3-5-10 Letting, Item 036

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	1
	ILLINOIS	CONTRACT NO. 78159		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAI ROUTE 57 NB /FAI ROUTE 57 SB
SECTION D9 BSMART FY10–2
PULASKI COUNTY
MICROSILICA OVERLAY AND MISC. REPAIRS

C–99–014–10

PROJECT NO. ACIM-057-1(200)005

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

I–57 TRAFFIC DATA

2007 ADT = 10,200
37% TRUCKS

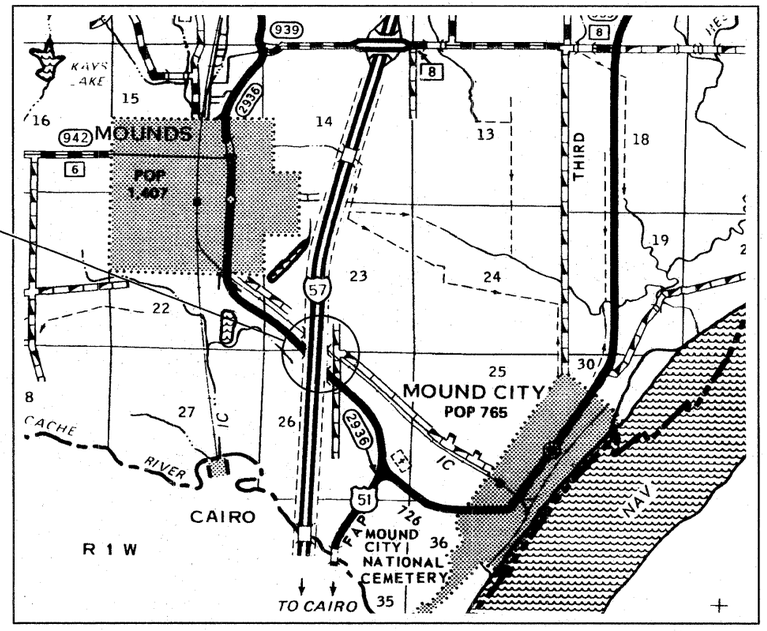
TOWNSHIPS:

COUNTY UNIT ROAD DISTRICT

D–99–014–10

LOCATION OF SECTION INDICATED THUS: – ■–

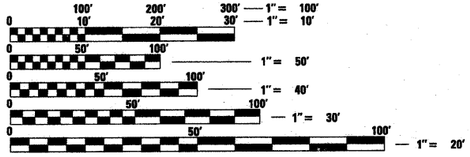
EXISTING SRUCTURE NO. 077–0003
FAI 57 (I–57) NB
EXISTING STRUCTURE NO. 077–0004
FAI 57 (I–57) SB



GROSS LENGTH OF PROJECT = 174 FT

SN 077–0003 (NB)
BRIDGE LENGTH = 174 FT
NET LENGTH = 174 FT

SN 077–0004 (SB)
BRIDGE LENGTH = 174 FT
NET LENGTH = 174 FT



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Nov 19 20 09
Mary C. Hamm
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

January 29, 20 10
Scott E. Stitt P.E.
Actg ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 20 10
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: DAVID PICHE (618) 351–5227
DESIGNER: T. WAYNE HALSTEAD (618) 351–5228

CONTRACT NO. 78159

PRINTED BY THE AUTHORITY 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: ON PAVEMENT	0.09 GAL /SQ YD

3) PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

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) COMMITMENTS: NONE AS OF DECEMBER 11, 2009.

MIXTURE REQUIREMENTS

LOCATION(S):	HOT-MIX ASPHALT SHOULDERS
MIXTURE USES(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N70
AC/PG:	PG64-22
RAP% (MAX):	10
DESIGN AIR VOIDS:	4%, 70 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICTION AGGREGATE:	C SURFACE

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
642001-01	SHOULDER RUMBLE STRIPS
701101-02	OFF-ROAD, MULTILANE 15' TO PAVEMENT EDGE
701400-04	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-05	LANE CLOSURE FREEWAY/EXPRESSWAY
701402-07	LANE CLOSURE FREEWAY/EXPRESSWAY, WITH BARRIER
701421-02	LANE CLOSURE, MULTILANE, DAY OPERATION ONLY, FOR SPEEDS $\geq$ 45 MPH TO 55 MPH
701426-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS $\geq$ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS

INDEX OF SHEETS

Prepared By: Dennis W. Hillebrand
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Irwin Emery
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Connie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Keith Dilger
DISTRICT OPERATIONS ENGINEER

Examined By: John Smothers
DISTRICT CONSTRUCTION ENGINEER

Examined By: Brunner Riebel
DISTRICT MATERIALS ENGINEER

Examined By: John Smothers
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Danny L. Paxton
ASSISTANT REGIONAL ENGINEER

Approved By: Mike Lamie
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

Nov. 19 2009
DATE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, STANDARDS, INDEX OF SHEETS AND MIXTURE REQUIREMENTS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	2
		CONTRACT NO. 78195		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	90% FEDERAL 10% STATE CONSTRUCTION TYPE CODE SFTY-2A PULASKI SN 077-0003 & 077-0004 UNIT	QUANTITY
42001300	PROTECTIVE COAT	SQ YD	1548
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	569
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	1536
48203100	HOT-MIX ASPHALT SHOULDERS	TON	48
50102400	CONCRETE REMOVAL	CU YD	27.5
50157300	PROTECTIVE SHIELD	SQ YD	354
50300255	CONCRETE SUPERSTRUCTURE	CU YD	31.3
50300260	BRIDGE DECK GROOVING	SQ YD	1410
50300530	FLOOR DRAIN EXTENSION	EACH	32
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3380
50800515	BAR SPLICERS	EACH	44
52000110	PREFORMED JOINT STRIP SEAL	FOOT	208
64200105	SHOULDER RUMBLE STRIP	FOOT	1280
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1
70100805	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	35
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2063
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	700
70400100	TEMPORARY CONCRETE BARRIER	FOOT	800
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	800
* 78004210	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LINE 4"	FOOT	2063
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	427
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2
X0321468	PLUG EXISTING DECK DRAINS	EACH	32
* X0323644	PAVEMENT MARKING GROOVING	FOOT	2063
XZ191200	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"	SQ YD	1466

*Specialty Items

CODE NUMBER	ITEM DESCRIPTION	90% FEDERAL 10% STATE CONSTRUCTION TYPE CODE SFTY-2A PULASKI SN 077-0003 & 077-0004 UNIT	QUANTITY
Z0006204	BRIDGE DECK HYDRO-SCARIFICATION 1/2"	SQ YD	1466
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

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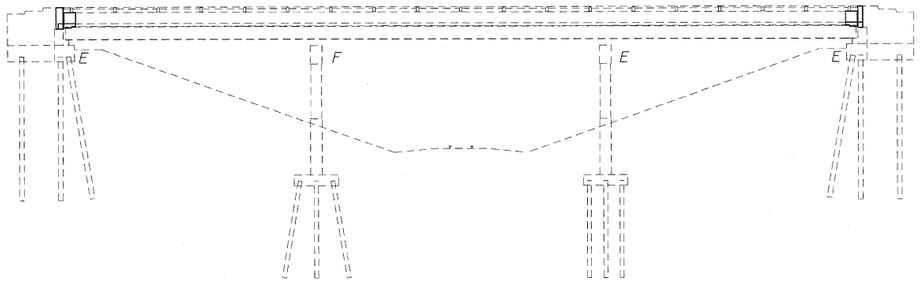
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

