRENT ADT = 1,550 (2007) US 150

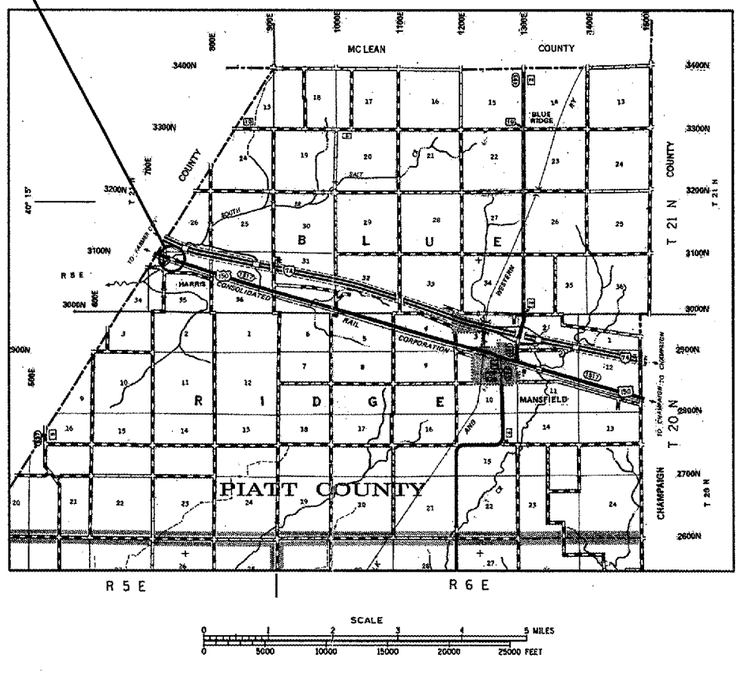
D-95-078-07



LOCATION OF SECTION INDICATED THUS:- ▬

BEAM REPLACEMENT (NORTH BEAMS 1 THRU 4)
FROM STATION 4+89.42 TO STATION 5+60.59

S.N. 074-0008
STATION 5+25.00



N

100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

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

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

PROJECT ENGINEER: NANCY FASIG
PROJECT MANAGER: TODD BLACK

CONTRACT NO. 70699

TOTAL LENGTH OF SECTION = 71.17 FEET = 0.0135 MILES
NET LENGTH OF SECTION = 71.17 FEET = 0.0135 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Feb 5 20 08

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 21, 20 08
Eric E. Harm
Interim ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 20 08
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

LIST OF HIGHWAY STANDARDS

STANDARD NO.	NAME OF STANDARD
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701006-02	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
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
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

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	PLOT DATE = 2/6/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND LIST OF HIGHWAY STANDARDS

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	05 BEAM REPLACE 2008-2	PIATT	18	2
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

FILE NAME = c:\projects\d570699\70699plans.dgn	USER NAME = cellierbw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES			F.A.S. RTE. 1517	SECTION: D5 BEAM REPLACE 2008-2	COUNTY: PIATT; TOTAL SHEETS: 18; SHEET NO.: 3
		DRAWN -	REVISED -							CONTRACT NO. 70699
	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
	PLOT DATE = 2/6/2008	DATE -	REVISED -							

SUMMARY OF QUANTITIES

LOCATION OF WORK: FAS 1517 (US 150)
PIATT COUNTY

STA. 4+89.42
STA. 5+60.59

CONSTRUCTION TYPE CODE: 100% STATE
SFTY-2A

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	50102400	CONCRETE REMOVAL	CU YD	1.0
	50300300	PROTECTIVE COAT	SQ YD	101.0
	50301200	CONCRETE WEARING SURFACE	SQ YD	101.0
	50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	854.0
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,190.0
	67100100	MOBILIZATION	L SUM	1.0
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1.0
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1.0
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	415.0
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	225.0
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,395.0
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	235.0
	X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	854.0
	X0321781	MECHANICAL SPLICE	EACH	72.0
	50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	73.0
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0

* SPECIALTY ITEM

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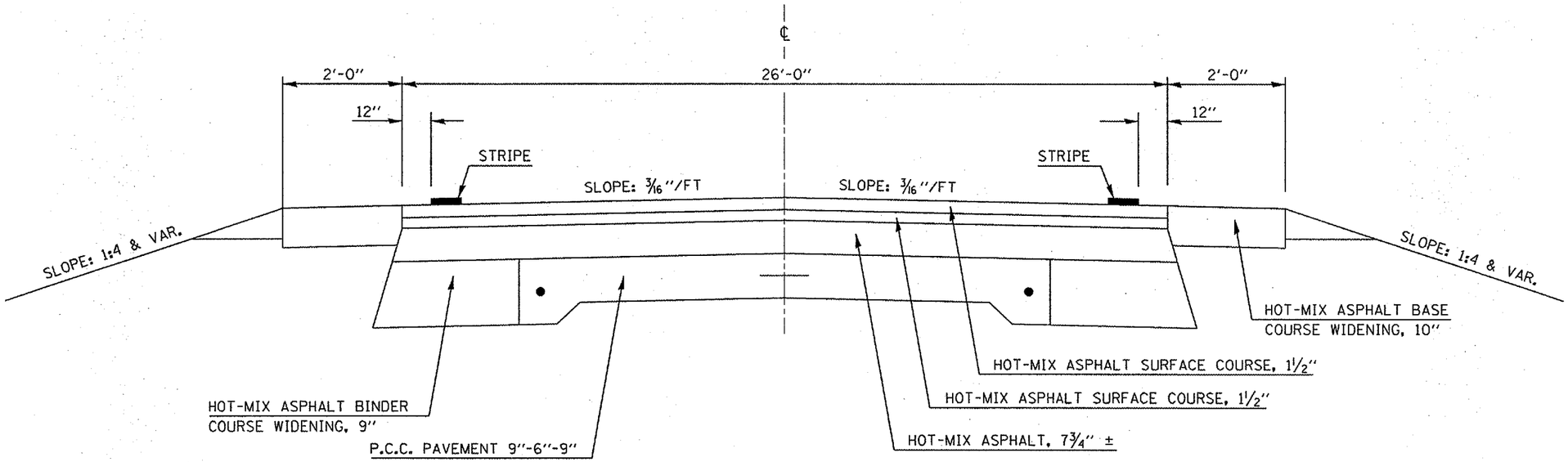
	PLOT DATE = 2/6/2008	DATE -	REVISED -		SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING AND PROPOSED ROADWAY TYPICAL SECTION

FAS 1517 (US 150)

STATION	TO	STATION
3+04.42		4+69.42 (BRIDGE APPROACH)
(BRIDGE APPROACH) 5+80.59		7+45.59



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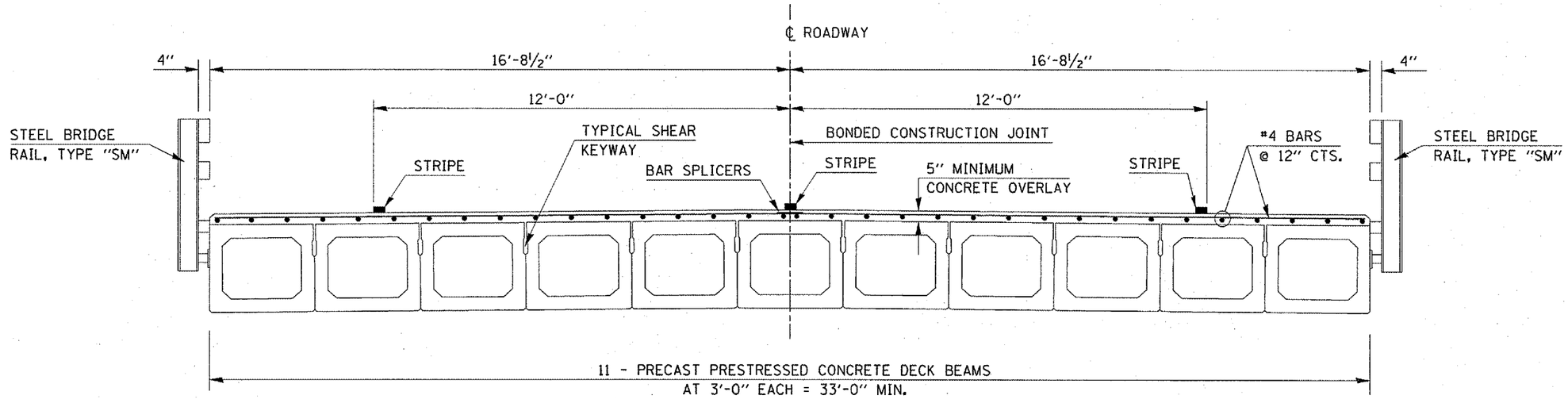
	PLOT DATE = 2/6/2008	DATE - 12-19-2007	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING STRUCTURE TYPICAL SECTION

