

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	41-2(BR-1)	JEFFERSON	8	1
ILLINOIS		CONTRACT NO. 78245		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAI ROUTE 57 (I-57)
OVER DODDS CREEK
SECTION 41-2(BR-1)
BRIDGE REPAIR
JEFFERSON COUNTY

C-99-032-11
PROJECT IM-057-2(156)088

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

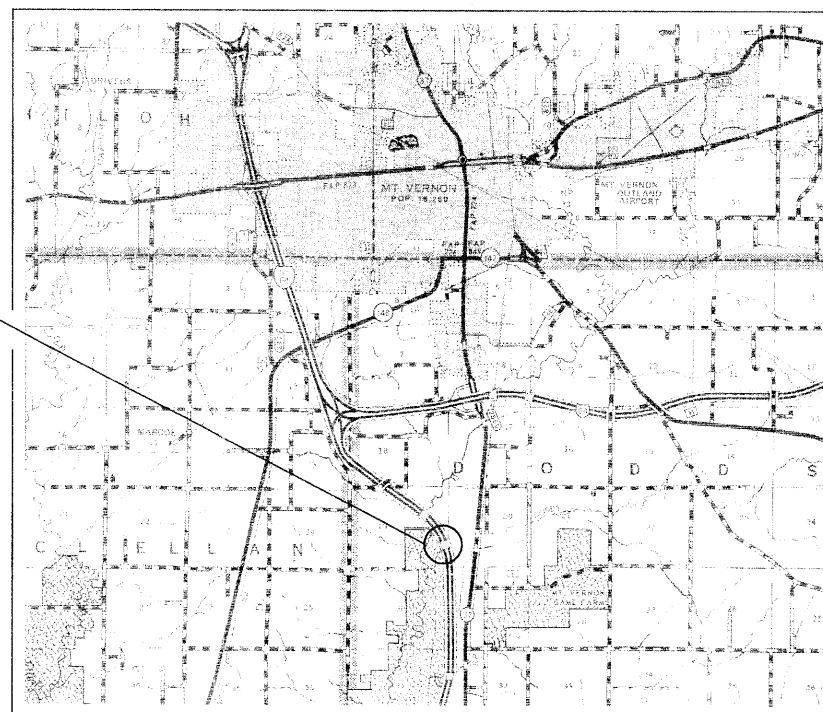
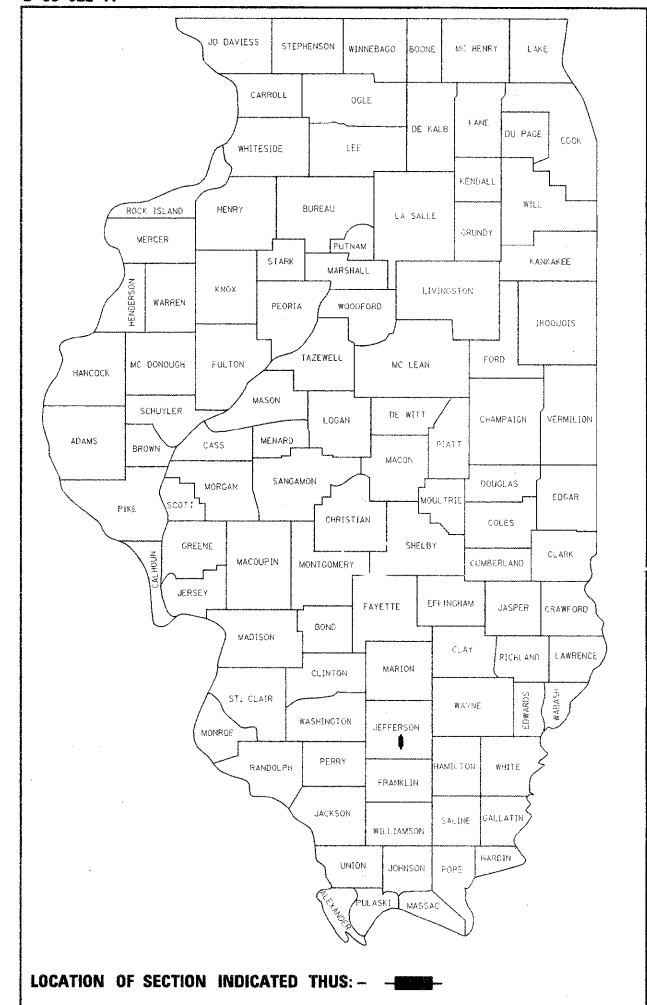
I-57 TRAFFIC DATA

2009 ADT = 29,000
32.7 % TRUCKS

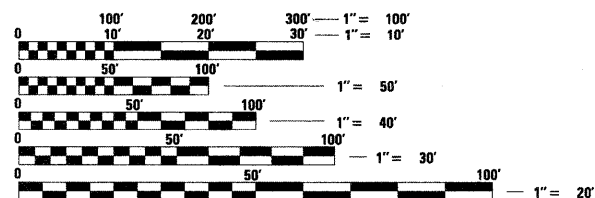
TOWNSHIP:

DODDS

D-99-022-11



PROJECT LOCATION
SN 041-0003 (NB) AND
041-0004 (SB)



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 T. WAYNE HALSTEAD
PROJECT MANAGER DAVID PICHE

CONTRACT NO. 78245

GROSS LENGTH = 160 FT.
NET LENGTH = 160 FT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 17 20 11
M. C. Hami
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13 20 11
Scott E. Stitt P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

May 13 20 11
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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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: 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) THE TRAFFIC BARRIER TERMINAL, TYPE 6 & TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT LOCATED AT THE SOUTHEAST APPROACH OF SN 041-0003 (NB) ARE TO BE REPLACED.
- 6) COMMITMENTS: NONE AS OF MARCH 25, 2011.