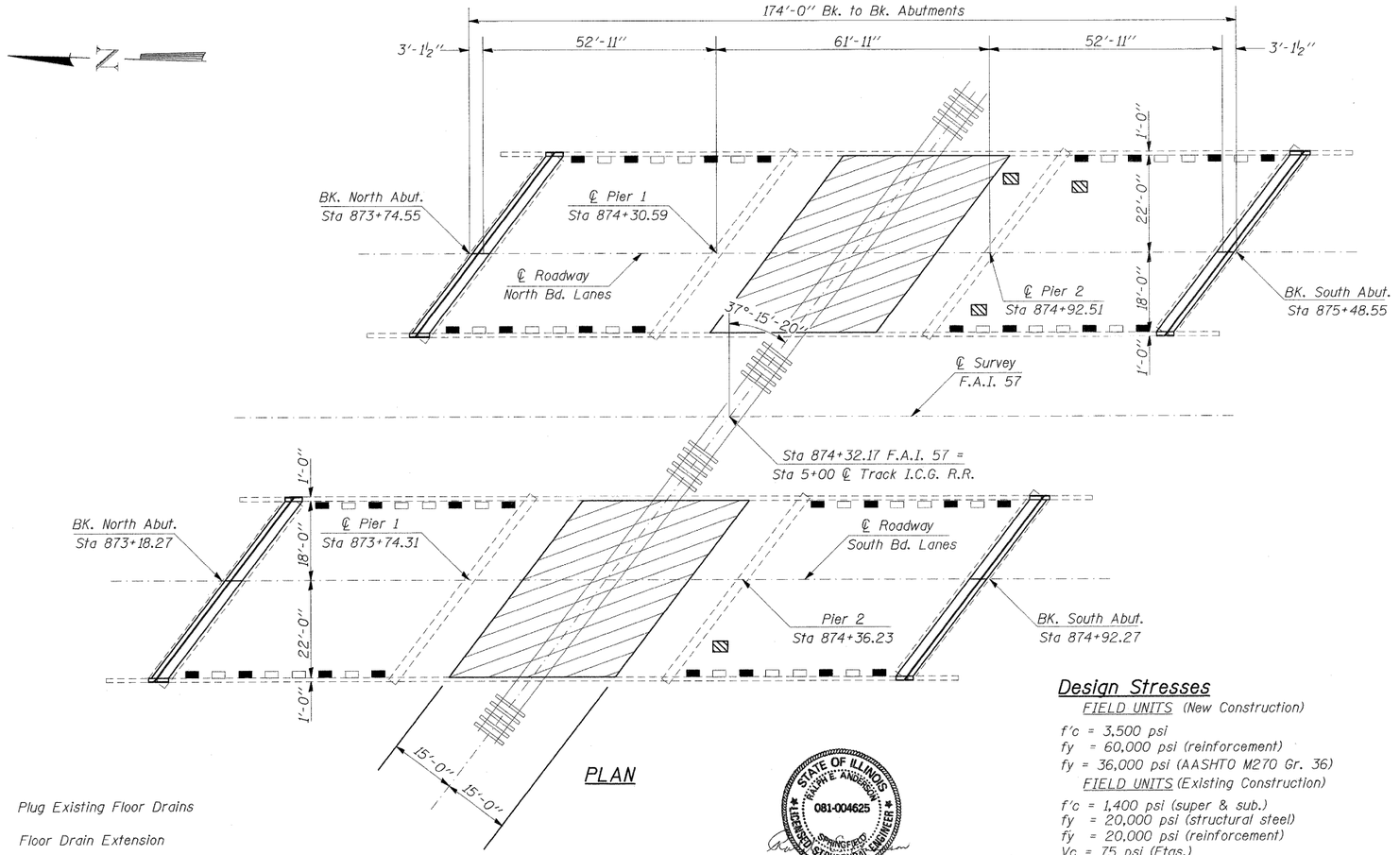
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	3
		CONTRACT NO. 78195		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ELEVATION



PLAN

- Plug Existing Floor Drains
- Floor Drain Extension
- Deck Slab Repair (Full Depth, Type I) 1' x 2' typ.
- Limits of Protective Shield

GENERAL NOTES

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted.
No field welding is permitted except as specified in the contract documents.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Prior to pouring the new concrete deck section, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.
Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
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.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".
The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the Acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".
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.
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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANITY
Concrete Removal	Cu. Yd.	27.5
Concrete Superstructures	Cu. Yd.	31.3
Bridge Deck Grooving	Sq. Yd.	1410
Protective Shield	Sq. Yd.	354
Plug Existing Deck Drains	Each	32
Reinforcement Bars, Epoxy Coated	Pound	3380
Bar Splicers	Each	44
Preformed Joint Strip Seal	Foot	208
Floor Drain Extension	Each	32
HMA Surface Removal (Deck)	Sq. Yd.	1536
Bridge Deck Microsilica Concrete Overlay 2½"	Sq. Yd.	1466
Bridge Deck Hydro-Scarification ½"	Sq. Yd.	1466
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Protective Coat	Sq. Yd.	1548

Design Stresses

FIELD UNITS (New Construction)

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (AASHTO M270 Gr. 36)

FIELD UNITS (Existing Construction)

f'c = 1,400 psi (super & sub.)
fy = 20,000 psi (structural steel)
fy = 20,000 psi (reinforcement)
Vc = 75 psi (Ftgs.)
n = 10

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

Expires 11-30-2010

BRIDGE REPAIRS
FAI RT 57 OVER ICG RR
PULASKI COUNTY
STA 874+32.17
SN 077-0003 (NB)
SN 077-0004 (SB)

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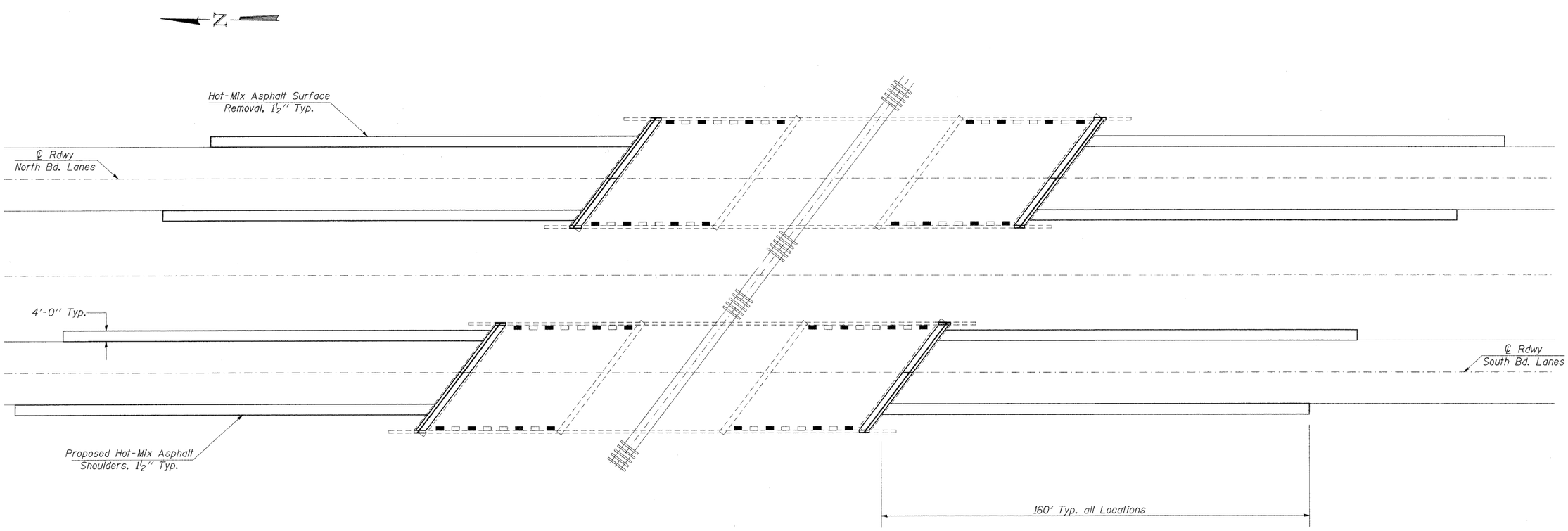
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	4
		CONTRACT NO. 78159		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Notes:

Shoulder work shall be done prior to allowing staged traffic.

