

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

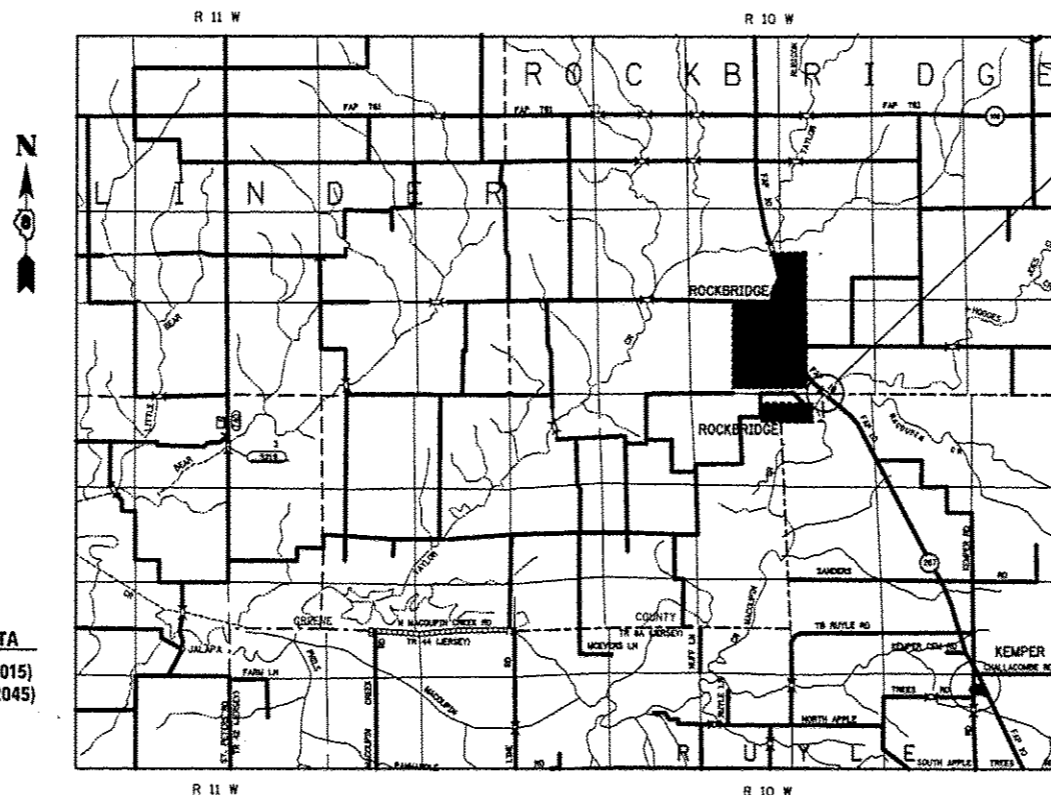
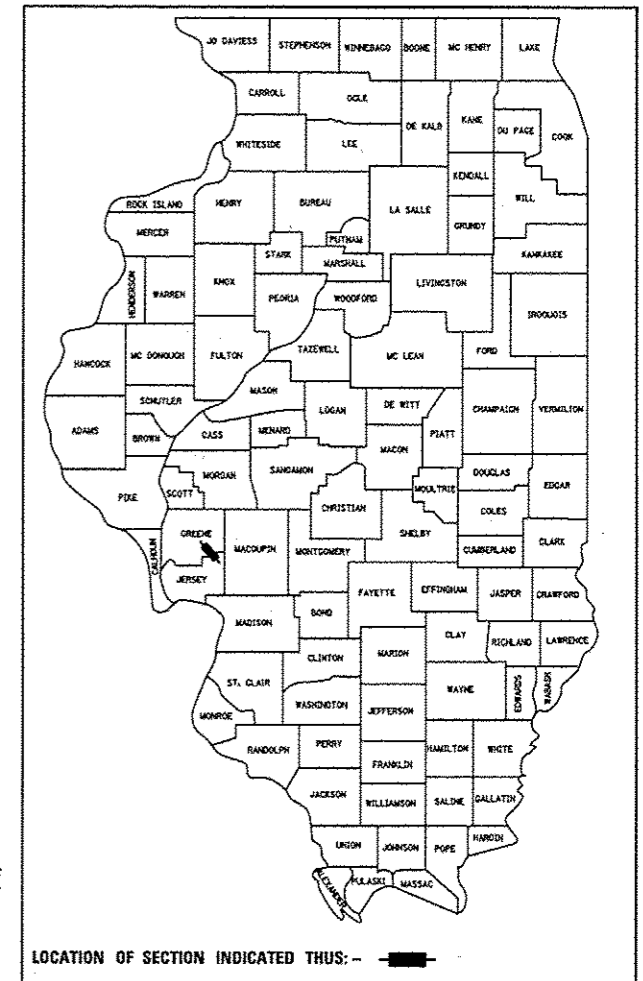
FAP ROUTE 10 (IL RTE 267)
SECTION 411BR-1
HMA OVERLAY, WATERPROOFING, PAINTING AND JOINT REPAIR
GREENE COUNTY

C-98-028-15

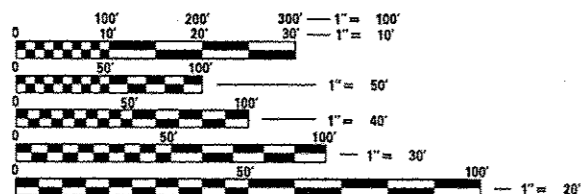
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	ILLINOIS	31	1
*JERSEY AND GREENE			CONTRACT NO. 76H76	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-98-033-15



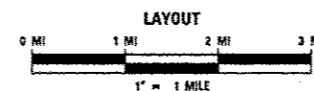
PROJECT LOCATION
IL 267 OVER MACOUPIN CREEK
SN 042-0017
STA 180 + 83.00
LAT: 39.26254
LON: 90.19540



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

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

TRAFFIC DATA
ADT: 1800 (2015)
2450 (2045)
SU: 4.6%
MU: 11.4%



GROSS LENGTH = 1650 FT = 0.312 MILE
NET LENGTH = 1650 FT = 0.312 MILE

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
PROJECT MANAGER: HERVE GELIN (618) 346-3323

CONTRACT NO. 76H76

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *March 23, 2015*

Jeffrey J. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

May 8, 2015
John D. Baranzelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2015
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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HIGHWAY STANDARDS

000001-06	701201-04
001001-02	701306-03
001006	701311-03
635006-03	701321-14
635011-02	701901-04
701006-05	704001-07
701011-04	780001-05
	781001-03

COMMITMENTS

NONE

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS SHALL APPLY TO THIS PROJECT.
2. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - FRONTIER NORTH, INC.
 MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.
3. THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING AND TOPOGRAPHY SHOWN IN THE PLANS WAS CREATED USING MICROFILM AND FIELD MEASUREMENTS. BOTH SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
4. THE LOCATIONS OF THE REPAIR AREAS AS SHOWN IN THE PLANS ARE APPROXIMATE LOCATIONS. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.
5. ALL TURF AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEEDED WITH THE APPROPRIATE EROSION CONTROL AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
6. TWO CHANGEABLE MESSAGE BOARDS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED ONE WEEK PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED ALONG IL 267 AS DIRECTED OF THE ENGINEER.
7. ALL CONSTRUCTION SIGNS SHALL BE 48"x48" FLUORESCENT ORANGE.
8. NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED UNLESS THE CONTRACTOR WORKS AT NIGHT. IN THAT CASE, ONLY THE LANE(S) IN WHICH THE CONTRACTOR IS WORKING CAN BE CLOSED OVERNIGHT.
9. THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
10. SHORT TERM PAVEMENT MARKING SHALL NOT INTERFERE WITH FINAL MARKINGS. ONLY REMOVAL FROM THE FINAL SURFACE SHALL BE PAID FOR AS "WORK ZONE PAVEMENT MARKING REMOVAL".
11. ALL MILLED AREAS SHALL BE RESURFACED WITH THE APPROPRIATE SURFACE COURSE PRIOR TO OPENING THE LANE TO TRAFFIC.
12. THE PAY FOR PERFORMANCE ITEMS AND QUANTITIES ARE AS FOLLOWS:
 - HMA POLY SURFACE COURSE - 463.0 TONS
 - HMA POLY LEVELING BINDER - 39.0 TONS
13. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS CONTRACT:

MIXTURE USE	POLY SURFACE	SHOULDERS > 2.25"	SHOULDERS > 2.25"
AC/PG	SBS PG 76-22	PG 64-22	PG 64-22
RAP % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR Voids	4.0% @ Ndes=70	4.0% @ Ndes=30	**2.0% @ Ndes=30
MIX COMPOSITION (GRADATION)	IL 9.5	IL 19.0L	IL 19.0L
FRICTION AGG	MIXTURE "D"		
QUALITY MGMT PROGRAM	OC/OA	OC/OA	OC/OA

PLAN QUANTITIES FOR HOT-MIX ASPHALT SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN (59.8 KG/SQ M/25 MM THICKNESS).

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = #SCALE#	CHECKED - _____	REVISED - _____			10	411BR-1	*	31	2	
	PLOT DATE = #DATE#	DATE - _____	REVISED - _____			* JERSEY AND GREENE		CONTRACT NO. 76H76			
						FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					
				SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____							

SUMMARY OF QUANTITIES

GREENE COUNTY

SUMMARY OF QUANTITIES			100% STATE	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0004	0014	
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	415	415		
40600837	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N70	TON	39	39		
40600990	TEMPORARY RAMP	SQ YD	232	232		
40603540	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	502	117	385	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	15	15		
50102400	CONCRETE REMOVAL	CU YD	38.7		38.7	
50300225	CONCRETE STRUCTURES	CU YD	37.2		37.2	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	5.1		5.1	
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1		1	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4240		4240	
50800515	BAR SPLICERS	EACH	92		92	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	239		239	

FILE NAME #	USER NAME # USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED -	REVISED -			*JERSEY AND GREENE CONTRACT NO. 76H76					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____							

SUMMARY OF QUANTITIES

GREENE COUNTY

SUMMARY OF QUANTITIES			100% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0004	0014	
58100200	WATERPROOFING MEMBRANE SYSTEM	SO YD	4581		4581	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	2		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	574	574		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	11918	11918		
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	3125	3125		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	4164	4164		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1562.5	1562.5		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1562.5	1562.5		

FILE NAME :	USER NAME : #USER#	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	P.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - _____	REVISED - _____			ID	411BR-1	*	31	4	
		CHECKED - _____	REVISED - _____			*JERSEY AND GREENE		CONTRACT NO. 76H76			
		DATE - _____	REVISED - _____			ILLINOIS FED. AID PROJECT					

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

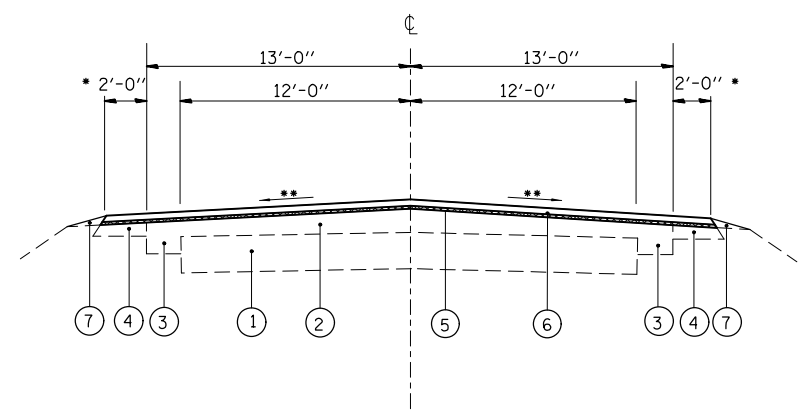
SUMMARY OF QUANTITIES

GREENE COUNTY

SUMMARY OF QUANTITIES			100% STATE	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0004	0014	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1		
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5850	5850		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	24	24		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	488	488		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	24	24		
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	922	922		
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1		1	
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	9819		9819	
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	100		100	
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	300		300	
∅ Z0070604	TRAINEES TRAINING PROGRAM GRADUATE	Hour	500	500		

* SPECIALTY ITEM

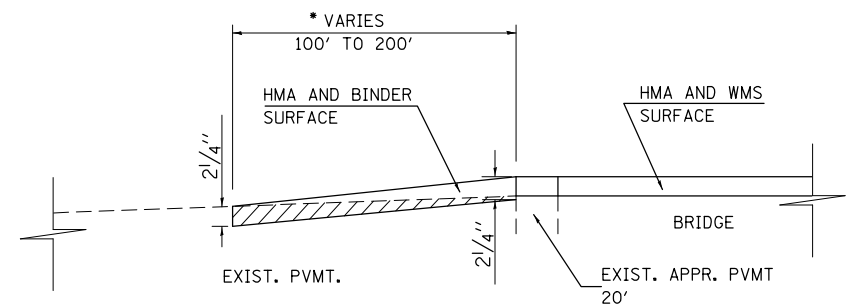
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		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
PLOT SCALE = #SCALE#		DATE		SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____							



** MATCH EXISTING SLOPE
 [Hatched Box] MILLING

- LEGEND**
- ① EXISTING PAVEMENT
 - ② EXISTING HMA BINDER
 - ③ EXISTING BASE COURSE WIDENING
 - ④ EXISTING BASE COURSE WIDENING
 - ⑤ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
 - ⑥ PROPOSED HMA SURFACE COURSE 2 1/4"
 - ⑦ PROPOSED AGGREGATE SHOULDER, TYPE B

STA. 172+08.00 TO STA. 173+32.50
 *STA. 173+32.50 TO STA. 174+28.00
 *STA. 187+18.00 TO STA. 188+32.00
 STA. 188+32.00 TO STA. 188+58.00



*SEE PLAN VIEW FOR BEGINNING AND END STATION OF RESURFACING

MILLING DETAIL

FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - ___	REVISED - ___	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - ___	REVISED - ___		10	411BR-1	*	31	6			
		CHECKED - ___	REVISED - ___		*JERSEY AND GREENE			CONTRACT NO. 76H76				
		DATE - ___	REVISED - ___		FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT							
					SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____					

RESURFACING SCHEDULE

STATION		BIT. MAT'L PRIME COAT (POUND)	POLYMERIZED HMA SURF. COURSE, MIX 'D', N70 (TON)	AGG. SHLD TYPE B (TON)	HMA SURFACE REMOVAL, VAR. DEPTH (SQ YD)	TEMPORARY RAMP (SQ YD)
172+08.00 RT/LT TO 174+08.00 RT/LT	MAINLINE	268.25	75.11		596.11	115.56
172+08.00 TO 174+15.75 RT/LT	SHOULDER			9.75		
174+08.00 RT/LT TO 187+58.00 RT/LT	** BRIDGE & APPR.		385.00			
187+58.00 RT/LT TO 188+58.00 RT/LT	MAINLINE	146.38	40.99		325.29	115.56
187+51.85 TO 188+58.00 RT/LT	SHOULDER			4.98		
TOTAL		414.63	501.10	14.73	921.40	231.12

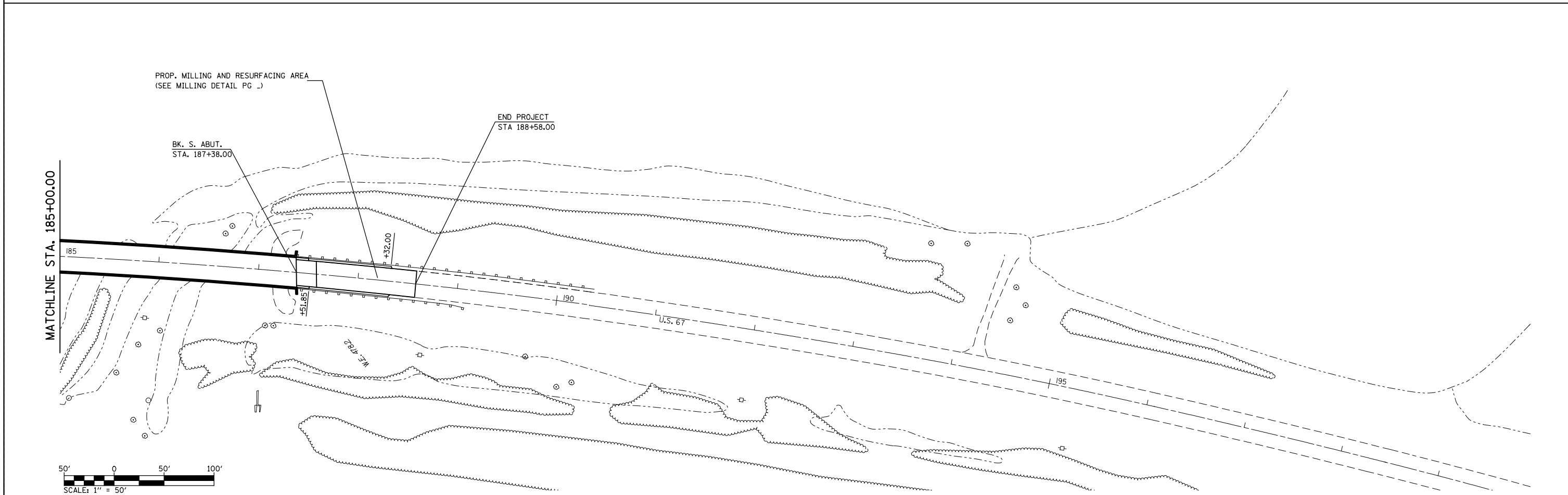
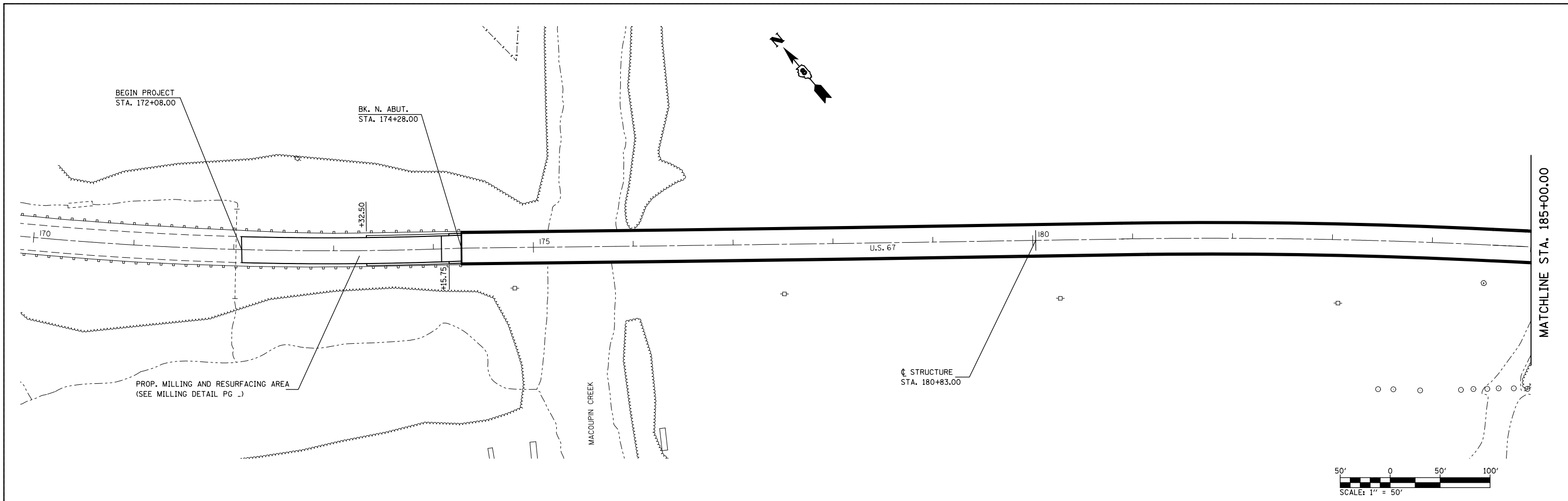
** SEE STRUCTURE PLANS

PAVEMENT MARKING SCHEDULE

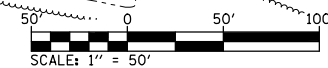
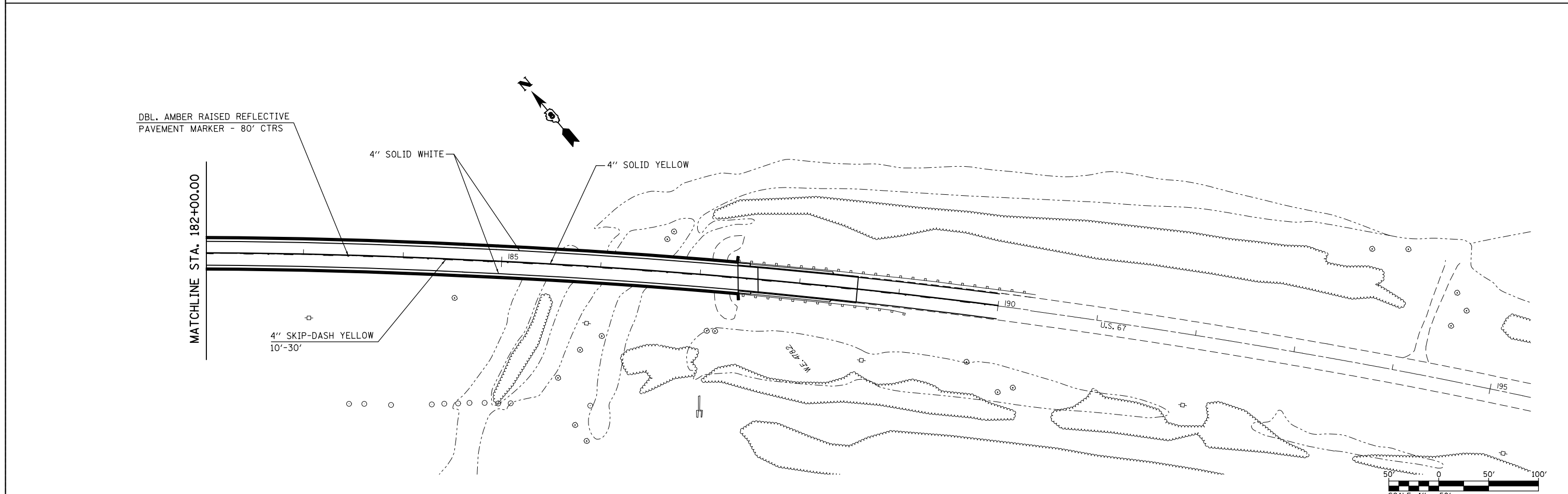
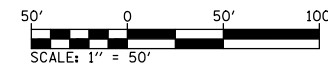
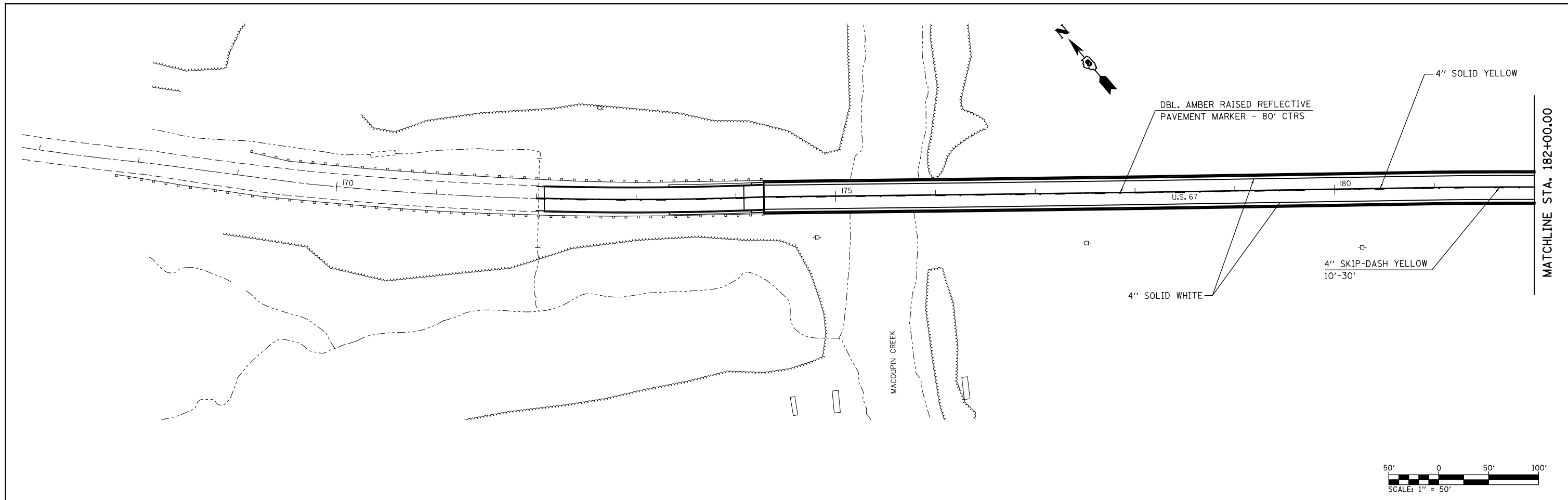
STATION		THERMOPLASTIC PVMT MKG			RSD REFL PMK MKRS TWO-WAY (EA)
		4" WHITE LINE (FT)	YELLOW SKIP DASH LINE (FT)	4" YELLOW LINE (FT)	
172+00.00 RT/LT TO 190+00.00 RT/LT	EDGE LINE	3600.00			
172+00.00 TO 190+00.00	CENTER LINE		450.00		24
172+00.00 TO 190+00.00	NO LT PASSING			1800.00	
SUB TOTAL		3600.00	450.00	1800.00	
TOTAL			5850.00		24

TEMP. PAVEMENT MARKING & REMOVAL SCHEDULE

STATION		TEMP PVMT MARKING LINE 4" (FT)	SHORT TERM PAVEMENT MARKING (FT)	WORK ZONE PAVEMENT REMOVAL (SQ FT)	RAISED REFL. PVMT MARKER REMOVAL (SQ FT)	PAVEMENT MARKING REMOVAL (SQ FT)
172+00.00 TO 174+08.00	EDGES/CENTER LINE					225.33
172+00.00 TO 190+00.00 RT/LT	EDGE LINES - STAGE 1	3600.00	144.00	1248.0	24.0	
173+00.00 TO 188+70.00	CENTER LINE	4718.00	285.45	1667.8		
172+00.00 TO 190+00.00 RT/LT	EDGE LINES - STAGE 2	3600.00	144.00	1248.0		
187+58.00 TO 190+00.00	EDGES/CENTER LINE					262.17
TOTAL		11918.0	573.45	4163.8	24.0	487.50



FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - ___	REVISED - ___	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN VIEW			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	DRAWN - ___	REVISED - ___		SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	10	411BR-1	*	31	8
	PLOT DATE = #DATE#	CHECKED - ___	REVISED - ___					*JERSEY AND GREENE CONTRACT NO. 76H76				
		DATE - _____	REVISED - ___					FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				



FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - ___	REVISED - ___
		DRAWN - ___	REVISED - ___
	PLOT SCALE = *SCALE*	CHECKED - ___	REVISED - ___
	PLOT DATE = *DATE*	DATE - ___	REVISED - ___

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING DETAILS			
SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	*	31	9
*JERSEY AND GREENE			CONTRACT NO. 76H76	
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

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.

