

INDEX OF SHEETS

06-11-2021 LETTING ITEM 210

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HIGHWAY STANDARDS

701400-10	701428-01
701401-12	701451-05
701402-12	701901-08
701406-12	704001-08
701411-09	780001-05
701426-09	782006-01

DESIGN DESIGNATION

INTERSTATE

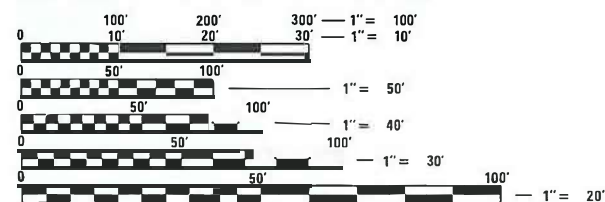
<u>I-74</u>	<u>I-474 EB</u>
ADT: 38800 (2017)	ADT: 13800 (2017)
MU: 1850	MU: 400
SU: 700	SU: 350

FREEWAY

<u>IL 6 EB</u>	<u>IL 6 WB</u>
ADT: 35000 (2019)	ADT: 9500 (2017)
MU: 1050	MU: 300
SU: 1250	SU: 500

RAMPS (2017)

<u>RAMP D</u>	<u>RAMP C</u>	<u>RAMP E</u>
ADT: 4150	ADT: 6900	ADT: 1100
MU: 50	MU: 175	MU: 60
SU: 100	SU: 200	SU: 90



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.

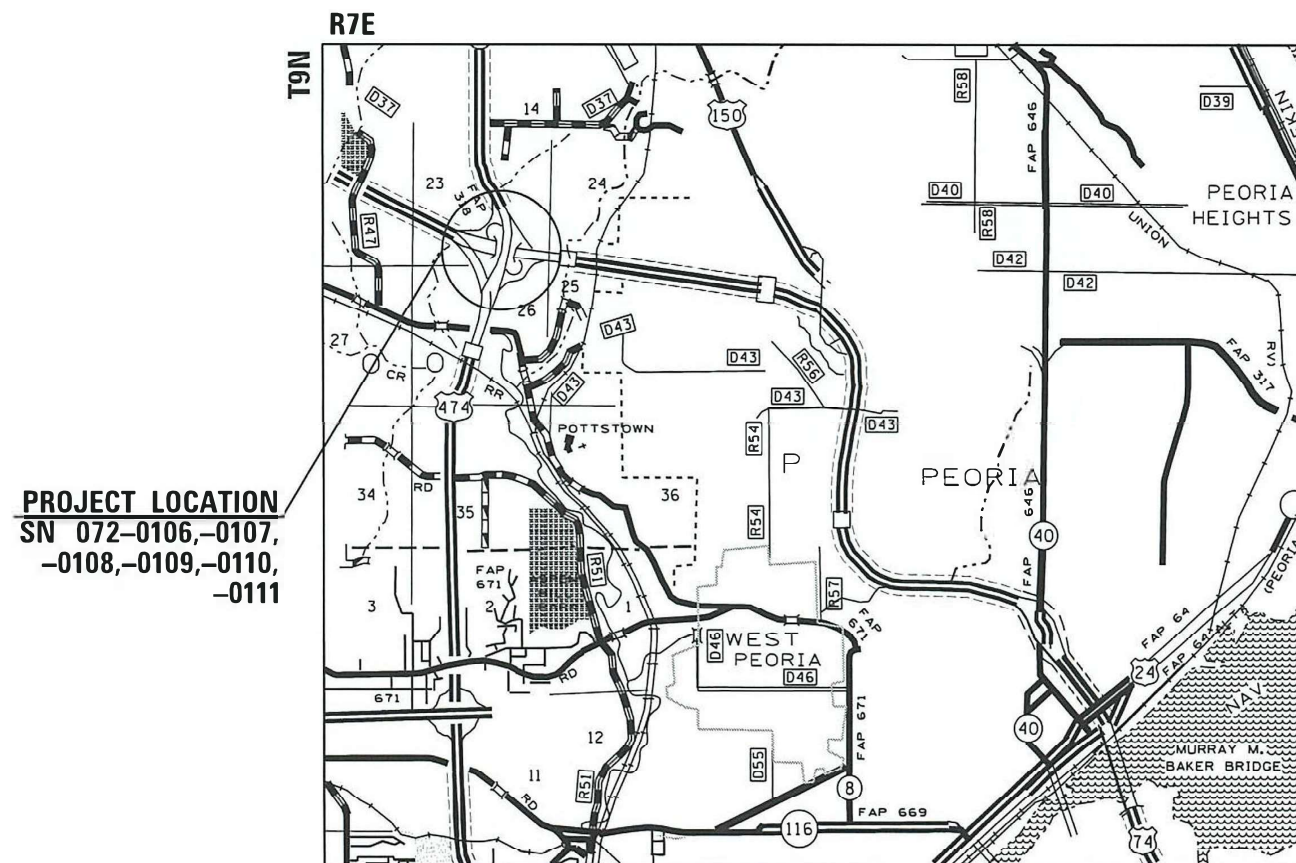
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER: RICH DOTSON (309)671-3455
PROJECT MANAGER: ANNA DEVINE (309)671-3475
CONTALOG NO. 035641-00D
CONTRACT NO. 68E52

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAI ROUTE 474 & 74
FAP ROUTE 318 (I-474, I-74, IL 6)
SECTION 72(1HB,HB-1,2,3)BR
PROJECT NHPP-R034(528)
BRIDGE REHABILITATION
PEORIA COUNTY
C-94-087-18

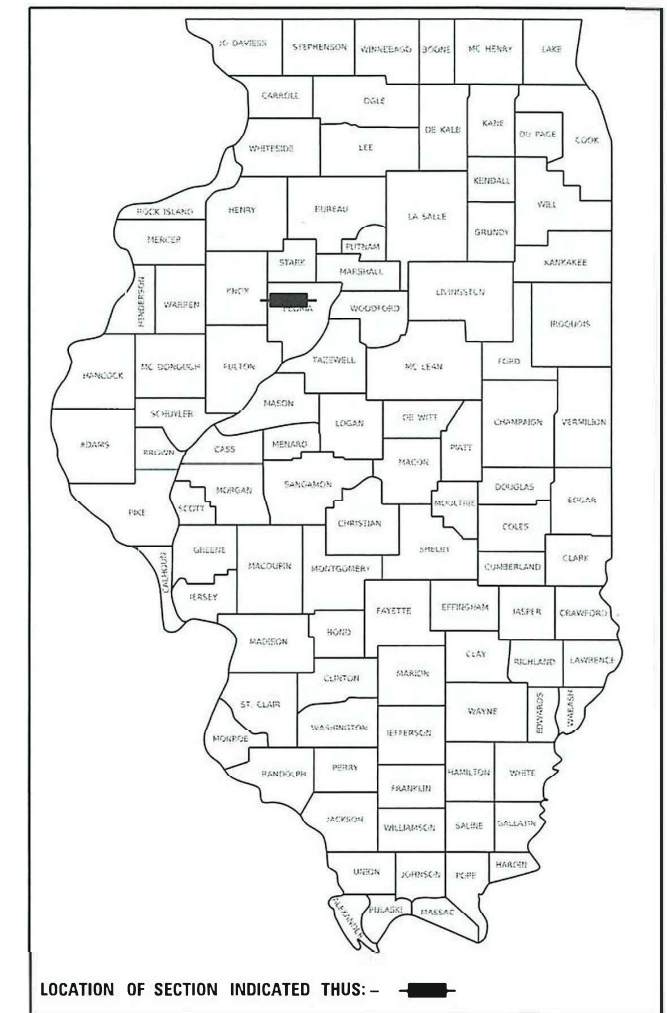


GROSS LENGTH = 2,700 FT. = 0.51 MILE
NET LENGTH = 2,700 FT. = 0.51 MILE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63*	1
ILLINOIS		CONTRACT NO. 68E52		

* 63 + 12 = 75 TOTAL SHEETS

D-94-065-18



PROJECT DESCRIPTION:
BRIDGE REHABILITATION TO 6 STRUCTURES, SN 072-0106, -0107, -0108, -0109, -0110, & -0111. REHABILITATION INCLUDES, BUT NOT LIMITED TO: HYDROSCARIFY AND MICROSILICA OVERLAY, JOINT REPLACEMENTS, DECK PATCHING, PARAPET WALL EXTENSIONS, SUBSTRUCTURE REPAIRS, AND ANY OTHER RELATED COLLATERAL WORK NECESSARY TO COMPLETE THIS PROJECT AS SHOWN IN THE PLANS AND AS DESCRIBED HEREIN.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 19, 2021
Benjamin J. Jones
REGION THREE ENGINEER

May 7, 2021 Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

May 7, 2021 James M. Jones
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION		
				0006	CODE 0013	
				ROADWAY	BRIDGE	
				90% FED	90% FED	
				10% STATE	10% STATE	
				URBAN	URBAN	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	878		878	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	46		46	
52100520	ANCHOR BOLTS, 1 "	EACH	160		160	
63301210	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	12.5	12.5		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	11	11		
67100100	MOBILIZATION	L SUM	1	1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	4	4		
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	2		
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1		
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1	1		
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5 "	FOOT	2351	2351		
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7 "	FOOT	20	20		
70107009	PAVEMENT MARKING BLACKOUT TAPE, 9 "	FOOT	700	700		

USER NAME = \$USER\$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 1:100	CHECKED -	REVISED -
PLOT DATE = 3/19/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	4
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				

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*= SPECIALTY ITEM

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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	DRAWN -	REVISED -
PLOT SCALE = 1:100	CHECKED -	REVISED -
PLOT DATE = 3/19/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	6
		CONTRACT NO. 68E52		
ILLINOIS		FED. AID PROJECT		

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LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3
	FOOT	FOOT	EACH	EACH
EB I-474 (SB IL 6)				
SN 072-0106	850.0	687.5	1.0	1.0
SN 072-0108				
SN 072-0111	725.0	575.0	1.0	1.0
ROADWAY A				
SN 072-0110	500.0	500.0	1.0	1.0
WB I-474 (NB IL 6)				
SN 072-0109	900.0	687.5	1.0	1.0
SN 072-0107				
TOTAL	2975.0	2450.0	4.0	4.0

DRAINAGE TABLE						
LOCATION	CLASS D PATCH, TYPE I, 12 INCH	POROUS GRANULAR EMBANKMENT	STONE DUMPED RIPRAP, CLASS B3	STONE RIPRAP, CLASS B3	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	MANHOLES TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL)
	SQ YD	CU YD	TON	TON	FOOT	EACH
STA. 217+00	4.0	3.0	42.0	6.0	12.5	
STA. 217+50			17.0			
STA. 221+50						1.0
TOTAL	4.0	3.0	59.0	6.0	12.5	1.0

LOCATION	MOBILIZATION	ENGINEER'S FIELD OFFICE, TYPE A	CHANGEABLE MESSAGE SIGN	DETOUR SIGNING	CONSTRUCTION LAYOUT	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451
	LSUM	CAL MO	CAL DAY	LSUM	LSUM	LSUM	LSUM	EACH	EACH	LSUM
JOBSITE	1.0	11.0	370.0	1.0	1.0	1.0	1.0	4.0	2.0	1.0
TOTAL	1.0	11.0	370.0	1.0	1.0	1.0	1.0	4.0	2.0	1.0

LOCATION	PAVEMENT MARKING TAPE, TYPE IV 4"		PAVEMENT MARKING BLACKOUT TAPE, 5"	PAVEMENT MARKING BLACKOUT TAPE, 7"	PAVEMENT MARKING BLACKOUT TAPE, 9"	SHORT TERM PAVEMENT MARKING REMOVAL
	YELLOW	WHITE				
	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT
STAGE I						
EB I-474 (SB IL 6)						
SN 072-0106	3202.0	711.0	368.0		245.0	1641.4
SN 072-0108						
SN 072-0111	764.0	767.0	767.0			829.9
ROADWAY A						
SN 072-0110	2105.0	608.0	608.0			1157.7
WB I-474 (NB IL 6)						
SN 072-0109	2237.0	278.0			440.0	1168.3
SN 072-0107						
STAGE II						
EB I-474 (SB IL 6)						
SN 072-0106	336.0	981.5		20.0	15.0	462.1
SN 072-0108						
SN 072-0111	360.0	1411.0				590.3
ROADWAY A						
SN 072-0110	608.0	2105.0	608.0			1157.7
WB I-474 (NB IL 6)						
SN 072-0109		1881.0				627.0
SN 072-0107						
SUB-TOTAL	9612.0	8742.5	2351.0	20.0	700.0	7634.4
TOTAL	18354.5		2351.0	20.0	700.0	7634.0

LOCATION	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"		MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	
	SOLID	SOLID	SKIP	SOLID	SKIP
	YELLOW	WHITE	WHITE	WHITE	WHITE
	FOOT	FOOT	FOOT	FOOT	FOOT
EB I-474 (SB IL 6)					
SN 072-0106	730.0	770.0	138.0	705.0	138.0
SN 072-0108					
SN 072-0111	340.0	1132.0	90.0		
ROADWAY A					
SN 072-0110	610.0	610.0	160.0		
WB I-474 (NB IL 6)					
SN 072-0109	700.0	757.0	180.0	365.0	102.0
SN 072-0107					
SUB-TOTAL	2380.0	3269.0	568.0	1070.0	240.0
TOTAL	5649.0		568.0	1310.0	

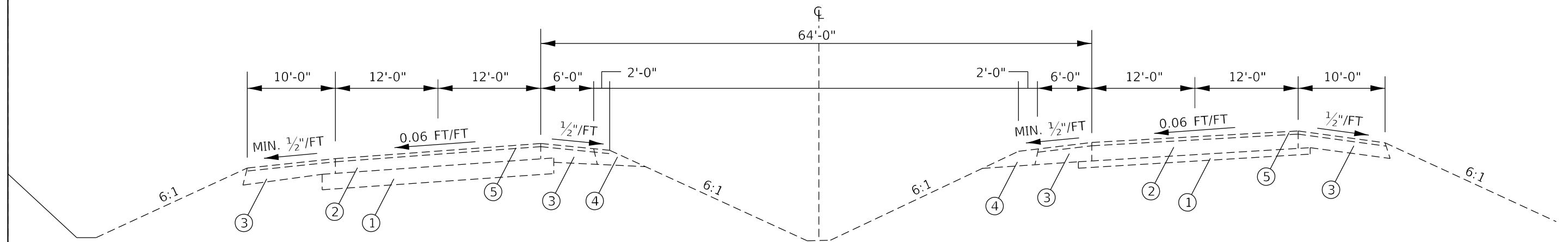
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		DRAWN -	REVISED -					474	72(1HB,HB-1,2,3)BR	PEORIA	63	7
	PLOT SCALE = 1:100	CHECKED -	REVISED -					CONTRACT NO. 68E52				
	PLOT DATE = 3/19/2021	DATE -	REVISED -		SCALE:	SHEET 1	OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

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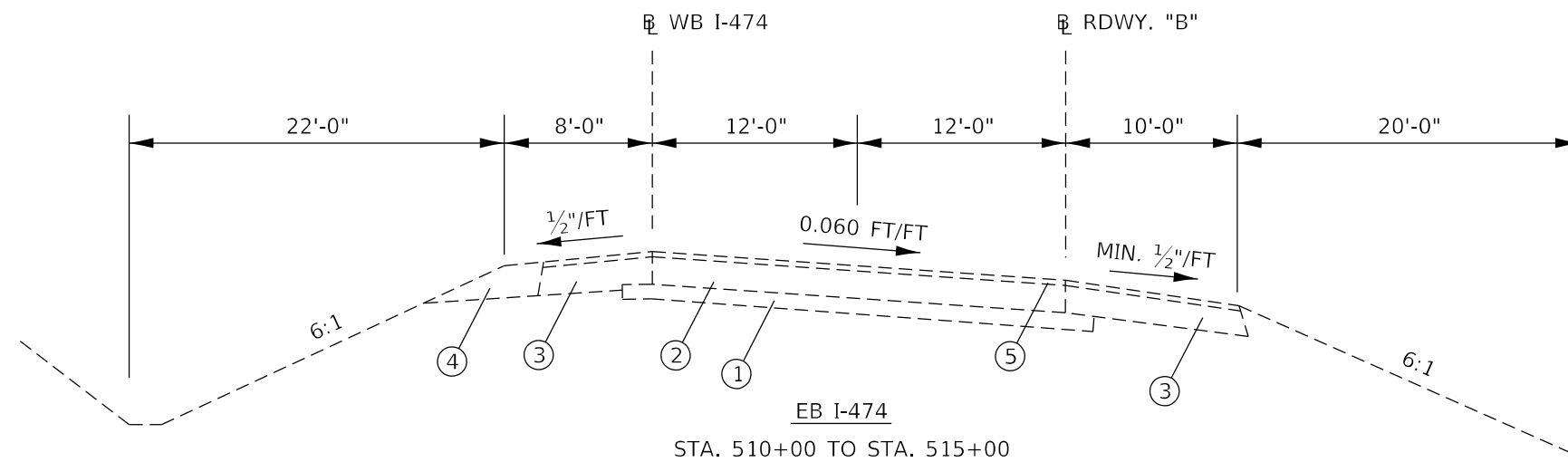


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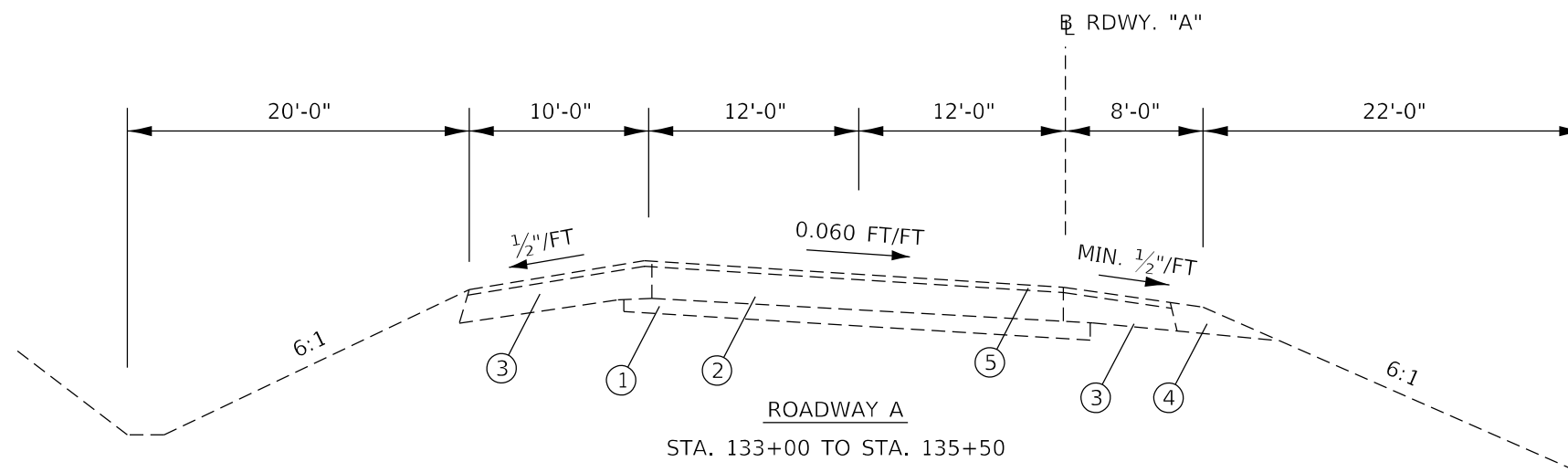
	USER NAME = \$USER\$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LINE DIAGRAM			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/19/2021	CHECKED -	REVISED -		SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.			CONTRACT NO. 68E52				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				



I-474
STA. 195+89.59 TO STA. 219+54.64



STA. 510+00 TO STA. 515+00



STA. 133+00 TO STA. 135+50

- ### LEGEND
- ① STABILIZED SUBBASE (BAM) - 4"
 - ② CRPCC - 8"
 - ③ STABILIZED SHOULDERS - 8"
 - ④ AGGREGATE SHOULDERS
 - ⑤ EXIST. HMA OVERLAY

DRAWINGS NOT TO SCALE

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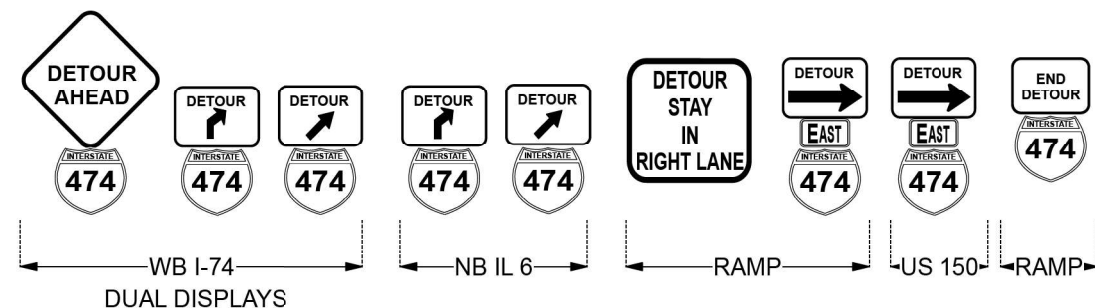
RAMP D DETOUR (EXIT 87 A)

PLACEMENT OF SIGNS AND DEVICES WILL BE DETERMINED BASED UPON THE EXISTING TRAFFIC CONTROL IN PLACE. THERE WILL BE TWO DETOURS IN PLACE- THE PRIMARY DETOUR AND AN ALTERNATE DETOUR.

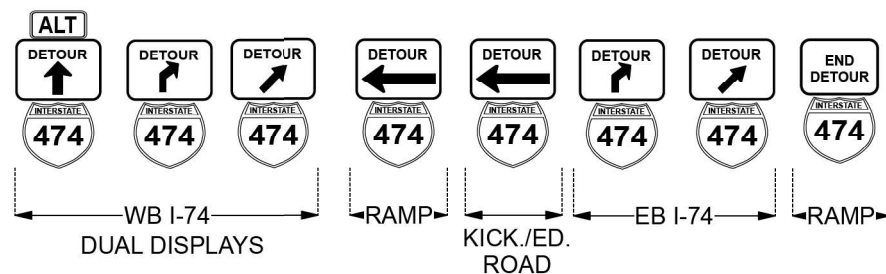
PRIMARY DETOUR VIA IL 6/US 150/IL 6:

I-474	VIA
DETOUR	IL 6
AHEAD	EXIT 87B

TWO MESSAGE BOARDS:
1) PRIOR TO STERLING AVE.
2) BETWEEN STERLING AND IL 6



ALTERNATE DETOUR VIA I-74/KICK.-ED. RD./I-74:



**DETOUR
STAY
IN
RIGHT LANE** 48 x 48- BLACK ON ORANGE


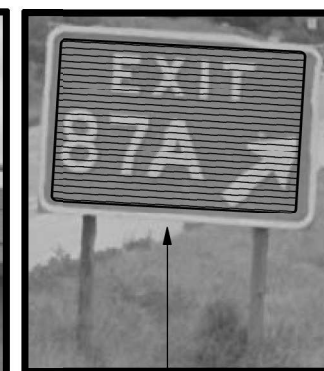


Diagram of a standard highway shield with callouts for color and size:

- WHITE ON BLUE (pointing to the top section)
- STANDARD COLOR (pointing to the bottom section)
- 30 X 24 (pointing to the bottom section)

 BLACK ON ORANGE
48 X36

ALT BLACK ON ORANGE



COVER

SEE PLAN DETAIL SHEET FOR "RAMP CLOSED" SIGN DIMENSIONS.

"B" SHALL BE BLACK ON ORANGE AND SIZED TO COVER THE EXISTING "A-B".

OVERHEAD SIGN PLACARD PLACEMENT AND REMOVAL SHALL NOT BE DONE OVER LIVE TRAFFIC.

STANDARD 701426 SHALL BE UTILIZED FOR THE PLACEMENT AND REMOVAL OF THE PLACARDS IF A LANE CLOSURE IS NOT PRESENT.

ALL SIGNS SHALL BE GROUND POST MOUNTED.

RAMP CLOSURE-LIT DEVICES SHALL CLOSE THE ENTIRE RAMP OPENING-

PLACED LONGITUDINALLY ALONG MAINLINE. FOUR TYPE III BARRICADES

SHALL BE PLACED WITHIN THE RAMP WITH ONE TYPE III DISPLAYING

"ROAD CLOSED".

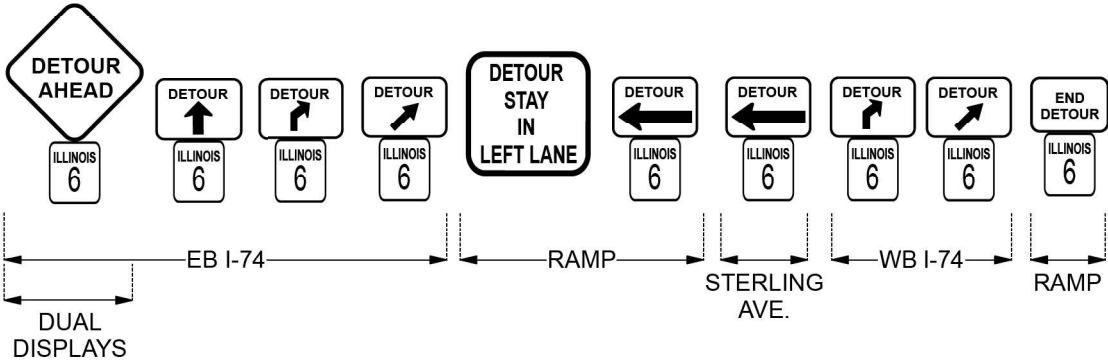
RAMP E DETOUR (EXIT 87 B)

PLACEMENT OF SIGNS AND DEVICES WILL BE DETERMINED BASED UPON THE EXISTING TRAFFIC CONTROL IN PLACE.

DETOUR VIA I-74/Sterling Ave./I-74:

IL 6	VIA
DETOUR	EB I-74
AHEAD	EXIT 88

ONE MESSAGE BOARD:
1) PLACE PRIOR CLOSED RAMP

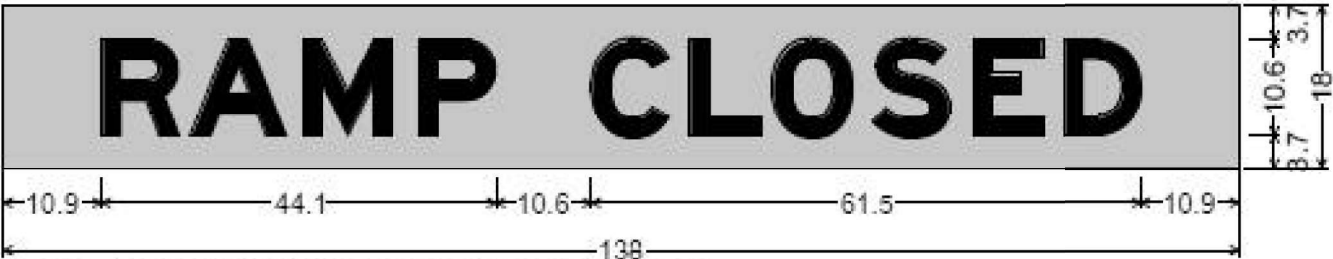


ALL SIGNS SHALL BE GROUND POST MOUNTED.
RAMP CLOSURE-LIT DEVICES SHALL CLOSE THE ENTIRE RAMP OPENING-
PLACED LONGITUDINALLY ALONG MAINLINE. FOUR TYPE III BARRICADES
SHALL BE PLACED WITHIN THE RAMP WITH ONE TYPE III DISPLAYING
"ROAD CLOSED".



OVERHEAD SIGN PLACARD PLACEMENT AND REMOVAL SHALL NOT BE DONE OVER LIVE TRAFFIC.
STANDARD 701426 SHALL BE UTILIZED FOR THE PLACEMENT AND REMOVAL OF THE PLACARDS IF A LANE CLOSURE IS NOT PRESENT.

PLAN DETAIL FOR "RAMP CLOSED" SIGN DIMENSIONS.



Overlay OL-D; No border, White on Fluorescent orange;
"RAMP CLOSED" Black E Mod 2K;
Table of distances between letter and object lefts.

	R	A	M	P	C	L	O	S	E	D	
10.9	9.8	12.7	12.9	19.3	11.0	9.2	11.2	11.3	10.1	8.7	10.9

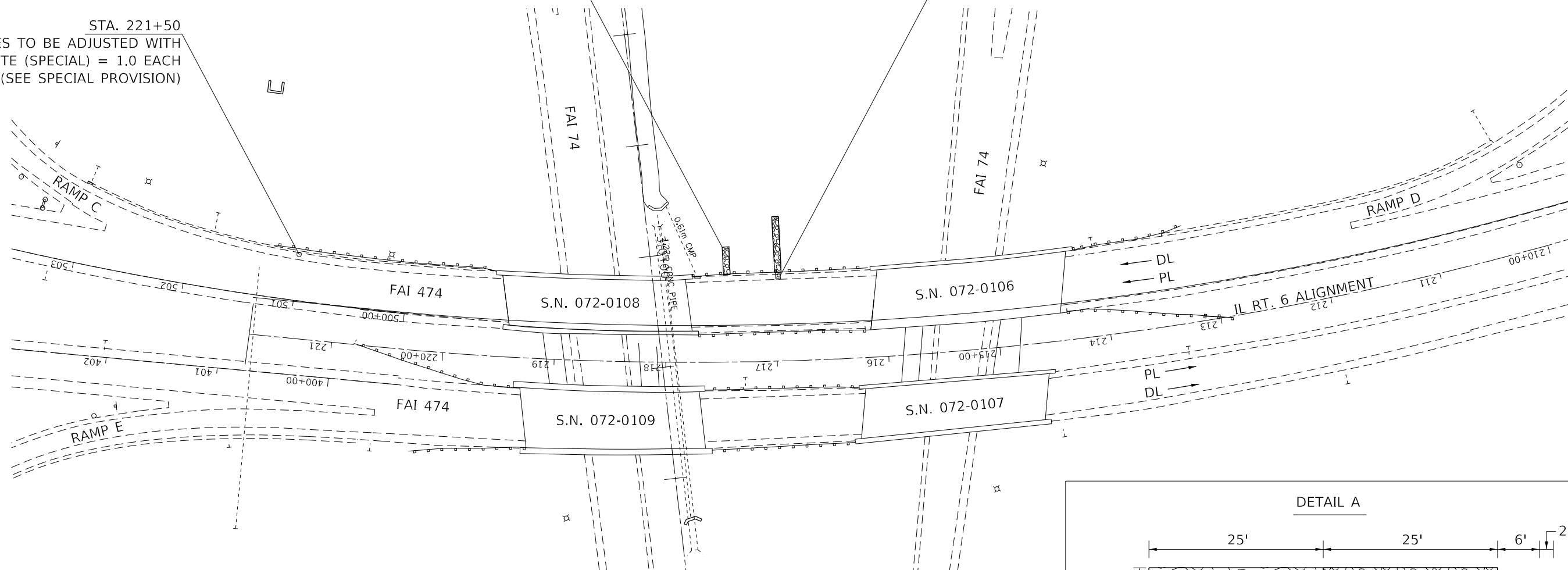
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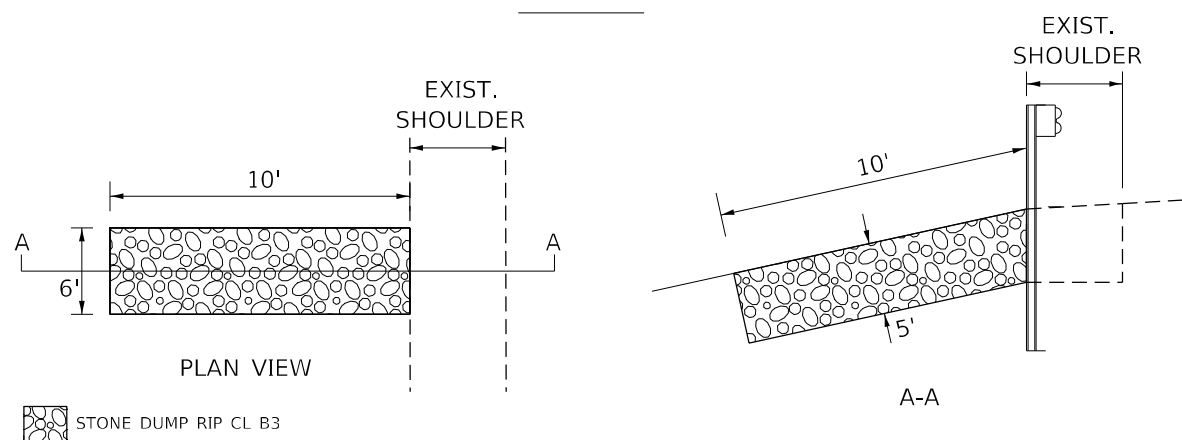
STA. 217+50 (APPROX. LOCATION OF EROSION ISSUE)
(SEE DETAIL B)
STONE DUMPED RIPRAP, CLASS B3 = 17 TON

STA. 217+00 (APPROX. LOCATION OF EROSION ISSUE)
(SEE DETAIL A)
CLASS D PATCH, TYPE I 12 INCH = 4.0 SQ YD
POROUS GRANULAR EMBANKMENT = 3.0 CU YD
STONE DUMPED RIPRAP, CLASS B3 = 42.0 TON
STONE RIPRAP, CLASS B3 = 6.0 TON
REMOVER AND REERECT SPBGR TY A = 12.5 FT

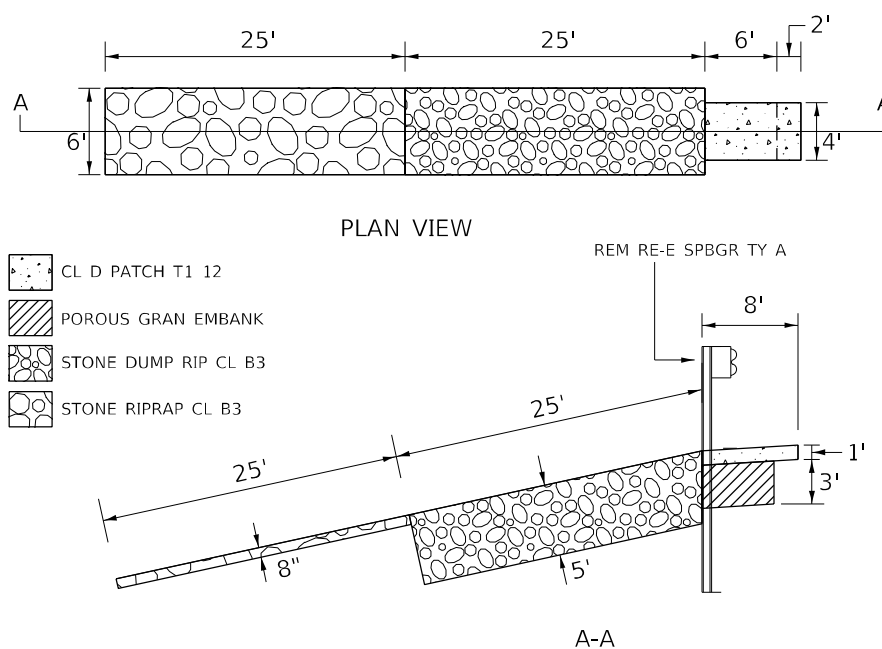
STA. 221+50
MANHOLES TO BE ADJUSTED WITH
FRAME & GRATE (SPECIAL) = 1.0 EACH
(SEE SPECIAL PROVISION)



DETAIL B



DETAIL A



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	12
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				

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GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, 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.

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.

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.

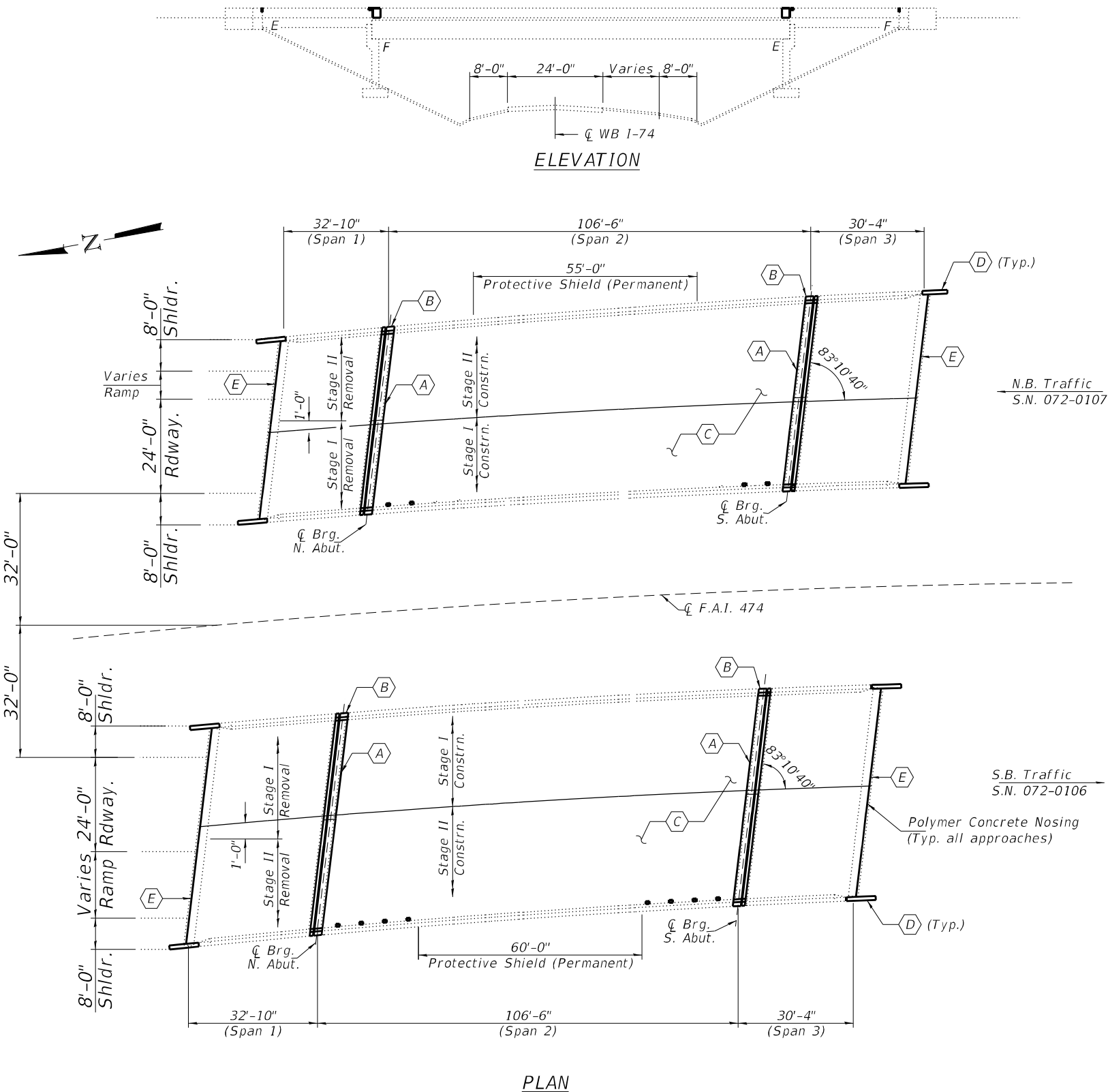
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	25.0
Concrete Superstructure	Cu. Yd.	26.0
Preformed Joint Strip Seal	Foot	181
Reinforcement Bars, Epoxy Coated	Pound	3340
Bar Splicers	Each	40
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	2.4
* Protective Coat	Sq. Yd.	6100
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	538
Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	5700
Furnishing & Erecting Structural Steel	Pound	7790
Elastomeric Bearing Assembly, Type I	Each	14
Jack & Remove Existing Bearings	Each	28
Anchor Bolts, 1"Ø	Each	56
Protective Shield (Permanent)	Sq. Yd.	494
Floor Drains	Each	7
Bridge Deck Grooving	Sq. Yd.	5560
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	5700
Bridge Deck Scarification, 3/4"	Sq. Yd.	5700
Polymer Concrete	Cu. Ft.	8.1

* On new concrete and overlay areas



PLAN

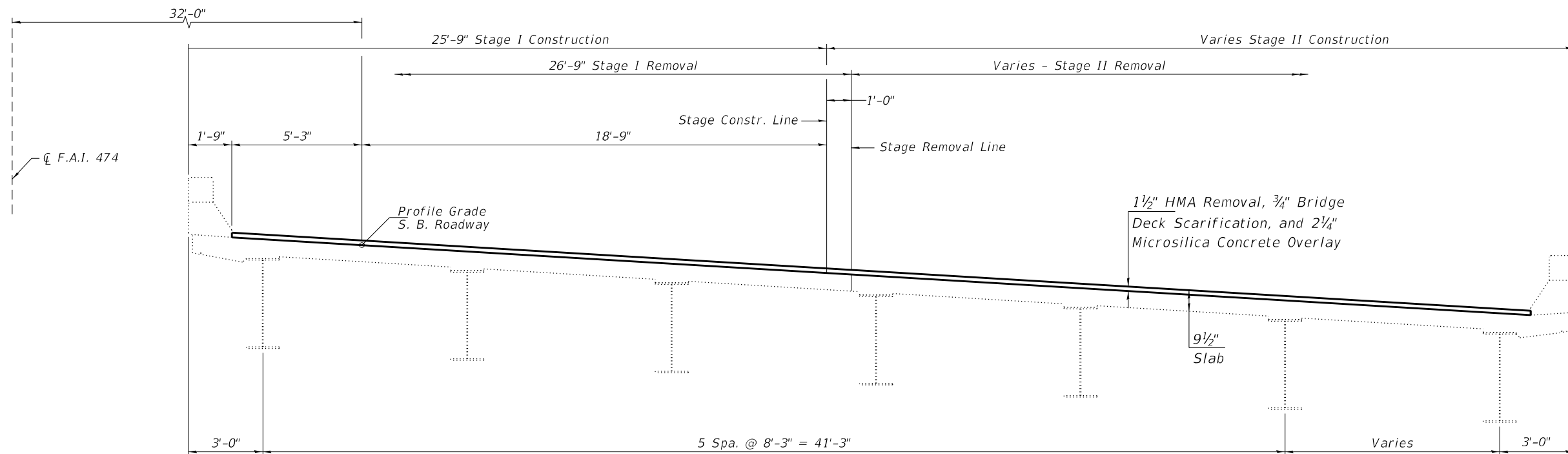


Expires 11/30/2022

- (A) - Remove and replace expansion joint with Preformed Joint Strip Seal.
- (B) - Bearing removal and replacement at Abutments.
- (C) - HMA Surface Removal, Bridge deck scarification with new Microsilica Concrete Overlay and Bridge Deck Grooving.
- (D) - Wingwall and Railing Modifications. See sheet 12 of 14 for details.
- (E) - Polymer Concrete Nosing. See sheet 8 of 14 for details.
- (F) - Substructure Repairs

DESIGNED - Jeffrey S. Burke	EXAMINED <i>Twig A. Bost</i>	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION F.A.I. 474 OVER F.A.I. 74 SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - Chi-Cheung Chau	ENGINEER OF STRUCTURAL SERVICES	REVISED -			474	72(1HB,HB-1.2,3)BR	PEORIA	63	13	
DRAWN - jostermann Venkat Ramana	PASSED <i>Chi Carl Puzey</i>	REVISED -			CONTRACT NO. 68E52					
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES				SHEET NO. 1 OF 14 SHEETS					

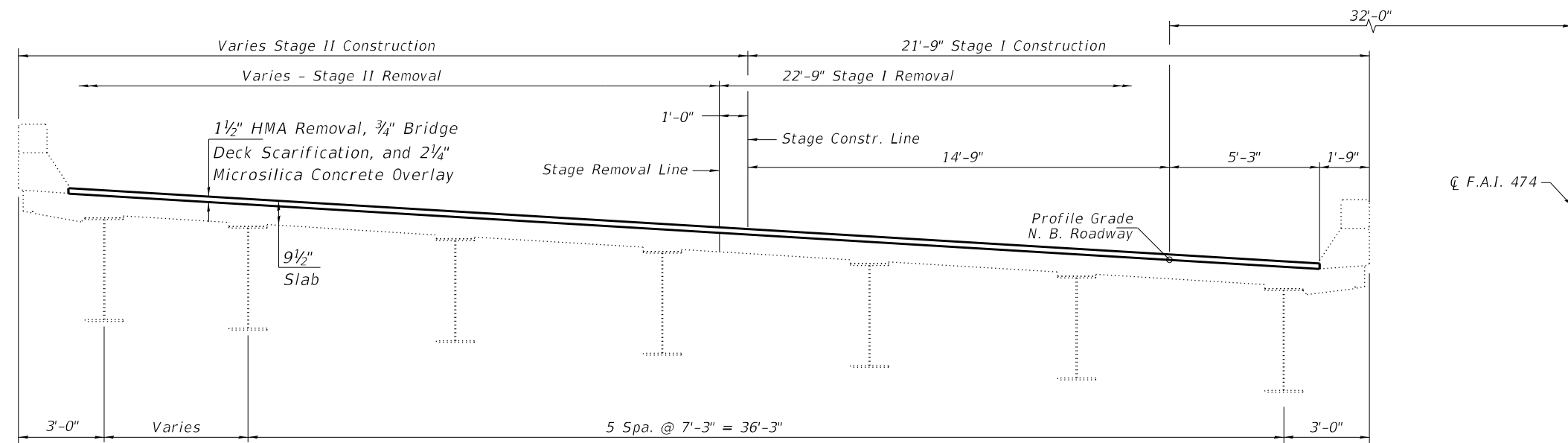
ILLINOIS FED. AID PROJECT



CROSS SECTION THRU BRIDGE DECK AT ABUTMENT

(SN 072-0106 Looking South)

Note: All dimensions shown are measured radially

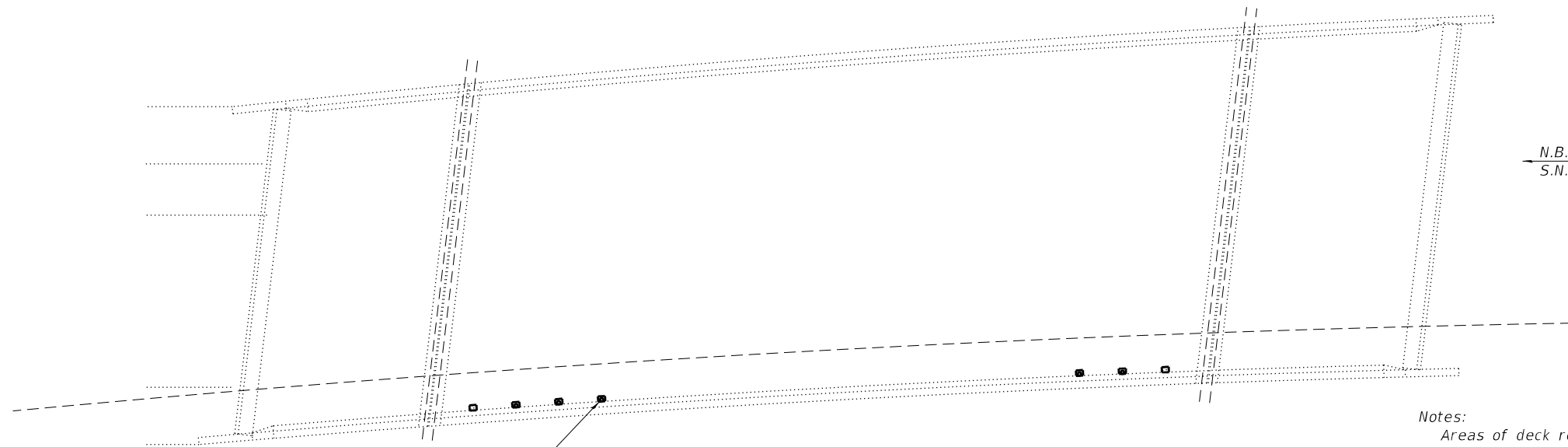


CROSS SECTION THRU BRIDGE DECK AT ABUTMENT

(SN 072-0107 Looking South)

Note: All dimensions shown are measured radially

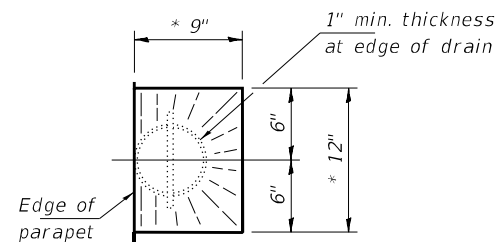
DESIGNED - JSB	EXAMINED  ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING CROSS SECTIONS SN 072-0106 (SB) & 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - CCC		PASSED  ENGINEER OF BRIDGES AND STRUCTURES			REVIS	474	72(1HB,HB-1,2,3)BR	PEORIA	63	14
DRAWN - Jim Ostermann					REVIS	CONTRACT NO. 68E52				
CHECKED - JSB CCC					SHEET NO. 2 OF 14 SHEETS					
					ILLINOIS FED. AID PROJECT					



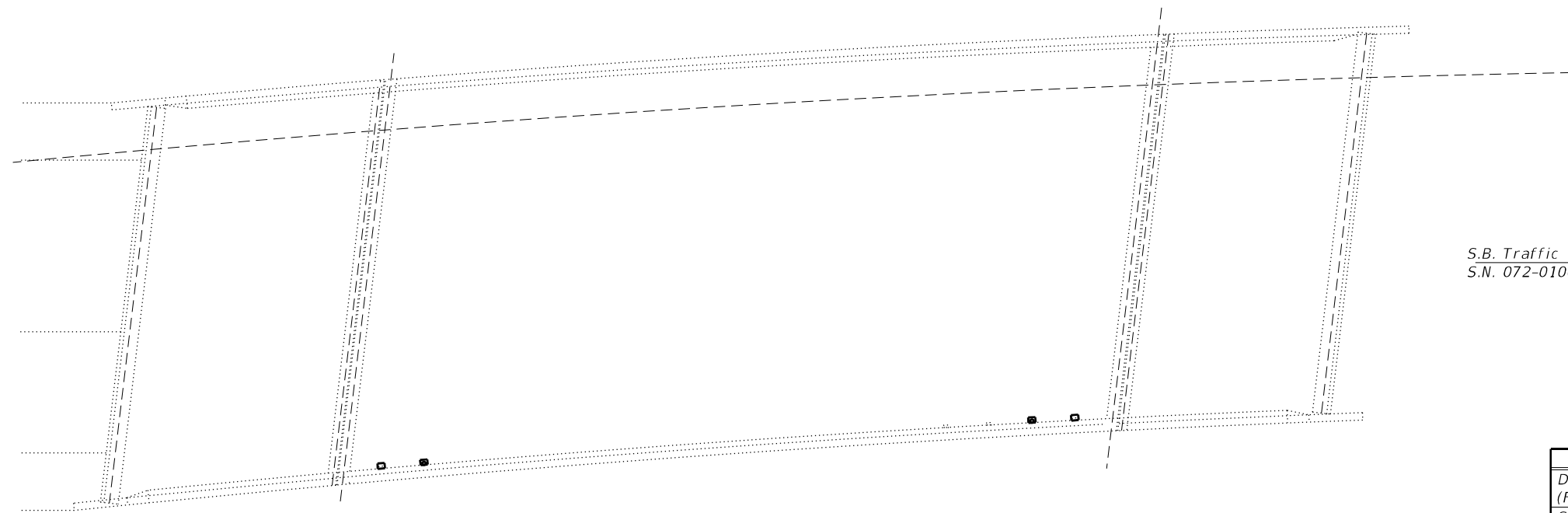
1'-0" x 2'-0", Typ

N.B. Traffic
S.N. 072-0107

Notes:
Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.
An estimated amount of 70 S.F. of Structural Repair of Concrete (depth less than or equal to 5") was added to each structure for repairs to the underside of the overhang soffit.