S.N. 074-0008

F. A. S. 1517 (US 150)

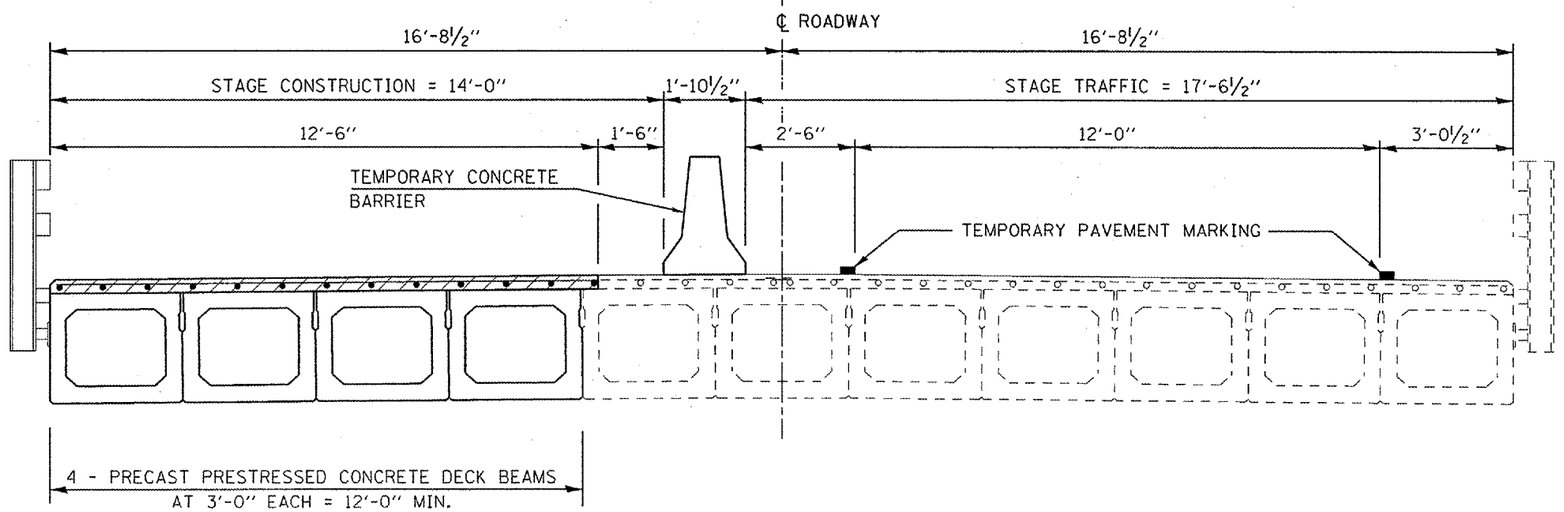
STATION	TO	STATION
4+89.42		5+60.59



PROPOSED STRUCTURE TYPICAL SECTION AND STAGE CONSTRUCTION DETAILS

S. N. 074-0008 F. A. S. 1517 (US 150)

STATION	TO	STATION
4+89.42		5+60.59



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED STRUCTURE TYPICAL SECTIONS AND STAGE CONSTRUCTION DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	D5 BEAM REPLACE 2008-2	PIATT	18	6
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULES OF QUANTITIES

78001110 PAINT PAVEMENT MARKING - LINE 4 INCH

STATION	TO	STATION	OFFSET (FT)	DESCRIPTION	LENGTH (FT)
1+90.50		8+09.50	0.00 CL	YELLOW SKIP DASH	155.00
1+90.50		8+09.50	12.00 LT	WHITE SOLID EDGE LINE	620.00
1+90.50		8+09.50	12.00 RT	WHITE SOLID EDGE LINE	620.00
				TOTALS =	1395.00
				USE	1395.00

78300100 PAVEMENT MARKING REMOVAL

STATION	TO	STATION	OFFSET (FT)	DESCRIPTION	LENGTH (FT)	WIDTH (INCH)	AREA (SQ FT)
1+90.50		8+09.50	0.00 CL	YELLOW SKIP DASH	155.00	4.0	51.20
2+50.50		7+99.50	12.00 RT	WHITE SOLID EDGE LINE	549.00	4.0	181.20
					TOTALS =		232.40
					USE		235.00

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	PLOT DATE = 2/6/2008	DATE -	REVISED -		SCALE: NA	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULES OF QUANTITIES

70400100 TEMPORARY CONCRETE BARRIER

STATION	OFFSET (FT)	TO	STATION	OFFSET (FT)	LENGTH (FT)
4+12.68	5.92 LT		4+62.50	1.77 LT	50.00
4+62.50	1.77 LT		5+87.50	1.77 LT	125.00
5+87.50	1.77 LT		6+37.32	5.92 LT	50.00
				TOTALS =	225.00
				USE	225.00

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-DIRECTIVE), TEST LEVEL 3

STATION	OFFSET (FT)	EACH
4+12.68	5.92 LT	1.00
6+37.32	5.92 LT	1.00
	TOTALS =	2.00
	USE	2.00

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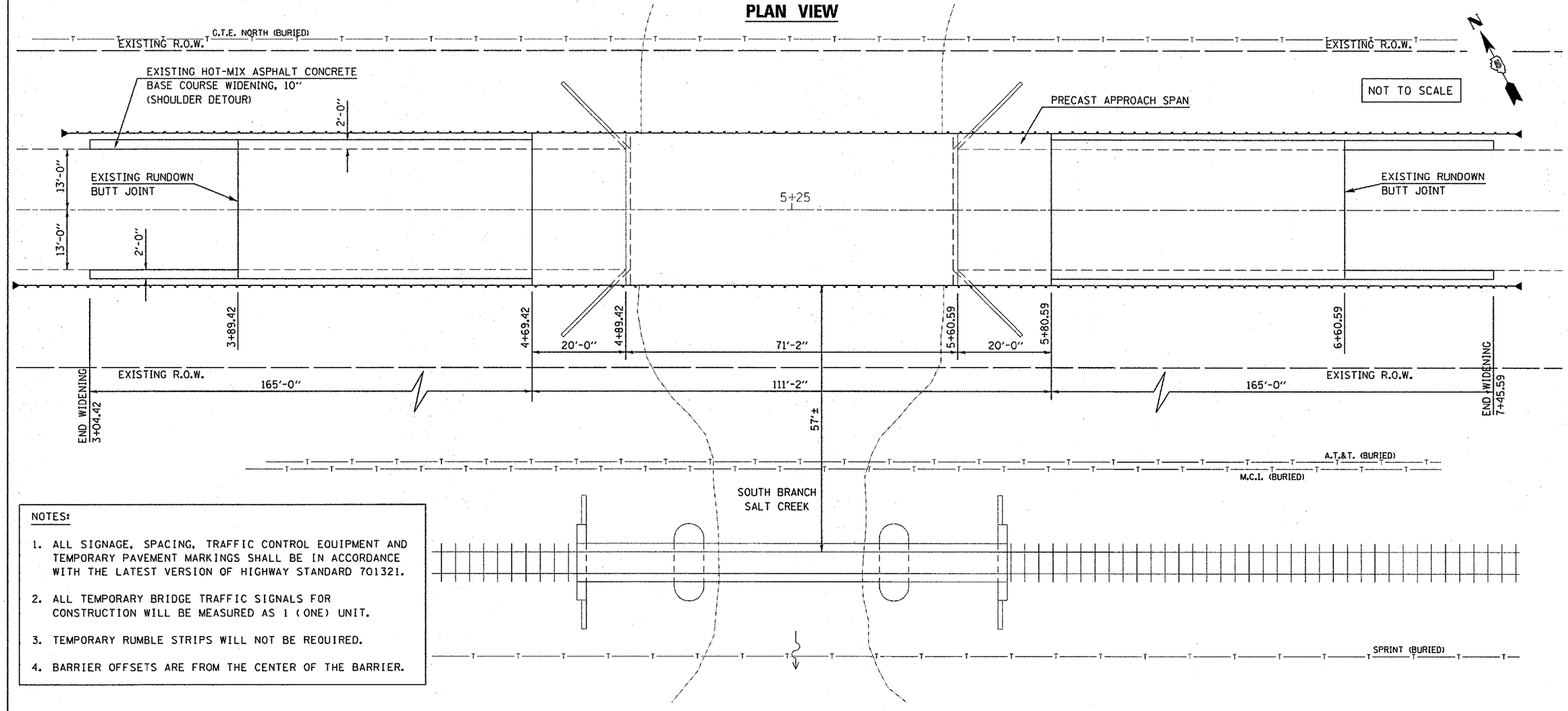
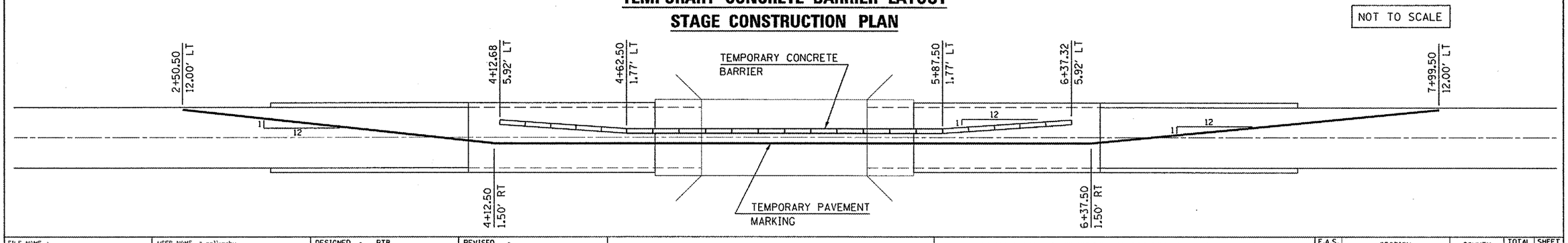
PLAN VIEW