STANDARDS

000001-06	STANDARD SYMBOLS, -ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
630001-09	STEEL PLATE BEAM GUARDRAIL
631031-09	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701101-02	OFF-ROAD, MULTILANE 15' TO PAVEMENT EDGE
701400-05	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-06	LANE CLOSURE FREEWAY/EXPRESSWAY
701402-08	LANE CLOSURE FREEWAY/EXPRESSWAY, WITH BARRIER
701426-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS; GENERAL NOTES; STANDARDS
3	SUMMARY OF QUANTITIES
4	WIDE LOAD SIGNING DETAILS
5	GENERAL PLAN AND ELEVATION
6	STAGING TYPICAL SECTION
7	JOINT DETAILS
8	TEMPORARY CONCRETE BARRIER

MIXTURE REQUIREMENTS

LOCATION(S):	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX E, N105
AC/PG:	SBS PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4%, 105 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICTION AGGREGATE:	E SURFACE

LOCATION(S):	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N105
MIXTURE USE(S):	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX C, N105
AC/PG:	SBS PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4%, 105 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICTION AGGREGATE:	NONE

LOCATION(S):	HOT-MIX ASPHALT BINDER COURSE
MIXTURE USE(S):	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, N105, IL-19.0
AC/PG:	SBS PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4%, 105 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0
FRICTION AGGREGATE:	NONE

Prepared By: *Joe Golan*
DISTRICT STUDIES & PLANNING ENGINEER

Examined By: *James Travis Emery*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *Carrie Nelson*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *Karl Wiley*
DISTRICT OPERATIONS ENGINEER

Examined By: *KRL*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *Bruce W. Pallas*
DISTRICT MATERIALS ENGINEER

Approved By: *My Chmiel*
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

March 17 2011
DATE

FILE NAME :	USER NAME = halsteadw	DESIGNED -	REVISED -
\\pwwork\pwwork\halsteadw\0254486\01-0003.0004-sht-misc.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 "/ IN.	CHECKED -	REVISED -
	PLOT DATE = 2/25/2011	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS, GENERAL NOTES

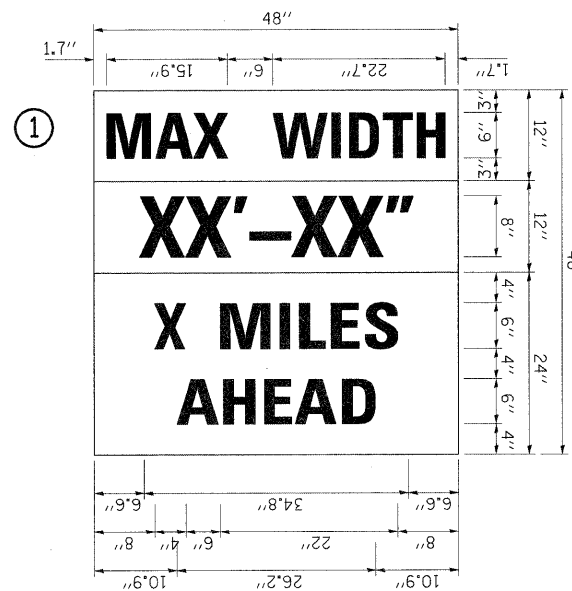
SHEET NO. OF SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	41-2(BR-1)	JEFFERSON	8	2
CONTRACT NO. 7B245				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

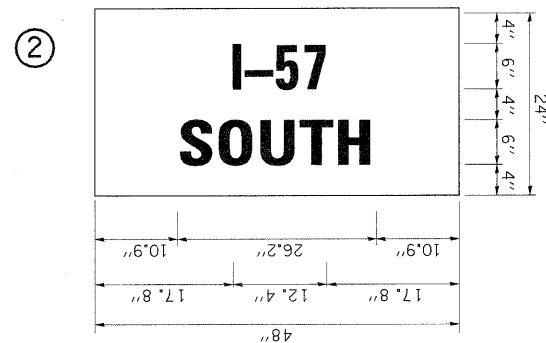
		IM FUNDING	
		90% FEDERAL	10% STATE
		CONSTRUCTION TYPE CODE	
		0005	
		JEFFERSON	
		SN 041-0003 & 041-0004	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
40600215	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	TON	327
40600855	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N105	TON	32
40603245	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, IL-19, N105	TON	232
40603575	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N105	TON	79
44000154	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/4"	SQ YD	214
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	997
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1
63200310	GUARDRAIL REMOVAL	FOOT	94
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	32
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1180
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	404
70400100	TEMPORARY CONCRETE BARRIER	FOOT	750
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	650
78004210	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LINE 4"	FOOT	1180
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	4
78200410	GUARDRAIL MARKERS, TYPE A	EACH	3
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1
78300100	PAVEMENT MARKING REMOVAL	SQ FT	294
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4
Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	997
Z0021922	SILICONE JOINT SEALER	FOOT	164
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0041895	POLYMER CONCRETE	CU FT	3.6

