

11-04-2016 LETTING ITEM 077

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14		ALEXANDER	13	1
		ILLINOIS	CONTRACT NO. 78530	

\*09 CM BRIDGE REPAIR 2017-1

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3-5  
FOR STRUCTURAL PAVEMENT DESIGN INFORMATION, SEE SHEET NO. NA

# PROPOSED HIGHWAY PLANS

FAP 14 (IL 3)  
SECTION D9 CM BRIDGE REPAIR 2017-1  
OVER UPRR AT THEBES  
BRIDGE JOINT REPAIR  
ALEXANDER COUNTY

**TRAFFIC DATA**

**IL 3 TRAFFIC DATA**

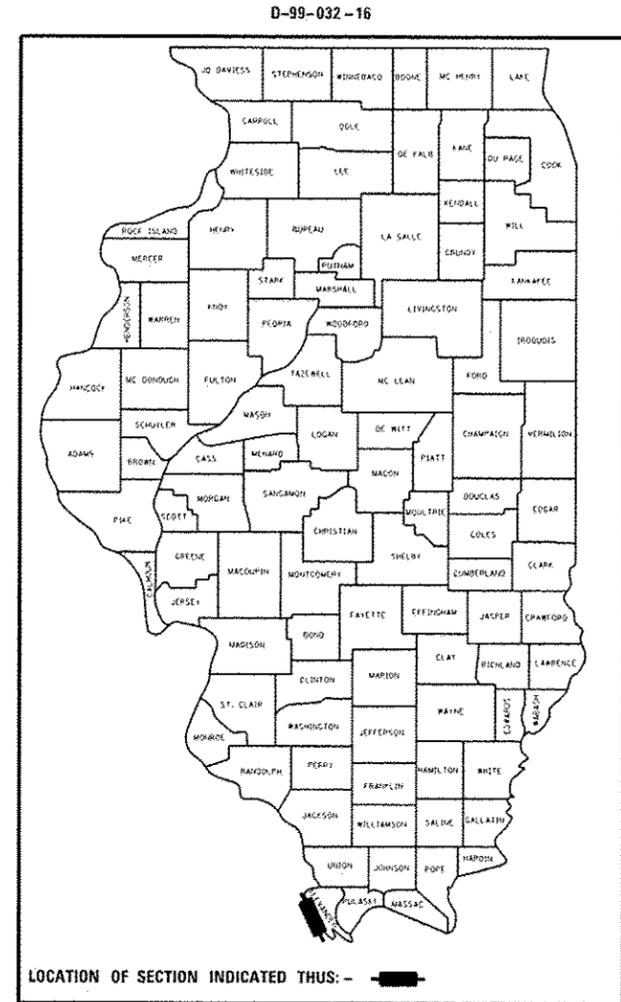
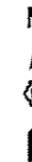
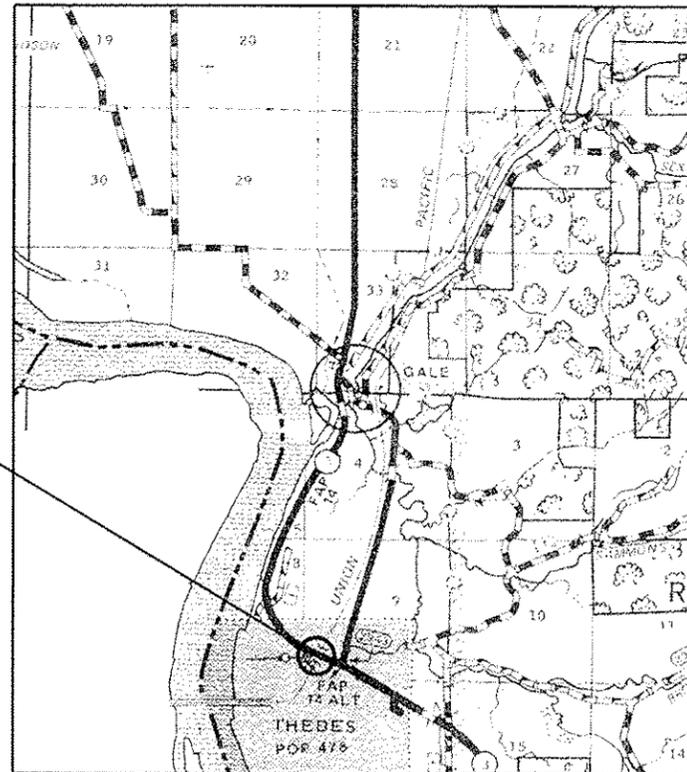
2015 ADT = 4100  
10 % TRUCKS

**TOWNSHIP:**

ALEXANDER COUNTY ROAD DISTRICT

C-99-032-16

R3W



LOCATION OF SECTION INDICATED THUS: - [black rectangle]

DESIGN DESIGNATION : NA  
COORDINATE SYSTEM : NA  
POSTED SPEED : 55 MPH

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

PROJECT ENGINEER: DAVID PICHE  
PROJECT DESIGNER: T. WAYNE HALSTEAD

CONTRACT NO. 78530

GROSS LENGTH = 205.0 FT. = 0.04 MILES  
NET LENGTH = 205.0 FT. = 0.04 MILES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

SUBMITTED August 9 2016  
Jeffrey Keim  
REGION FIVE ENGINEER

Sept 30 2016  
Muhammad M. Addis PE, Inc.  
acting ENGINEER OF DESIGN AND ENVIRONMENT

Sept 30 2016  
Amelia [Signature]  
DIRECTOR OF PROGRAM DEVELOPMENT

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OF THE STATE OF ILLINOIS

**GENERAL NOTES**

- 1) THE THICKNESS OF HOT-MIX ASPHALT MIXTURE 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 HOT-MIX ASPHALT MIXTURE IS PLACED.
- 2) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:
 

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
BITUMINOUS MATERIALS: (TACK COAT) ON PAVEMENT	0.05 POUND/50 FT
- 3) THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- 4) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 5) TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.
- 6) IF THE CONTRACTOR ELECTS TO USE P.C.C. BASE COURSE WIDENING, SUCH WIDENING SHALL BE PRIMED ACCORDING TO ARTICLE 406.02, EXCEPT THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WIDENING.
- 7) THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- 8) ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.
- 9) THE CONTRACTOR SHALL CONTACT UPRR MTM (MASTER OF TRACK MAINTENANCE) KEVIN FERNALDO (402)-501-1305 OR (573)-270-7345, 2 WEEKS PRIOR TO STARTING WORK.
- 10) COMMITMENTS: NONE AS OF AUGUST 12, 2016.

**MIXTURE REQUIREMENTS**

Location(s):	Base Course Widening
Mixture Use(s):	Hot-Mix Asphalt Binder Course, N70, IL-19.0
AC/PG:	PG64-22
ABR % (Max):	See Special Provision
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-19.0mm
Friction Aggregate:	None
Quality Management Program:	QCQA

Location(s):	Hot-Mix Asphalt Surface Course
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N70 Fine Graded
AC/PG:	PG64-22
ABR % (Max):	See Special Provision
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5mm Fine Graded
Friction Aggregate:	C Surface
Quality Management Program:	QCQA

**STANDARDS**

- |           |   |
|-----------|---|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS              |
| 701001-02 | OFF-ROAD, 2L2W MORE THAN 15' FROM PAVEMENT EDGE           |
| 701006-05 | OFF-ROAD, 2L2W 15' TO 24" FROM PAVEMENT EDGE              |
| 701201-04 | LANE CLOSURE, 2L2W DAY ONLY, FOR SPEEDS ≥ 45 MPH          |
| 701321-15 | LANE CLOSURE, 2L2W BRIDGE REPAIR WITH BARRIER             |
| 701326-04 | LANE CLOSURE, 2L2W PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH |
| 701901-05 | TRAFFIC CONTROL DEVICES                                   |
| 704001-08 | TEMPORARY CONCRETE BARRIER                                |
| 780001-05 | TYPICAL PAVEMENT MARKINGS                                 |