NOTES:

1. ALL SIGNAGE, SPACING, TRAFFIC CONTROL EQUIPMENT AND TEMPORARY PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF HIGHWAY STANDARD 701321.
2. ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR CONSTRUCTION WILL BE MEASURED AS 1 (ONE) UNIT.
3. TEMPORARY RUMBLE STRIPS WILL NOT BE REQUIRED.
4. BARRIER OFFSETS ARE FROM THE CENTER OF THE BARRIER.

TEMPORARY CONCRETE BARRIER LAYOUT
STAGE CONSTRUCTION PLAN



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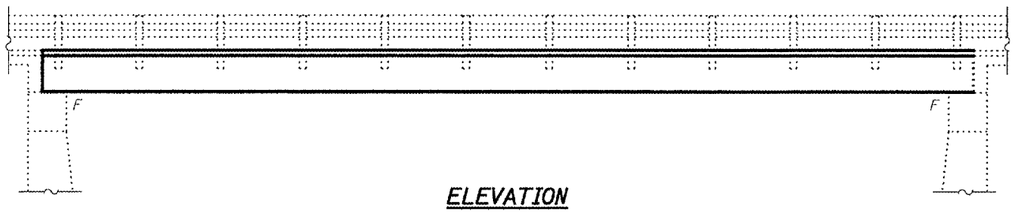
	PLOT DATE = 2/6/2008	DATE - 12-19-2007	REVISED -		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

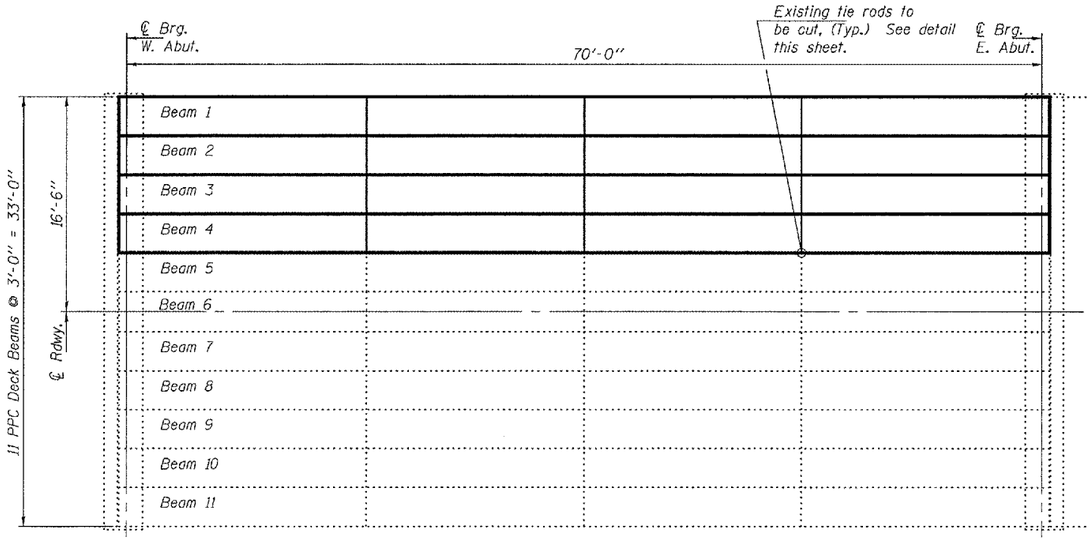
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 39		PIATT	18	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
5 SHEETS

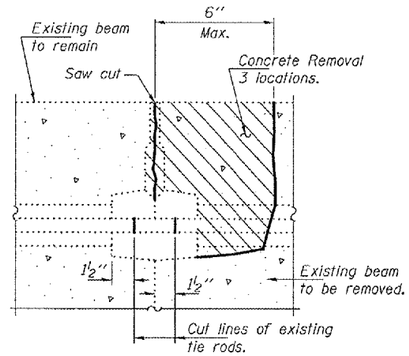
Contract Number: 70699



ELEVATION



PLAN



BEAM REMOVAL DETAIL AT TRANSVERSE TIES

N

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½"Φ low lax strands)
f'si = 201,960 psi (½"Φ low lax strands)

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.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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

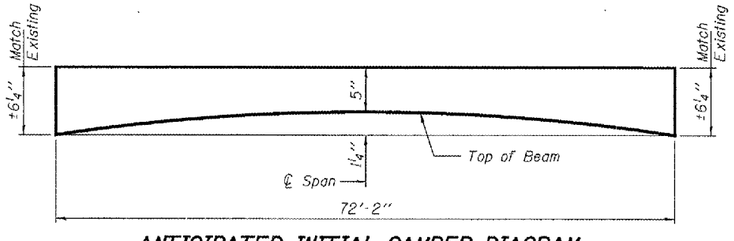
Reinforcement bars designated (E) shall be epoxy coated.

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 deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Wearing Surface.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	854
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	854
Concrete Wearing Surface	Sq. Yd.	100.7
Reinforcement Bars Epoxy Coated	Pound	1190
Protective Coat	Sq. Yd.	101
Mechanical Splice	Each	72
Concrete Removal	Cu. Yd.	0.7
Removing & Re-erecting Existing Railing	Foot	73



ANTICIPATED INITIAL CAMBER DIAGRAM

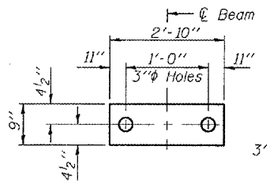
DESIGNED	
CHECKED	Victor H. Velez
DRAWN	Steffen
CHECKED	AJB VHV

FEBRUARY 25, 2008
EXAMINED J. Carl Kumpf, ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

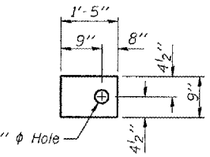
STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2008

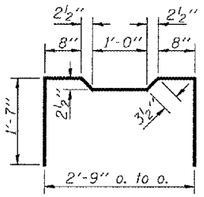
PLAN AND ELEVATION
SBI 39 OVER
SOUTH BRANCH SALT CREEK
PIATT COUNTY
SN 074-0008



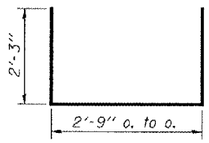
FIXED FABRIC BEARING PAD



FIXED FABRIC ADJUSTING SHIM



BAR A1



BARS U & U1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 39		PIATT	18	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