SIGN LEGEND

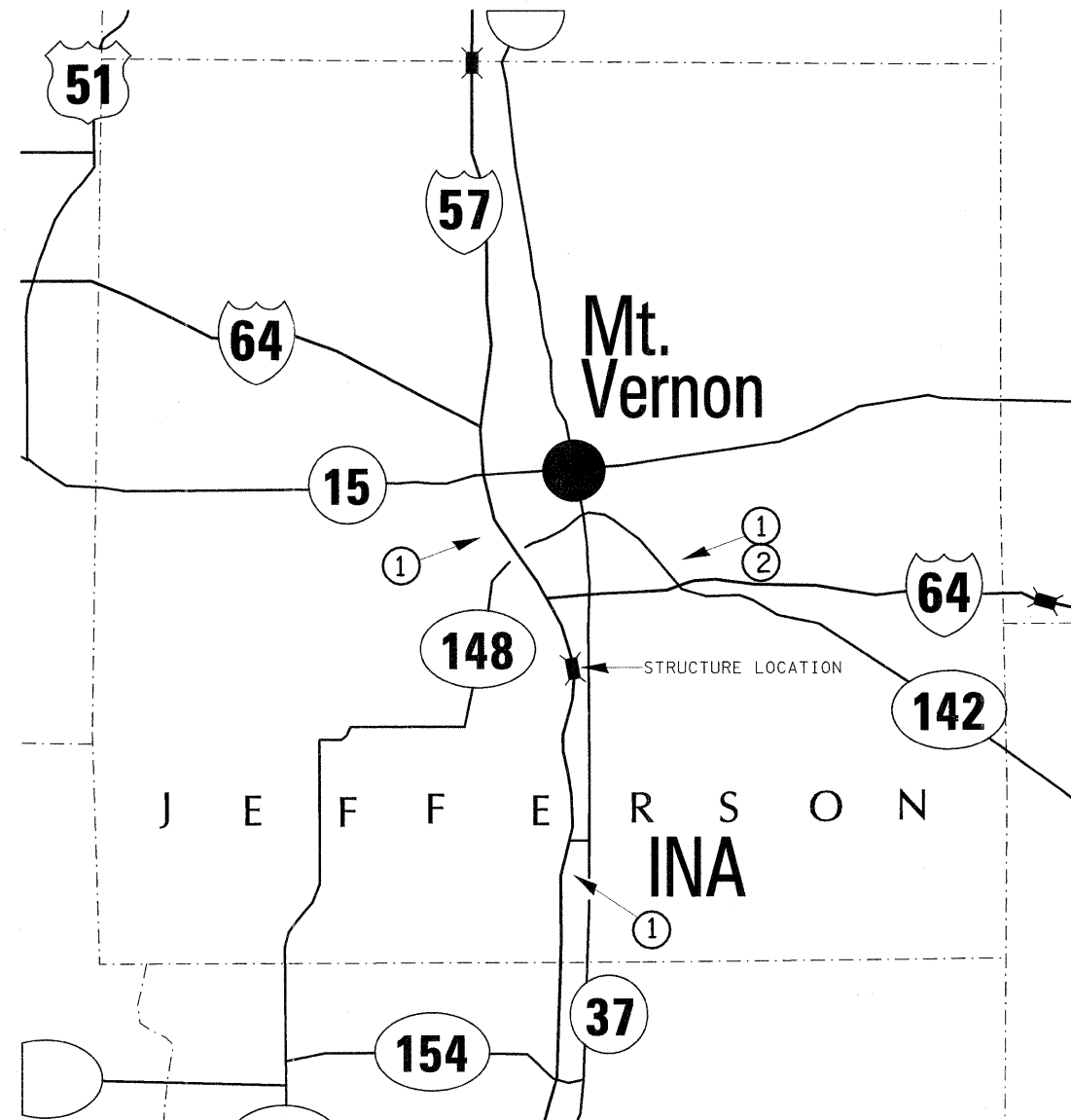


W12-I103

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



NO BORDER, BLACK ON WHITE;
"I-57" D;
NO BORDER, BLACK ON WHITE;
"SOUTH" D



DETOUR SIGNING PLAN

DETOUR NOTES:

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.

THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701402 AND NO OTHER COMPENSATION WILL BE ALLOWED.

THE WIDTH SHOWN ON THE W12-I103 SIGN SHALL BE 14'-9" FOR STAGE I AND 15'-0" FOR STAGE II OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.

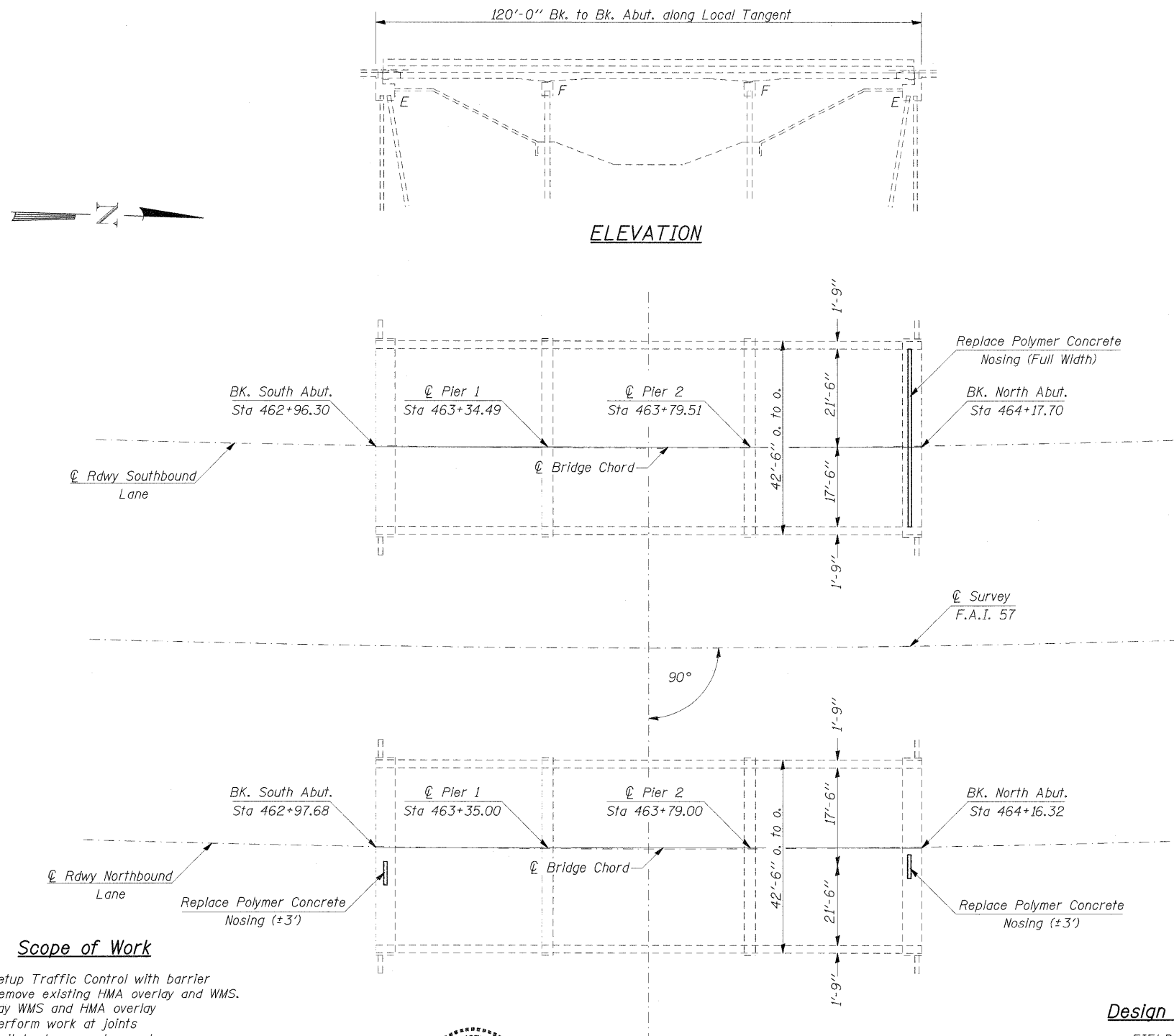
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	PLOT SCALE = 100.0000' / IN.	CHECKED -	REVISED -				CONTRACT NO. 78245				
	PLOT DATE = 3/11/2011	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				