DRAIN DETAIL
* slope to drain



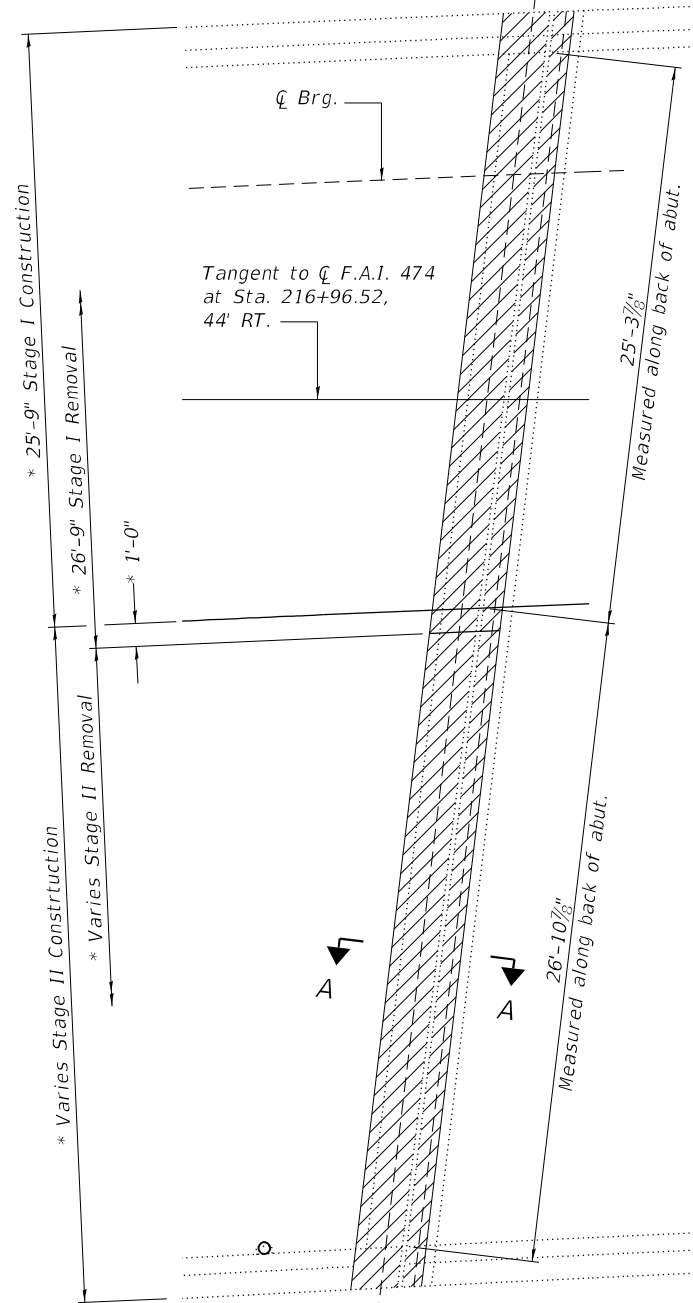
S.B. Traffic
S.N. 072-0106

PLAN

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	2.4
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	140
Floor Drains	Each	7

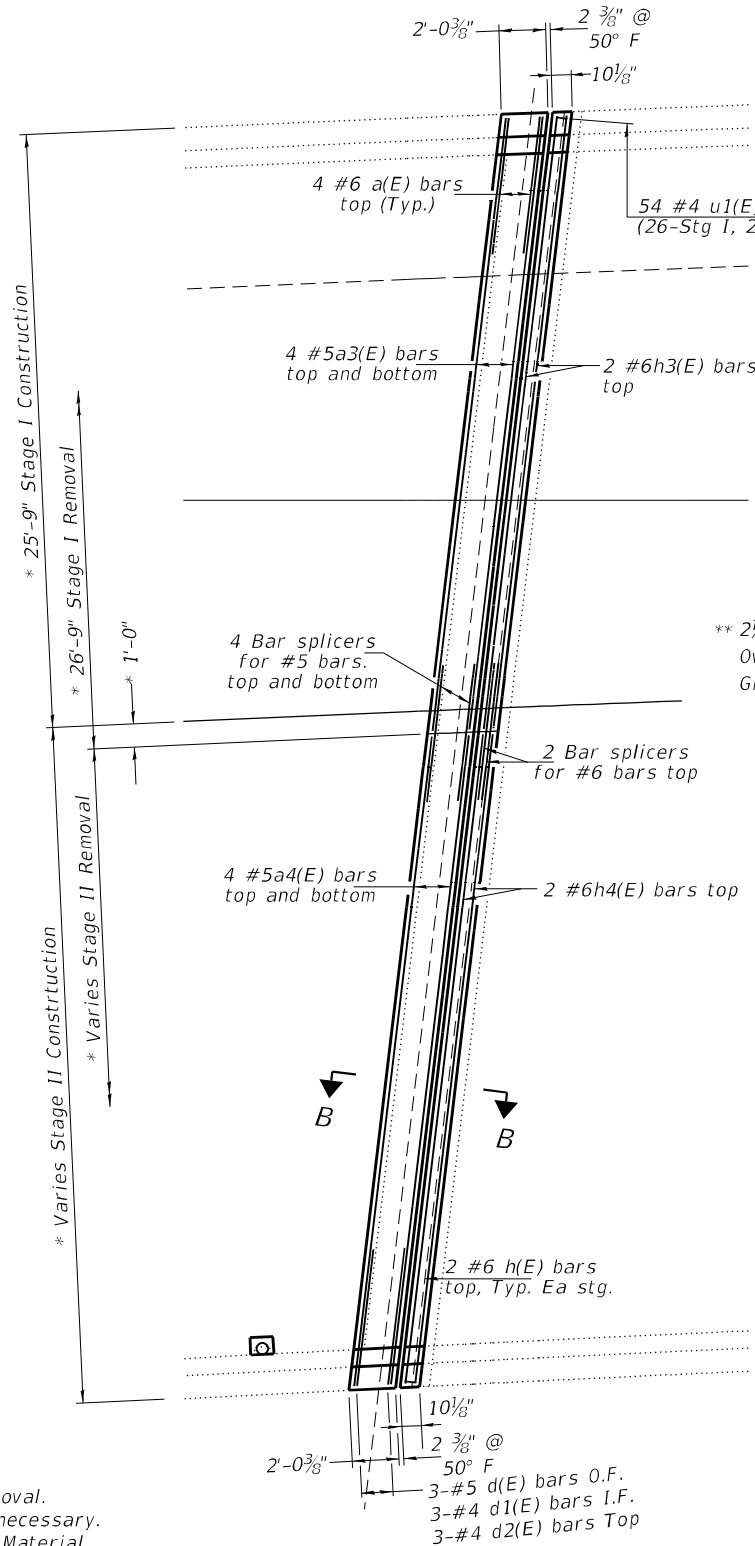
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal



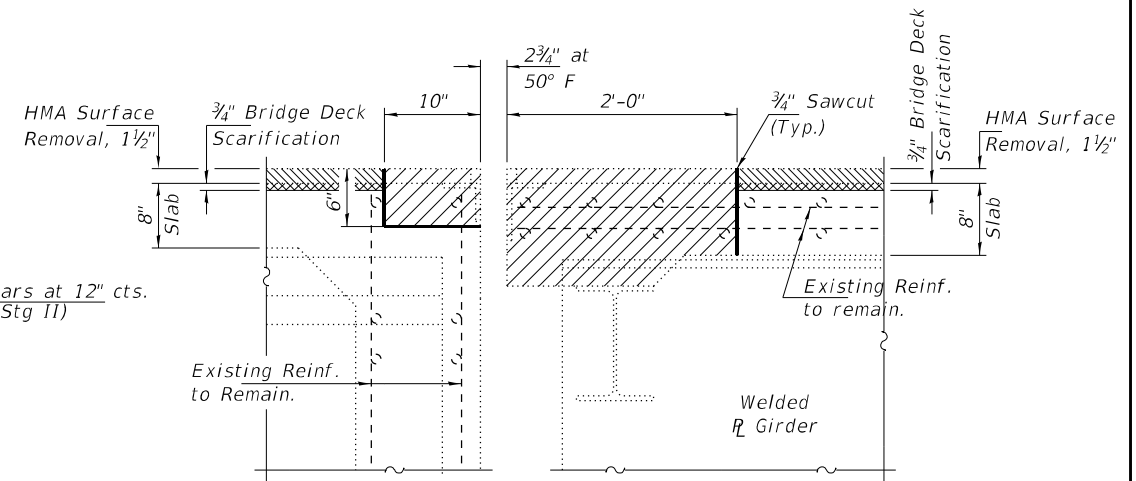
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet x of x.
* Measured radially to C F.A.I. 474.

CONCRETE REMOVAL DETAILS
S. ABUT., 072-0106 (S.B.)

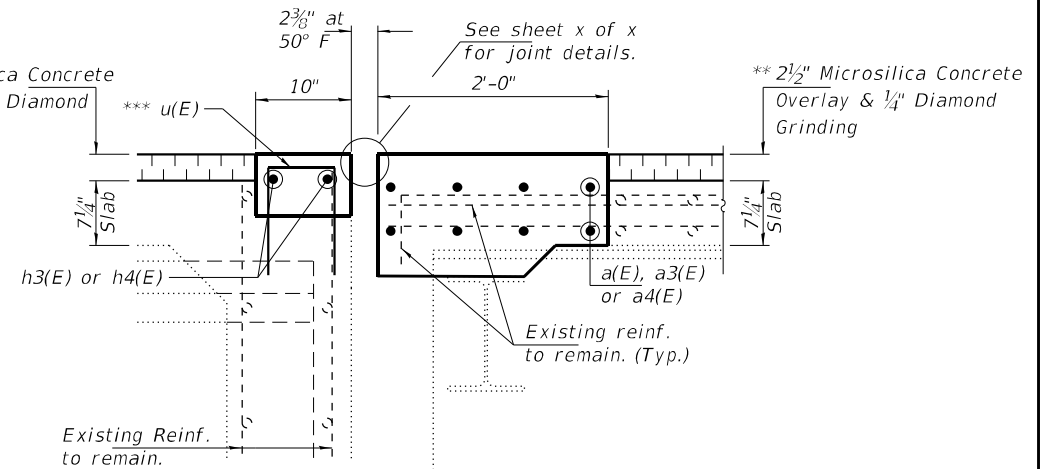
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal
* 25'-9" Stage I Construction
* 26'-9" Stage I Removal



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0106 (S.B.)



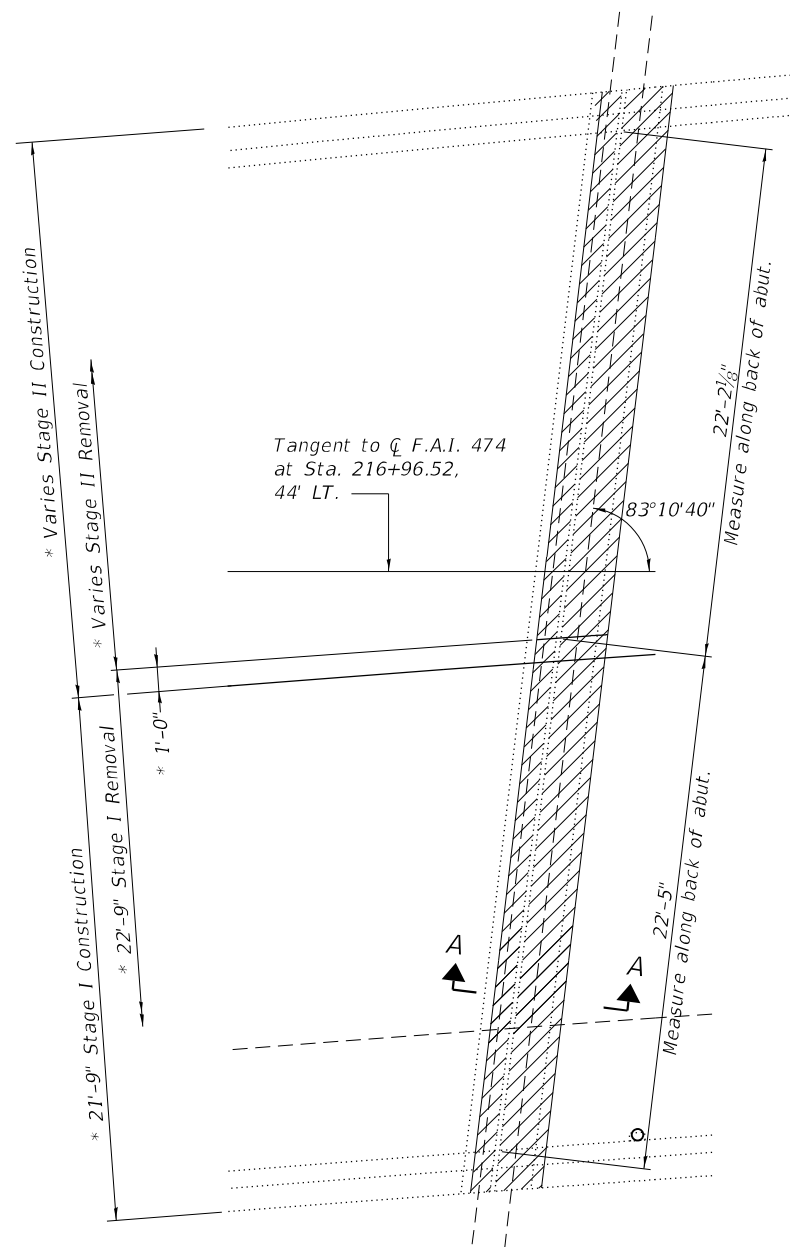
SECTION A-A
(Near C Roadway)
(Dims at RT Ls to end of deck)



SECTION B-B
(Near C Roadway)
(Dims at RT Ls to end of deck)

Notes:
* Measured radially to C F.A.I. 474.
*** Epoxy u1(E) bars in 9" min. holes
according to Article 584 of Standard
Specifications

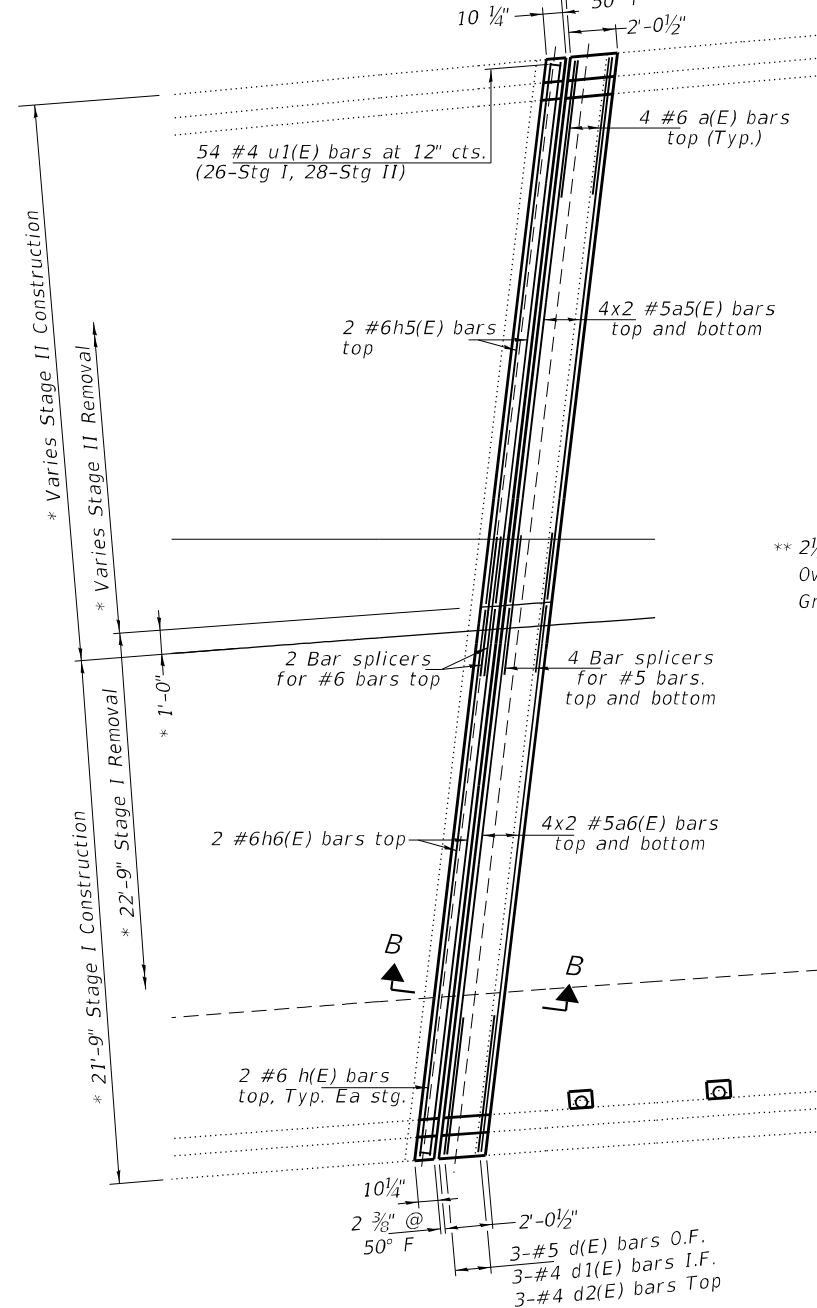
DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS	JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	PASSED	REVIS	DEPARTMENT OF TRANSPORTATION	SN 072-0106 (SB)	474	72(1HB,HB-1,2,3)BR	PEORIA	63	17
DRAWN - Jim Ostermann		REVIS						CONTRACT NO. 68E52	
CHECKED - JSB CCC							ILLINOIS	FED. AID PROJECT	



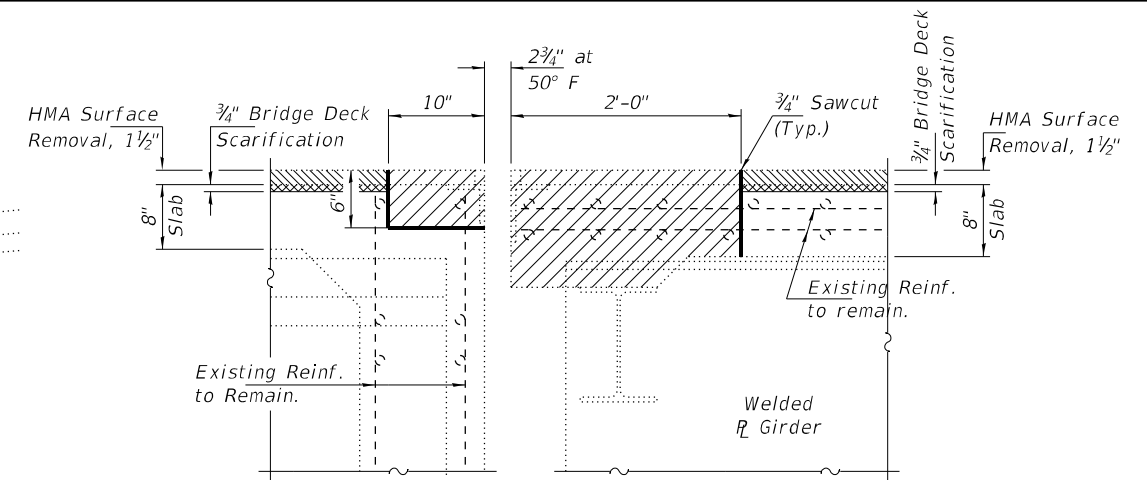
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet x of x.

* Measured radially to C F.A.I. 474.

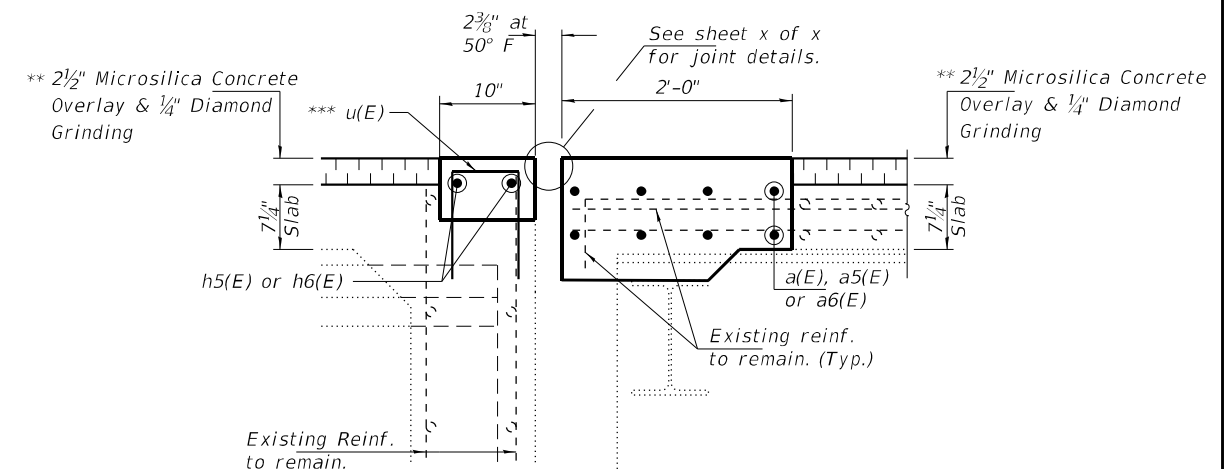
CONCRETE REMOVAL DETAILS
N. ABUT., 072-0107 (N.B.)



CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0107 (N.B.)



SECTION A-A
(Near C Roadway)
(Dims at RT Ls to end of deck)

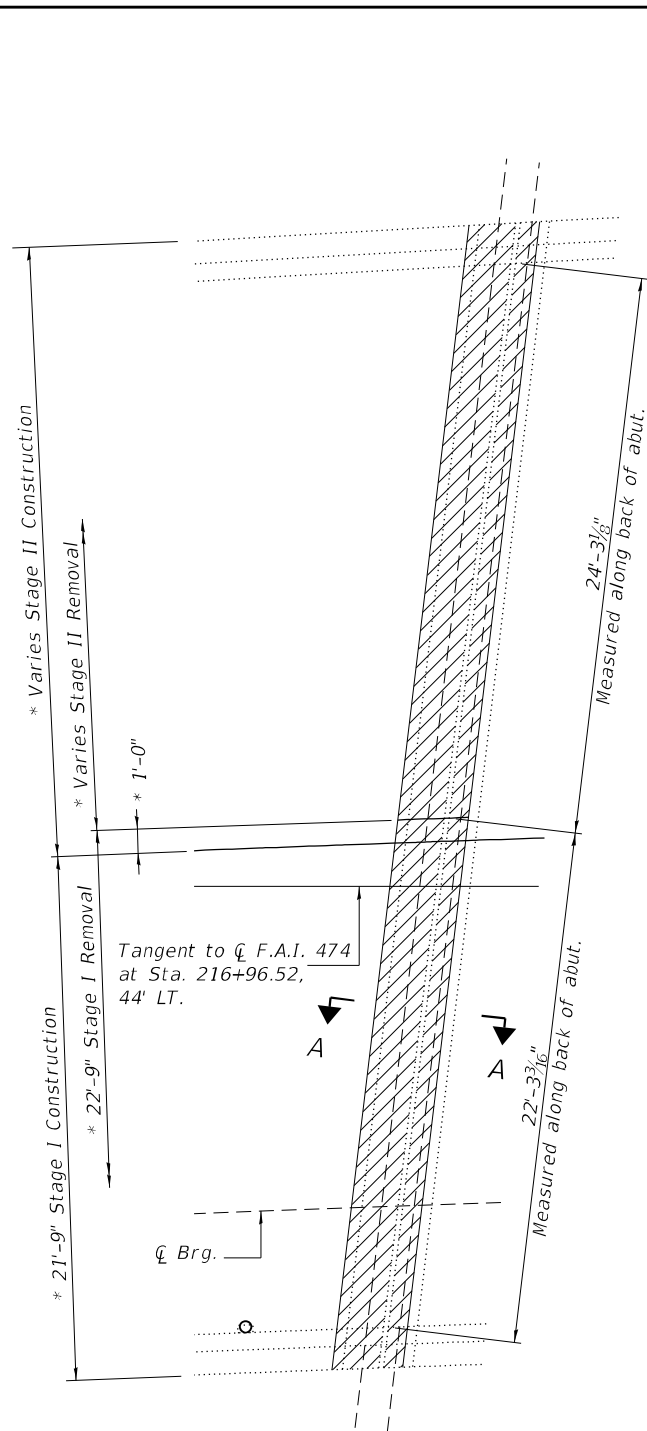


SECTION B-B
(Near C Roadway)
(Dims at RT Ls to end of deck)

Notes:
* Measured radially to C F.A.I. 474.

*** Epoxy u1(E) bars in 9" min. holes
according to Article 584 of Standard
Specifications

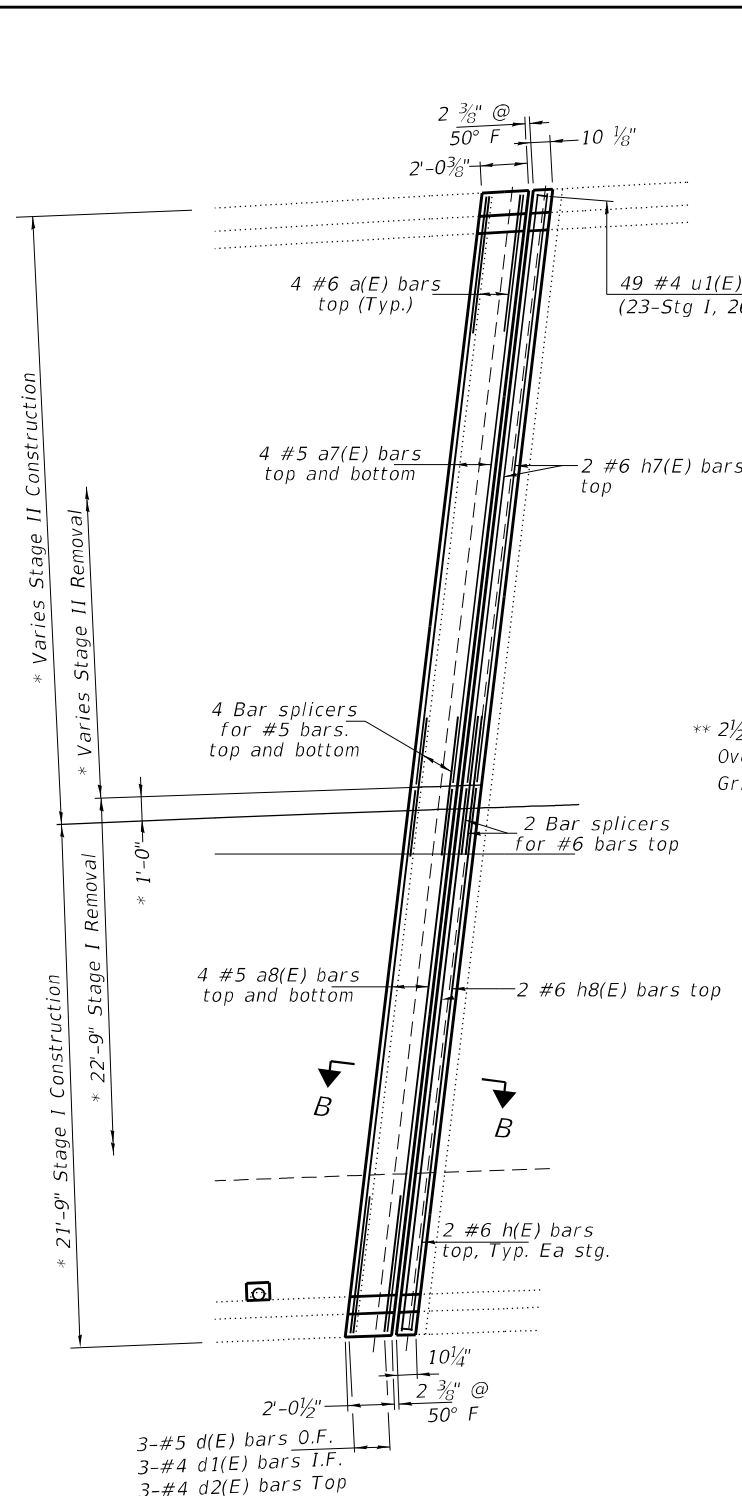
DESIGNED - JSB	EXAMINED  ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT. SN 072-0107 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - CCC		PASSED  ENGINEER OF BRIDGES AND STRUCTURES			REVISED -	474	72(1HB,HB-1,2,3)BR	PEORIA	63	18
DRAWN - Jim Ostermann					REVISED -	CONTRACT NO. 68E52				
CHECKED - JSB CCC					SHEET NO. 6 OF 14 SHEETS	ILLINOIS FED. AID PROJECT				



Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet x of x.

* Measured radially to \bar{C} F.A.I. 474.

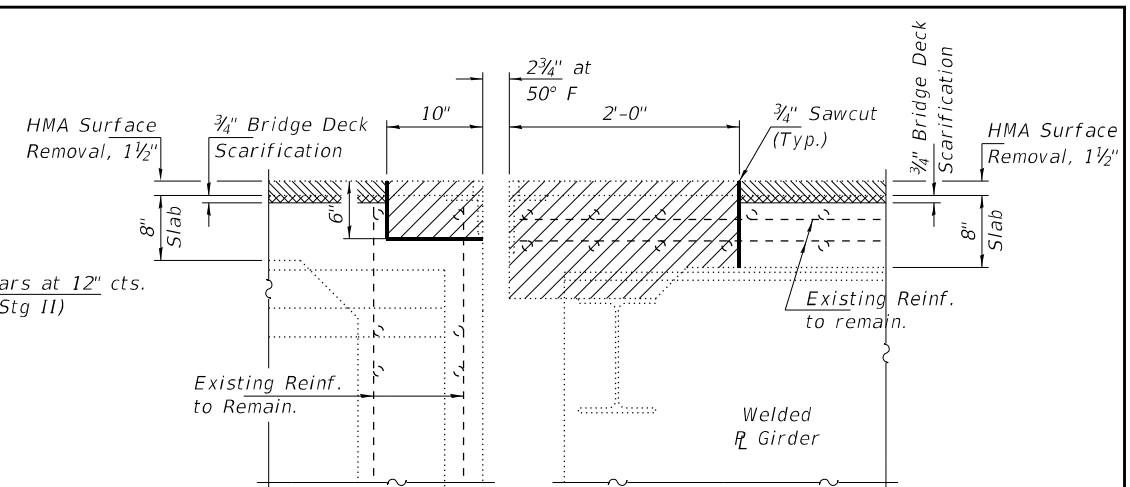
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0107 (N.B.)



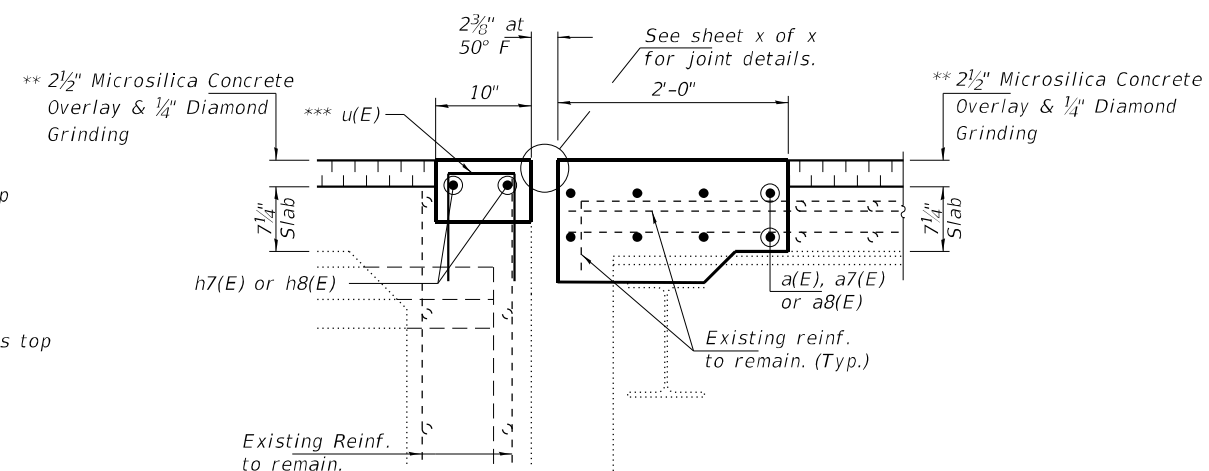
Notes:
* Measured radially to \bar{C} F.A.I. 474.

*** Epoxy u1(E) bars in 9" min. holes
according to Article 584 of Standard
Specifications

CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0107 (N.B.)

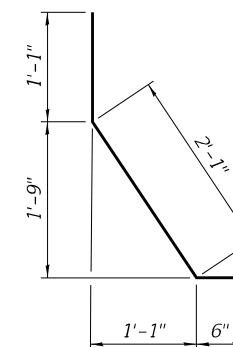
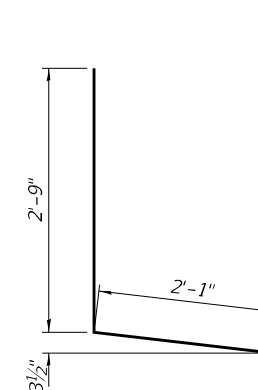
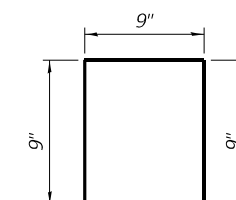
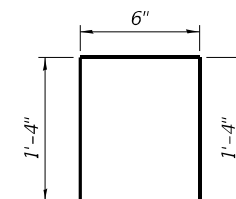
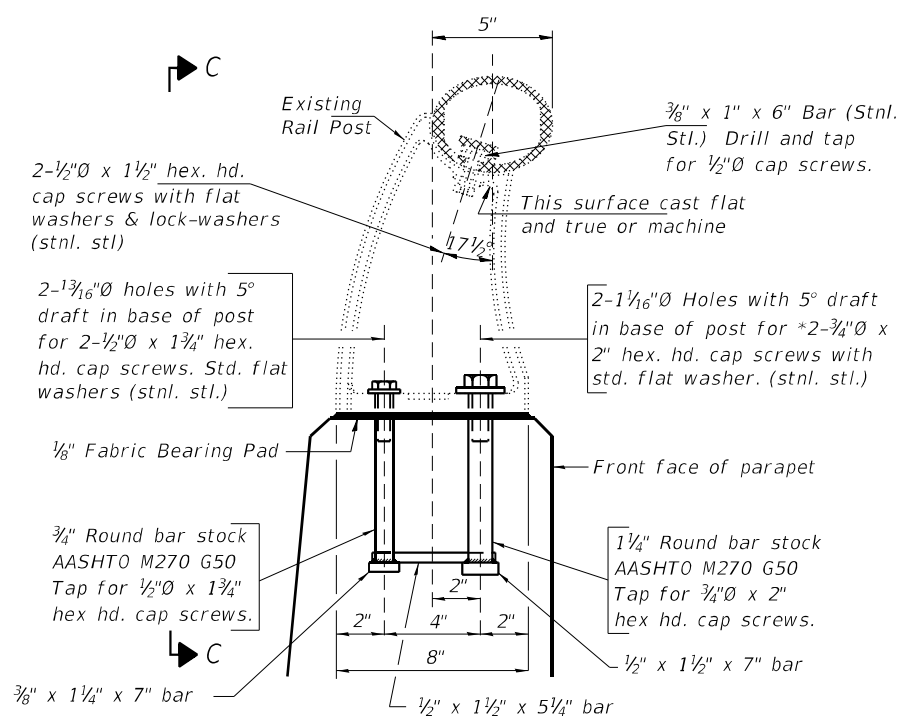
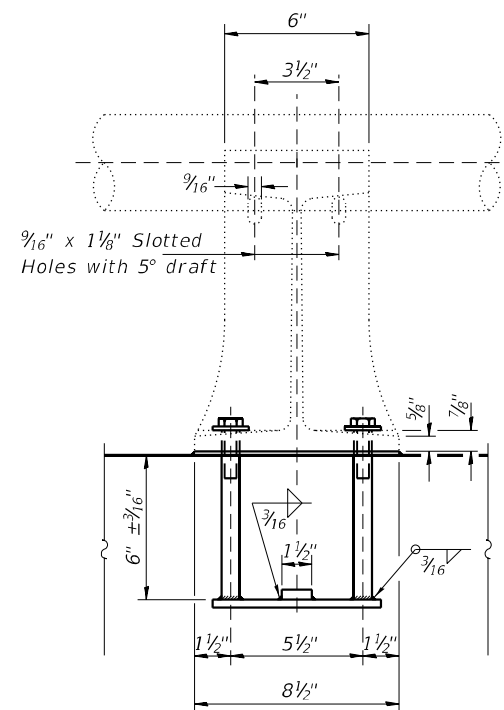
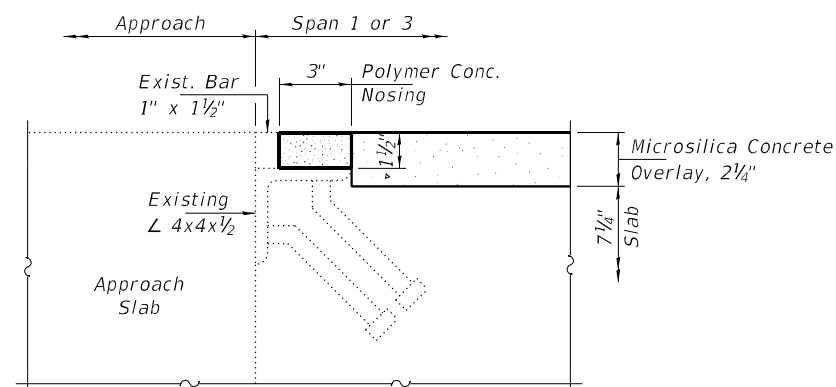
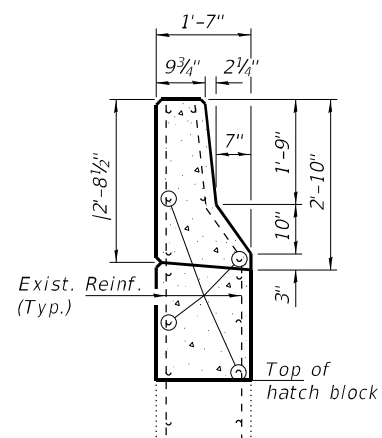
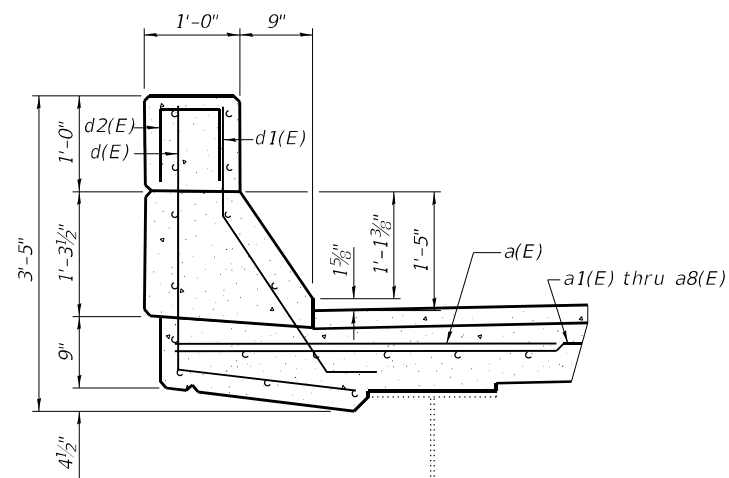


SECTION A-A
(Near \bar{C} Roadway)
(Dims at RT Ls to end of deck)





SECTION B-B
(Near \bar{C} Roadway)
(Dims at RT Ls to end of deck)

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0107 (NB)				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	PASSED	REVISED -									474	72(1HB,HB-1,2,3)BR	PEORIA	63	19
DRAWN - Jim Ostermann		REVISED -									CONTRACT NO. 68E52				
CHECKED - JSB CCC							SHEET NO. 7 OF 14 SHEETS				ILLINOIS FED. AID PROJECT				



BILL OF MATERIAL

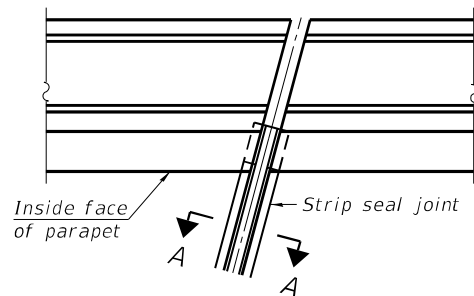
Bar	No.	Size	Length	Shape
a(E)	32	#6	6'-0"	=====
a1(E)	8	#5	25'-6"	=====
a2(E)	8	#5	27'-10"	=====
a3(E)	8	#5	25'-3"	=====
a4(E)	8	#5	26'-10"	=====
a5(E)	8	#5	22'-1"	=====
a6(E)	8	#5	22'-4"	=====
a7(E)	8	#5	24'-2"	=====
a8(E)	8	#5	22'-2"	=====
d(E)	24	#5	4'-10"	L
d1(E)	24	#5	3'-8"	
d2(E)	24	#4	2'-3"	U
h(E)	16	#6	6'-0"	=====
h1(E)	2	#6	25'-6"	=====
h2(E)	2	#6	27'-10"	=====
h3(E)	2	#6	25'-3"	=====
h4(E)	2	#6	26'-10"	=====
h5(E)	2	#6	22'-1"	=====
h6(E)	2	#6	22'-4"	=====
h7(E)	2	#6	24'-2"	=====
h8(E)	2	#6	22'-2"	=====
u1(E)	205	#4	3'-2"	Π
Concrete Removal			Cu. Yd.	25.0
Concrete Superstructure			Cu. Yd.	26.0
Reinforcement Bars, Epoxy Coated			Pound	3340

DESIGNED - JSB	EXAMINED	 ENGINEER OF STRUCTURAL SERVICES	DATE - MAY 07, 2021
CHECKED - CCC			
DRAWN - Jim Ostermann	PASSED	 ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
CHECKED - JSB CCC			

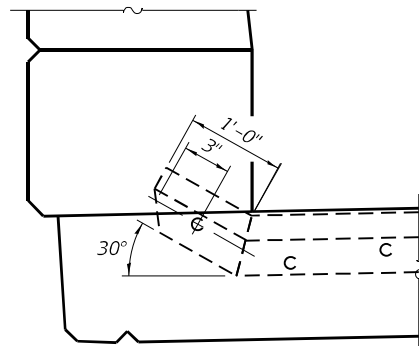
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

JOINT REPLACEMENT DETAILS
SN 072-0106 (SB) & 072-0107 (NB)

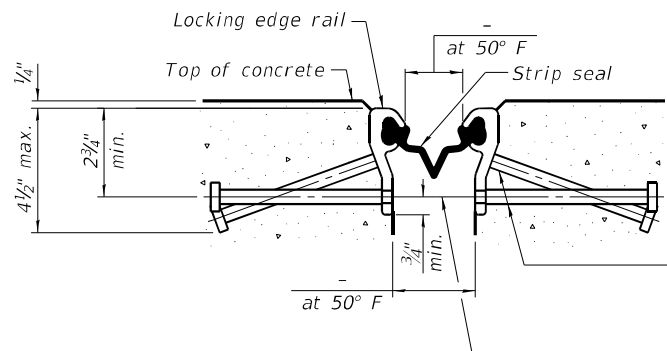
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	20
		CONTRACT NO. 68E52		
ILLINOIS		FED. AID PROJECT		



FOR SKEWS ≤ 30°
PLAN AT PARAPET



ELEVATION AT PARAPET
(Skews ≤ 30°)

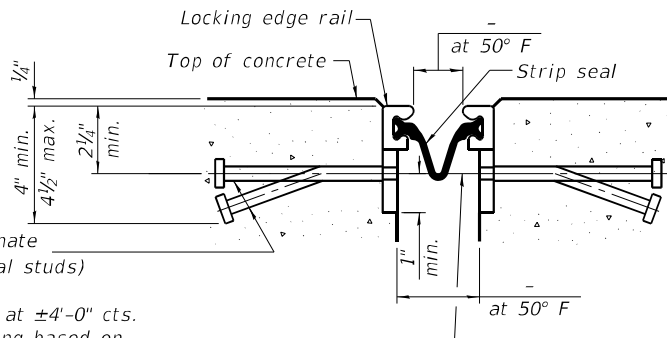


SHOWING ROLLED RAIL JOINT

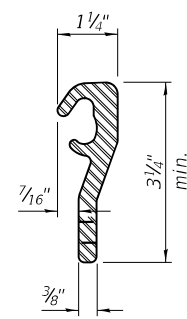
* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
3/8" Ø threaded rods in 7/16" Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

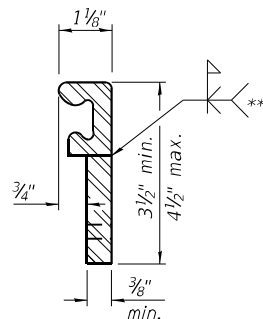
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



SHOWING WELDED RAIL JOINT



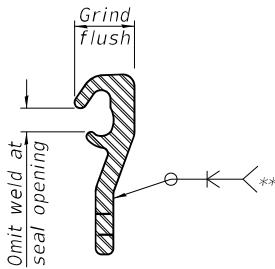
ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	181

EJ-SS1 LT30/REPS

2-25-20

DESIGNED - JSB
CHECKED - CCC
DRAWN - Jim Ostermann
CHECKED - JSB CCC

EXAMINED	Timothy A. Daulton
PASSED	Carl R. Ruyter
ENGINEER OF BRIDGES AND STRUCTURES	

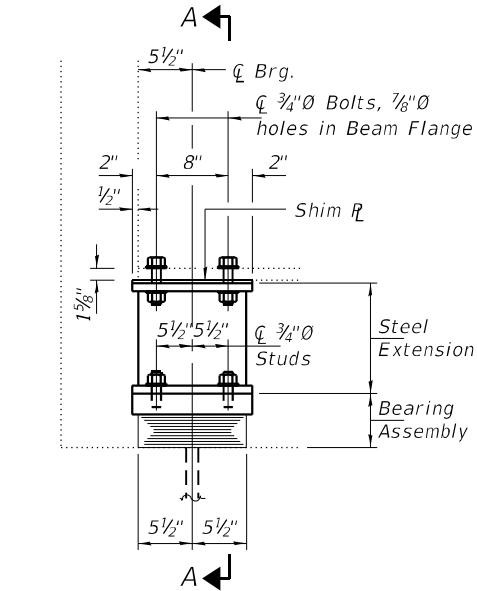
DATE - MAY 07, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 072-0106 (SB) & 072-0107 (NB)

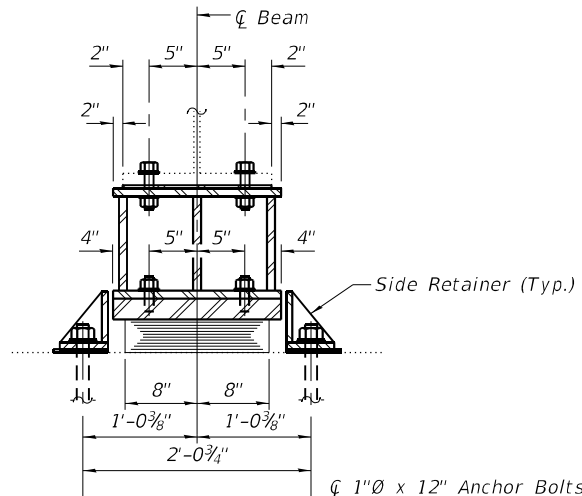
SHEET NO. 9 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	21
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				



ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



SECTION A-A

1" x 12" Anchor Bolts with 2 3/4" x 2 3/4" x 5/16" R washer under nut.

BEAM REACTIONS

	072-0106(SB)	072-0107(NB)
R _p	(K) 86.2	76.7
R _t	(K) 49.3	43.3
Imp.	(K) 10.6	9.3
R (Total)	(K) 146.1	129.3

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

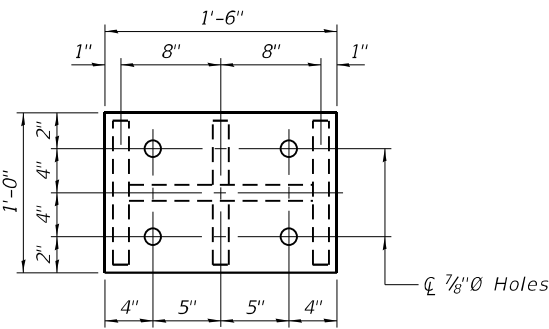
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 83 Tons.

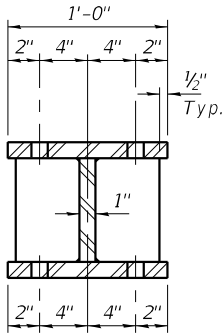
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

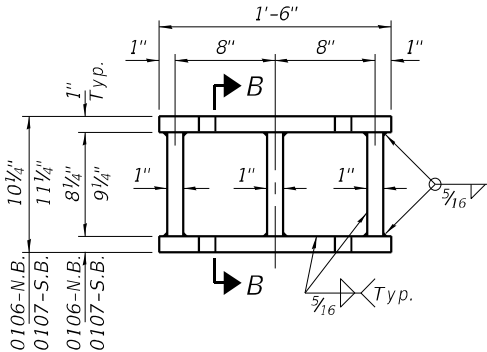
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



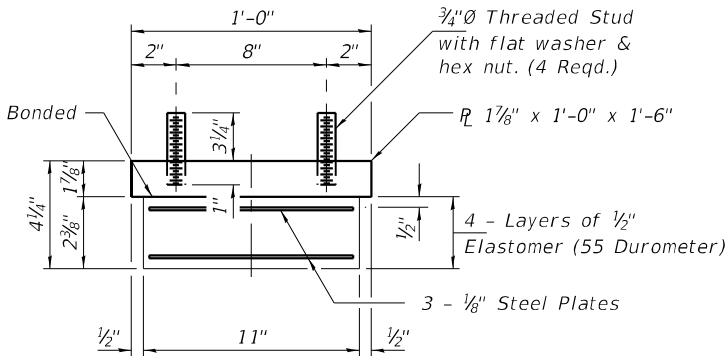
PLAN TOP AND BOTTOM PLATE



SECETION B-B



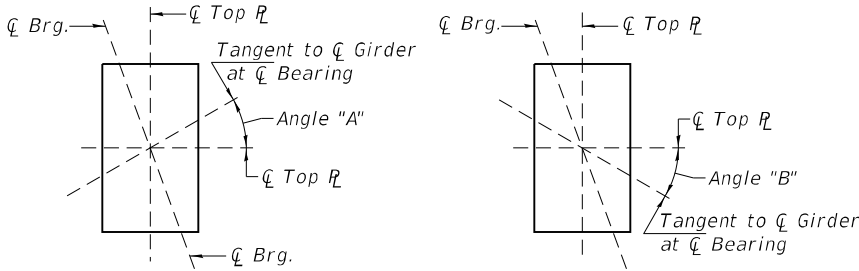
STEEL EXTENSION DETAIL



BEARING ASSEMBLY

Note:

Shim plates shall not be placed under Bearing Assembly.



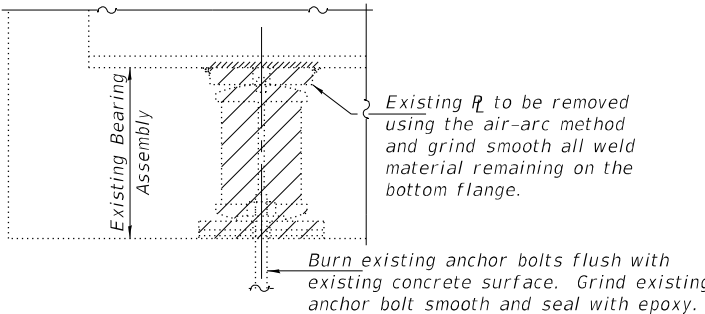
TOP BEARING PLATE TO GIRDER

CONNECTION DETAIL

(See Table for Dimensions)

TABLE FOR ANGLE "A" & "B"

Girder	Girder N. Abut.		Girder S. Abut.	
	Angle "A"	Angle "B"	Angle "A"	Angle "B"
1	1°-12'-17"	-	1°-13'-26"	-
2	0°-02'-58"	-	0°-03'-51"	-
3	0°-01'-47"	-	0°-02'-19"	-
4	0°-00'-36"	-	0°-00'-47"	-
5	-	0°-00'-35"	-	0°-00'-45"
6	-	0°-01'-46"	-	0°-02'-18"
7	-	0°-02'-58"	-	0°-03'-52"
8	0°-03'-01"	-	0°-03'-55"	-
9	0°-01'-49"	-	0°-02'-38"	-
10	0°-00'-37"	-	0°-00'-49"	-
11	-	0°-00'-35"	-	0°-00'-45"
12	-	0°-01'-48"	-	0°-02'-20"
13	-	0°-03'-01"	-	0°-03'-55"
14	0°-24'-25"	-	0°-23'-59"	-



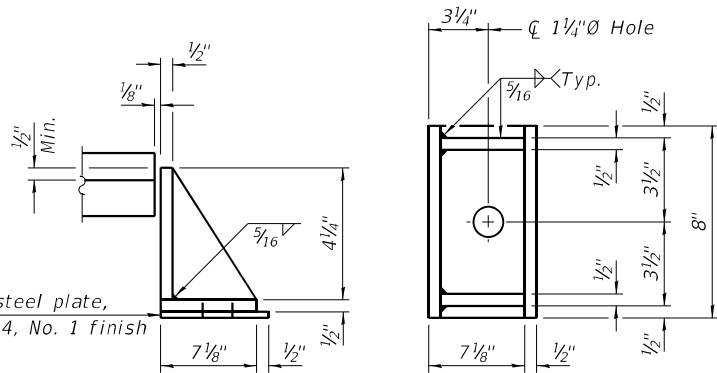
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	3330
Anchor Bolts, 1"0	Each	28

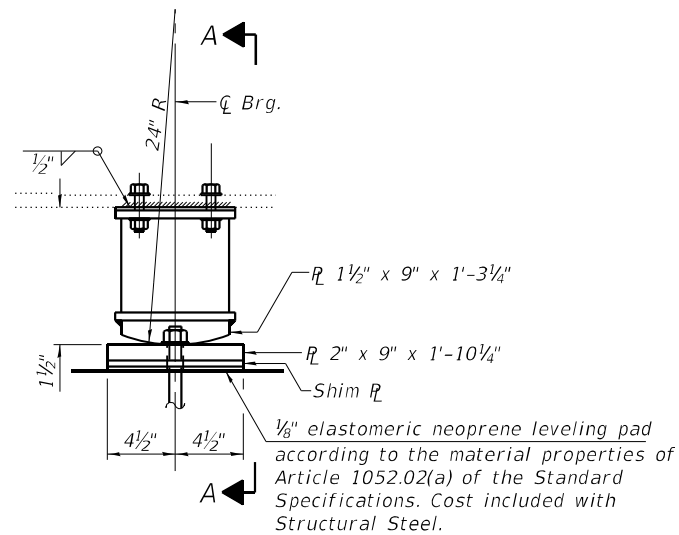
1/4" Stainless steel plate, A240, Type 304, No. 1 finish



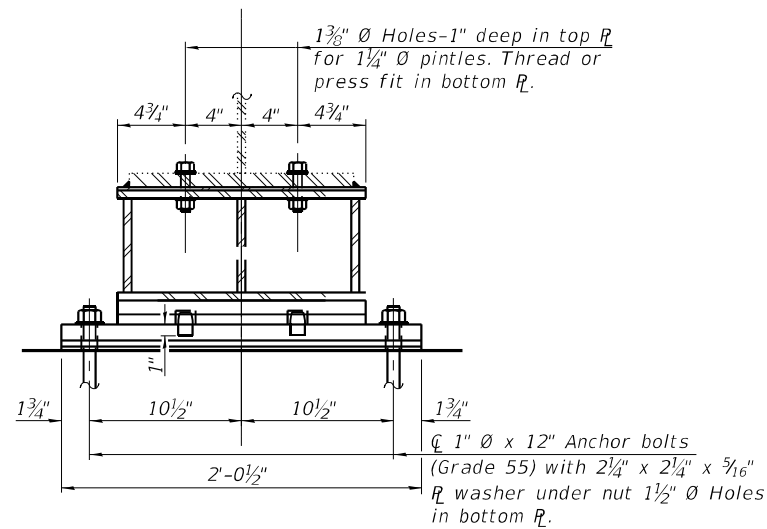
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

TYI/REPS 5-17-2018

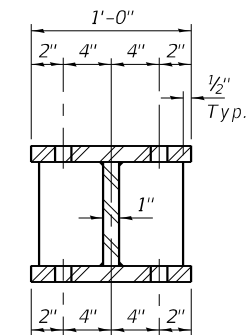


ELEVATION

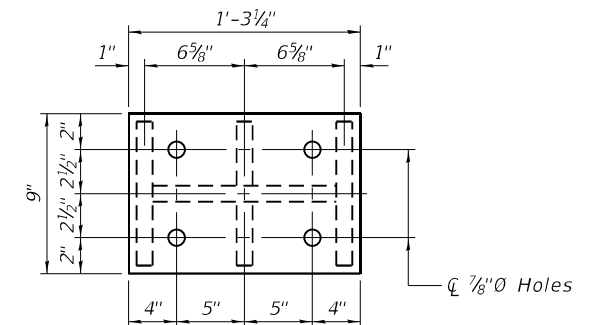


SECTION A-A

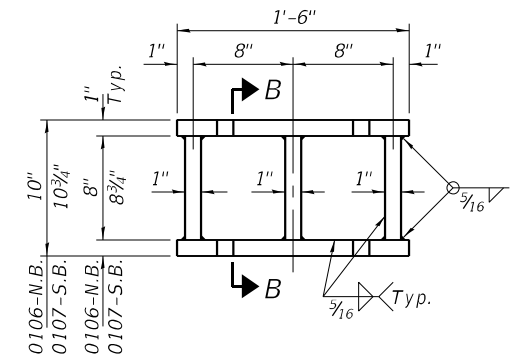
FIXED BEARING AT ABUTMENT
(7 Required)



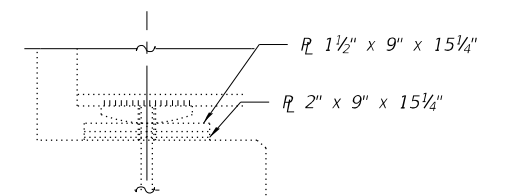
SECETION B-B



PLAN TOP AND BOTTOM PLATE



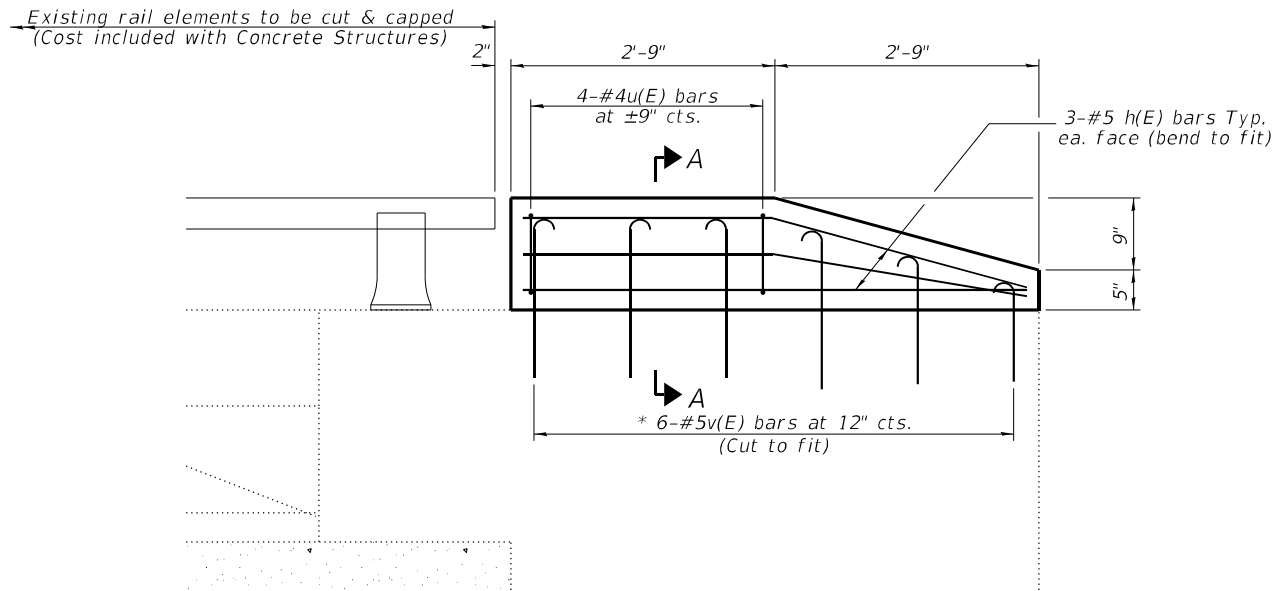
STEEL EXTENSION DETAIL



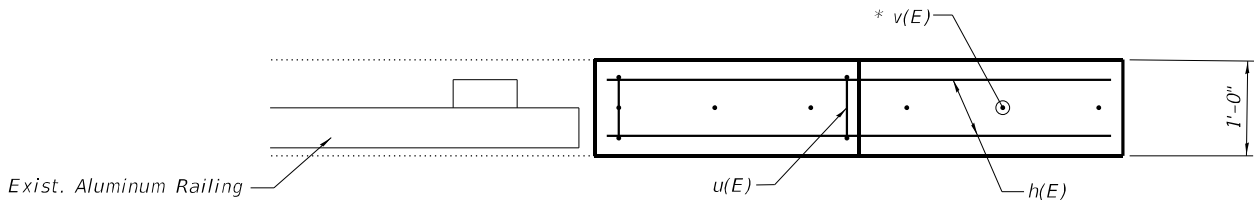
EXISTING FIXED BEARING DETAIL

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	3470
Anchor Bolts, 1"Ø	Each	28

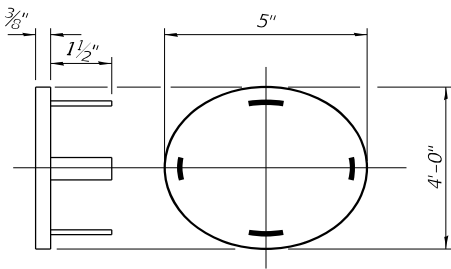


PROPOSED ELEVATION

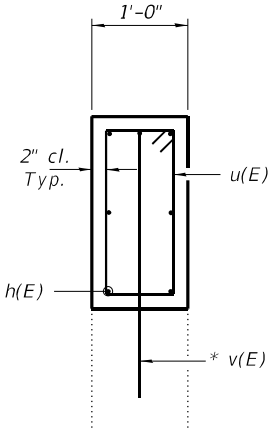


PLAN

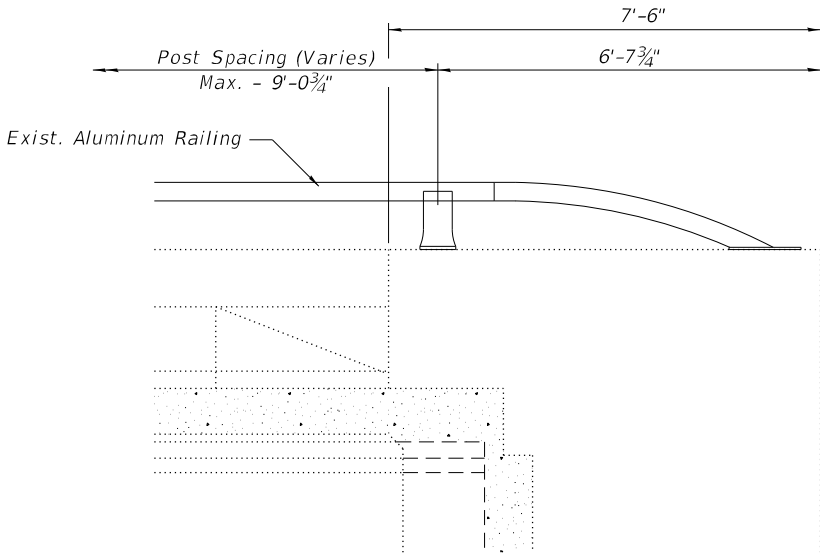
* Epoxy v(E) bars in 9" min. holes according to Article 584 of the Standard Specs.