**INDEX OF SHEETS**

- |     |   |
|-----|---|
| 1   | COVER SHEET                               |
| 2   | INDEX OF SHEETS; GENERAL NOTES; STANDARDS |
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| 6   | GENERAL PLAN AND ELEVATION                |
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| 8   | STAGING DETAILS                           |
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| 10  | PREFORMED JOINT STRIP SEAL                |
| 11  | BAR SPLICER ASSEMBLY BSD-1                |
| 12  | TEMP. CONCRETE BARRIER (R-27)             |
| 13  | BUTT JOINT DETAILS                        |

Prepared By:	<i>[Signature]</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT MATERIALS ENGINEER

\*09 CM BRIDGE REPAIR 2017-1

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNATURES, GENERAL NOTES, STANDARDS, & INDEX OF SHEETS

FILE NAME	USER NAME	DESIGNED	REVISED
PROJECT	PROJECT	CHECKED	REVISED
DATE	DATE		

SCALE: SHEET OF SHEETS: STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	*	ALEXANDER	13	2
CONTRACT NO. 78530				



# SUMMARY OF QUANTITIES - CONT

ALEXANDER  
IL 3  
100% STATE  
RURAL

CODE NUMBER	ITEM DESCRIPTION	UNIT	CONSTRUCTION CODE 0014
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	74
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	25
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3,076
70400100	TEMPORARY CONCRETE BARRIER	FOOT	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2

12

\*09 CM BRIDGE REPAIR 2017-1

2103 21 011

# SUMMARY OF QUANTITIES - CONT

ALEXANDER
IL 3
100% STATE
RURAL

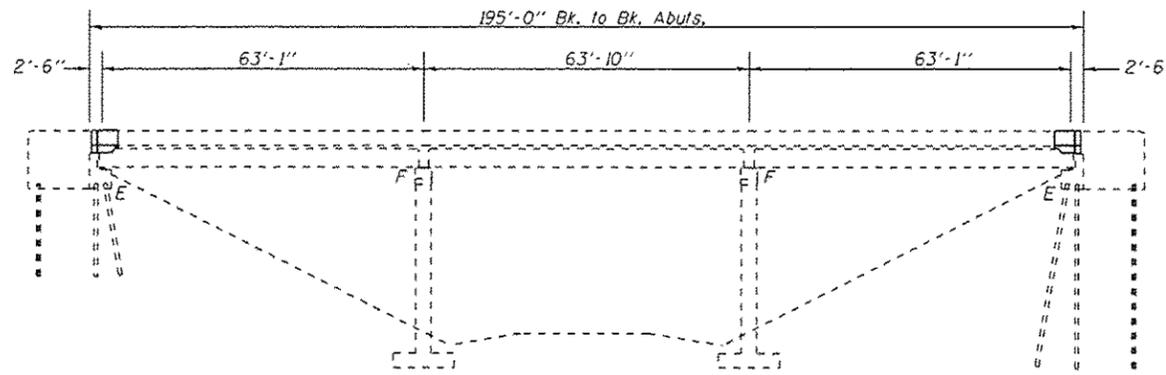
CODE NUMBER	ITEM DESCRIPTION	UNIT	CONSTRUCTION CODE 0014
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3,076
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SO FT	494
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	24
Z0016200	DECK SLAB REPAIR (PARTIAL)	SO YD	1.0
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
<b>X0300002</b>	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, N70	TON	86

4

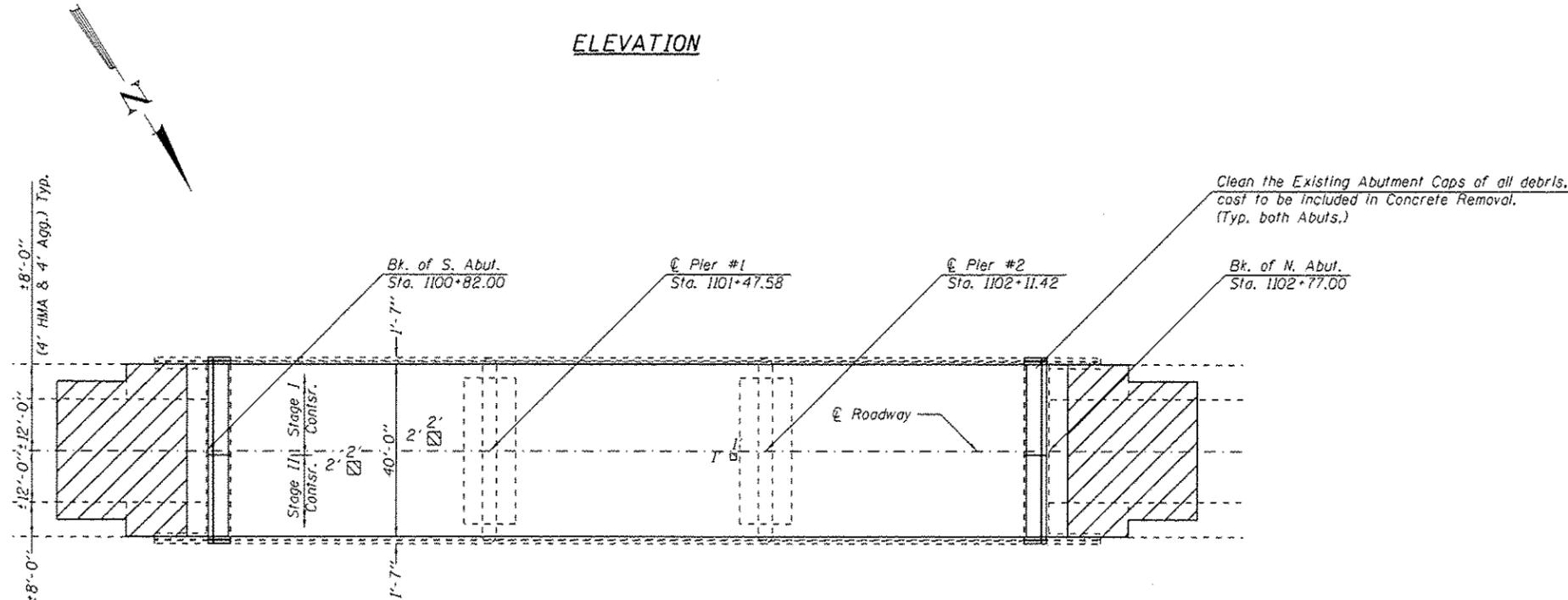
\* SPECIALTY ITEM

•09 CM BRIDGE REPAIR 2017-1

FILE NAME :	USER NAME :	DESIGNED :	REVISED :	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pm\1108\EBID\INTED\illinois.gov\PI00T\00	halsteadtw	Documents\1007 Offices\District 9\Projects\78530\0000\0000\Design\78530-Design.dgn	REVISED -						14	*	ALEXANDER	13	5
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	PLOT DATE :	DATE :	REVISED -		ILLINOIS FED. AID PROJECT								



ELEVATION



PLAN

**GENERAL NOTES**

Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.