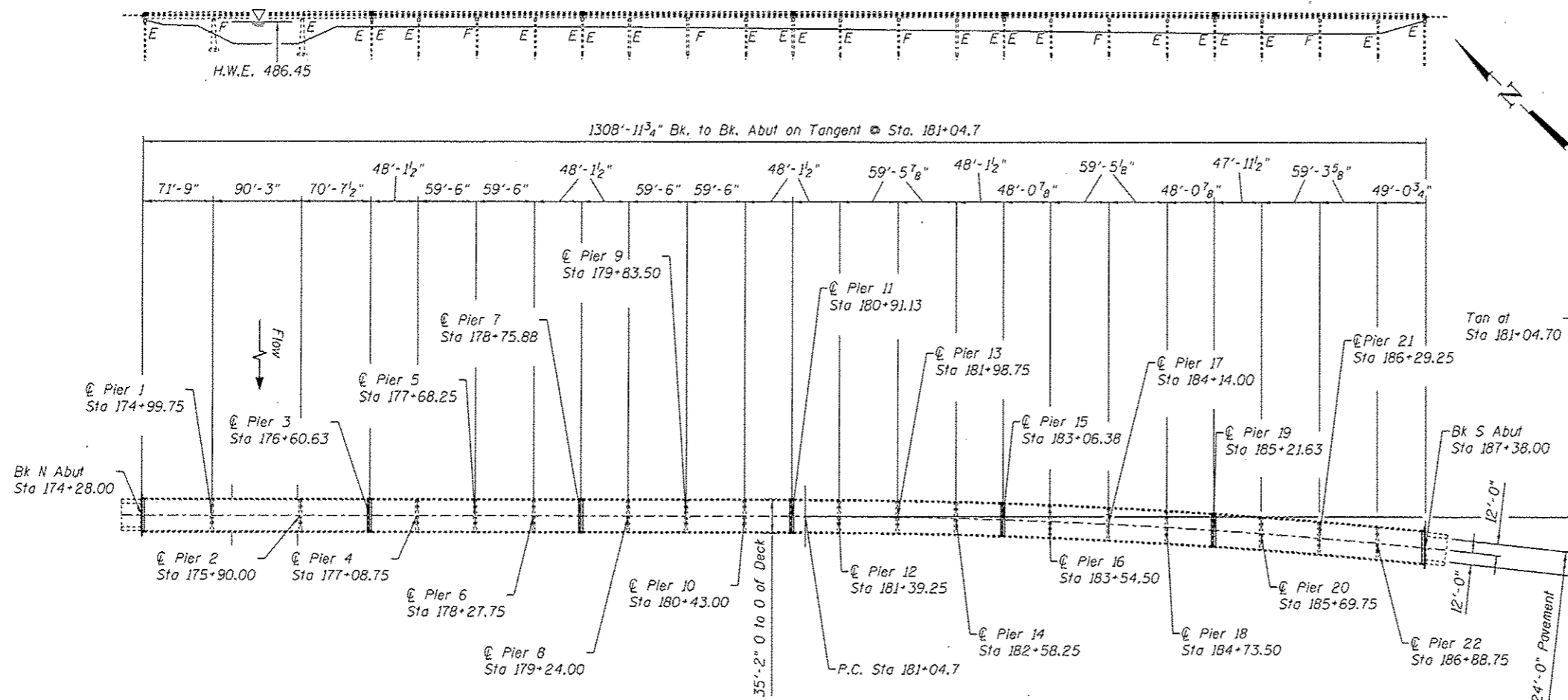
Joint opening shall be adjusted according to Article 520.04 of the Standard Specs, when the deck is poured at an ambient temperature other than 50° F.

Existing reinforcement bars extending into 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.

Bridge deck concrete sealer shall be placed on top/inside faces of parapet (full length) and wingwalls and on top of new concrete at joints.

Cleaning and Painting of the existing structural steel and bearings shall be included with "Cleaning and Painting Structural Steel, Location 1." All beams, bearings, deck drains, and other structural steel within 5 feet (measured along the beam) of either side of the deck joints shall be cleaned per "Near White Blast Cleaning-SSPC-SP10."

The designated areas cleaned per near white blast cleaning SSPC-SP10 shall be painted according to the requirement of paint system 1-OZ/E/U. The color of the final finish coat for all steel surfaces shall be Federal Standard Color Interstate Green (Munsell No 7.5G 4/8)



PLAN

INDEX OF SHEETS

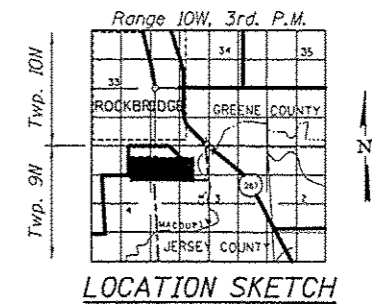
1. General Plan & Elevation
2. Deck Cross Section (Spans 1-7)
3. Deck Cross Section (Spans 8-11)
4. Deck Cross Section (Spans 12-15)
5. Deck Cross Section (Spans 16-19)
6. Deck Cross Section (Spans 20-23)
7. Joint Removal & Replacement & Jt Details (N. Abut)
8. Joint Removal & Replacement (Piers 3 & 7)
9. Joint Removal & Replacement (Pier 11)
10. Joint Removal & Replacement (Pier 15)
11. Joint Removal & Replacement (Pier 19)
12. Joint Removal & Replacement (S. Abut.)
13. Joint Details (S. Abut & Piers)
14. Elev N Abut, Hatchblock & Wingwalls
15. Elev S Abut, Hatchblock & Wingwalls
16. Strip Seal Details
17. Temporary Concrete Barrier
18. Bar Splicers
19. For Information Only (F.I.O.)- Structural Steel Details (Spans 1-3)
20. F.I.O.- Structural Steel Details (Spans 4-23)
21. F.I.O.- Type I Bearings
22. F.I.O.- Type II Bearings

CURVE DATA

P.I. = 193+34.6
 Δ = -21° 52' Rt.
 D = 0° 54'
 T = 1229.9'
 L = 2429.6'
 R = 6366.3'
 E = 117.7'
 S.E. = 01875 '1'
 S.E. Attained
 Sta. 179+44.70 to
 Sta. 181+84.70

SCOPE OF WORK

- Replace deck ends at abutments, piers 3, 7, 11, 15 & 19 & install Preformed Joint Strip Seals
- HMA overlay with WMS
- Perform partial and full depth patching
- Clean & paint beam ends under new expansion joints



LOCATION SKETCH

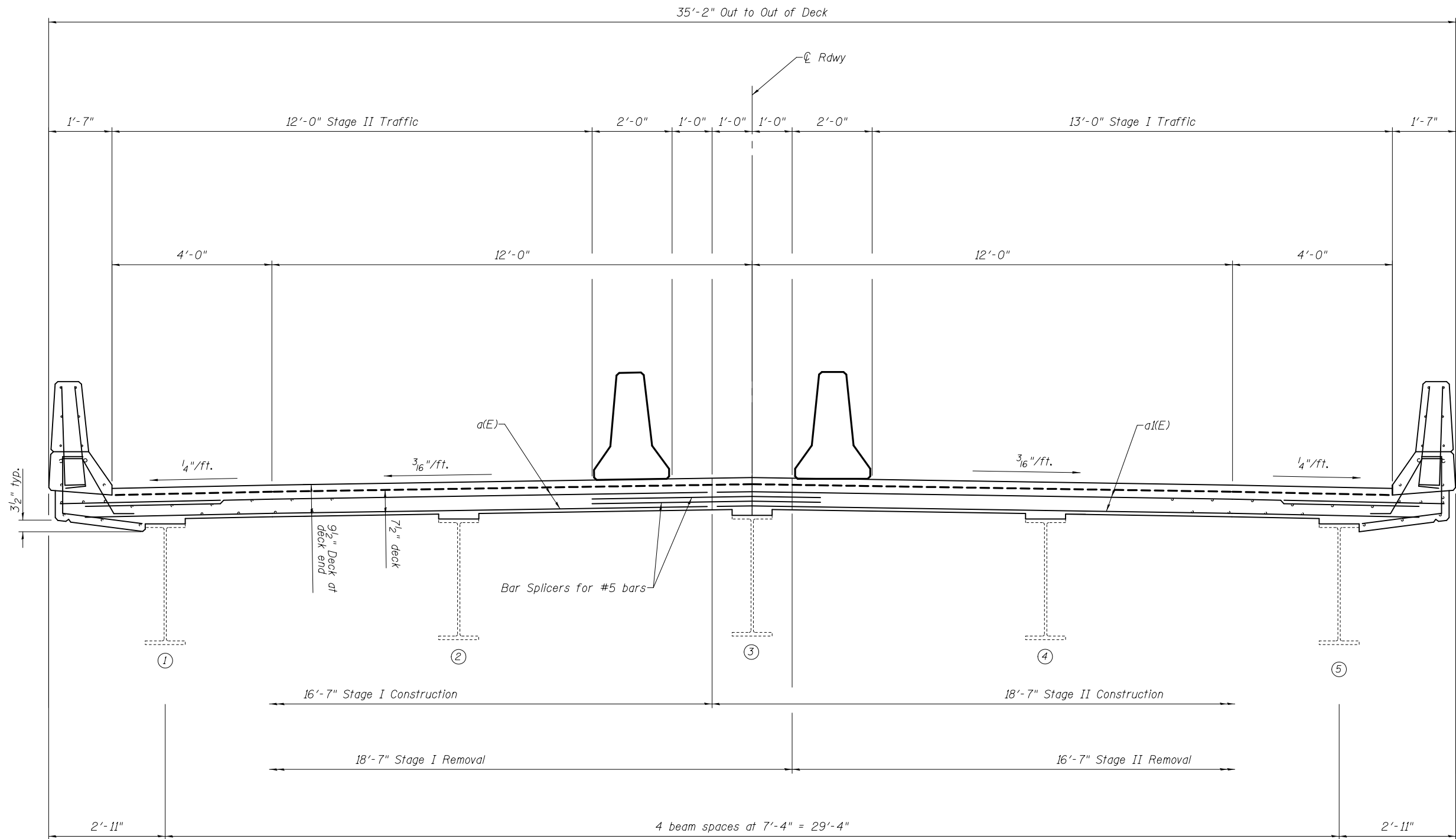
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	38.7
Concrete Superstructure	Cu. Yd.	37.2
Concrete Structures	Cu. Yd.	5.1
Bridge Deck Concrete Sealer	Sq. Ft.	9819
Bar Splicers	Each	92
Waterproofing Membrane System	Sq. Yd.	4581
Preformed Joint Strip Seal	Foot	239
*Deck Slab Repair (Partial)	Sq. Yd.	300
*Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	100
Polymerized HMA Surface Course, Mix "D" N70	Ton	385
Reinforcement Bars, Epoxy Coated	Pound	4240
Cleaning and Painting Structural Steel, Bridge No. 1	L. Sum	1
Containment and Disposal of Non-Lead Paint Cleaning Residues Bridge No. 1	L. Sum	1

*The quantities of deck slab repair are estimated. The Engineer in the field shall determine the actual quantity and locations.



David Carl Puzey 5/6/15
 Expires 11/30/16



CROSS SECTION

Looking S @ Joint Location

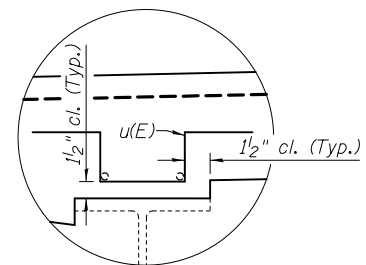
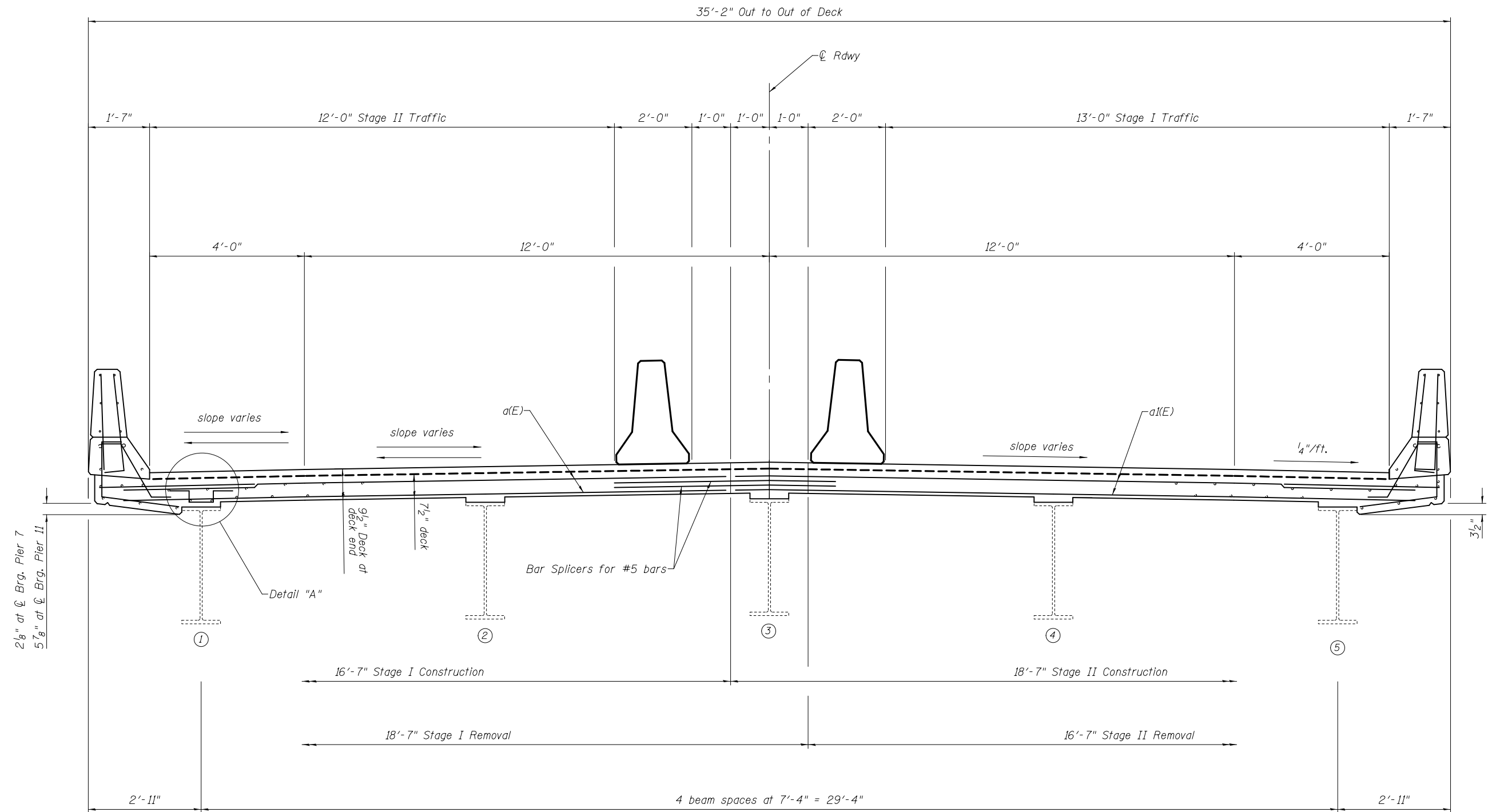
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Spans 1-7)
042-0017**

SHEET NO. 2 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	11
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



DETAIL "A"

Showing Fillet Reinforcement (Only at Pier 11, Bm 1)

CROSS SECTION

Looking S @ Joint Location

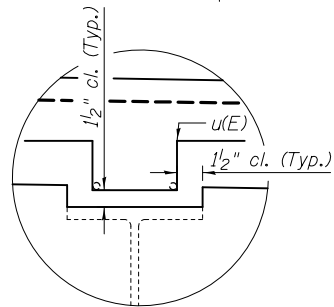
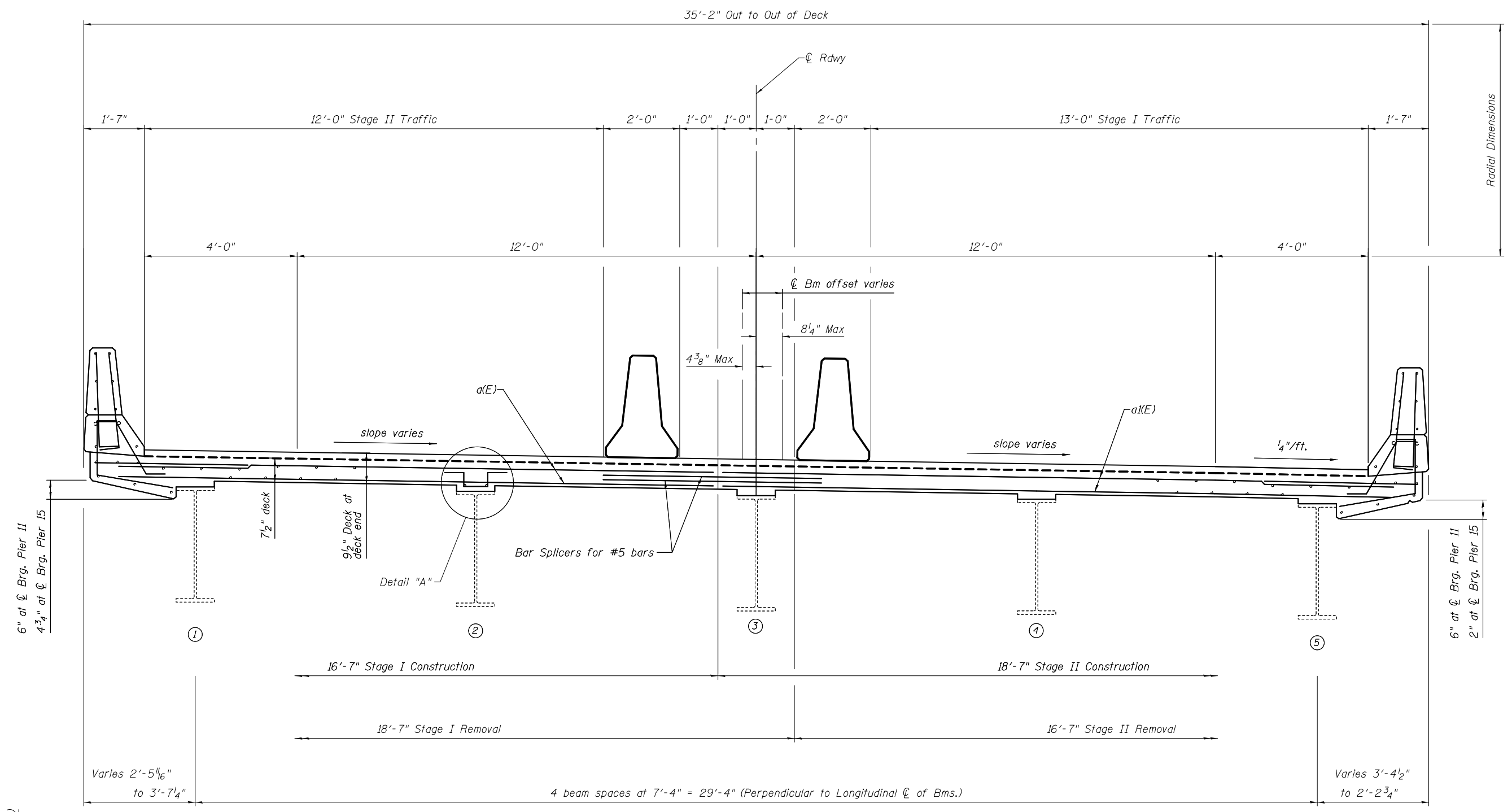
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Spans 8-11)
042-0017**

SHEET NO. 3 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	12
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



DETAIL "A"

Showing Fillet Reinforcement (Only at Pier 11, typ all bms)

CROSS SECTION

Looking S @ Joint Location

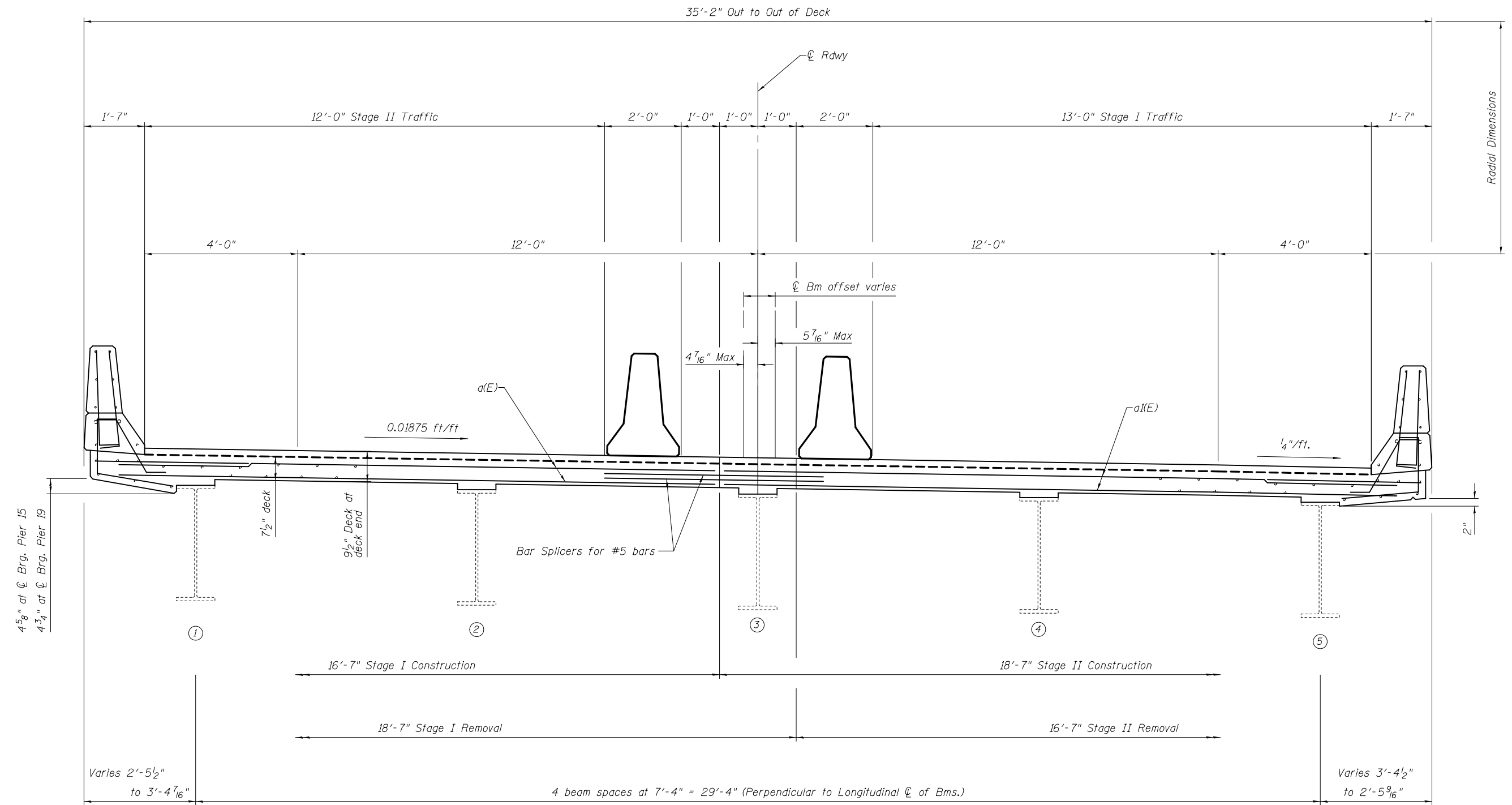
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Spans 12-15)
042-0017**