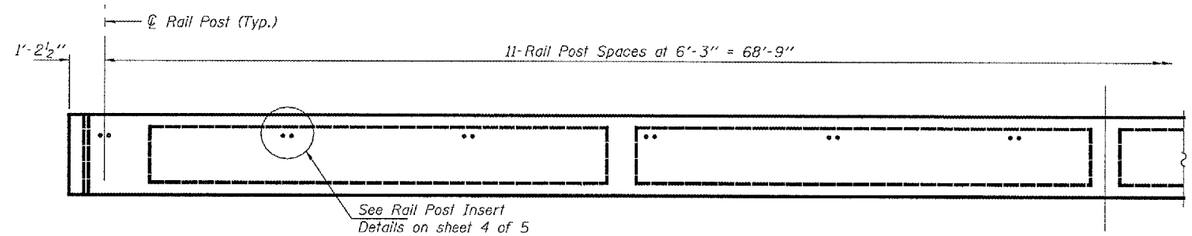
SHEET NO. 2
5 SHEETS

Contract Number: 70699

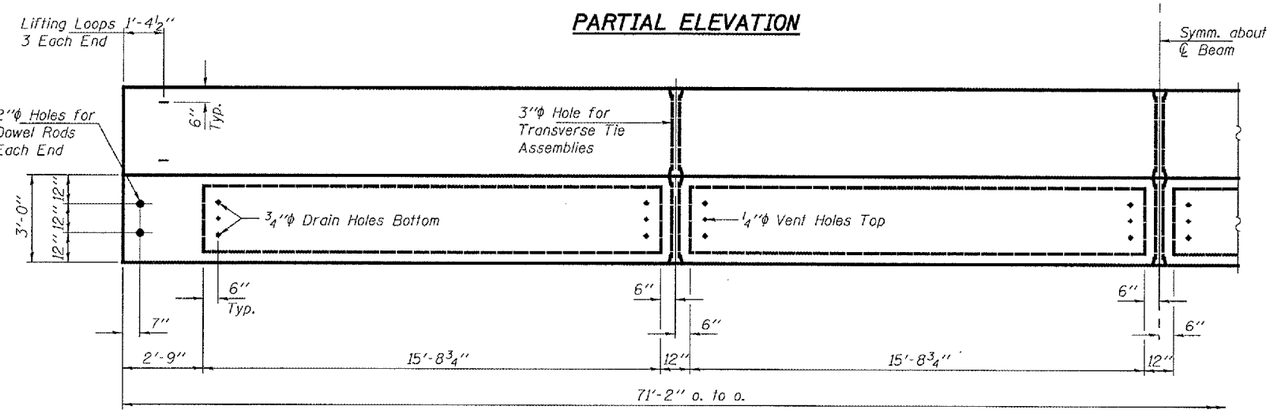
** TRANSVERSE PLACEMENT GUIDELINES

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be ½".
4. The minimum clearance from strand to void shall be 1½".

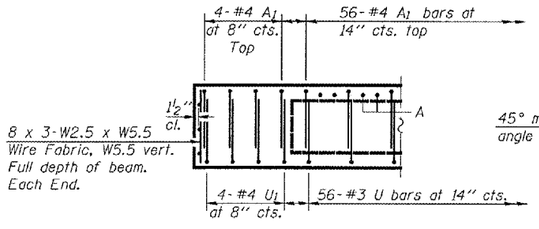
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



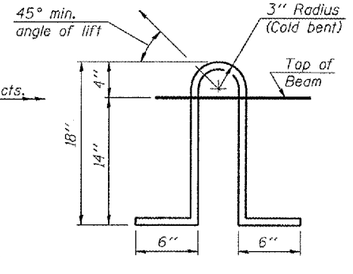
PARTIAL ELEVATION



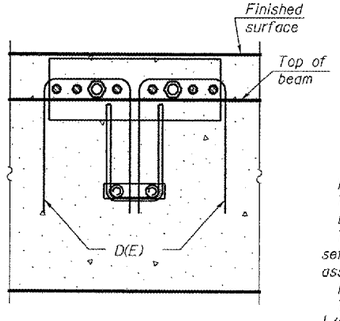
PARTIAL PLAN



END ELEVATION

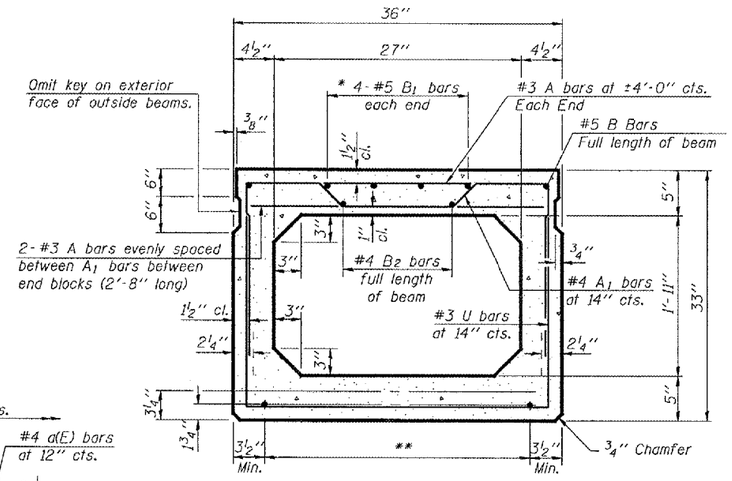


LIFTING LOOP DETAIL



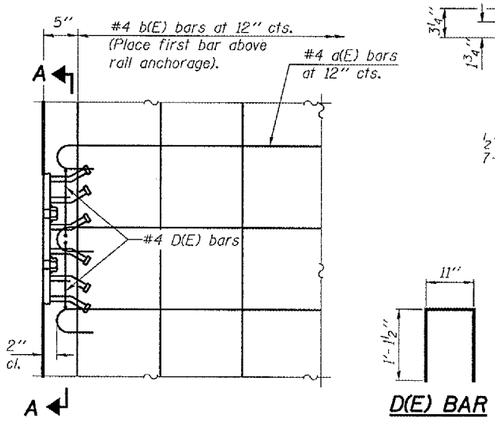
SECTION A-A

* 0.2 x Length of beam

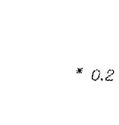


TYPICAL SECTION

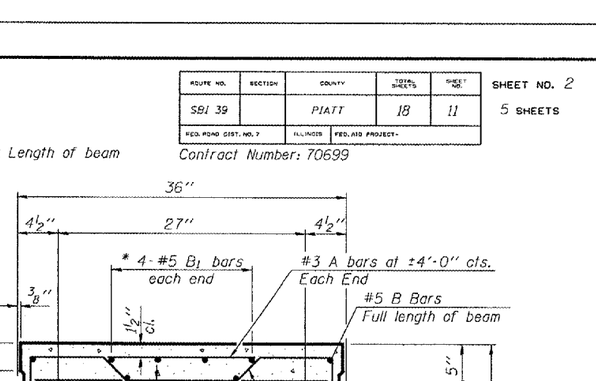
½"ϕ Strands, Each Strand Stressed to 30,900 Lbs.
7-Strands 1¾" up, 6-Strands 3¼" up, 2-Strands 6" up



PLAN



D(E) BAR



CROSS SECTION

Note:
Rail anchorage shall be cast in precast beams.
See typical section for dimensions, strand pattern, and bar callouts not shown.
Formwork necessary for the wearing surface may be secured utilizing the bottom rail inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
Lifting loops shall be 3-½"ϕ-270 ksi strands, as shown.
The 1"ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions shown shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4000 p.s.i.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms.	Sq. Ft.	854

DESIGNED	AJB
CHECKED	VHV
DRAWN	Steffen
CHECKED	AJB VHV

FEBRUARY 25, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

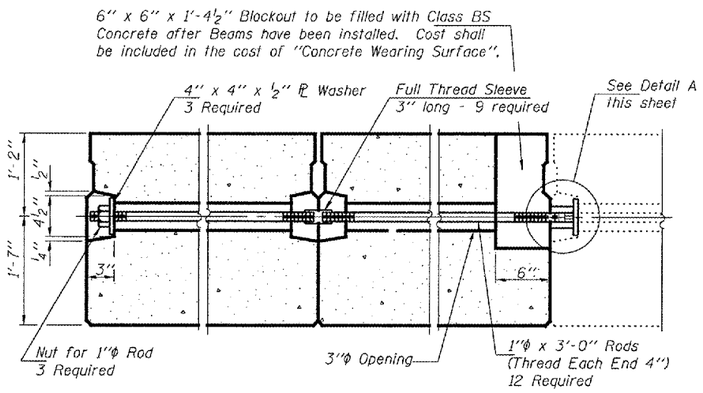
REPAIR DETAILS
SBI 39 OVER
SOUTH BRANCH SALT CREEK
PIATT COUNTY
SN 074-0008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

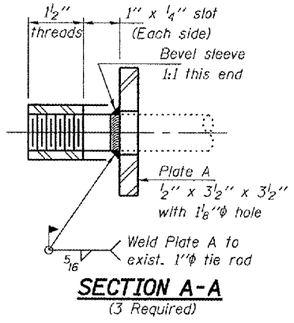
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 39		PIATT	18	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
5 SHEETS

Contract Number: 70699



TYPICAL TRANSVERSE TIE ASSEMBLY



SECTION A-A
(3 Required)