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.

The Contractor will need to remove any spalling concrete around the existing drain locations. Cost to be included with HMA Surface Removal (Deck).

Partial Depth Patching of the existing bridge deck shall be done per article 109.04 of the Standard Specifications.



Scope of Work

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



David Carl Puzey 5/4/11
Expires 11/30/2012

Design Stresses

FIELD UNITS (Existing Construction)
 $f_c = 1,400$ psi (super & sub.)
 $f_s = 20,000$ psi Struct.(A-36)
 $f_s = 20,000$ psi (reinforcement)
 $V_c = 75$ psi (Ftgs.)
 $n = 10$

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized HMA Surface Course, Mix "E", N105	Ton	79
Polymerized HMA Binder Course, IL-19, N105	Ton	232
Waterproofing Membrane System	Sq. Yd.	997
HMA Surface Removal (Deck)	Sq. Yd.	997
HMA Surface Removal, 1 1/4"	Sq. Yd.	214
Silicone Joint Sealer	Foot	164
Polymer Concrete	Cu. Ft.	3.6
Polymerized Leveling Binder (Machine Method), N105	Ton	32

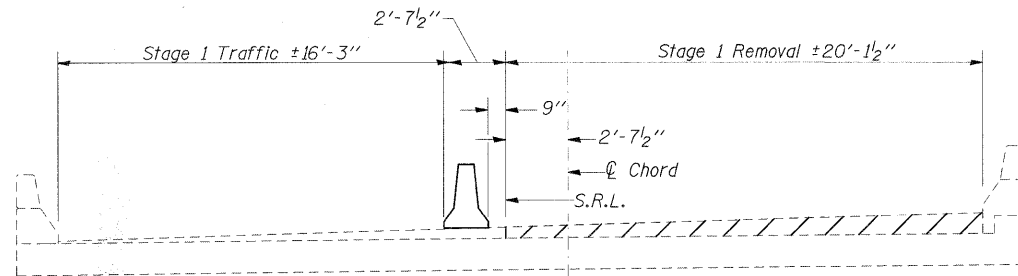
BRIDGE REPAIR
 FAI RT 57 OVER
 DODDS CREEK
 JEFFERSON COUNTY
 SECTION 41-2(BR-1)
 STA. 463+57

SN 041-0003 (NB) SN 041-0004 (SB)

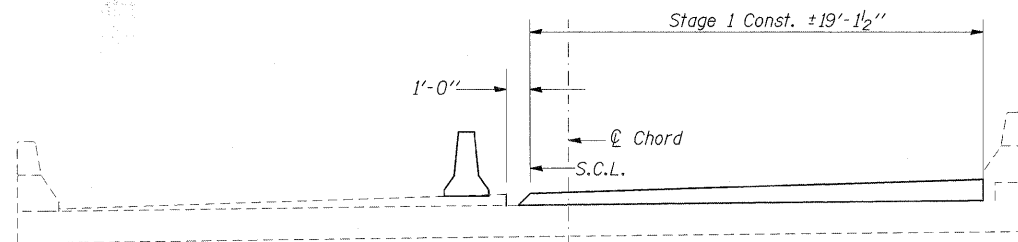
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	PLOT DATE = 2/25/2011	CHECKED - MAS	REVISED -			ILLINOIS FED. AID PROJECT						
		DATE - 10/15/09	REVISED -									