SHEET NO. 4 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	13
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



CROSS SECTION

Looking S @ Joint Location

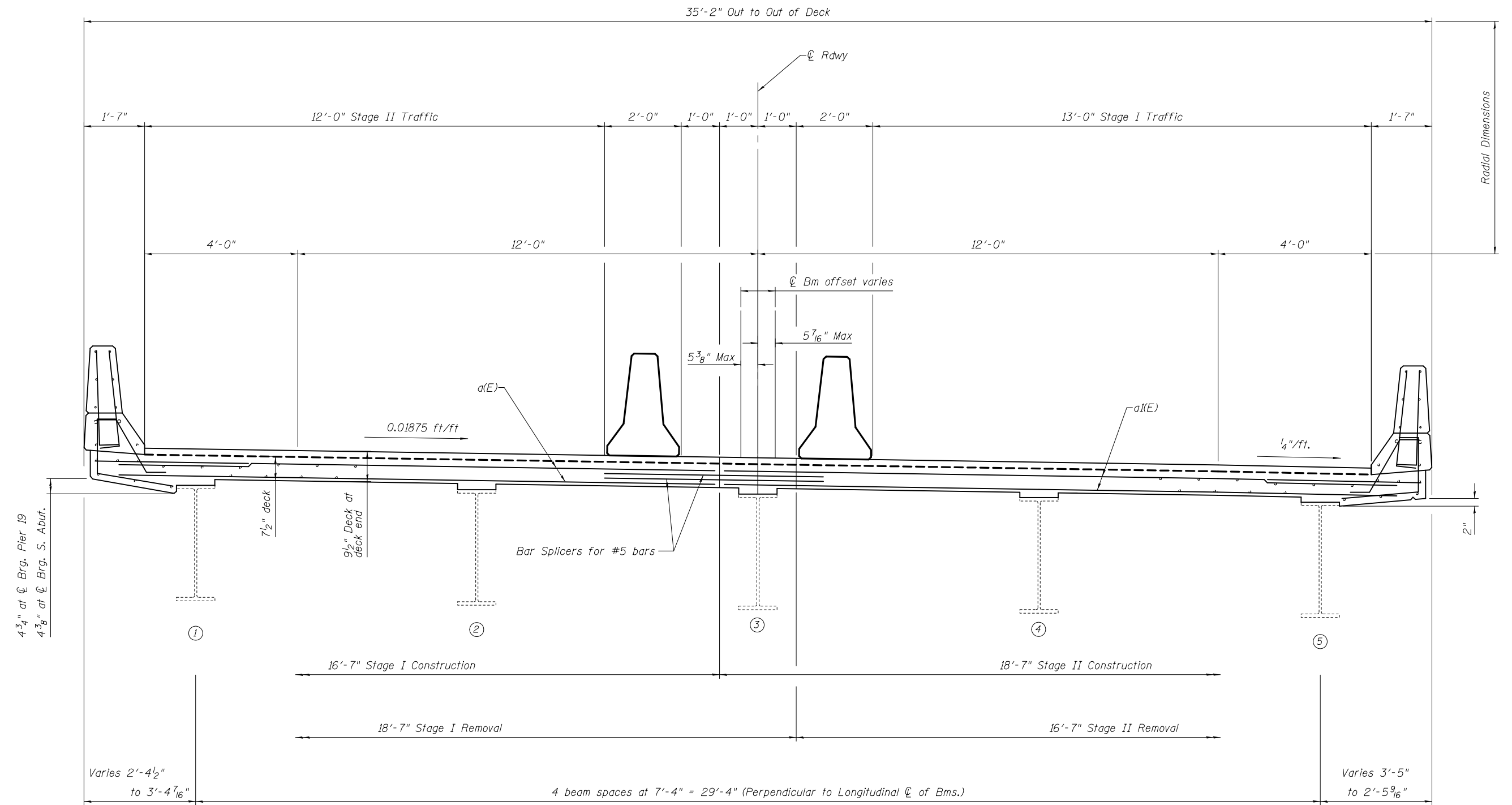
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Spans 16-19)
042-0017**

SHEET NO. 5 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	14
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



CROSS SECTION

Looking S @ Joint Location

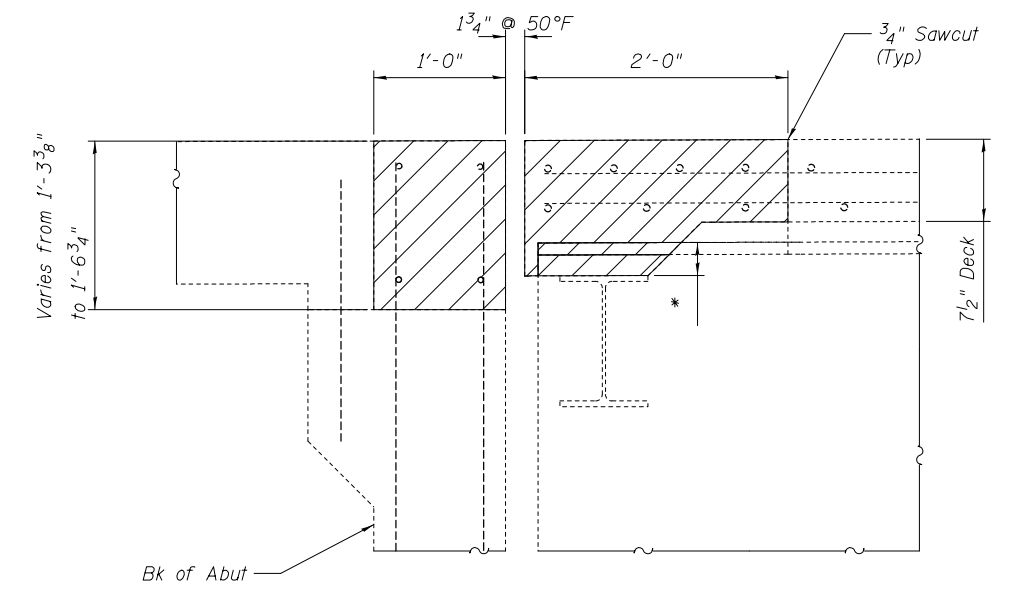
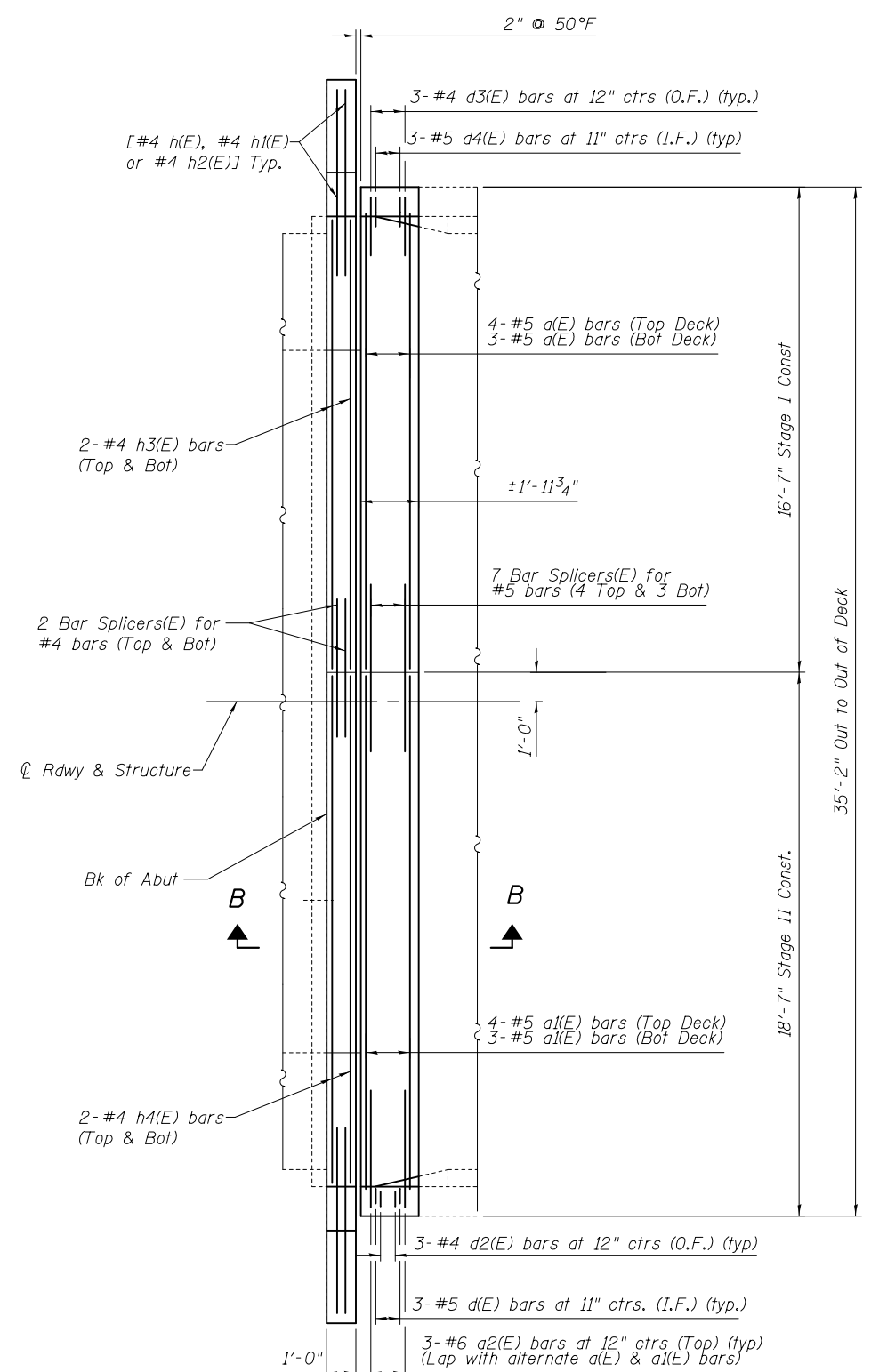
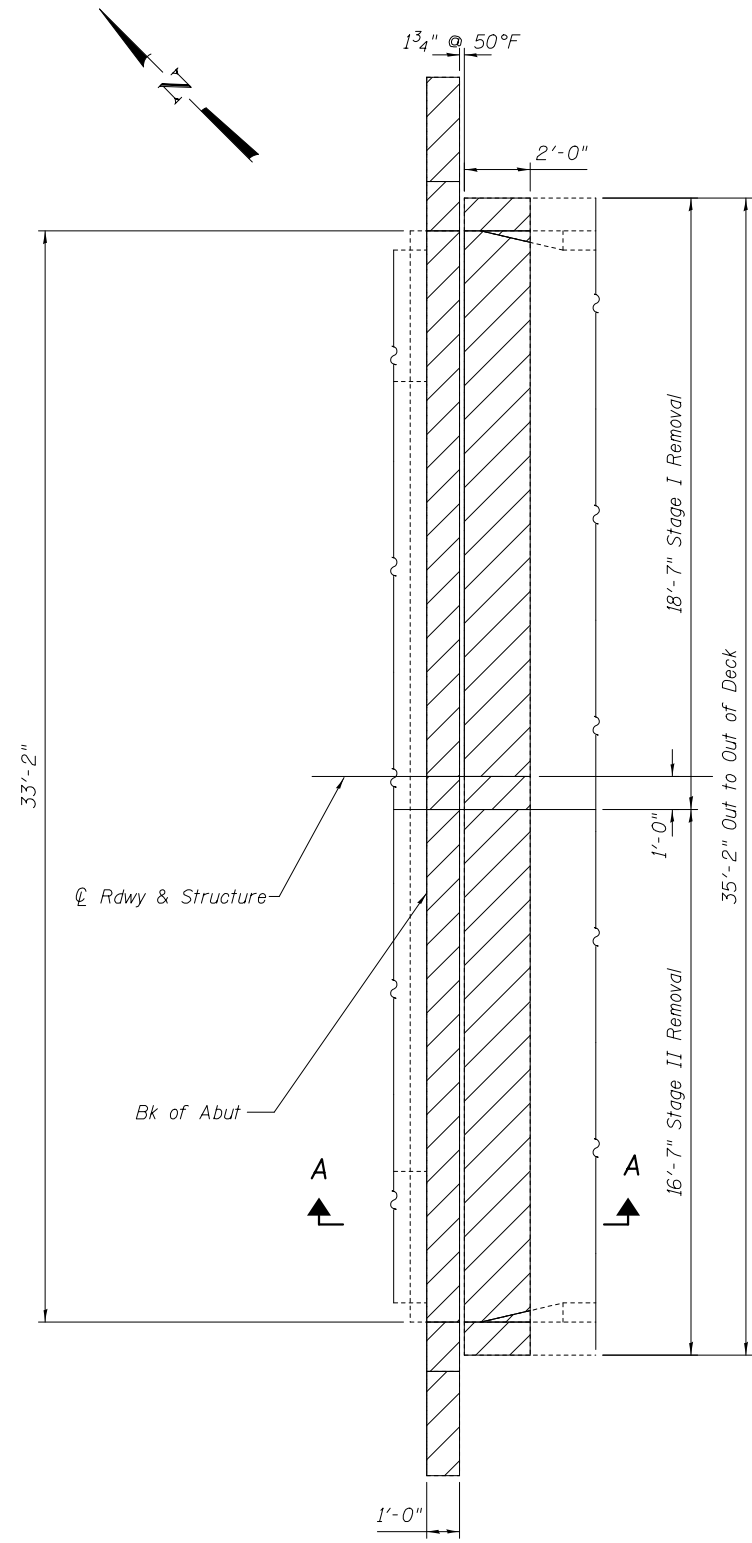
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Spans 20-23)
042-0017**

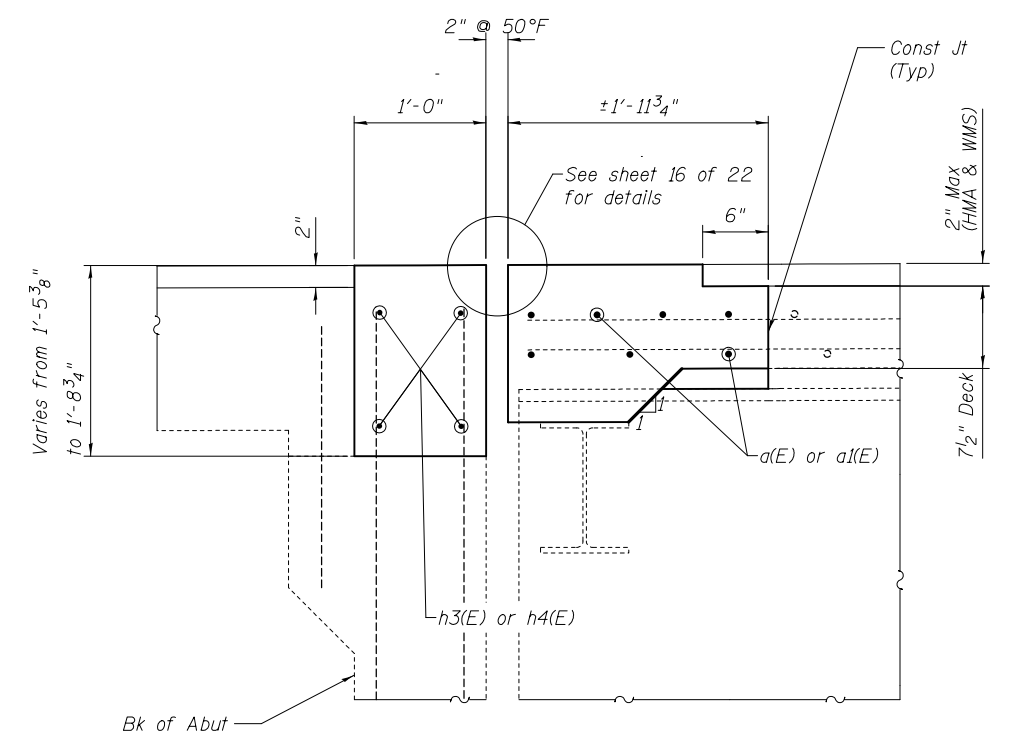
SHEET NO. 6 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	15
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



SECTION A-A

* 3" @ low beam



SECTION B-B

Concrete Removal

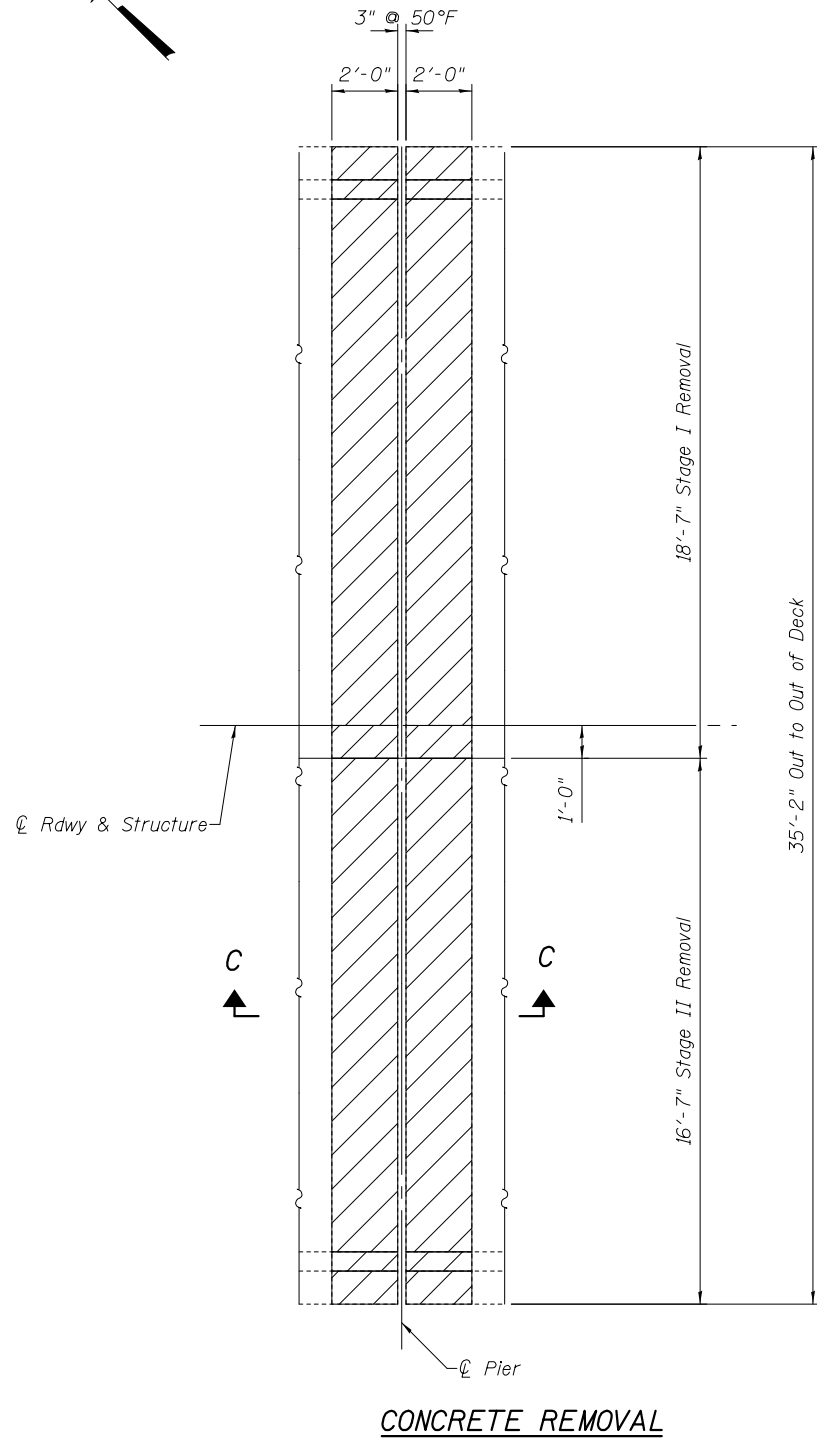
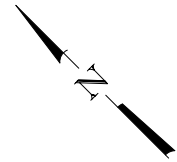
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL & REPLACEMENT (N. ABUT.)
SN 042-0017**

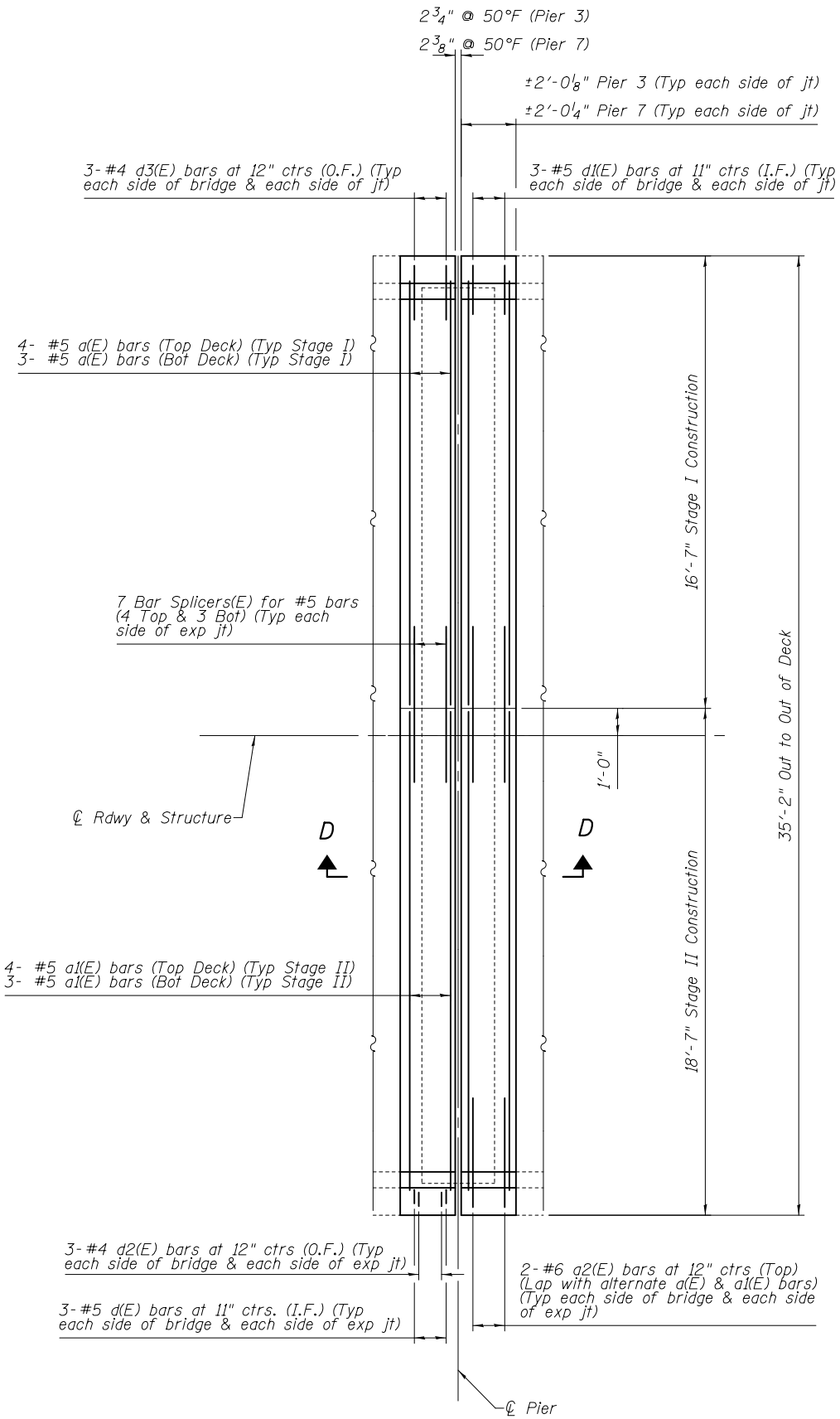
SHEET NO. 7 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	16
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				

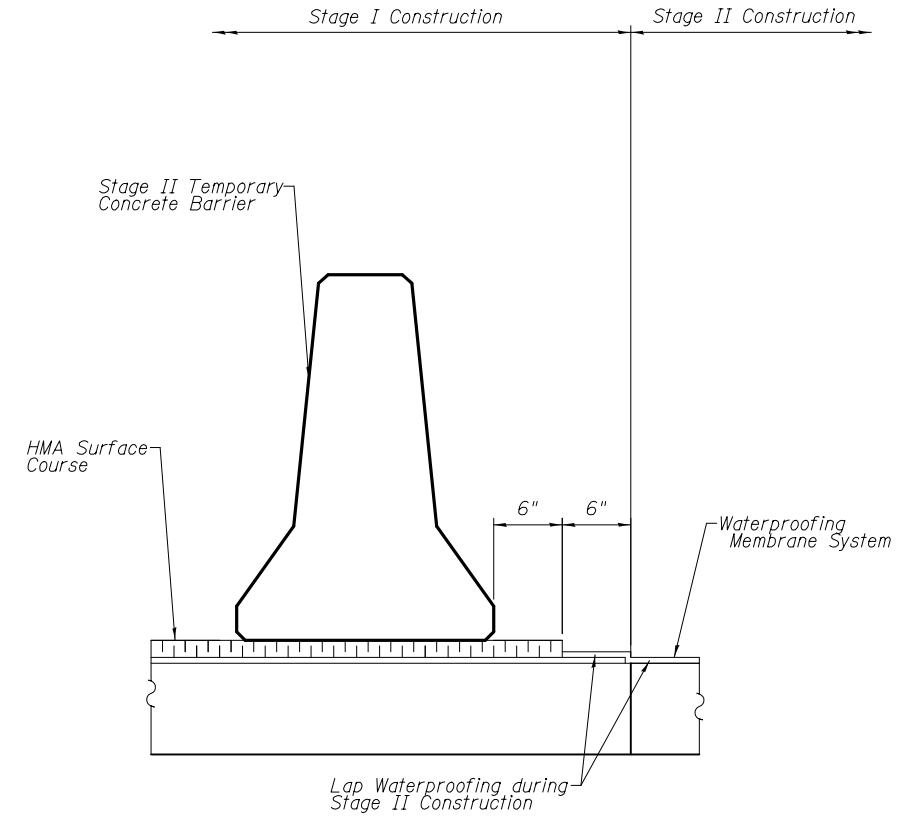


Concrete Removal

See sheet 13 of 22 for Section C-C & D-D.