CAST END CAP



SECTION A-A

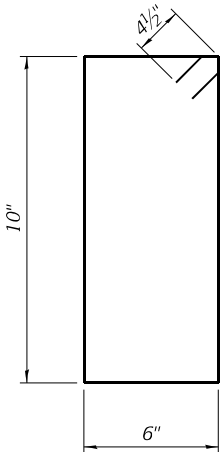


INSIDE VIEW AT APPROACH BENT

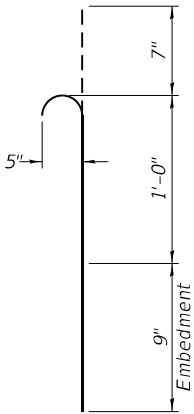
NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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.



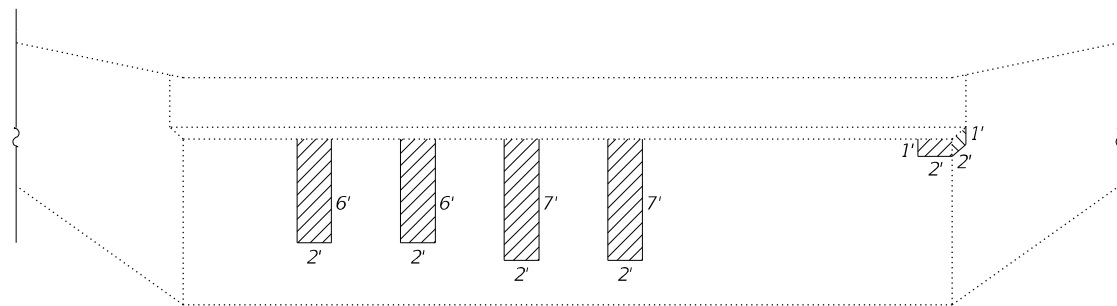
BAR u(E)



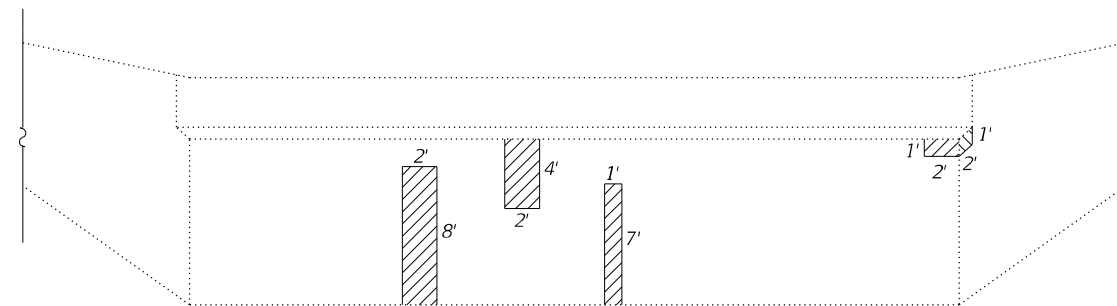
BAR v(E)

TOTAL BILL OF MATERIAL
8 LOCATIONS

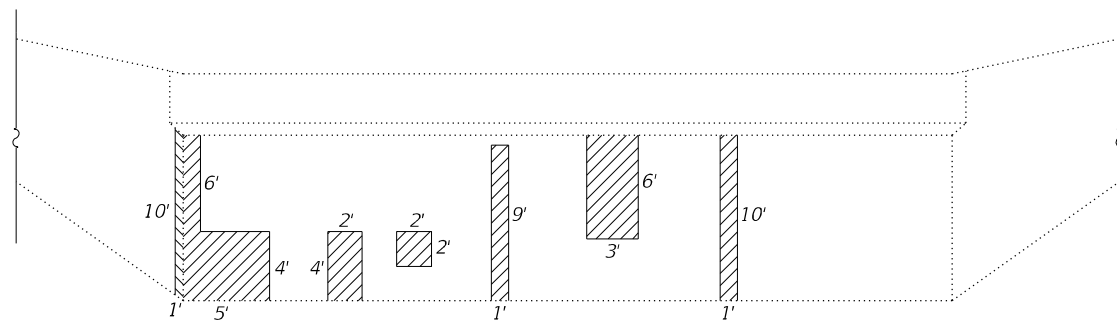
Bar	No.	Size	Length	Shape
h(E)	24	#5	5'-2"	—
u(E)	24	#4	3'-5"	□
v(E)	24	#5	2'-4"	—
Concrete Superstructure			Cu. Yd.	6
Reinforcement Bars, Epoxy Coated			Pound	240



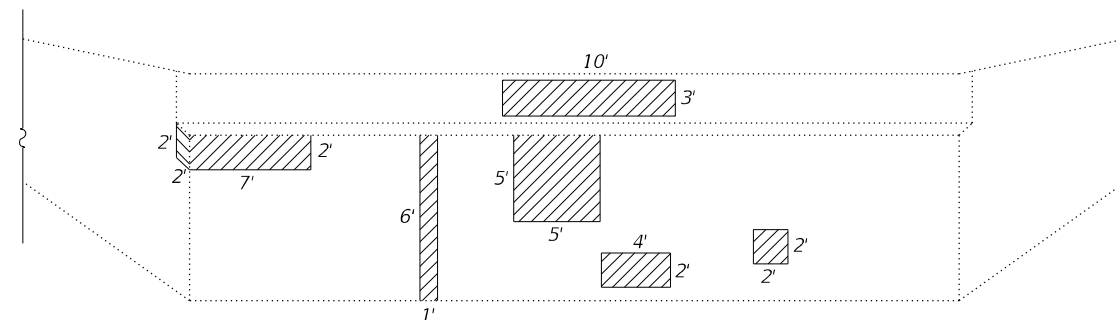
SOUTH ABUTMENT FACE
(SN 072-0106)



SOUTH ABUTMENT FACE
(SN 072-0107)



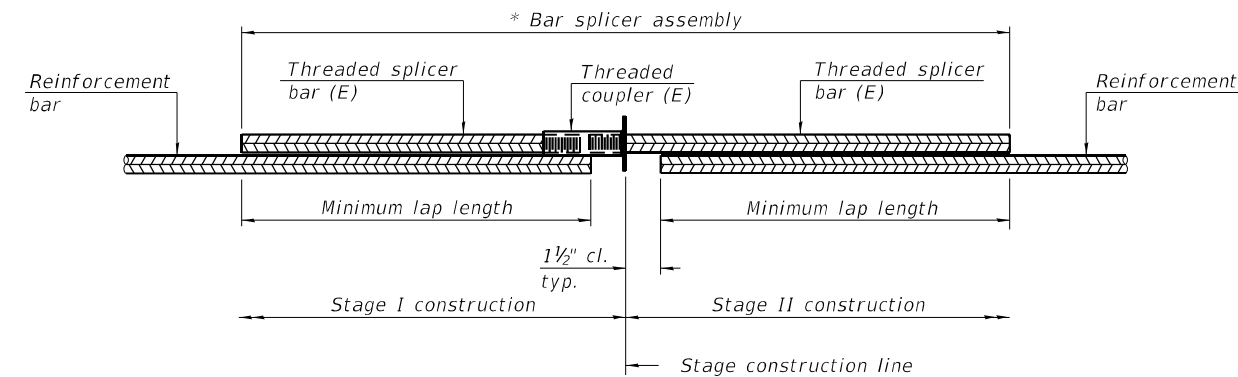
NORTH ABUTMENT FACE
(SN 072-0106)



NORTH ABUTMENT FACE
(SN 072-0107)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth \leq 5")	Sq. Ft.	398



STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

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

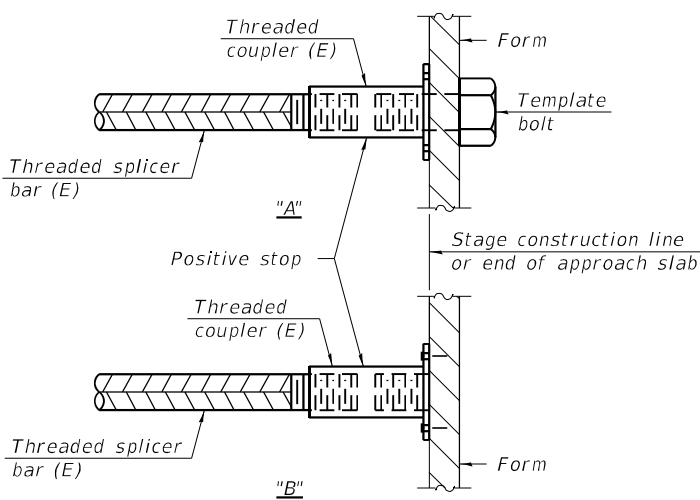
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

SN 072-0106

Location	Bar size	No. assemblies required	Minimum lap length
N. Abut - deck	#5	8	3'-6"
S. Abut - deck	#5	8	3'-6"
N. Abut - appr.	#6	2	4'-10"
S. Abut - appr.	#6	2	4'-10"

SN 072-0107

Location	Bar size	No. assemblies required	Minimum lap length
N. Abut - deck	#5	8	3'-6"
S. Abut - deck	#5	8	3'-6"
N. Abut - appr.	#6	2	4'-10"
S. Abut - appr.	#6	2	4'-10"

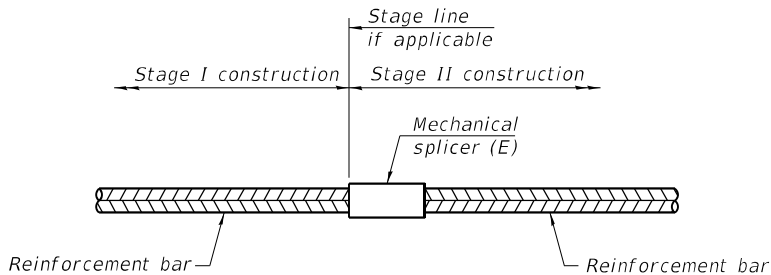


INSTALLATION AND SETTING METHODS

"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

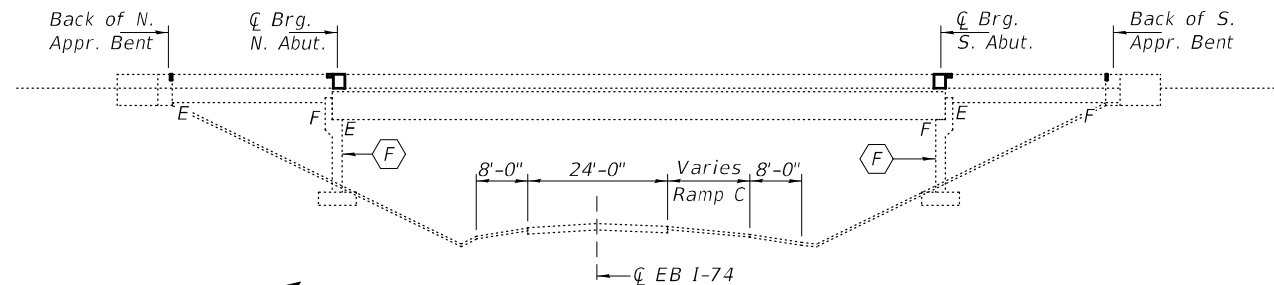
Location	Bar size	No. assemblies required

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.

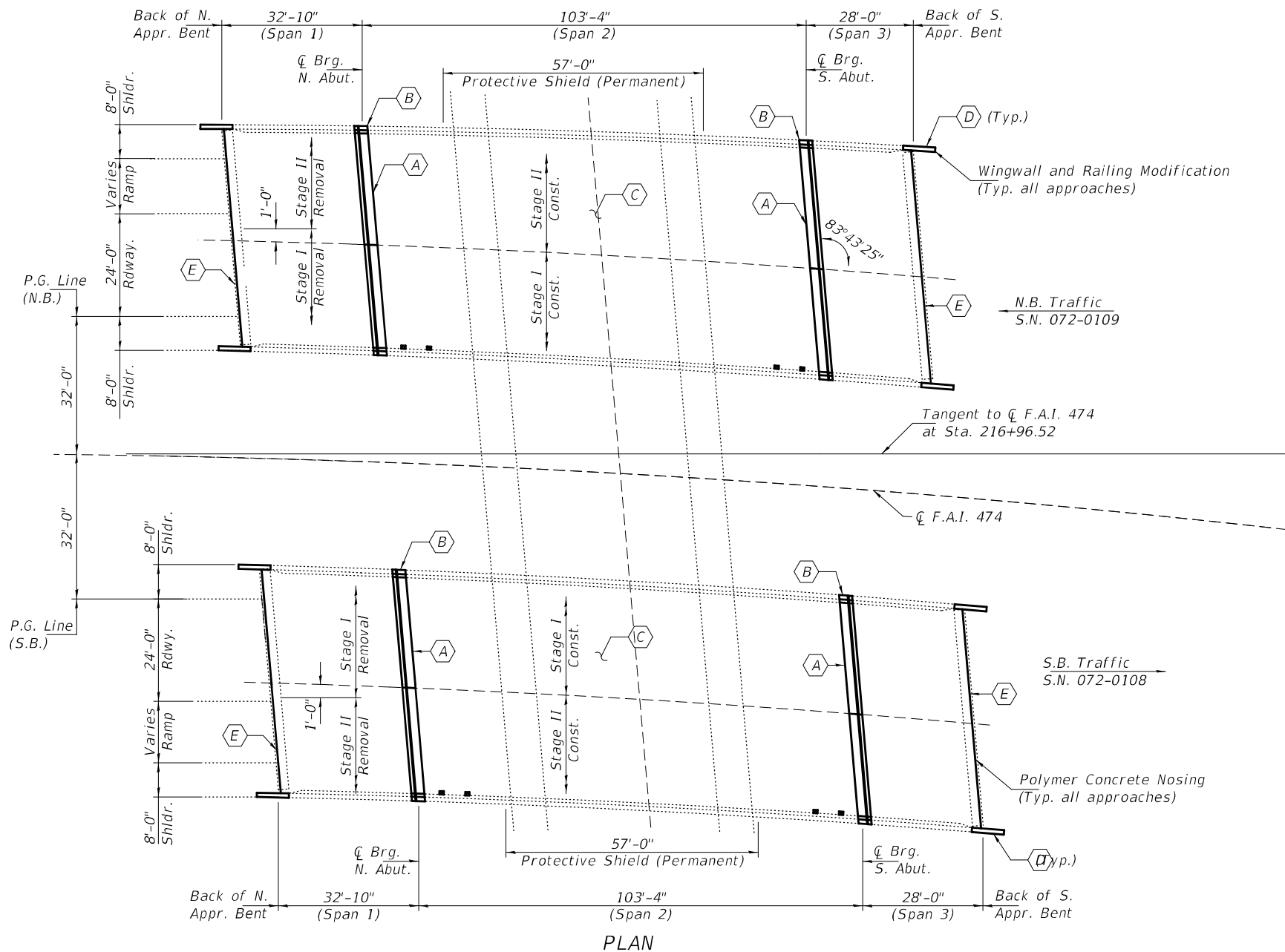
BSD-1

1-1-2020

DESIGNED - JSB	EXAMINED	DATE - MAY 07, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 072-0106 (SB) & 072-0107 (NB)		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	PASSED	REVISD -					474	72(1HB,HB-1,2,3)BR	PEORIA	63	26
DRAWN - Jim Ostermann		REVISD -					CONTRACT NO. 68E52				
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES		SHEET NO. 14 OF 14 SHEETS				ILLINOIS FED. AID PROJECT				



ELEVATION



PLAN



- (A) - Remove and replace expansion joint with Preformed Joint Strip Seal.
- (B) - Bearing removal and replacement at Abutments.
- (C) - Bridge deck scarification with new Microsilica Concrete Overlay
- (D) - Wingwall and Railing Modifications. See sheet 15 of 17 for details.
- (E) - Polymer Concrete Nosing. See sheet 9 of 17 for details.
- (F) - Substructure Repairs

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, 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.

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.

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.

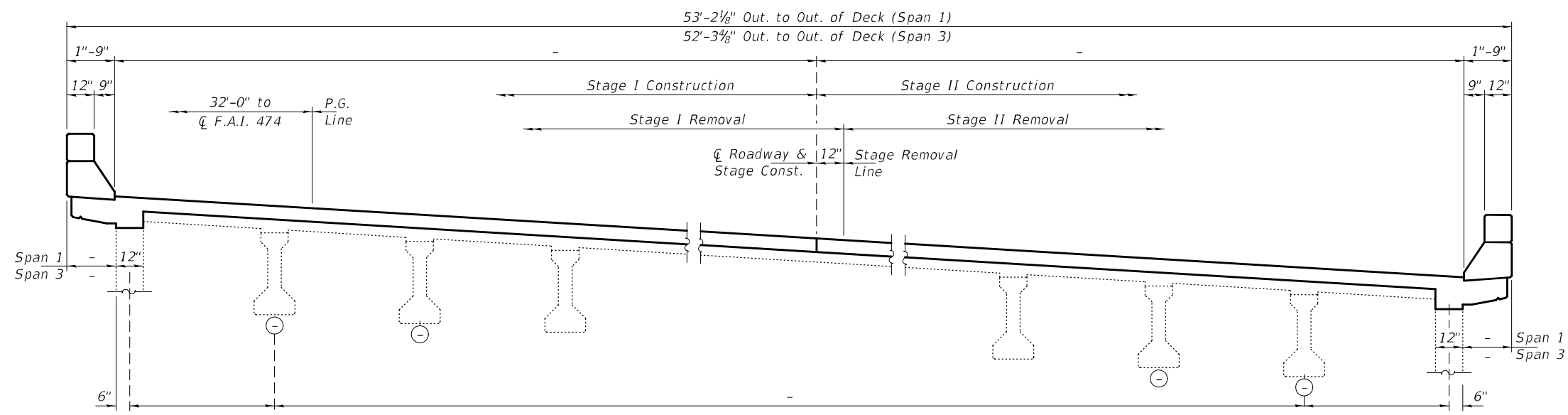
All new structural steel and bearing assemblies shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."

TOTAL BILL OF MATERIAL

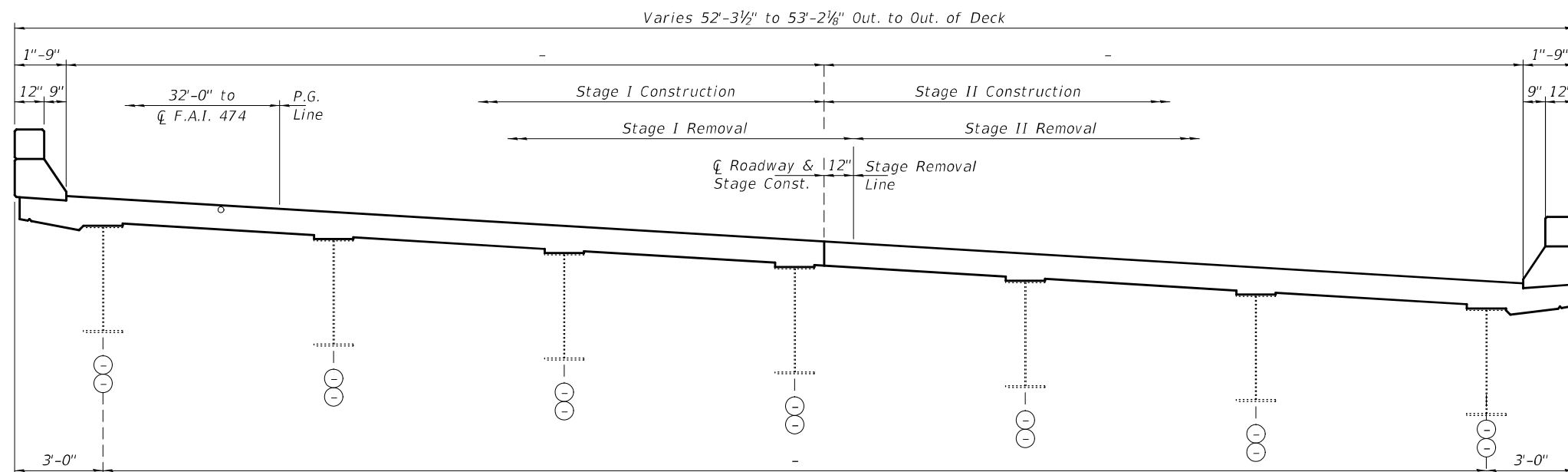
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	21.1
Concrete Superstructure	Cu. Yd.	21.5
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	1825
Bridge Deck Grooving	Sq. Yd.	1677
Floor Drains	Each	4
Preformed Joint Strip Seal	Foot	211
Reinforcement Bars, Epoxy Coated	Pound	2710
Bar Splicers	Each	40
* Protective Coat	Sq. Yd.	1825
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	245
Furnishing & Erecting Structural Steel	Pound	6068
Elastomeric Bearing Assembly, Type I	Each	14
Jack & Remove Existing Bearings	Each	28
Anchor Bolts, 1"Ø	Each	56
Protective Shield (Permanent)	Sq. Yd.	511
Hot-Mix Asphalt Surface Removal Deck	Sq. Yd	1825
Polymer Concrete	Cu. Ft.	6.5
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1.8
Bridge Deck Scarification, 3/4"	Sq. Yd.	1825

* On new concrete and microsilica concrete overlay only.

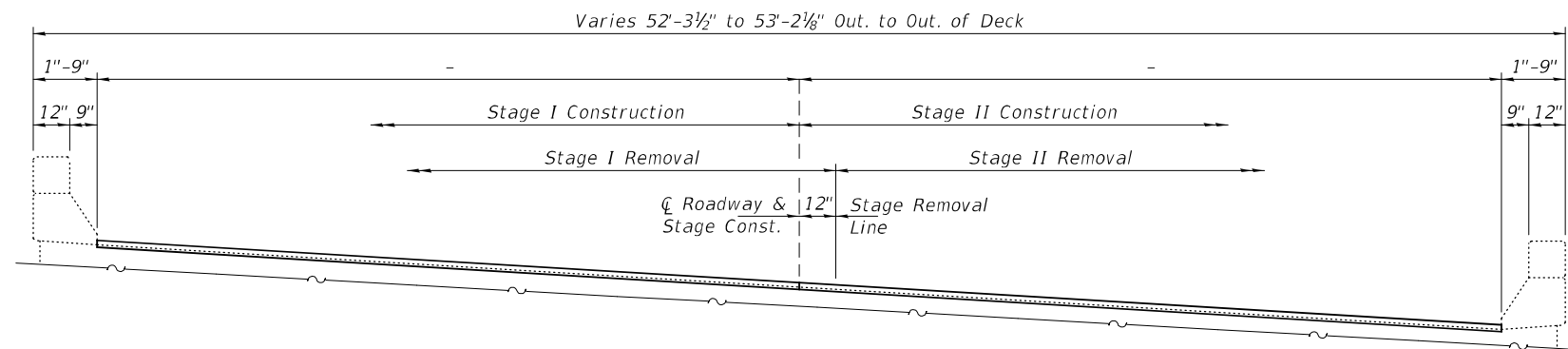
DESIGNED - CHI-CHEUNG CHAU	EXAMINED - <i>Twg A. Bost</i>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION F.A.I. 474 OVER F.A.I. 74 SN 072-0108 (SB) & 072-0109 (NB)	SHEET NO. 1 OF 17 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JEFFREY S. BURKE	ENGINEER OF STRUCTURAL SERVICES					474	72(1HB,HB-1.2.3)BR	PEORIA	63	27
DRAWN - jostermann	PASSED - <i>Sh. Carl Perry</i>	REVISD -				CONTRACT NO. 68E52				
CHECKED - CCC JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISD -				ILLINOIS FED. AID PROJECT				



CROSS SECTION THRU SPANS 1 & 3 AT ABUTMENT
(Looking South)

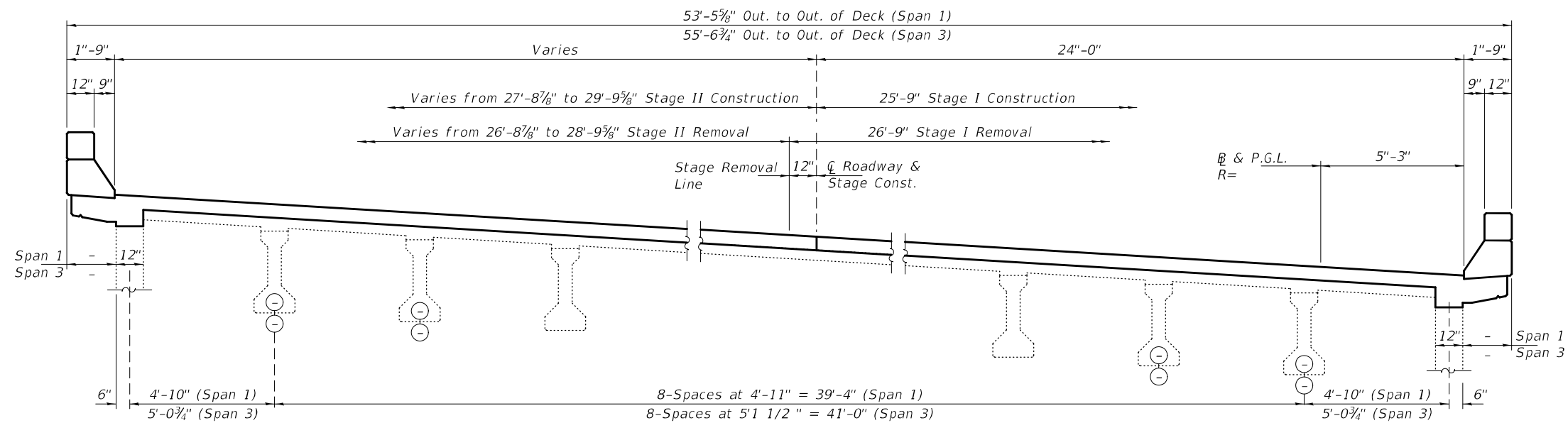


CROSS SECTION THRU SPAN 2 AT ABUTMENT
(Looking South)

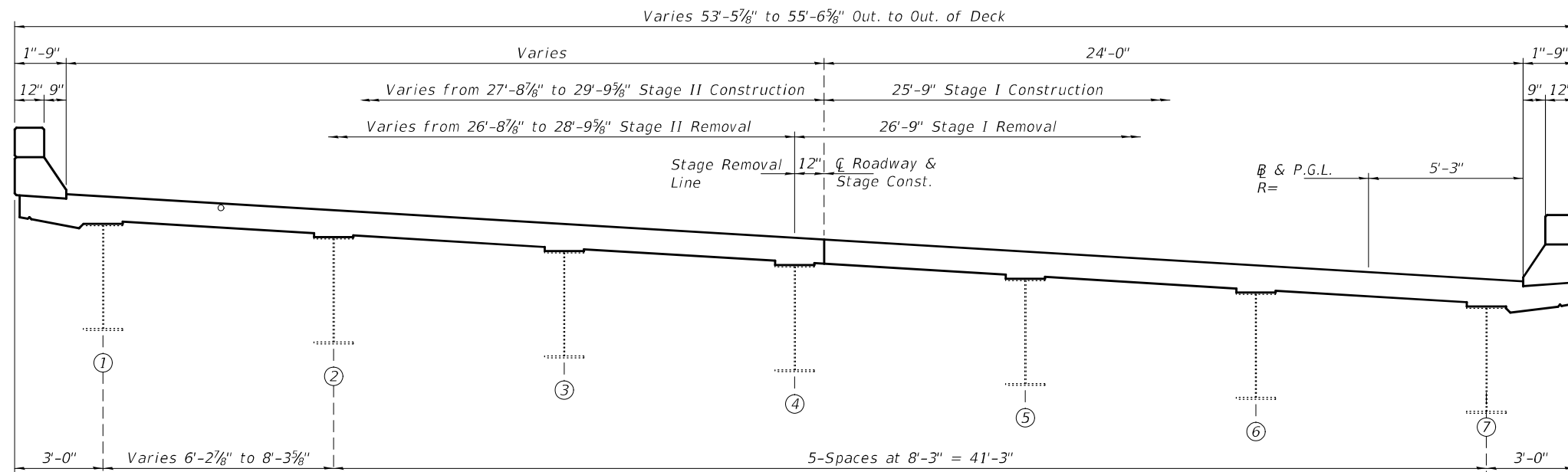


TYPICAL CROSS SECTION THRU MID-SPAN
(Looking South)

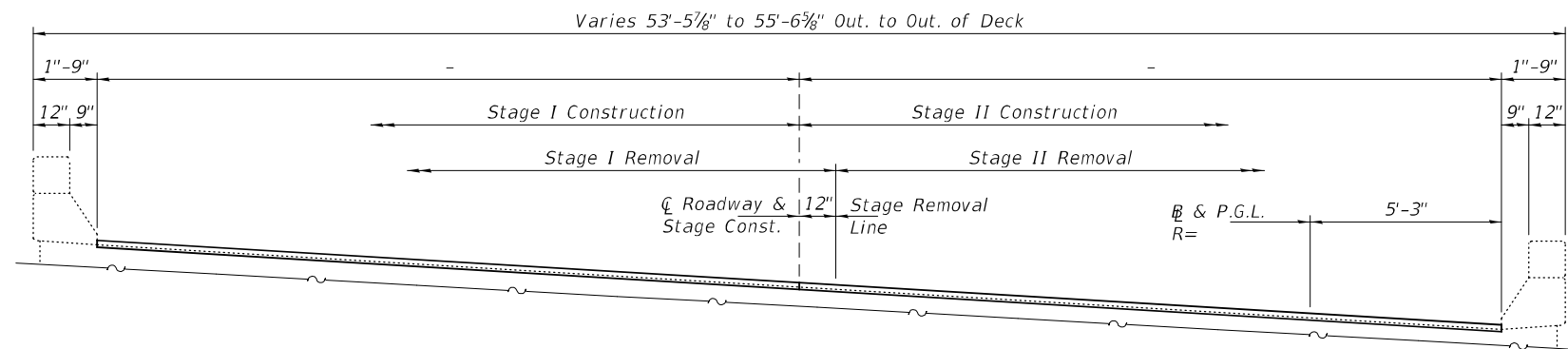
DESIGNED - CCC	EXAMINED <div>Timothy A. Anderson</div> <div>ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING CROSS SECTIONS SN 072-0108 (SB)	SHEET NO. 2 OF 17 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - JSB		PASSED <div>Carl P. Poyner</div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>				REVISED -	474	72(1HB,HB-1.2,3)BR	PEORIA	63	28
DRAWN - Jim Ostermann steffen						REVISED -	CONTRACT NO. 68E52				
CHECKED - CCC JSB						ILLINOIS FED. AID PROJECT					



CROSS SECTION THRU SPANS 1 & 3 AT ABUTMENT
(Looking South)

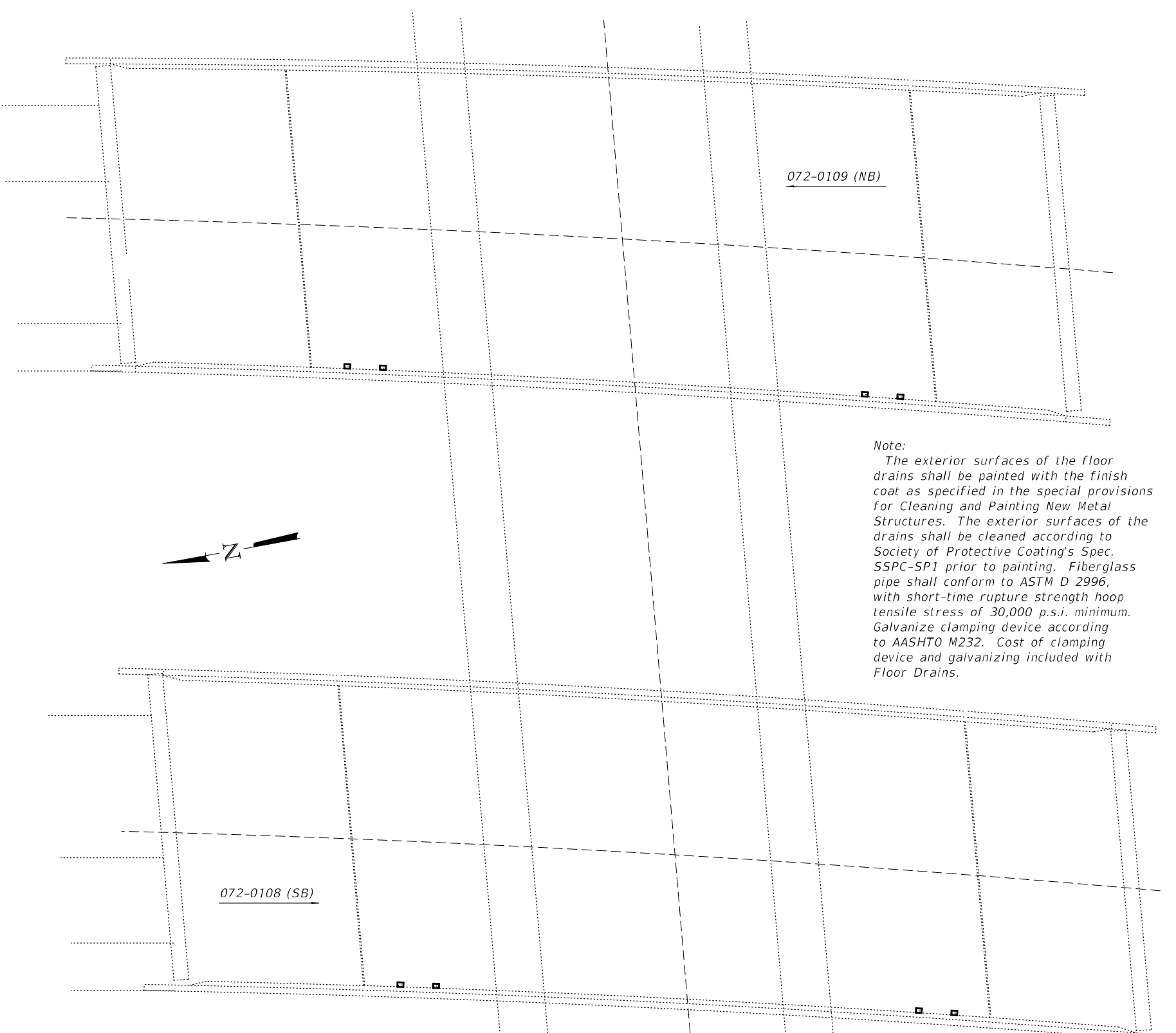


CROSS SECTION THRU SPAN 2 AT ABUTMENT
(Looking South)



TYPICAL CROSS SECTION THRU MID-SPAN
(Looking South)

DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING CROSS SECTIONS SN 072-0109 (NB)	SHEET NO. 3 OF 17 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB						474	72(1HB,HB-1.2,3)BR	PEORIA	63	29
DRAWN - Jim Ostermann steffen	PASSED	REVISED -				CONTRACT NO. 68E52				
CHECKED - CCC JSB		REVISED -				ILLINOIS FED. AID PROJECT				



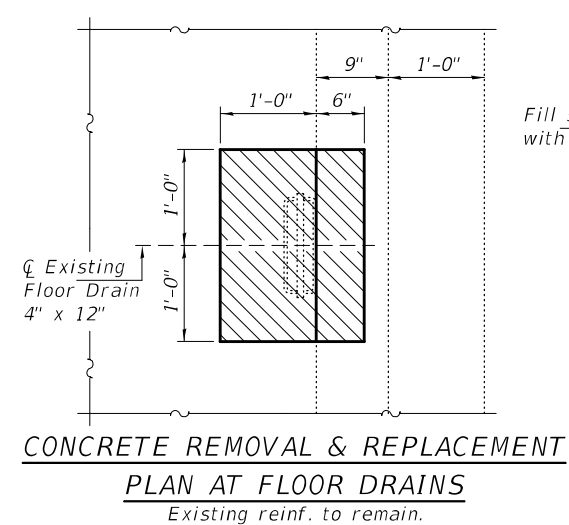
PLAN

Note:
Areas of deck repairs shown are estimated.
The Engineer shall show actual locations of
deck repairs on As-built Plans.

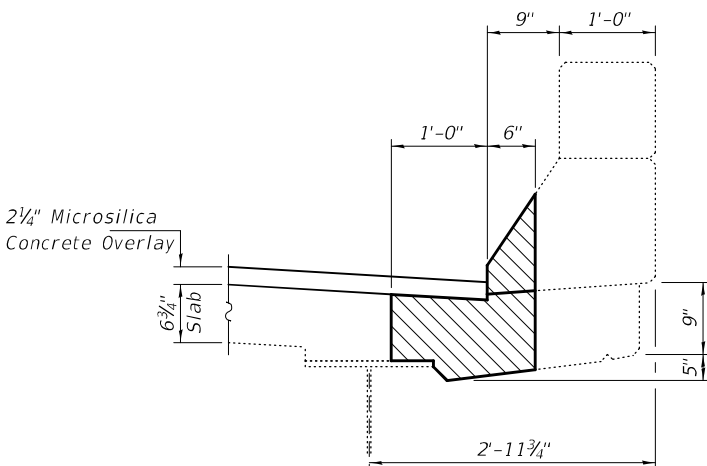
Note:
The exterior surfaces of the floor
drains shall be painted with the finish
coat as specified in the special provisions
for Cleaning and Painting New Metal
Structures. The exterior surfaces of the
drains shall be cleaned according to
Society of Protective Coating's Spec.
SSPC-SP1 prior to painting. Fiberglass
pipe shall conform to ASTM D 2996,
with short-time rupture strength hoop
tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according
to AASHTO M232. Cost of clamping
device and galvanizing included with
Floor Drains.

BILL OF MATERIAL

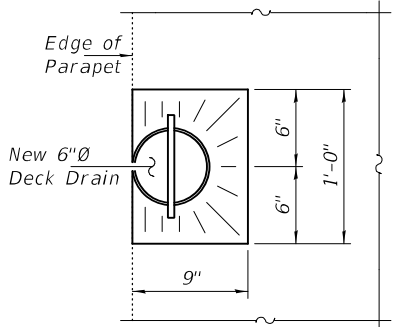
Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1.8



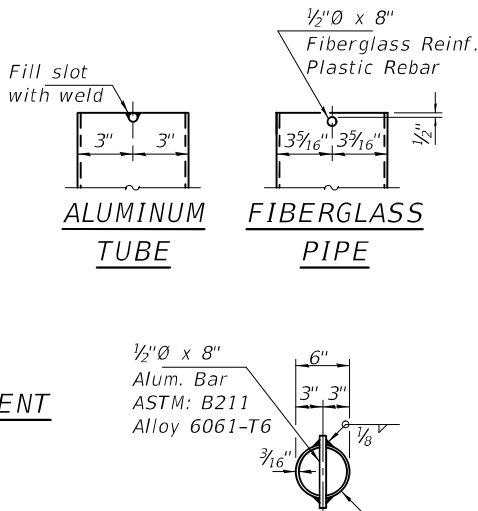
CONCRETE REMOVAL & REPLACEMENT
PLAN AT FLOOR DRAINS
Existing reinf. to remain.



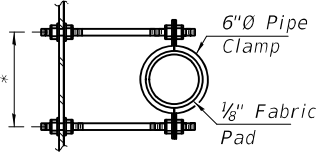
SECTION THRU CONCRETE REMOVAL &
REPLACEMENT AT FLOOR DRAINS



OVERLAY TREATMENT
AT FLOOR DRAINS

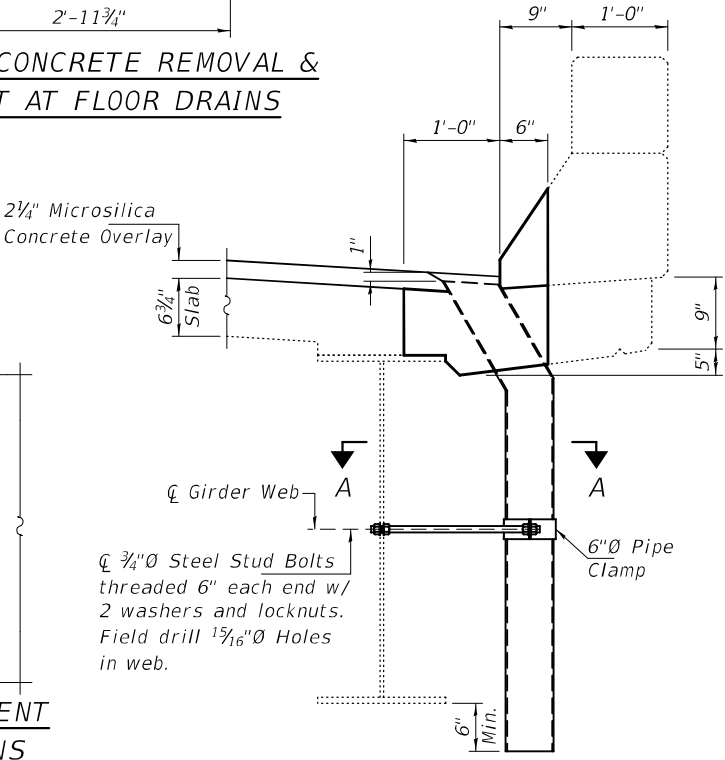


ALUMINUM
TUBE
FIBERGLASS
PIPE
CONCRETE REMOVAL & REPLACEMENT
PLAN AT FLOOR DRAINS
Existing reinf. to remain.

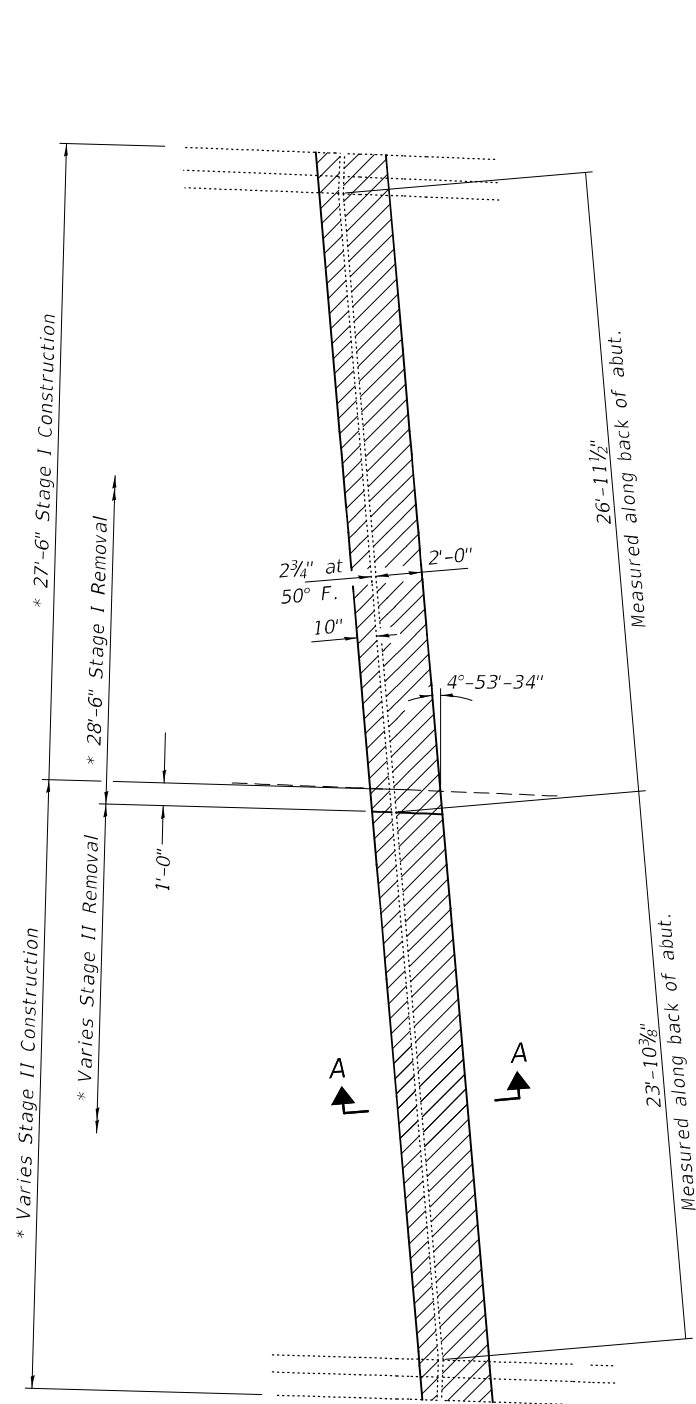


SECTION A-A

* Dimension as req'd
by Pipe Clamp.



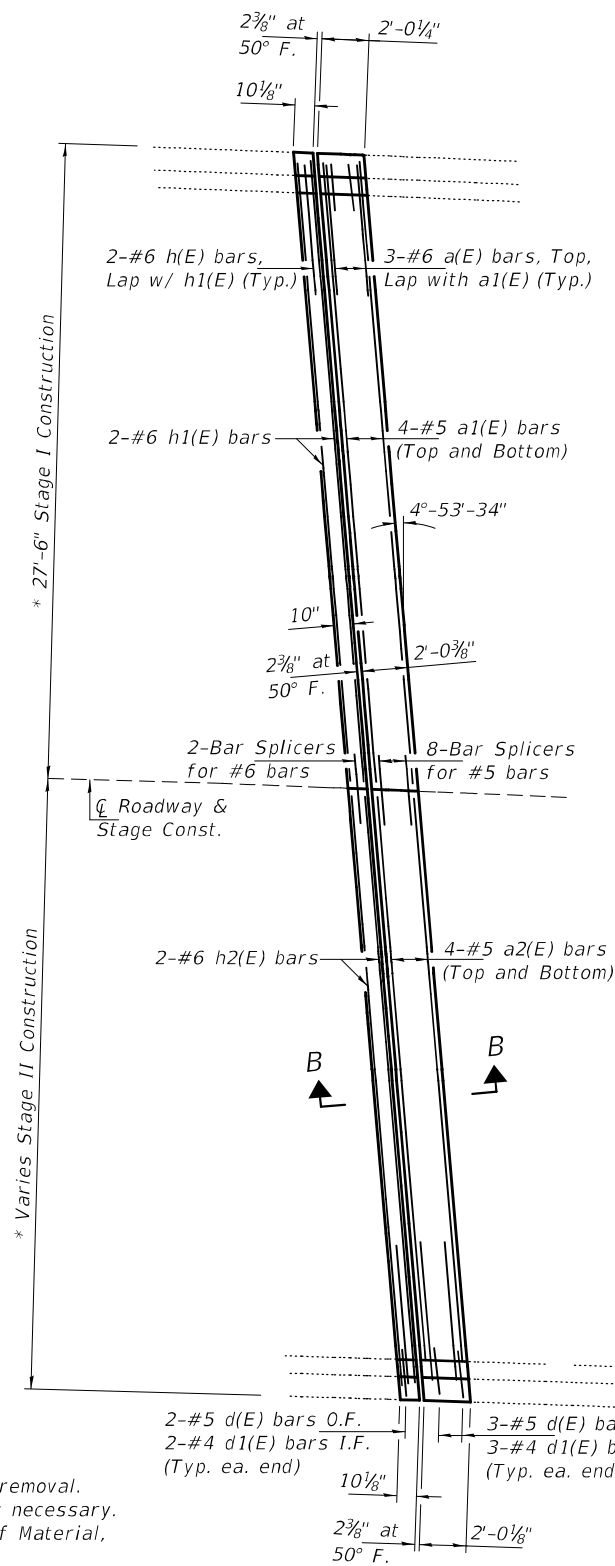
FLOOR DRAIN DETAILS
(8-Locations)



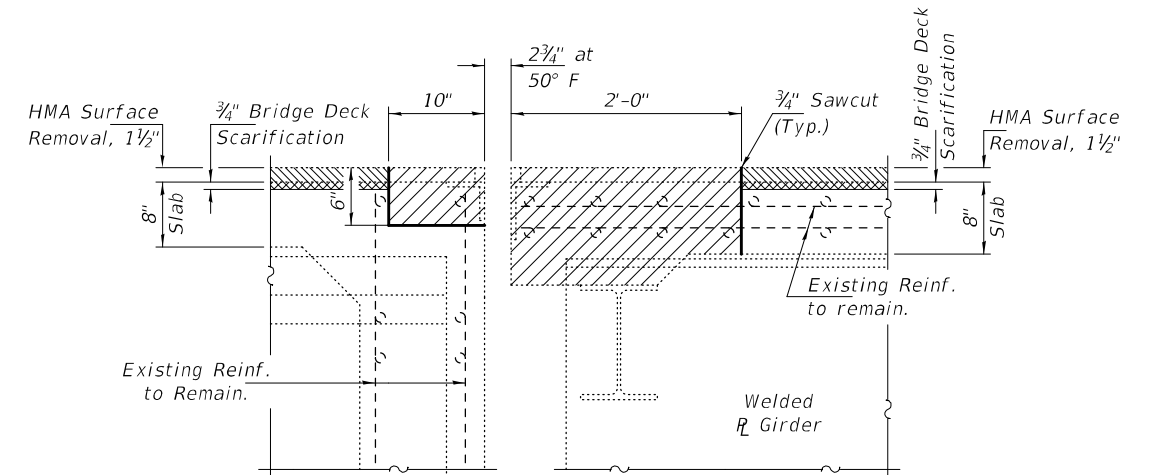
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet 9 of 17.