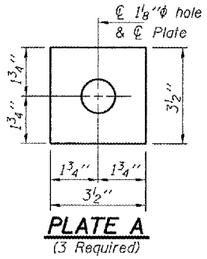
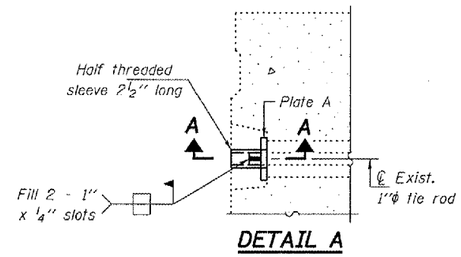
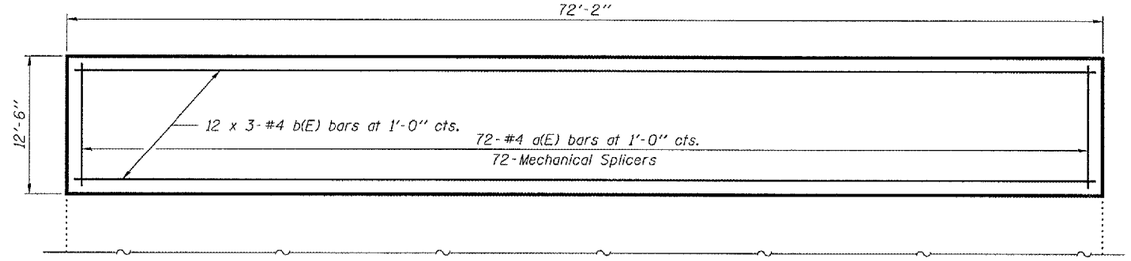


PLATE A
(3 Required)

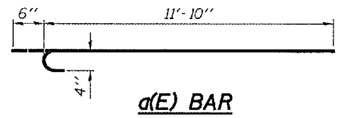


DETAIL A

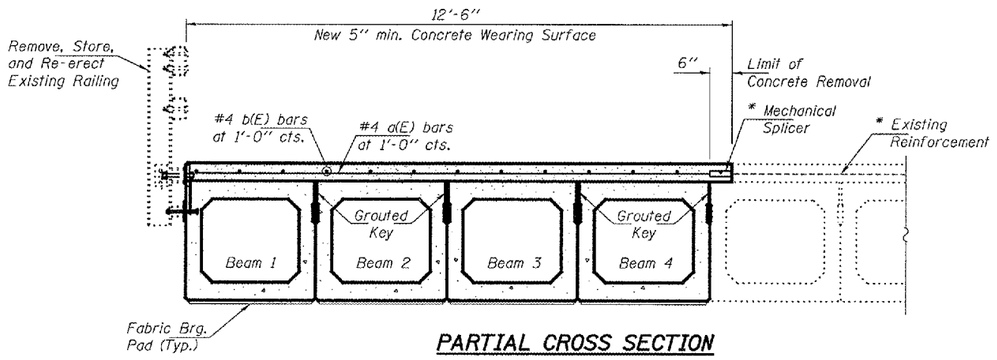


PARTIAL CONCRETE WEARING SURFACE PLAN

Saw cut after resurfacing. ¼" wide by ¾" deep. Seal with elastic joint sealer in accordance with Article 589 of the Standard Specifications. Cost included with Concrete Wearing Surface.

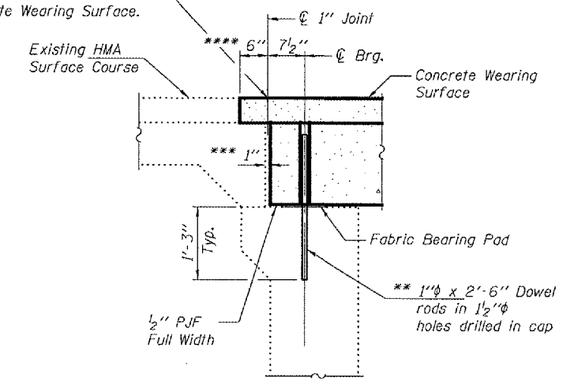


a(E) BAR



PARTIAL CROSS SECTION
(Looking East)
Showing Reinforcement

* Attach existing reinforcement with mechanical splicers. Existing reinforcement to extend 6" (min.) into the removal area to allow attachment of the mechanical splicers.



TYPICAL SECTION AT ABUTMENT

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

**** Limits of HMA Surface Removal. Cost included with Concrete Removal

MIN. BAR LAPS
#4 Bar = 1'-4"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	72	#4	12'-4"	⊂———
b(E)	36	#4	24'-10"	———
Reinforcement Bars, Epoxy Coated			Pound	1190
Concrete Removal			Cu. Yd.	0.7
Concrete Wearing Surface			Sq. Yd.	100.7

Bars indicated thus 12 x 3-#4 etc. indicates 12 lines of bars with 3 lengths per line.

REPAIR DETAILS
SBI 39 OVER
SOUTH BRANCH SALT CREEK
PIATT COUNTY
SN 074-0008

DESIGNED	AJB
CHECKED	VHV
DRAWN	Steffen
CHECKED	AJB VHV

FEBRUARY 25, 2008

EXAMINED — ENGINEER OF STRUCTURAL SERVICES

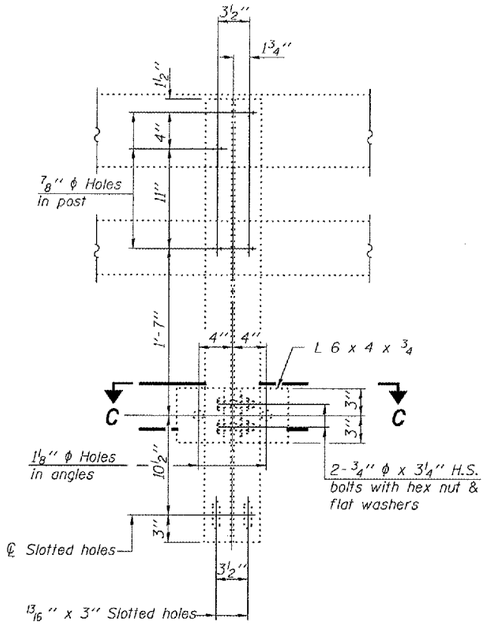
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

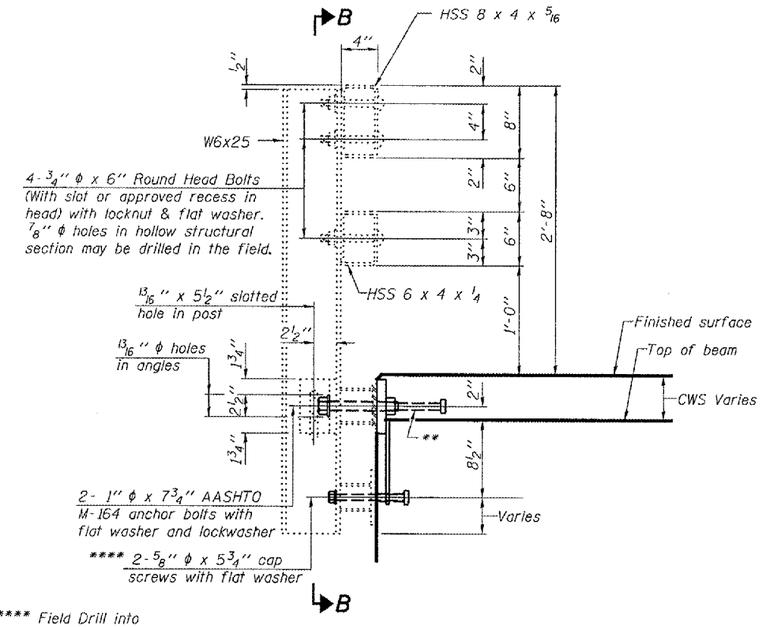
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 39		PIATT	18	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
5 SHEETS

Contract Number: 70699



SECTION B-B

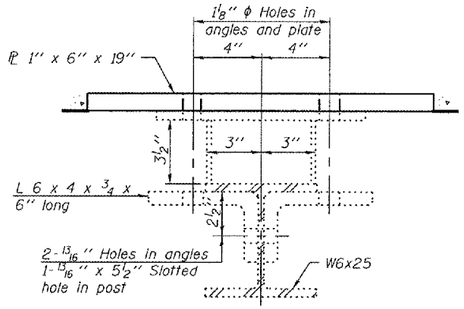


**** Field Drill into Existing Post

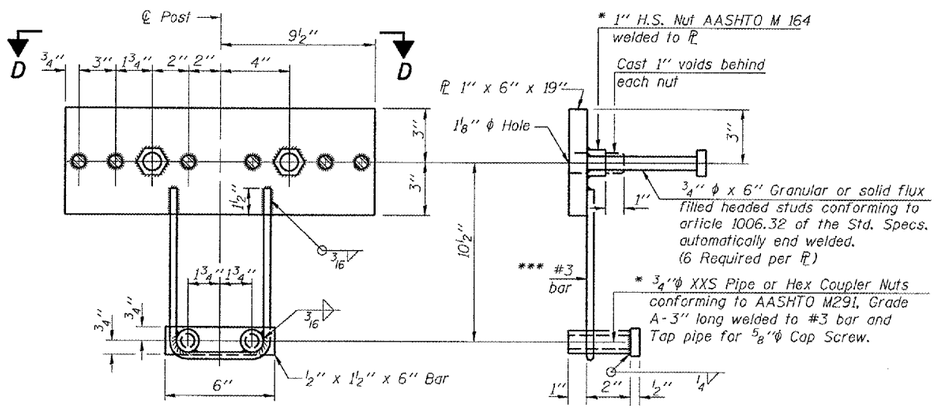
SECTION AT RAIL POST

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.