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 designated (E) shall be epoxy coated.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Hot-Mix Asphalt Surface Course, IL-9.5FG, N70	Ton	58
Waterproofing Membrane System	Sq. Yd.	821
Reinforcement Bars, Epoxy Coated	Pound	4340
Bar Splicers	Each	24
Preformed Joint Strip Seal	Foot	91
Deck Slab Repair (Partial)	Sq. Yd.	1.0
Concrete Removal	Cu. Yd.	22.7
Concrete Superstructure	Cu. Yd.	25.0

- Deck Slab Repair (Partial)
- Hot-Mix Asphalt Surface Removal-Butt Joint

**Design Stresses**

FIELD UNITS (Existing Construction)

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

FIELD UNITS

PRECAST PRESTRESSED UNITS (Existing Construction)

$f'_c = 5,000$  psi  
 $f_{ci} = 4,000$  psi  
 $f_s = 248,000$  psi ( $1\frac{1}{16}$ "  $\phi$  stress relieved strands)  
 $f_{sr} = 173,600$  psi ( $1\frac{1}{16}$ "  $\phi$  stress relieved strands)



*David Carl Puzey* 9/21/16  
 Expires 11/30/18

**Scope of Work**

- Setup Traffic Control with barrier
- Perform work at joints and patching
- Lay WMS and HMA overlay
- Switch stages and repeat

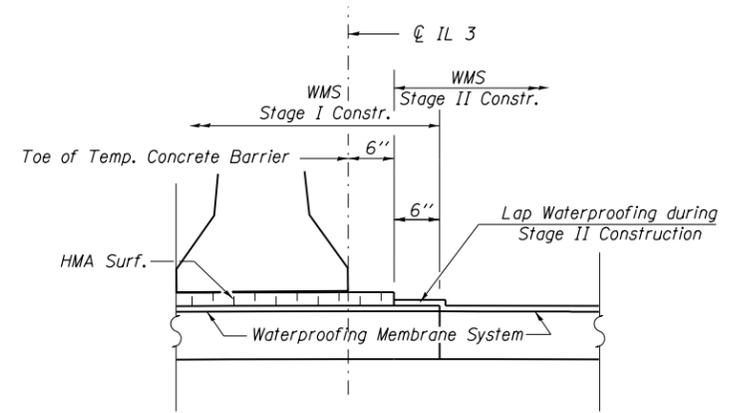
BRIDGE REPAIR  
 IL 3 (FAP 14) OVER UPRR AT THEBES  
 ALEXANDER COUNTY  
 D9 CM BRIDGE REPAIR 2017-1  
 STA. 1101+79.50  
 SN 002-0031

•D9 CM BRIDGE REPAIR 2017-1

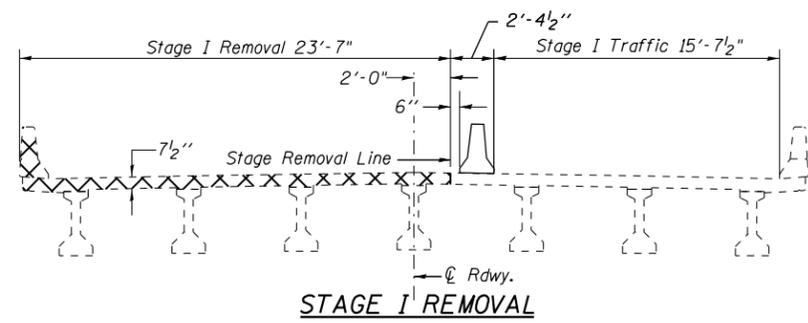
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PLOT DATE : 8/11/2016	DATE - 6/8/2016	REVISED -	REVISED -									

Concrete Removal (at Joint Locations)

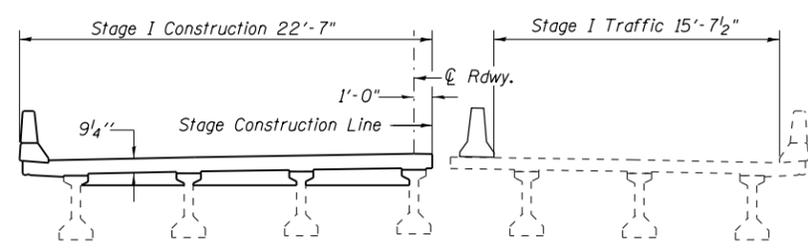
NOTES:  
All Sections looking North.