CONCRETE REPLACEMENT



WATERPROOFING STAGING

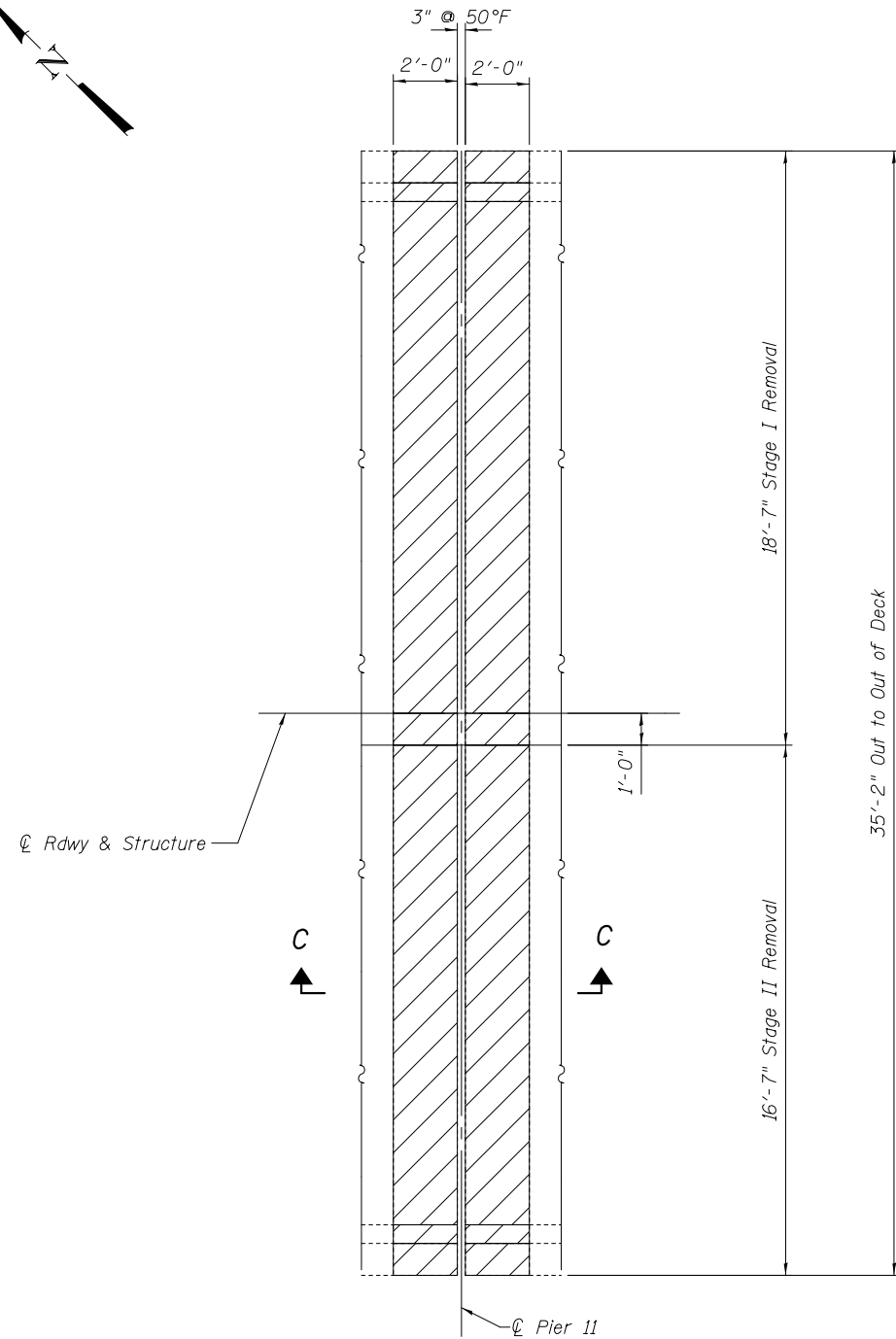
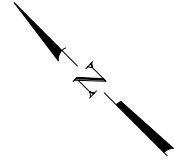
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

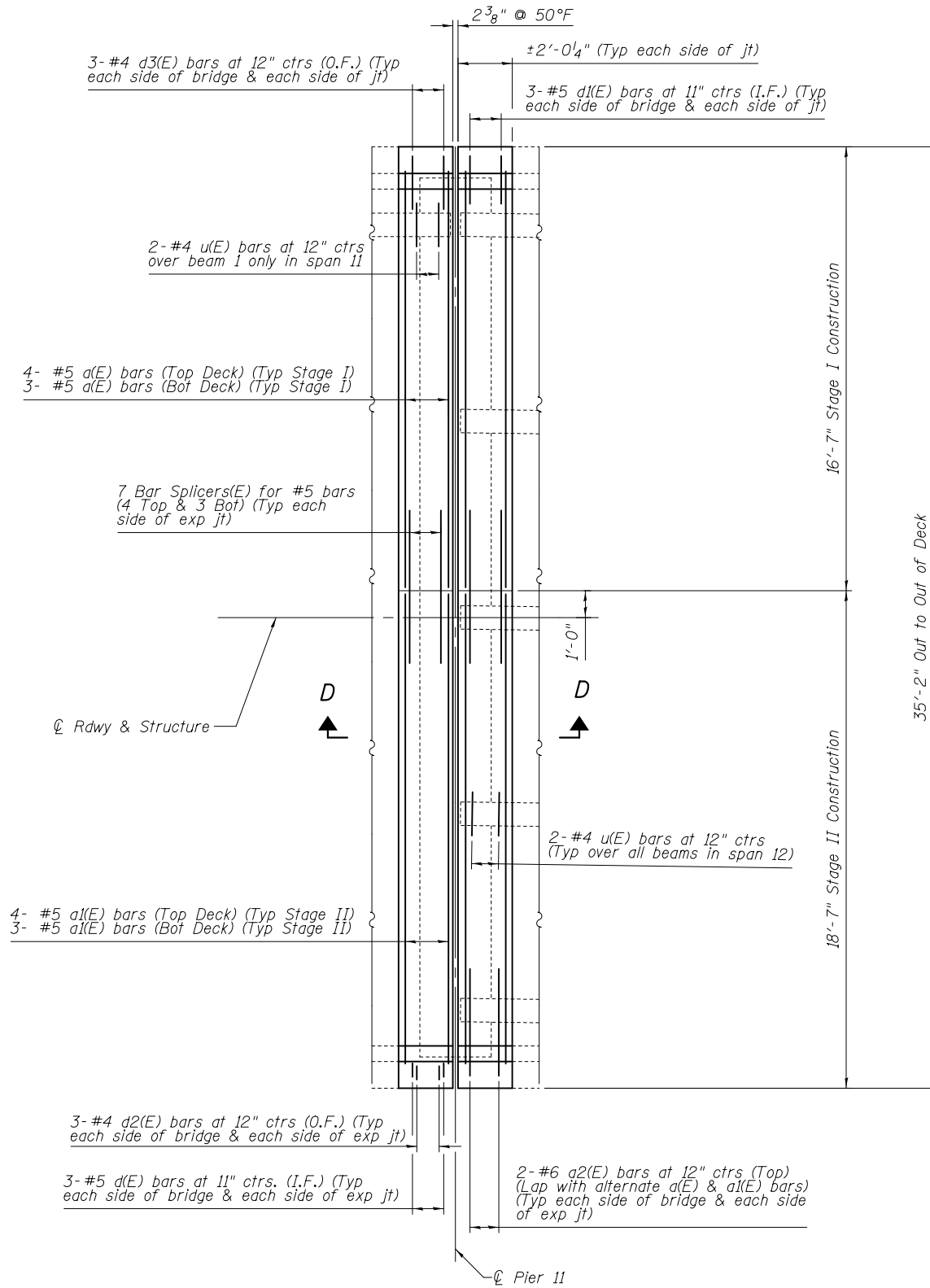
**JOINT REM. & REPL. (PIERS 3 & 7) & WATERPROOFING STAGING
SN 042-0017**

SHEET NO. 8 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	17
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL



CONCRETE REPLACEMENT

See sheet 13 of 22 for Section C-C & D-D

DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

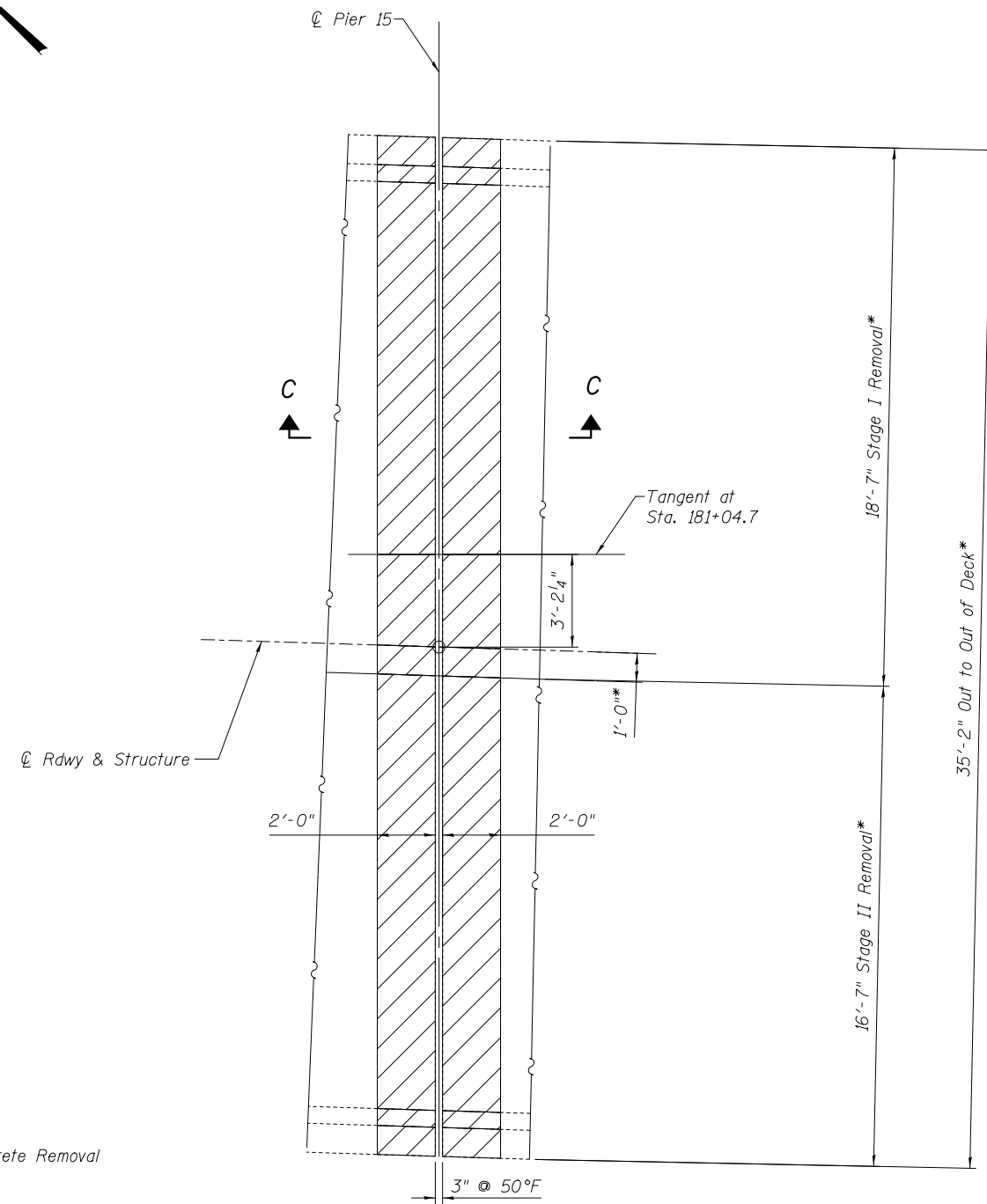
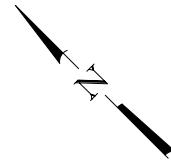
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL & REPLACEMENT (PIER 11)
SN 042-0017**

SHEET NO. 9 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	18
CONTRACT NO. 76H76				

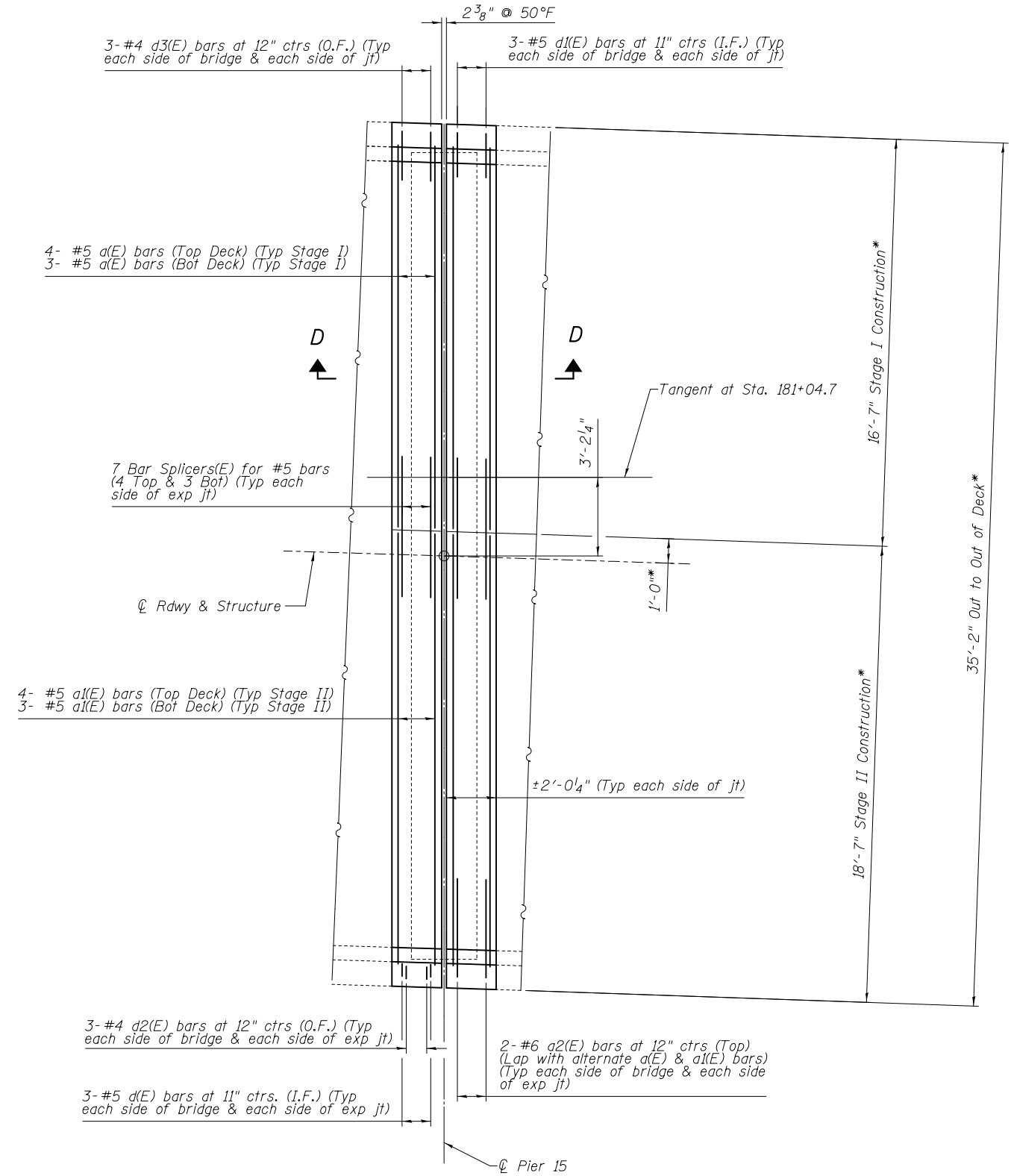
ILLINOIS FED. AID PROJECT



Concrete Removal

CONCRETE REMOVAL

* Radial Dimensions



CONCRETE REPLACEMENT

See sheet 13 of 22 for Section C-C & D-D.

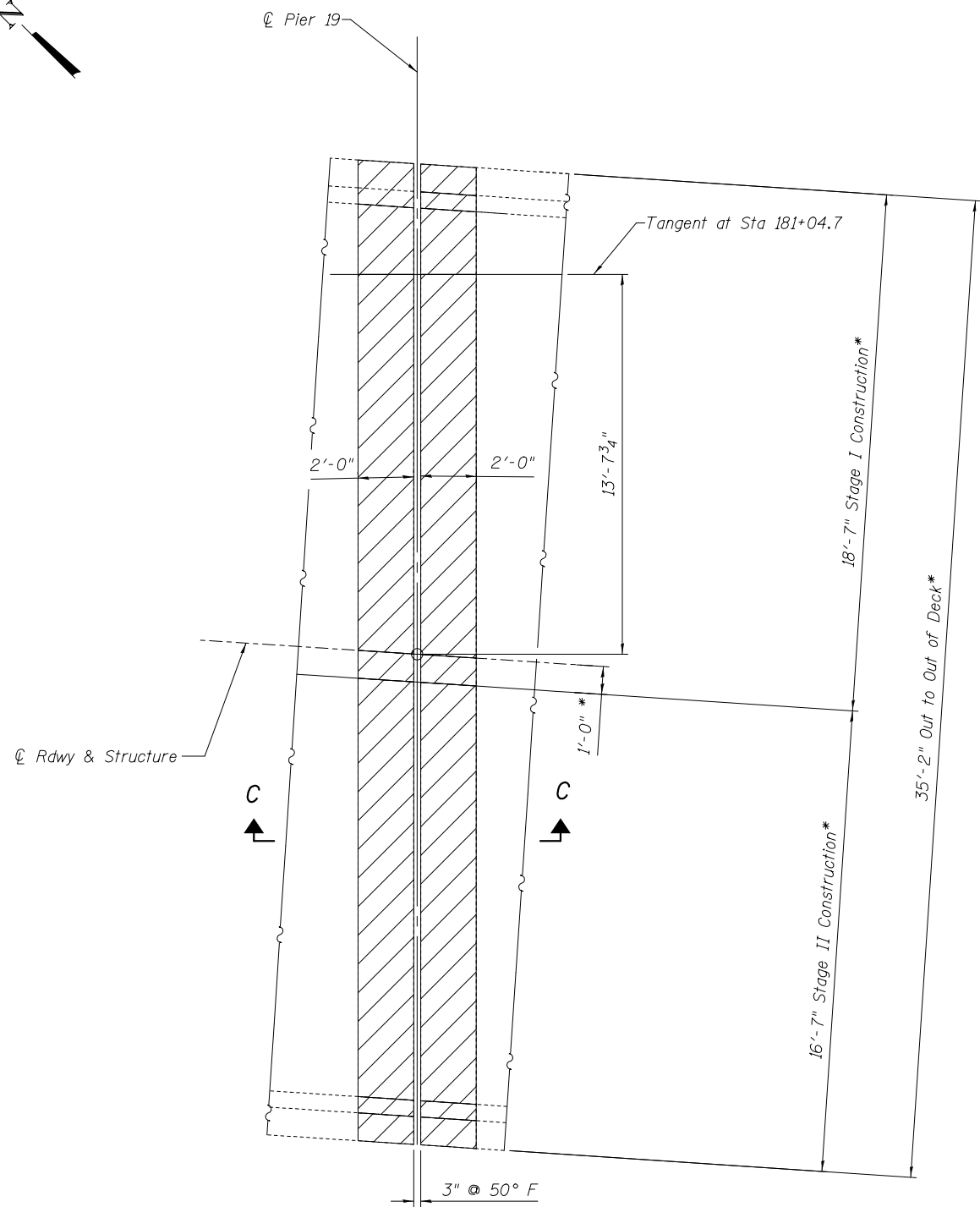
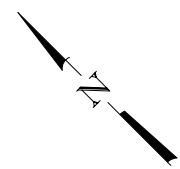
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISOR
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

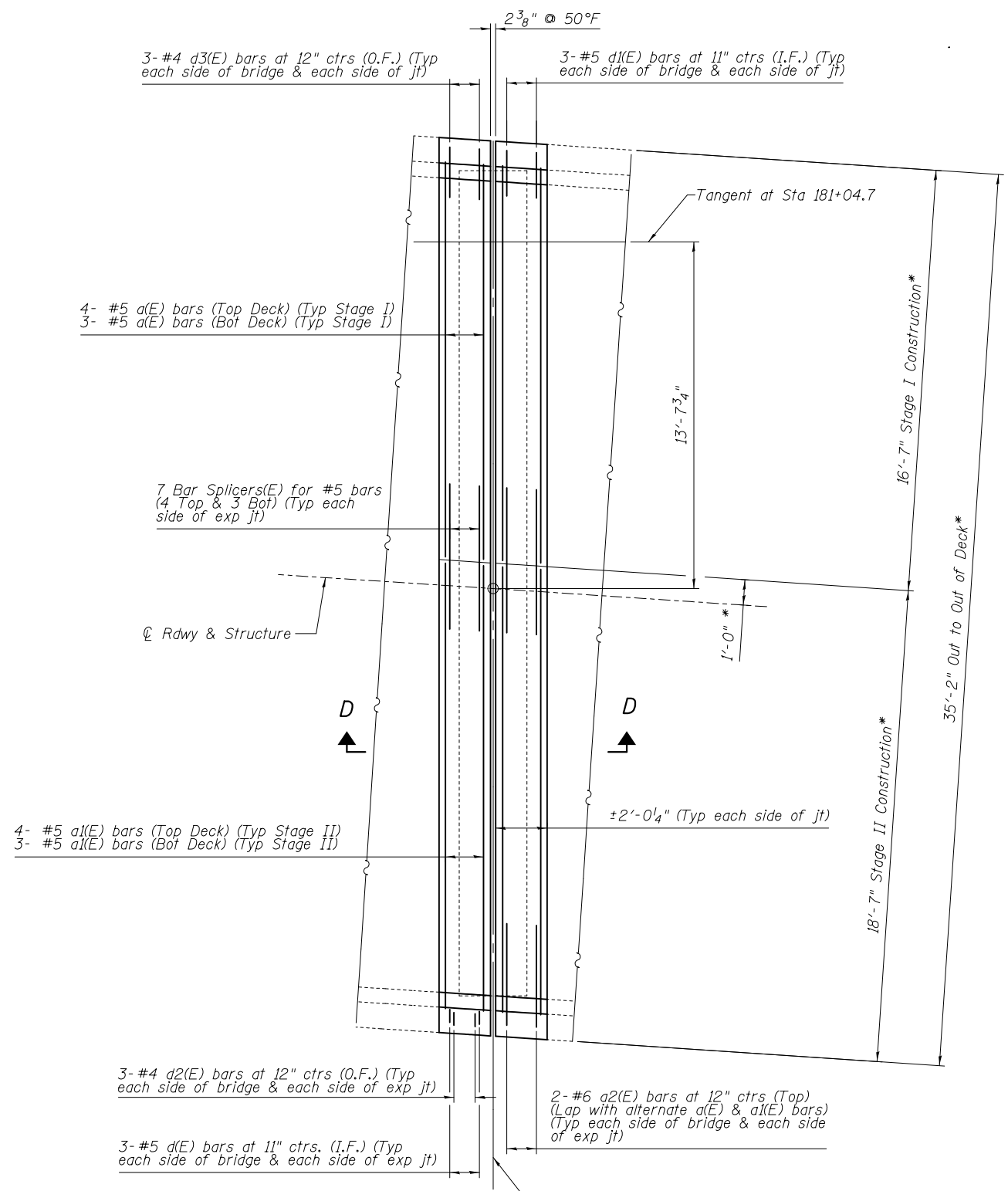
**JOINT REMOVAL & REPLACEMENT (PIER 15)
SN 042-0017**