* Measured radially to C F.A.I. 474.

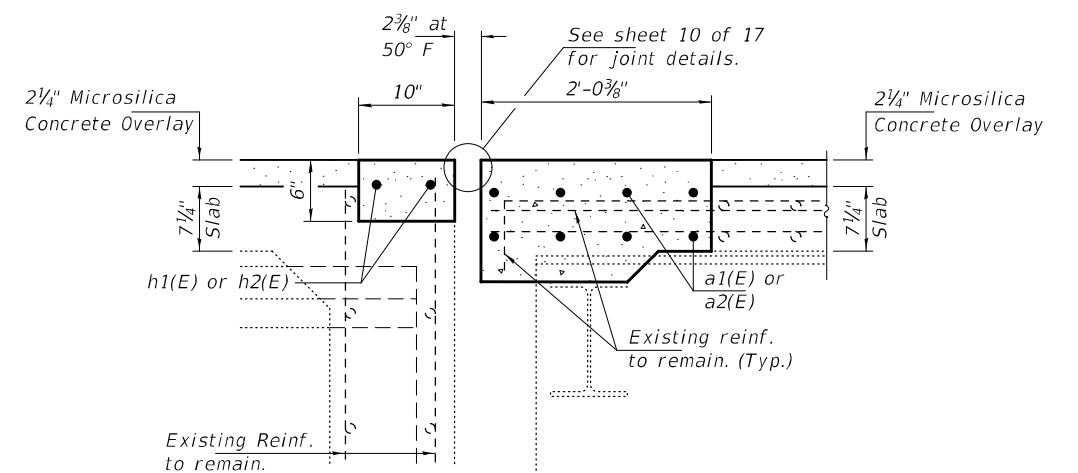
CONCRETE REMOVAL DETAILS
N. ABUT., 072-0108 (S.B.)



CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0108 (S.B.)

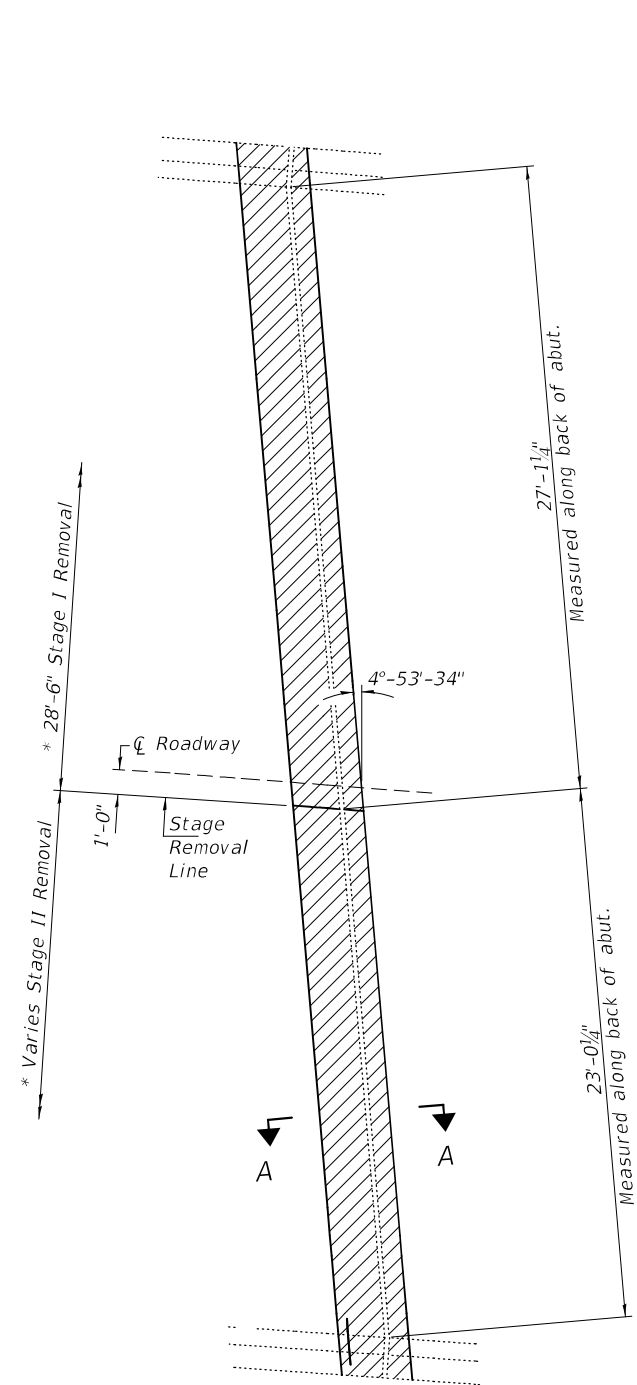


SECTION A-A
(Near C Roadway)
(Dims at RT L's to end of deck)



SECTION B-B
(Near C Roadway)
(Dims at RT L's to end of deck)

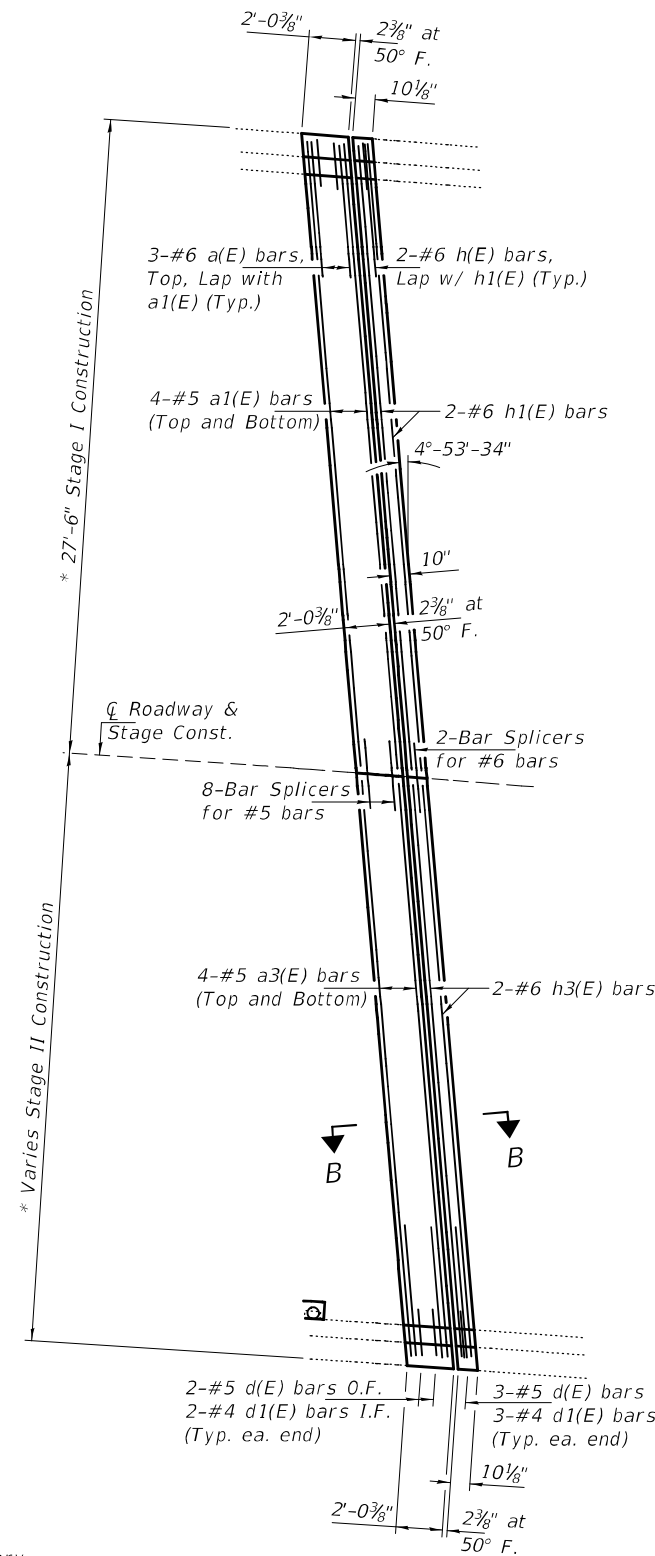
DESIGNED - CCC	EXAMINED <div></div> <div>ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT. SN 072-0108 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - JSB		PASSED <div></div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>			REVISED -	474	72(1HB,HB-1,2,3)BR	PEORIA	63	31
DRAWN - Jim Ostermann steffen					REVISED -	CONTRACT NO. 68E52				
CHECKED - CCC JSB										
			SHEET NO. 5 OF 17 SHEETS		ILLINOIS FED. AID PROJECT					



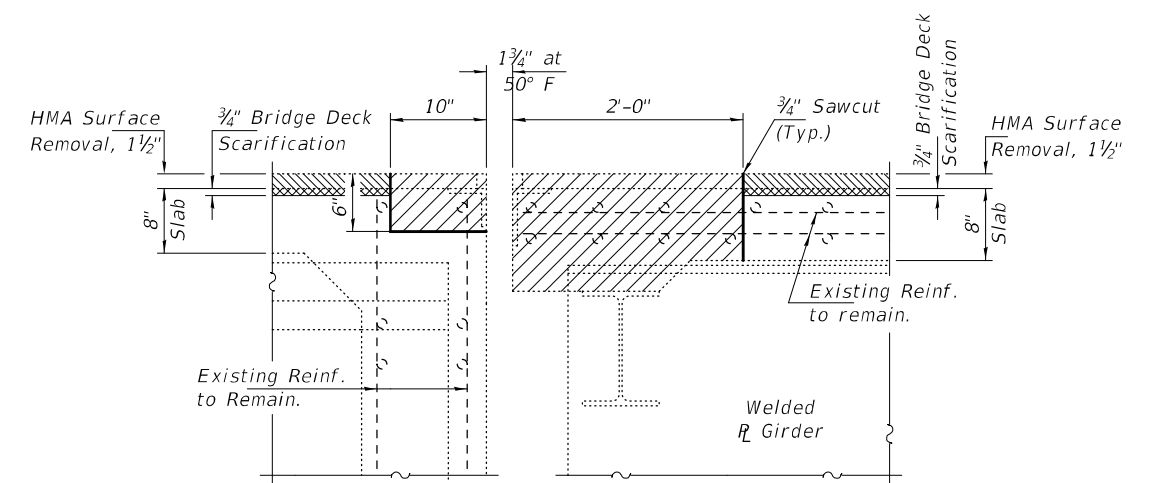
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet 9 of 17.

* Measured radially to CL F.A.I. 474.

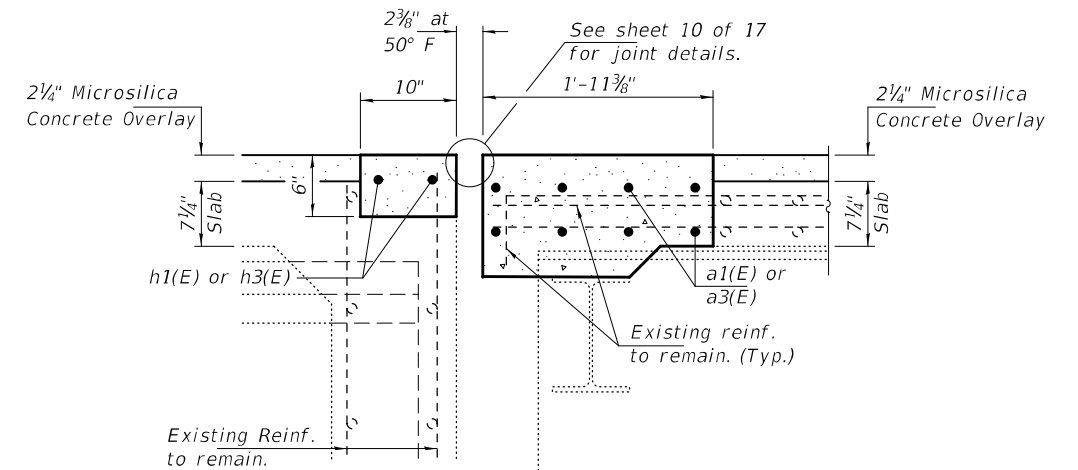
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0108 (S.B.)



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0108 (S.B.)

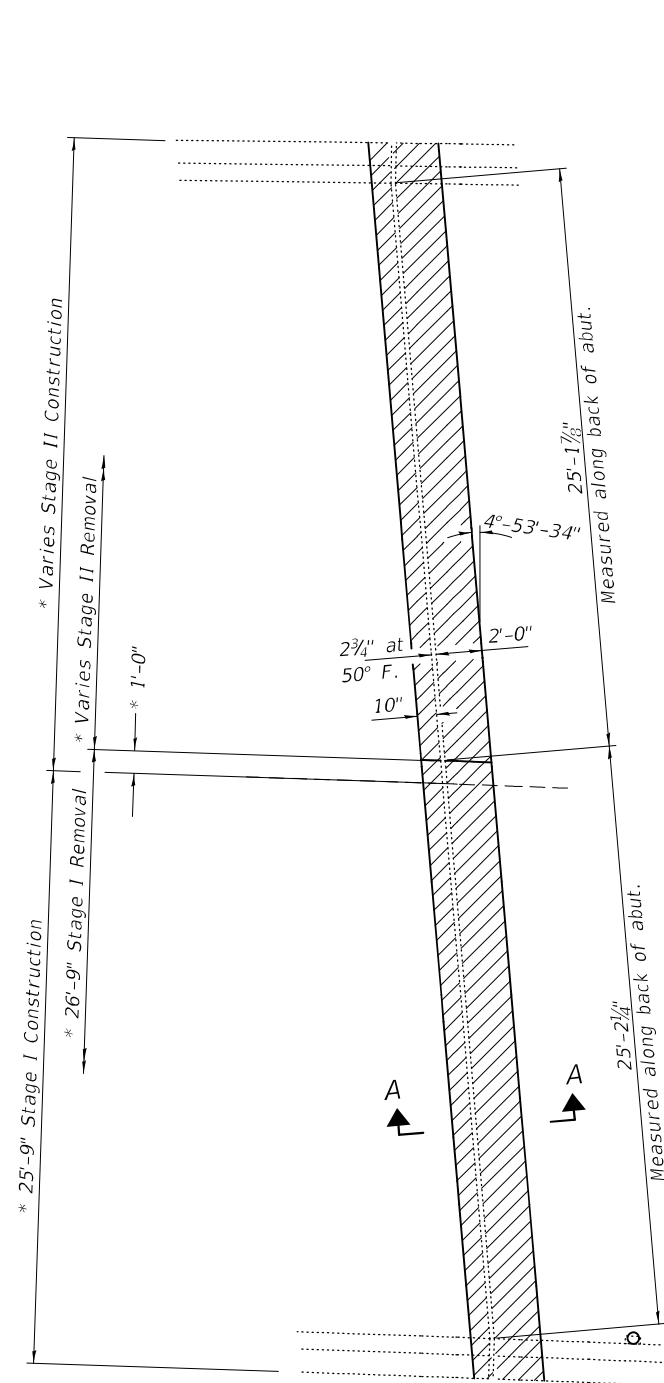


SECTION A-A
(Near CL Roadway)
(Dims at RT Ls to end of deck)



SECTION B-B
(Near CL Roadway)
(Dims at RT Ls to end of deck)

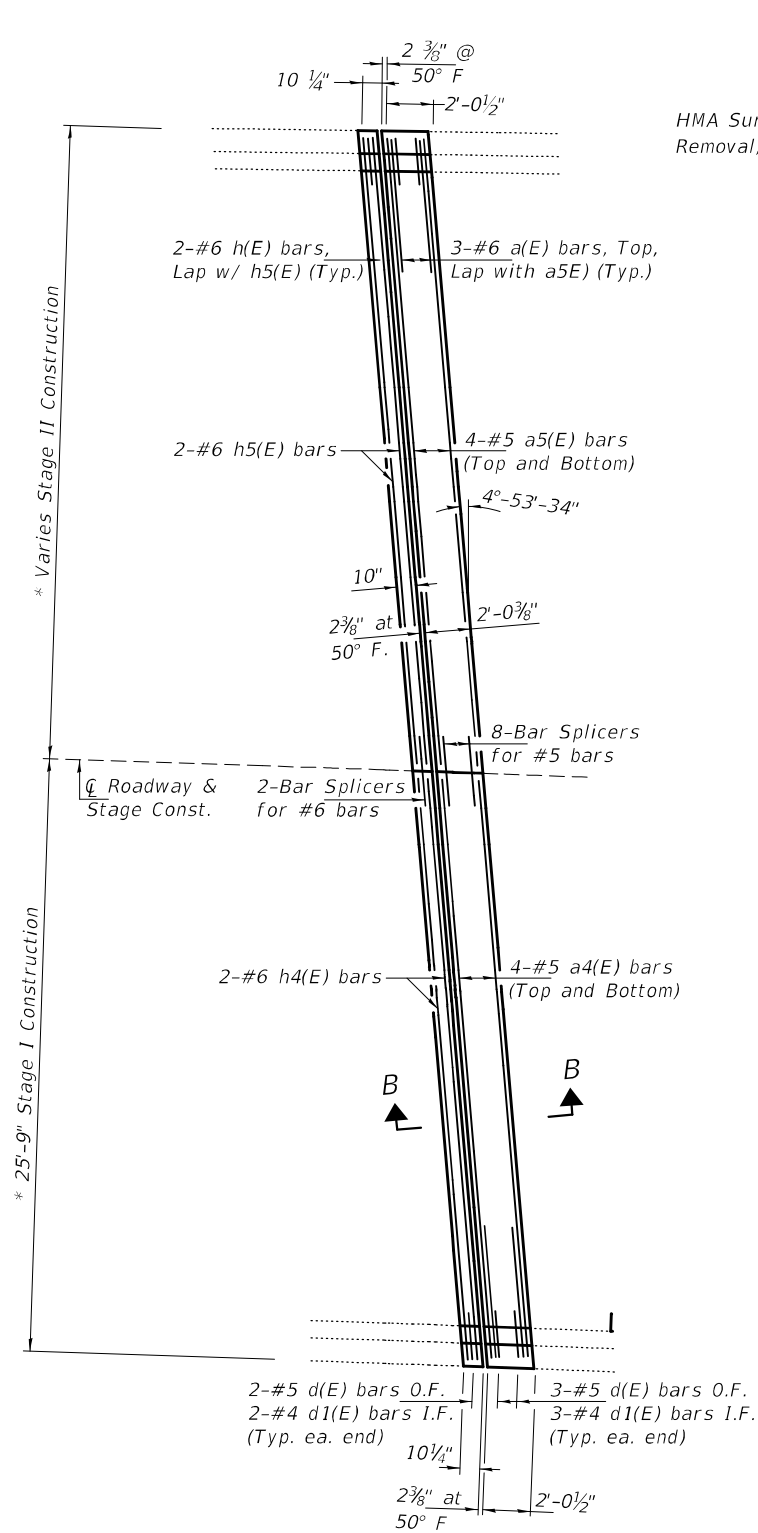
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0108 (SB)		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB							474	72(1HB,HB-1,2,3)BR	PEORIA	63	32
DRAWN - Jim Ostermann steffen	PASSED	REVISED -					CONTRACT NO. 68E52				
CHECKED - CCC JSB		REVISED -					ILLINOIS FED. AID PROJECT				



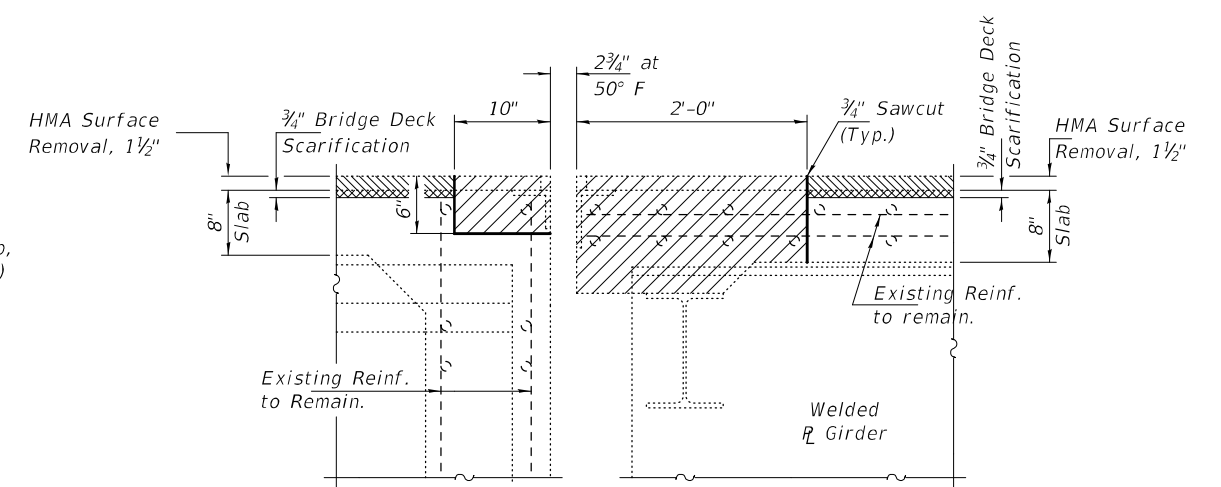
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet 9 of 17.

* Measured radially to \varnothing F.A.I. 474.

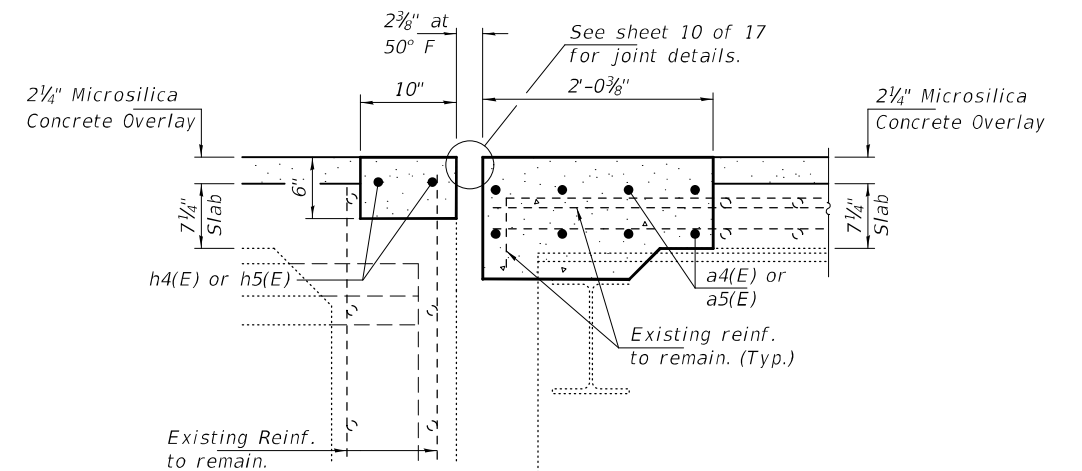
CONCRETE REMOVAL DETAILS
N. ABUT., 072-0109 (N.B.)



CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0109 (N.B.)

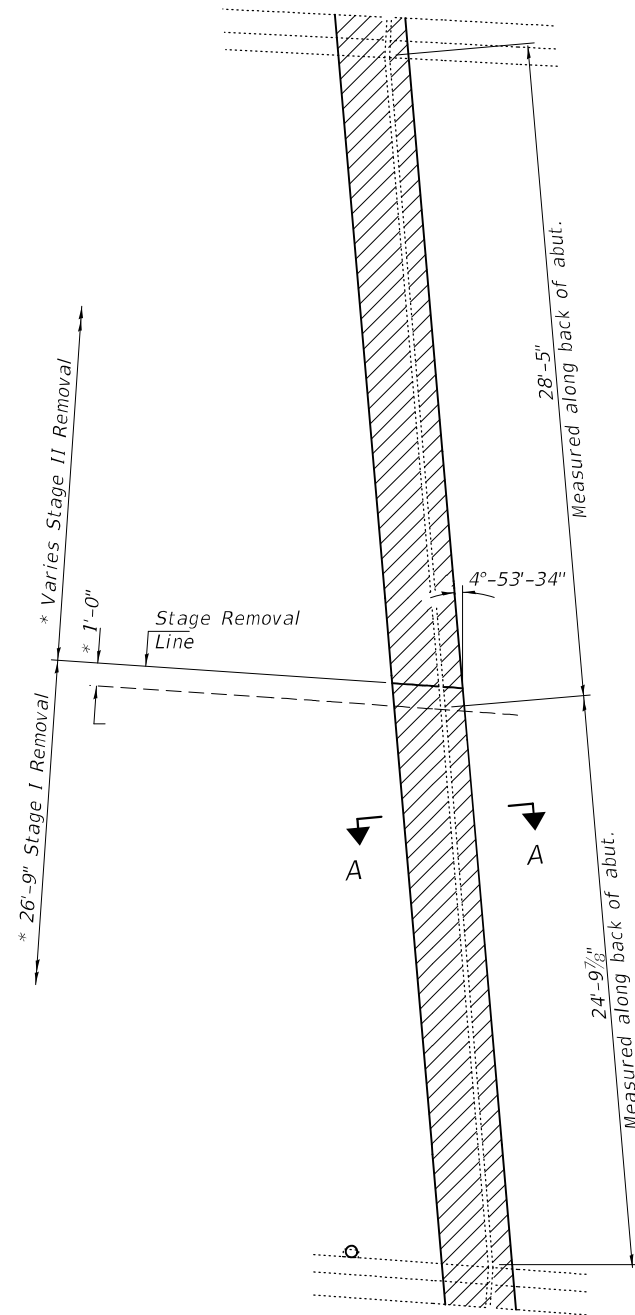


SECTION A-A
(Near \varnothing Roadway)
(Dims at RT Ls to end of deck)

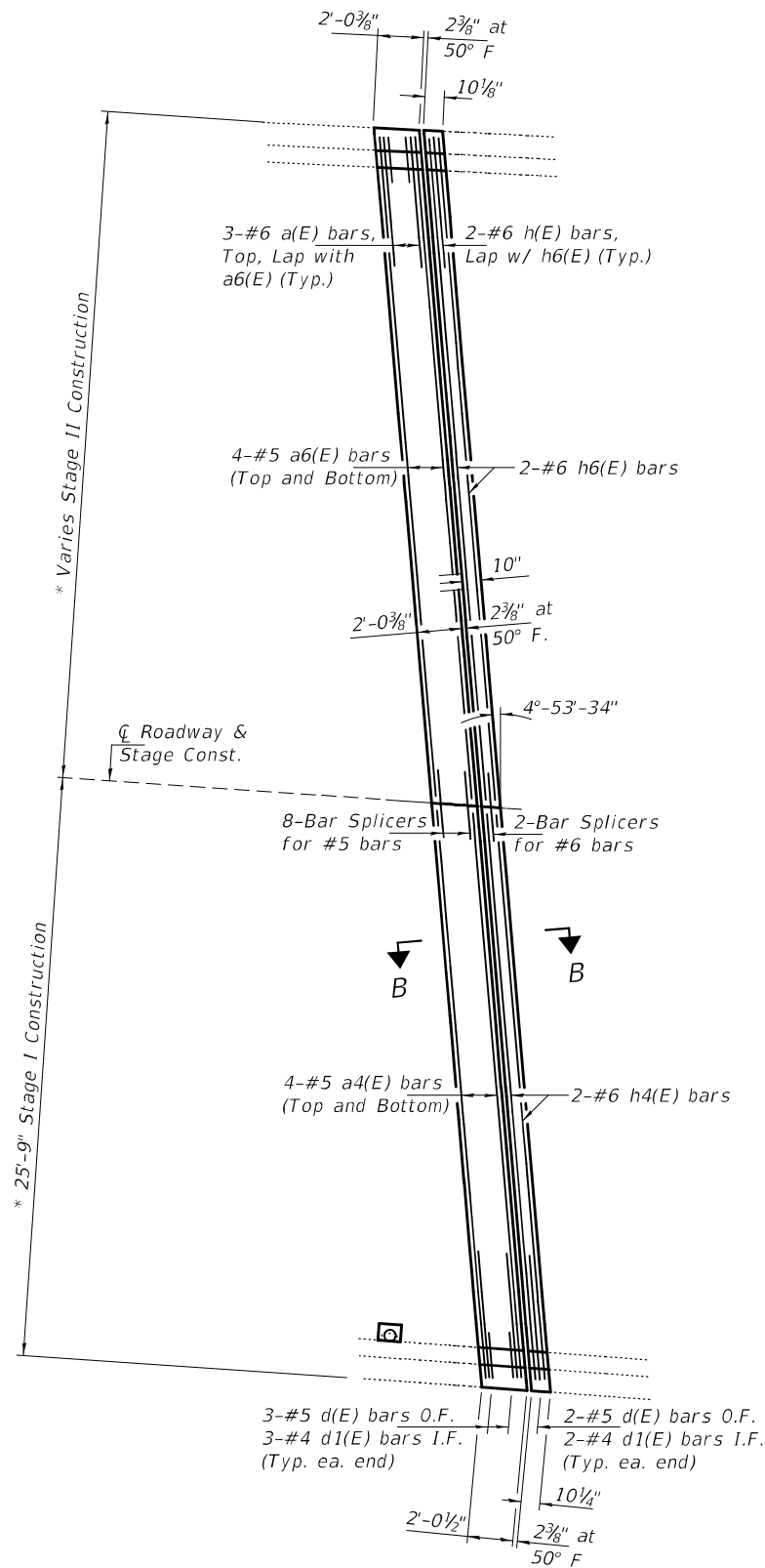


SECTION B-B
(Near \varnothing Roadway)
(Dims at RT Ls to end of deck)

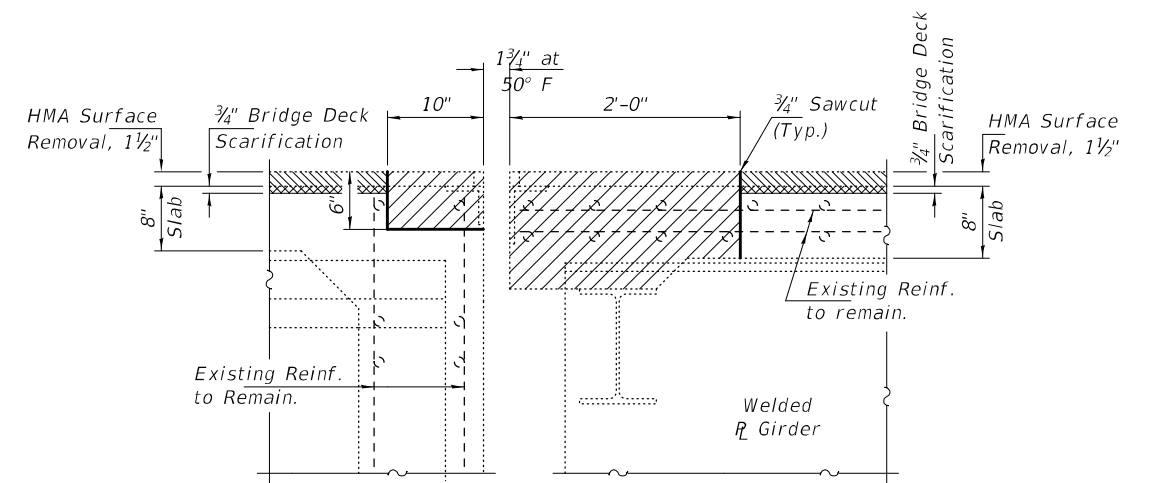
DESIGNED - CCC	<div>EXAMINED</div> <div> ENGINEER OF STRUCTURAL SERVICES</div> <div>PASSED</div> <div> ENGINEER OF BRIDGES AND STRUCTURES</div>	DATE - MAY 7, 2021	<div>STATE OF ILLINOIS</div> <div>DEPARTMENT OF TRANSPORTATION</div>	<div>JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT.</div> <div>SN 072-0109 (NB)</div>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		REVISÉ -			474	72(1HB,HB-1,2,3)BR	PEORIA	63	33
DRAWN - Jim Ostermann steffen		REVISÉ -			CONTRACT NO. 68E52				
CHECKED - CCC JSB		SHEET NO. 7 OF 17 SHEETS							
					ILLINOIS FED. AID PROJECT				



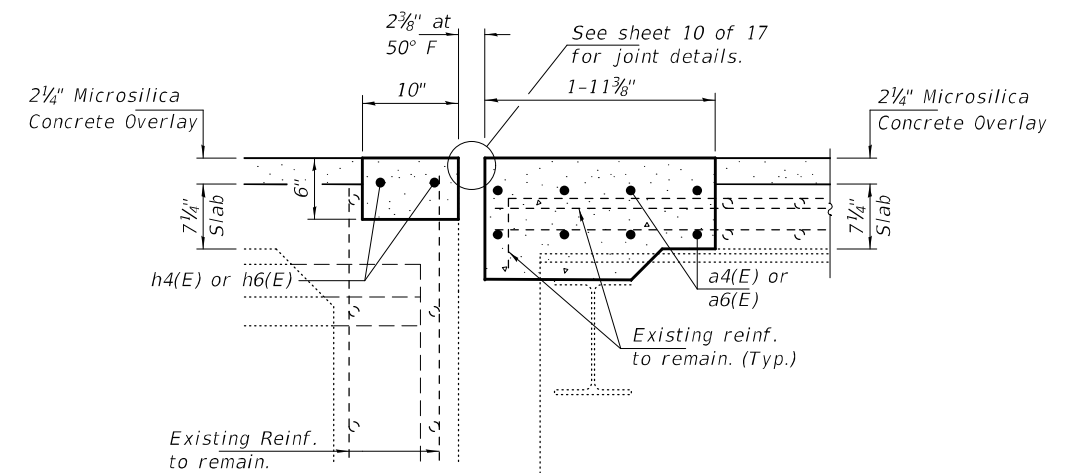
CONCRETE REMOVAL DETAILS
S. ABUT., 072-0109 (N.B.)



CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0109 (N.B.)



SECTION A-A
(Near Centerline Roadway)
(Dims at RT Ls to end of deck)

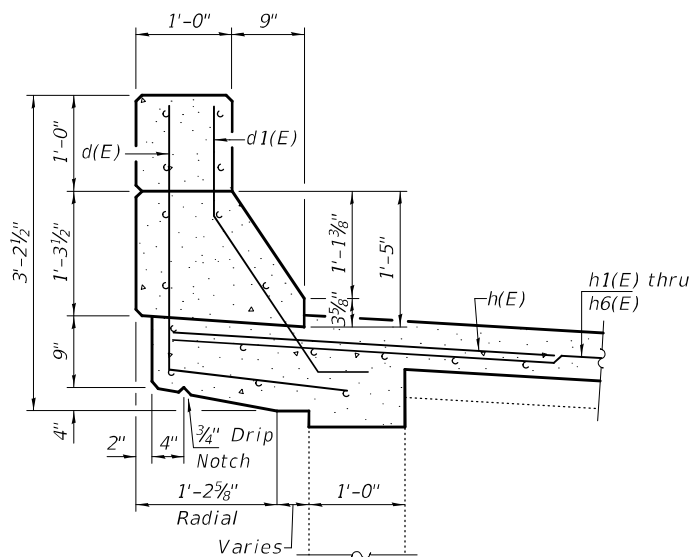


SECTION B-B
(Near Centerline Roadway)
(Dims at RT Ls to end of deck)

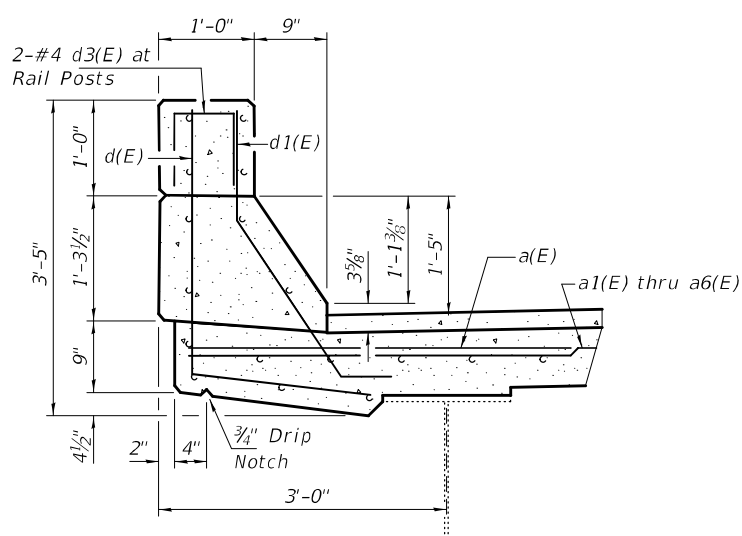
Notes:
Hatched areas indicate removal.
Bend a(E) bars in field as necessary.
For bar details and Bill of Material,
see sheet 9 of 17.

* Measured radially to Centerline F.A.I. 474.

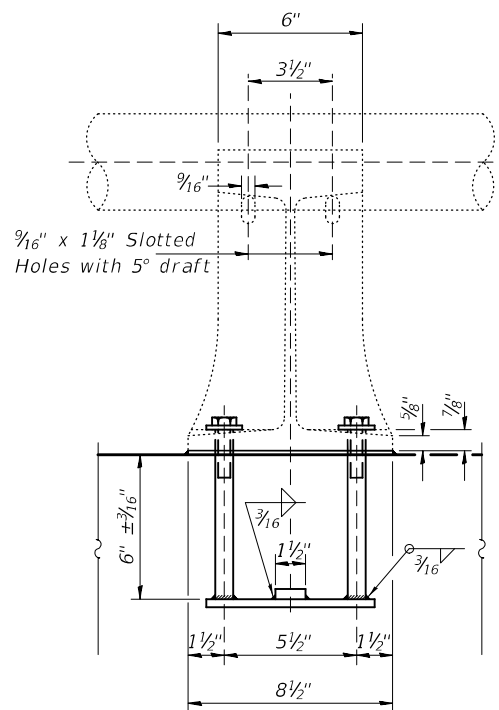
DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				JOINT REMOVAL AND REPLACEMENT DETAILS - S. ABUT. SN 072-0109 (NB)				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB											474	72(1HB,HB-1,2,3)BR	PEORIA	63	34
DRAWN - Jim Ostermann steffen	PASSED										CONTRACT NO. 68E52				
CHECKED - CCC JSB											ILLINOIS FED. AID PROJECT				



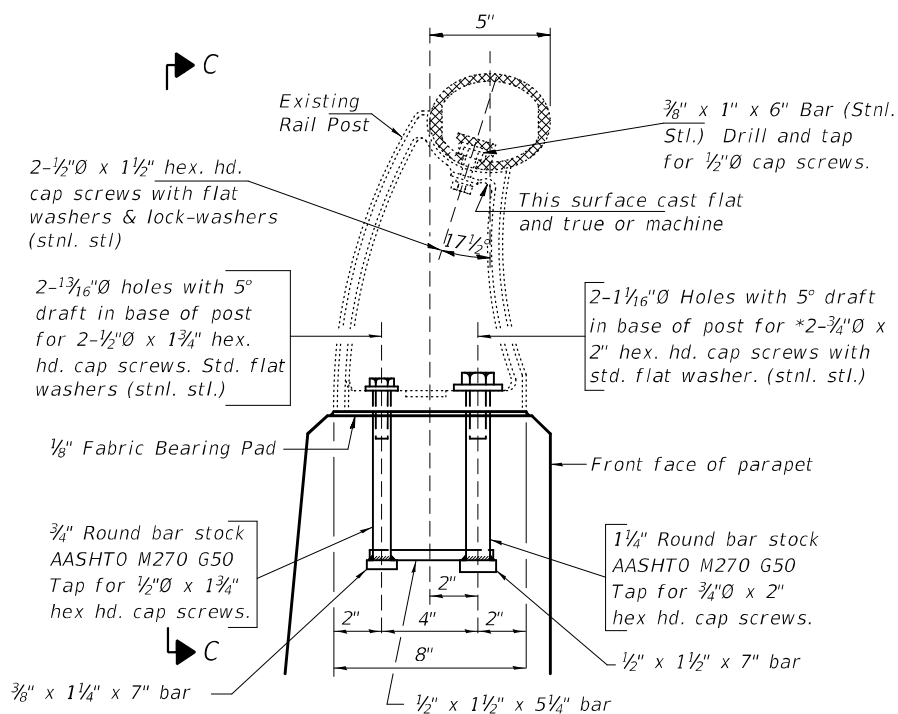
SECTION THRU SPAN 1 & 3 PARAPET



SECTION THRU SPAN 2 PARAPET

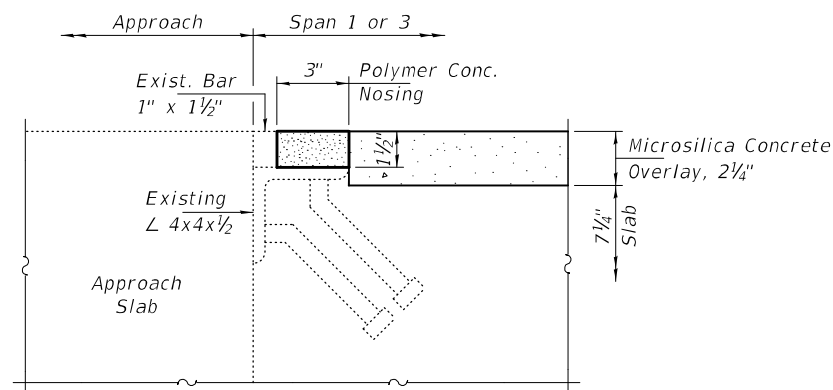


VIEW C-C

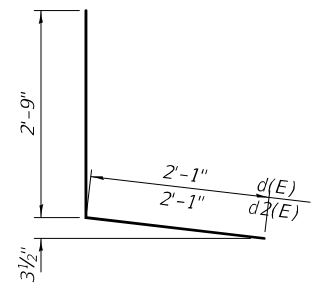


RAIL POST ANCHORAGE DEVICE DETAILS

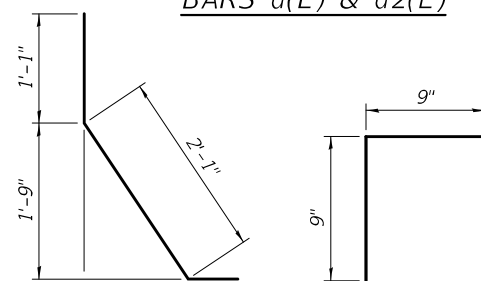
New Rail Post Anchorage Devices will be required at locations where posts are connected to new concrete.
Cost to be included with Concrete Removal
(-Required)



POLYMER CONCRETE NOSING DETAIL



BARS d(E) & d2(E)



BAR d3(E)

BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	32	#6	6'-0"	—
a1(E)	8	#5	26'-10"	—
a2(E)	8	#5	23'-9"	—
a3(E)	8	#5	27'-0"	—
a4(E)	8	#5	22'-11"	—
a5(E)	8	#5	25'-1"	—
a6(E)	8	#5	25'-1"	—
d(E)	24	#5	4'-10"	—
d1(E)	24	#5	3'-8"	—
d2(E)	24	#4	2'-3"	—
h(E)	2	#6	26'-10"	—
h1(E)	2	#6	23'-9"	—
h2(E)	2	#6	27'-0"	—
h3(E)	2	#6	22'-11"	—
h4(E)	2	#6	25'-1"	—
h5(E)	2	#6	25'-1"	—
Concrete Removal			Cu. Yd.	60.0
Concrete Superstructure			Cu. Yd.	60.8
Reinforcement Bars, Epoxy Coated			Pound	6750

DESIGNED - CCC
CHECKED - JSB
DRAWN - Jim Ostermann steffen
CHECKED - CCC JSB

EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

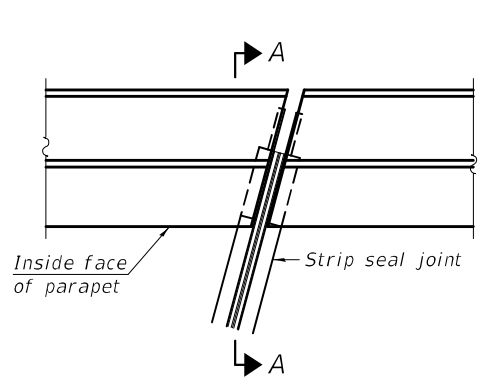
DATE - MAY 7, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
SN 072-0108 (SB) & 072-0109 (NB)

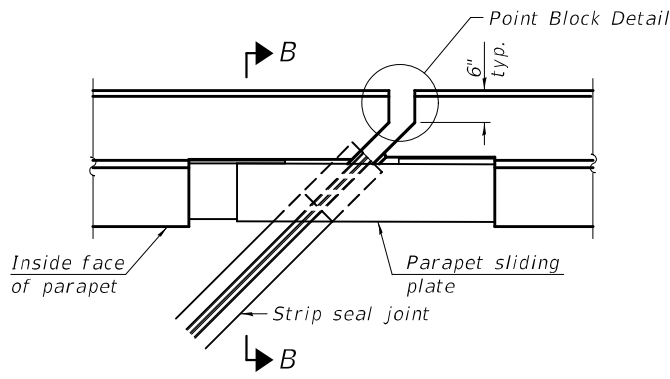
SHEET NO. 9 OF 17 SHEETS

F.A.I. RTE. 474
SECTION 72(1HB,HB-1.2,3)BR
COUNTY PEORIA
TOTAL SHEETS 63
SHEET NO. 35
CONTRACT NO. 68E52
ILLINOIS FED. AID PROJECT

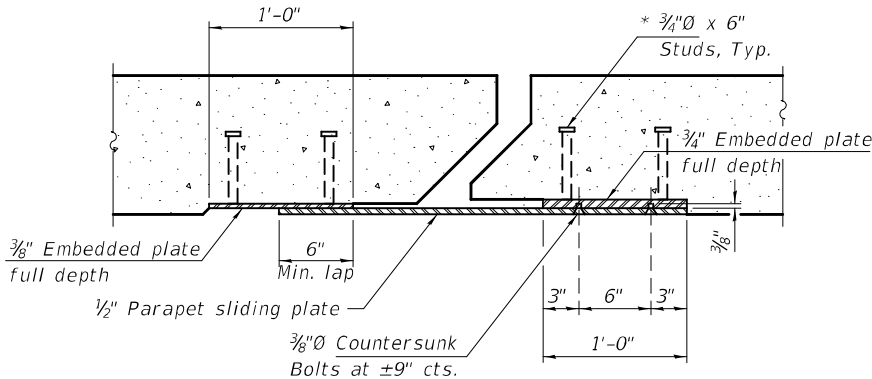


FOR SKEWS $\leq 30^\circ$

PLAN AT PARAPET



FOR SKEWS $> 30^\circ$



SECTION C-C

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

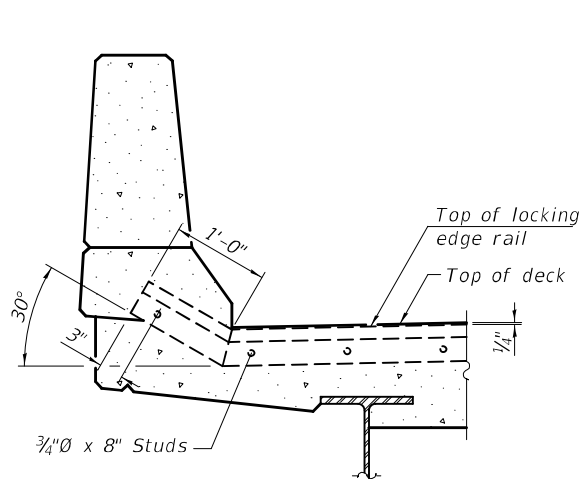
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

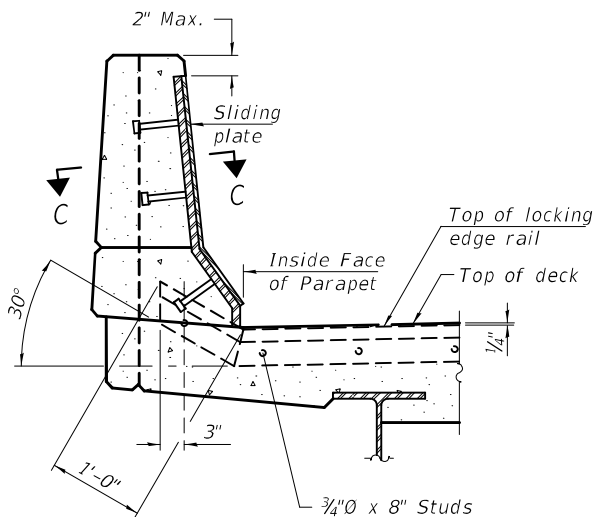
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

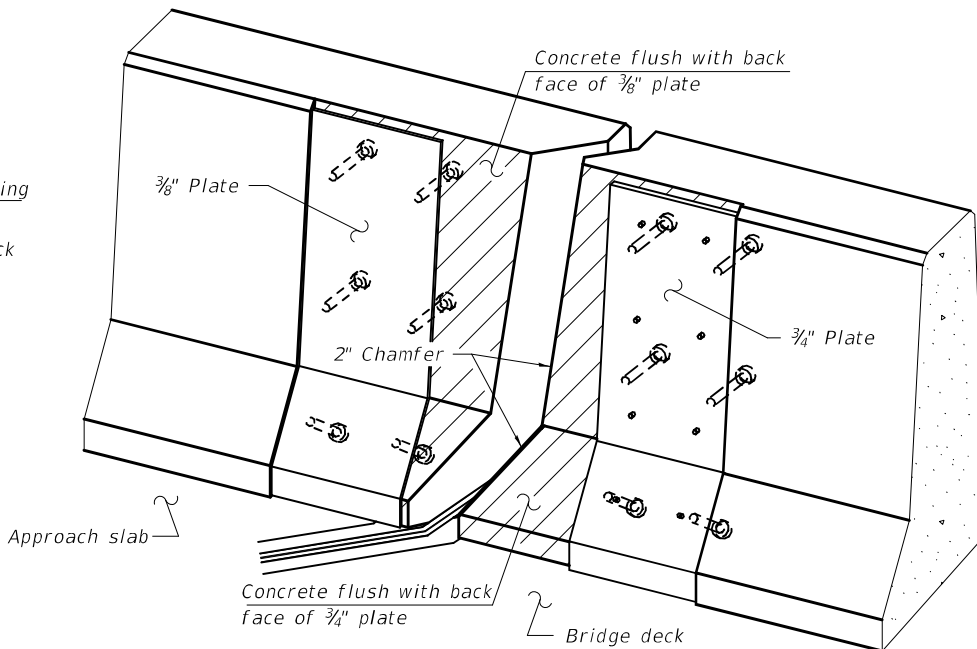
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



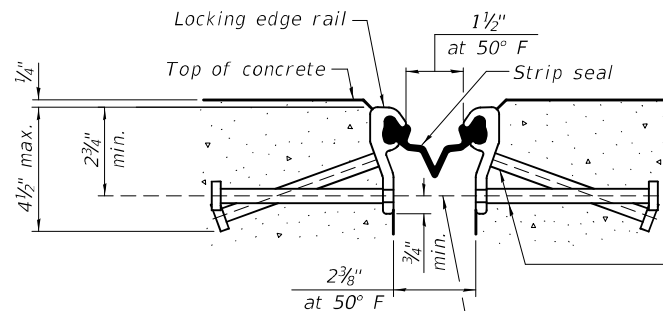
SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

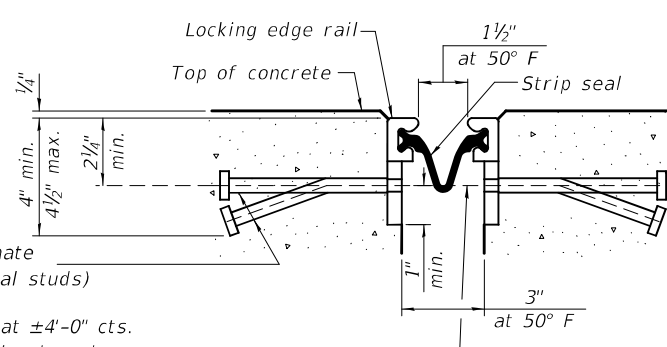


SECTION THRU
ROLLED RAIL JOINT

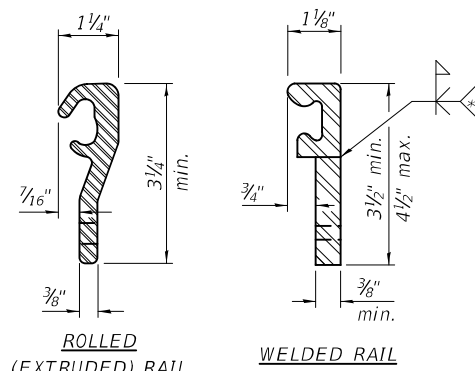
* $\frac{3}{8}$ " \varnothing x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)

$\frac{3}{8}$ " \varnothing threaded rods in $\frac{7}{16}$ " \varnothing holes at ± 4 "-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

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

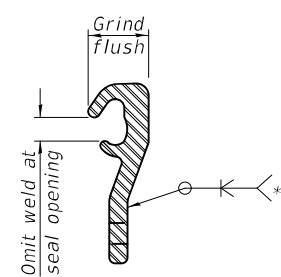


SECTION THRU
WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	211

DESIGNED - CCC	EXAMINED	DATE - MAY 7, 2021
CHECKED - JSB	PASSED	REVISED -
DRAWN - Jim Ostermann steffen		REVISED -
CHECKED - CCC JSB		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 072-0108 (SB) & 072-0109 (NB)

SHEET NO. 10 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	36
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				

ELEVATION AT ABUTMENT

SECTION A-A

BEAM REACTIONS

R_{\varnothing}	(K)	79.4
$R_{\frac{1}{2}}$	(K)	46.7
Imp.	(K)	10.1
$R_{(Total)}$	(K)	136.2

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

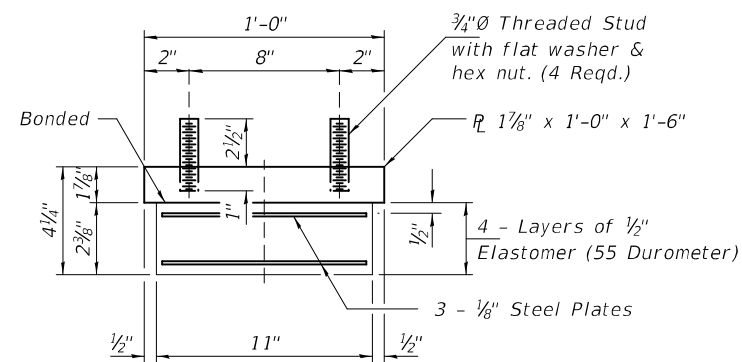
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 85 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 ($F_y=36\text{ksi}$). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

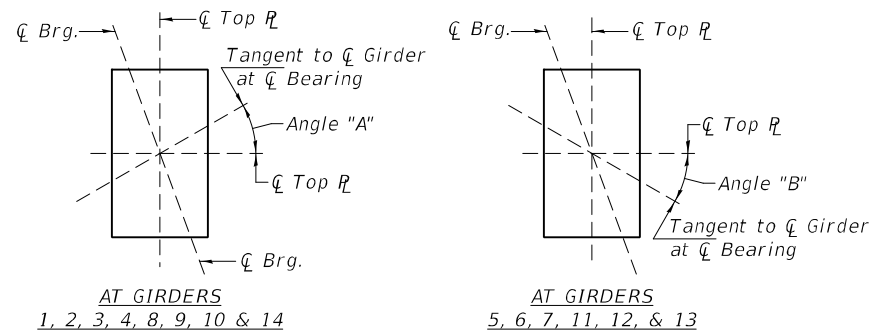
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



BEARING ASSEMBLY

Note:

Shim plates shall not be placed under Bearing Assembly.