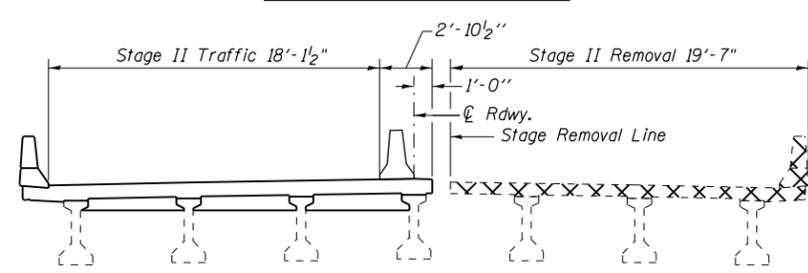
**WATERPROOFING TREATMENT AT STAGE CONSTRUCTION**



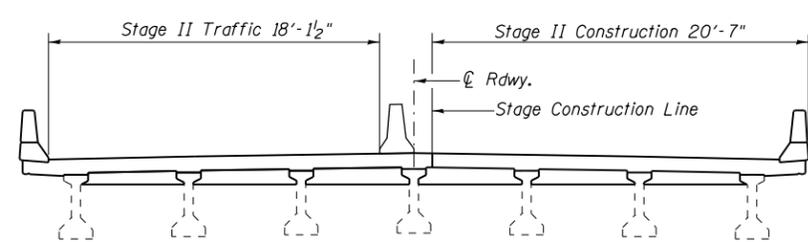
**STAGE I REMOVAL**



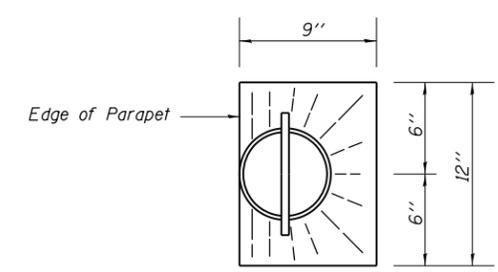
**STAGE I CONSTRUCTION**



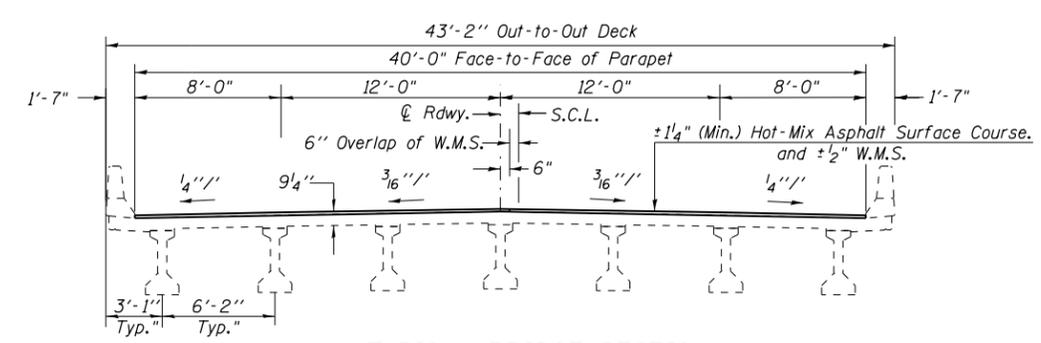
**STAGE II REMOVAL**



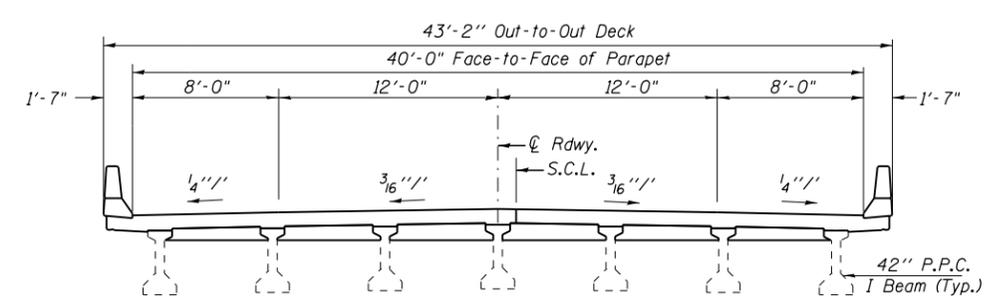
**STAGE II CONSTRUCTION**



**TOP PLAN**  
Slope HMA at Drains



**TYPICAL BRIDGE SECTION**

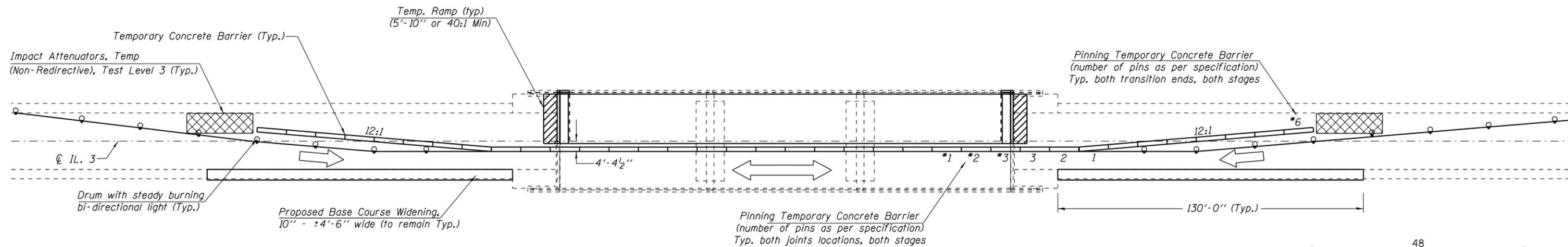


**SECTION THROUGH JOINT**

**STAGING DETAILS AND TYPICAL SECTION SN 002-0031**

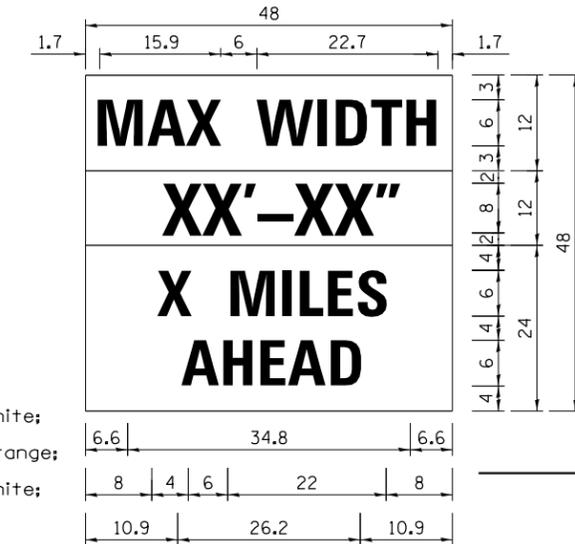
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	PLOT DATE = 8/11/2016	DATE -	REVISED -		SCALE:	SHEET 2	OF 7 SHEETS	STA.	TO STA.			

\*D9 CM BRIDGE REPAIR 2017-1



**STAGE I TRAFFIC**

Notes:  
 See Standard 701321 for additional details.  
 \* These Pins to be included in the cost of Temporary Concrete Barrier.

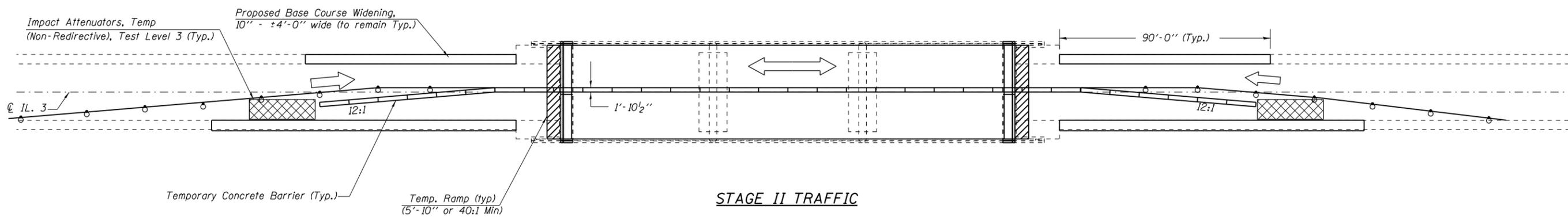


**W12-I103**

W12-I103 (Width is 8D);  
 No border, Black on White;  
 "MAX WIDTH" D;  
 No border, Black on Orange;  
 "XX'-XX'" D;  
 No border, Black on White;  
 "X MILES" D; "AHEAD" D

NOTE: THIS SIGN SHALL BE LOCATED AS DIRECTED BY THE ENGINEER. ONE SIGN SHALL BE PROVIDED FOR EACH APPROACH DURING EACH STAGE TO THE SITE. ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321.

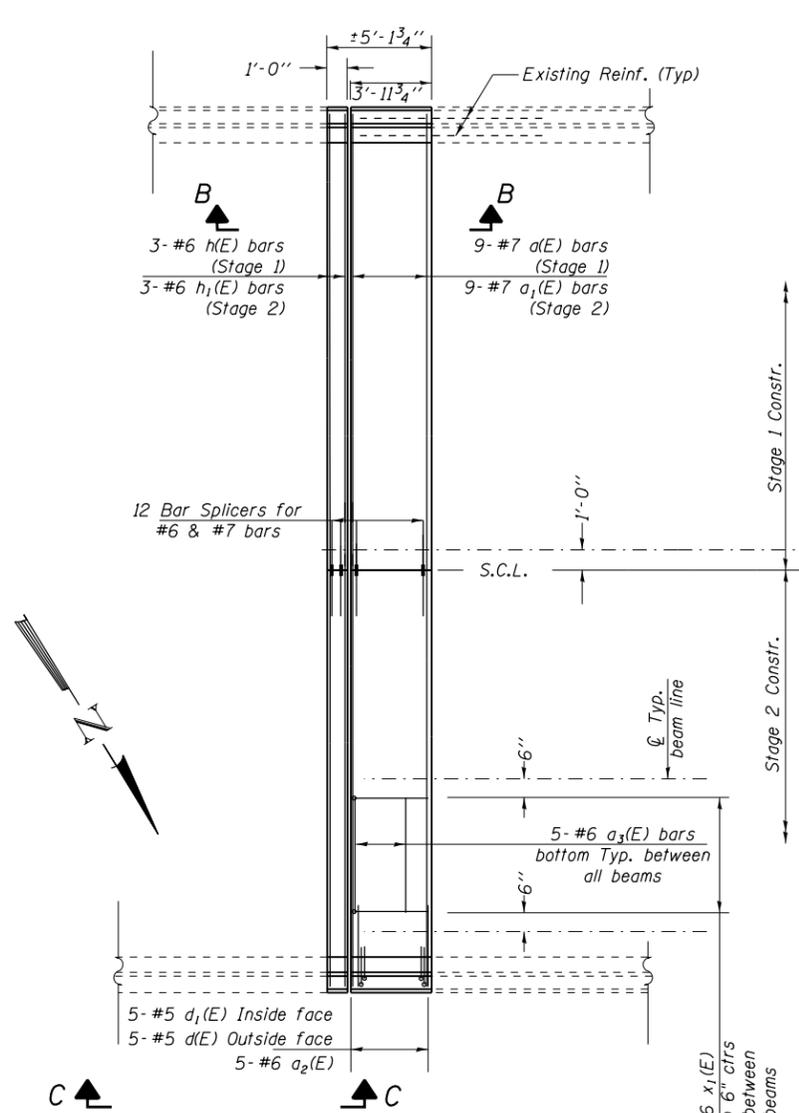
THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(O)-48) SHOWN ON STANDARD 701321 AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN ON THIS SHEET SHALL BE 14'-1/2" FOR STAGE I TRAFFIC.