SHOULDER RUMBLE STRIP REMOVAL DETAILS STRUCTURE NO. 077-0003 & 077-0004

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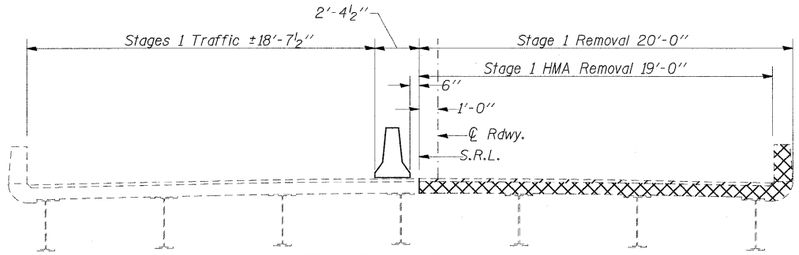
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9BSMART FY10-2	PULASKI	12	5
		CONTRACT NO. 78159		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

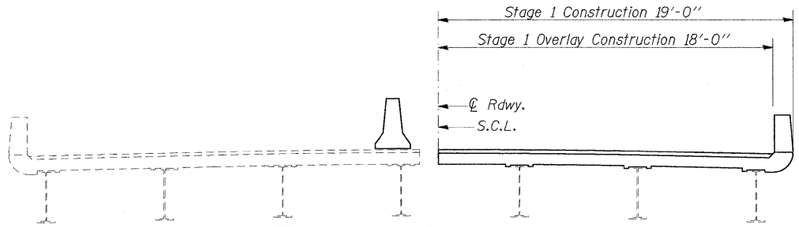
SECTIONS AT JOINTS

All Sections Looking North



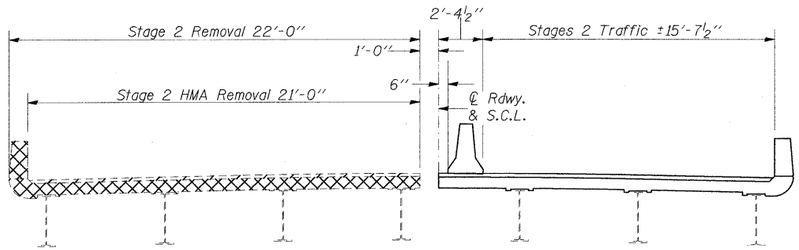
STAGE I REMOVAL

Southbound Lane



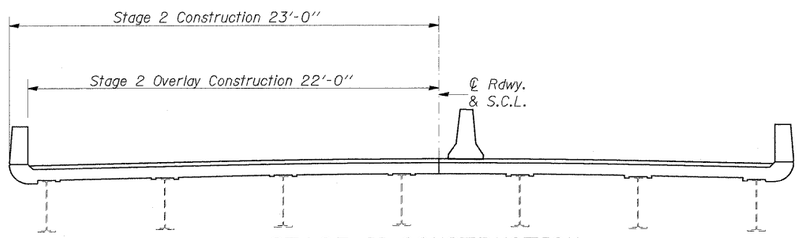
STAGE I CONSTRUCTION

Southbound Lane



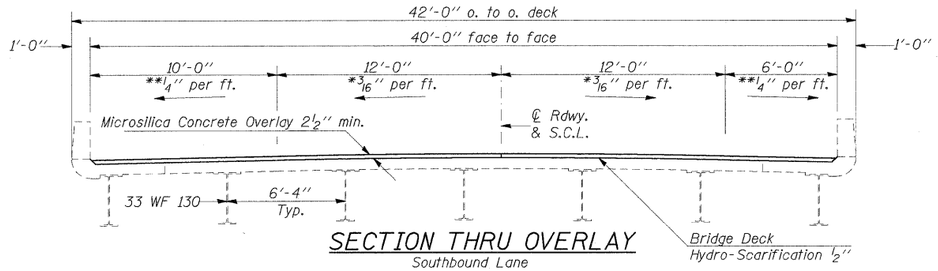
STAGE II REMOVAL

Southbound Lane



STAGE II CONSTRUCTION

Southbound Lane



SECTION THRU OVERLAY

Southbound Lane

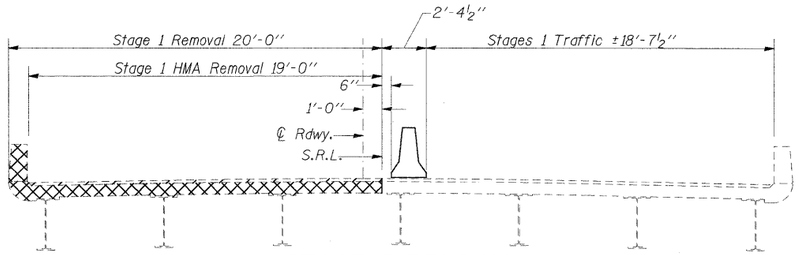
Concrete Removal at Abuts Joints

HMA Surface Removal

NOTES:

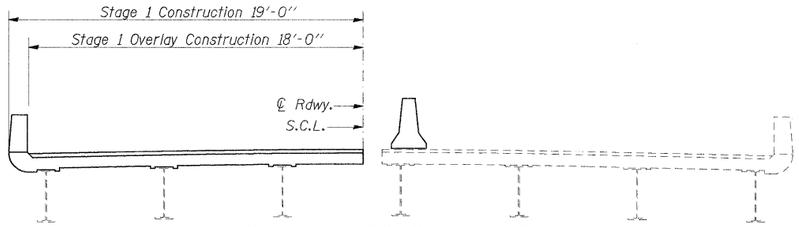
* The original deck portion was constructed on a 1½" Circular Crown in 12'-0".