SECTIONS THRU BRIDGES

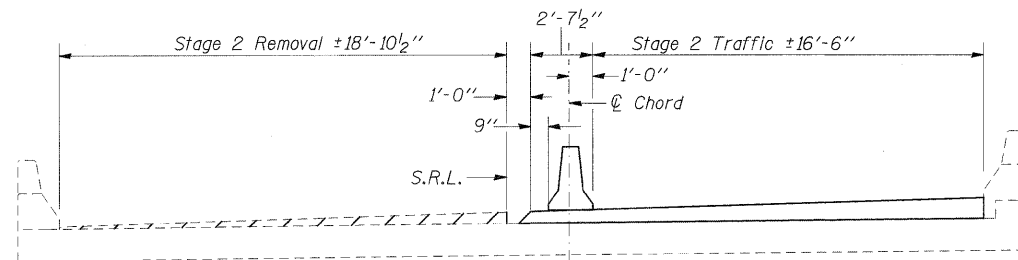
All Sections Looking North



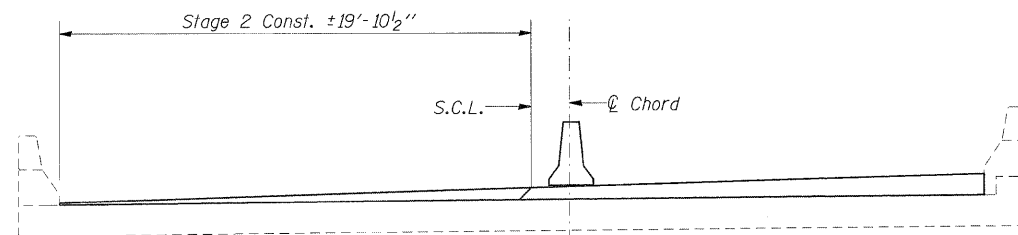
STAGE I REMOVAL
Southbound Lane



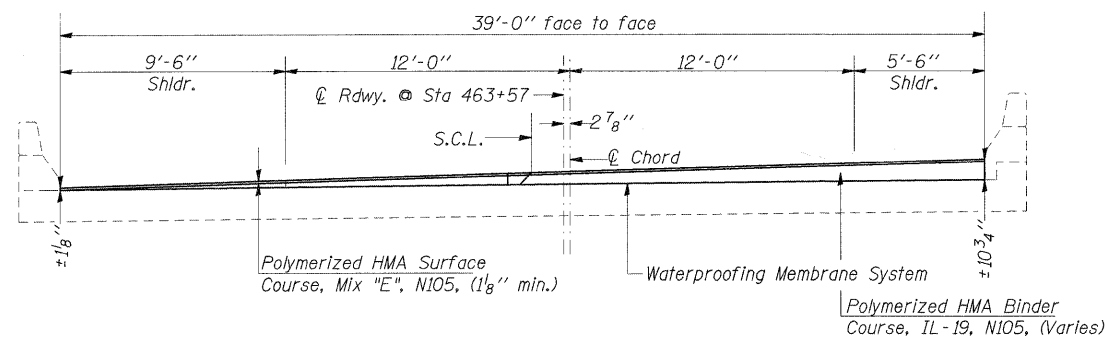
STAGE I CONSTRUCTION
Southbound Lane



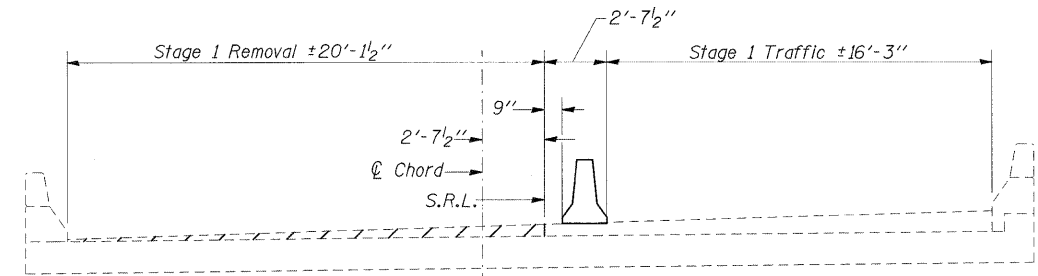
STAGE II REMOVAL
Southbound Lane



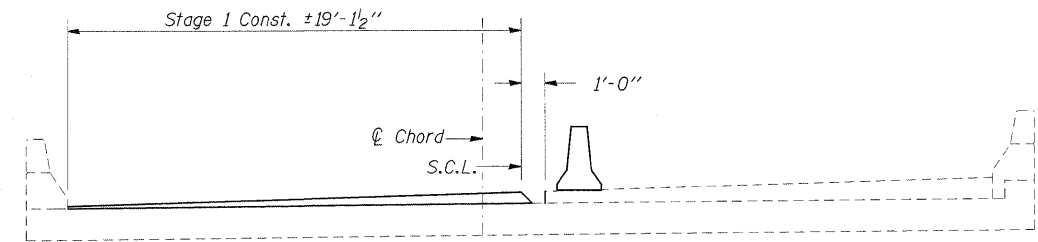
STAGE II CONSTRUCTION
Southbound Lane



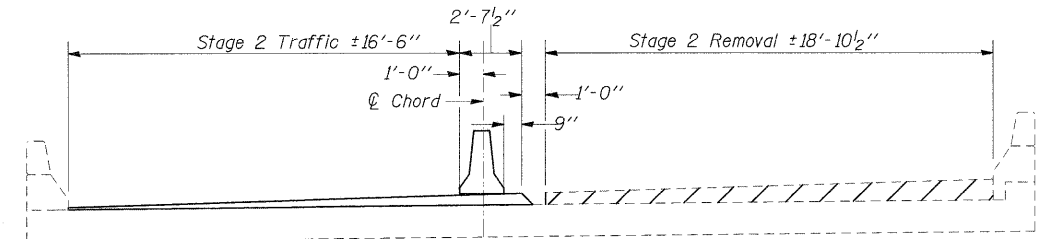
SECTION THRU OVERLAY
Southbound Lane



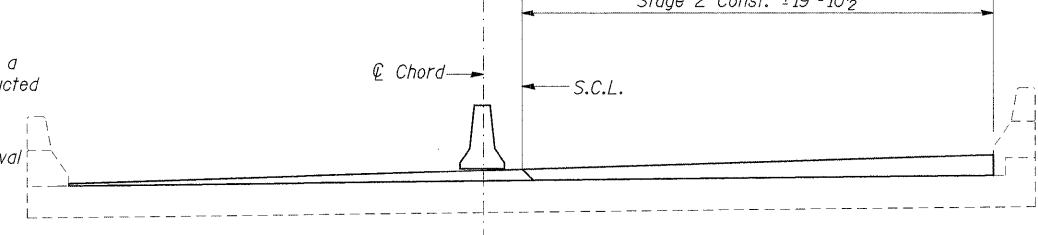
STAGE I REMOVAL
Northbound Lane



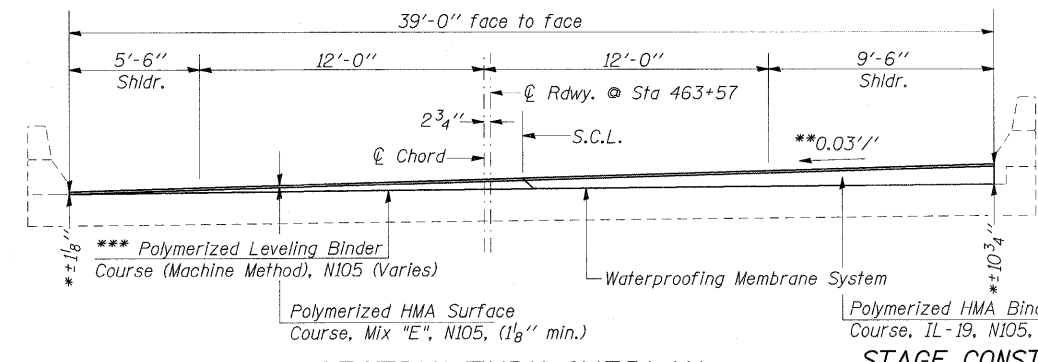
STAGE I CONSTRUCTION
Northbound Lane



STAGE II REMOVAL
Northbound Lane



STAGE II CONSTRUCTION
Northbound Lane



SECTION THRU OVERLAY
Northbound Lane