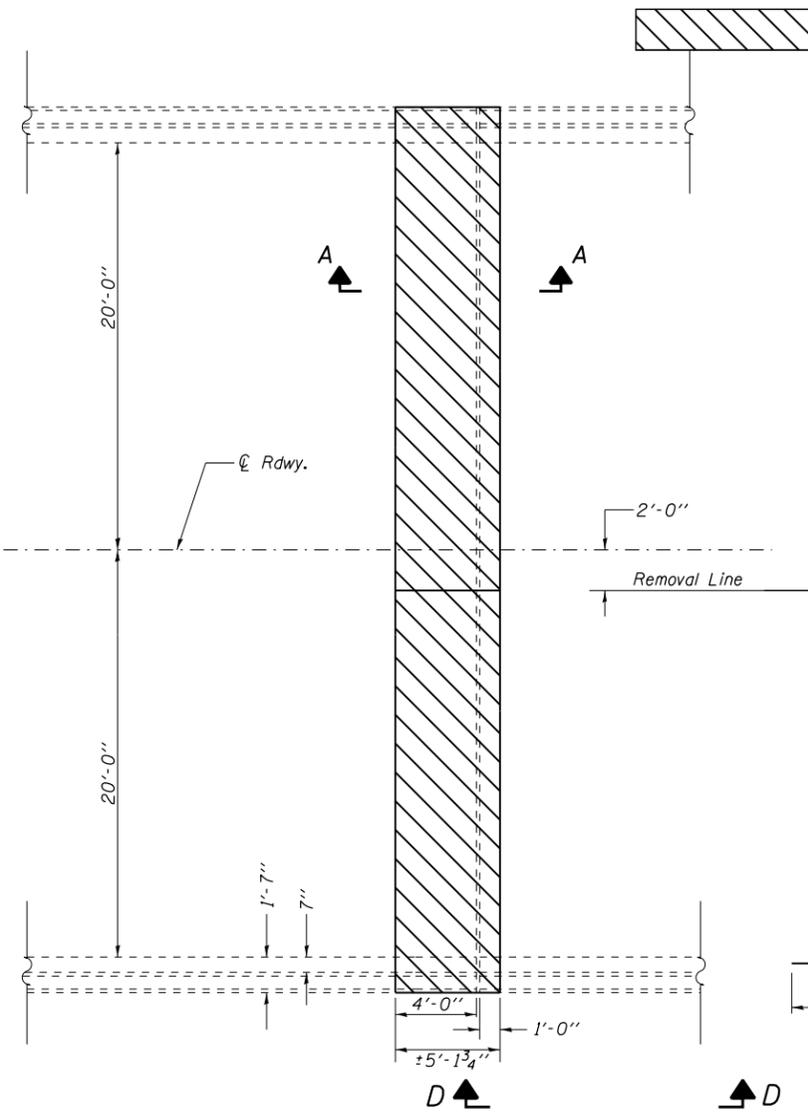
**STAGE II TRAFFIC**

Notes:  
 See Standard 701321 for additional details.

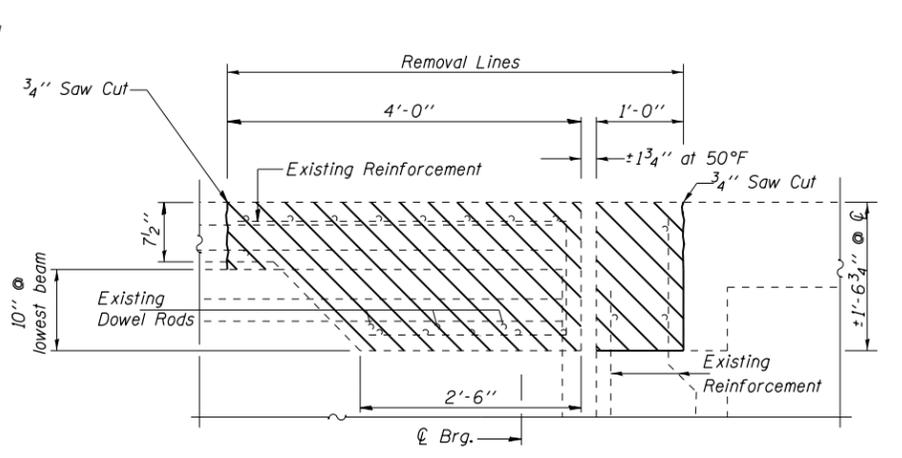
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Default	PLOT DATE = 8/11/2016	DATE -	REVISED -		SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.			CONTRACT NO. 78530				
** D9 CM BRIDGE REPAIR 2017-1												



**JOINT @ SOUTH ABUT. PLAN**  
**SHOWING NEW CONCRETE**  
 North Abut. similar by 180° rotation

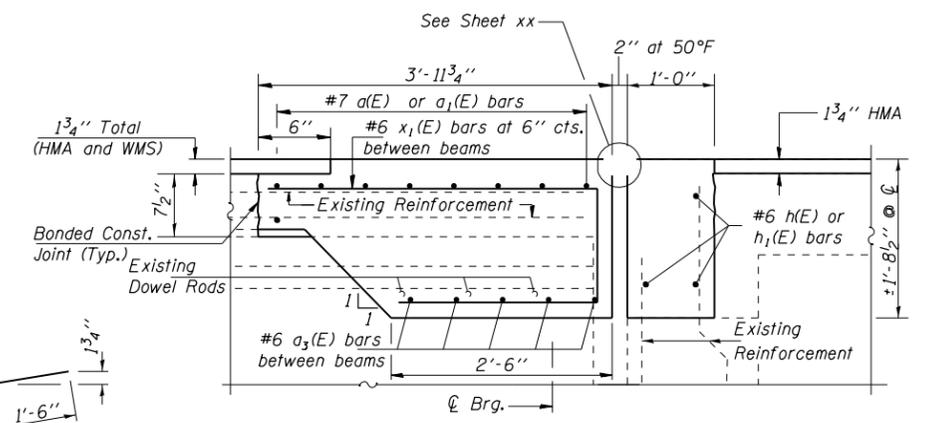


**JOINT @ NORTH ABUT. PLAN**  
**SHOWING CONCRETE REMOVAL**  
 South Abut. similar by 180° rotation

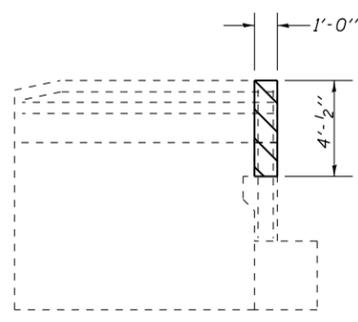


Note:  
 Contractor must exercise extreme care so not to damage existing PCI-Beam during Concrete Removal. Any damage is to be repaired to the satisfaction of the Engineer at the contractor's expense.

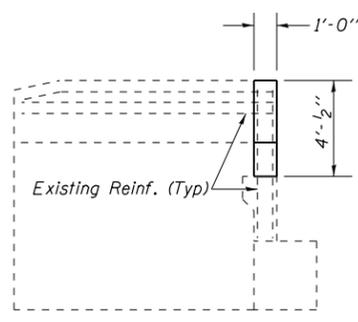
**SECTION A-A**



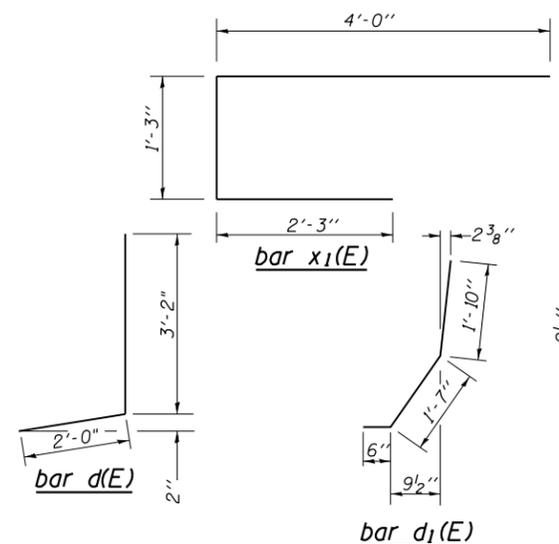
**SECTION B-B**



**VIEW D-D**  
 Showing Concrete Removal



**VIEW C-C**  
 Showing Concrete Superstructures



**SECTION THRU PARAPET**

**BILL OF MATERIAL (BOTH JOINTS)**

Bar No.	Size	Length	Shape
a(E)	18 #7	22'-2"	—
a1(E)	18 #7	20'-2"	—
a2(E)	20 #6	4'-0"	—
a3(E)	60 #6	5'-2"	—
d(E)	20 #5	5'-2"	J
d1(E)	20 #5	3'-11"	J
h(E)	6 #6	22'-2"	—
h1(E)	6 #6	20'-2"	—
x1(E)	144 #6	7'-6"	—

Concrete Superstructure	Cu. Yd.	25.0
Concrete Removal	Cu. Yd.	22.7
Reinforcement Bars, Epoxy Coated	Pound	4340

Reinforcement bars designated (E) shall be epoxy coated.