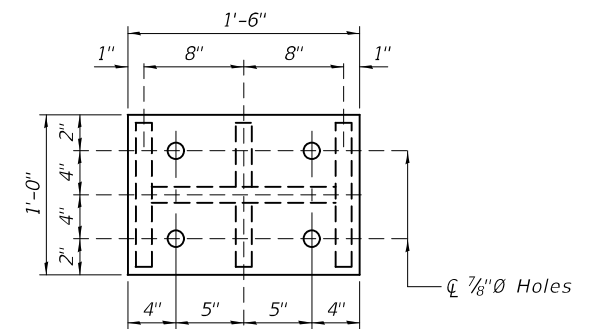
TOP BEARING PLATE TO GIRDER

CONNECTION DETAIL

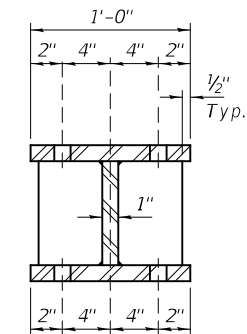
(See Table for Dimensions)

TABLE FOR ANGLE "A" & "B"

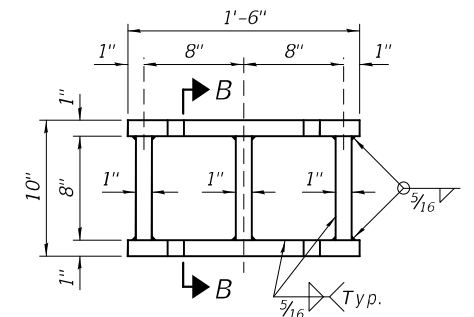
Girder	C Brg. N. Abut.		C Brg. S. Abut.	
	Angle "A"	Angle "B"	Angle "A"	Angle "B"
1	1°-12'-17"	-	1°-13'-26"	-
2	0°-02'-58"	-	0°-03'-51"	-
3	0°-01'-47"	-	0°-02'-19"	-
4	0°-00'-36"	-	0°-00'-47"	-
5	-	0°-00'-35"	-	0°-00'-45"
6	-	0°-01'-46"	-	0°-02'-18"
7	-	0°-02'-58"	-	0°-03'-52"
8	0°-03'-01"	-	0°-03'-55"	-
9	0°-01'-49"	-	0°-02'-38"	-
10	0°-00'-37"	-	0°-00'-49"	-
11	-	0°-00'-35"	-	0°-00'-45"
12	-	0°-01'-48"	-	0°-02'-20"
13	-	0°-03'-01"	-	0°-03'-55"
14	0°-24'-25"	-	0°-23'-59"	-



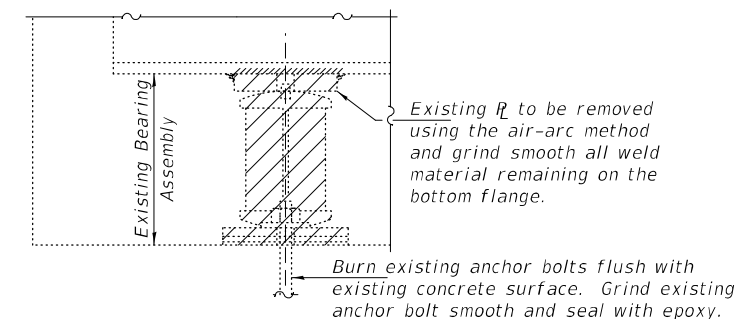
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel Anchor Bolts, 1"Ø	Pound	3330
	Each	14

TYI/REPS 5-17-2018

DESIGNED - CCC	EXAMINED <div>Timothy A. Duggan</div> <div>ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - NORTH ABUTMENT SN 072-0108 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - JSB					474	72(1HB-HB-1.2.3)BR	PEORIA	63	37	
DRAWN daburdell nn steffen	PASSED <div>Carl Meyer</div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>	REVISED -								
CHECKED - CCC JSB		REVISED -								
					SHEET NO. 11 OF 17 SHEETS					
					ILLINOIS FED. AID PROJECT CONTRACT NO. 68E52					

BEAM REACTIONS

R \bar{Q}	(K)	79.4
R \bar{L}	(K)	46.7
Imp.	(K)	10.1
R (Total)	(K)	136.2

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

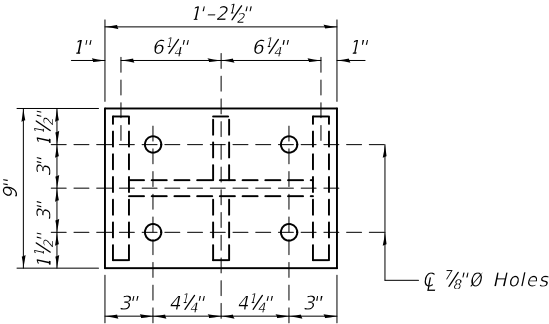
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

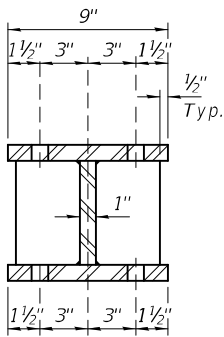
Min. jack capacity = 90 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

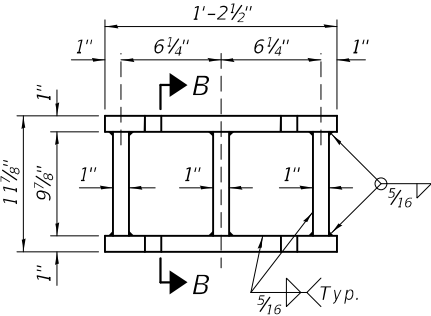
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



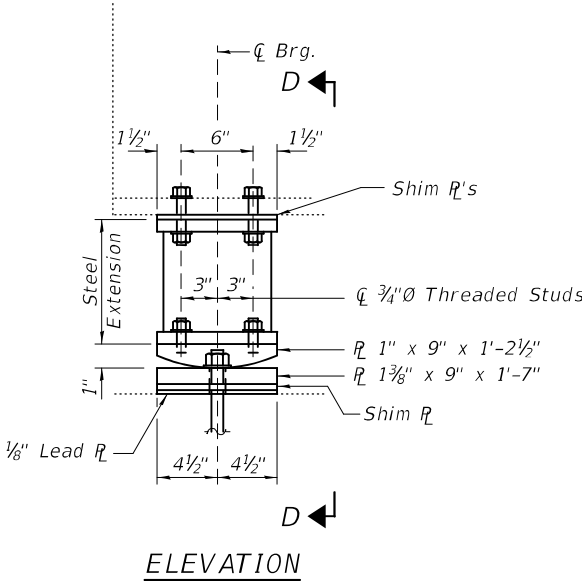
PLAN TOP AND BOTTOM PLATE



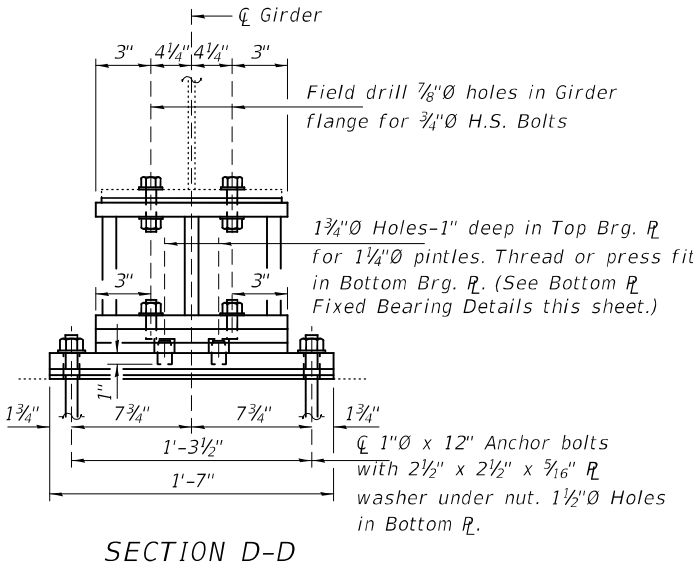
SECTION B-B



STEEL EXTENSION DETAIL

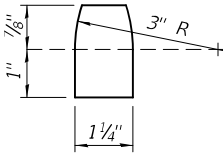


ELEVATION

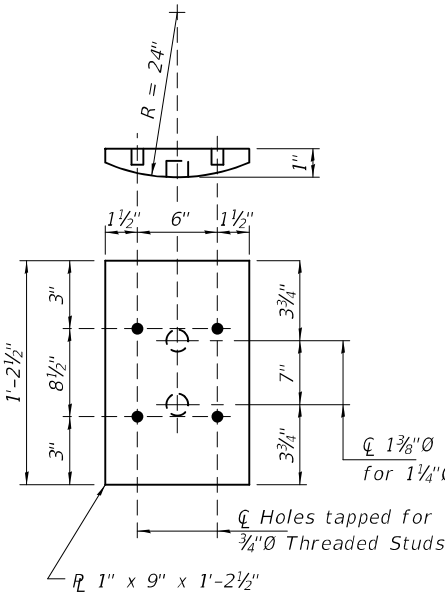


SECTION D-D

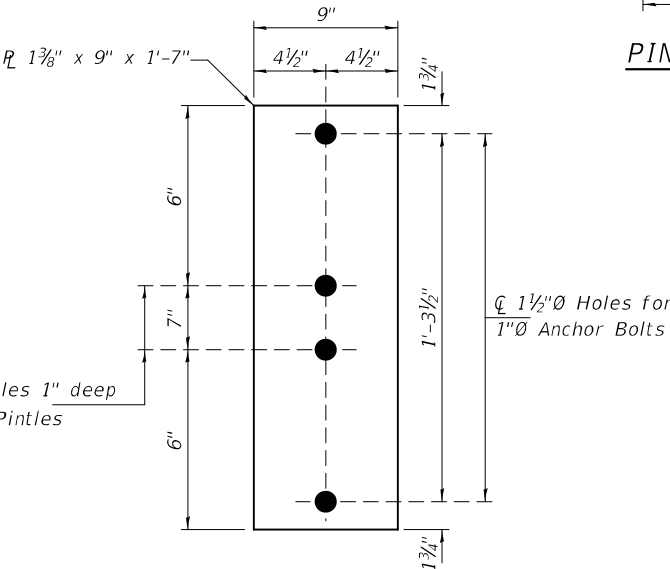
FIXED BEARINGS



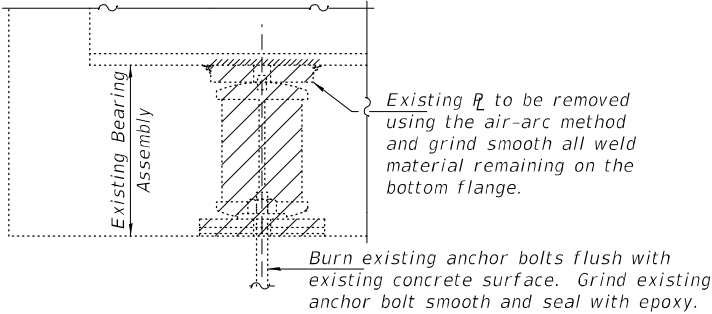
PINTLE



PLAN - TOP PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS

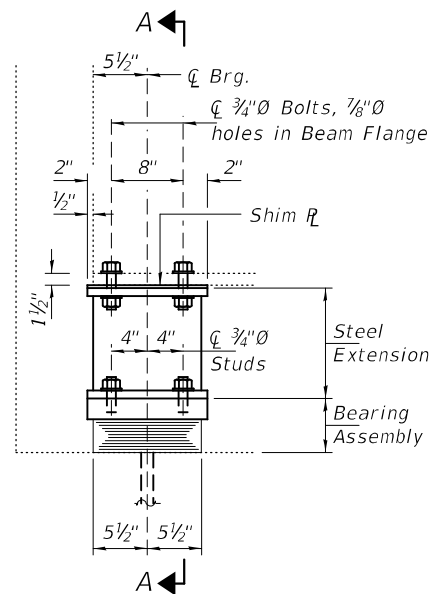


EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

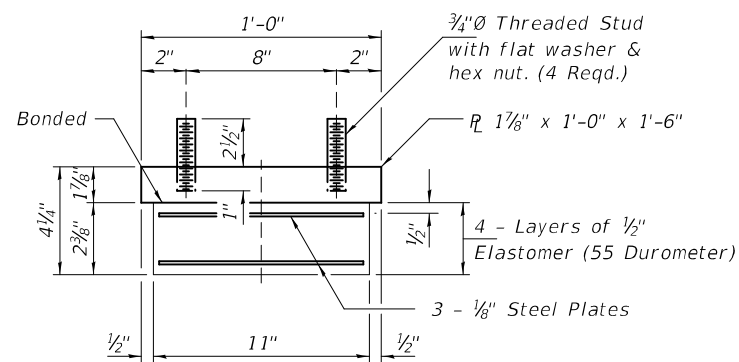
BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	1318
Anchor Bolts, 1"Ø	Each	14



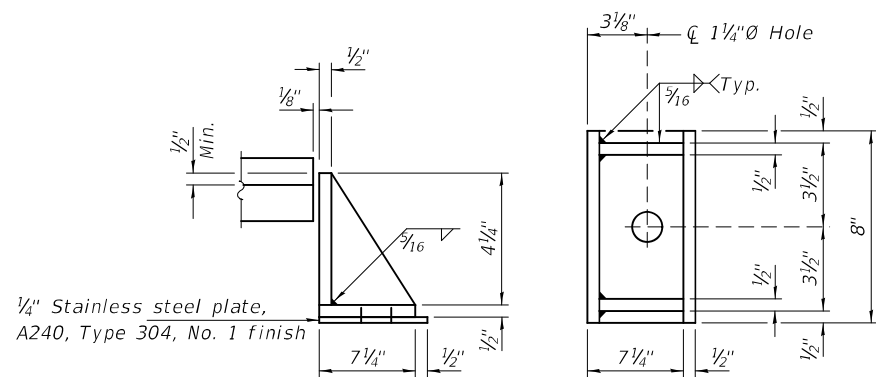
ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



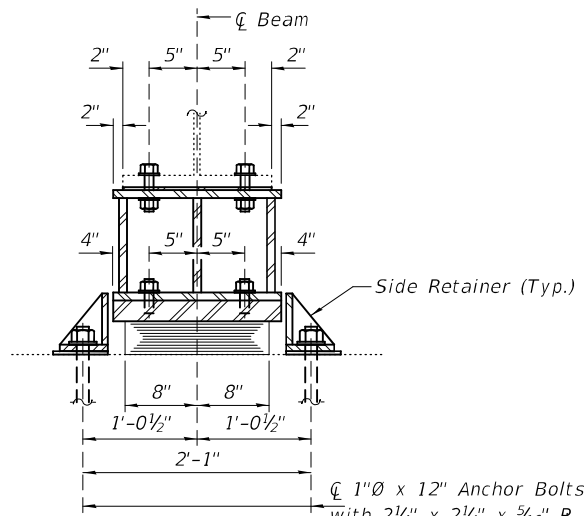
BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SECTION A-A

1" x 12" Anchor Bolts with 2 1/4" x 2 1/4" x 5/16" washer under nut.

BEAM REACTIONS

R	Q	(K)	84.3
R	L	(K)	49.1
Imp.		(K)	10.7
R	(Total)	(K)	144.1

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

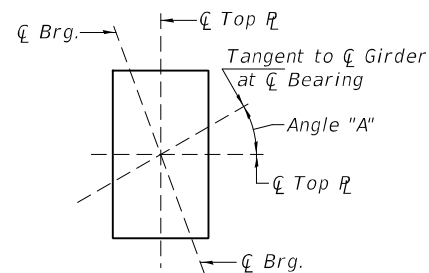
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 90 Tons.

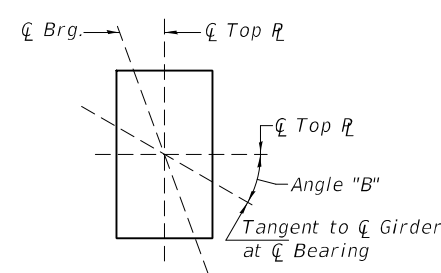
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



AT GIRDERS
1, 2, 3, 4, 8, 9, 10 & 14



AT GIRDERS
5, 6, 7, 11, 12 & 13

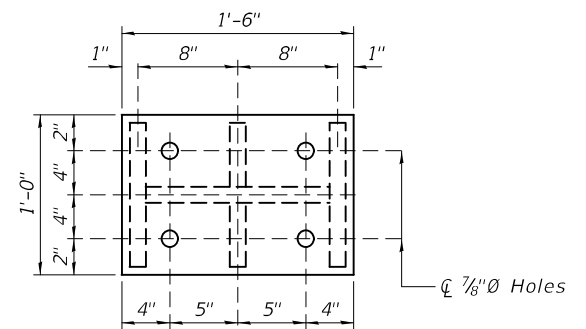
TOP BEARING PLATE TO GIRDER

CONNECTION DETAIL

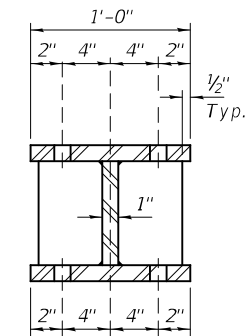
(See Table for Dimensions)

TABLE FOR ANGLE "A" & "B"

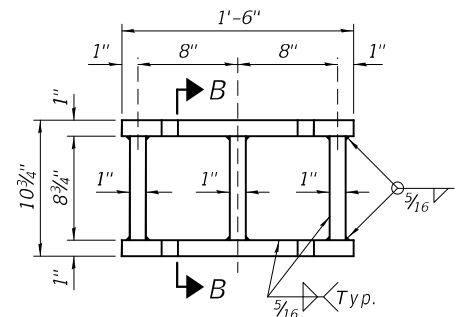
Girder	Q Brg. N. Abut.		Q Brg. S. Abut.	
	Angle "A"	Angle "B"	Angle "A"	Angle "B"
1	1°-12'-17"	-	1°-13'-26"	-
2	0°-02'-58"	-	0°-03'-51"	-
3	0°-01'-47"	-	0°-02'-19"	-
4	0°-00'-36"	-	0°-00'-47"	-
5	-	0°-00'-35"	-	0°-00'-45"
6	-	0°-01'-46"	-	0°-02'-18"
7	-	0°-02'-58"	-	0°-03'-52"
8	0°-03'-01"	-	0°-03'-55"	-
9	0°-01'-49"	-	0°-02'-38"	-
10	0°-00'-37"	-	0°-00'-49"	-
11	-	0°-00'-35"	-	0°-00'-45"
12	-	0°-01'-48"	-	0°-02'-20"
13	-	0°-03'-01"	-	0°-03'-55"
14	0°-24'-25"	-	0°-23'-59"	-



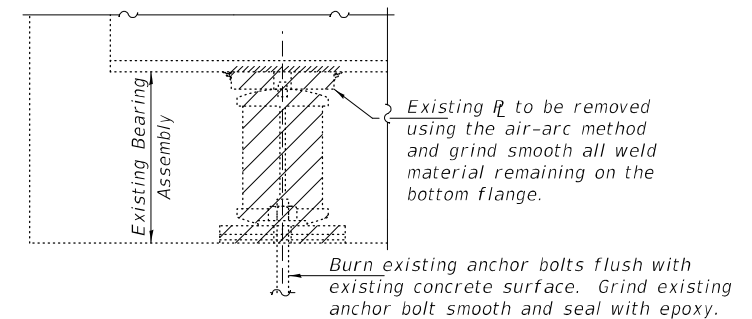
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

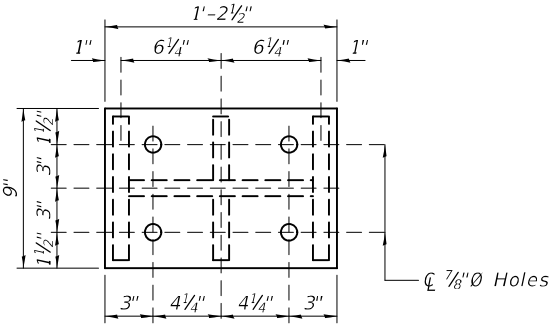
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	3470
Anchor Bolts, 1"0	Each	14

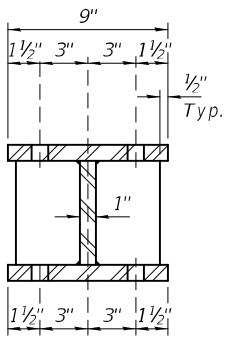
BEAM REACTIONS

R \bar{Q}	(K)	84.3
R \bar{L}	(K)	49.1
Imp.	(K)	10.7
R (Total)	(K)	144.1

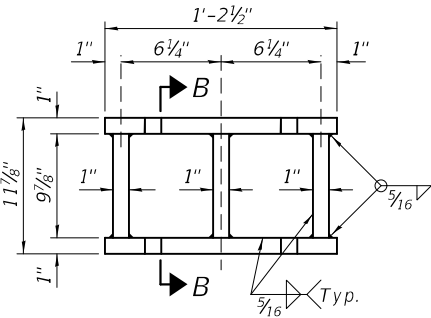
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
Min. jack capacity = 90 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



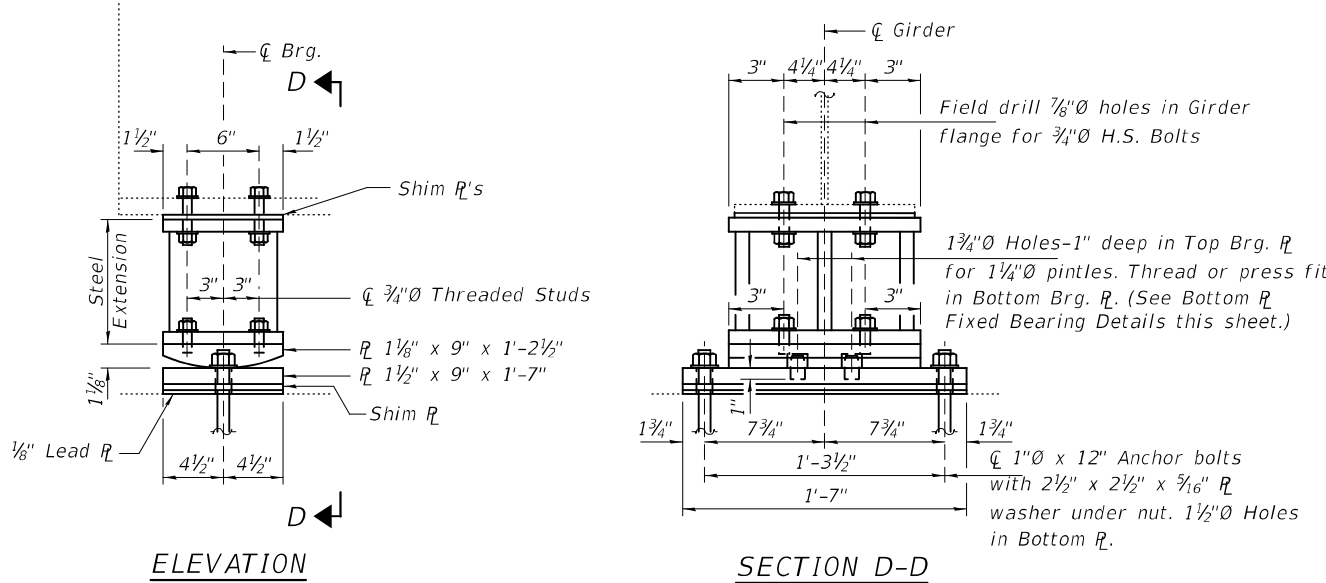
PLAN TOP AND BOTTOM PLATE



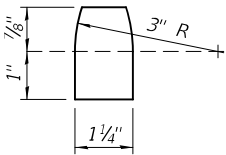
SECTION B-B



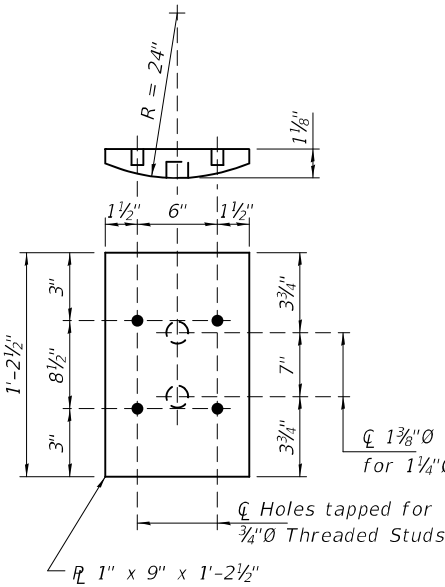
STEEL EXTENSION DETAIL



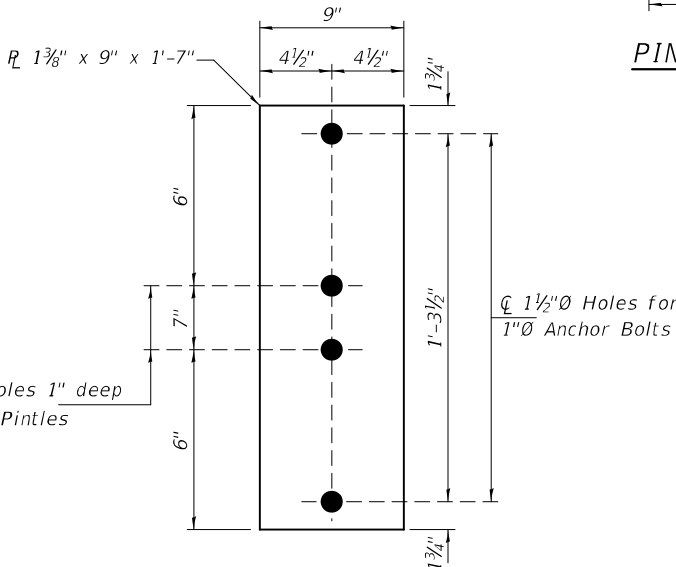
FIXED BEARINGS



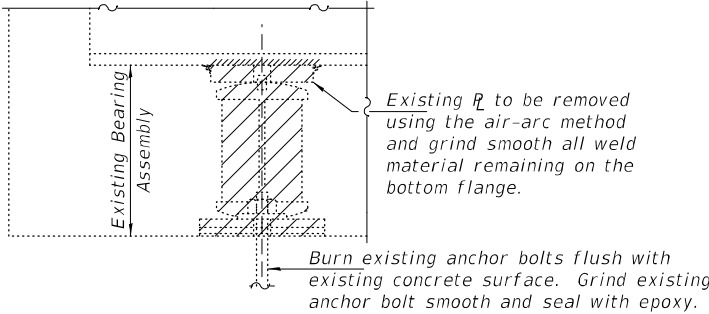
PINTLE



PLAN - TOP PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS

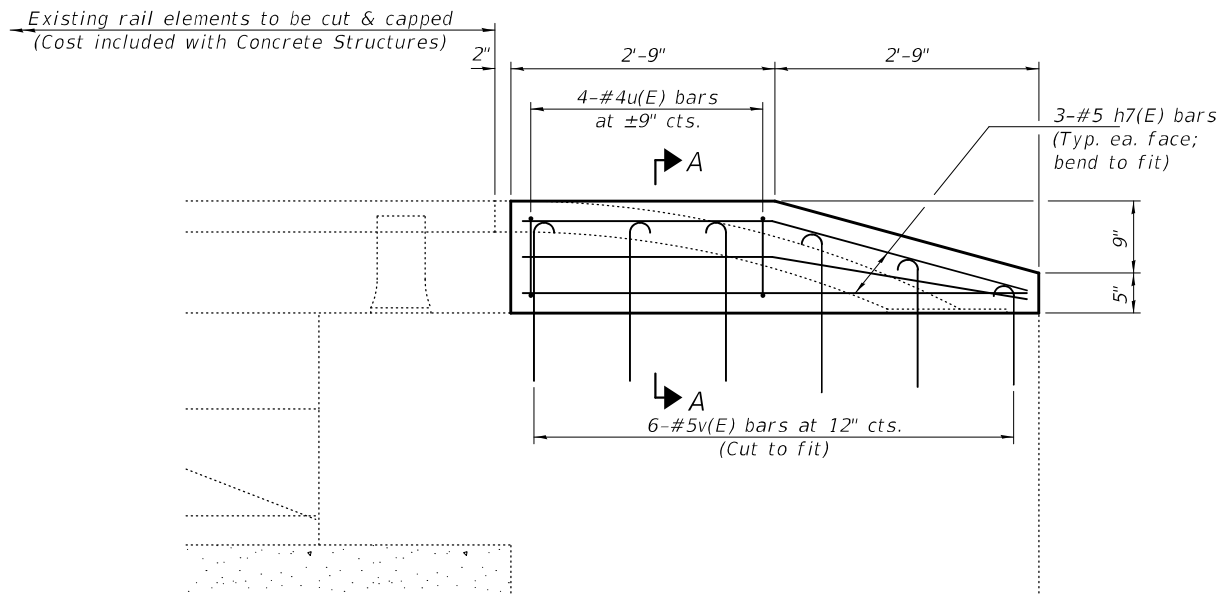


EXISTING BEARING REMOVAL DETAIL

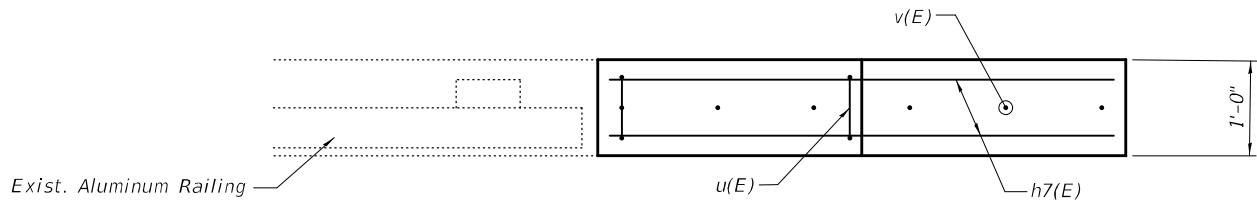
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	7
Furnishing and Erecting Structural Steel	Pound	1318
Anchor Bolts, 1"Ø	Each	14

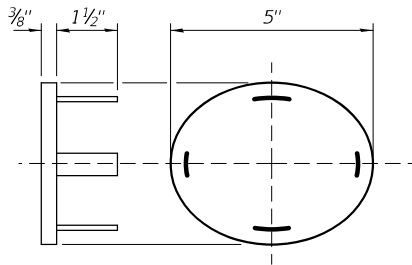


PROPOSED ELEVATION

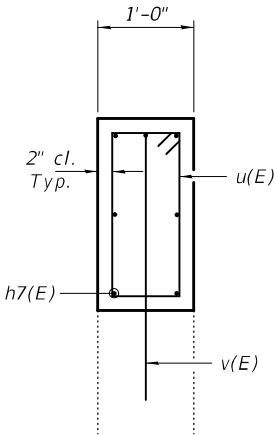


PLAN

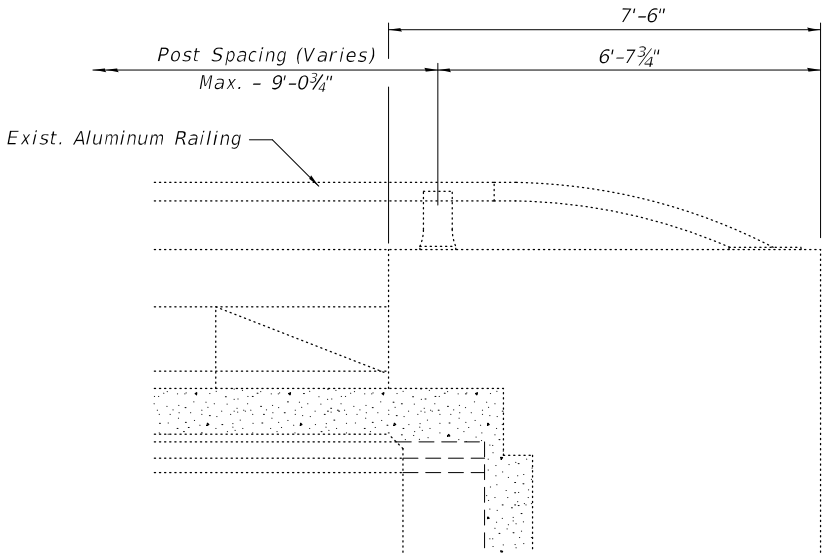
* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



CAST END CAP



SECTION A-A



INSIDE VIEW AT APPROACH BENT

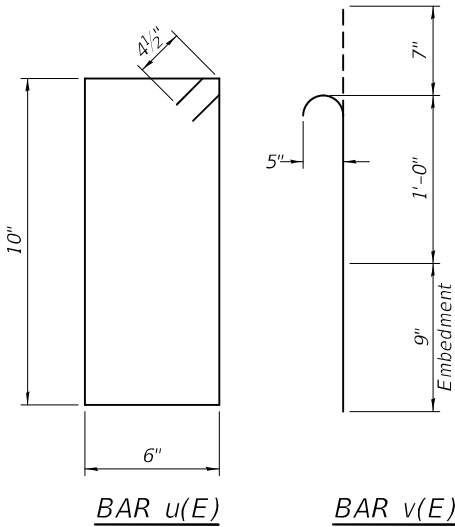
NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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.

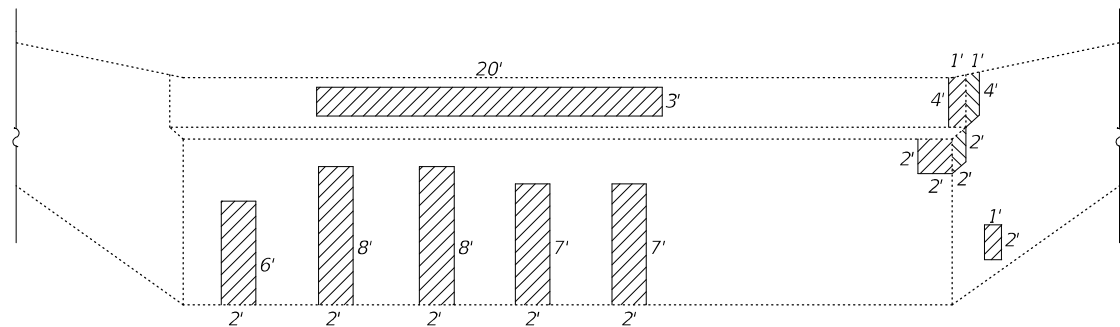
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h7(E)	6	#5	5'-1"	
u(E)	4	#5	3'-5"	
v(E)	6	#5	2'-4"	
Concrete Superstructure			Cu. Yd.	1.6
Reinforcement Bars, Epoxy Coated			Pound	60

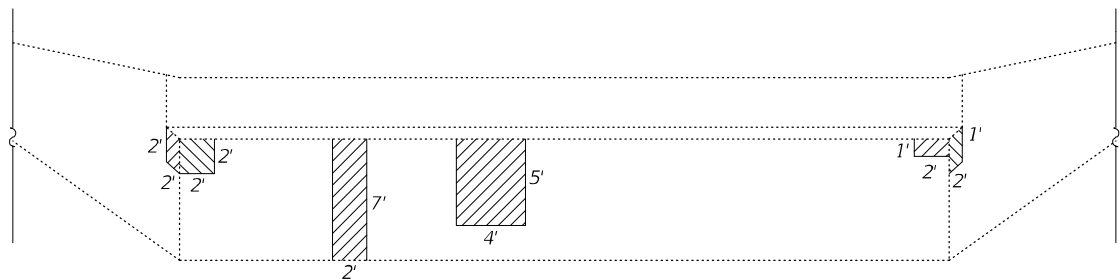


BAR u(E)

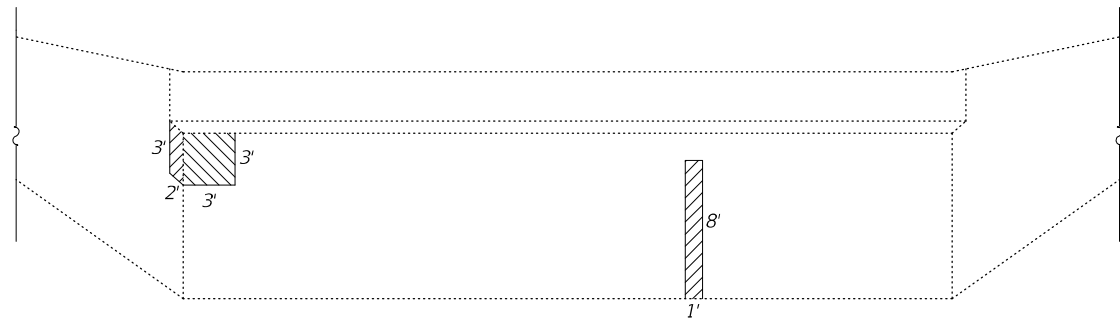
BAR v(E)



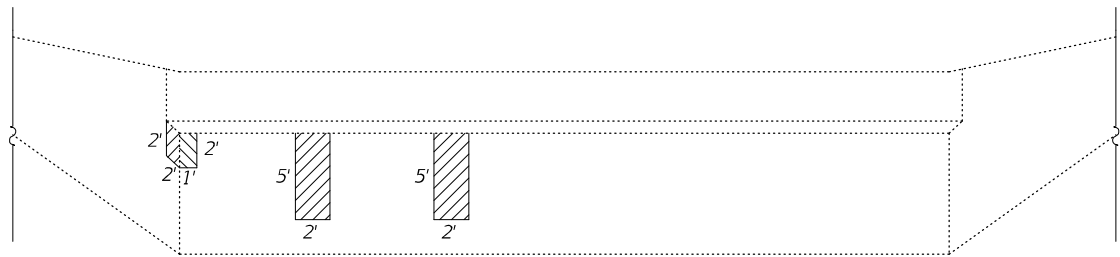
SOUTH ABUTMENT FACE
(SN 072-0108)



SOUTH ABUTMENT FACE
(SN 072-0109)



NORTH ABUTMENT FACE
(SN 072-0108)



NORTH ABUTMENT FACE
(SN 072-0109)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth \leq 5")	Sq. Ft.	245

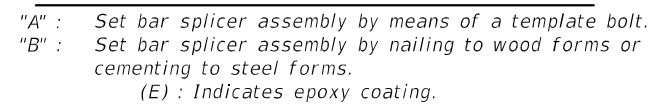
DESIGNED - CCC	EXAMINED		DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE CONCRETE REPAIRS SN 072-0108 (SB) & 072-0109 (NB)	SHEET NO. 16 OF 17 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF STRUCTURAL SERVICES	REVISED -				474	72(1HB,HB-1,2,3)BR	PEORIA	63	42
DRAWN <i>daburdell</i> in steffen		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -				CONTRACT NO. 68E52				
CHECKED - CCC JSB			ILLINOIS FED. AID PROJECT								



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

<i>Location</i>	<i>Bar size</i>	<i>No. assemblies required</i>	<i>Minimum lap length</i>
<i>N. Abut - deck</i>	<i>#5</i>	<i>8</i>	<i>3'-6"</i>
<i>S. Abut - deck</i>	<i>#5</i>	<i>8</i>	<i>3'-6"</i>
<i>N. Abut - appr.</i>	<i>#6</i>	<i>2</i>	<i>4'-0"</i>
<i>S. Abut - appr.</i>	<i>#6</i>	<i>2</i>	<i>4'-0"</i>

<i>Location</i>	<i>Bar size</i>	<i>No. assemblies required</i>	<i>Minimum lap length</i>
<i>N. Abut - deck</i>	<i>#5</i>	<i>8</i>	<i>3'-6"</i>
<i>S. Abut - deck</i>	<i>#5</i>	<i>8</i>	<i>3'-6"</i>
<i>N. Abut - appr.</i>	<i>#6</i>	<i>2</i>	<i>4'-0"</i>
<i>S. Abut - appr.</i>	<i>#6</i>	<i>2</i>	<i>4'-0"</i>



<i>Location</i>	<i>Bar size</i>	<i>No. assemblies required</i>

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

1-1-2020

DESIGNED - CCC	<div>EXAMINED</div> <div></div> <div>ENGINEER OF STRUCTURAL SERVICES</div> <div>PASSED</div> <div></div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>	DATE - MAY 7, 2021	<div>STATE OF ILLINOIS</div> <div>DEPARTMENT OF TRANSPORTATION</div>	<div>BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS</div> <div>SN 072-0108 (SB) & 072-0109 (NB)</div>	F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		474			72(1HB,HB-1,2,3)BR	PEORIA	63	43	
DRAWN - Jim Ostermann steffen		CONTRACT NO. 68E52							
CHECKED - CCC JSB		SHEET NO. 17 OF 17 SHEETS							

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

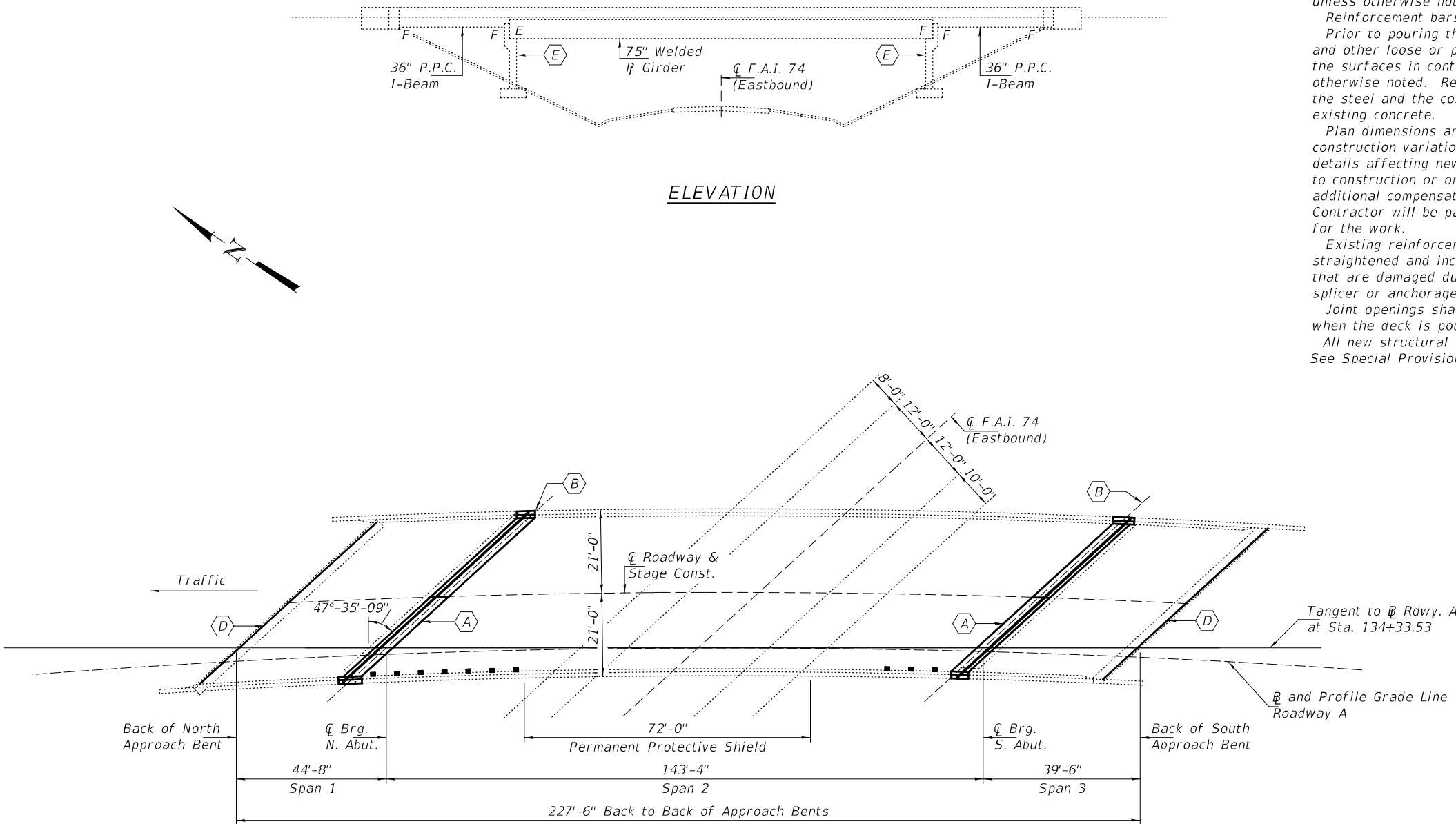
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

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.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."



ELEVATION

PLAN

- (A) - Remove and replace expansion joint with Preformed Joint Strip Seal.
- (B) - Bearing removal and replacement at Abutments.
- (C) - Bridge deck scarification with new Microsilica Concrete Overlay on Spans 1 thru 3.
- (D) - Polymer Concrete Nosing. See sheet 6 of 11 for details.
- (E) - Substructure Repairs

TOTAL BILL OF MATERIAL

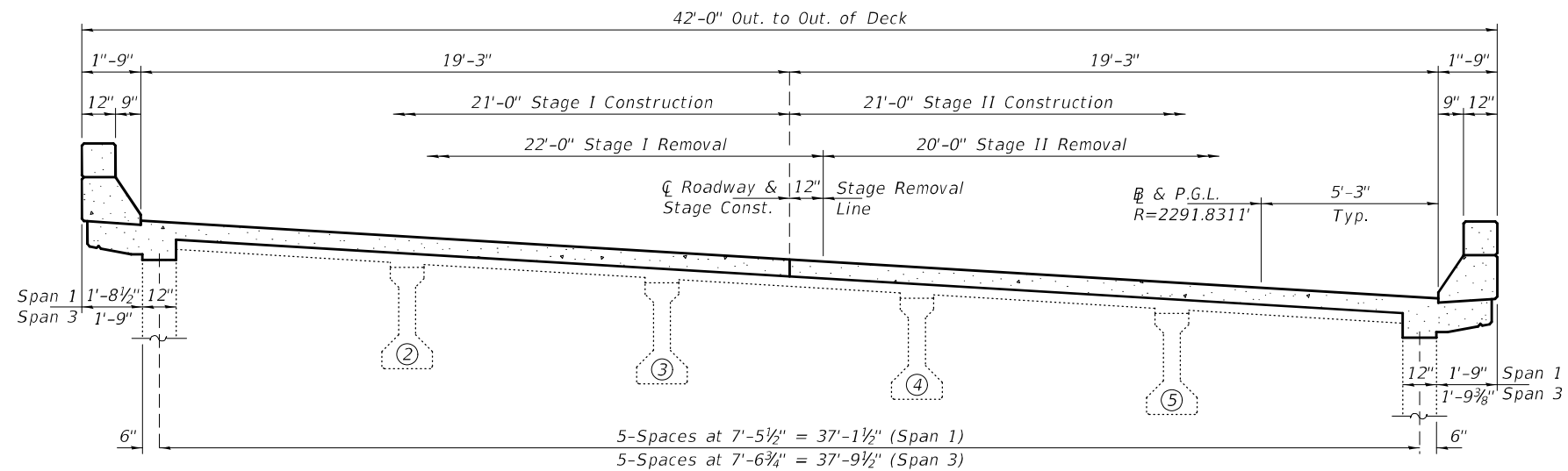
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	14
Concrete Superstructure	Cu. Yd.	14
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	928.4
Bridge Deck Grooving	Sq. Yd.	916.2
Floor Drains	Each	8
Preformed Joint Strip Seal	Foot	118
Reinforcement Bars, Epoxy Coated	Pound	1640
Bar Splicers	Each	20
* Protective Coat	Sq. Yd.	975.1
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	126
Furnishing & Erecting Structural Steel	Pound	4000
Elastomeric Bearing Assembly, Type I	Each	6
Jack & Remove Existing Bearings	Each	12
Anchor Bolts, 1"Ø	Each	24
Protective Shield (Permanent)	Sq. Yd.	288
Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	928.4
Bridge Deck Scarification, 3/4"	Sq. Yd.	928.4
Mechanical Splicers	Each	48
Polymer Concrete	Cu. Ft.	4.2
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	30

* On new concrete & microsilica concrete overlay only.