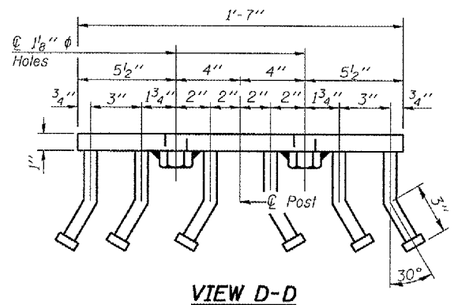
SECTION C-C



ANCHOR DEVICE

* 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 ½".



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Removing & Re-erecting Existing Railing	Foot	73

DESIGNED	AJB
CHECKED	VHV
DRAWN	Steffen
CHECKED	AJB VHV

FEBRUARY 25, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES

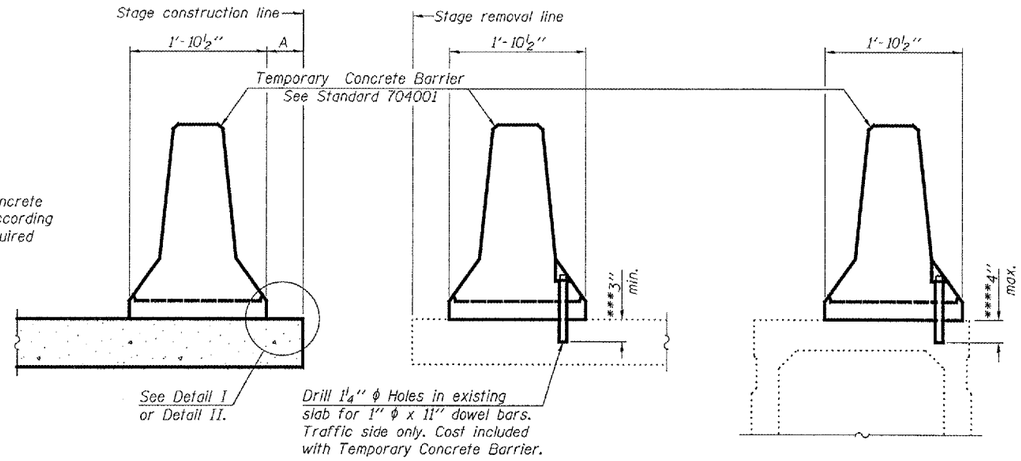
REPAIR DETAILS
SBI 39 OVER
SOUTH BRANCH SALT CREEK
PIATT COUNTY
SN 074-0008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 39		PIATT	18	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
5 SHEETS

Contract Number: 70699



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

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

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab or concrete wearing surface with 2-⅝"ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

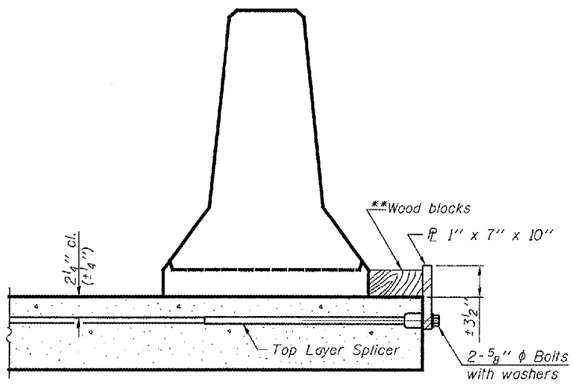
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

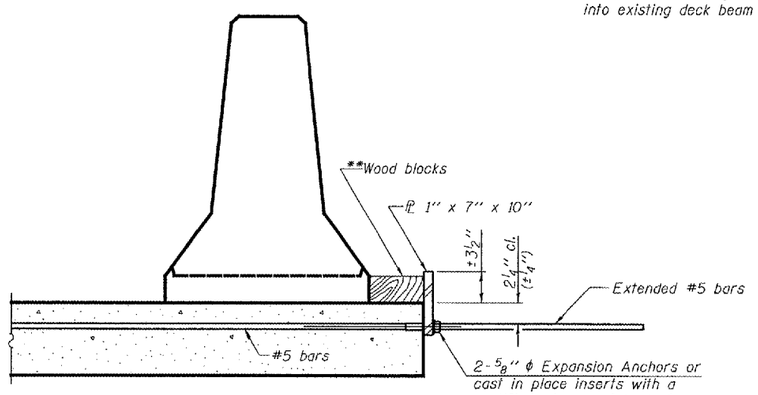
SECTIONS THRU SLAB OR DECK BEAM

***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

****If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

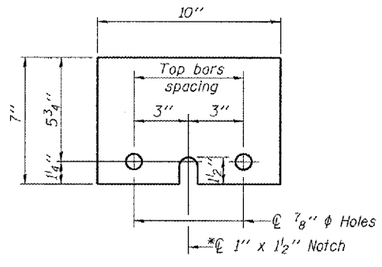


DETAIL I



DETAIL II

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



STEEL RETAINER ℙ 1" x 7" x 10"