**ABUTMENT JOINTS**  
**REPLACEMENT DETAILS**  
**SN 002-0031**

\*D9 CM BRIDGE REPAIR 2017-1

FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -
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PLOT SCALE = 9.0000' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/11/2016	DATE -	REVISED -	

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

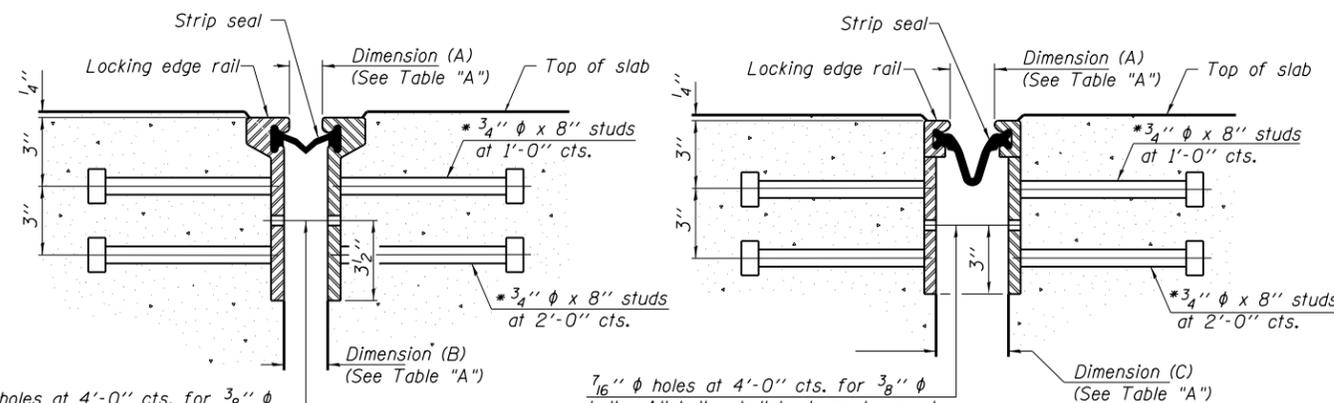
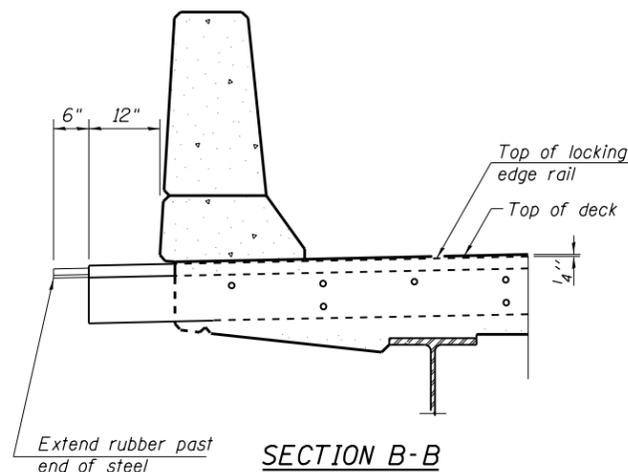
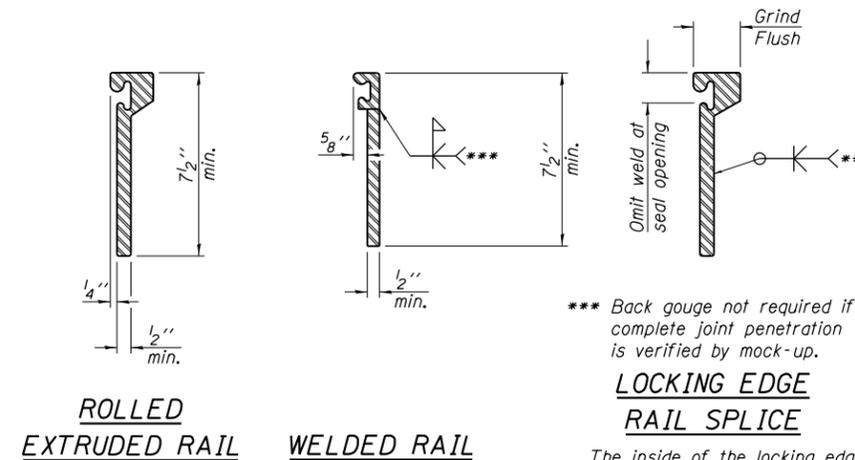
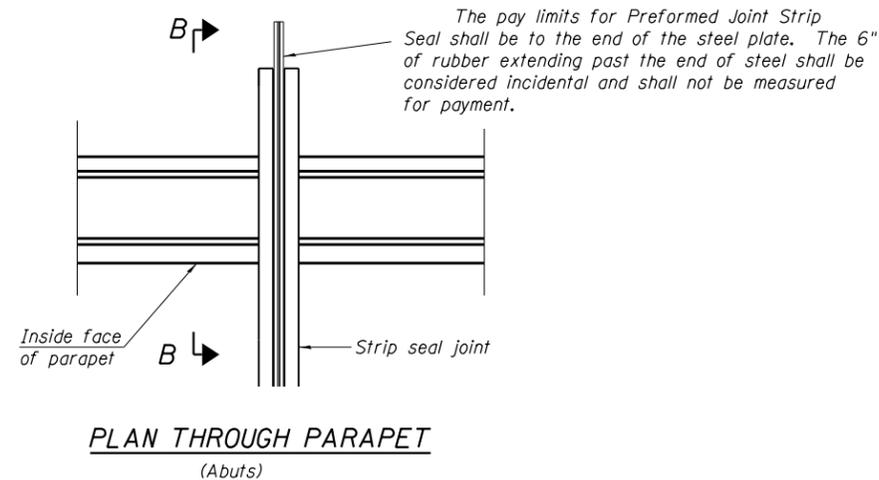
**ABUTMENT JOINT DETAILS**

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	.	ALEXANDER	13	9

CONTRACT NO. 78530

ILLINOIS FED. AID PROJECT



**TABLE "A"**  
(All dimensions @ 50° F)

Joint	A	B	C
Abuts.	1 1/2"	2"	2 3/4"

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

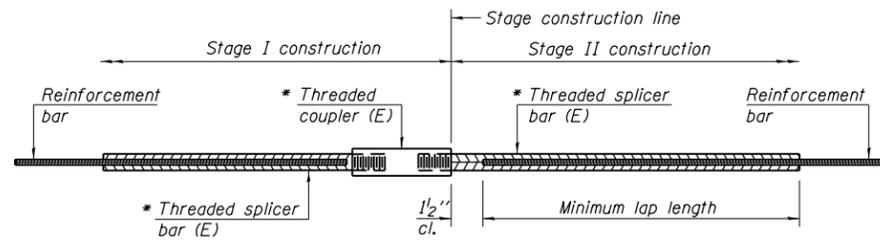
Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	91

**PREFORMED JOINT STRIP SEAL  
ALEXANDER COUNTY  
STRUCTURE NO. 002-0031**

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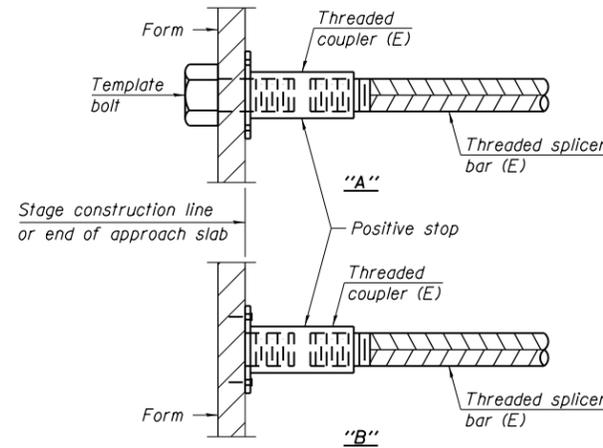