NOTES:

- * The proposed overlay thickness matches the existing overlay thickness.
- ** The original bridge deck portion was constructed on a slope of 0.01'/''. The original overlay section was constructed on a slope of 0.03'/''.
- The Contractor may elect to change the sequence of staging, i.e. perform stage 2 first then stage 1, with approval of the Engineer.
- *** Levelling Binder to only be used on Stage I Construction of SN 041-0003 (NB).

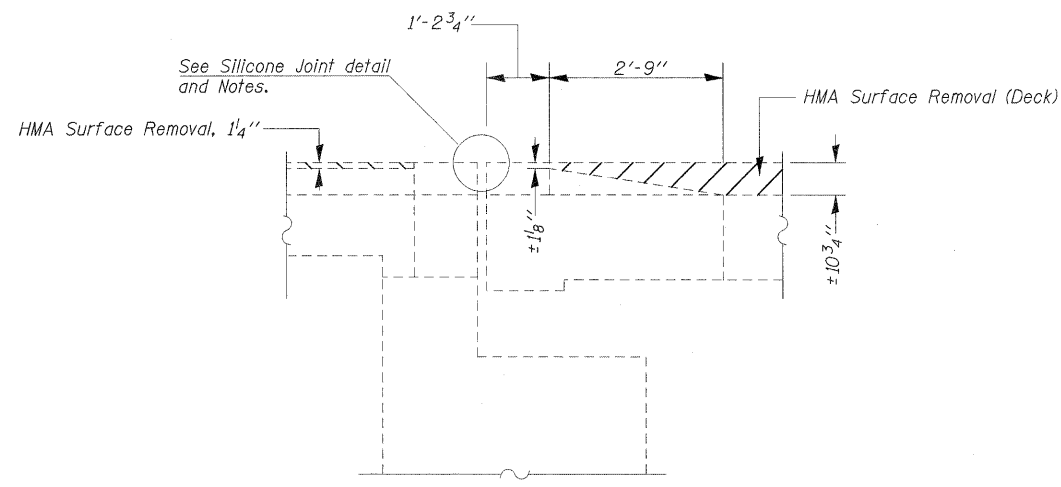
STAGE CONSTRUCTION
JEFFERSON COUNTY
S.N. 041-0003 & 041-0004

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PLOT DATE = 3/18/2011		DATE - 10/15/09	REVISED -

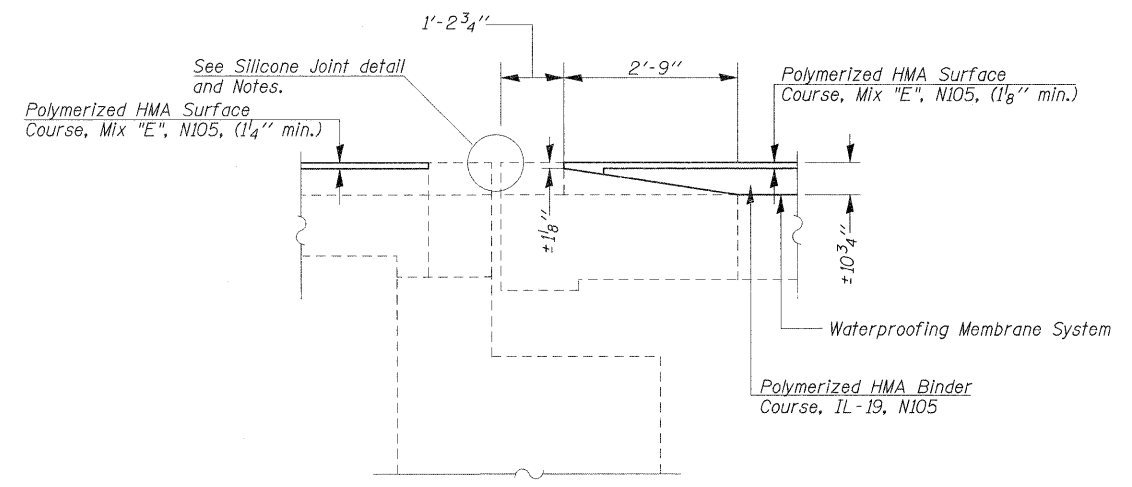
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING DETAILS