SHEET NO. 10 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	19
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL



CONCRETE REPLACEMENT

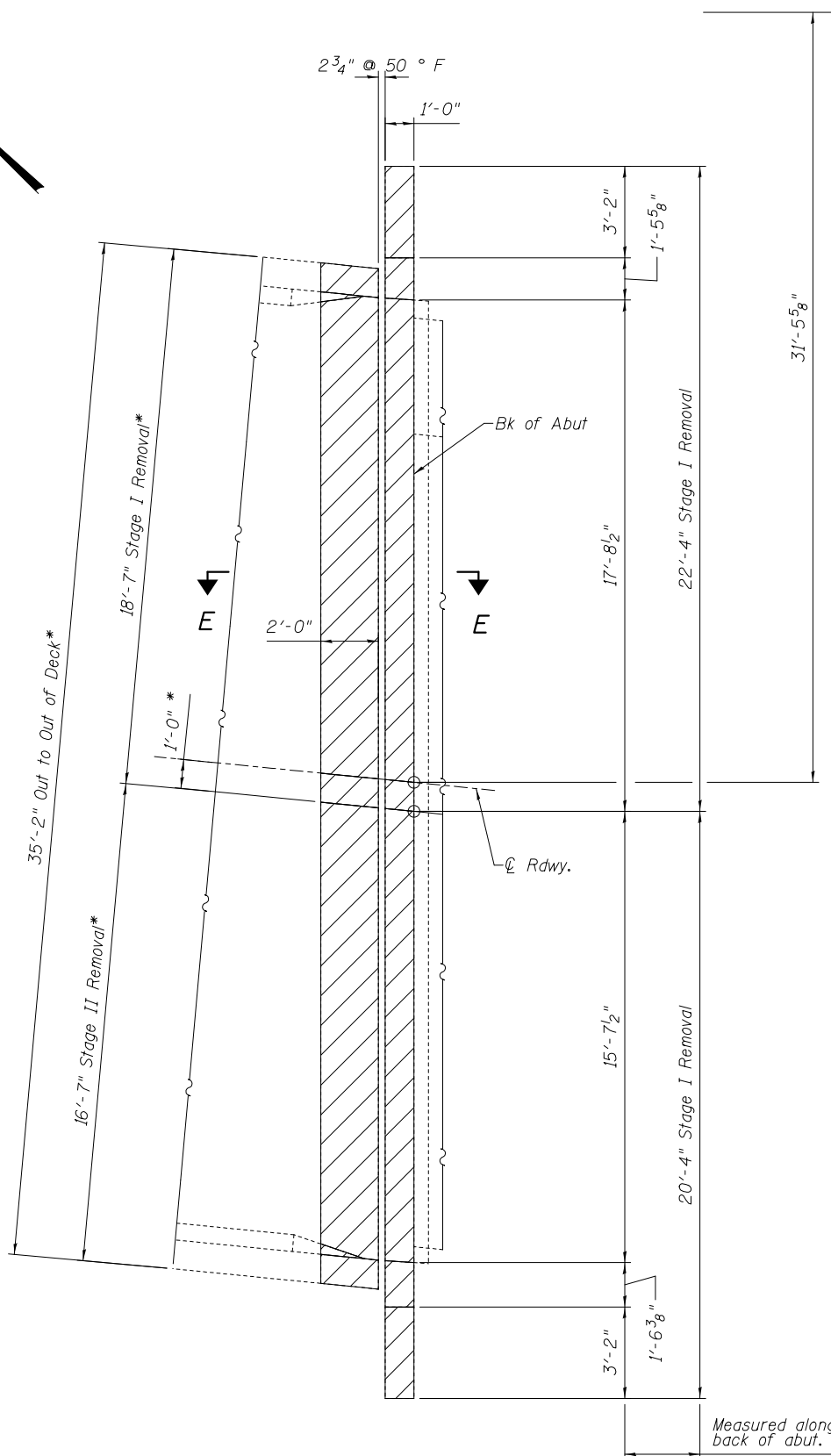
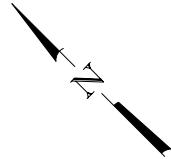


* Radial Dimensions

See sheet 13 of 22 for Section C-C & D-D.

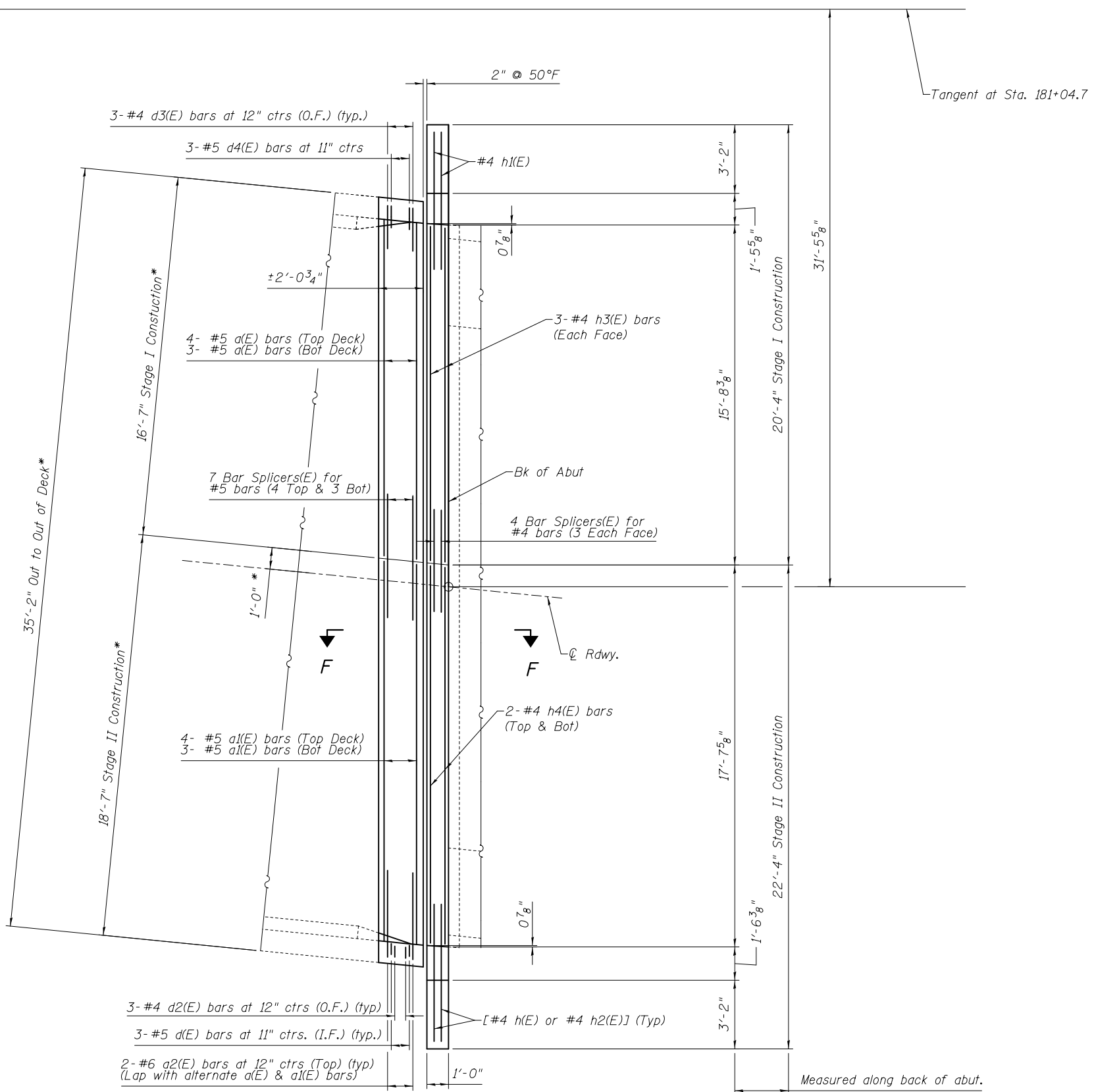
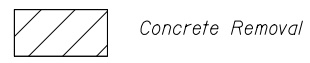
DESIGNED - AYV	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL & REPLACEMENT (PIER 19) SN 042-0017	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVIS			10	411BR-1	JERSEY-GREEN	31	20	
DRAWN - AYV	PASSED	REVIS			CONTRACT NO. 76H76					
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVIS			SHEET NO. 11 OF 22 SHEETS					

ILLINOIS FED. AID PROJECT



CONCRETE REMOVAL

* Radial Dimensions



CONCRETE REPLACEMENT

See sheet 13 of 22 for Section E-E & F-F.

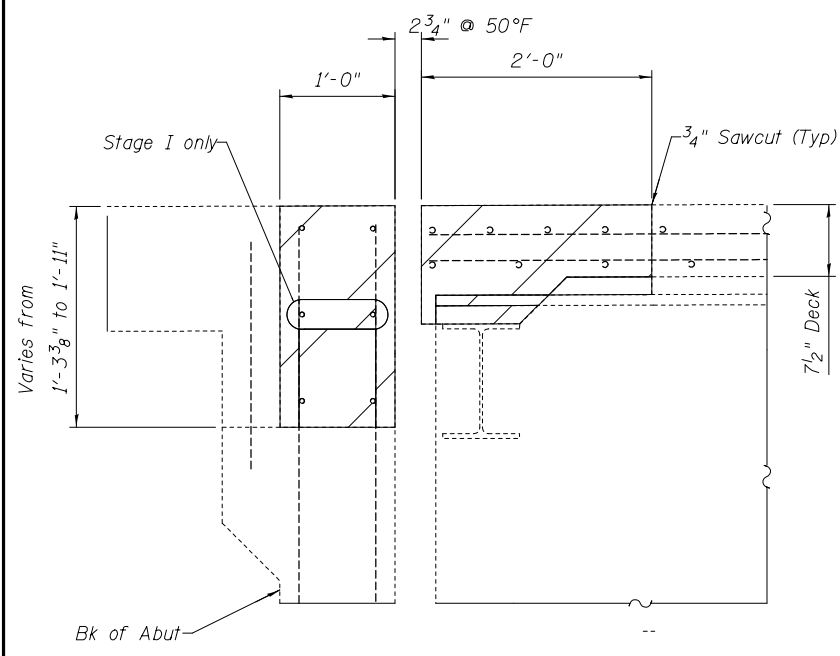
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

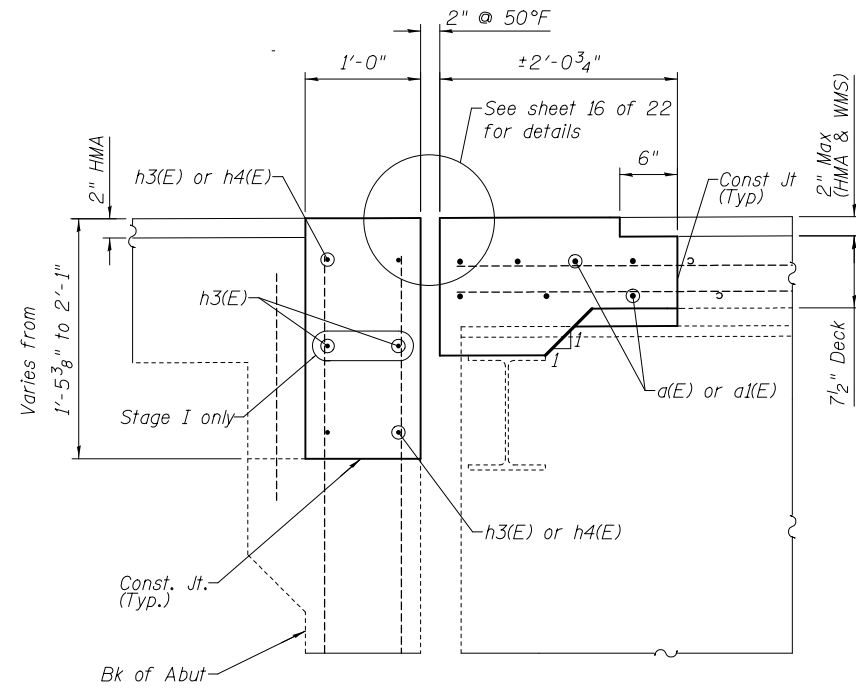
**JOINT REMOVAL & REPLACEMENT (S ABUT)
SN 042-0017**

SHEET NO. 12 OF 22 SHEETS

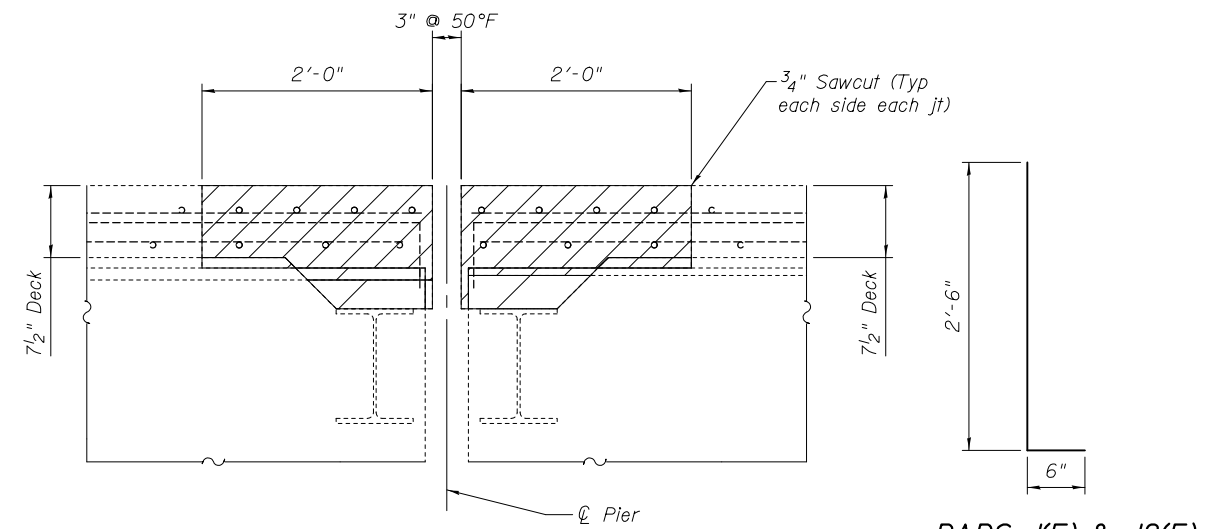
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	21
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



SECTION E-E



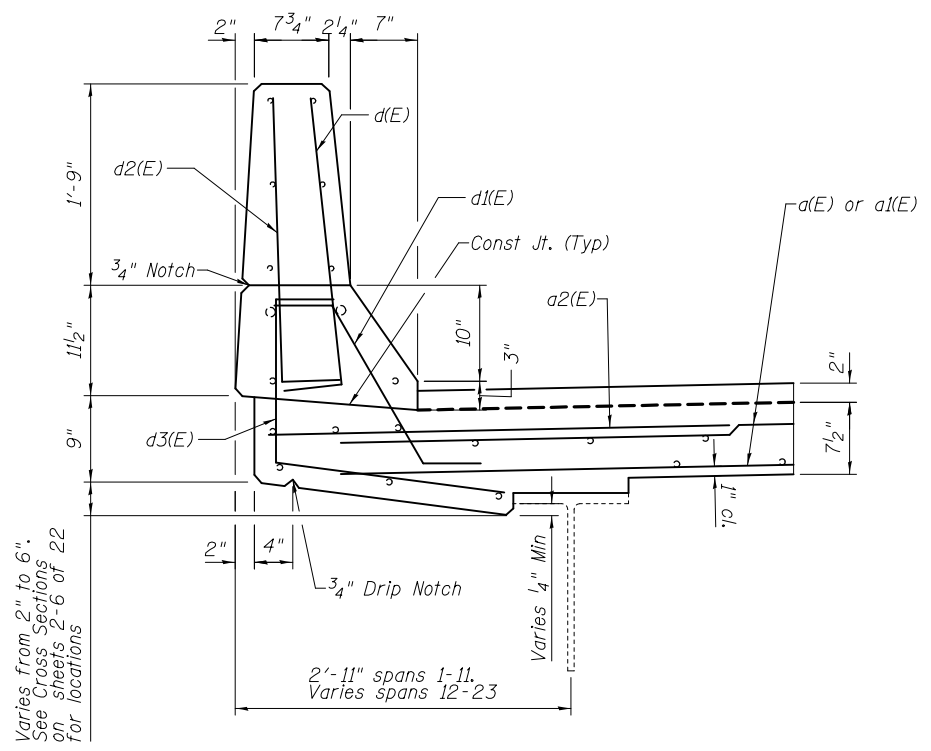
SECTION F-F



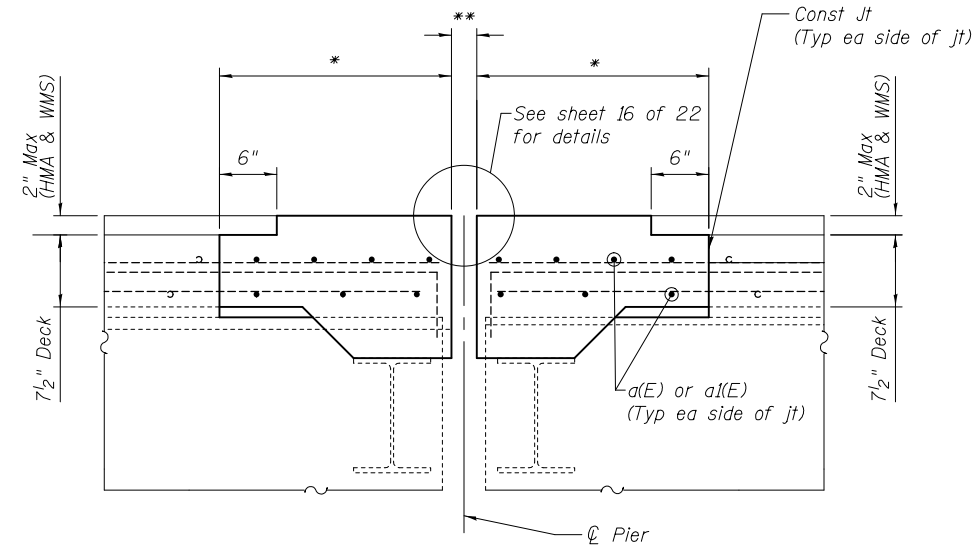
SECTION C-C

(Piers 3, 7, 11, 15 & 19)

S. ABUT

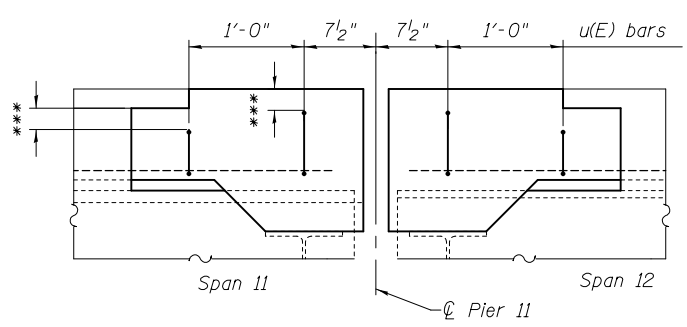


PARAPET SECTION



SECTION D-D

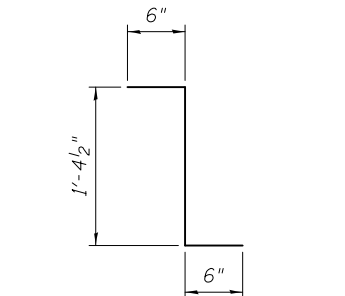
* Pier 3 = ±2'-0 1/8" Pier 7, 11, 15 & 19 = ±2'-0 1/4" ** Pier 3 = 2 3/4" Pier 7, 11, 15 & 19 = 2 3/8"



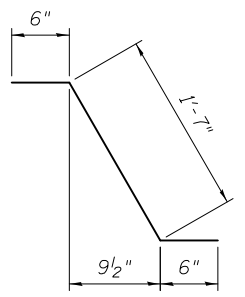
FILLET REINFORCEMENT

Place u(E) bars over Beam 1 only in span 11 & over all beams in span 12 (Only at new jt over Pier 11)

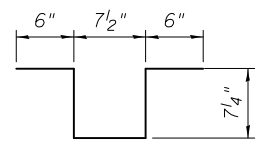
*** 2 1/4" cl. (Min) (Typ ea side of jt) (Tilt top of u(E) bars if necessary to maintain clearance.)



BAR d4(E)



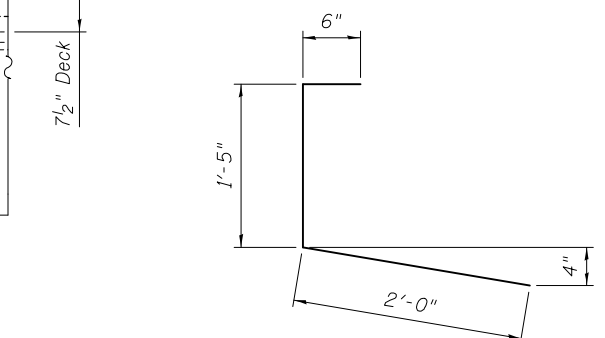
BAR d1(E)



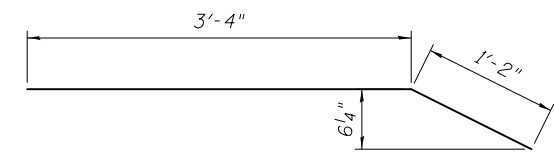
BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
d(E)	84	#5	15'-7"	—	
a1(E)	84	#5	17'-7"	—	
a2(E)	48	#6	4'-0"	—	
d(E)	72	#5	3'-0"	┌	
d1(E)	60	#5	2'-7"	┌	
d2(E)	72	#4	3'-0"	┌	
d3(E)	72	#4	3'-11"	┌	
d4(E)	12	#5	2'-5"	┌	
h(E)	8	#4	6'-4"	—	
h1(E)	6	#4	5'-6"	—	
h2(E)	8	#4	4'-6"	┌	
h3(E)	10	#4	15'-4"	—	
h4(E)	8	#4	17'-4"	—	
u(E)	12	#4	2'-10"	┌	
Reinforcement Bars, Epoxy Coated				Pound	4240
Waterproofing Membrane System				Sq. Yd.	4581
Polymerized HMA Surface Course, Mix "D" N70				Ton	385
Concrete Structures				Cu. Yd.	5.1
Bridge Deck Concrete Sealer				Sq. Ft.	9819
Concrete Superstructure				Cu. Yd.	37.2
Concrete Removal				Cu. Yd.	38.7
Deck Slab Repair (Full Depth, Type II)				Sq. Yd.	100
Deck Slab Repair (Partial)				Sq. Yd.	300



BAR d3(E)



BAR h2(E)