** The original deck portion was constructed on a slope of ¼" per ft.



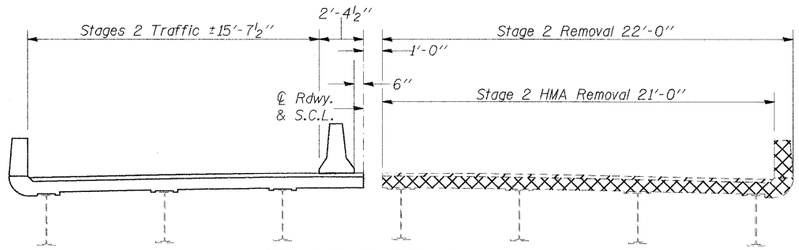
STAGE I REMOVAL

Northbound Lane



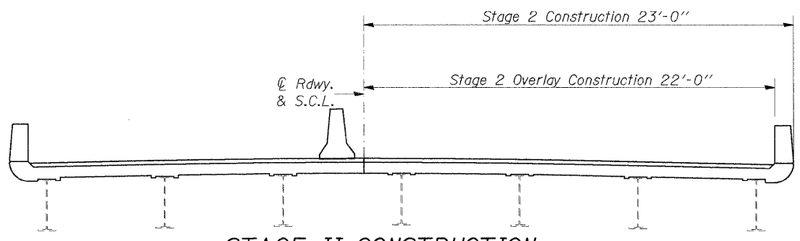
STAGE I CONSTRUCTION

Northbound Lane



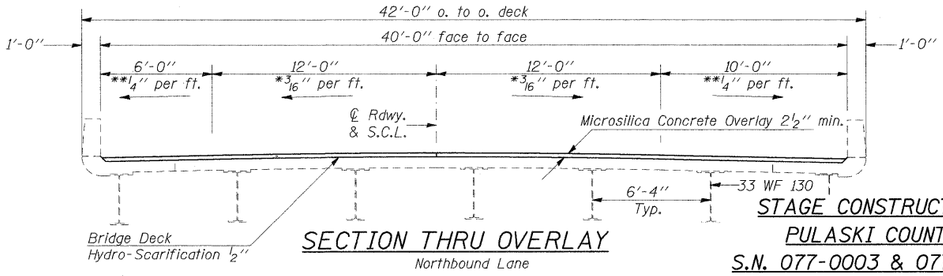
STAGE II REMOVAL

Northbound Lane



STAGE II CONSTRUCTION

Northbound Lane



SECTION THRU OVERLAY

Northbound Lane

STAGE CONSTRUCTION
PULASKI COUNTY
S.N. 077-0003 & 077-0004

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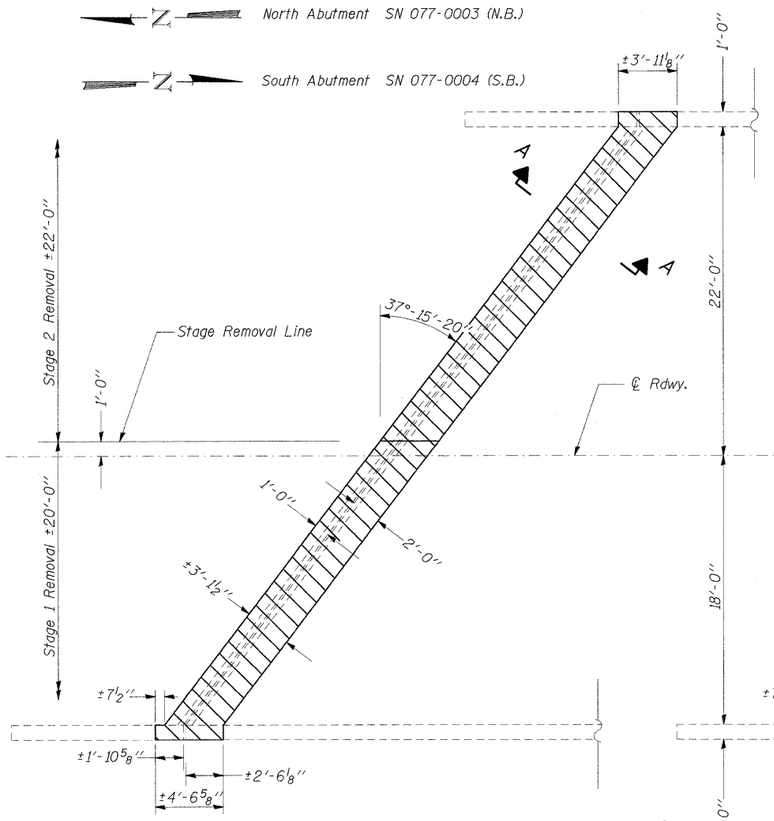
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

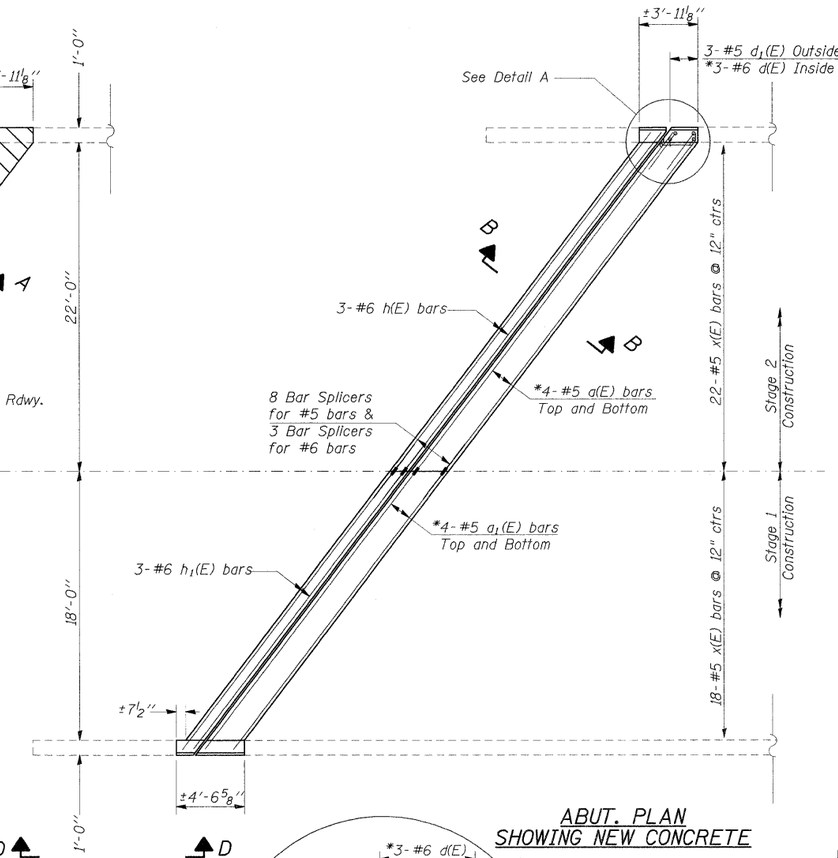
STAGING DETAILS

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	6
		CONTRACT NO. 78159		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ABUT. PLAN SHOWING CONCRETE REMOVAL



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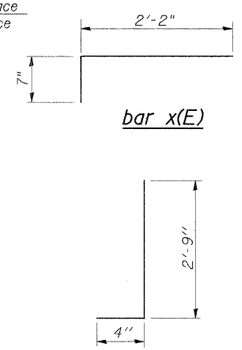
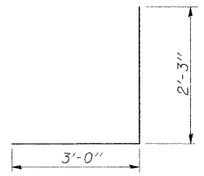


bar x(E)

bar d(E)



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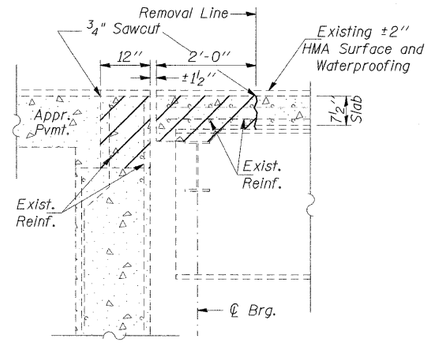

SECTION A-A

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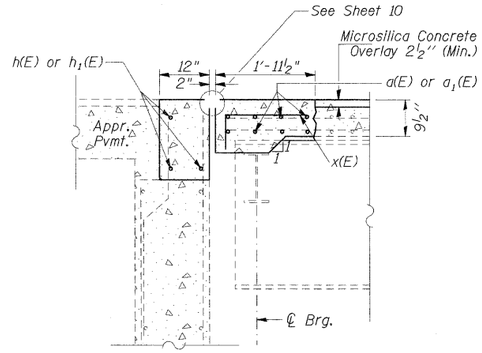
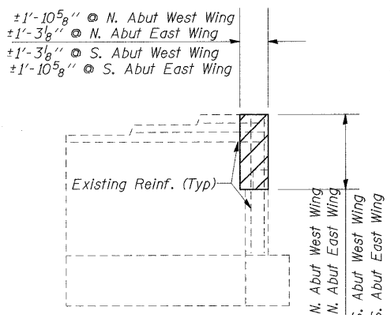