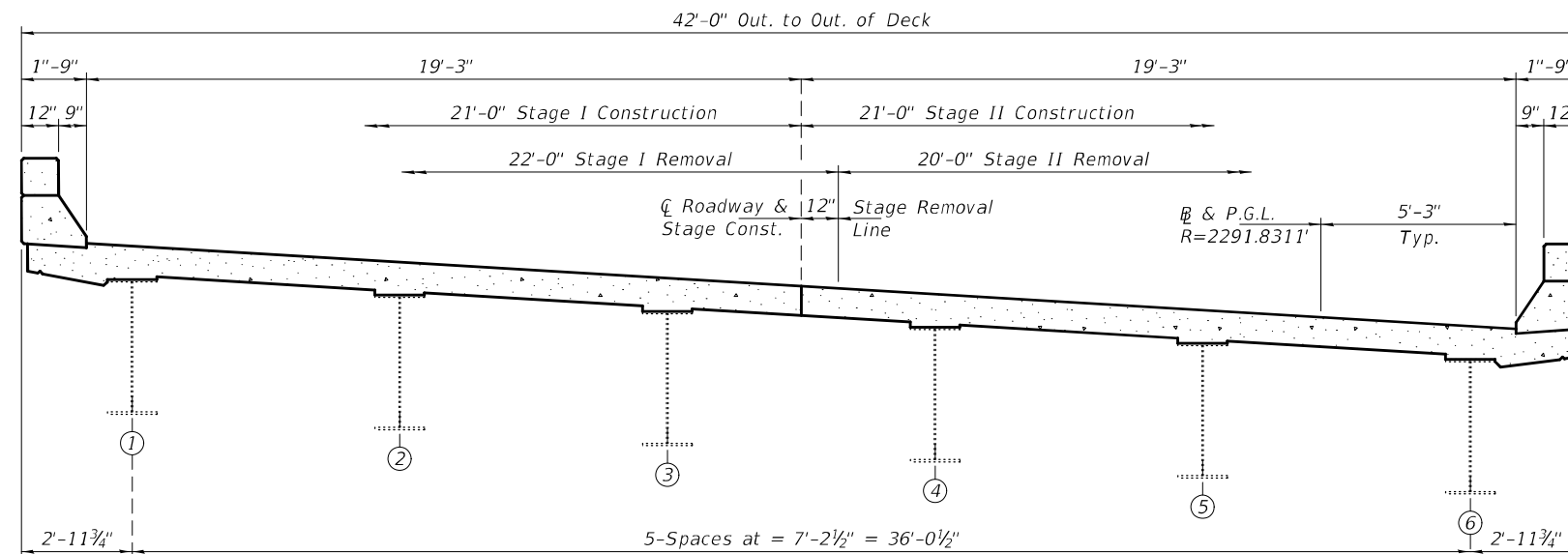


EXPIRES 11-30-2022

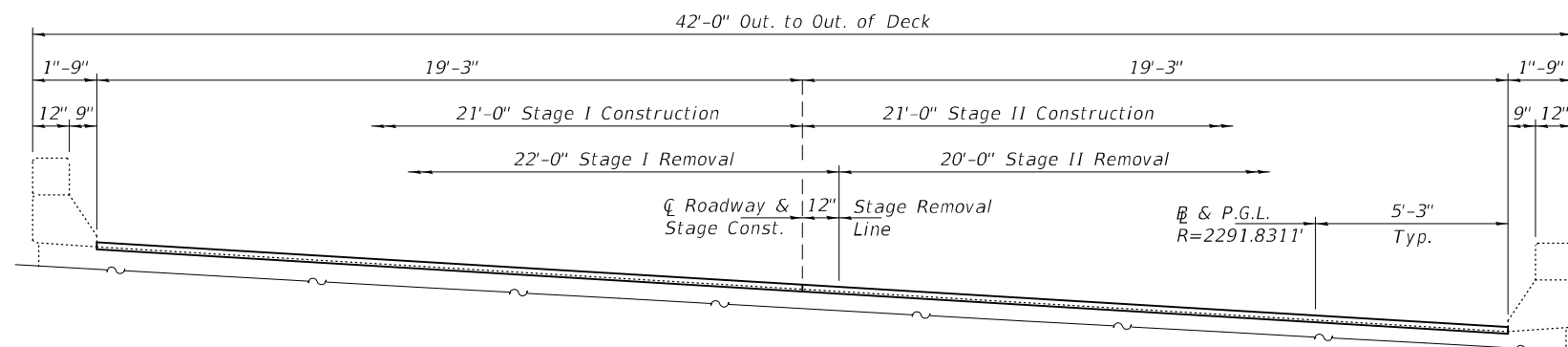
DESIGNED - ADRIAN T. HALLOWAY	EXAMINED - <i>Ting A. Bock</i>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION F.A.I. 474 OVER F.A.I. 74 SN 072-0110	SHEET NO. 1 OF 11 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VICTOR H. VELIZ	ENGINEER OF STRUCTURAL SERVICES					474	72(1HB,HB-1.2.3)BR	PEORIA	63	44
DRAWN - <i>jostermann</i> Steffen	PASSED - <i>David Carl Puzey</i>	REVISED -				CONTRACT NO. 68E52				
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -				ILLINOIS FED. AID PROJECT				



CROSS SECTION THRU SPANS 1 & 3 AT ABUTMENT
(SN 072-0110 Looking South)



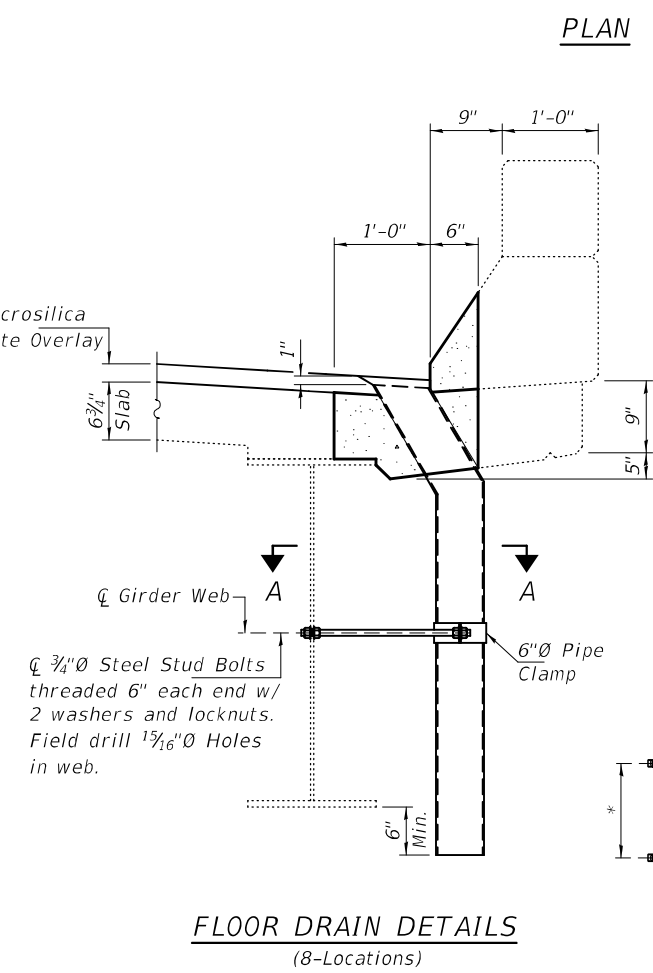
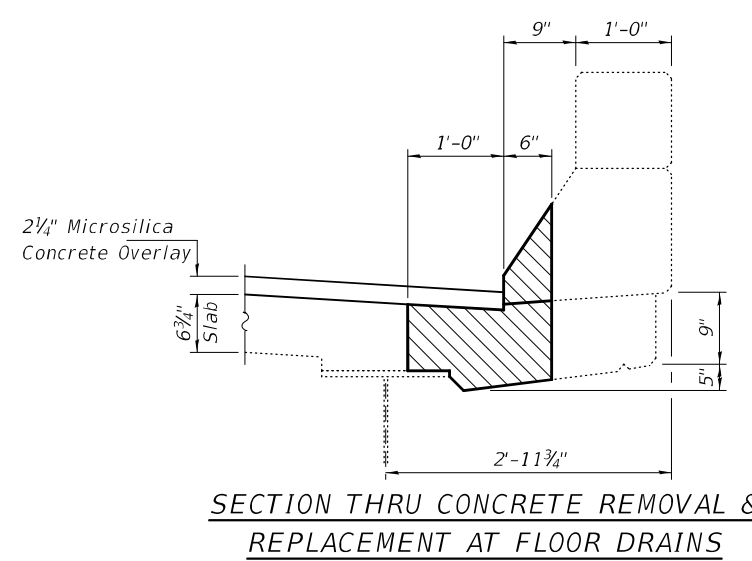
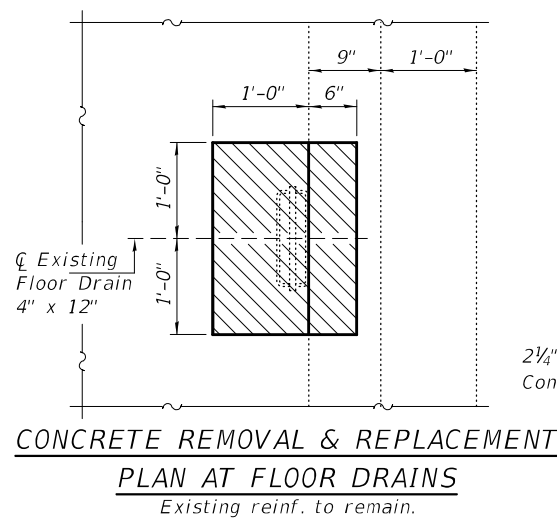
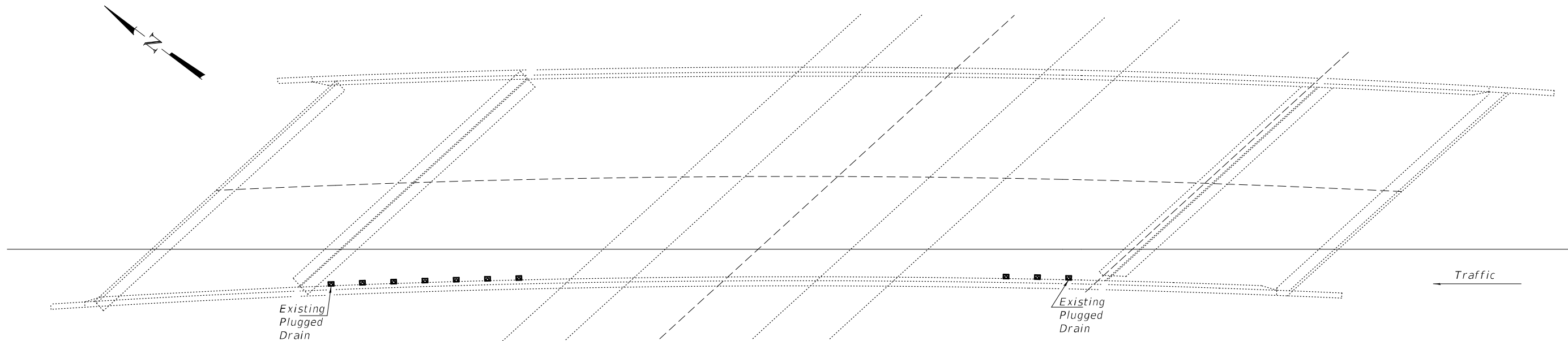
CROSS SECTION THRU SPAN 2 AT ABUTMENTS
(SN 072-0110 Looking South)



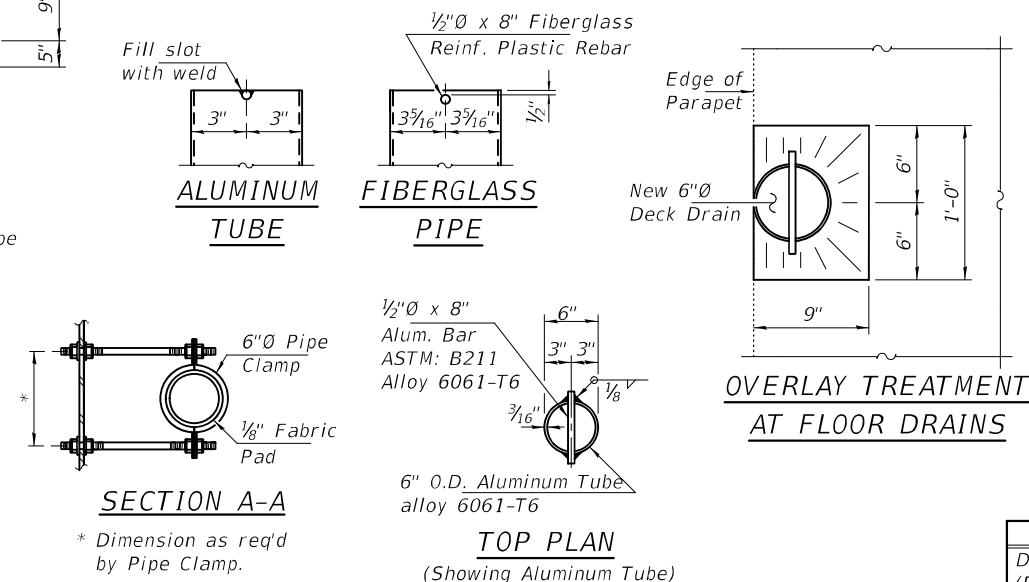
TYPICAL CROSS SECTION THRU MID-SPAN
(Looking South)

Note: All dimensions shown are measured radially

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING CROSS SECTIONS SN 072-0110	SHEET NO. 2 OF 11 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV						474	72(1HB,HB-1.2.3)BR	PEORIA	63	45
DRAWN - Jim Ostermann Steffen	PASSED					CONTRACT NO. 68E52				
CHECKED - ATH VHV						ILLINOIS FED. AID PROJECT				



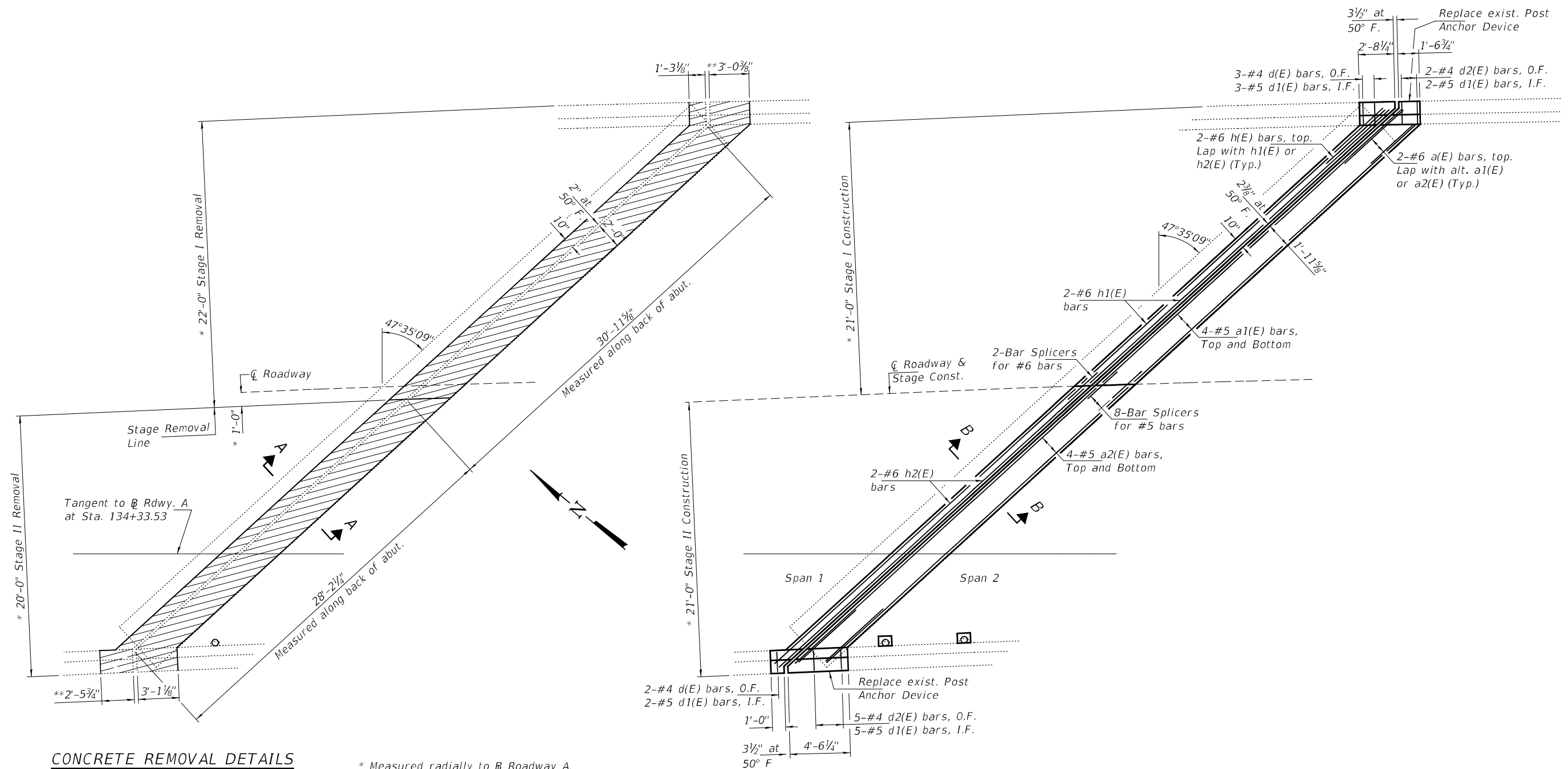
Note:
Areas of deck repairs shown are estimated.
The Engineer shall show actual locations of
deck repairs on As-built Plans.



Note:
The exterior surfaces of the floor
drains shall be painted with the finish
coat as specified in the special provisions
for Cleaning and Painting New Metal
Structures. The exterior surfaces of the
drains shall be cleaned according to
Society of Protective Coating's Spec.
SSPC-SP1 prior to painting. Fiberglass
pipe shall conform to ASTM D 2996,
with short-time rupture strength hoop
tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according
to AASHTO M232. Cost of clamping
device and galvanizing included with
Floor Drains.

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	30



CONCRETE REMOVAL DETAILS
N. ABUT., 072-0110 (N.B.)

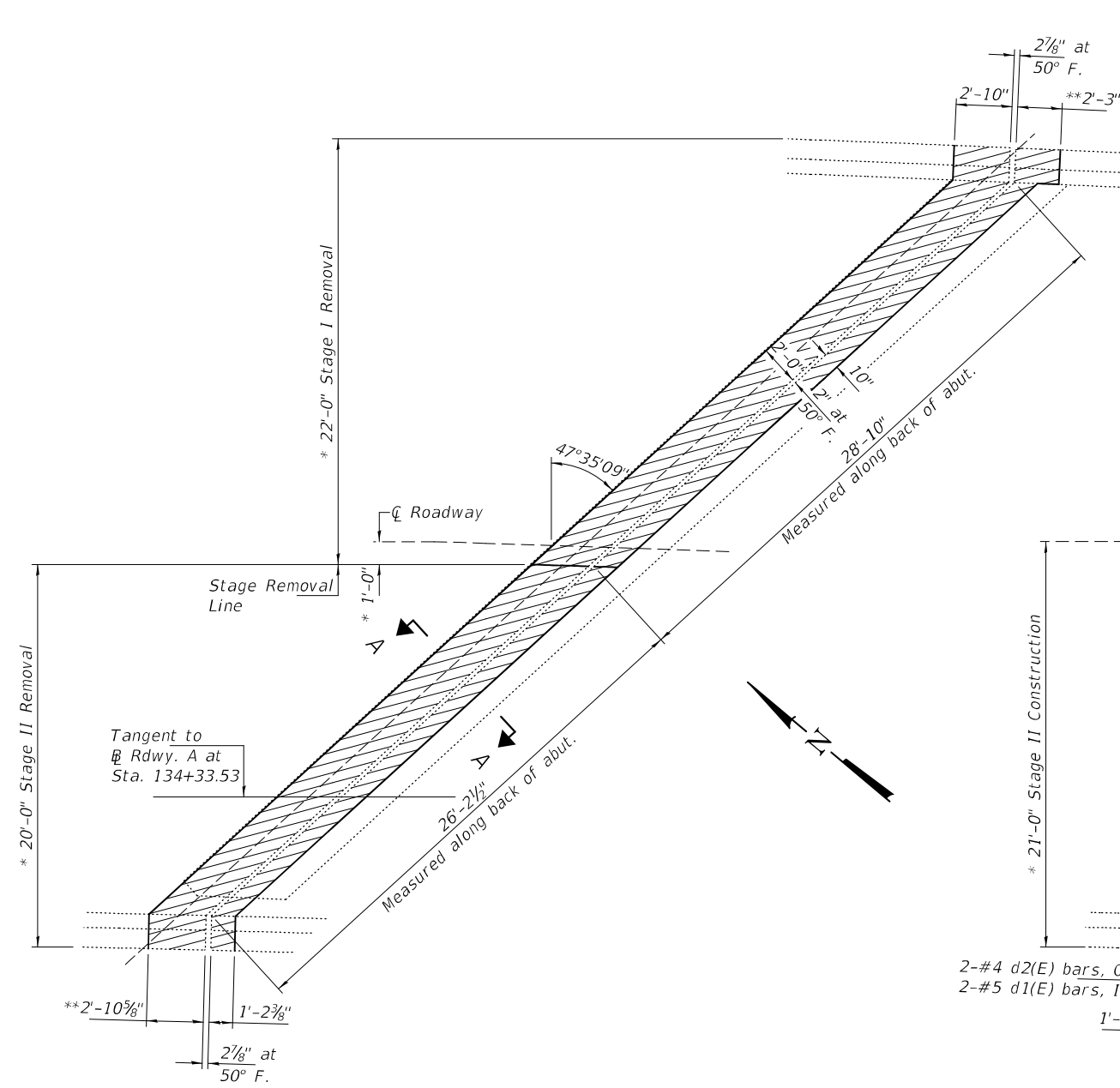
* Measured radially to \varnothing Roadway A.

** Cut excess existing longitudinal reinforcement bars in parapet and deck overhang to fit and mechanically splice to reinforcement bars in the opposite end. Cost included with Concrete Removal.

Notes:
 Hatched areas indicate removal.
 Bend a(E) bars in field as necessary.
 For Sections A-A & B-B, bar details and Bill of Material, see sheet 6 of 11.

CONCRETE REPLACEMENT DETAILS
N. ABUT., 072-0110 (N.B.)

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		JOINT REMOVAL AND REPLACEMENT DETAILS - N. ABUT. SN 072-0110		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	<i>Timothy A. Daulton</i> ENGINEER OF STRUCTURAL SERVICES						474	72(1HB,HB-1.2.3)BR	PEORIA	63	47
DRAWN - Jim Ostermann	PASSED	REVIS	SHEET NO. 4 OF 11 SHEETS		ILLINOIS FED. AID PROJECT		CONTRACT NO. 68E52				
CHECKED - ATH VHV	<i>Carl R. Ruyter</i> ENGINEER OF BRIDGES AND STRUCTURES	REVIS									

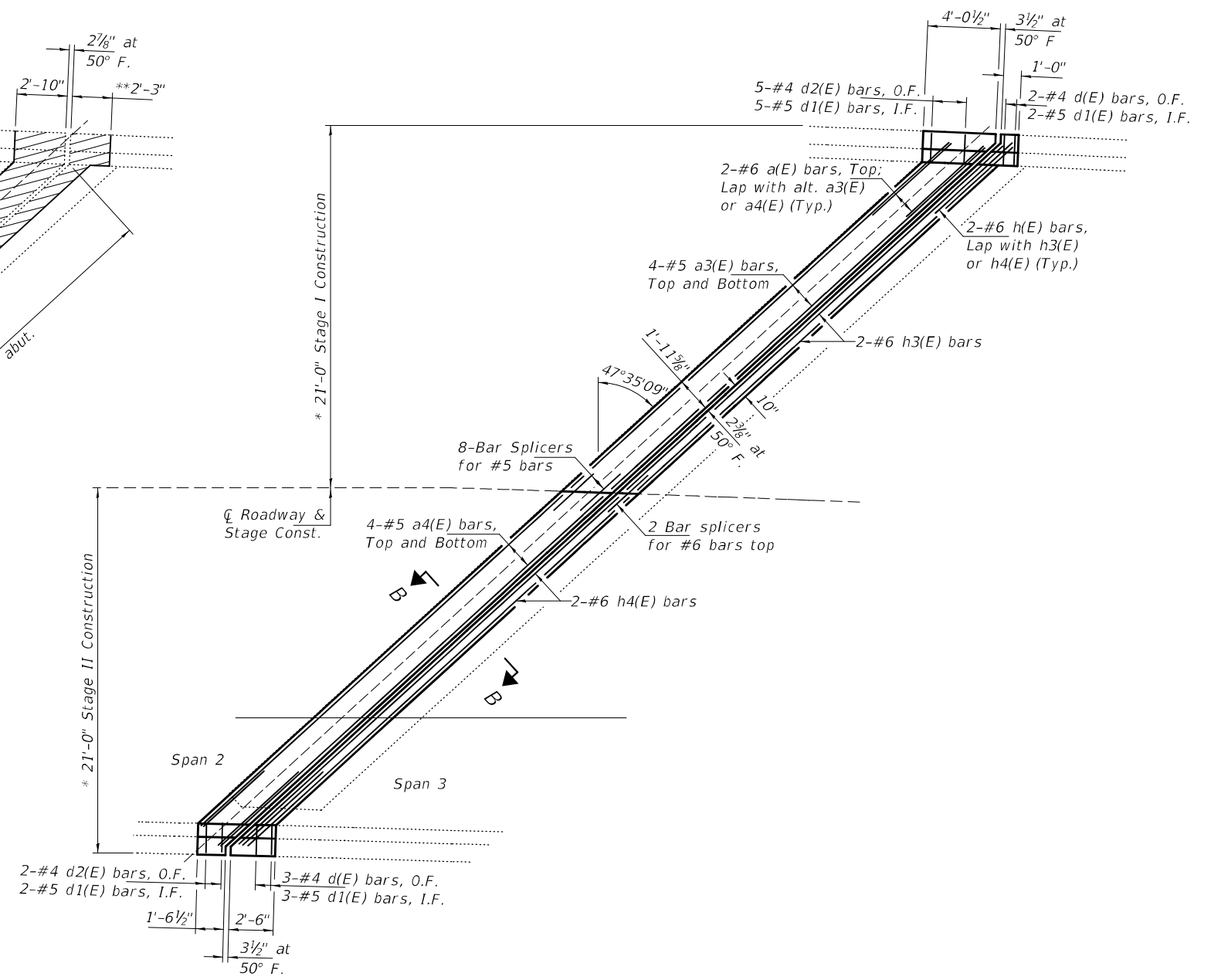


CONCRETE REMOVAL DETAILS
S. ABUT., 072-0110 (N.B.)

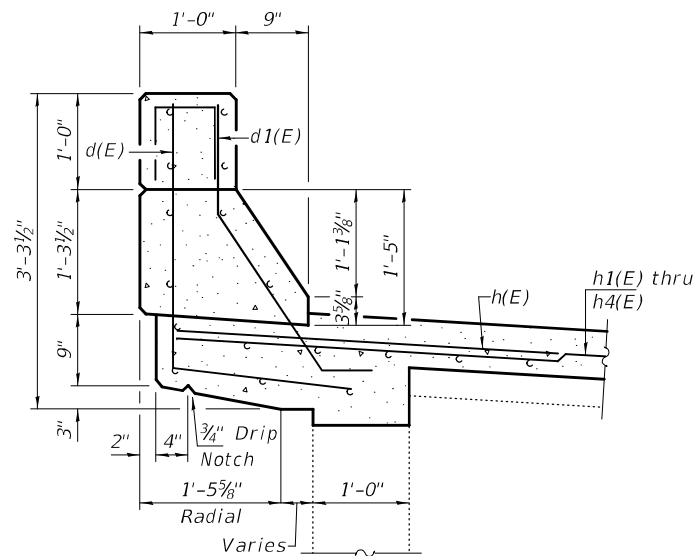
* Measured radially to \varnothing Roadway A.

** Cut excess existing longitudinal reinforcement bars in parapet and deck overhang to fit and mechanically splice to reinforcement bars in the opposite end. Cost included with Concrete Removal.

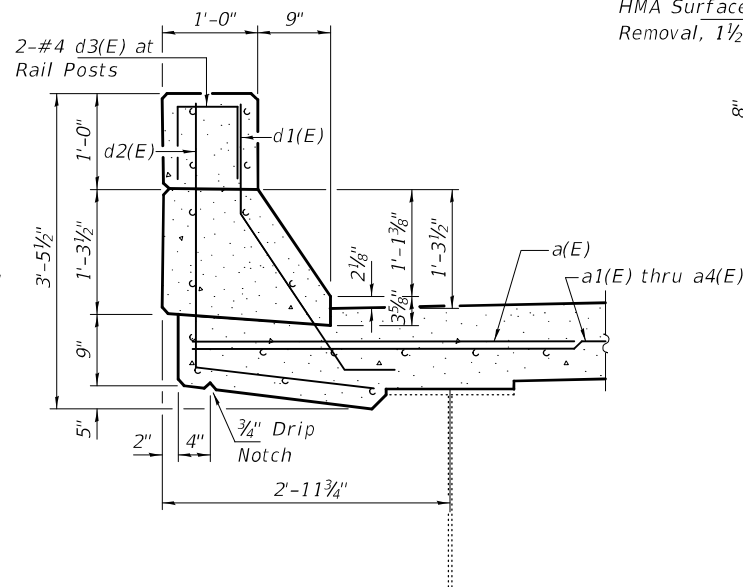
Notes:
 Hatched areas indicate removal.
 Bend a(E) bars in field as necessary.
 For Sections A-A & B-B, bar details and Bill of Material, see sheet 6 of 10.



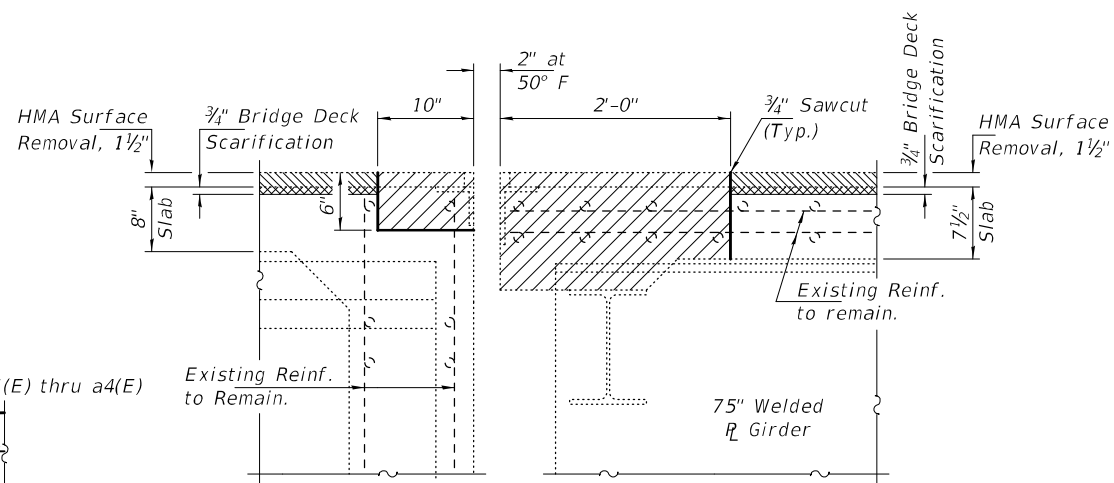
CONCRETE REPLACEMENT DETAILS
S. ABUT., 072-0110 (N.B.)



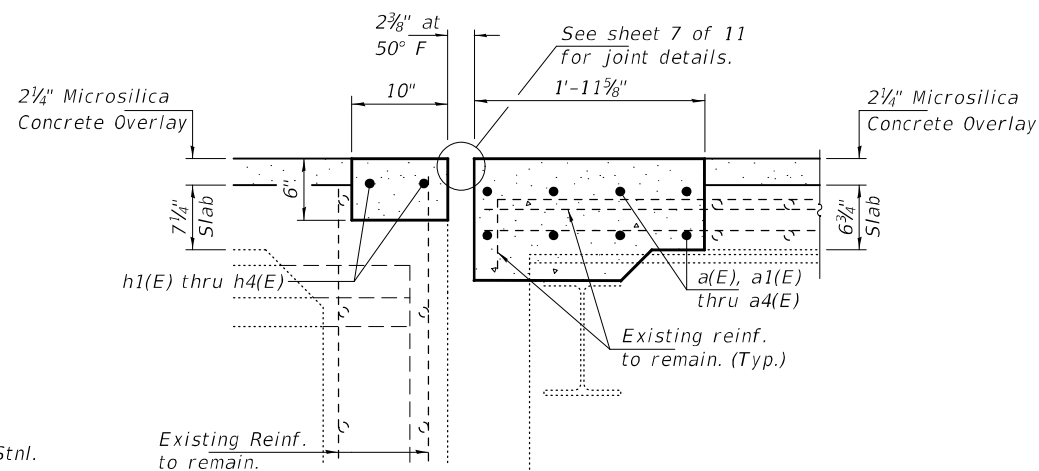
SECTION THRU SPAN 1 & 3 PARAPET



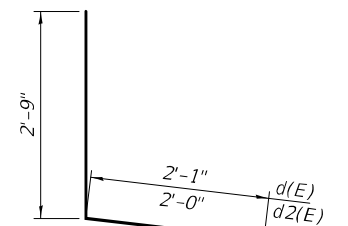
SECTION THRU SPAN 2 PARAPET



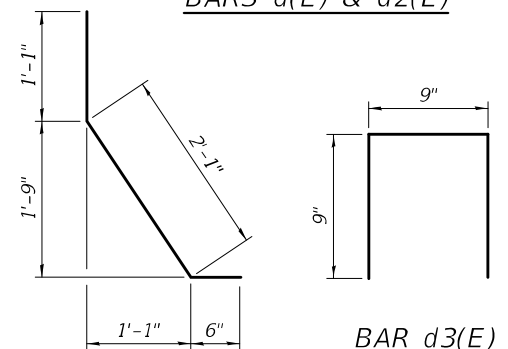
SECTION A-A
(Near Centerline Roadway)
(Dims at RT Ls to end of deck)



SECTION B-B
(Near Centerline Roadway)
(Dims at RT Ls to end of deck)



BARS d(E) & d2(E)

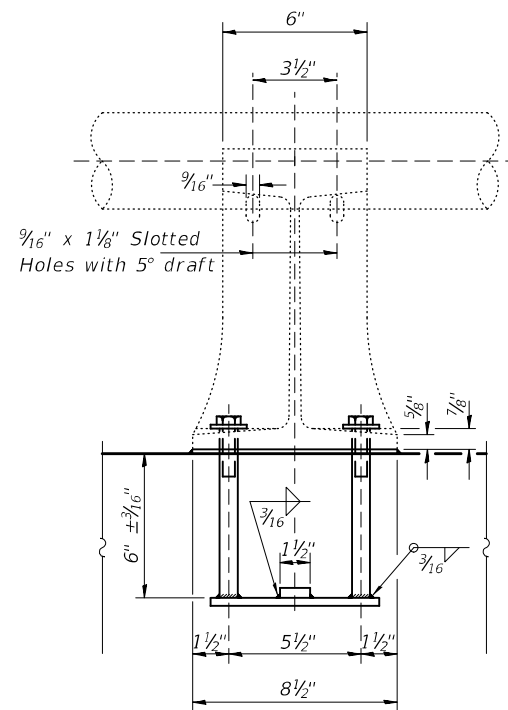


BAR d3(E)

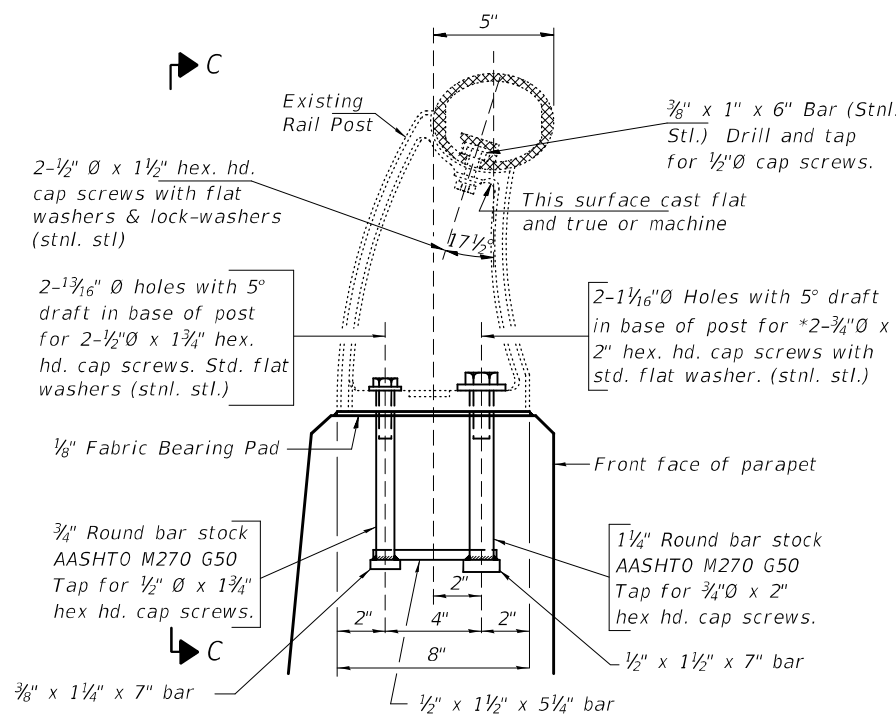
BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#6	6'-0"	—
a1(E)	8	#5	30'-2"	—
a2(E)	8	#5	30'-6"	—
a3(E)	8	#5	28'-3"	—
a4(E)	8	#5	28'-6"	—
d(E)	10	#4	4'-10"	└
d1(E)	24	#5	3'-8"	└
d2(E)	14	#4	4'-9"	└
d3(E)	4	#4	2'-3"	└
h(E)	8	#6	4'-9"	—
h1(E)	2	#6	30'-2"	—
h2(E)	2	#6	30'-6"	—
h3(E)	2	#6	28'-3"	—
h4(E)	2	#6	28'-6"	—
Concrete Removal				Cu. Yd. 14.0
Concrete Superstructure				Cu. Yd. 14.0
Reinforcement Bars, Epoxy Coated				Pound 1640

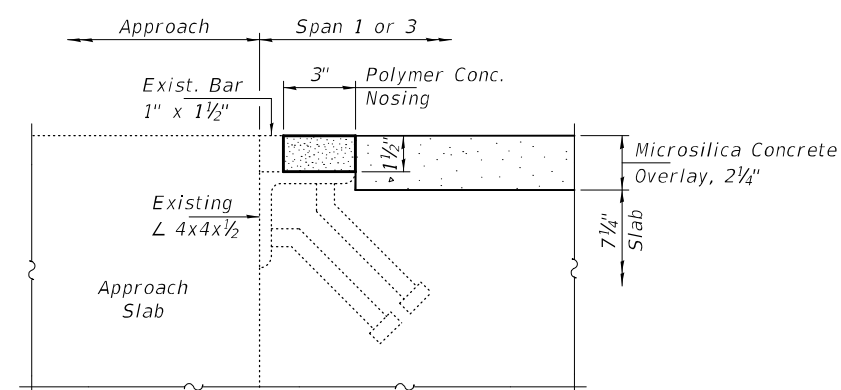


VIEW C-C



RAIL POST ANCHORAGE DEVICE DETAILS

New Rail Post Anchorage Devices will be required at locations where posts are connected to new concrete.
Cost to be included with Concrete Removal
(2-Required)



POLYMER CONCRETE NOSING DETAIL

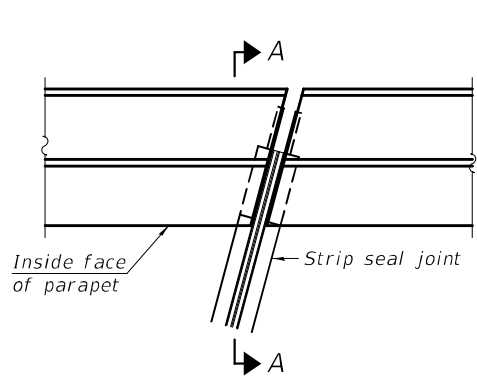
DESIGNED - ATH	EXAMINED - <i>Timothy A. Daulton</i>	DATE - MAY 7, 2021
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Jim Ostermann	PASSED - <i>Carl R. Rieger</i>	REVISED -
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
SN 072-0110

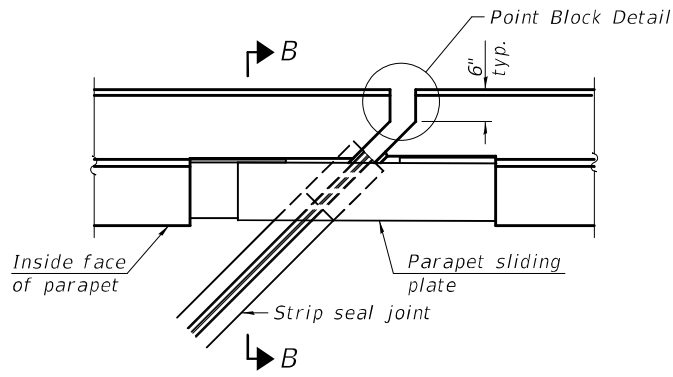
SHEET NO. 6 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1.2.3)BR	PEORIA	63	49
				CONTRACT NO. 68E52
ILLINOIS FED. AID PROJECT				

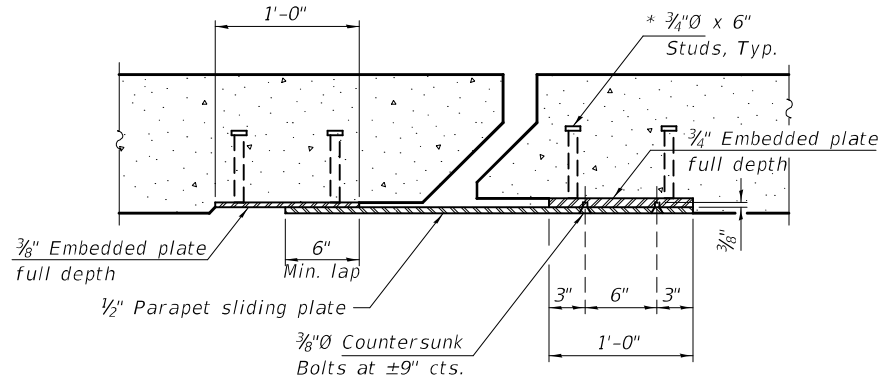


FOR SKEWS $\leq 30^\circ$

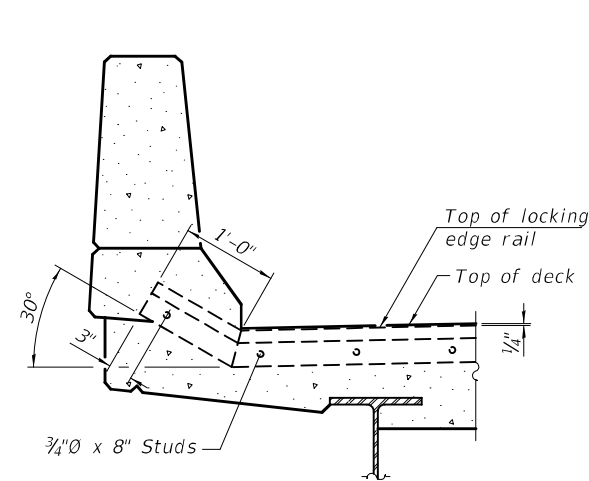
PLAN AT PARAPET



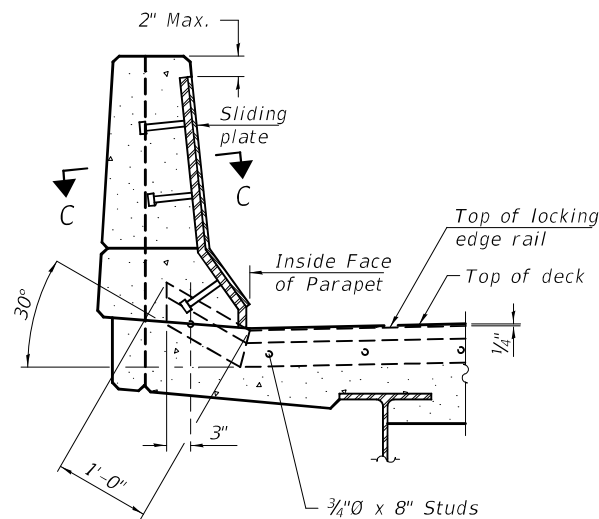
FOR SKEWS $> 30^\circ$



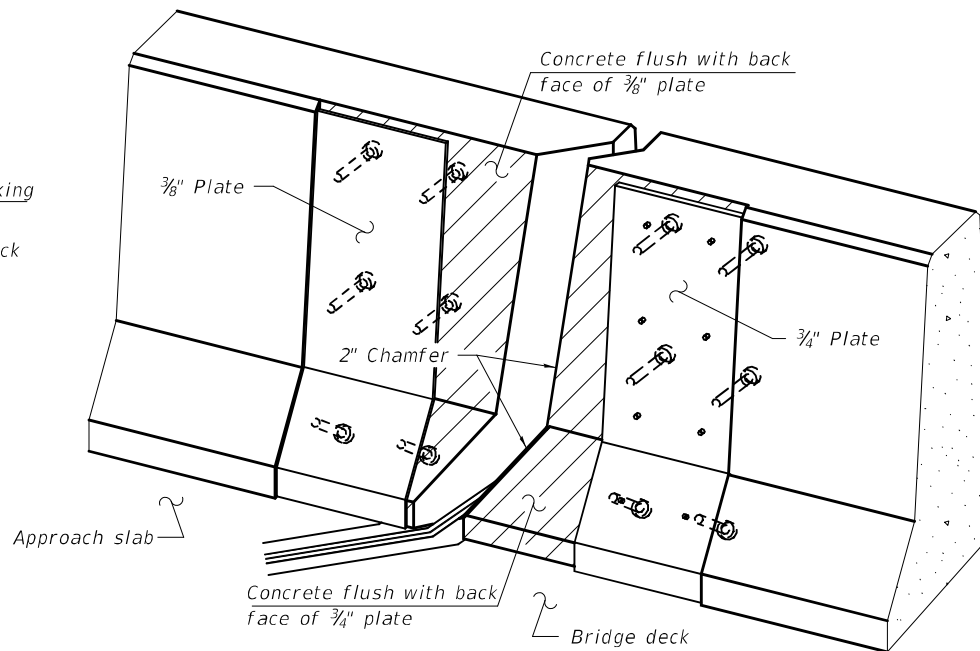
SECTION C-C



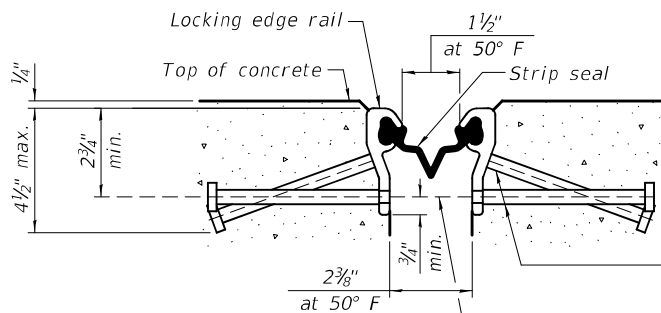
SECTION A-A



SECTION B-B

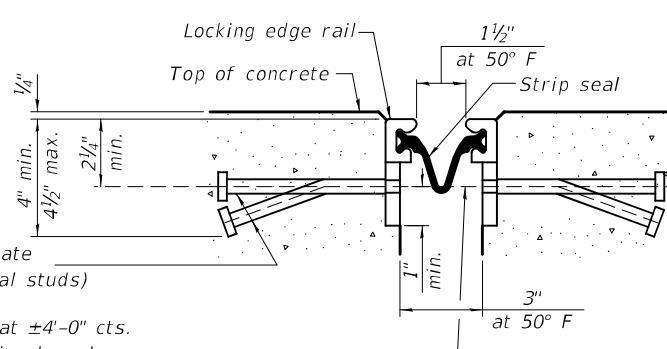


TRIMETRIC VIEW
(Showing back plates only)

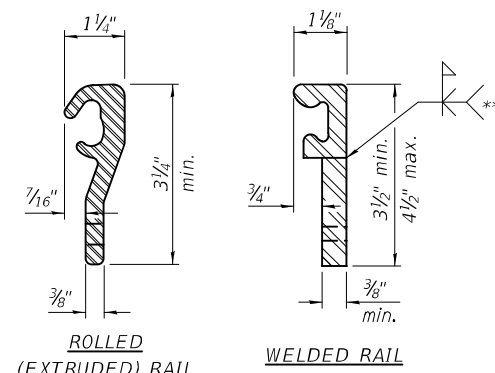


SECTION THRU
ROLLED RAIL JOINT

* $\frac{5}{8}$ " \varnothing x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)
 $\frac{3}{8}$ " \varnothing threaded rods in $\frac{7}{16}$ " \varnothing holes at ± 4 "-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

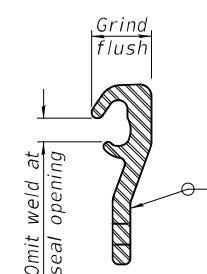


SECTION THRU
WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	118

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

39" constant slope barrier shown, 44" constant slope barrier similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

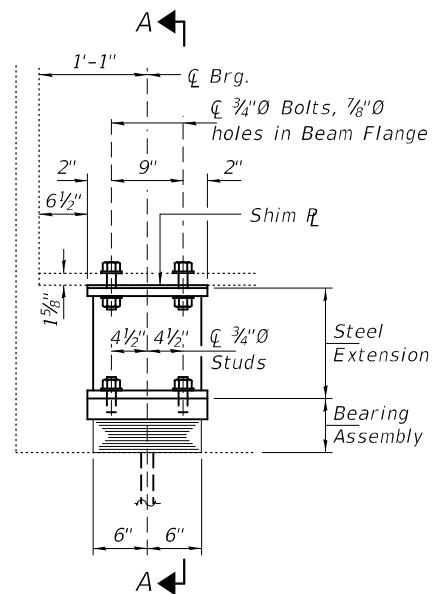
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021
CHECKED - VHV		
DRAWN - Jim Ostermann Steffen	PASSED	REVISED -
CHECKED - ATH VHV		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

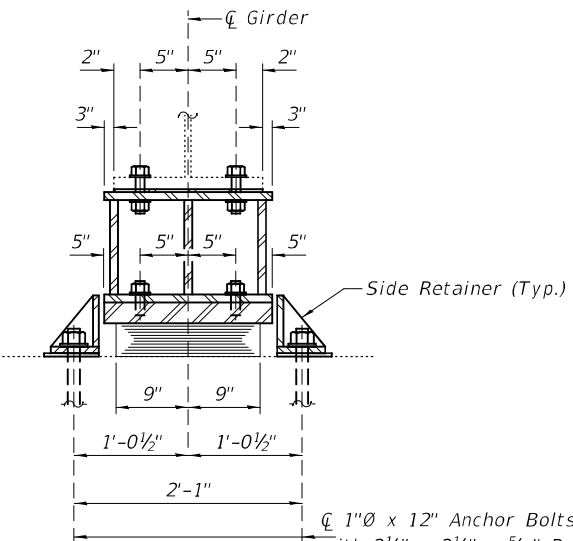
PREFORMED JOINT STRIP SEAL
SN 072-0110

SHEET NO. 7 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1.2.3)BR	PEORIA	63	50
				CONTRACT NO. 68E52
				ILLINOIS FED. AID PROJECT



ELEVATION AT NORTH ABUTMENT



SECTION A-A

BEAM REACTIONS

R _P	(K)	111.8
R _L	(K)	47.0
Imp.	(K)	8.7
R (Total)	(K)	167.5

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

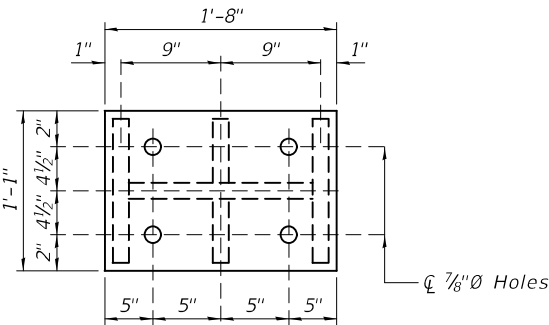
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 105 Tons.

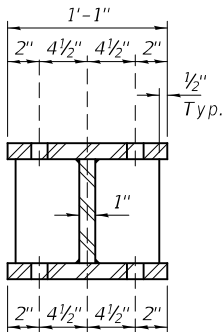
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

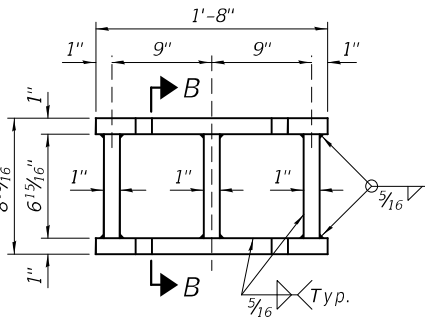
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



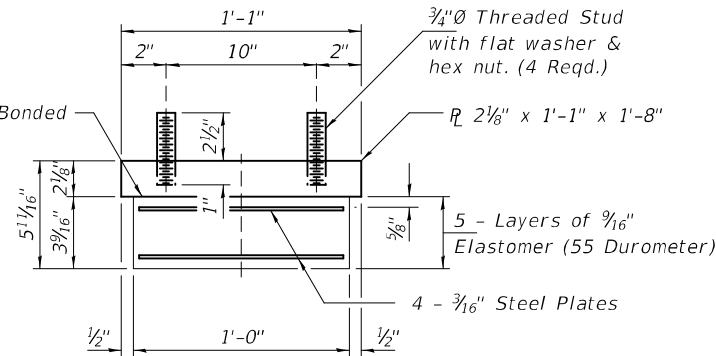
PLAN TOP AND BOTTOM PLATE



SECETION B-B



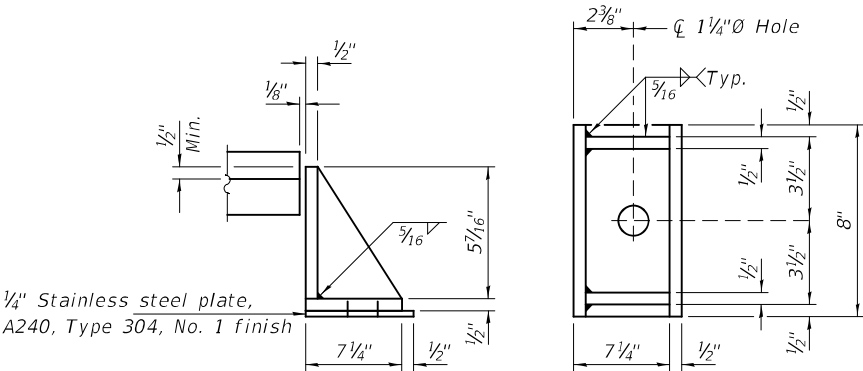
STEEL EXTENSION DETAIL



BEARING ASSEMBLY

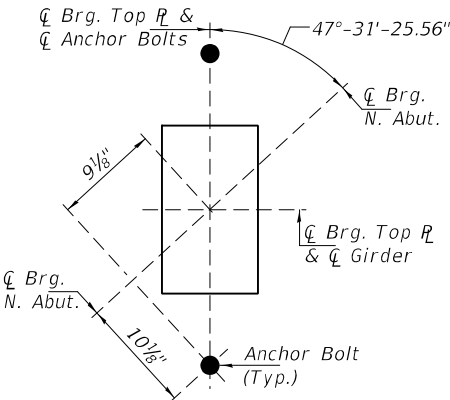
Note:

Shim plates shall not be placed under Bearing Assembly.