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutments (deck)	#7	18	4'-2"
Hatch Block	#6	6	4'-0"

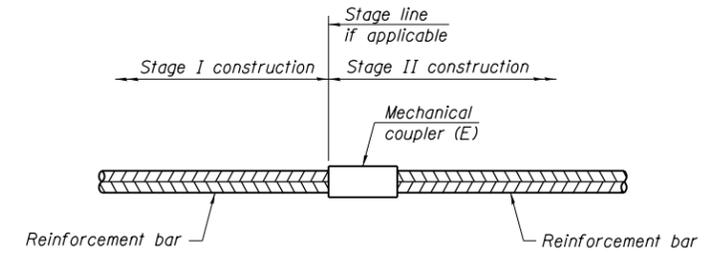


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

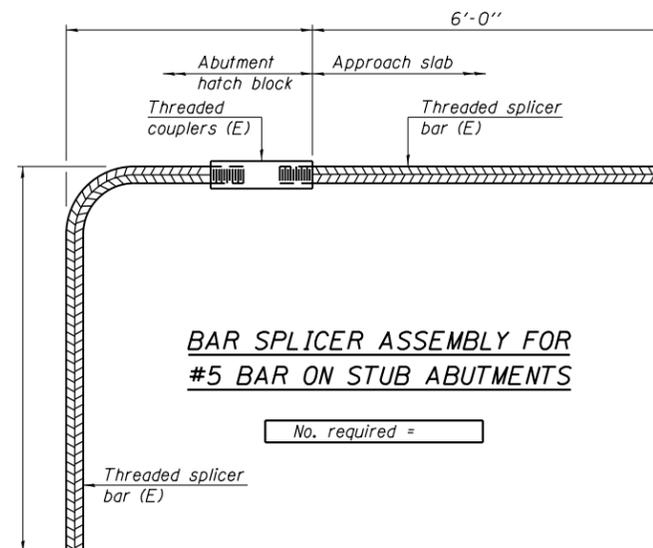
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

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\* D9 CM BRIDGE REPAIR 2017-1

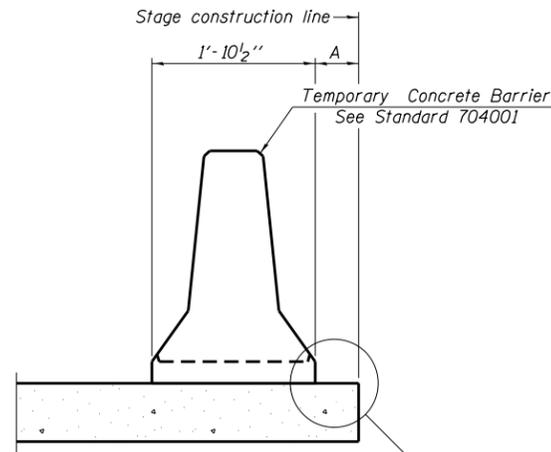
FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -
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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO.**

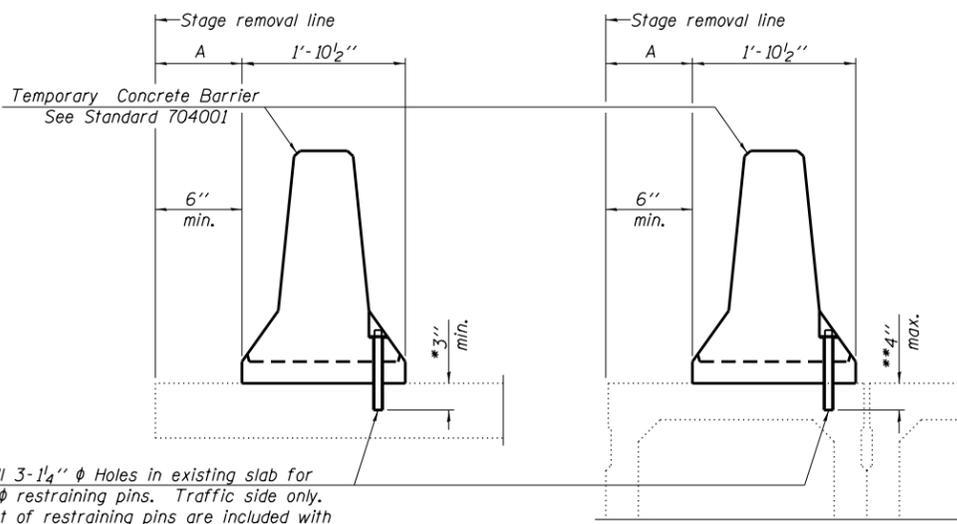
SCALE: SHEET 6 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14	*	ALEXANDER	13	11
CONTRACT NO. 78530				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I or Detail II. No restraint is required when "A" is greater than 3'-1".

**NEW SLAB**



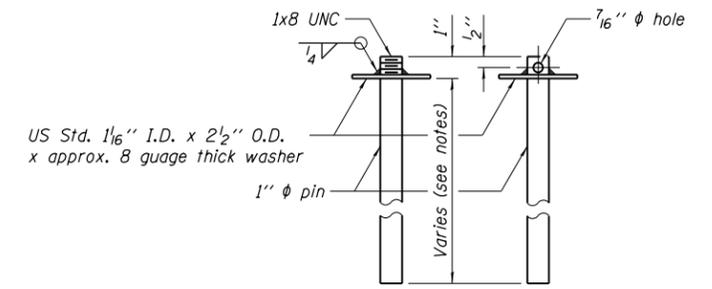
Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

**EXISTING SLAB**

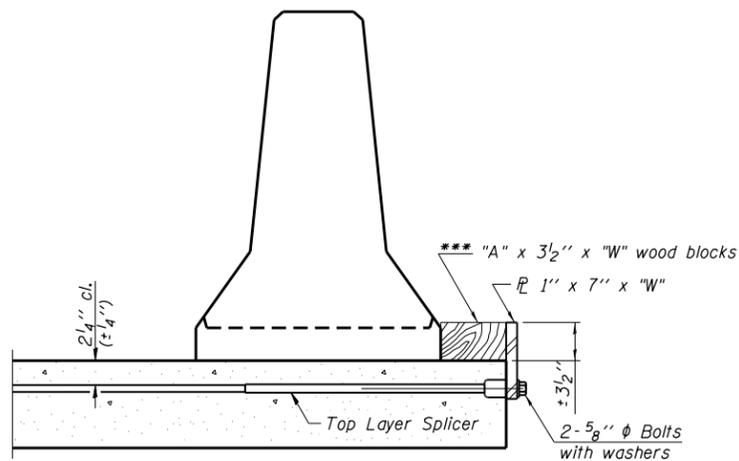
**EXISTING DECK BEAM**

**SECTIONS THRU SLAB OR DECK BEAM**

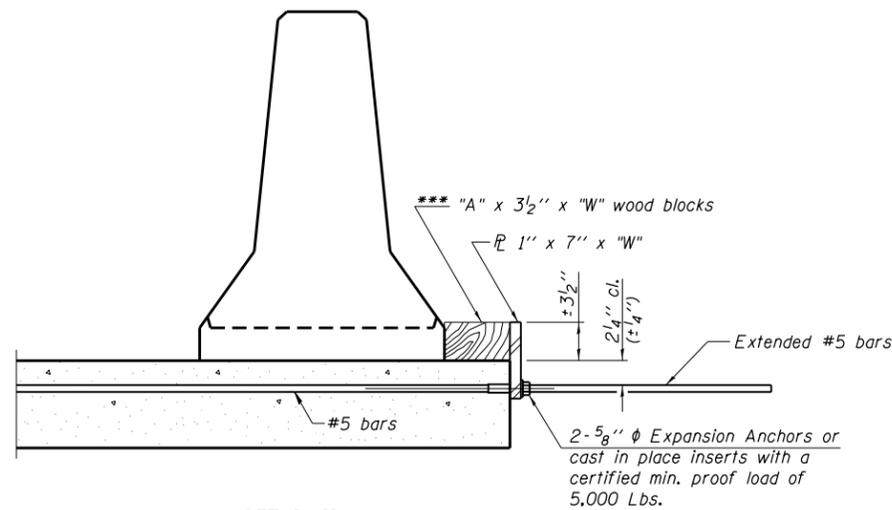
- \* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- \*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**RESTRAINING PIN**