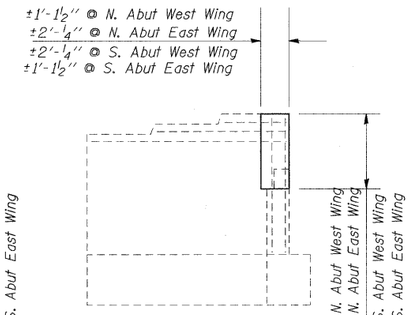
SECTION B-B

Dimensions measured @ Right Angles



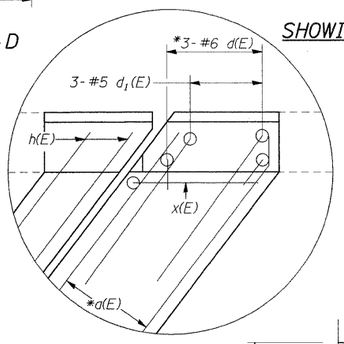
VIEW C-C

Showing Concrete Removal

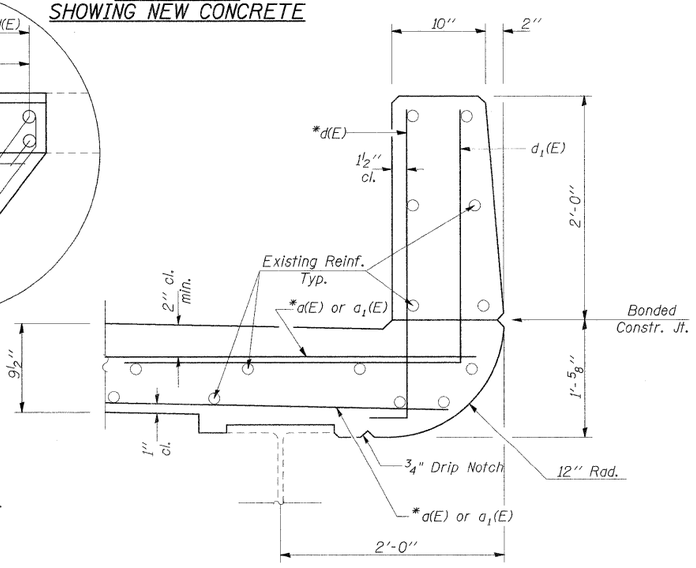


VIEW D-D

Showing Concrete Superstructures



DETAIL A



SECTION THRU PARAPET

Notes:

* Bend or turn Bars in Field to fit.

BILL OF MATERIAL (2 ABUTMENTS)

Bar	No.	Size	Length	Shape
a(E)	16	#5	28'-6"	—
a1(E)	16	#5	23'-6"	—
d(E)	12	#6	3'-1"	⌟
d1(E)	12	#5	5'-3"	⌟
h(E)	6	#6	28'-6"	—
h1(E)	6	#6	23'-6"	—
x(E)	80	#5	2'-9"	⌜
Concrete Superstructure			Cu. Yd.	15.65
Concrete Removal			Cu. Yd.	13.75
Reinforcement Bars, Epoxy Coated			Pound	1690

NORTH ABUT. SN 077-0003 (N.B) SOUTH ABUT. SN 077-0004 (S.B) JOINT REPLACEMENT DETAILS PULASKI COUNTY

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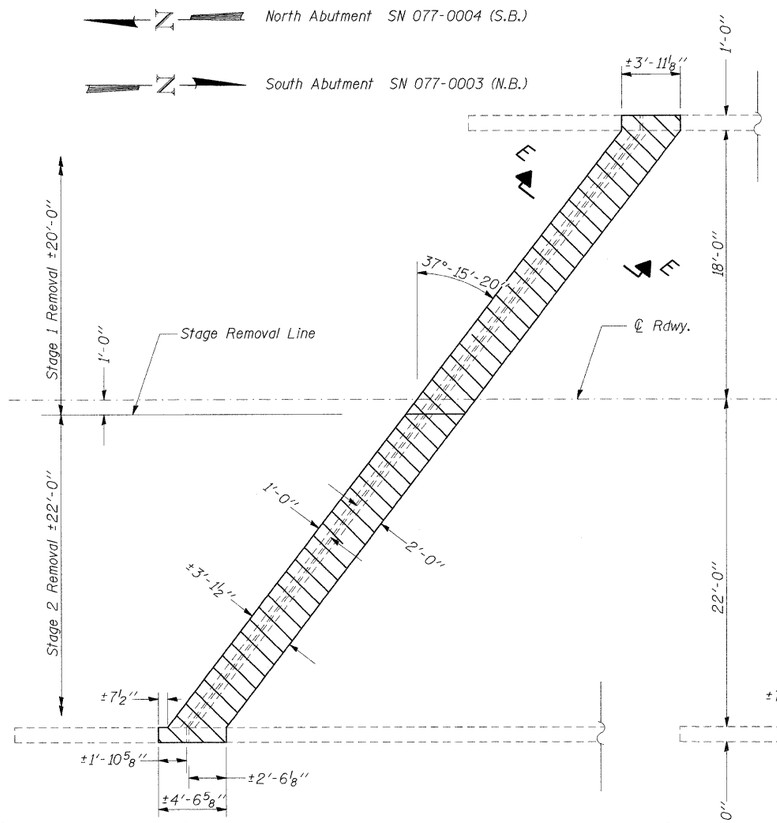
		DRAWN - TWH	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED - MAS	REVISED -
	PLOT DATE = 10/19/2009	DATE - 10/15/09	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

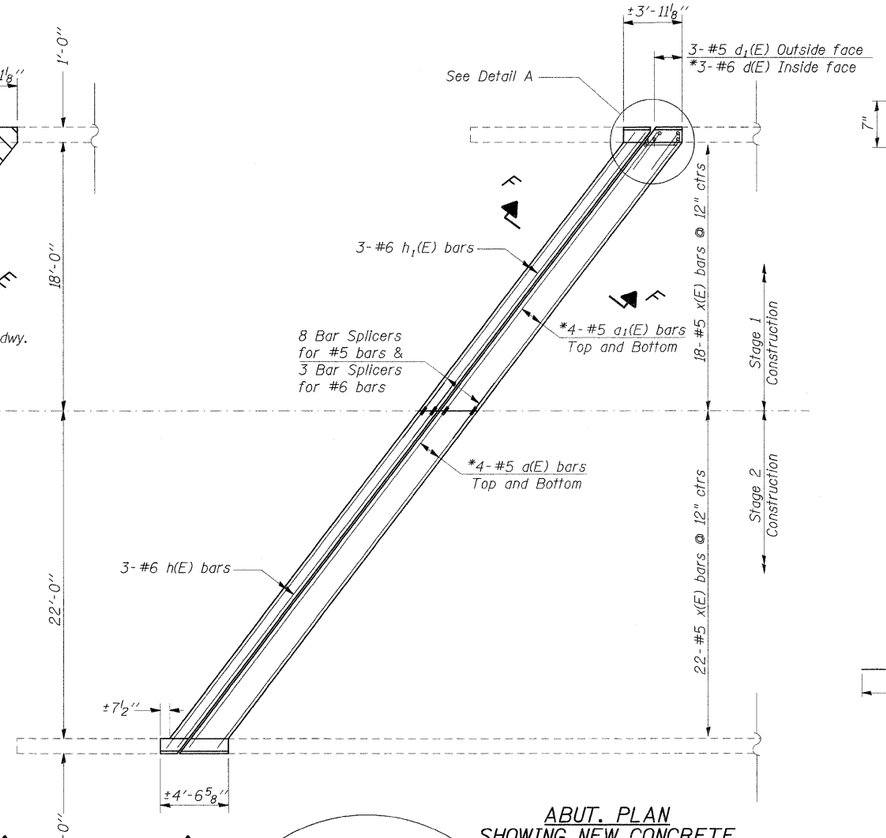
JOINT REPLACEMENT DETAILS
SN 077-0003

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

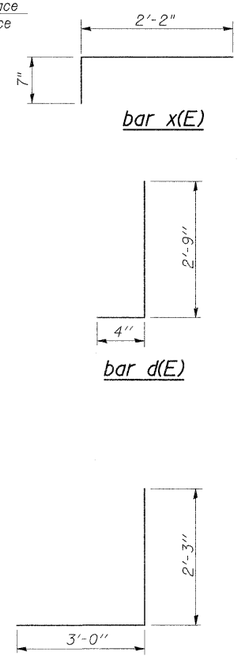
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	7
		CONTRACT NO. 78159		
	ILLINOIS FED. AID PROJECT			