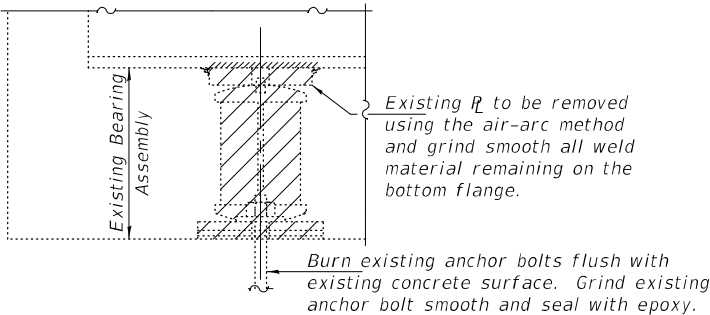


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BEARING & ANCHOR BOLT LOCATION



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1800
Anchor Bolts, 1"Ø	Each	12

TYI/REPS 5-17-2018

DESIGNED - ATH
CHECKED - VHV
DRAWN - Jim Ostermann Steffen
CHECKED - ATH VHV

EXAMINED	Timothy A. Daulton
PASSED	Carl R. Ruyter
ENGINEER OF STRUCTURAL SERVICES	ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 7, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT - NORTH ABUTMENT
SN 072-0110

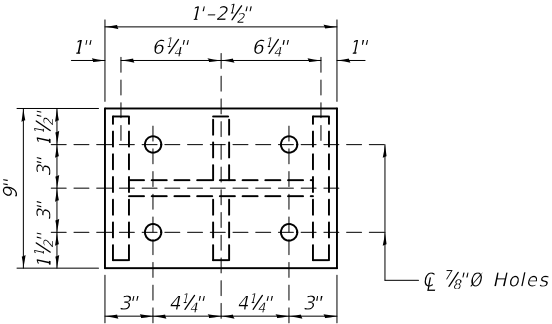
SHEET NO. 8 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1.2.3)BR	PEORIA	63	51
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				

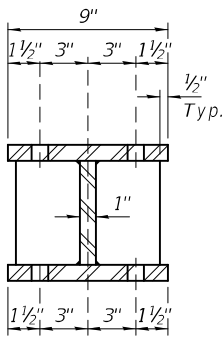
BEAM REACTIONS

R \bar{Q}	(K)	79.4
R \bar{L}	(K)	46.7
Imp.	(K)	10.1
R (Total)	(K)	136.2

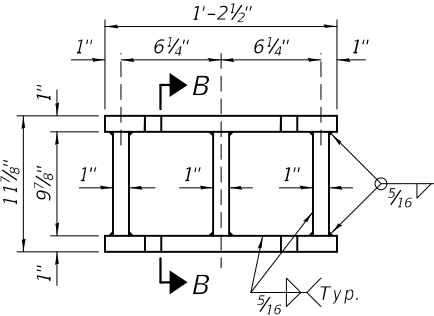
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
Min. jack capacity = 90 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



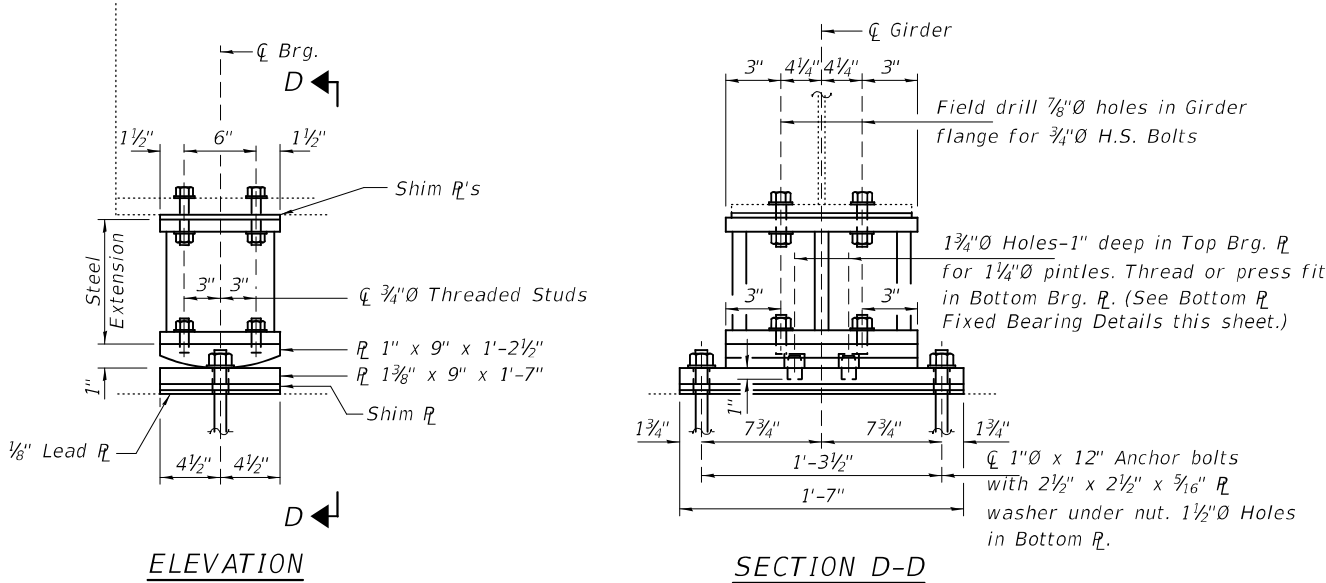
PLAN TOP AND BOTTOM PLATE



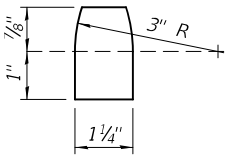
SECTION B-B



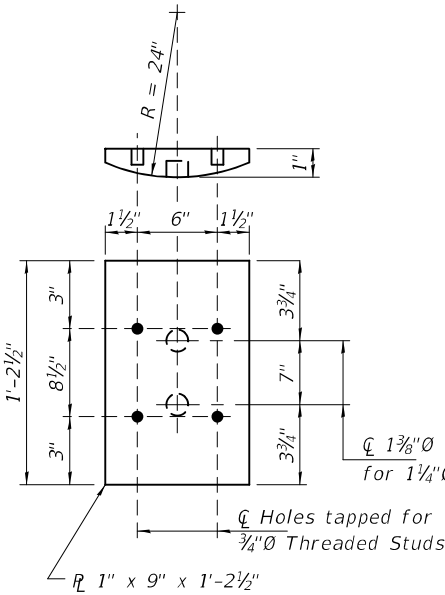
STEEL EXTENSION DETAIL



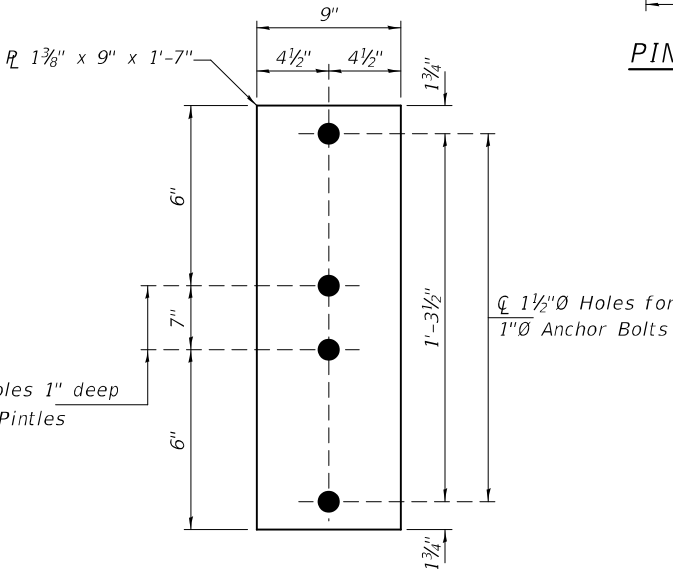
FIXED BEARINGS



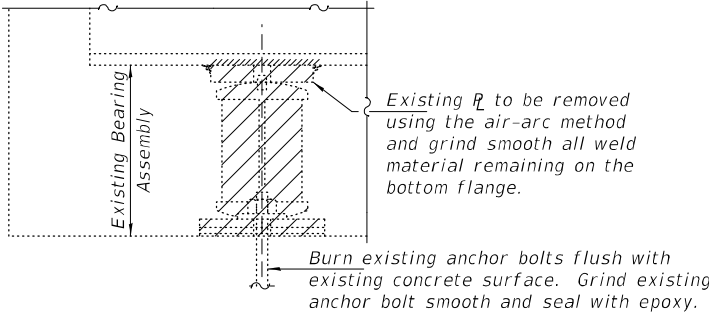
PINTLE



PLAN - TOP PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	2200
Anchor Bolts, 1"Ø	Each	12

5-17-2018

DESIGNED - ATH	
CHECKED - VHV	
DRAWN - Jim Ostermann	Steffen
CHECKED - ATH	VHV

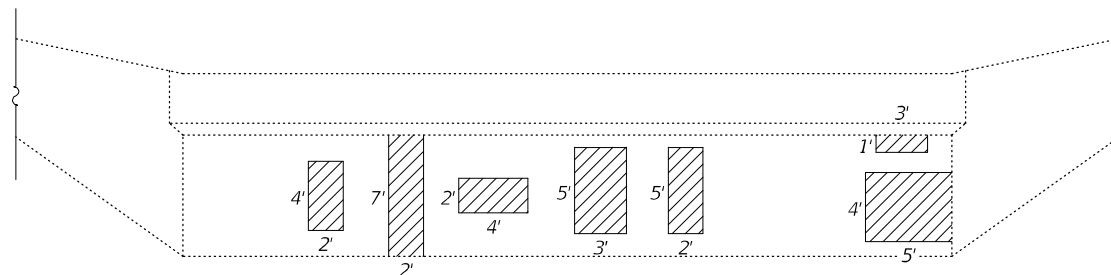
EXAMINED	Timothy A. Daulton	DATE - MAY 7, 2021
PASSED	Carl R. Ruyter	REVISED -
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

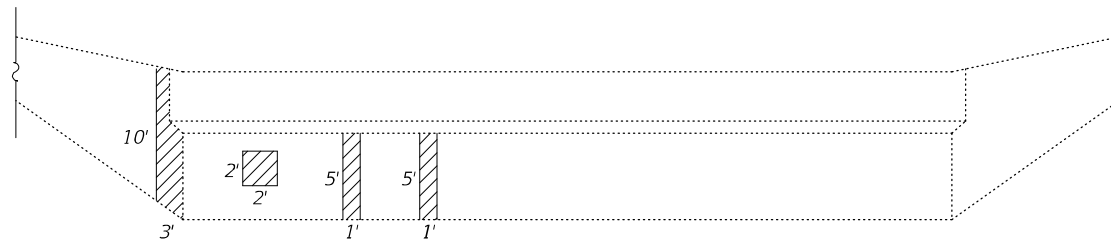
BEARING REPLACEMENT - SOUTH ABUTMENT
SN 072-0110

SHEET NO. 9 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1.2.3)BR	PEORIA	63	52
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				



SOUTH ABUTMENT FACE
(SN 072-0110)

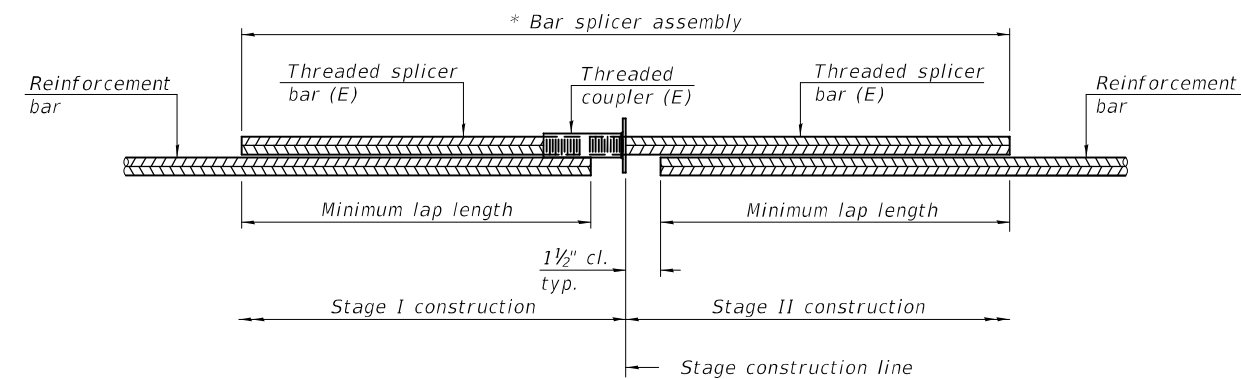


NORTH ABUTMENT FACE
(SN 072-0110)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth \leq 5")	Sq. Ft.	126

DESIGNED - ATH	<div>EXAMINED</div> <div> ENGINEER OF STRUCTURAL SERVICES</div> <div>DATE - MAY 7, 2021</div>	<div>REVIS</div> <div>REVISED -</div>	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE CONCRETE REPAIRS SN 072-0110	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV					<div>PASSED</div> <div> ENGINEER OF BRIDGES AND STRUCTURES</div>	47472(1HB,HB-1.2.3)BRPEORIA6353				
DRAWN - Jim Ostermann						CONTRACT NO. 68E52				
CHECKED - ATH VHV						ILLINOIS FED. AID PROJECT				
SHEET NO. 10 OF 11 SHEETS										

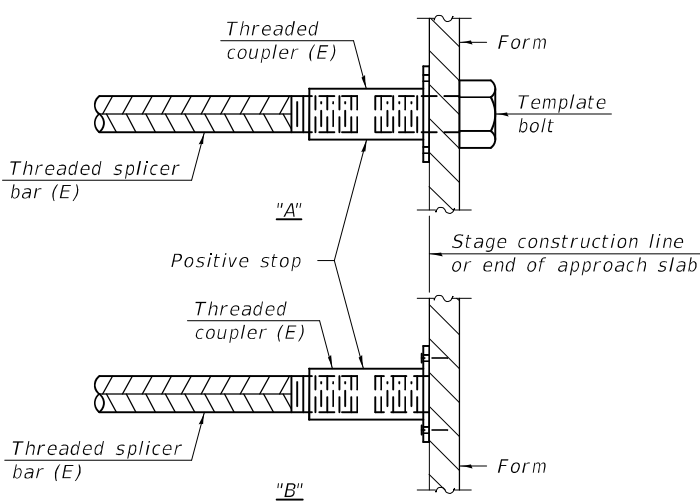


STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

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

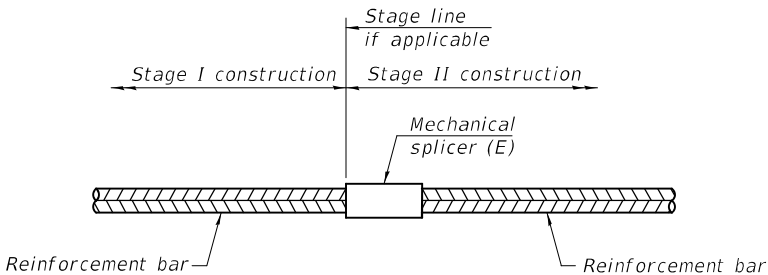
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
N. Abut. - Deck	#5	8	3'-6"
S. Abut. - Deck	#5	8	3'-6"
N. Abut. - Appr.	#6	2	4'-0"
S. Abut. - Appr.	#6	2	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
Parapet & Overhang	#4	16
Parapet & Overhang	#5	24
Parapet & Overhang	#8	8

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

1-1-2020

DESIGNED - ATH	EXAMINED		DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 072-0110	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1.2.3)BR	PEORIA	63	54	
DRAWN - Jim Ostermann Steffen	PASSED		REVISED -			CONTRACT NO. 68E52					
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -								
				SHEET NO. 11 OF 11 SHEETS		ILLINOIS FED. AID PROJECT					

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

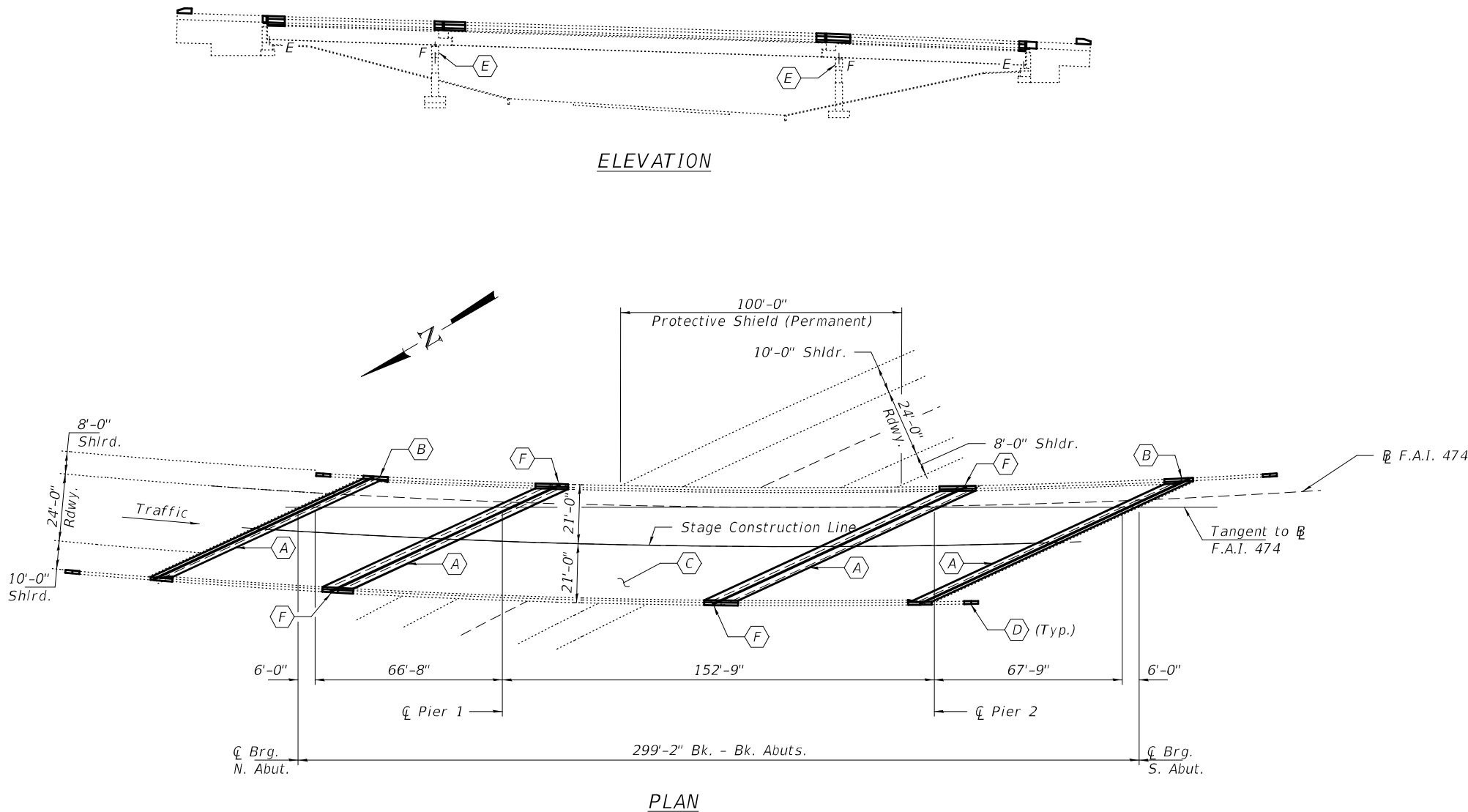
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

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.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."



TOTAL BILL OF MATERIAL

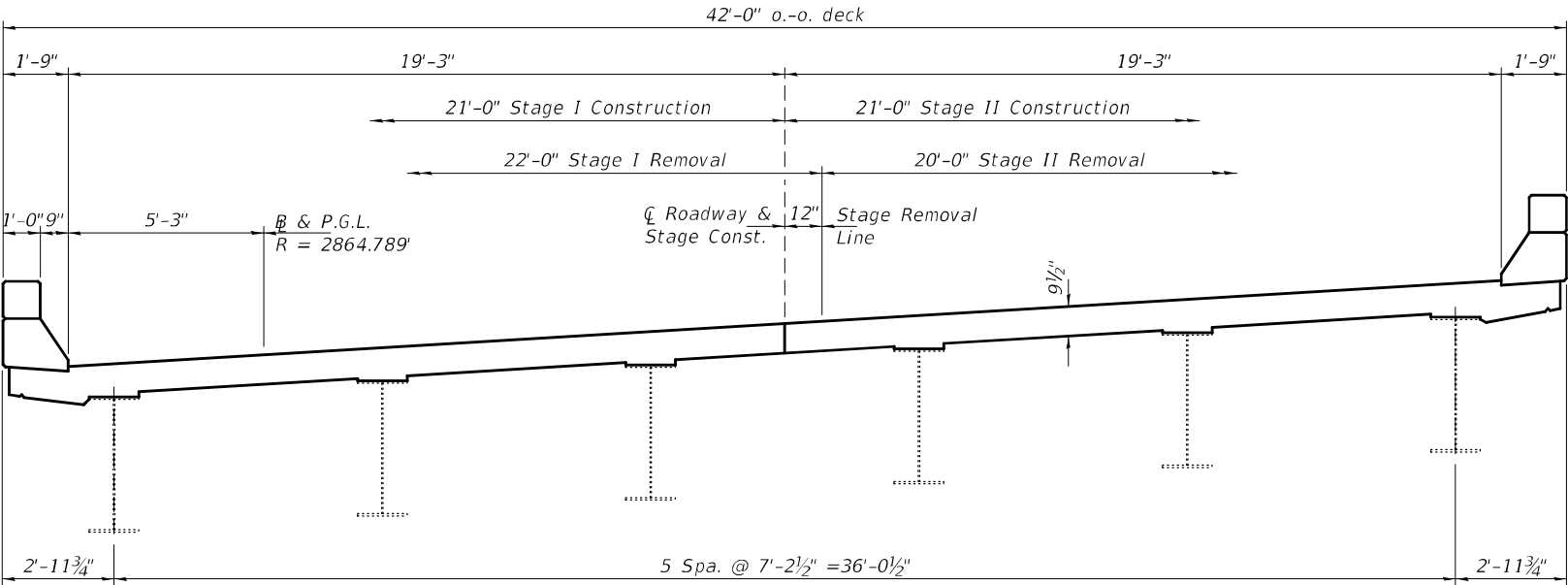
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	71.6
Concrete Superstructure	Cu. Yd.	71.6
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	1080.5
Bridge Deck Grooving	Sq. Yd.	1138.7
Preformed Joint Strip Seal	Foot	368
Reinforcement Bars, Epoxy Coated	Pound	3510
Bar Splicers	Each	56
* Protective Coat	Sq. Yd.	1257.5
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	122
Furnishing & Erecting Structural Steel	Pound	2200
Elastomeric Bearing Assembly, Type I	Each	12
Jack & Remove Existing Bearings	Each	12
Anchor Bolts, 1"Ø	Each	24
Protective Shield (Permanent)	Sq. Yd.	511
Hot-Mix Asphalt Surface Removal Deck	Sq. Yd.	1080.5
Bridge Deck Scarification, 3/4"	Sq. Yd.	1080.5
Mechanical Splicers	Each	96
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	12.5
Concrete Structures	Cu. Yd.	1.4
Temporary Shoring and Cribbing	Each	1
Beam Straightening	L. Sum	1

* On new concrete and overlay only.

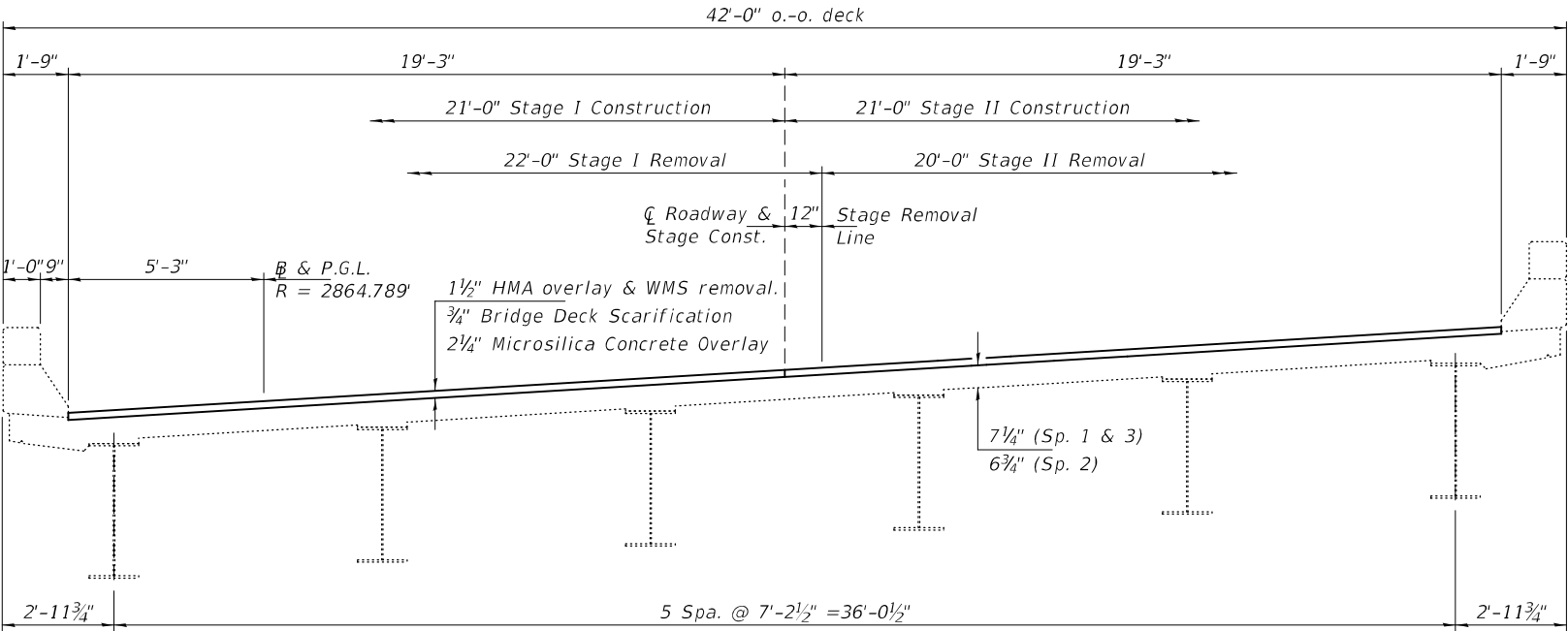


EXPIRES 11-30-2022

DESIGNED - Adrian T. Halloway	EXAMINED <i>Twig A. Beck</i>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION F.A.I. 474 RAMP OVER F.A.I. 474 SN 072-0111 (SB)	SHEET NO. 1 OF 19 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Victor H. Veliz	ENGINEER OF STRUCTURAL SERVICES	REVISED -				474	72(1HB,HB-1,2,3)BR	PEORIA	63	55
DRAWN - Jim Ostermann daburdell	PASSED <i>Dr. Carl Puzey</i>	REVISED -				CONTRACT NO. 68E52				
CHECKED - ATH VHV	ENGINEER OF BRIDGES AND STRUCTURES					ILLINOIS FED. AID PROJECT				



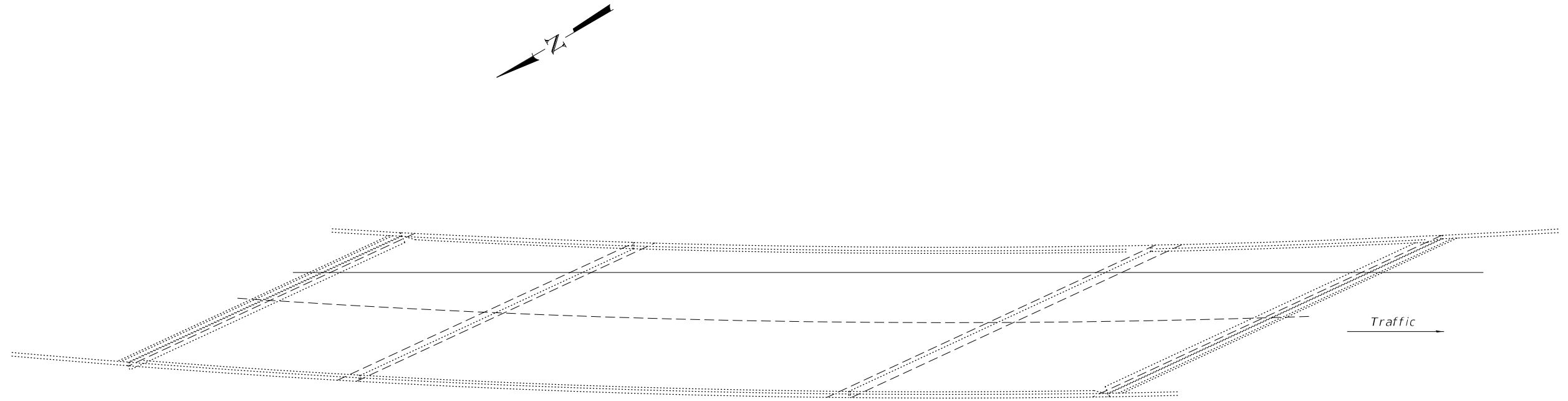
CROSS SECTION AT ABUTMENT
(Looking South)



CROSS SECTION AT MIDSPAN
(Looking South)

Note: All dimensions shown are measured radially.

DESIGNED - ATH	EXAMINED <div>Timothy A. Burt</div> <div>ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING CROSS SECTIONS SN 072-0111	SHEET NO. 2 OF 19 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV		PASSED <div>Carl P. Ruyter</div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>				REVISED -	474	72(1HB,HB-1,2,3)BR	PEORIA	63	56
DRAWN - Jim Ostermann daburdell						CONTRACT NO. 68E52					
CHECKED - ATH VHV						ILLINOIS FED. AID PROJECT					



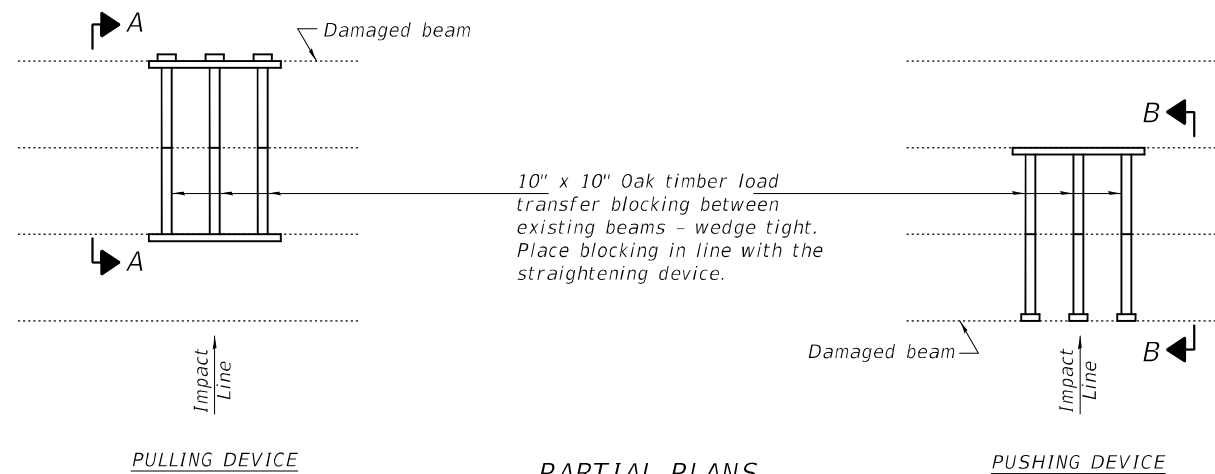
PLAN

Note:
Areas of deck repairs shown are estimated.
The Engineer shall show actual locations of
deck repairs on As-built Plans.

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	12.5

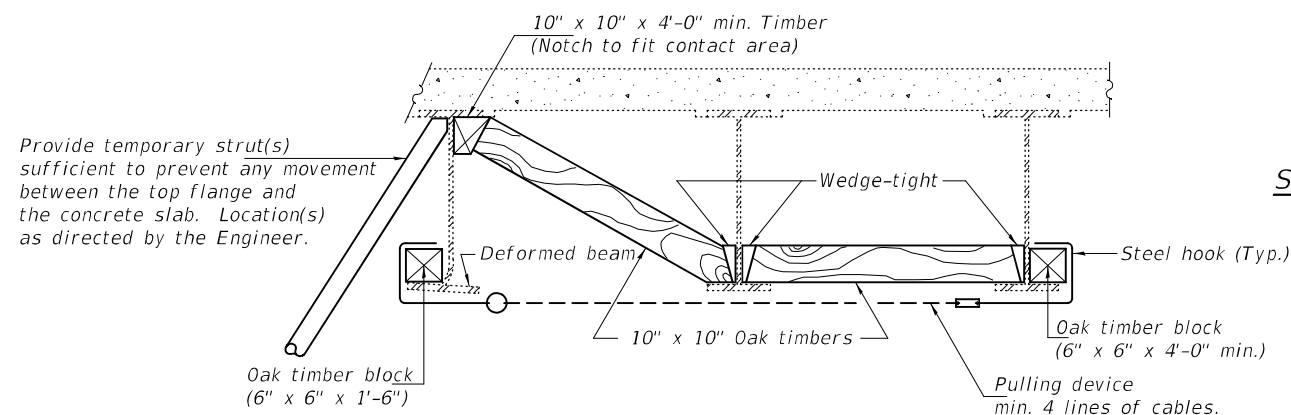
DESIGNED - ATH	EXAMINED <div> ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK SLAB REPAIRS SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
CHECKED - VHV					474	72(1HB,HB-1,2,3)BR	PEORIA	63	57		
DRAWN - Jim Ostermann daburdell					PASSED <div> ENGINEER OF BRIDGES AND STRUCTURES</div>	REVISED -	CONTRACT NO. 68E52				
CHECKED - ATH VHV						REVISED -	ILLINOIS FED. AID PROJECT				
SHEET NO. 3 OF 19 SHEETS											



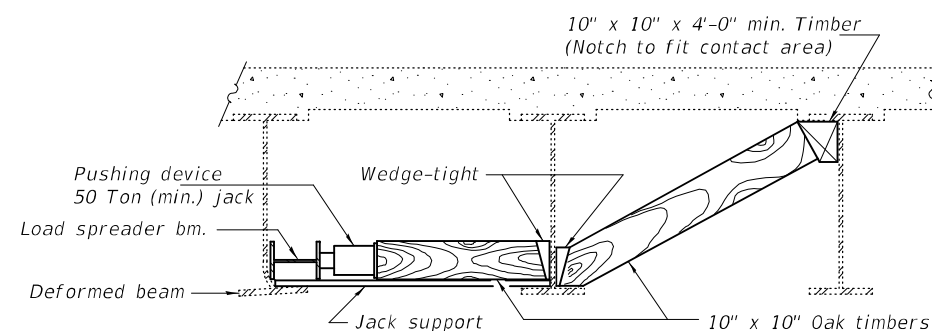
PARTIAL PLANS

SUGGESTED BEAM STRAIGHTENING METHODS

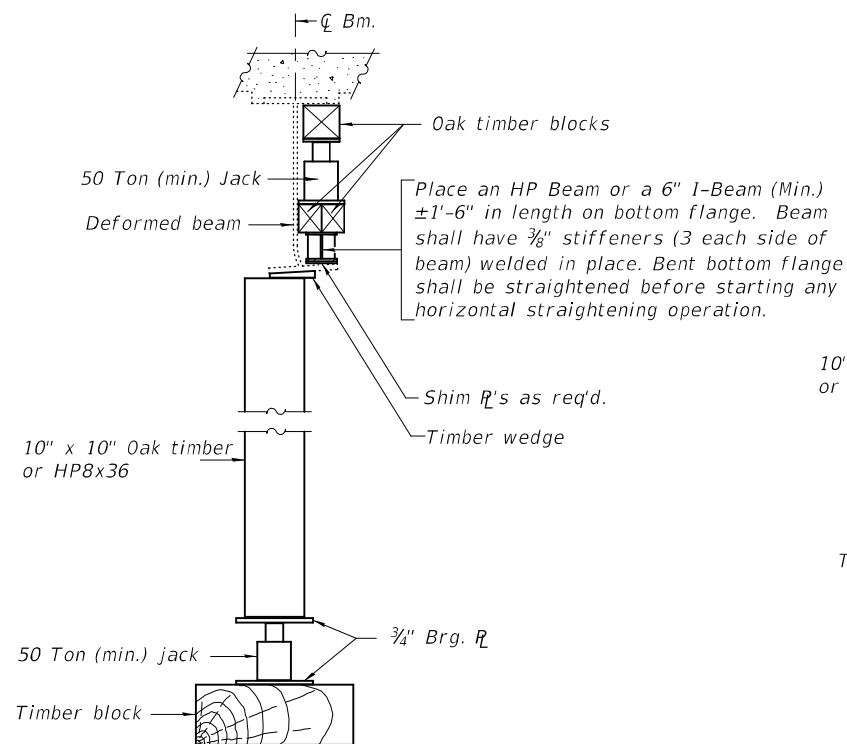
Straightening force shall be maintained on all load transfer blocking during beam straightening.



SECTION A-A

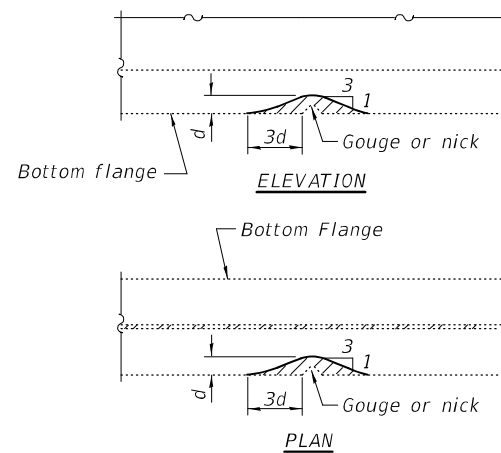


SECTION B-B



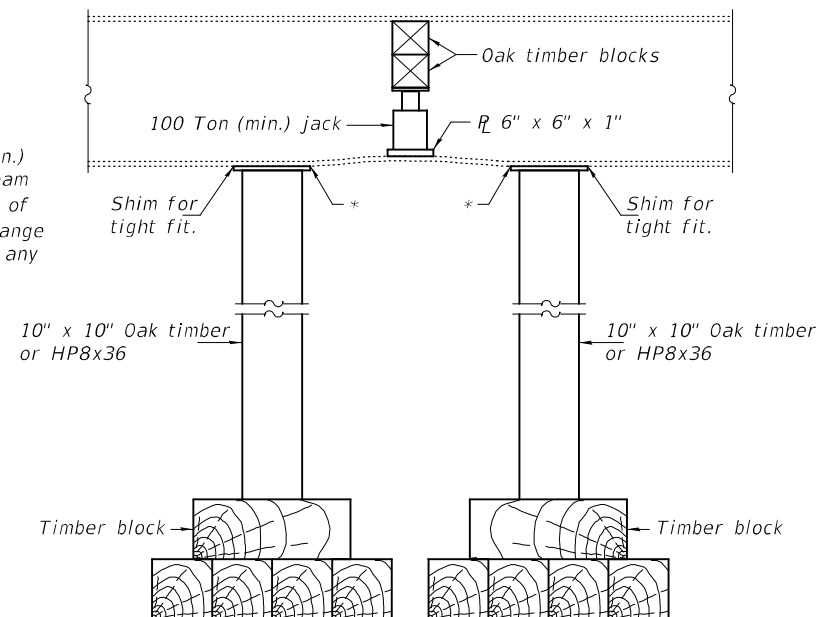
SUGGESTED VERTICAL STRAIGHTENING DETAIL

(To correct flange rotation.)



GRINDING DETAIL

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.



SUGGESTED VERTICAL STRAIGHTENING DETAIL

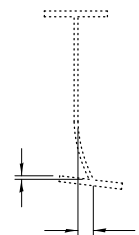
(To correct localized vertical flange deformations.)

* Edge of plate shall line up with edge of deformation.

Note:

Braces and jack assembly shall be placed on same side of web.

Bent bottom flange shall be straightened before starting any horizontal straightening operations.



EXISTING DEFORMATION TO BE STRAIGHTENED

(Looking)

(Approximate max. deflections)

Deflected length of beam to be straightened is approximately .

REP-1 8-16-2018

DESIGNED - ATH
CHECKED - VHV
DRAWN - Jim Ostermann daburdell
CHECKED - ATH VHV

EXAMINED
PASSED

Timothy A. Daburdell
ENGINEER OF STRUCTURAL SERVICES

Carl R. Ruyter
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 7, 2021

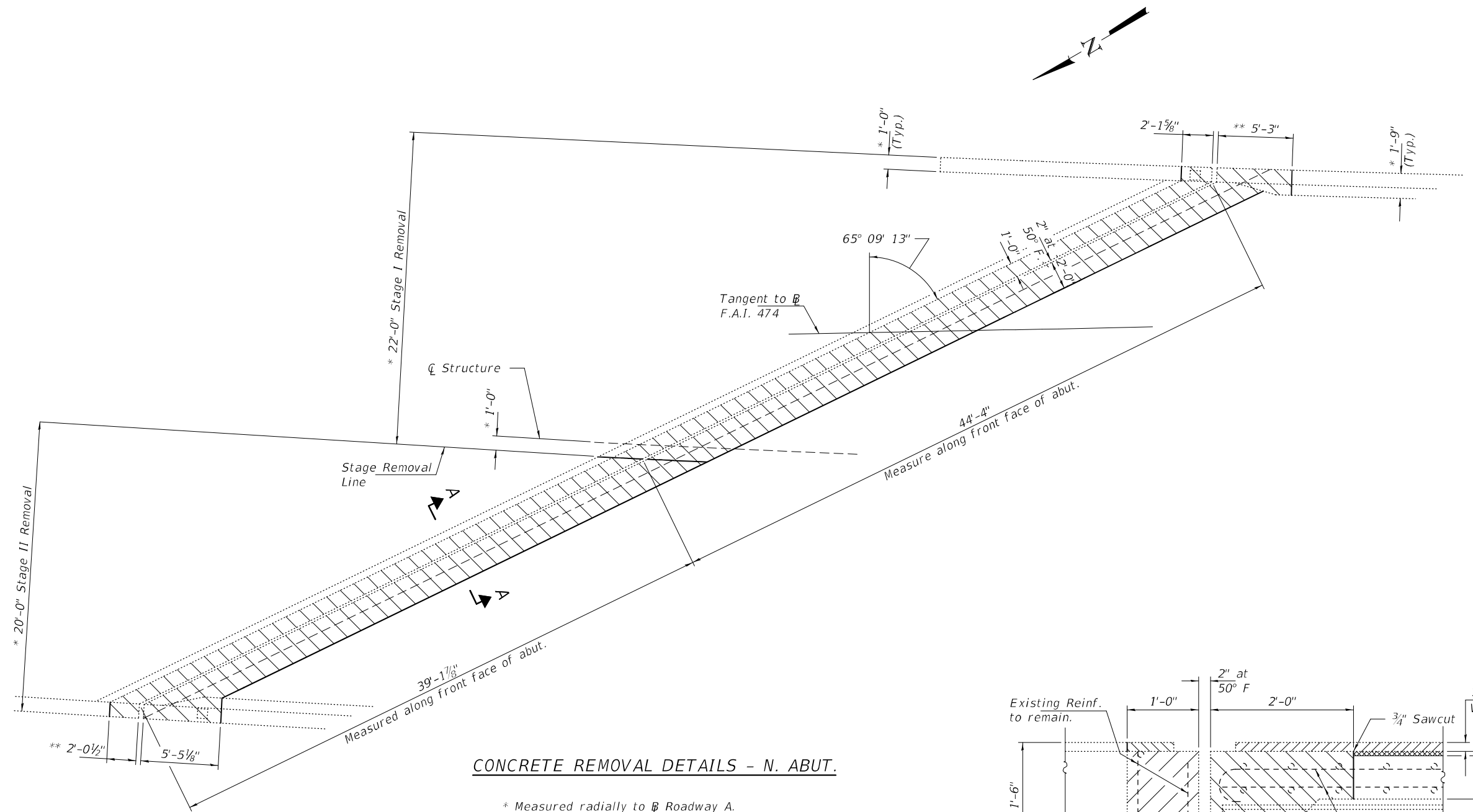
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM STRAIGHTENING DETAILS
SN 072-0111

SHEET NO. 4 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	58
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				

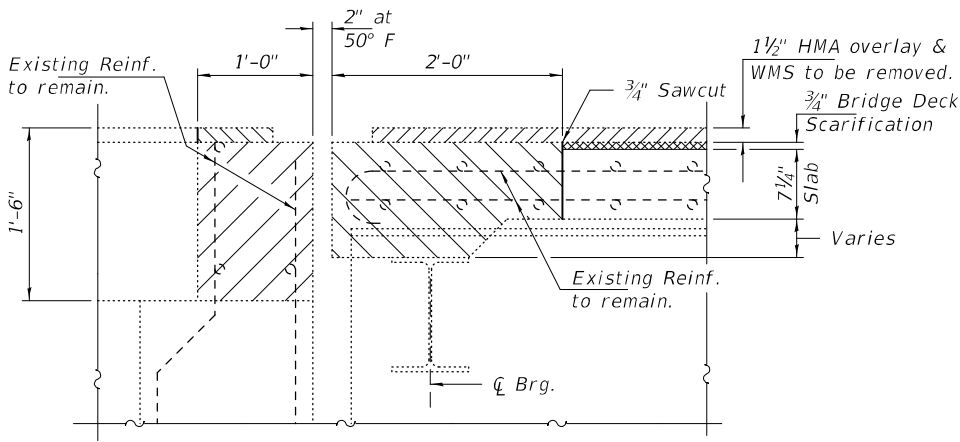


CONCRETE REMOVAL DETAILS - N. ABUT.

* Measured radially to \varnothing Roadway A.

** Cut excess existing longitudinal reinforcement bars in parapet and deck overhang to fit and mechanically splice to reinforcement bars in the opposite end. Cost included with Concrete Removal.

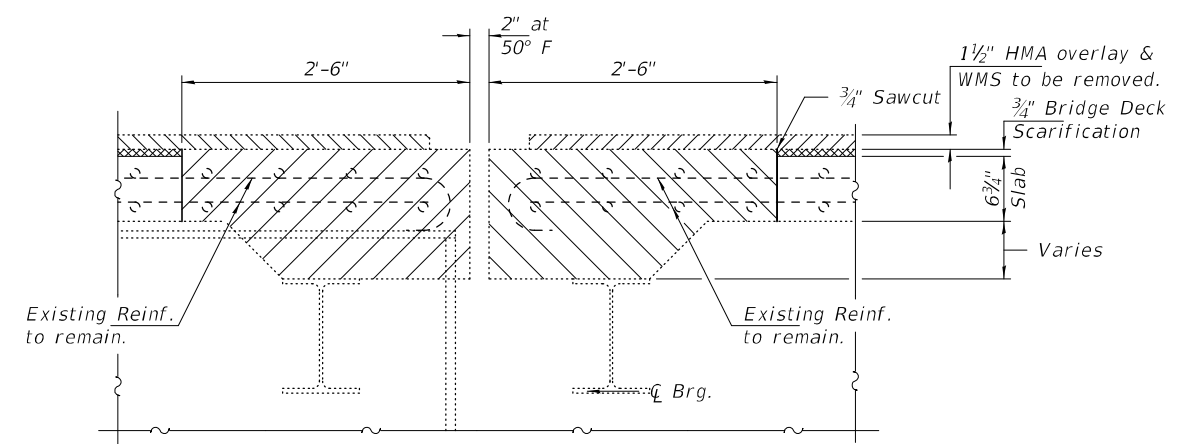
Note:
Hatched areas indicate concrete removal, unless otherwise noted.



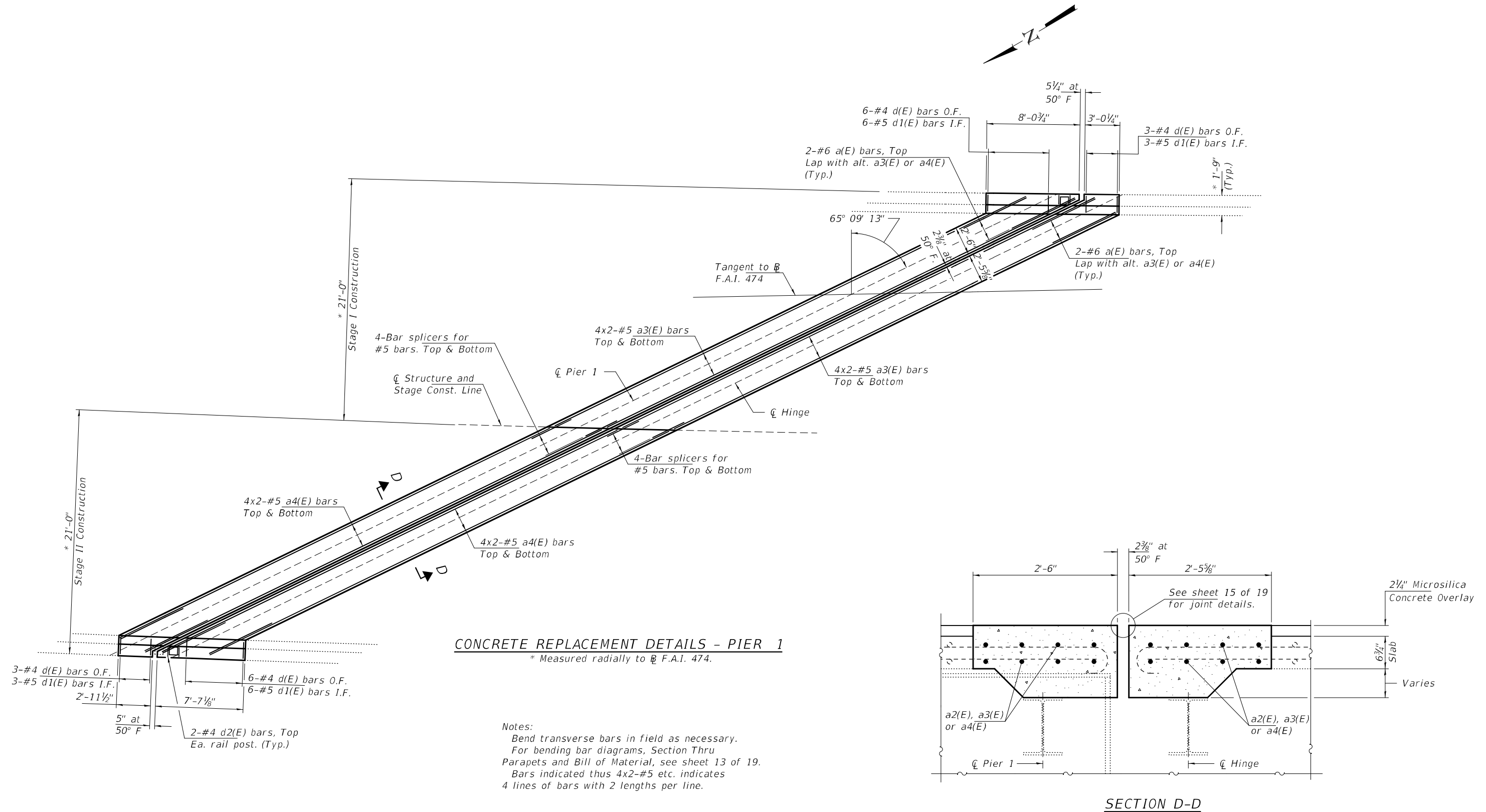
SECTION A-A

DESIGNED - ATH	EXAMINED		DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL DETAILS - N. ABUT. SN 072-0111	SHEET NO. 5 OF 19 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED	ENGINEER OF STRUCTURAL SERVICES	REVISED -				474	72(1HB,HB-1,2,3)BR	PEORIA	63	59
DRAWN - Jim Ostermann daburdell			REVISED -				CONTRACT NO. 68E52				
CHECKED - ATH VHV			ENGINEER OF BRIDGES AND STRUCTURES				ILLINOIS FED. AID PROJECT				

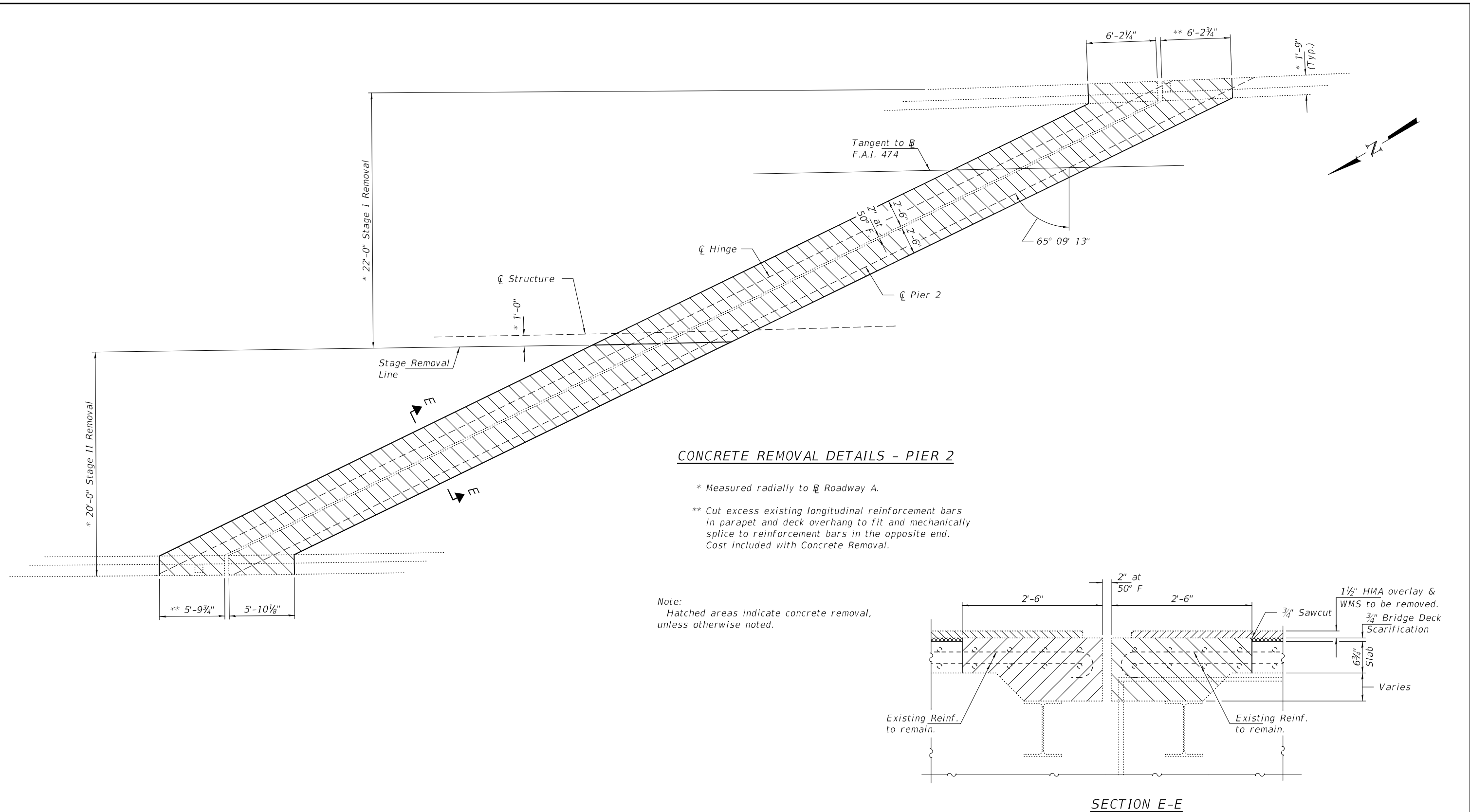




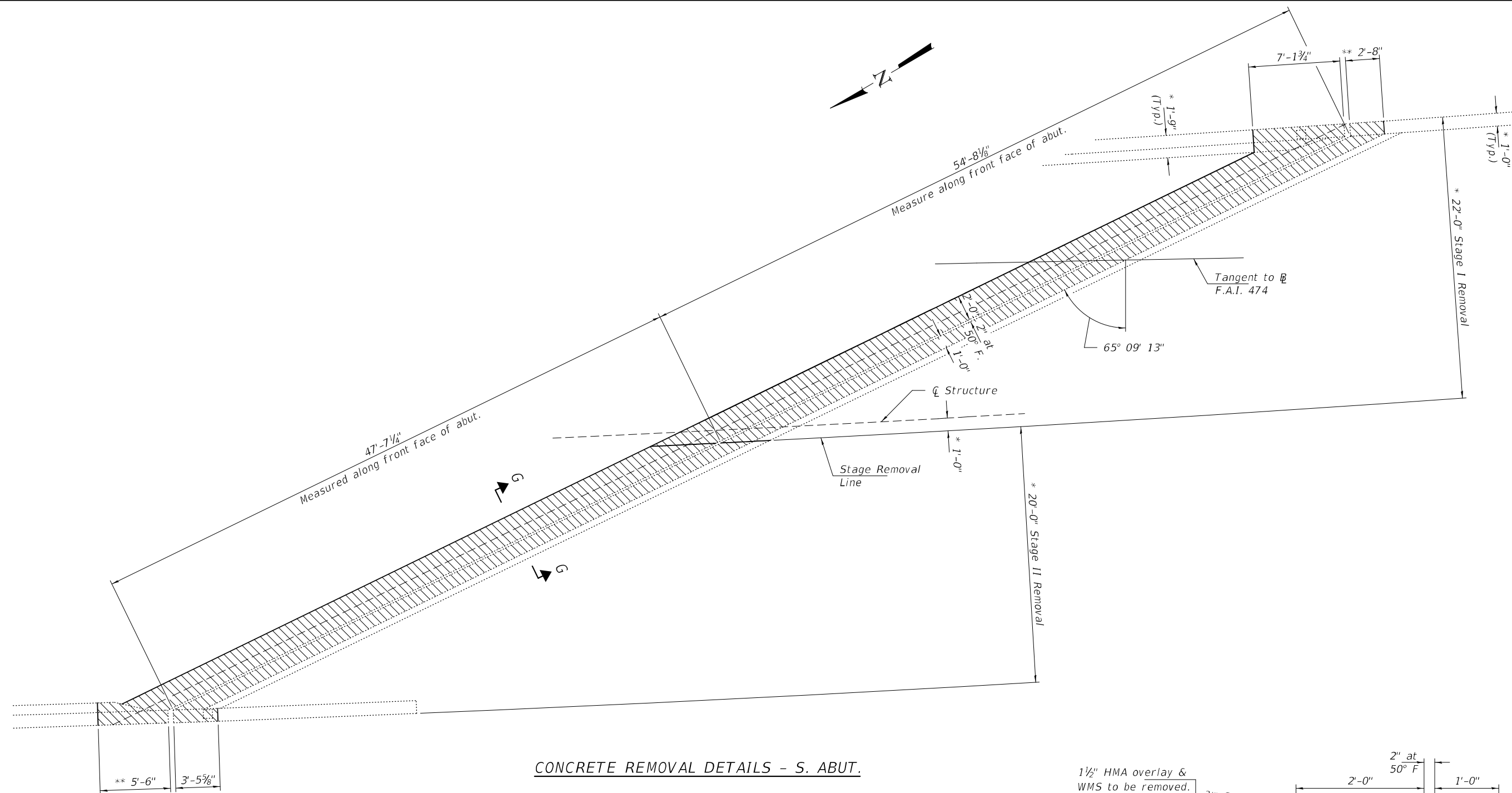
DESIGNED - ATH	EXAMINED		DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL DETAILS - PIER 1 SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	61	
DRAWN - Jim Ostermann <i>daburdell</i>	PASSED		REVISED -			CONTRACT NO. 68E52					
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			SHEET NO. 7 OF 19 SHEETS					
				ILLINOIS FED. AID PROJECT							



DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		JOINT REPLACEMENT DETAILS - PIER 1 SN 072-0111		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED	REVIS					474	72(1HB,HB-1,2,3)BR	PEORIA	63	61A
DRAWN - Jim Ostermann daburdell		REVIS					CONTRACT NO. 68E52				
CHECKED - ATH VHV		REVIS					ILLINOIS FED. AID PROJECT				





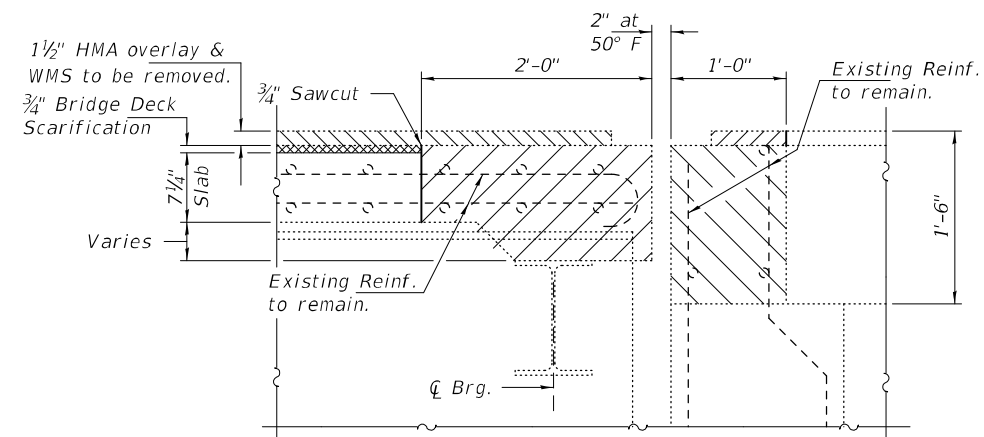


CONCRETE REMOVAL DETAILS - S. ABUT.