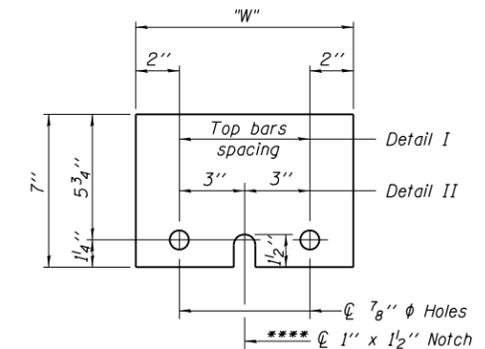
**DETAIL I**



**DETAIL II**

**RETAINER ASSEMBLY**

\*\*\* 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 1" x 7" x "W"**

\*\*\*\* Required only with Detail II

**NOTES**

- Detail I - With Bar Splicer or Couplers: Connect one (1) 1" x 7" x "W" steel  $\mathcal{R}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\mathcal{C}$  of each barrier panel.
  - Detail II - With Extended Reinforcement Bars: Connect one (1) 1" x 7" x "W" steel  $\mathcal{R}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\mathcal{C}$  of each barrier panel.
- Cost of retainer assembly is included with Temporary Concrete Barrier. The 1" x 7" x "W" 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.

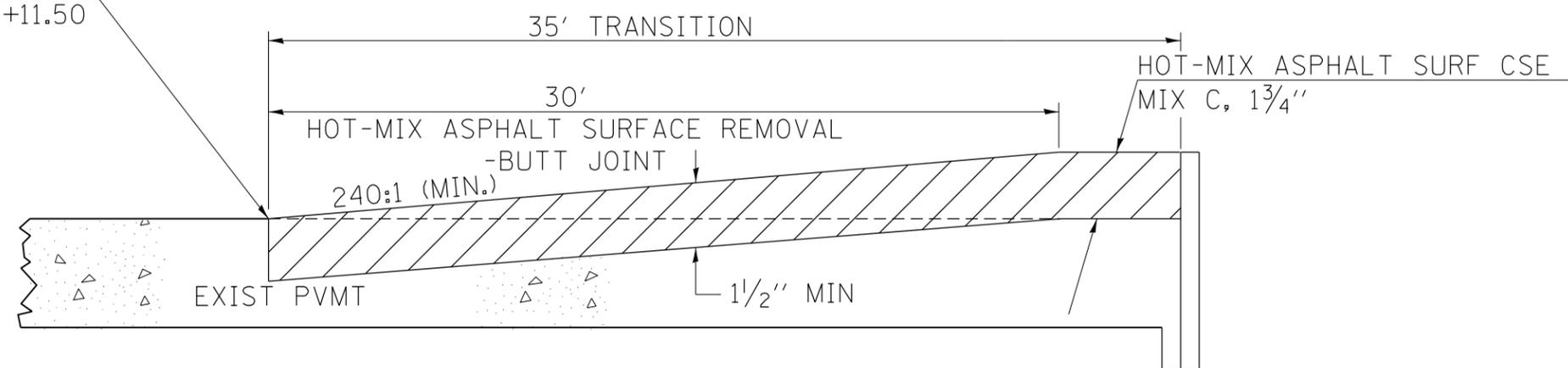
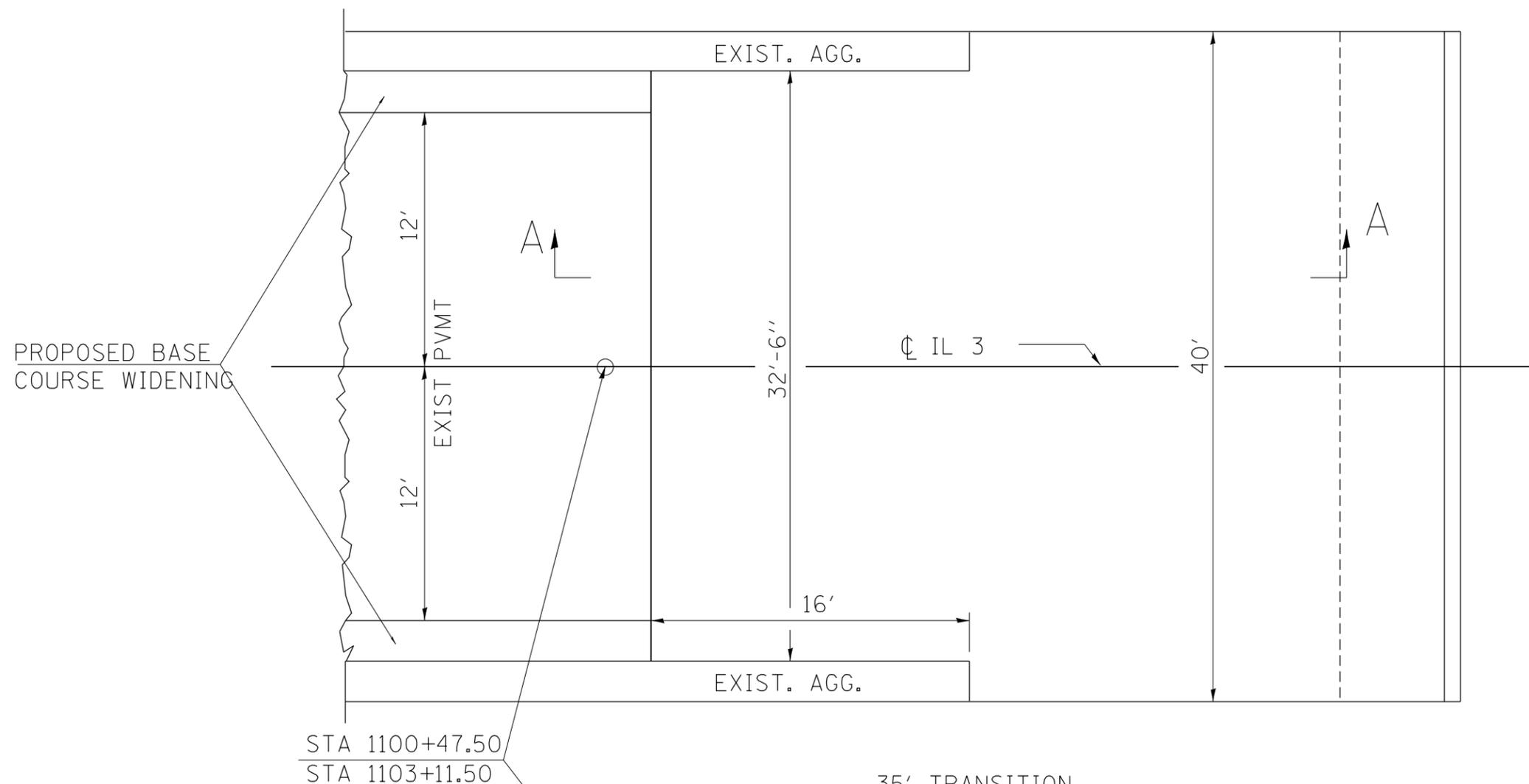
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\* D9 CM BRIDGE REPAIR 2017-1

FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 002-0031</b>	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 8/11/2016						ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET 7	OF 7 SHEETS	STA.	TO STA.	

# BUTT JOINT



SECTION A-A

REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	5-17-13

STD. 9-86

\* D9 CM BRIDGE REPAIR 2017-1

FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BUTT JOINT DETAIL</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 8/11/2016								ILLINOIS FED. AID PROJECT				