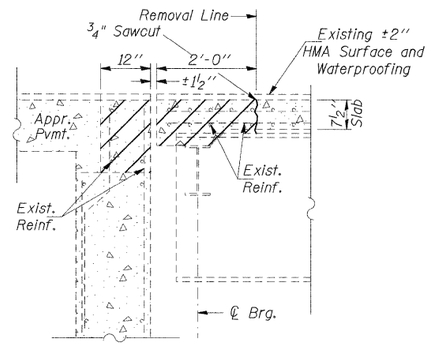


ABUT. PLAN SHOWING CONCRETE REMOVAL



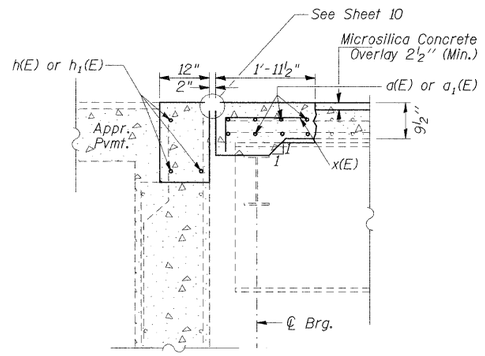
ABUT. PLAN SHOWING NEW CONCRETE





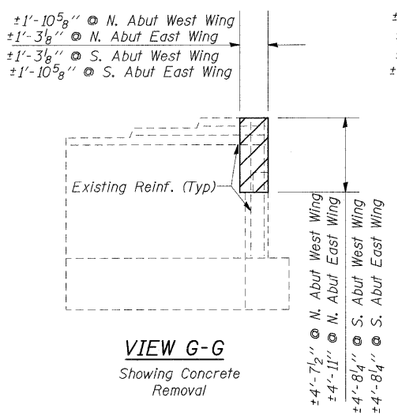
SECTION E-E

Dimensions measured ⊙ Right Angles



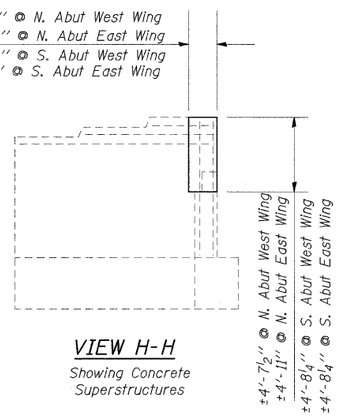
SECTION F-F

Dimensions measured ⊙ Right Angles



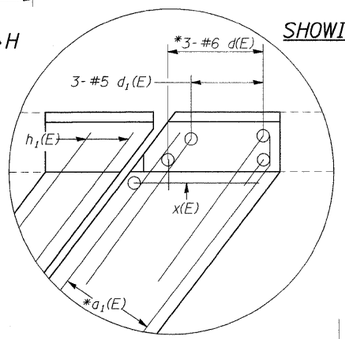
VIEW G-G

Showing Concrete Removal

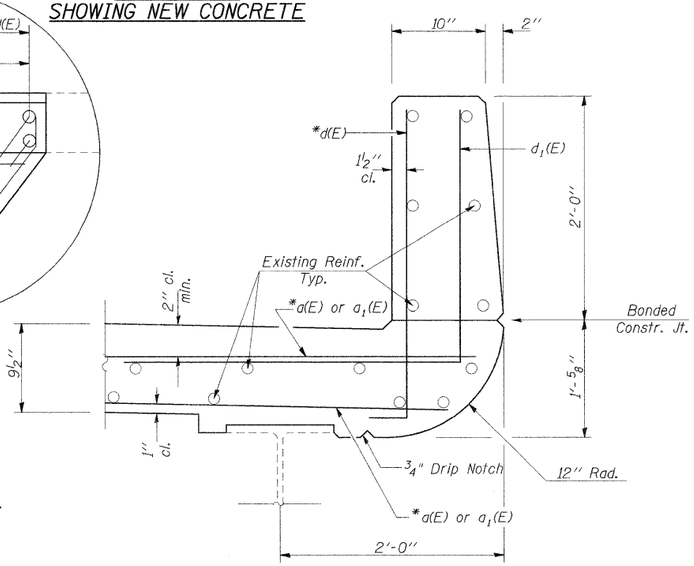


VIEW H-H

Showing Concrete Superstructures



DETAIL A



SECTION THRU PARAPET

Notes:

* Bend or turn Bars in Field to fit.

BILL OF MATERIAL (2 ABUTMENTS)

Bar	No.	Size	Length	Shape
d(E)	16	#5	28'-6"	
a1(E)	16	#5	23'-6"	
d(E)	12	#6	3'-1"	
d1(E)	12	#5	5'-3"	
h(E)	6	#6	28'-6"	
h1(E)	6	#6	23'-6"	
x(E)	80	#5	2'-9"	
Concrete Superstructure			Cu. Yd.	15.65
Concrete Removal			Cu. Yd.	13.75
Reinforcement Bars, Epoxy Coated			Pound	1690

NORTH ABUT. SN 077-0004 (S.B)
SOUTH ABUT. SN 077-0003 (N.B)
JOINT REPLACEMENT DETAILS
PULASKI COUNTY

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	PLOT DATE = 10/19/2009	DATE - 10/15/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
SN 077-0003

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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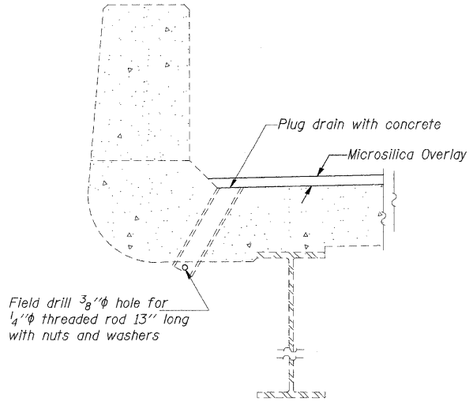
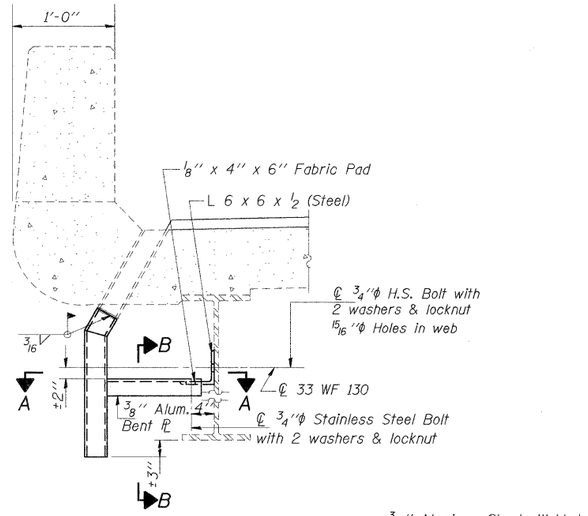
		CONTRACT NO. 78159		
	ILLINOIS FED. AID PROJECT			

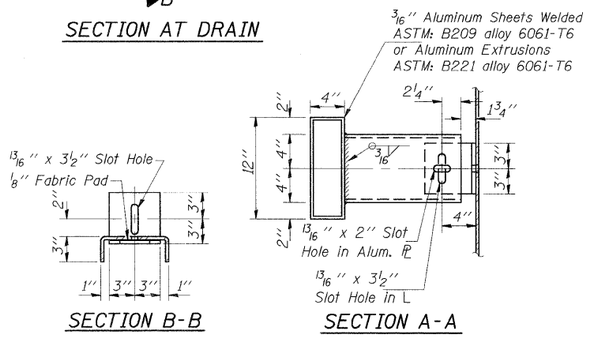


DRAIN ELIMINATION DETAIL

(32 Locations total)



SECTION AT DRAIN

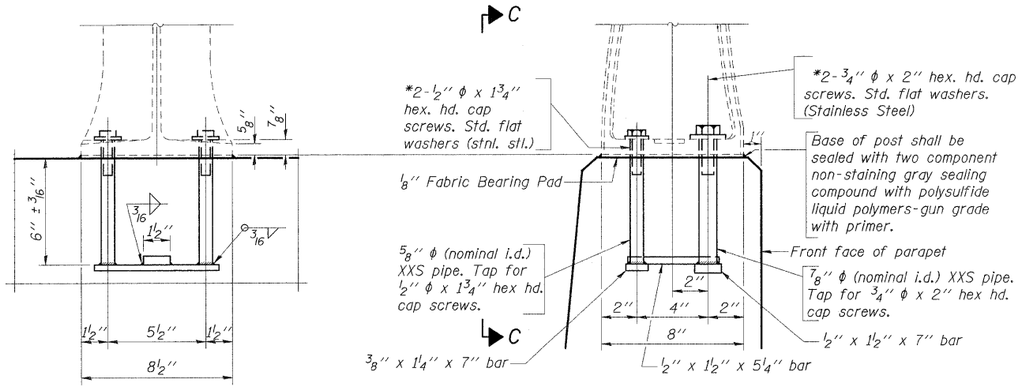


SECTION B-B

SECTION A-A

DRAIN EXTENSION DETAIL

(32 locations total)



VIEW C-C

RAIL POST DETAILS

8 Locations

Notes:

Plug all existing deck drains that are within ±10' of the existing substructure. Locations shown on sheet 4.