* Measured radially to \varnothing Roadway A.

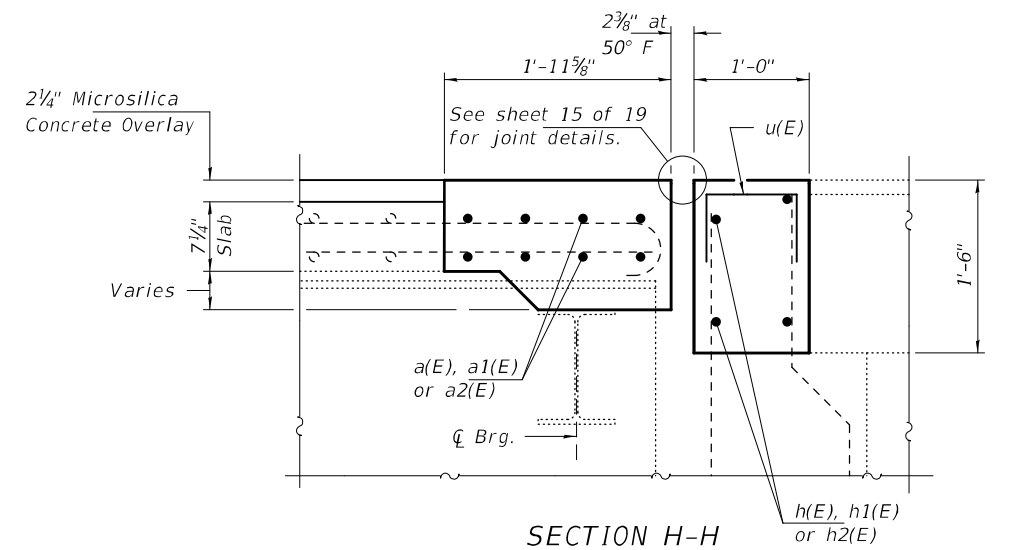
** Cut excess existing longitudinal reinforcement bars in parapet and deck overhang to fit and mechanically splice to reinforcement bars in the opposite end. Cost included with Concrete Removal.

Note:
Hatched areas indicate concrete removal, unless otherwise noted.



SECTION G-G

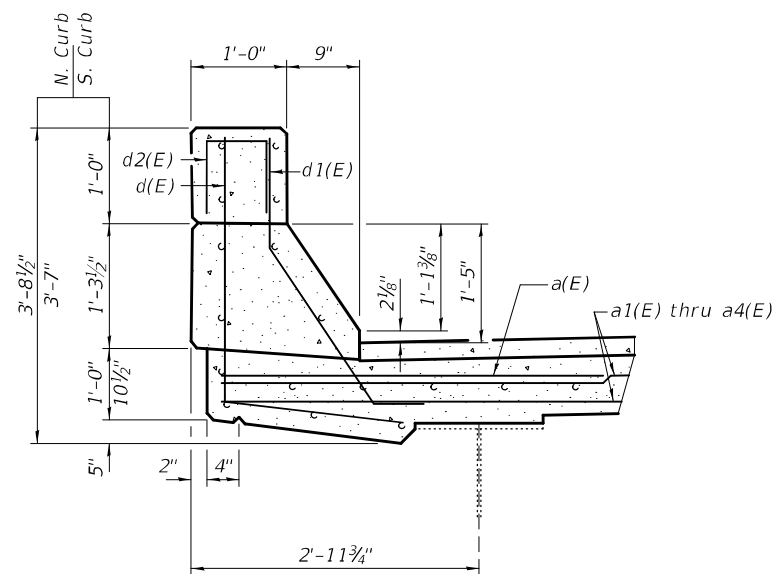
DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL DETAILS - S. ABUT. SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED				474	72(1HB,HB-1,2,3)BR	PEORIA	63	61D
DRAWN - Jim Ostermann daburdell		REVISED -			CONTRACT NO. 68E52				
CHECKED - ATH VHV		REVISED -			ILLINOIS FED. AID PROJECT				



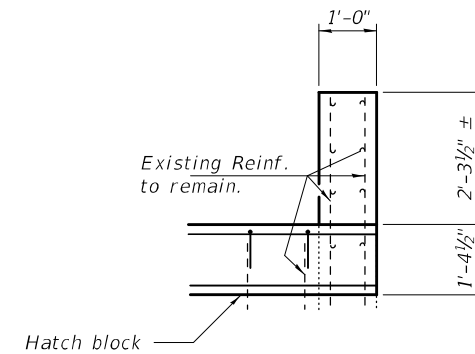
* Measured radially to B F.A.I. 474.

2¼" Microsilica
Concrete Overlay

DESIGNED - ATH	EXAMINED		DATE - MAY 7, 2021	<div>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</div>	<div>JOINT REPLACEMENT DETAILS - S. ABUT. SN 072-0111</div>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV		ENGINEER OF STRUCTURAL SERVICES				474	72(1HB,HB-1,2,3)BR	PEORIA	63	61E	
DRAWN - Jim Ostermann <i>daburdell</i>	PASSED		REVISED -			CONTRACT NO. 68E52					
CHECKED - ATH VHV		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			SHEET NO. 12 OF 19 SHEETS					
				ILLINOIS FED. AID PROJECT							








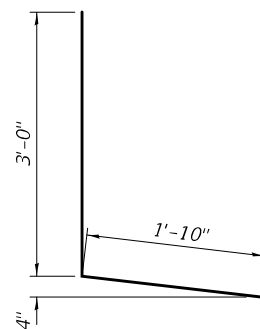
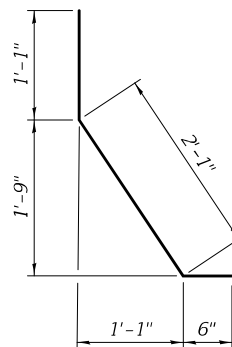
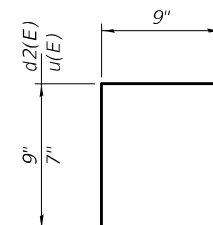
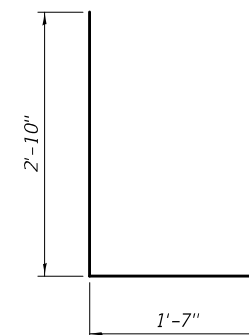
SECTION THRU BRIDGE PARAPET



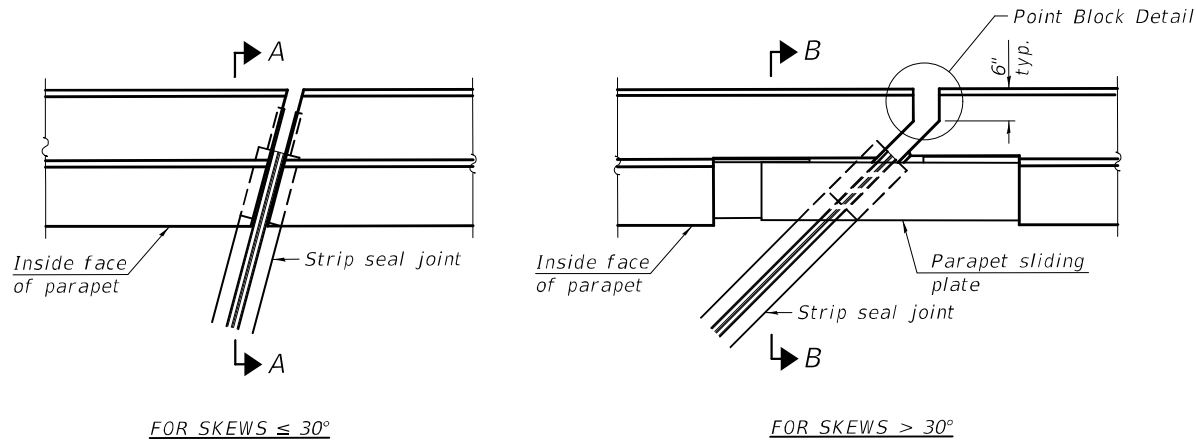
SECTION THRU ABUTMENT AT APPROACH

BILL OF MATERIAL

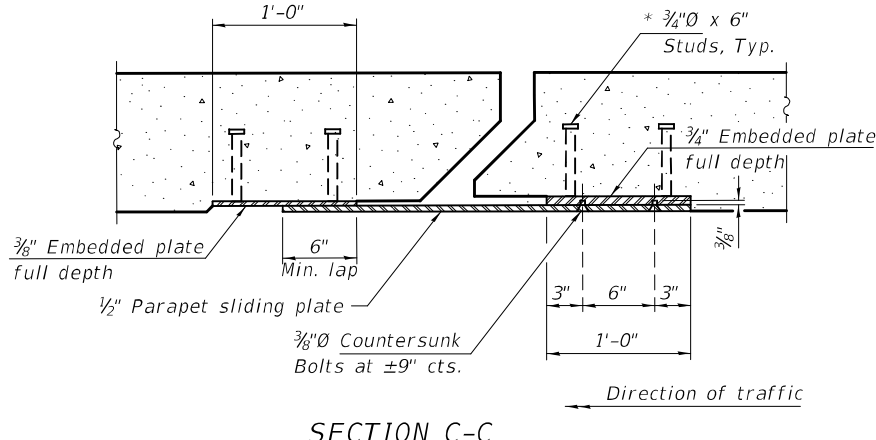
Bar	No.	Size	Length	Shape
a(E)	24	#6	6'-0"	————
a1(E)	8	#5	22'-11"	————
a2(E)	8	#5	22'-6"	————
a3(E)	8	#5	28'-6"	————
a4(E)	8	#5	23'-3"	————
a5(E)	8	#5	26'-1"	————
a6(E)	8	#5	25'-3"	————
a7(E)	8	#5	27'-9"	————
a8(E)	8	#5	26'-9"	————
d(E)	59	#4	4'-10"	
d1(E)	23	#5	3'-8"	
d2(E)	16	#4	2'-3"	
d3(E)	18	#5	4'-5"	
h1(E)	4	#6	24'-0"	————
h2(E)	4	#6	23'-4"	————
h3(E)	4	#6	29'-0"	————
h4(E)	4	#6	27'-11"	————
u(E)	176	#4	1'-11"	
Concrete Removal			Cu. Yd.	71.6
Concrete Superstructure			Cu. Yd.	71.6
Reinforcement Bars, Epoxy Coated			Pound	3130

BARS $d(E)$ 
$$\underline{BAR\ d1(E)}$$
BARS $d_2(E)$ & $u(E)$ BAR d3(E)

DESIGNED - ATH	EXAMINED	<div> ENGINEER OF STRUCTURAL SERVICES</div>	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REPLACEMENT DETAILS SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - VHV			REVISED -			474	72(1HB, HB-1,2,3)BR	PEORIA	63	61F	
DRAWN - Jim Ostermann <i>daburdell</i>	PASSED	<div> ENGINEER OF BRIDGES AND STRUCTURES</div>	REVISED -		CONTRACT NO. 68E52						
CHECKED - ATH VHV			REVISED -		SHEET NO. 13 OF 19 SHEETS			ILLINOIS	FED. AID PROJECT		



PLAN AT PARAPET



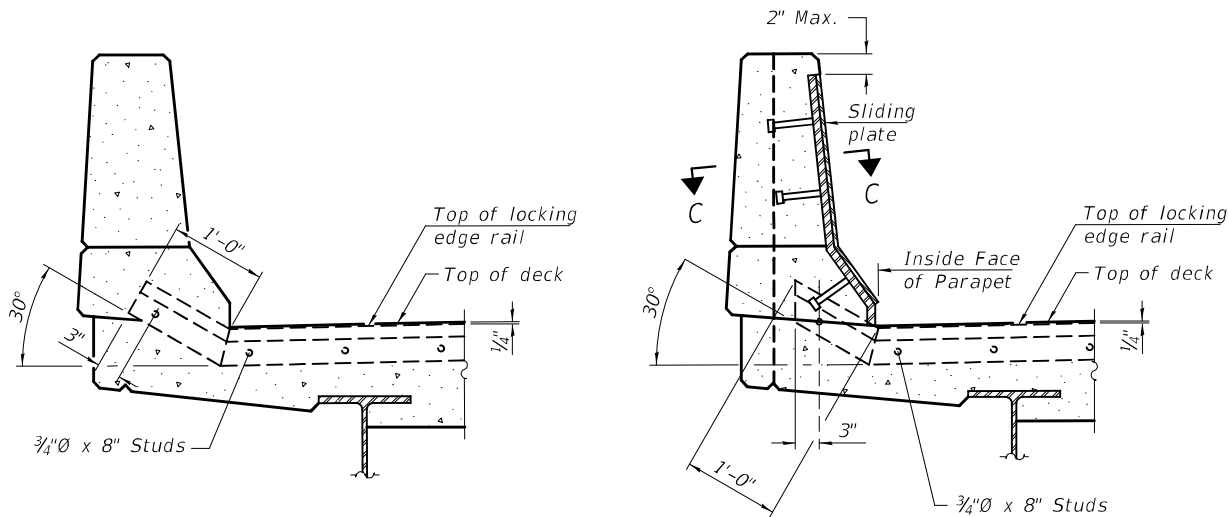
SECTION C-C

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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

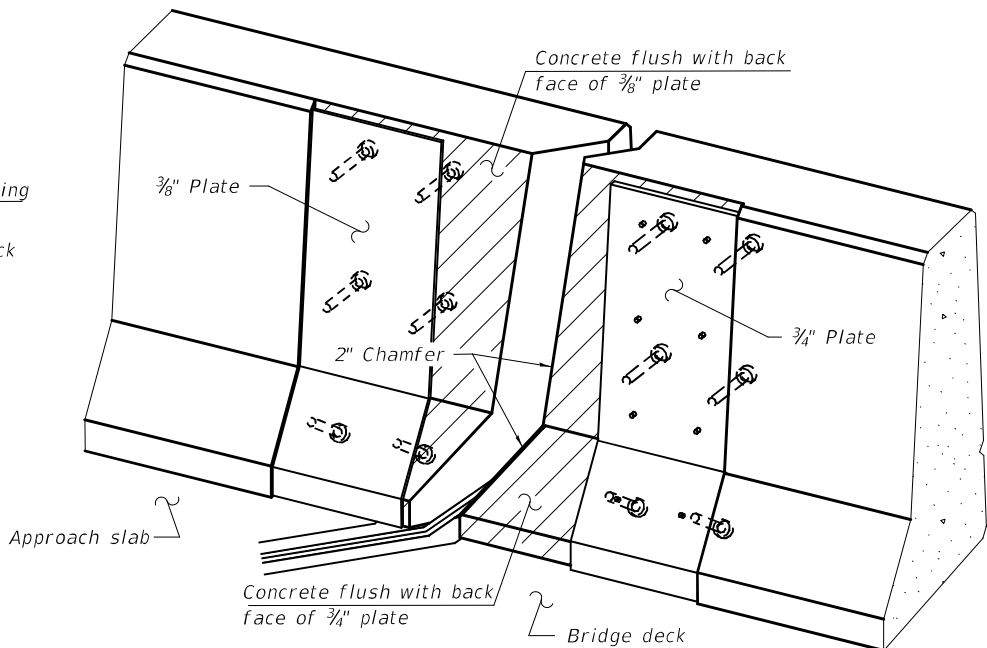
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.
39" constant slope barrier shown, 44" constant slope barrier similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

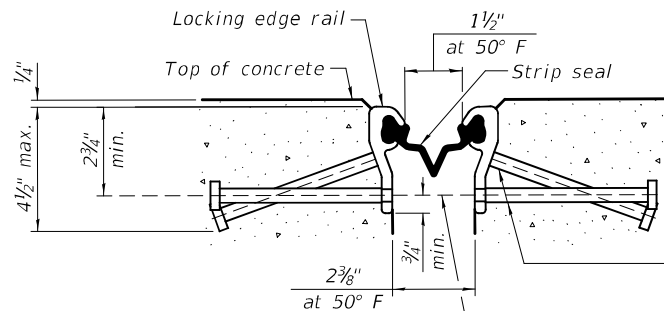


SECTION A-A

SECTION B-B

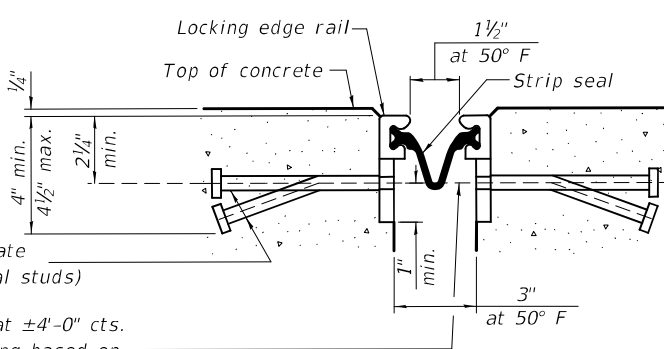


TRIMETRIC VIEW
(Showing back plates only)

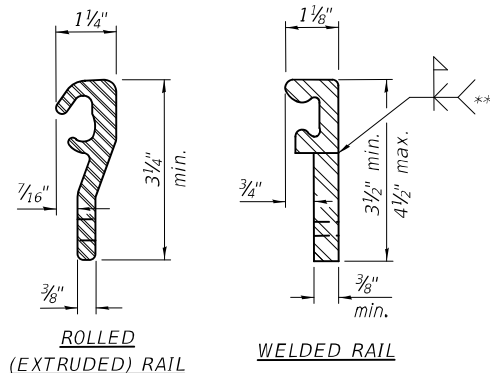


SECTION THRU
ROLLED RAIL JOINT

* 5/8"Ø x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)
3/8"Ø threaded rods in 7/16"Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

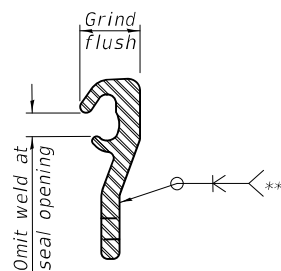


SECTION THRU
WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	368

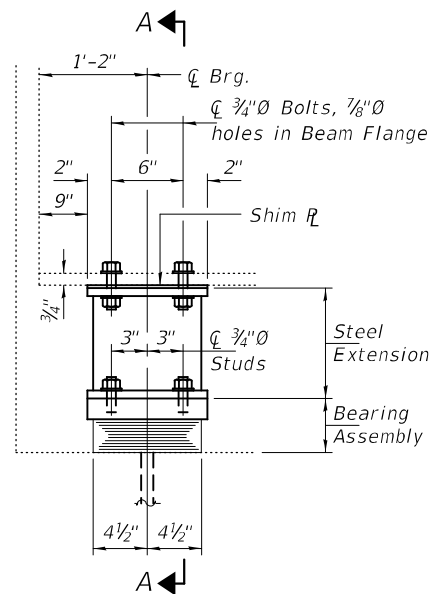
DESIGNED - ATH	EXAMINED - Timothy A. Daburdell	DATE - MAY 7, 2021
CHECKED - VHV	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Jim Ostermann	PASSED - Carl Ruyter	REVISED -
CHECKED - ATH	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 072-0111

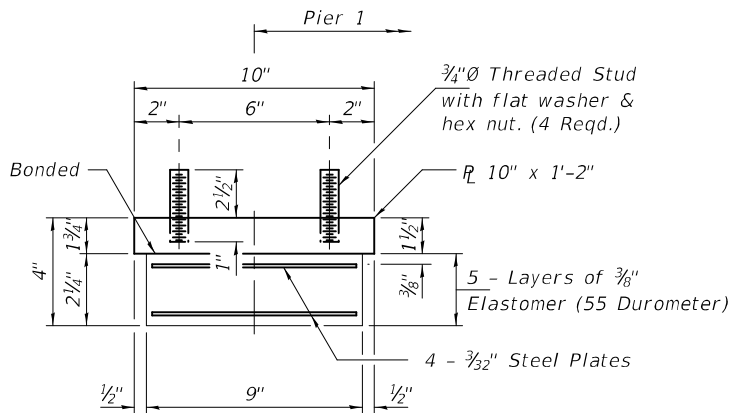
SHEET NO. 14 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
474	72(1HB,HB-1,2,3)BR	PEORIA	63	61G
CONTRACT NO. 68E52				
ILLINOIS FED. AID PROJECT				



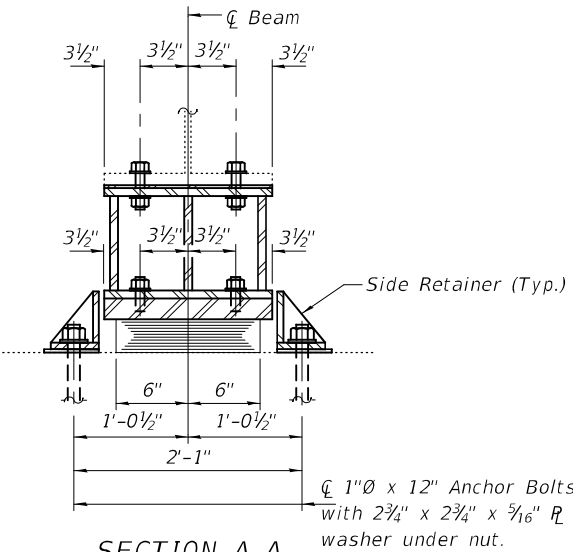
ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

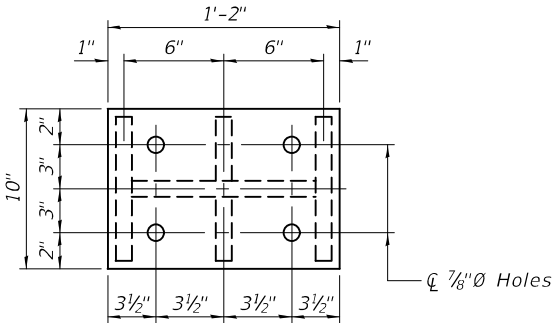


SECTION A-A

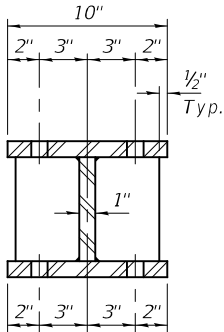
BEAM REACTIONS

R _P	(K)	33.2
R _L	(K)	42.0
Imp.	(K)	11.0
R (Total)	(K)	86.2

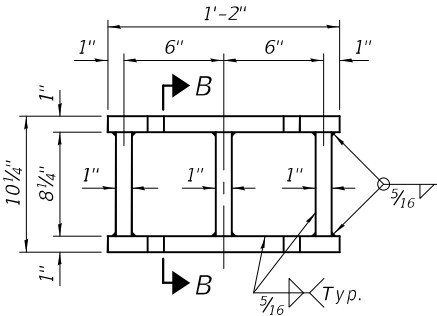
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
Min. jack capacity = 45 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



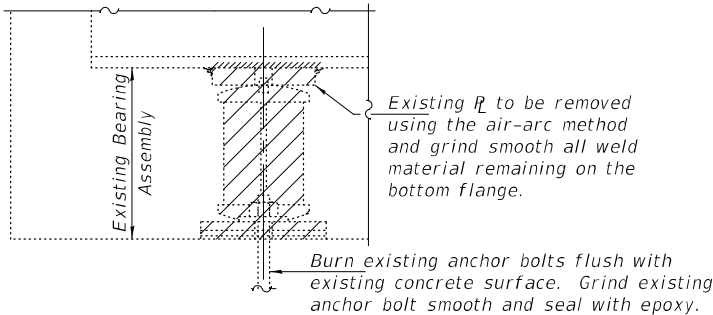
PLAN TOP AND BOTTOM PLATE



SECETION B-B

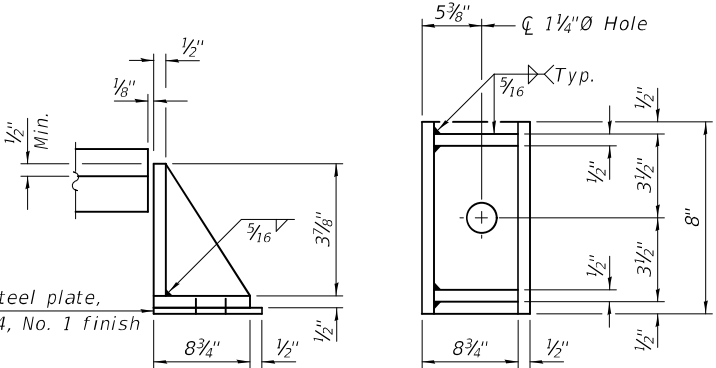


STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

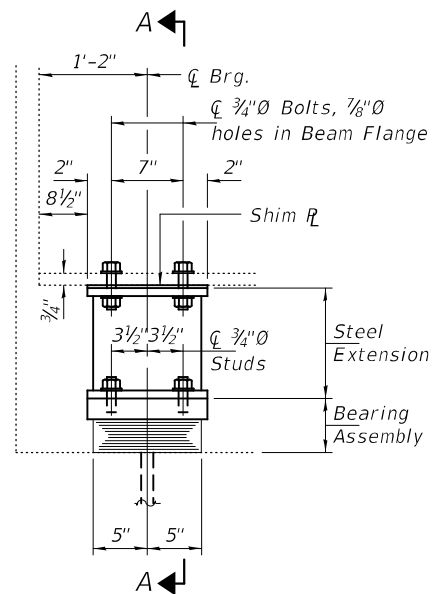


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

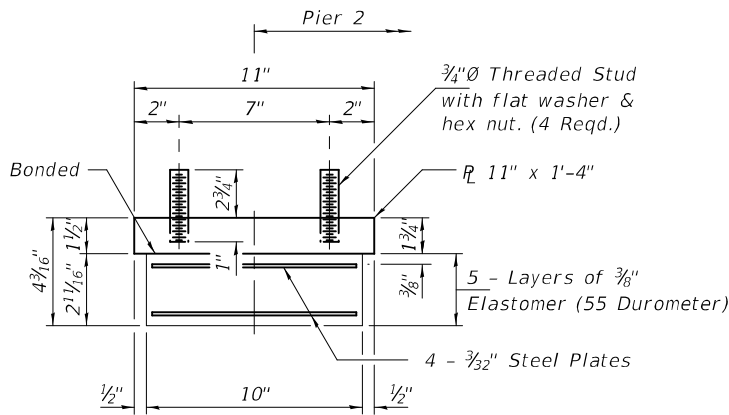
TYI/REPS 5-17-2018

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - N. ABUT. SN 072-0111	SHEET NO. 15 OF 19 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV						474	72(1HB,HB-1,2,3)BR	PEORIA	63	61H
DRAWN - Jim Ostermann daburdell	PASSED					CONTRACT NO. 68E52				
CHECKED - ATH VHV						ILLINOIS FED. AID PROJECT				



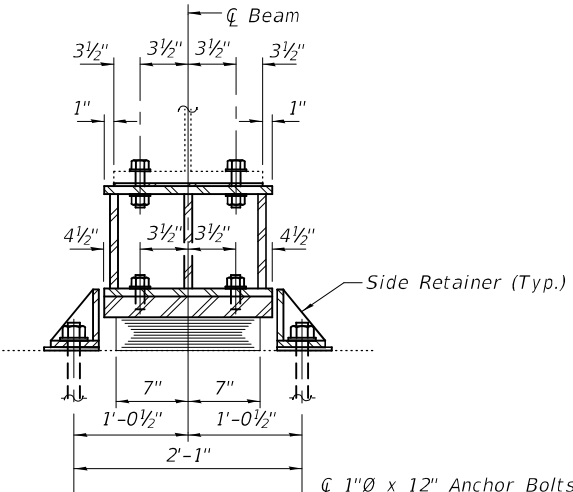
ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



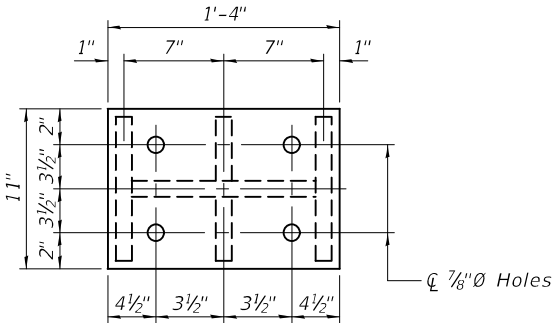
SECTION A-A

1"Ø x 12" Anchor Bolts with 2 3/4" x 2 3/4" x 5/16" R washer under nut.

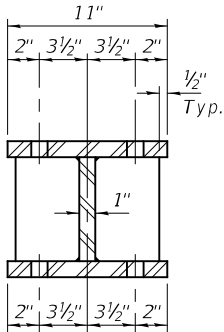
BEAM REACTIONS

R _P	(K)	44.2
R _L	(K)	42.8
Imp.	(K)	11.1
R (Total)	(K)	98.1

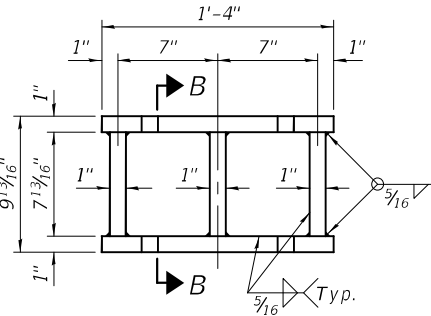
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
Min. jack capacity = 35 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



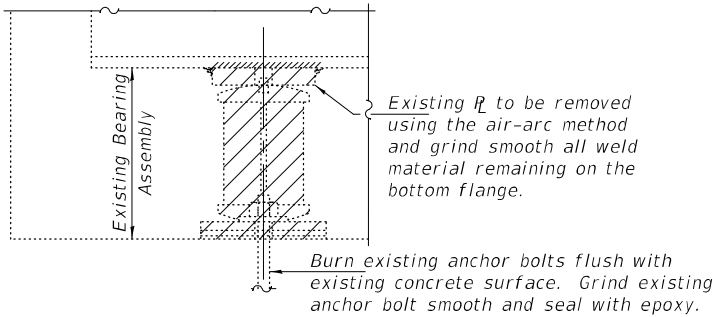
PLAN TOP AND BOTTOM PLATE



SECETION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

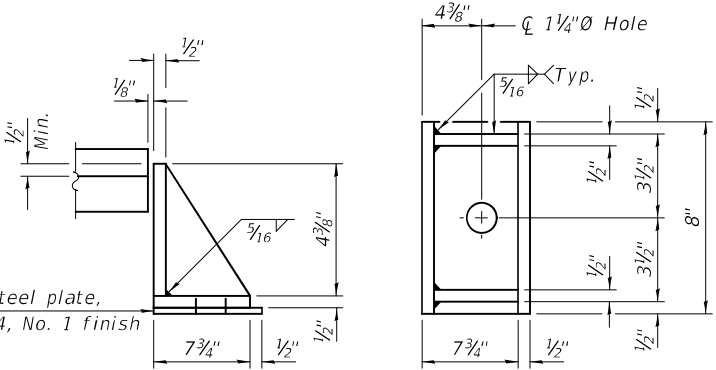
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	1190
Anchor Bolts, 1"Ø	Each	12

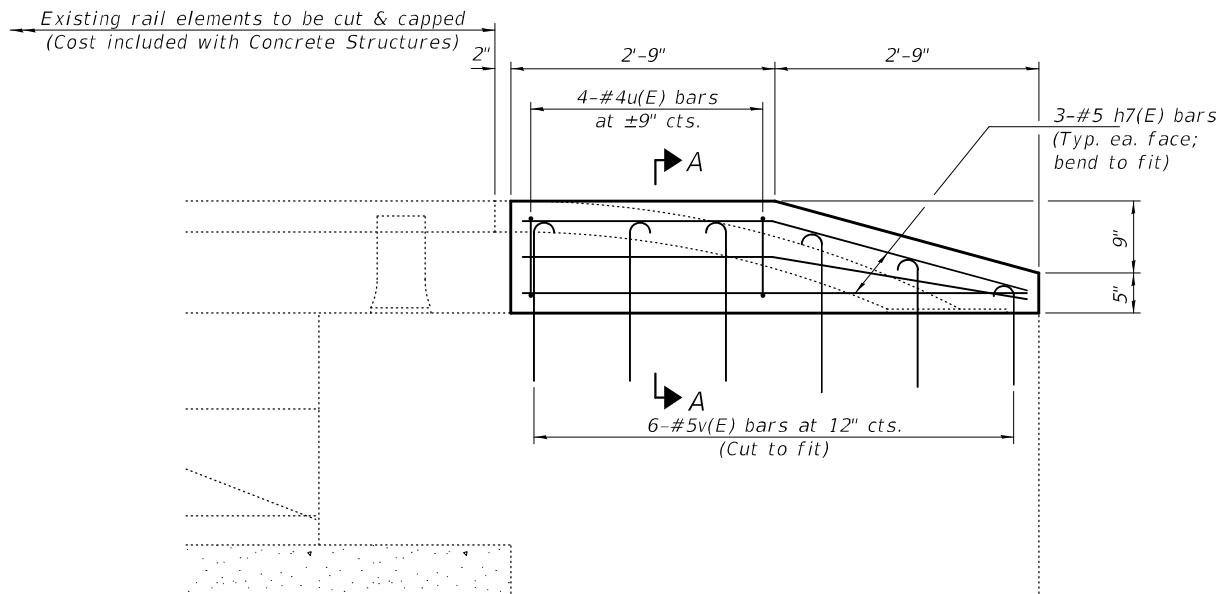
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

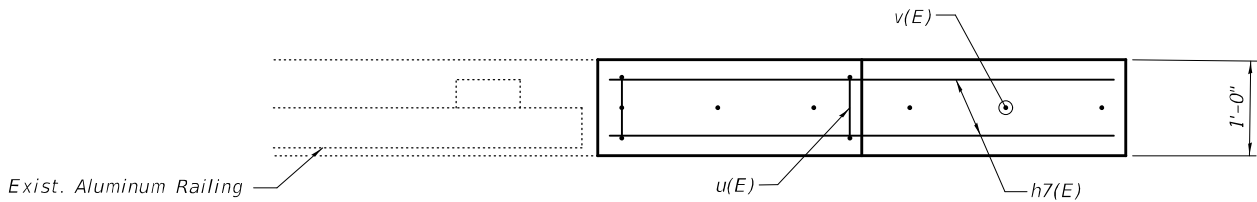


TYI/REPS 5-17-2018

DESIGNED - ATH	EXAMINED	DATE - MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT - S. ABUT. SN 072-0111	SHEET NO. 16 OF 19 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV						474	72(1HB,HB-1,2,3)BR	PEORIA	63	611
DRAWN - Jim Ostermann daburdell	PASSED					CONTRACT NO. 68E52				
CHECKED - ATH VHV						ILLINOIS FED. AID PROJECT				

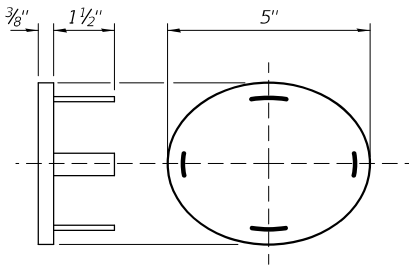


PROPOSED ELEVATION

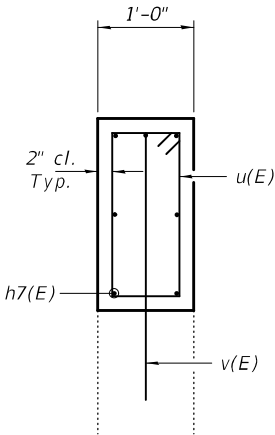


PLAN

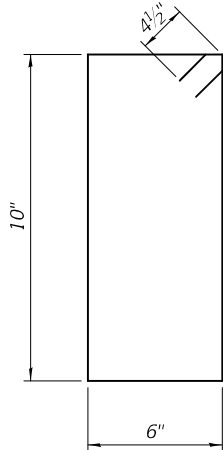
* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



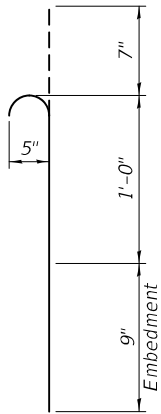
CAST END CAP



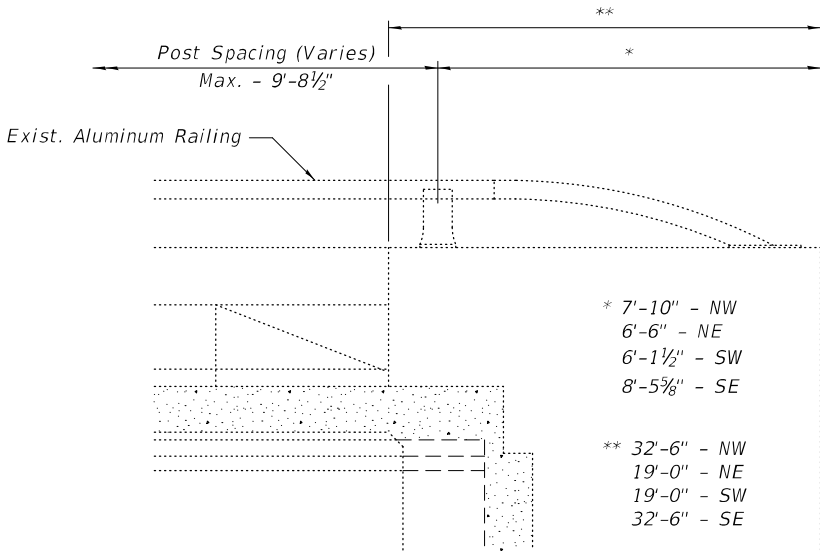
SECTION A-A



BAR u(E)



BAR v(E)



INSIDE VIEW AT APPROACH BENT

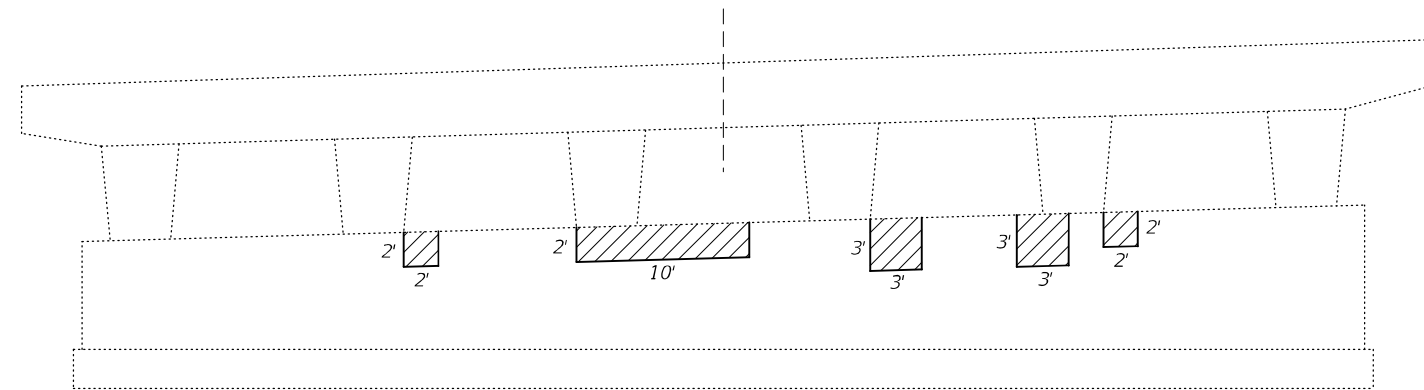
NOTES

Reinforcement bars designated (E) shall be epoxy coated.

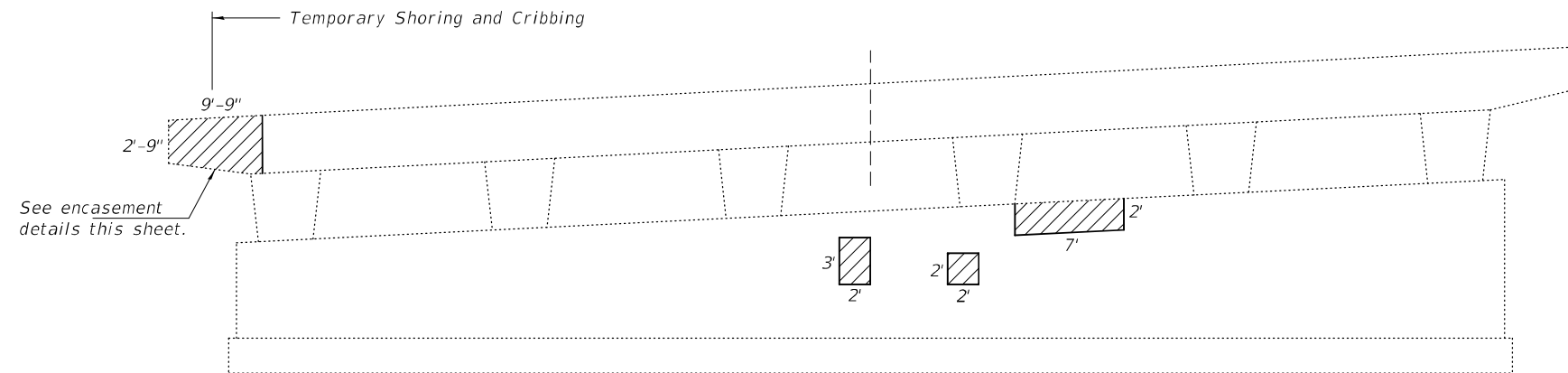
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall 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.

BILL OF MATERIAL
4 LOCATIONS

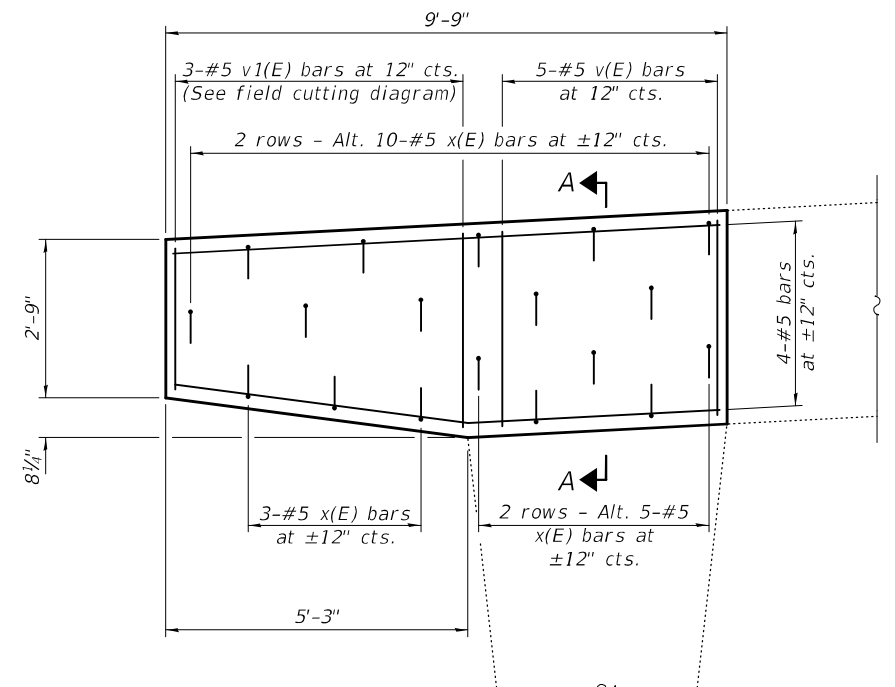
Bar	No.	Size	Length	Shape
h7(E)	24	#5	5'-1"	—
u(E)	16	#5	3'-5"	□
v(E)	24	#5	2'-4"	—
Concrete Structures			Cu. Yd.	0.7
Reinforcement Bars, Epoxy Coated			Pound	270



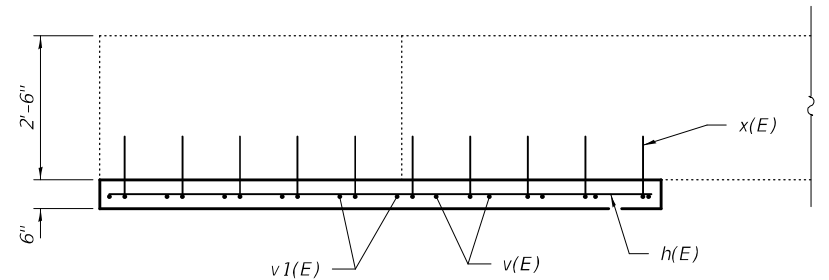
PIER 1
(Looking West)



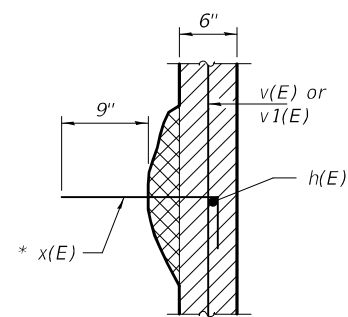
PIER 2
(Looking West)



ELEVATION



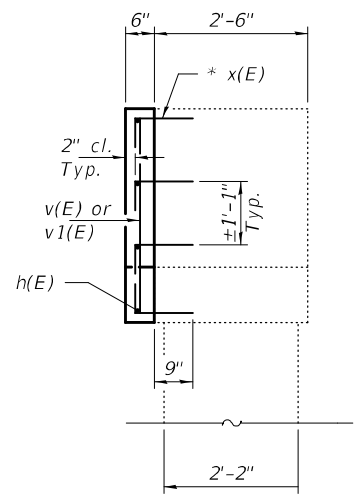
PLAN



REPAIR DETAIL

Concrete in this area to be paid as Concrete Structures.

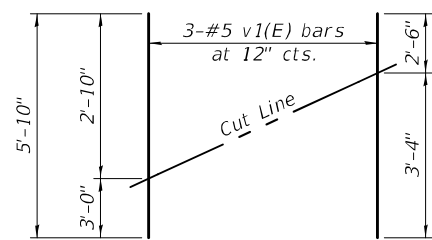
Concrete in this area is included with Structural Repair of Concrete (Depth ≤ 5").



SEC A-A

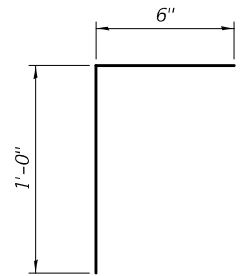
* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.

** Concrete includes encasement shown on this sheet.



FIELD CUTTING DIAGRAM

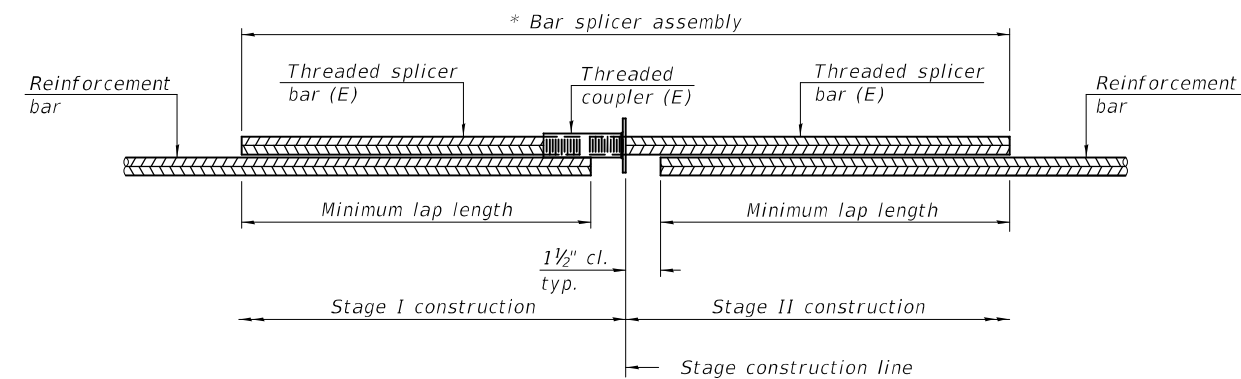
Order v1(E) full length. Cut as shown and use remainder of bars in opposite end.



BAR x(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#5	9'-5"	=====
v(E)	5	#5	3'-4"	=====
v1(E)	3	#5	5'-10"	=====
x(E)	18	#5	1'-6"	=====
** Concrete Structures			Cu. Yd.	0.7
Reinforcement Bars, Epoxy Coated			Pound	110
Structural Repair of Concrete (Depth ≤ 5")			Sq. Yd.	122
Temporary Shoring and Cribbing			Each	1

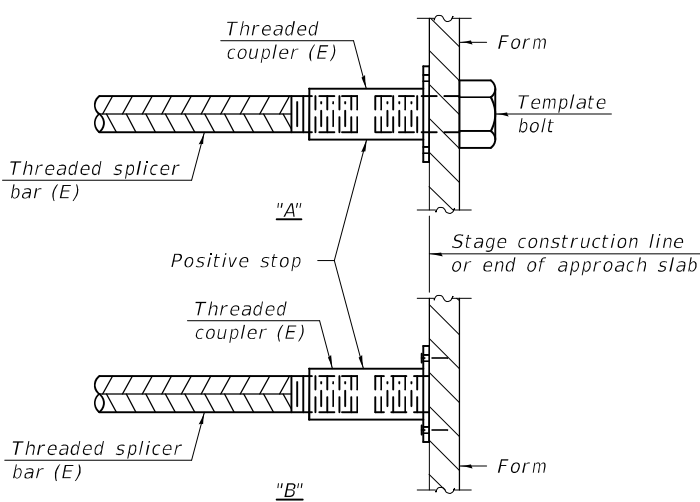


STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

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	Minimum lap length
N.A. - Deck Sp 1	#5	8	3'-6"
N.A. - Aprpr.	#6	4	4'-0"
P1 - Deck Sp 1	#5	8	3'-6"
P1 - Deck Sp 2	#5	8	3'-6"
P2 - Deck Sp 2	#5	8	3'-6"
P2 - Deck Sp 3	#5	8	3'-6"
S.A. - Deck Sp 3	#5	8	3'-6"
S.A. - Aprpr.	#6	4	4'-0"

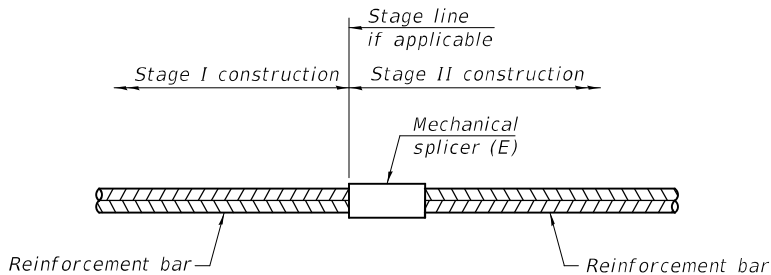


INSTALLATION AND SETTING METHODS

"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
Parapet & Overhang	#4	32
Parapet & Overhang	#5	48
Parapet & Overhang	#8	16

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.

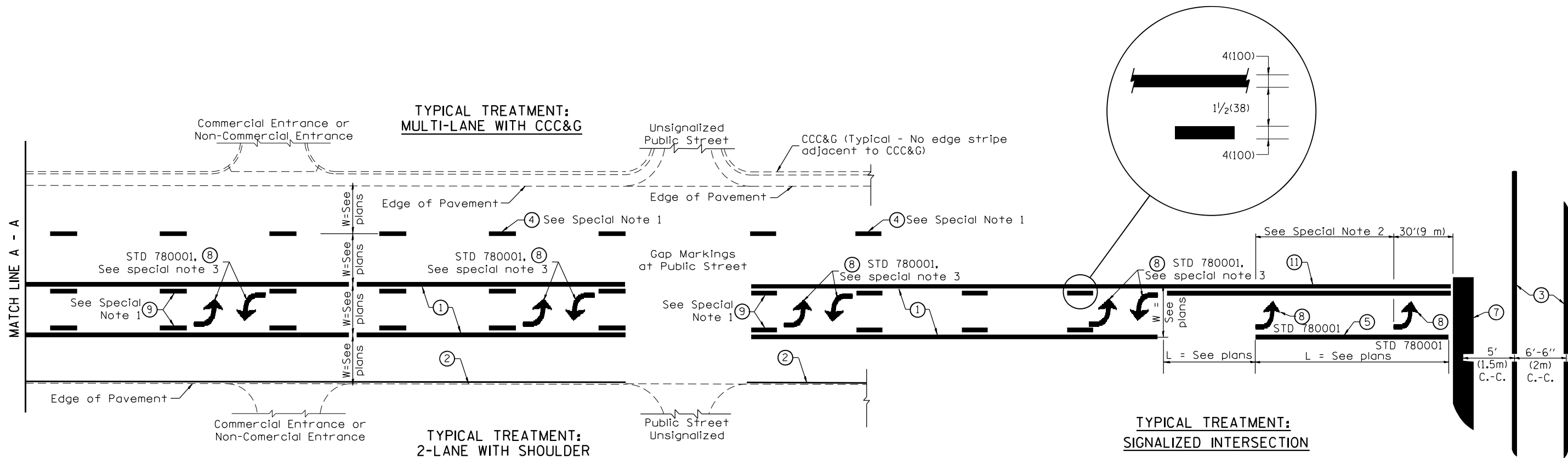
BSD-1

1-1-2020

DESIGNED - ATH	EXAMINED		DATE -	MAY 7, 2021	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 072-0111	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - VHV	PASSED	ENGINEER OF STRUCTURAL SERVICES	REVISED -	474			72(1HB, HB-1,2,3)BR	PEORIA	63	61L	
DRAWN - Jim Ostermann daburdell		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	CONTRACT NO. 68E52							
CHECKED - ATH VHV			SHEET NO. 19 OF 19 SHEETS				ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:

1. Include State Standard 780001 (Typical Pavement Markings)



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE
WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend.
Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A) (See Table A)
- ⑪ 4(100) Double Solid (Yellow) (See Table A)

SPECIAL NOTES

- Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
- The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
- The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

- Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
- See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
- Refer to Article 780.13 for letter, number and symbol areas (sq. ft.).
- Areas are grooved 1" beyond each edge for the following symbols:
 - Through Arrow= 14.8 sq. ft.
 - Large Left or Right Arrow= 21.9 sq. ft.
 - 2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
 - Wrong Way Arrow= 29.5 sq. ft.
 - Railroad Crossing Symbol= 69.8 sq. ft.(For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL PAVEMENT MARKINGS	SHT. 1 OF 2 CADD STD. 780001-D4	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.				474	72(IHB,HB-1,2,3)BR	PEORIA	63	62
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.	07-16-19	SPELLING CORRECTIONS	R.D.				CONTRACT NO. 68E52				
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