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

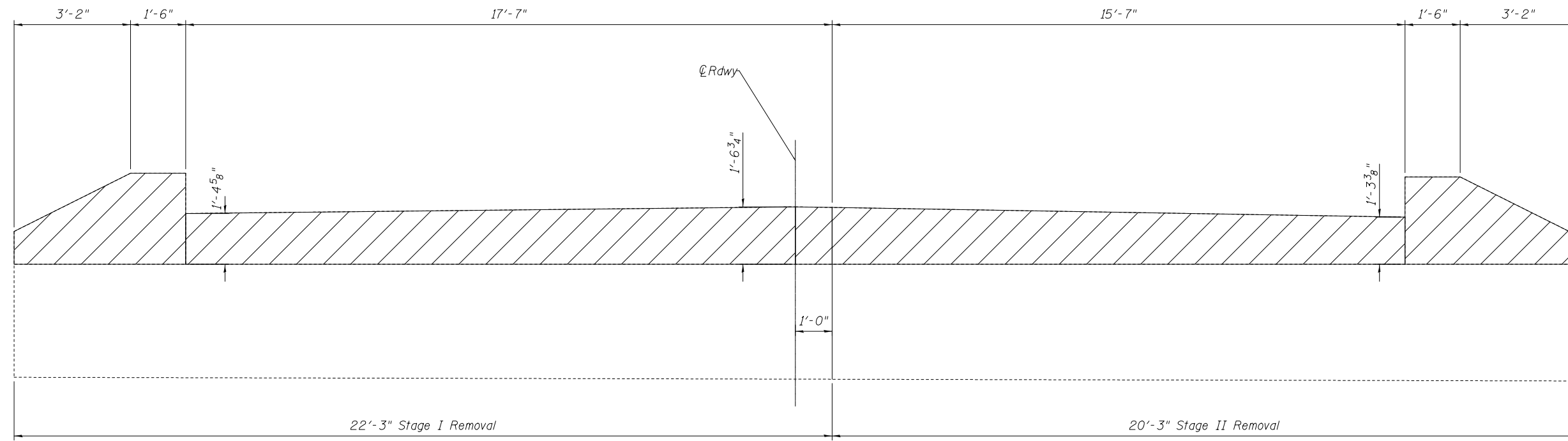
DATE -	REVISED
REVISED	

DATE -	REVISED
REVISED	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

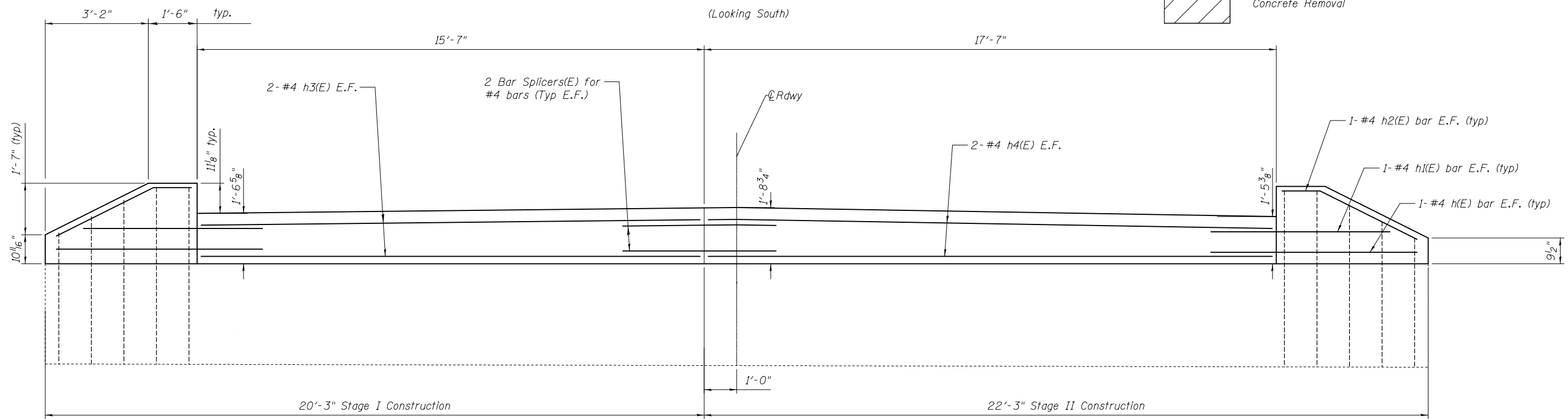
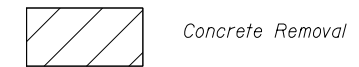
**JOINT DETAILS
SN 042-0017**
SHEET NO. 13 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	22
CONTRACT NO. 76HT6				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL

(Looking South)



CONCRETE REPLACEMENT

(Looking South)

Note:
E.F. = Each Face

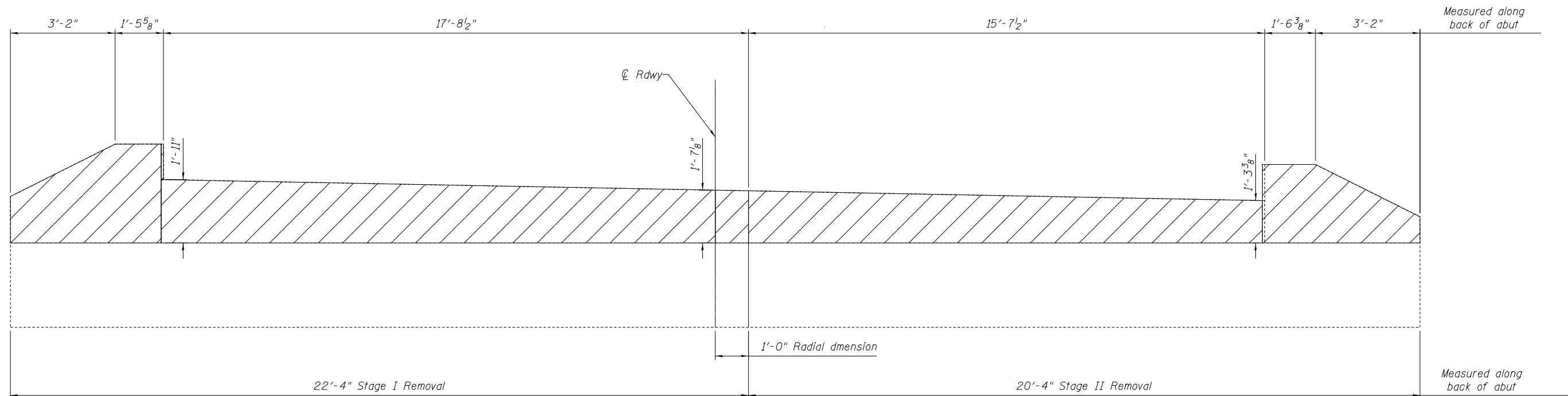
DESIGNED - AYV	EXAMINED _____	DATE - _____
CHECKED - _____	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED _____	REVISED _____
CHECKED - _____	ENGINEER OF BRIDGES AND STRUCTURES	REVISED _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ELEVATION N. ABUTMENT, HATCHBLOCK & WINGWALLS
SN 042-0017**

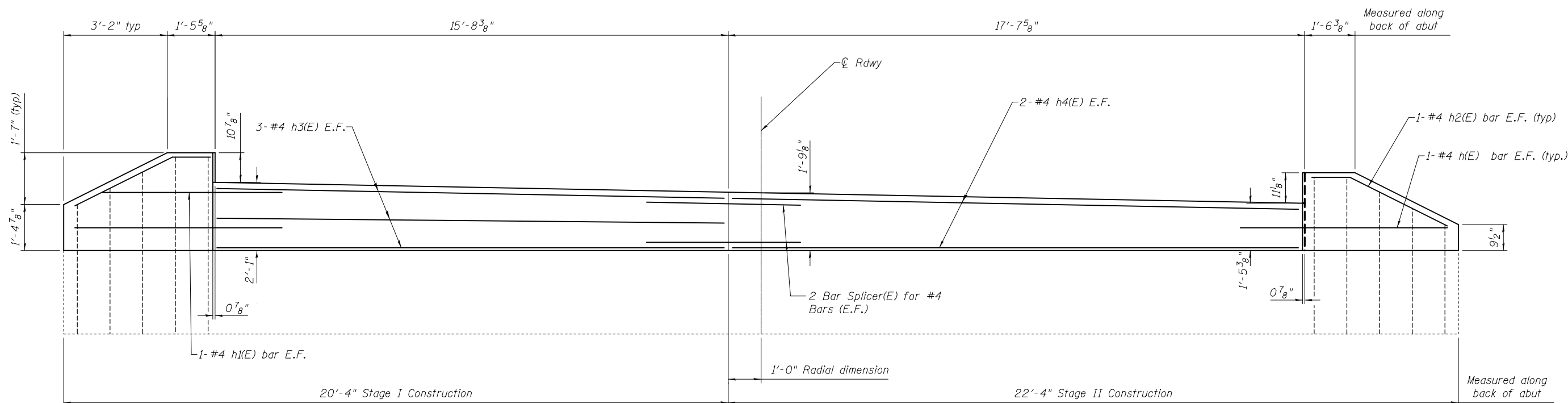
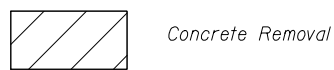
SHEET NO. 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	23
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL

(Looking South)



CONCRETE REPLACEMENT

(Looking South)

Note: E.F. = Each Face

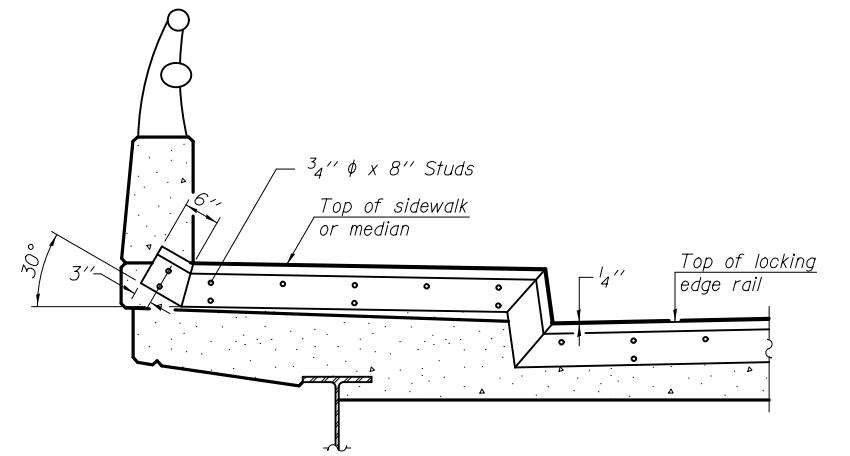
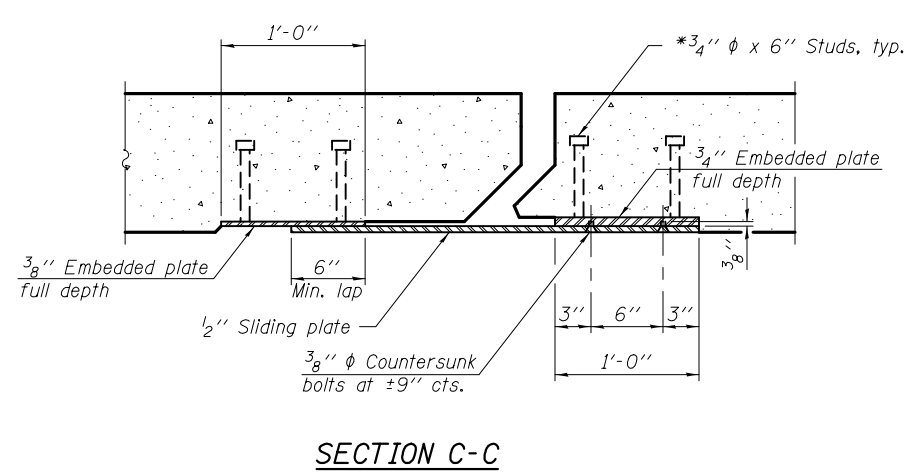
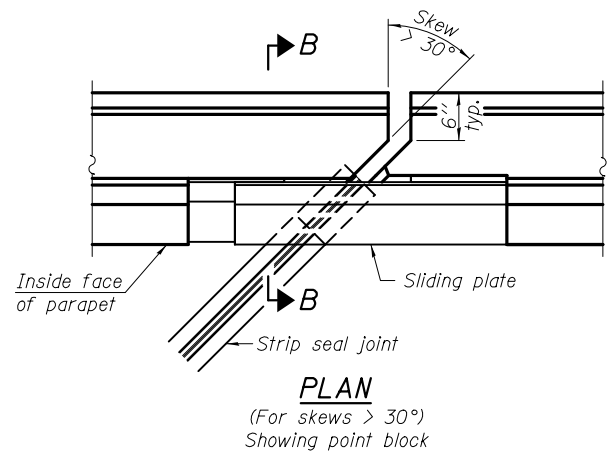
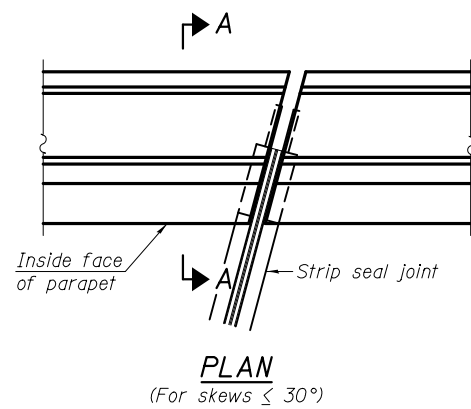
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

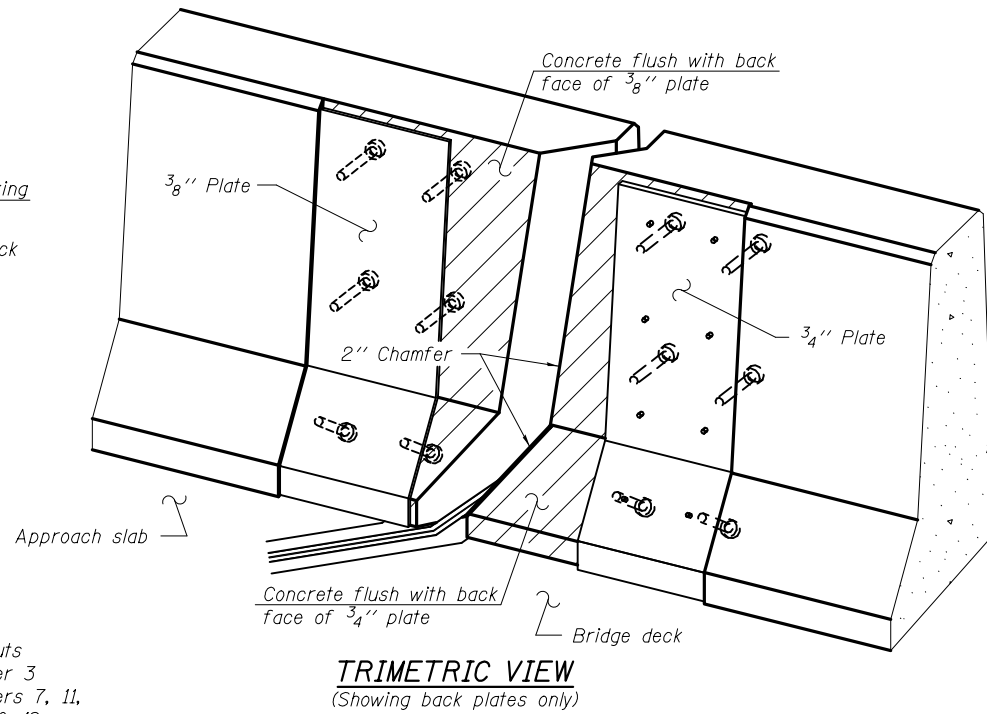
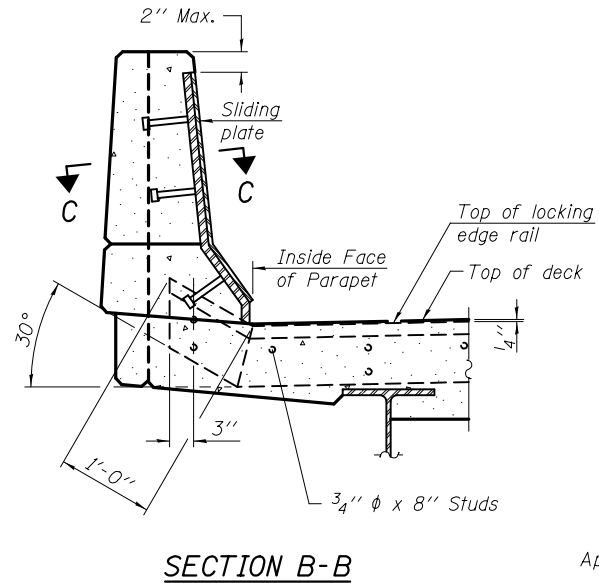
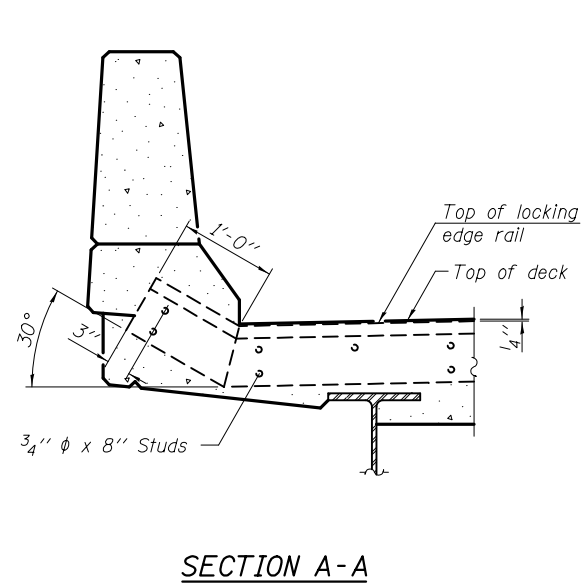
**ELEVATION S. ABUTMENT, HATCHBLOCK & WINGWALLS
SN 042-0017**

SHEET NO. 15 OF 22 SHEETS

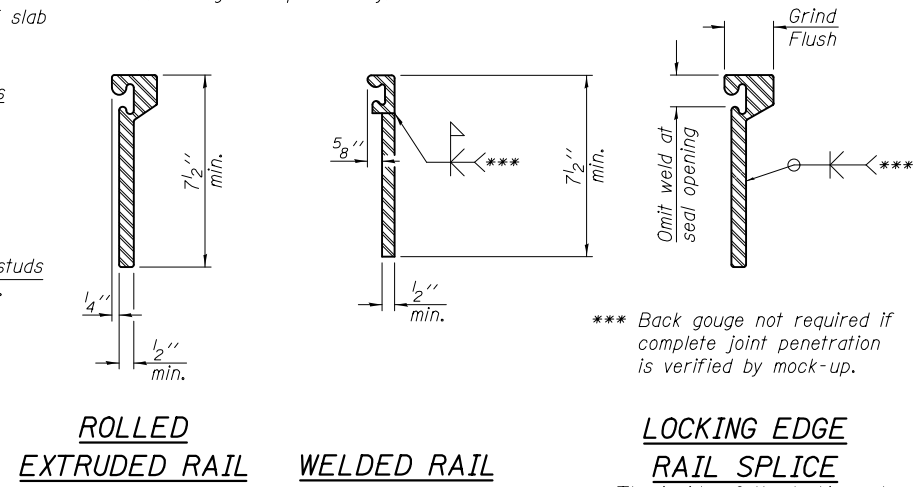
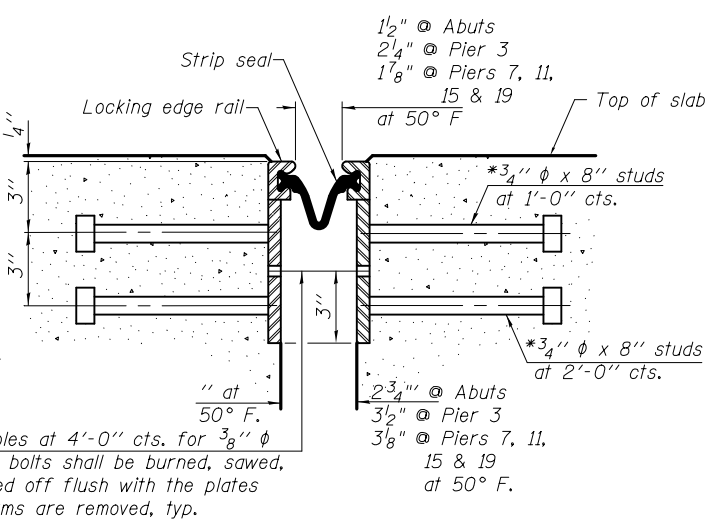
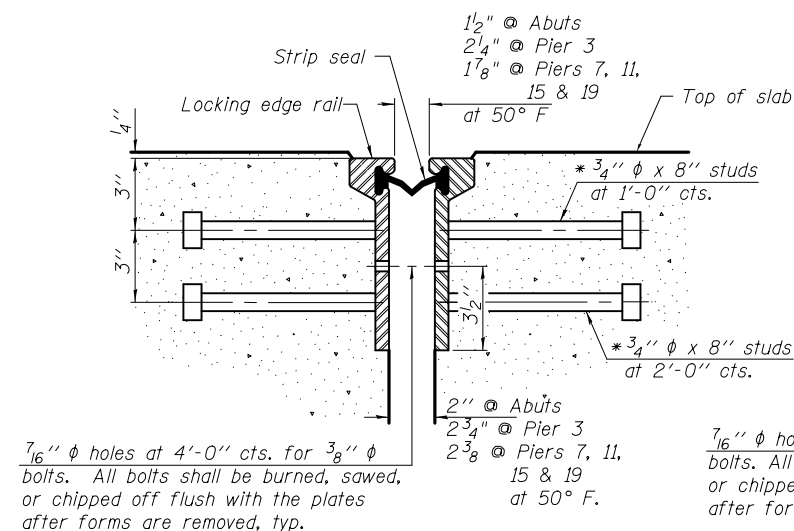
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	24
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



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



Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



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

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

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	239

EJ-SSJ 1-27-12

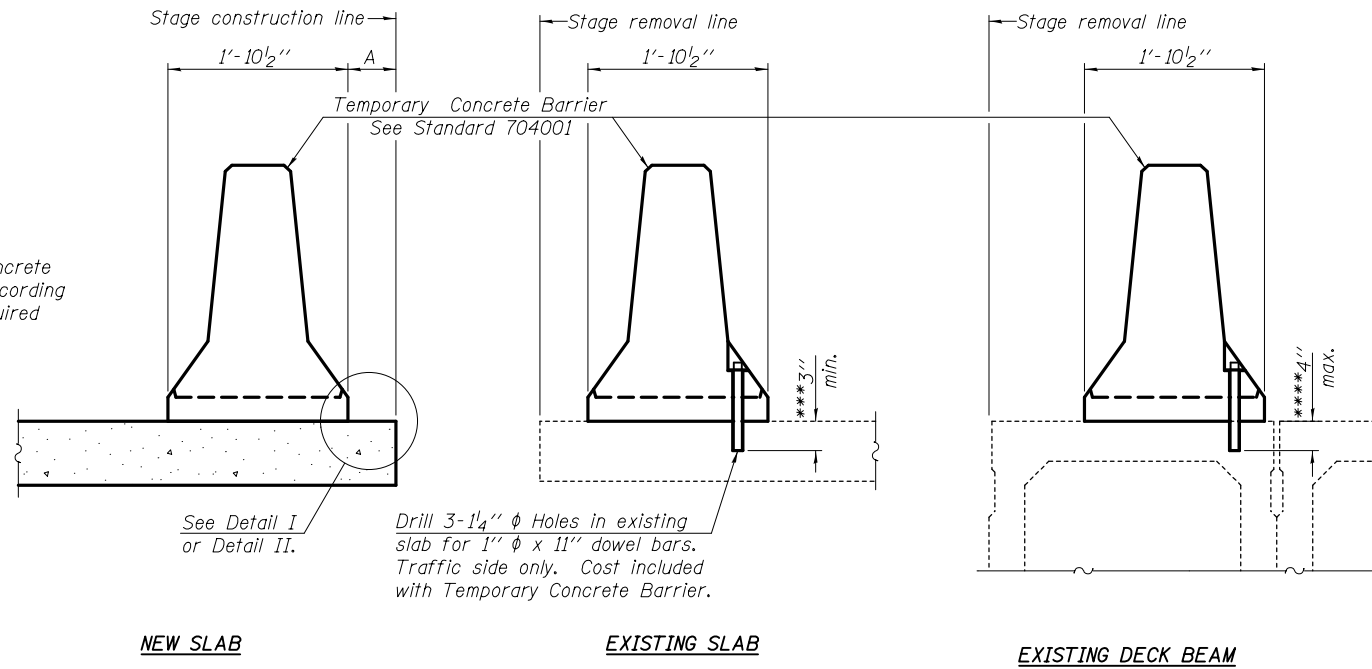
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 042-0017
SHEET NO. 16 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	25
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				

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



SECTIONS THRU SLAB OR DECK BEAM

NOTES

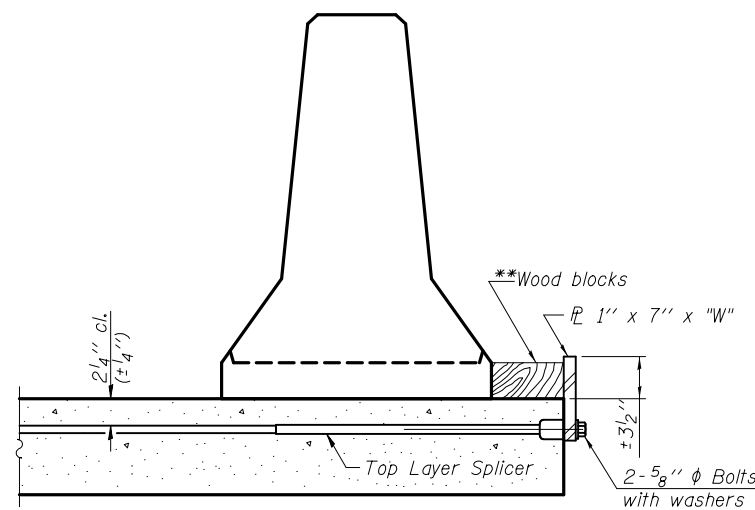
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