Post shall be normal to parapet.

*In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

Removal and and re-erection of the existing aluminum handrail, rail post, and all new applicable hardware, including labor and installation shall be included in the cost of Concrete Removal.

DRAINS AND RAILING DETAILS
PULASKI COUNTY
SN 077-0003 & 077-0004

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

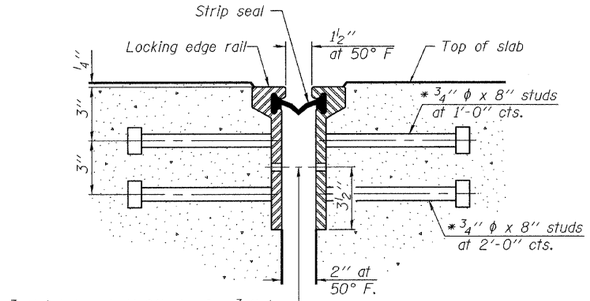
DRAINS AND RAILING DETAILS

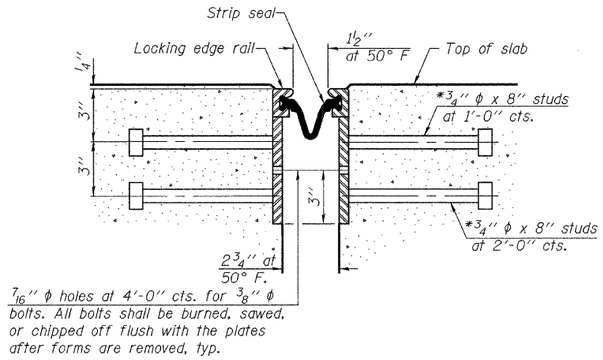
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

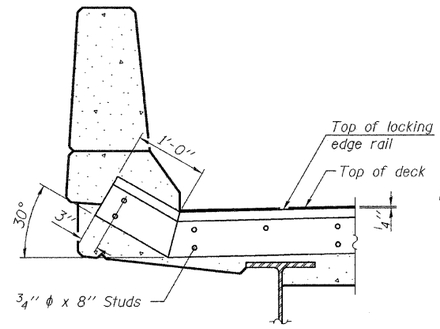
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BSMART FY10-2	PULASKI	12	9
		CONTRACT NO. 78159		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

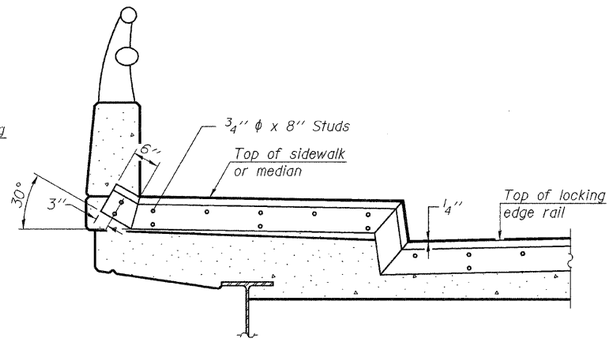






AT PARAPET

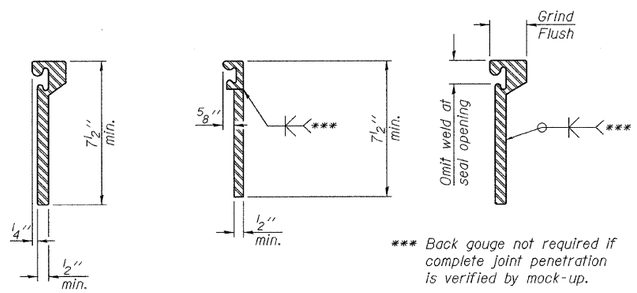
See Section A-A for end treatment of skews > 30°.



AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

SECTION THRU ROLLED RAIL JOINT



ROLLED EXTRUDED RAIL

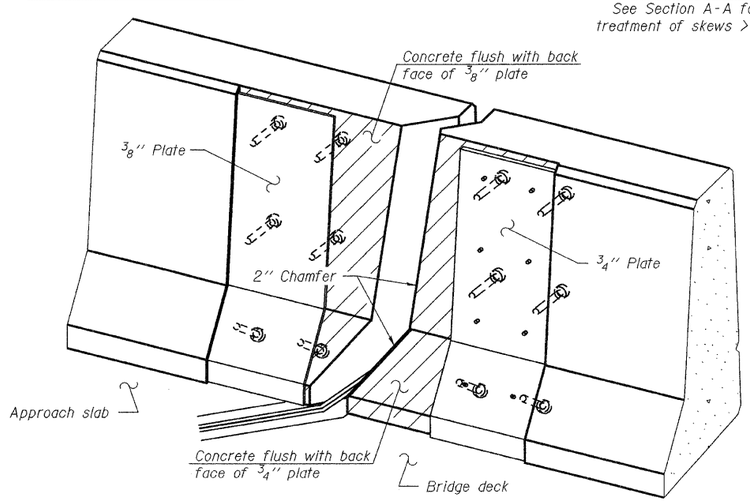
WELDED RAIL

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

SECTION THRU WELDED RAIL JOINT



TRIMETRIC VIEW

(Showing back plates only)

TYPICAL END TREATMENTS

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.

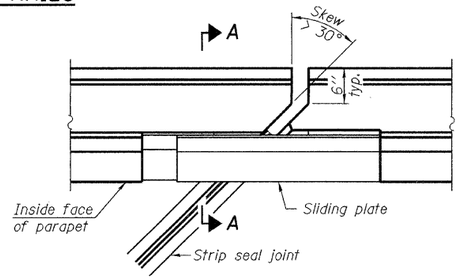
The manufacturer's recommended installation methods shall be followed.

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.