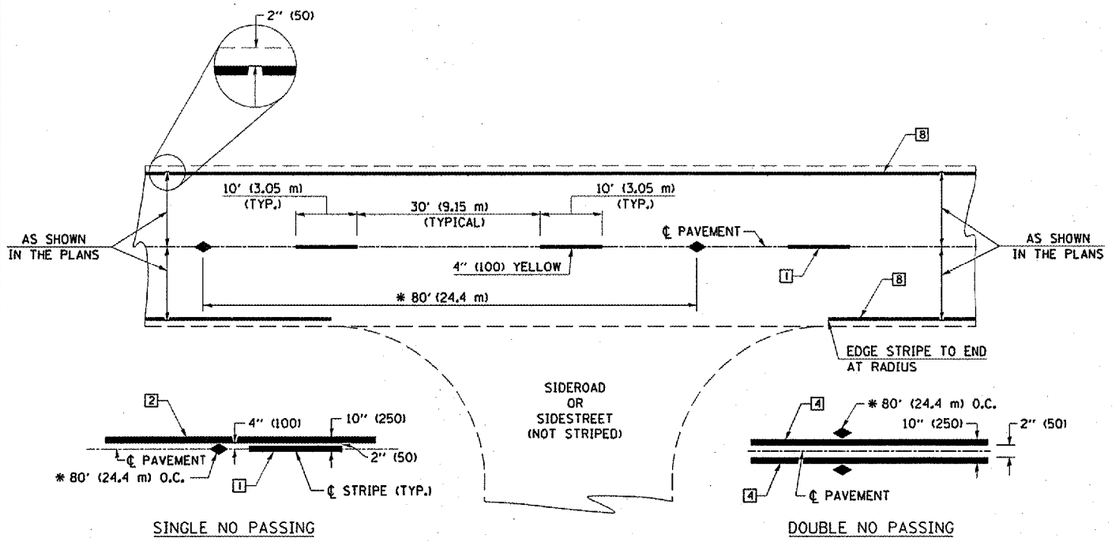
* Required only with Detail II

DESIGNED	AJB
CHECKED	VHV
DRAWN	Steffen
CHECKED	AJB VHV

FEBRUARY 25, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

R-27 9-3-07

REPAIR DETAILS
SBI 39 OVER
SOUTH BRANCH SALT CREEK
PIATT COUNTY
SN 074-0008



SINGLE NO PASSING

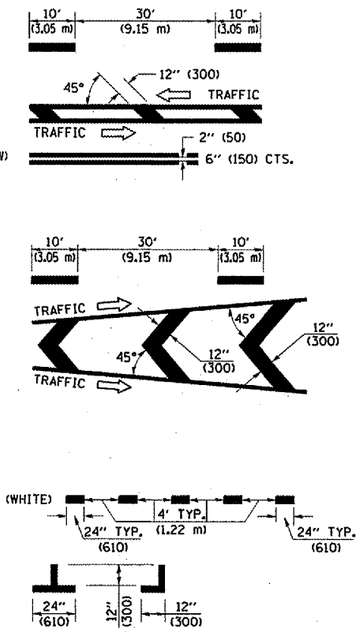
DOUBLE NO PASSING

* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

TYPICAL PAVEMENT MARKING LEGEND

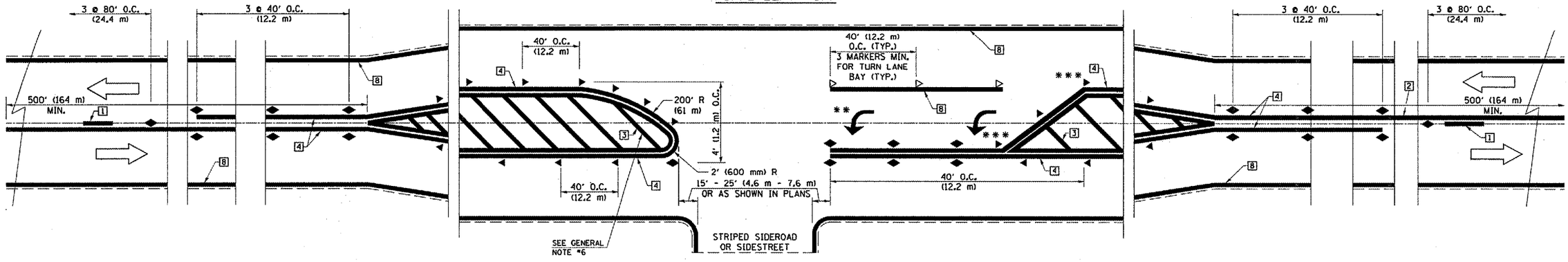
1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. RESERVED
6. RESERVED
7. 4" (100) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) LANE LINE EXTENSIONS (WHITE)
14. 4" (100) PARKING WHITE



TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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		DRAWN -	REVISED -
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	PLOT DATE = 2/6/2008	DATE -	REVISED -

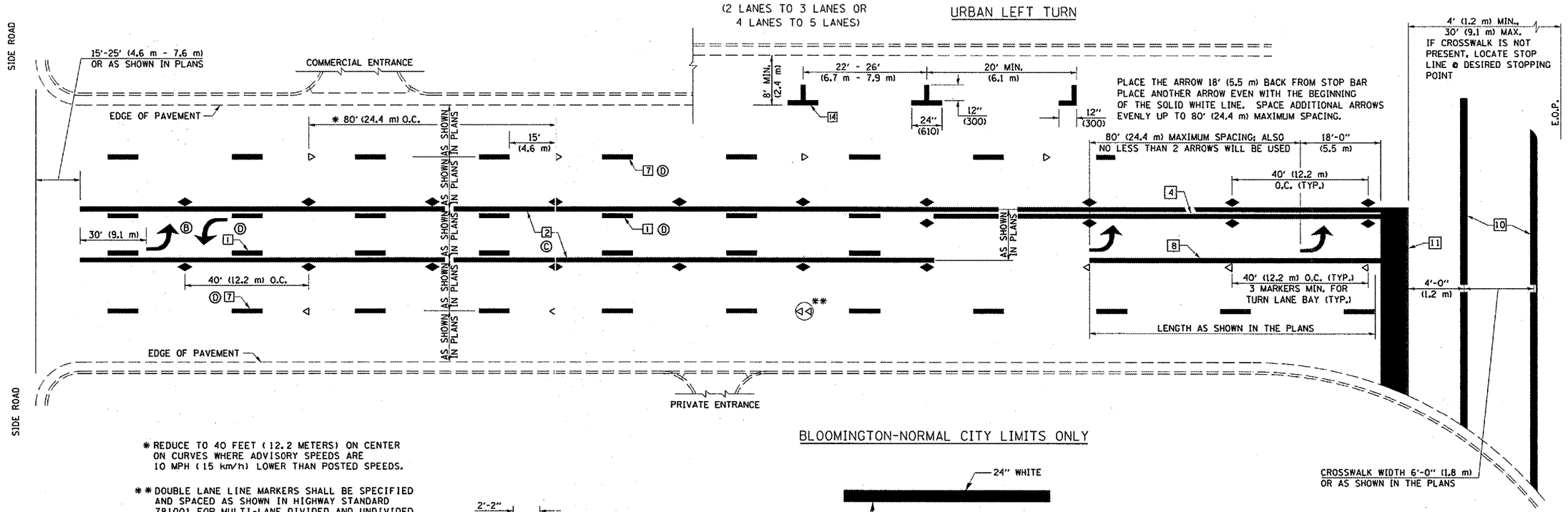
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: NA | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	D5 BEAM REPLACE 2008-2	PIATT	18	15
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

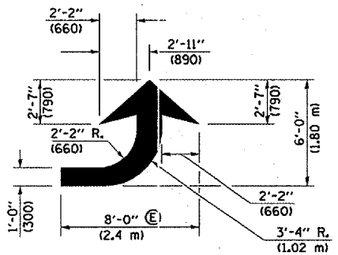
URBAN LEFT TURN



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

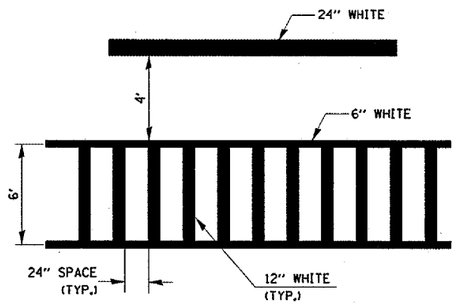
** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

BLOOMINGTON-NORMAL CITY LIMITS ONLY

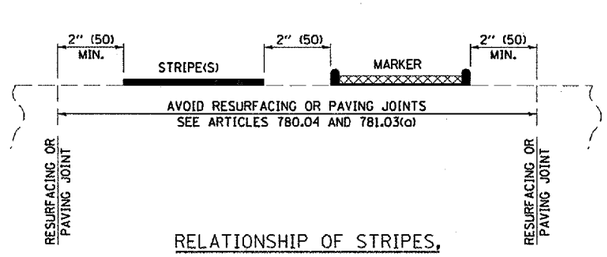


LEFT ARROW

REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)



TYPICAL SPACING FOR
CROSSWALKS & STOP BARS



RELATIONSHIP OF STRIPES,
MARKERS AND JOINTS

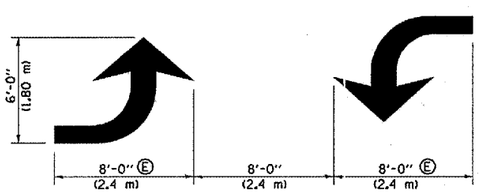
GENERAL NOTES:

Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.

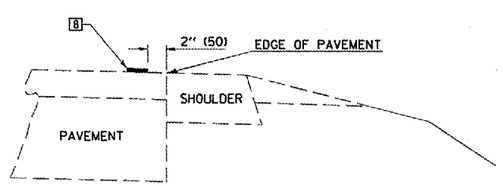
Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.

Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.

Ⓔ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



TYPICAL DOUBLE
TURN ARROWS (WHITE)



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT

(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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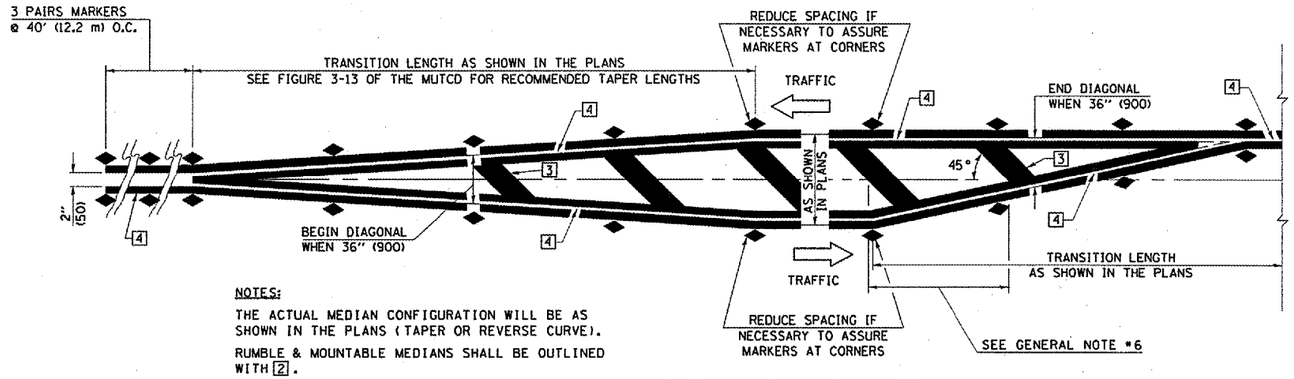
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: NA | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	D5 BEAM REPLACE 2008-2	PIATT	18	16
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