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

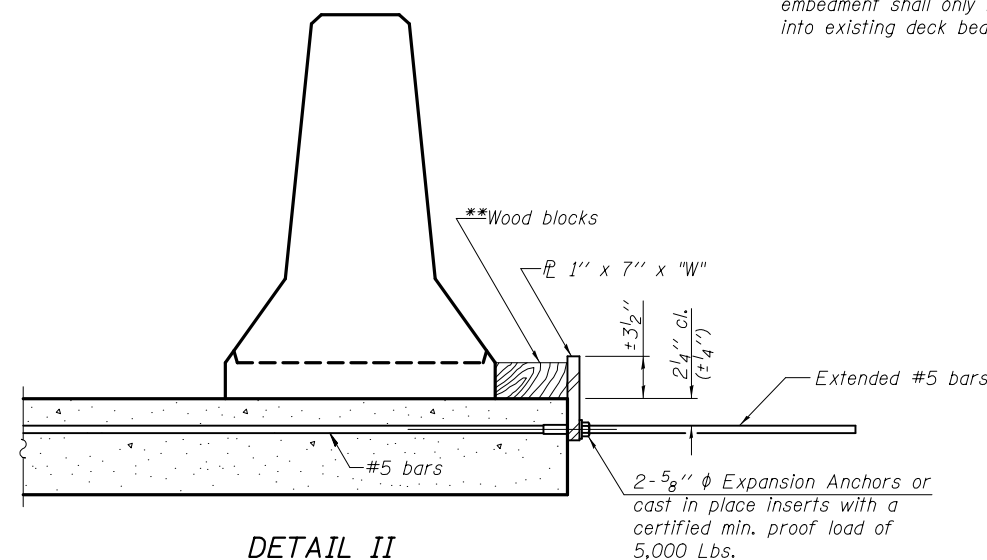
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

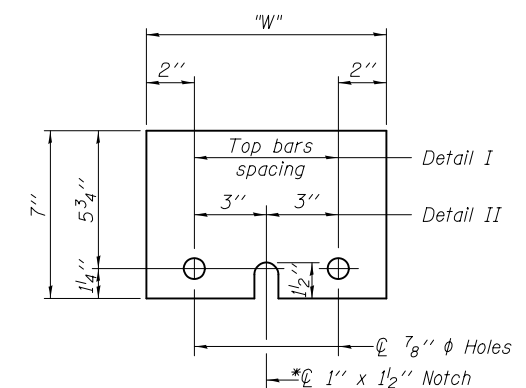
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x "W"

* Required only with Detail II

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

"W" = Top bars spacing + 4"

R-27 7-1-10

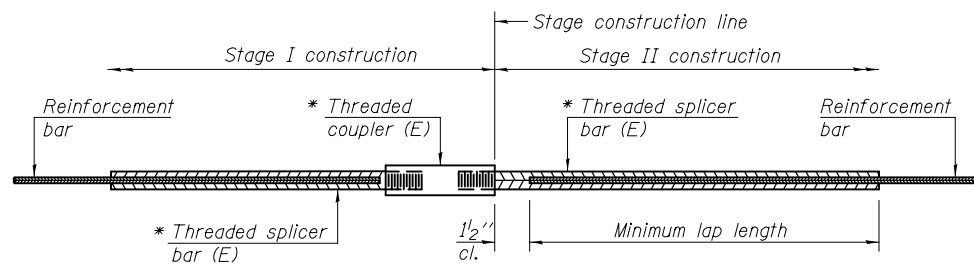
DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 042-0017**

SHEET NO. 17 OF 22 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	26
CONTRACT NO. 76H76				
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

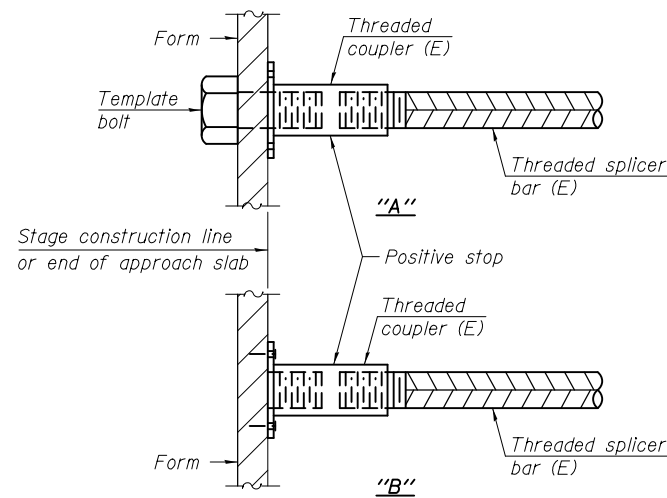
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

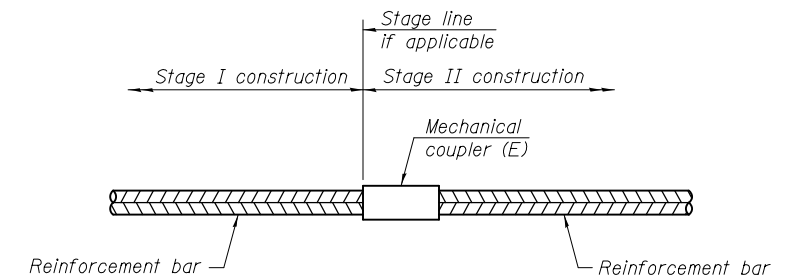
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
N Abut (Hatchblock)	#4	4	3
N Abut (Deck)	#5	7	3
Pier 3	#5	14	3
Pier 7	#5	14	3
Pier 11	#5	14	3
Pier 15	#5	14	3
Pier 19	#5	14	3
S Abut (Deck)	#5	7	3
S Abut (Hatchblock)	#4	4	3



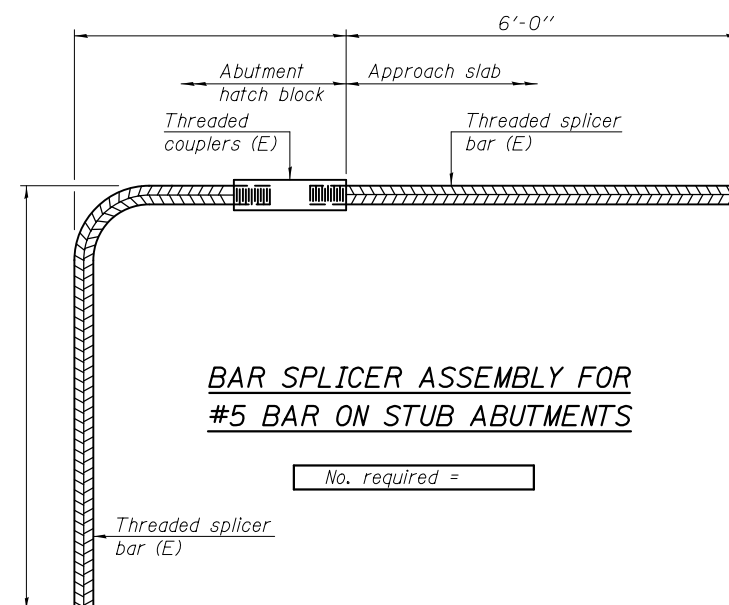
INSTALLATION AND SETTING METHODS

- "A" : Set bar splicer assembly by means of a template bolt.
- "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
- (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NOTES

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

8-31-12

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

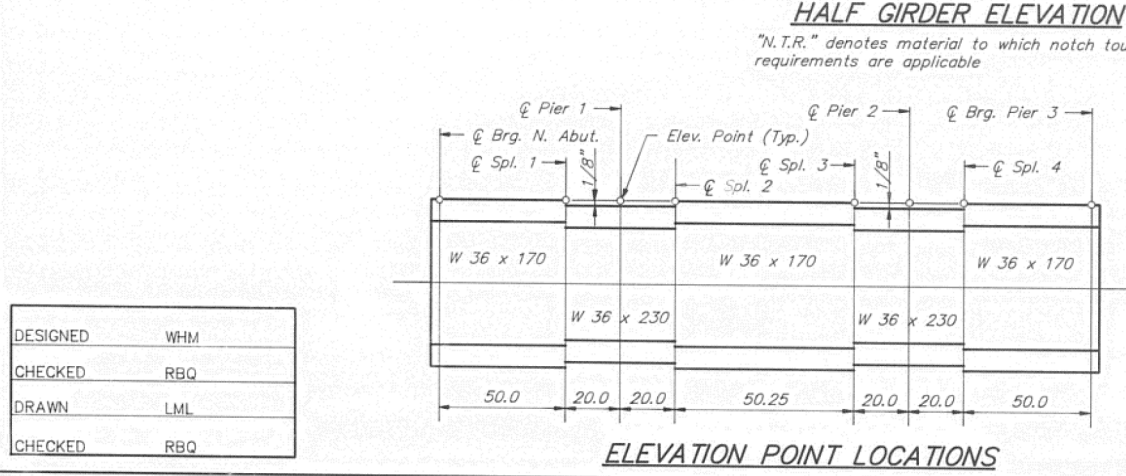
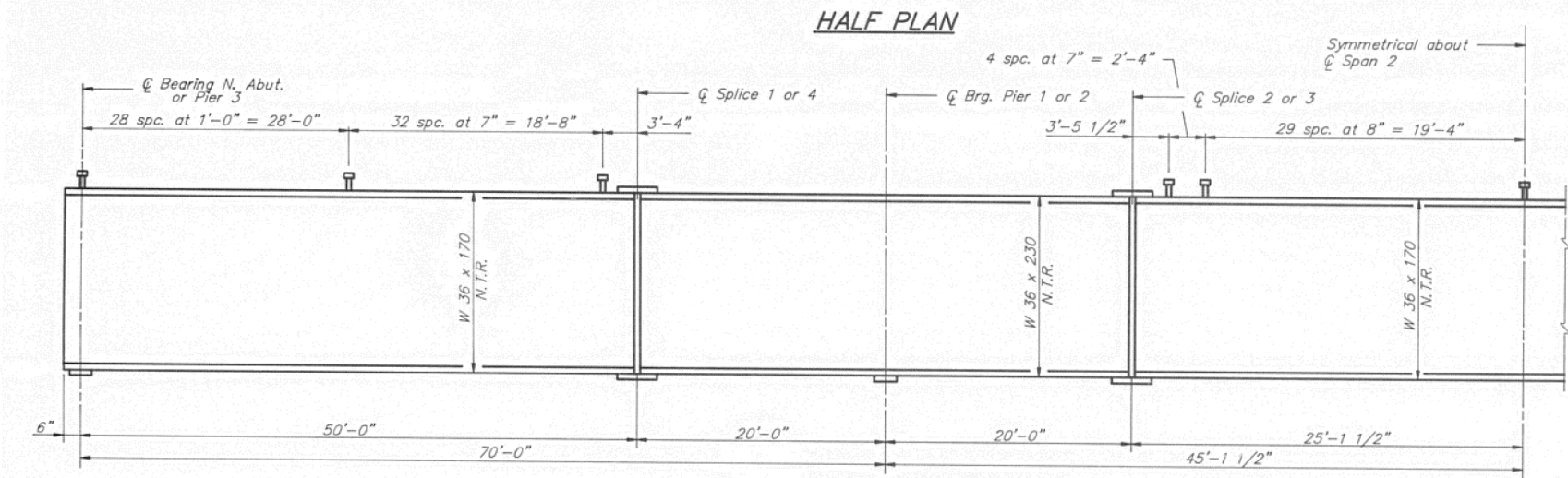
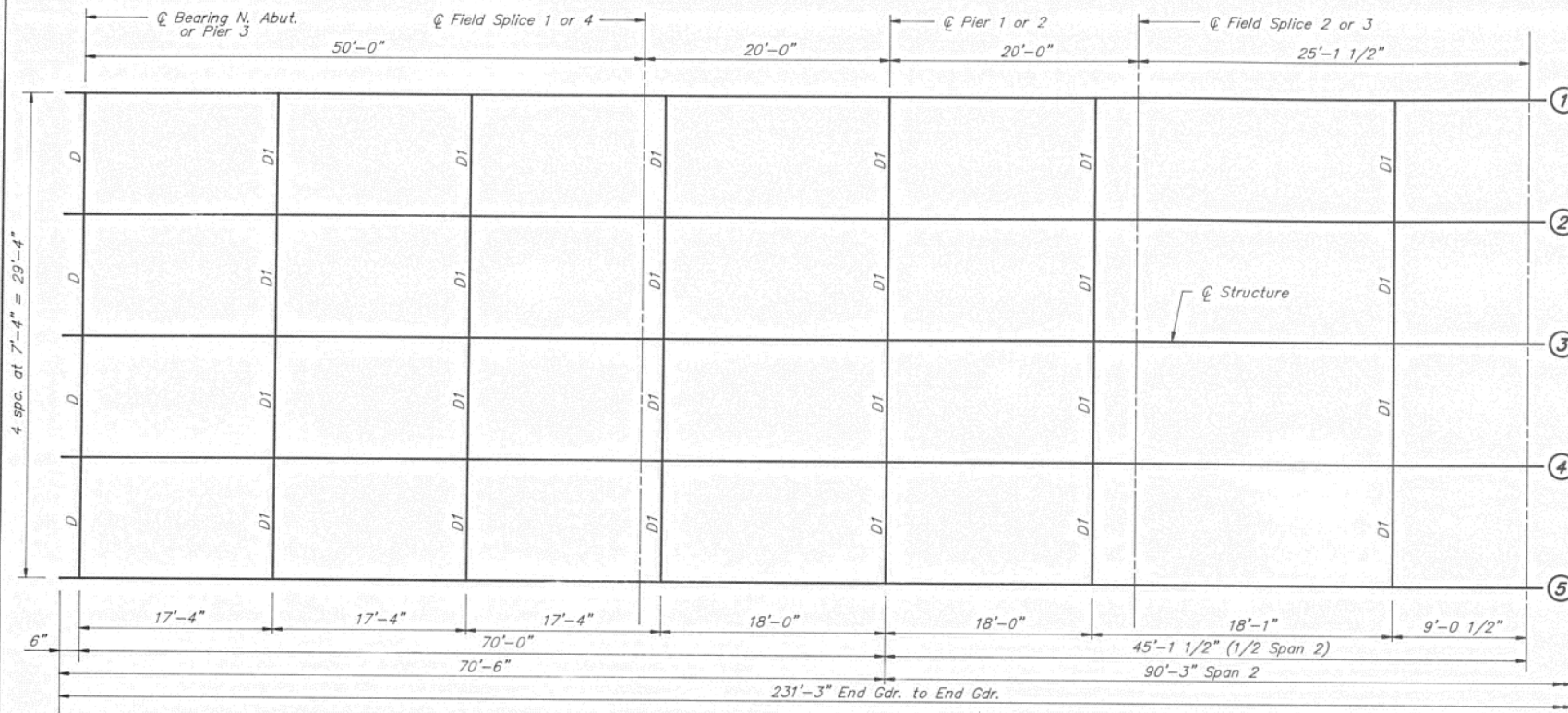
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 042-0017

SHEET NO. 18 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREEN	31	27
CONTRACT NO. 76H76				

ILLINOIS FED. AID PROJECT

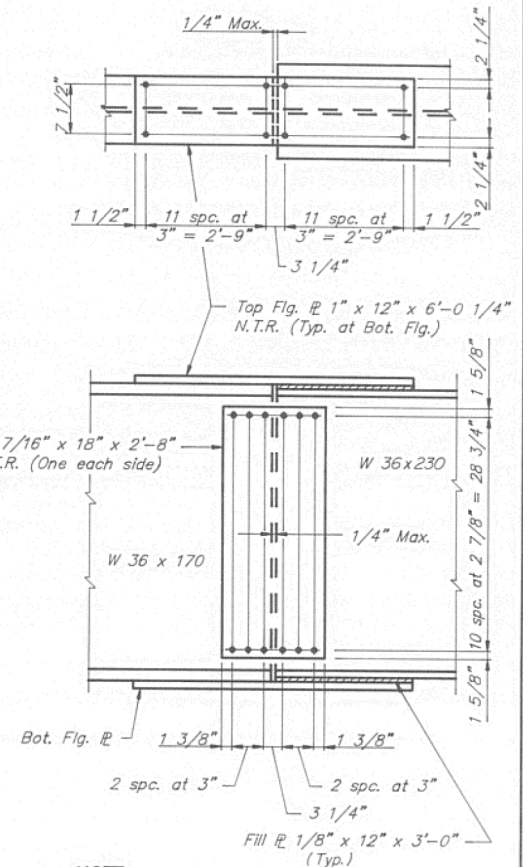
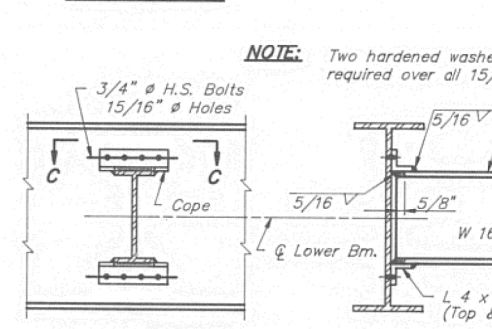
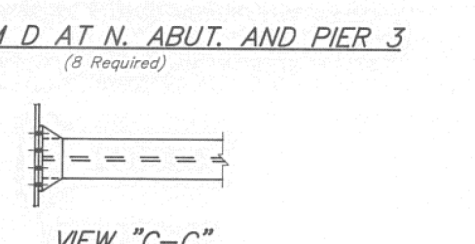
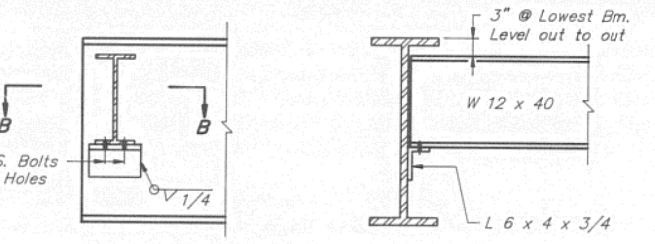
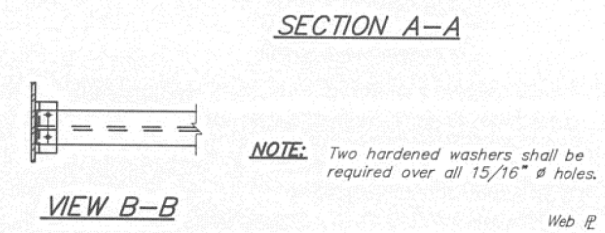
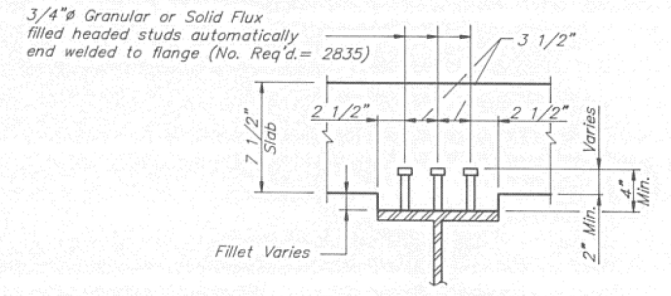
SHEET 19 OF 31	ROUTE NO. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	10 411BR-1	* JERSEY	31	28
	FED. ROAD DIST. NO. 8	ILLINOIS	FED. AID PROJ.	
	* GREENE & JERSEY			



FOR INFORMATION ONLY

ELEVATION OF TOP OF BEAMS (See Elev. Point Location Detail)

BEAM NO.	BRG. N. ABUT.	SPLICE #1	PIER #1	SPLICE #2	SPLICE #3	PIER #2	SPLICE #4	BRG. PIER #3
1	491.148	491.283	490.337	491.391	491.526	491.580	491.634	491.769
2	.268	.403	.457	.511	.646	.700	.754	.889
3	.308	.445	.500	.555	.692	.747	.802	.939
4	.268	.403	.457	.511	.646	.700	.754	.889
5	.148	.283	.337	.391	.526	.580	.634	.769



NOTE: Two hardened washers shall be required over all 15/16" Holes.

NOTE: All flange bolts are 7/8" High Strength Bolts with 15/16" Holes. All web bolts are 3/4" High Strength Bolts with 13/16" Holes.

FIELD SPLICE DETAIL

Typical for all Splices (20 Req'd.) Total weight per splice = 770 lbs.

DESIGNED	WHM
CHECKED	RBQ
DRAWN	LML
CHECKED	RBQ

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISOR
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR

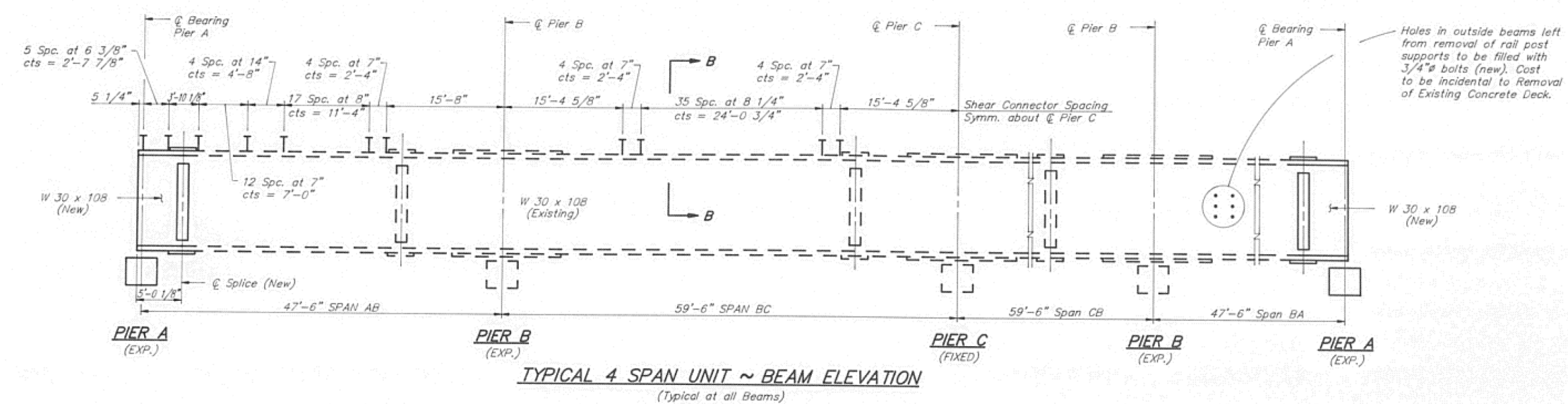
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY-STRUCTURAL STEEL DETAILS (SPANS 1, 2 & 3)
SN 042-0017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
STRUCTURAL STEEL DETAILS
SPANS 1, 2 AND 3
U.S. 67 OVER MACOUPIN CREEK
F.A. RTE. 10(U.S. 67) SECTION 411-BR
GREENE AND JERSEY COUNTIES
STA. 180+83.00
STRUCTURE NUMBER 042-0017

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREENE	31	28
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76HT6	

SHEET 20 OF 31	ROUTE NO. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	10 411-BR	* ILLINOIS	47	36
FED. ROAD DIST. NO. 8		ILLINOIS	FED. AID PROJ.	
		* GREENE & JERSEY		



INTERIOR BEAM REACTIONS (KIPS)

SPANS 1, 2 AND 3					
LD.	LOC.	N. ABUT.	PIER 1	PIER 2	PIER 3
R Dead Ld.		30.5	111.5	111.5	30.5
R Live Ld.		45.3	61.8	61.8	45.3
Impact		10.9	14.8	14.8	10.9
R Total		86.7	188.1	188.1	86.7

SPANS 4 THRU 23 : All End Reactions

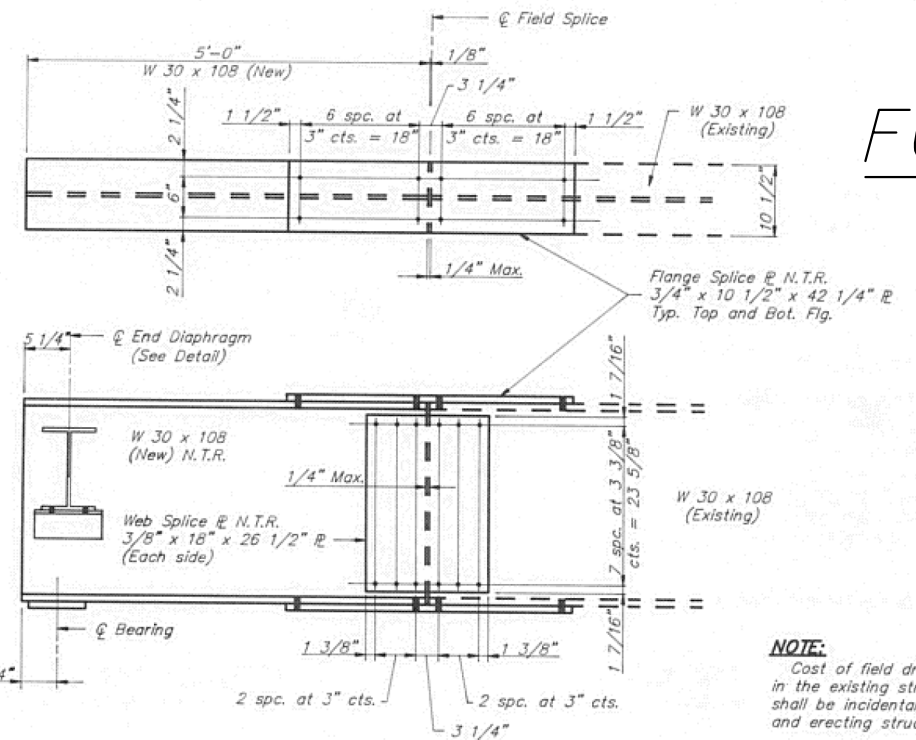
R Dead Ld.	= 19.9
R Live Ld.	= 42.0
Impact	= 11.7
R Total	= 73.6