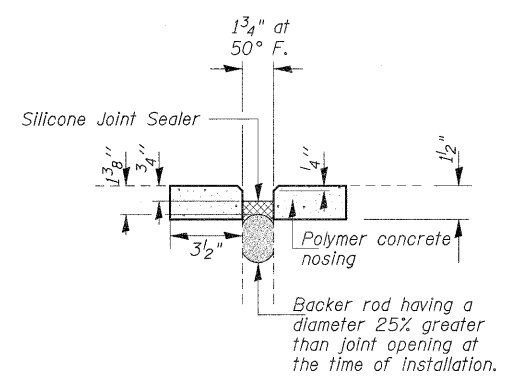
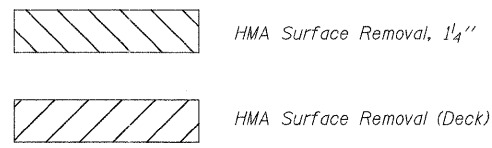
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			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 78245		



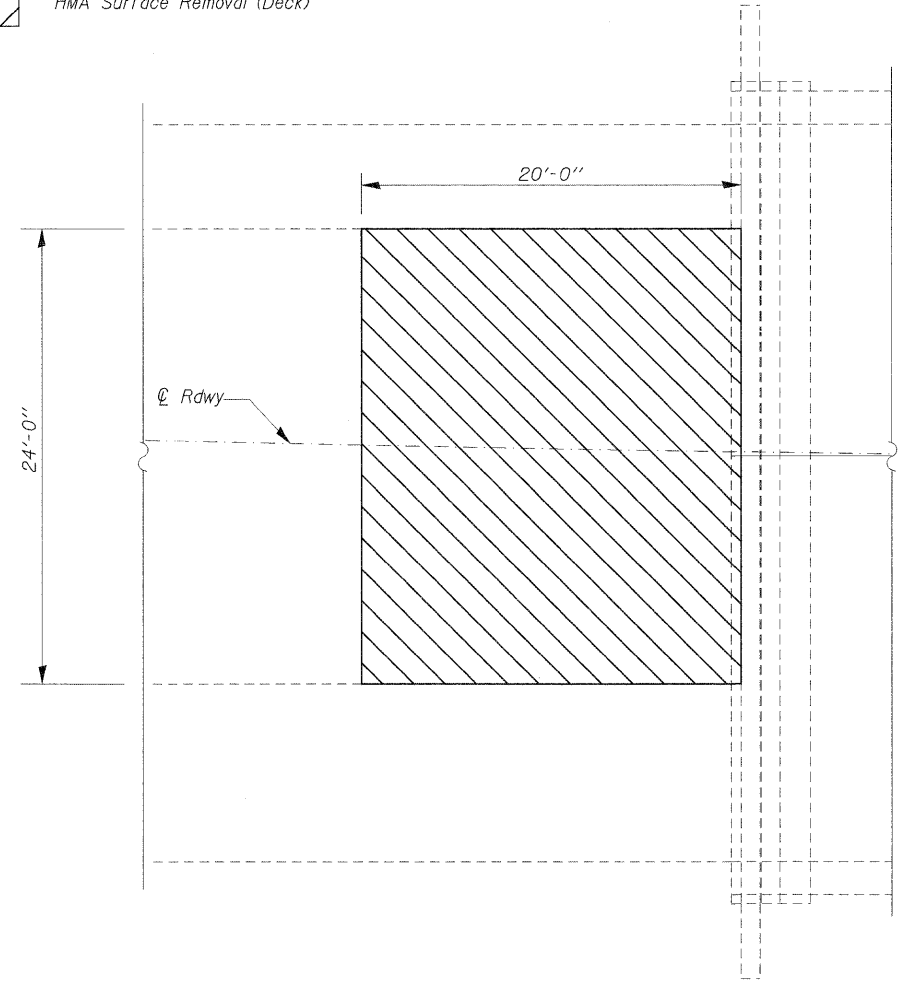
SECTION @ JOINTS
HMA Removal



SECTION @ JOINTS
New HMA



SILICONE JOINT SEALER DETAIL



PLAN VIEW @ APPROACHES
Typical all approaches

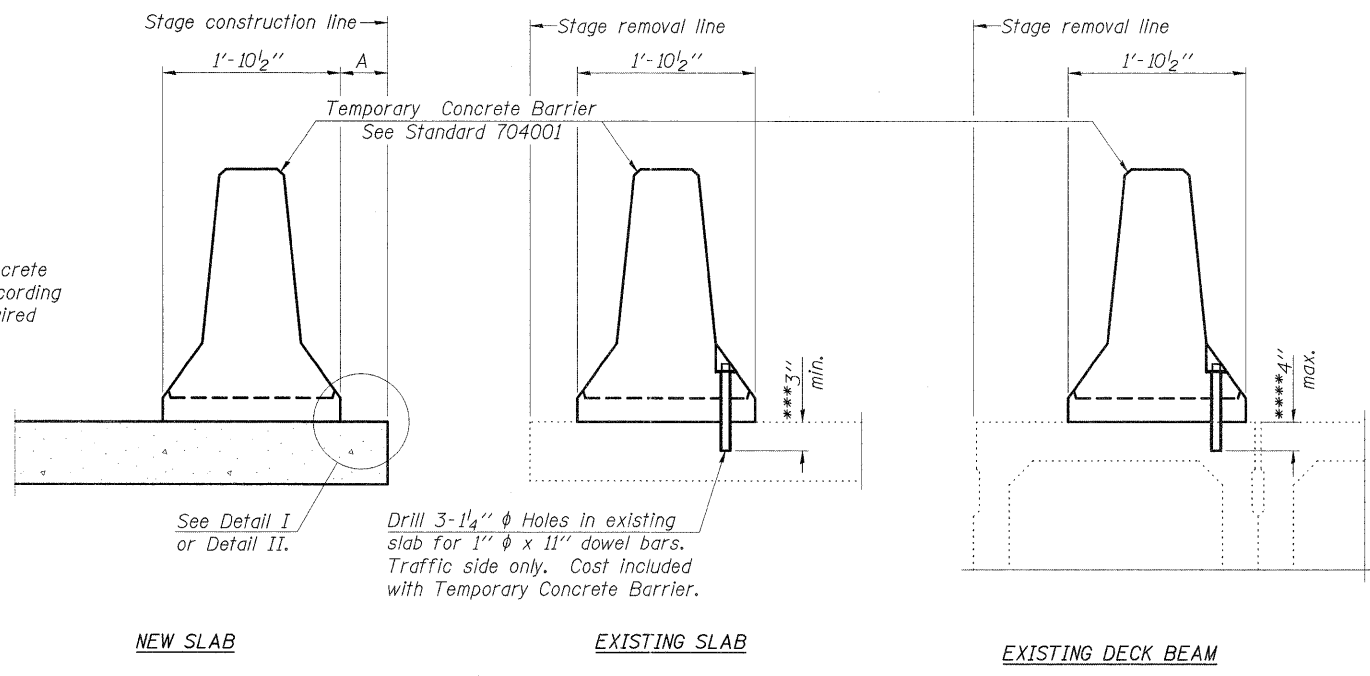
Notes:

Polymer Concrete Nosing to be replaced in-kind at the entire North Abutment joint of SN 041-0004 (SB), and at two 3' locations at the North and South Abutments of SN 041-0003 (NB).
Backer rod and silicone joint sealer to be replaced at all four joint locations.

JOINT DETAILS
JEFFERSON COUNTY
SN 041-0003 & 041-0004

FILE NAME =	USER NAME = halsteadtw	DESIGNED - TWH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINTS AND OVERLAY DETAILS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 1/5000' / IN.	CHECKED - MAS	REVISED -	CONTRACT NO. 78245							
PLOT DATE = 2/25/2011	DATE - 10/15/09	REVISED -	SCALE:			SHEET NO. 3 OF 4 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

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".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

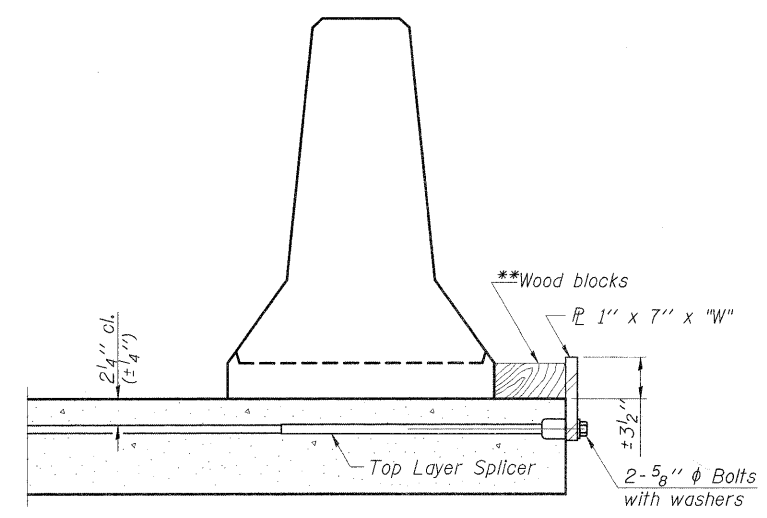
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

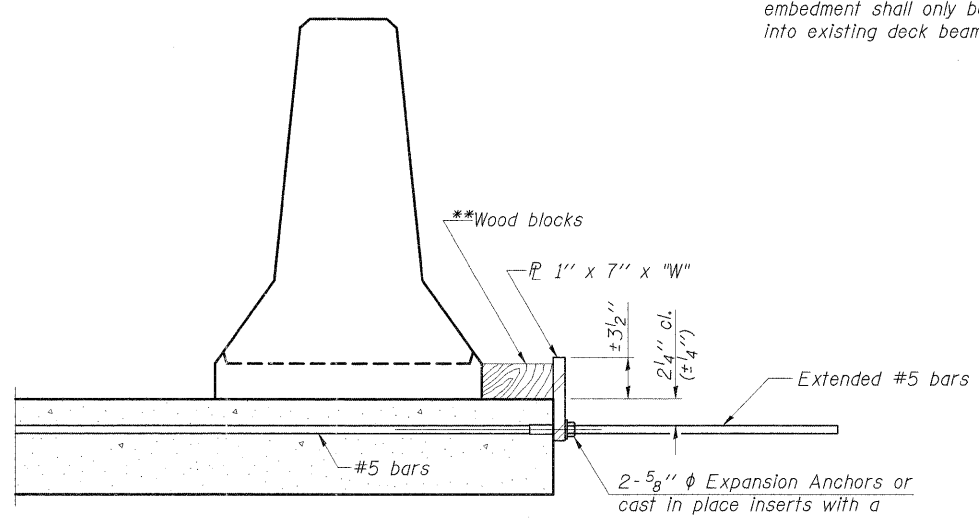
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.



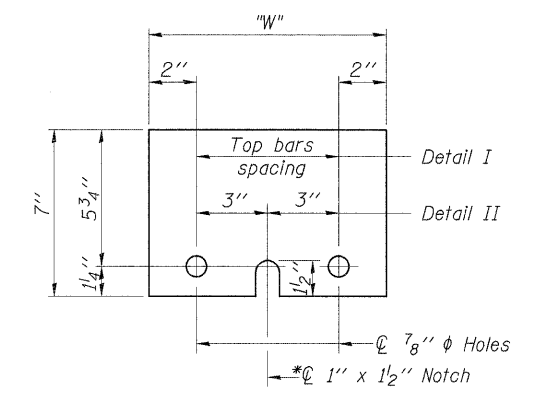
DETAIL I



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 \bar{P} 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10

FILE NAME =	USER NAME =	DESIGNED - TWH	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	F.A.I. RTE. 57	SECTION 41-2(BR-1)	COUNTY JEFFERSON	TOTAL SHEETS 8	SHEET NO. 8		
PLOT SCALE =	DRAWN - TWH	REVISD -				SHEET NO. 4 OF 4 SHEETS		CONTRACT NO. 78245				
PLOT DATE =	CHECKED - MAS	REVISD -				ILLINOIS FED. AID PROJECT						

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
JEFFERSON COUNTY**