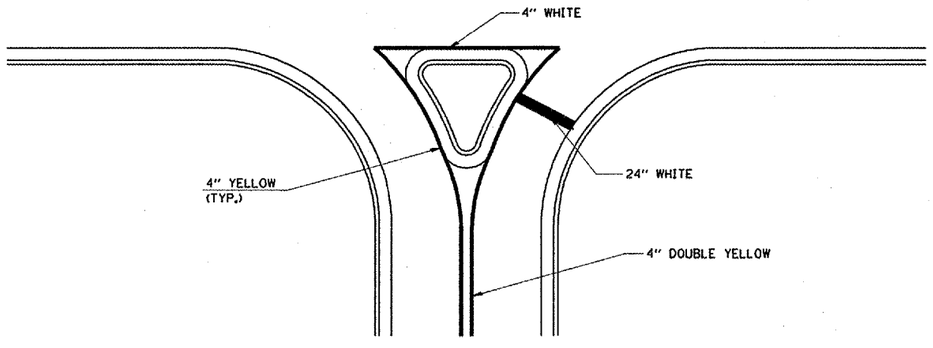
THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).

RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

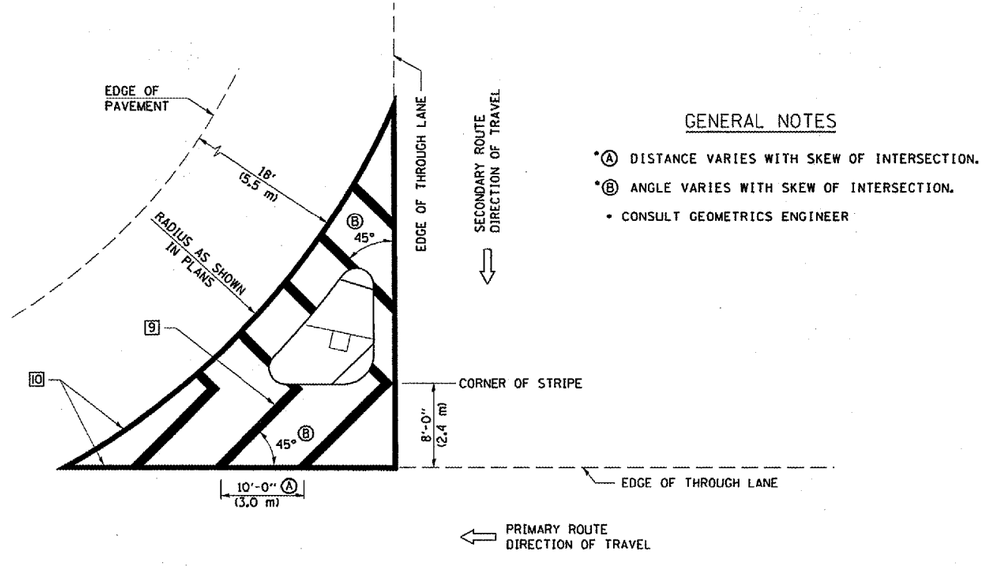
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
   <30 MPH USE 15' (<50 km/h USE 4.5 m)
   30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
   >45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



GENERAL NOTES

*(A) DISTANCE VARIES WITH SKEW OF INTERSECTION.

*(B) ANGLE VARIES WITH SKEW OF INTERSECTION.

• CONSULT GEOMETRICS ENGINEER

ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

FILE NAME = c:\projects\d570699\70699plans.dgn	USER NAME = collierbw	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED -
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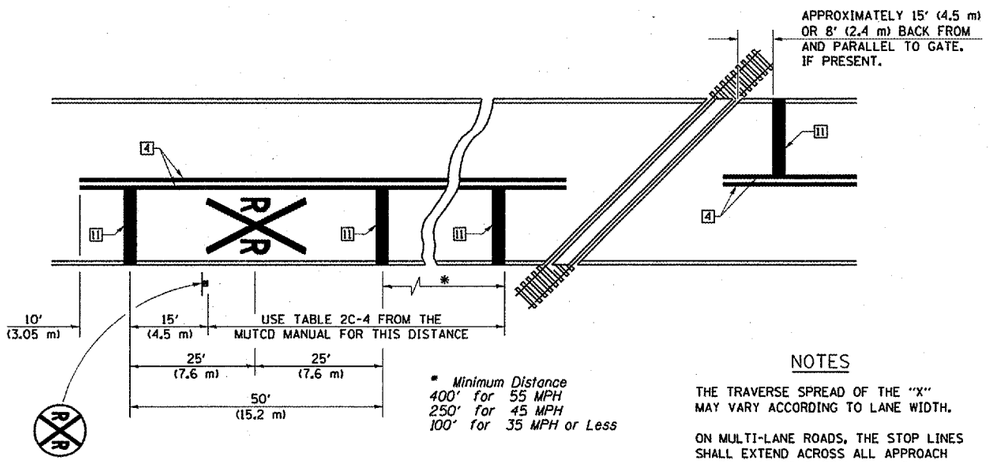
	PLOT DATE = 2/6/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: NA | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	D5 BEAM REPLACE 2008-2	PIATT	18	17
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PAVEMENT MARKINGS AT
RAILROAD-HIGHWAY GRADE CROSSING

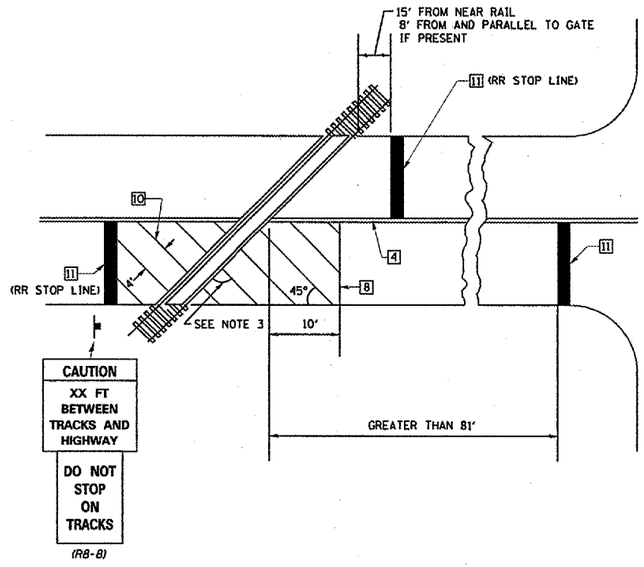
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

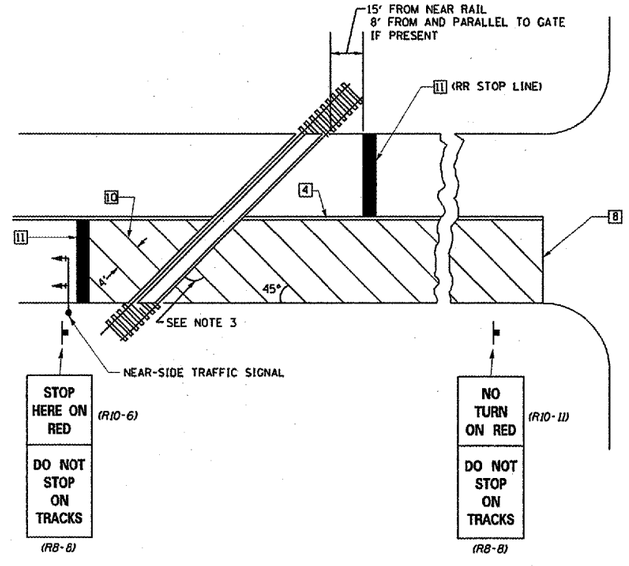
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

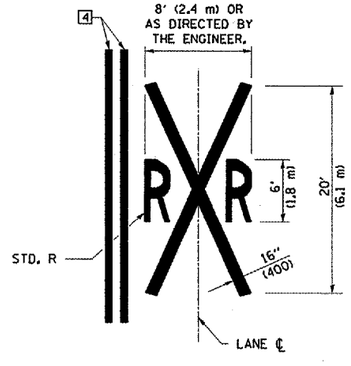
RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR
RAILROAD-HIGHWAY GRADE CROSSING



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800AAAA

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	PLOT DATE = 2/6/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: NA | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	05 BEAM REPLACE 2008-2	PIATT	18	18
		CONTRACT NO. 70699		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		