INTERIOR BEAM MOMENT TABLES

SPANS 1, 2 AND 3 (SYMMETRICAL)

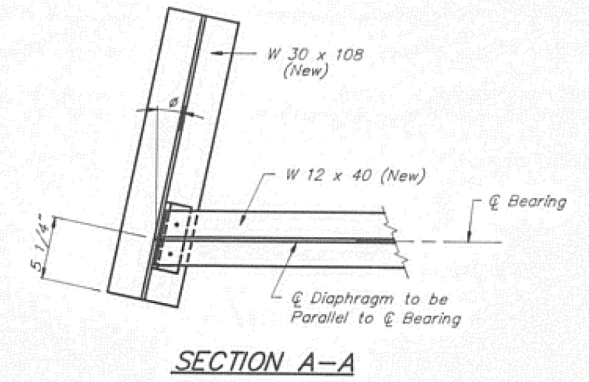
	0.4 Sp.1	PIER 1	0.5 Sp.2
Is (in. 4)	10500	15000	10500
Ic (in. 4)	23957	—	23957
Ss (in. 3)	580	837	580
Sc (in. 3)	790	—	790
Q (k/.)	0.887	0.953	0.887
M @ (k)	270	642	275
fs non-comp (k.s.i.)	5.59	9.20	5.68
S @ (k/.)	0.323	—	0.323
Ms @ (k)	109	204	125
M @ (k)	550	424	605
M imp (k)	132	102	145
Total (k)	791	730	875
fs comp. (k.s.i.)	12.18	10.47	13.49
fs Total (k.s.i.)	17.77	19.66	19.17
VR (K)	55.7	—	58.6

FOR INFORMATION ONLY



DIAPHRAGM ANGLE ϕ

PIER	SPAN	ϕ
3	4	0°00'
7	7	0°00'
11	11	0°00'
	12	0°43'35"
15	15	0°43'35"
	16	2°47'01"
19	19	2°47'01"
	20	4°43'08"



TYPICAL 4 SPAN UNIT (SYMMETRICAL)

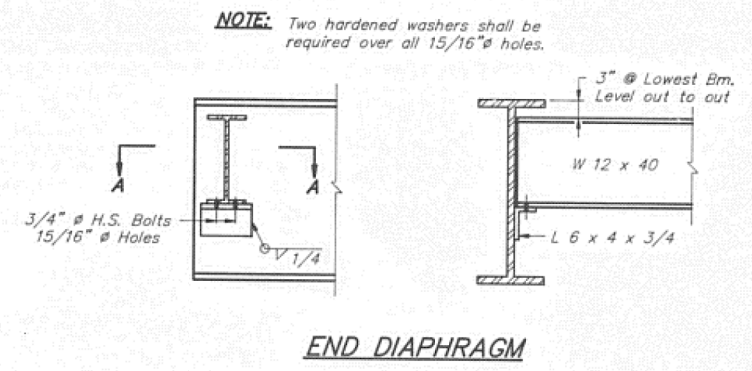
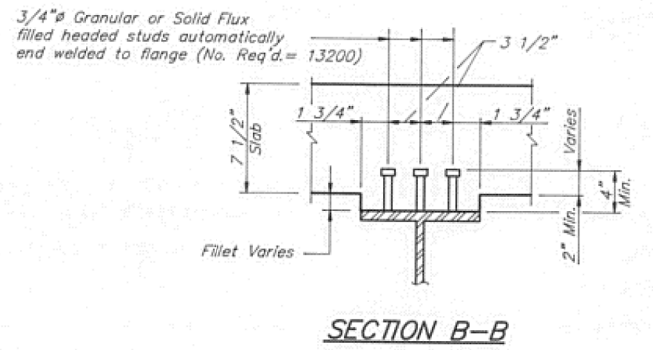
	0.4 Sp.1 AB @ PIER B	0.5 Sp.2 BC @ PIER C
Is (in. 4)	4461	7501
Ic (in. 4)	11973	—
Ss (in. 3)	299	481
Sc (in. 3)	439	—
Q (k/.)	0.819	0.867
M @ (k)	119	258
fs non-comp (k.s.i.)	4.76	6.44
S @ (k/.)	0.323	—
Ms @ (k)	53	87
M @ (k)	323	221
M imp (k)	91	62
Total (k)	467	370
fs comp. (k.s.i.)	12.92	9.23
fs Total (k.s.i.)	17.68	15.67
VR (K)	53.0	—

NOTE: Cost of field drilling of holes in the existing structural steel shall be incidental to furnishing and erecting structural steel.

NOTE: All field splice flange bolts are 7/8" ϕ High Strength Bolts with 15/16" ϕ holes. All field splice web bolts are 3/4" ϕ High Strength Bolts with 13/16" ϕ holes. "N.T.R." denotes material to which notch toughness requirements are applicable

BEAM END REPLACEMENT AND FIELD SPLICE
(45 Field Splices required at 367 Lb. per splice)

DESIGNED	WHM
CHECKED	RBQ
DRAWN	LML
CHECKED	RBQ

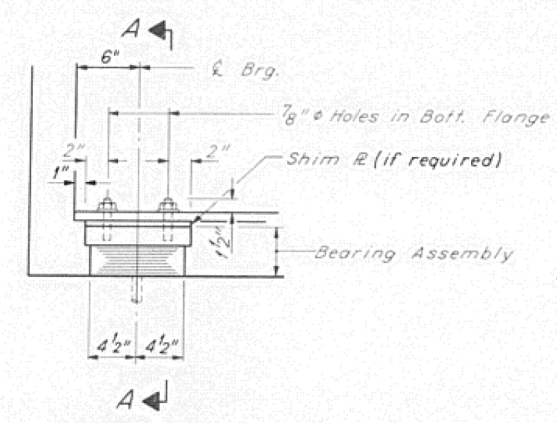


NOTE: The Beam End Replacement and new End Diaphragms as detailed on this sheet are required at all ends of beams in Spans 4 thru 23 with the exception that no replacement of beam ends or diaphragms is required at S. Abutment.

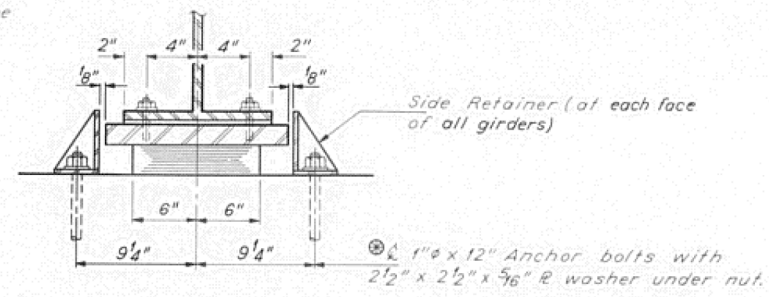
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total)
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total)
VR is the maximum ℓ + Impact shear range in span.
Structure is composite in positive moment regions only.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
STRUCTURAL STEEL DETAILS
SPANS 4 THRU 23
U.S. 67 OVER MACOUPIN CREEK
F.A. RTE. 10(U.S. 67) SECTION 411-BR
GREENE AND JERSEY COUNTIES
STA. 180+83.00
STRUCTURE NUMBER 042-0017

SHEET 24 OF 31	ROUTE NO 10	SECTION 411-BR	COUNTY *	TOTAL SHEETS 47	SHEET NO. 40
FED. ROAD DIST. NO. B		ILLINOIS	FED. PROJ.		
* GREENE & JERSEY					

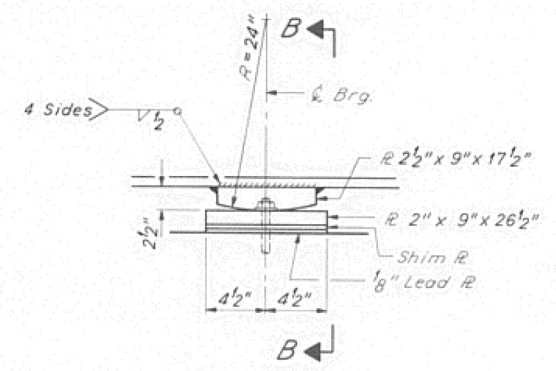


ELEVATION AT ABUT.

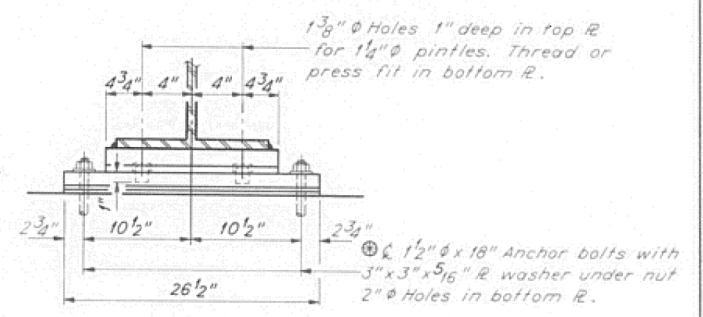


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
Used at N. Abut. ~ 5 Req'd.

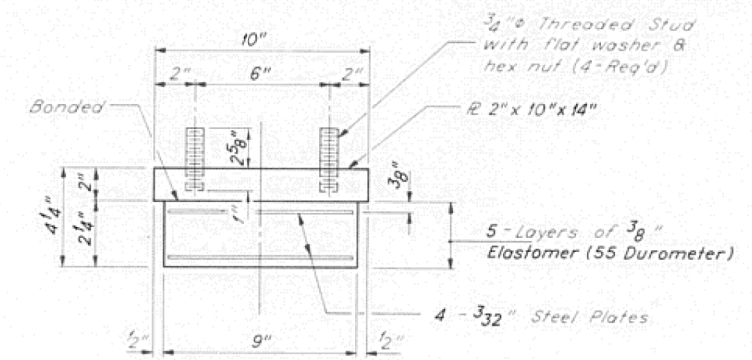


ELEVATION AT PIER



SECTION B-B

FIXED BEARING
Used at Pier 1 ~ 5 Req'd.

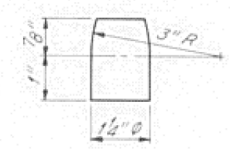


BEARING ASSEMBLY

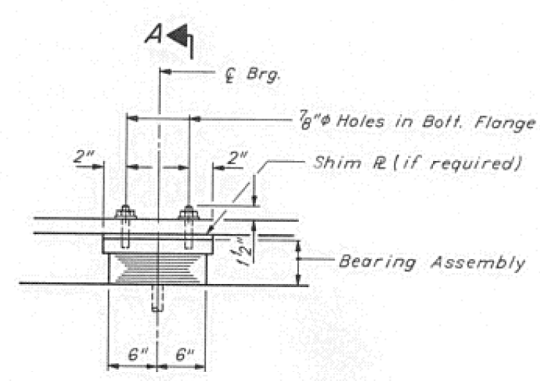
Note: Shim plates shall not be placed under Bearing Assembly.

Note: See sheet # 31 for Anchor Bolt installation.

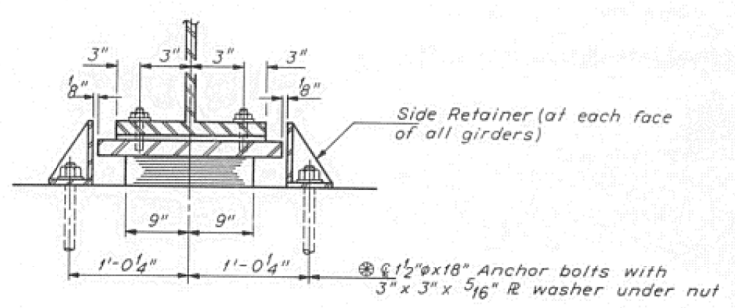
FOR INFORMATION ONLY



PINTLE

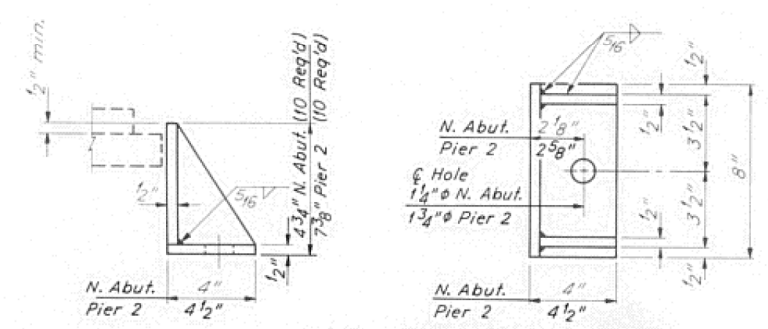


ELEVATION AT PIER



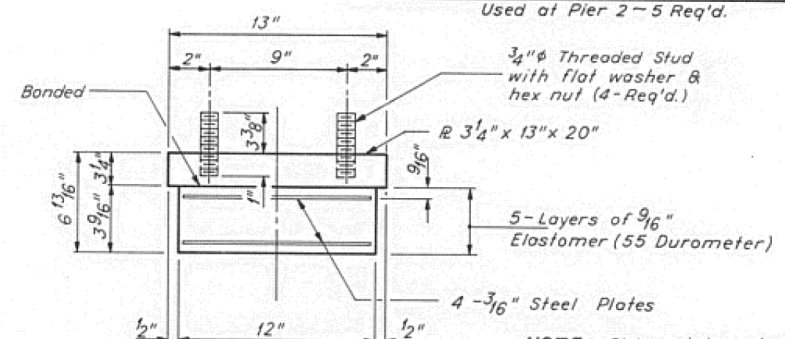
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
Used at Pier 2 ~ 5 Req'd.



SIDE RETAINER

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



BEARING ASSEMBLY

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIXED BEARING ASSEMBLY AND
TYPE I BEARING ASSEMBLY
U.S. 67 OVER MACOUPIN CREEK
F.A. RTE. 10 (U.S. 67) SECTION 411-BR
GREENE AND JERSEY COUNTIES
STA. 180+83.00
STRUCTURE NUMBER 042-0017

DESIGNED	WHM
CHECKED	RBQ
DRAWN	P. Ray
CHECKED	PLH

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

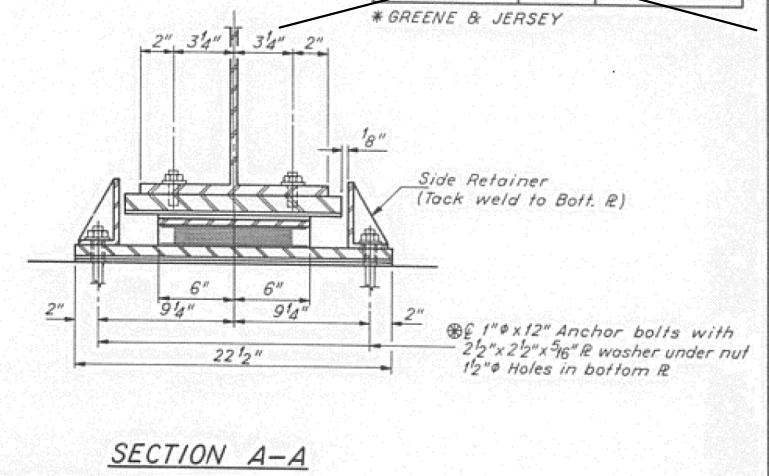
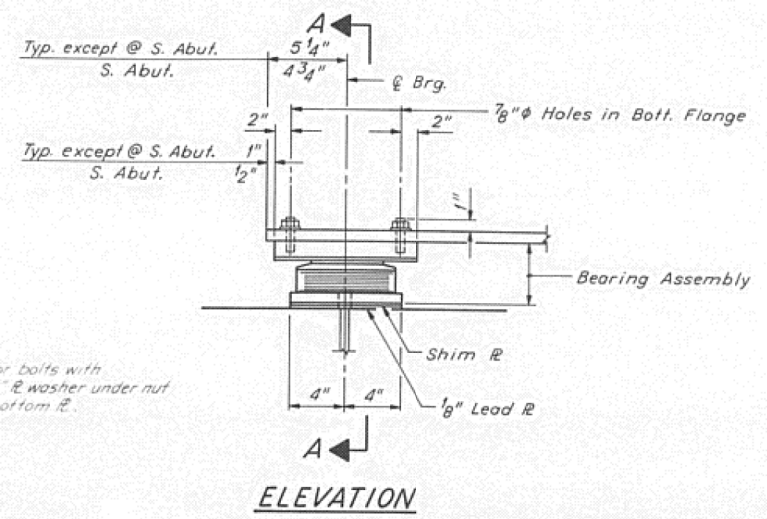
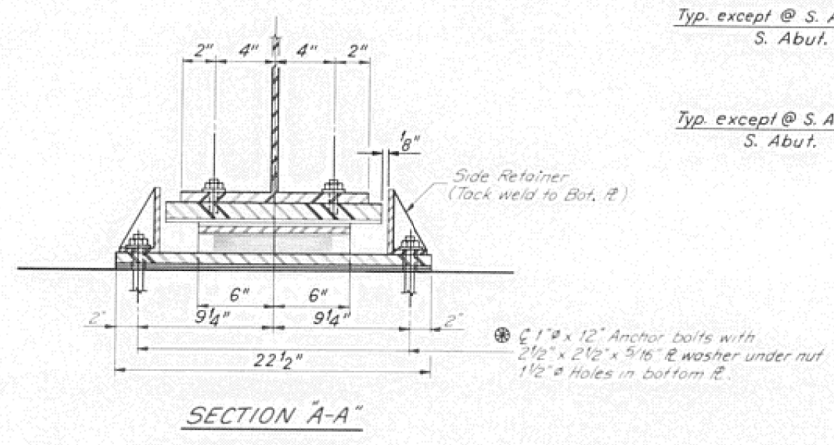
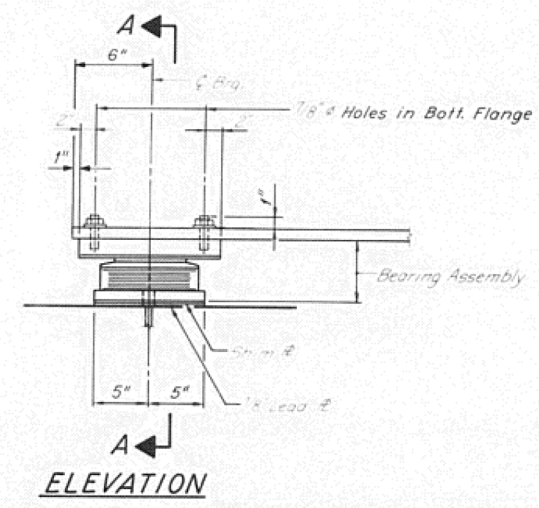
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY- TYPE I BEARINGS
SN 042-0017

SHEET NO. 21 OF 22 SHEETS

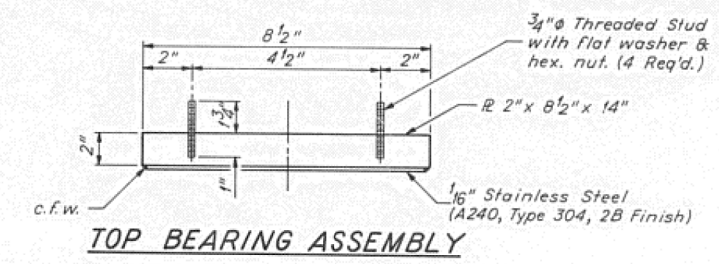
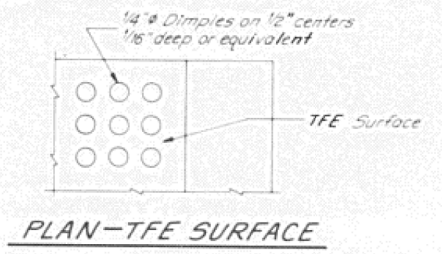
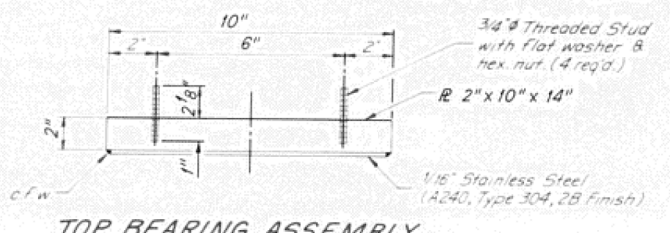
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREENE	31	30
CONTRACT NO. 76HT6				
ILLINOIS FED. AID PROJECT				

SHEET 25 OF 31	ROUTE NO. 10	SECTION 411-BR	COUNTY *	TOTAL SHEETS 47	SHEET NO. 41
			FED. DIST. NO. 8	ILLINOIS FED. AID PROJ.	
* GREENE & JERSEY					

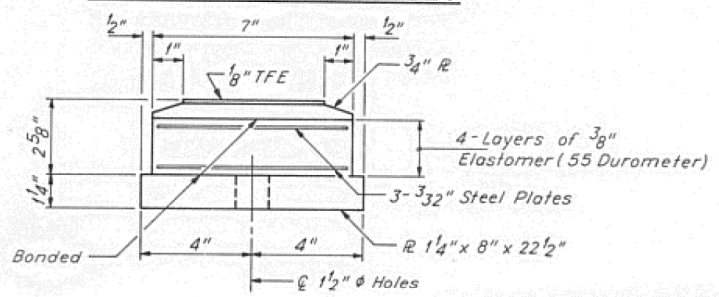
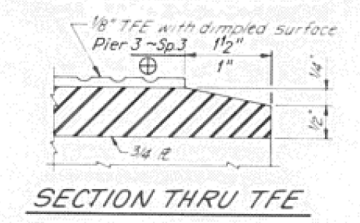
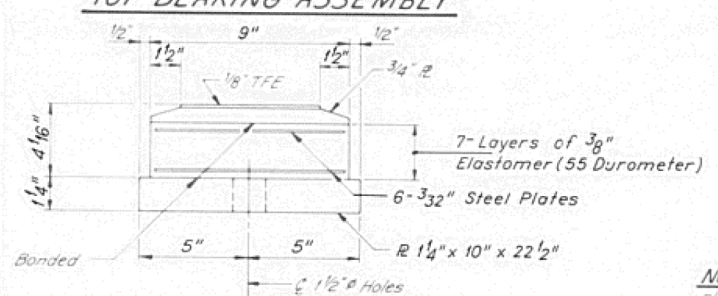


TYPE II TFE ELASTOMERIC EXP. BRG.
Used at Pier 3 in Span 3 - 5 Req'd

TYPE II TFE ELASTOMERIC EXP. BRG.
Used at Piers 3, 7, 11, 15, 19 & S. Abut. - 50 Req'd



NOTE:
See Sheet # 31 for Anchor Bolt installation.

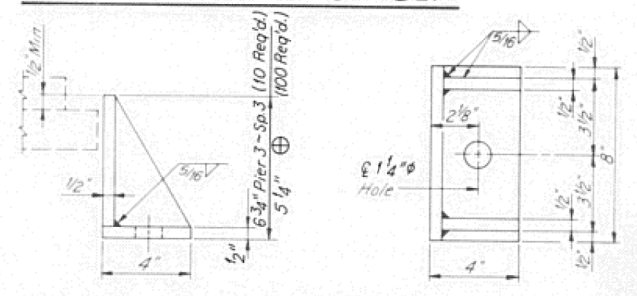


BILL OF MATERIAL

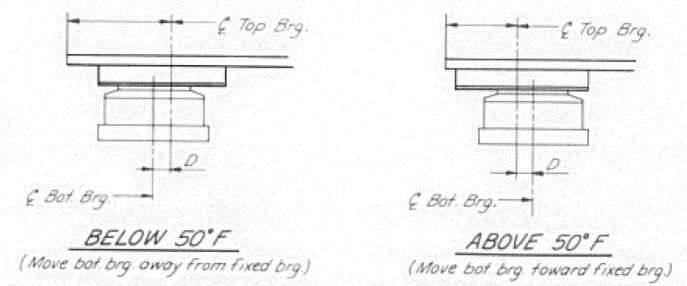
ITEM	UNIT	TOTAL
Elastomeric Bearing Assembly Type II	Each	55

NOTE: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



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



D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. 50°F.

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPE II BEARING ASSEMBLY
U.S. 67 OVER MACOUPIN CREEK
F.A. RTE. 10 (U.S. 67) SECTION 411-BR
GREENE AND JERSEY COUNTIES
STA. 180+83.00
STRUCTURE NUMBER 042-0017

DESIGNED	WHM
CHECKED	RBQ
DRAWN	Volk & P. Ray
CHECKED	PLH

DESIGNED - AYV	EXAMINED	DATE -
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY - TYPE II BEARINGS
SN 042-0017

SHEET NO. 22 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10	411BR-1	JERSEY-GREENE	31	31
			CONTRACT NO. 76H76	
ILLINOIS FED. AID PROJECT				