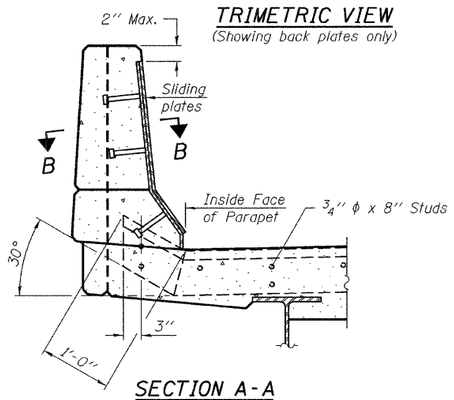
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

LOCKING EDGE RAILS



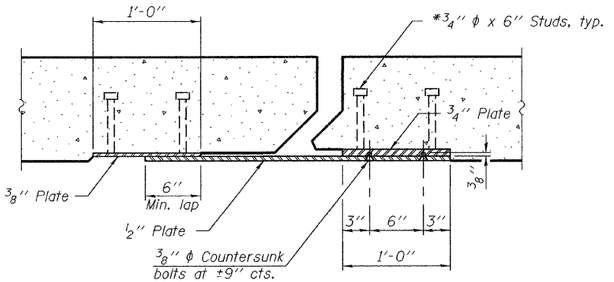
PLAN



SECTION A-A

POINT BLOCK DETAILS

(for skews > 30°)



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	208

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 077-0003 & 077-0004

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS	57	D9 BSMART FY10-2	PULASKI	12	10
			CONTRACT NO. 78159		
		ILLINOIS FED. AID PROJECT			

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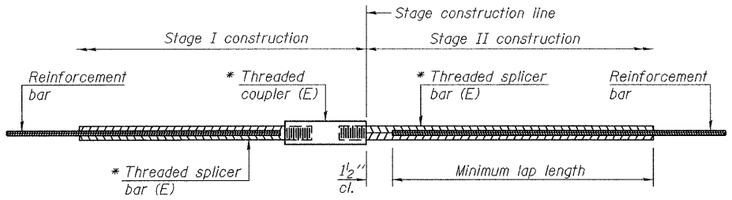
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

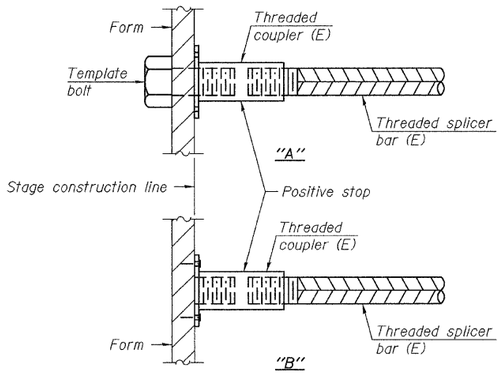
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

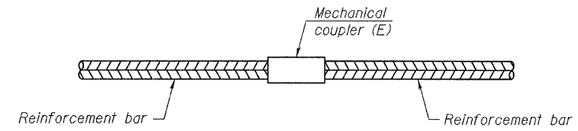
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	32	3
Abutment	#6	12	3



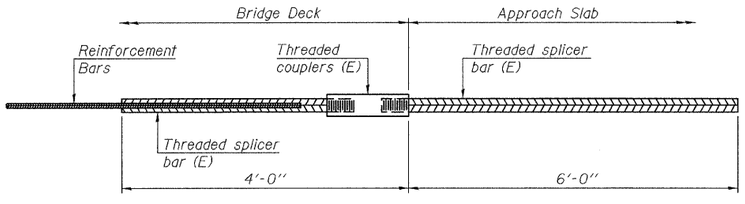
INSTALLATION AND SETTING METHODS

"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.



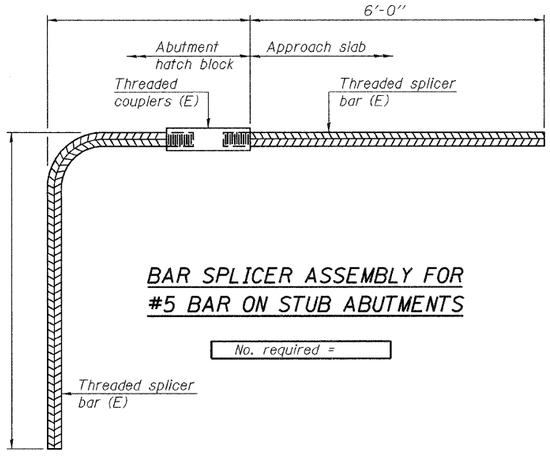
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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 special provision for Mechanical Splicers.

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

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 077-0003 & 077-0004

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS	57	D9 BSMART FY10-2	PULASKI	12	11
			CONTRACT NO. 78159		
		ILLINOIS	FED. AID PROJECT		

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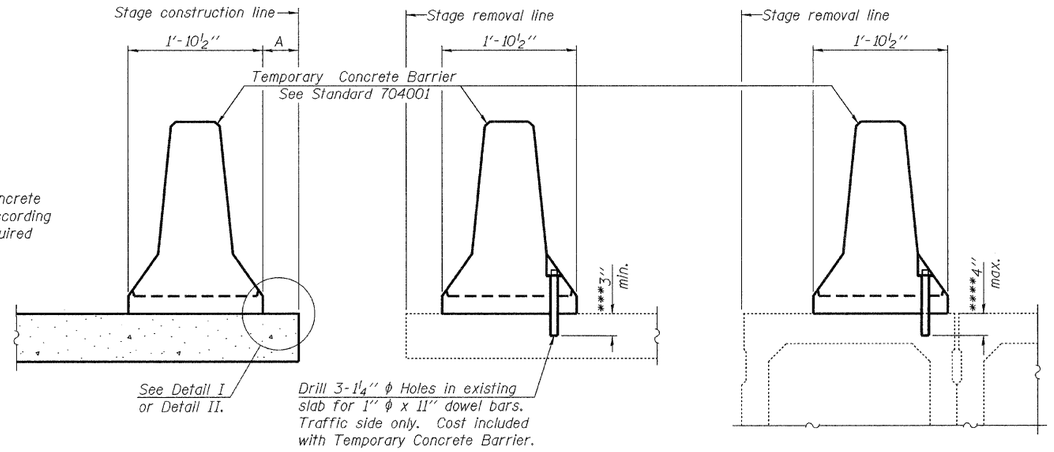
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

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"x 10" 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.

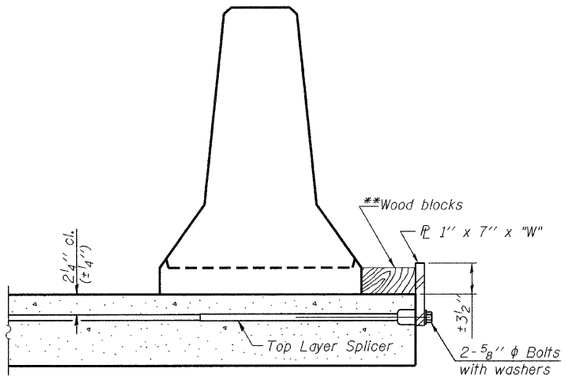
Cost of anchorage is included with Temporary Concrete Barrier.

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.

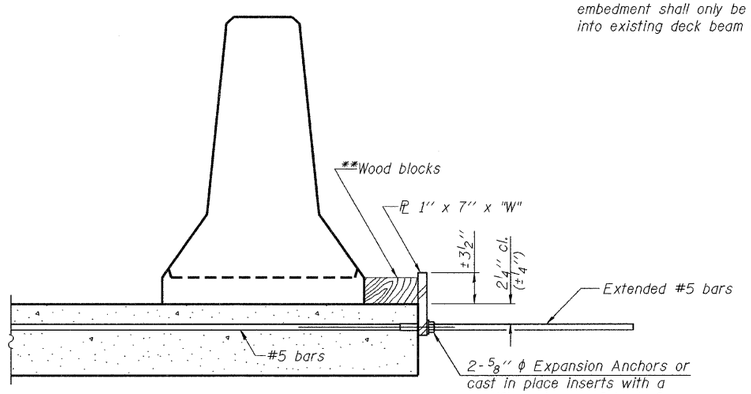
SECTIONS THRU SLAB OR DECK BEAM

*** 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.



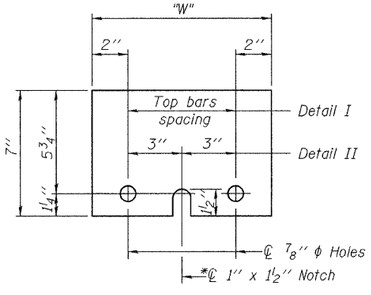
DETAIL I



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.

"W" = Top bars spacing + 4"



STEEL RETAINER ℙ 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 077-0003 & 077-0004

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS	57	D9 BSMART FY10-2	PULASKI	12	12
			CONTRACT NO. 78159		
		ILLINOIS FED. AID PROJECT			

R-27

11-1-09

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