F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	1
	ILLINOIS	CONTRACT NO. 76L36		

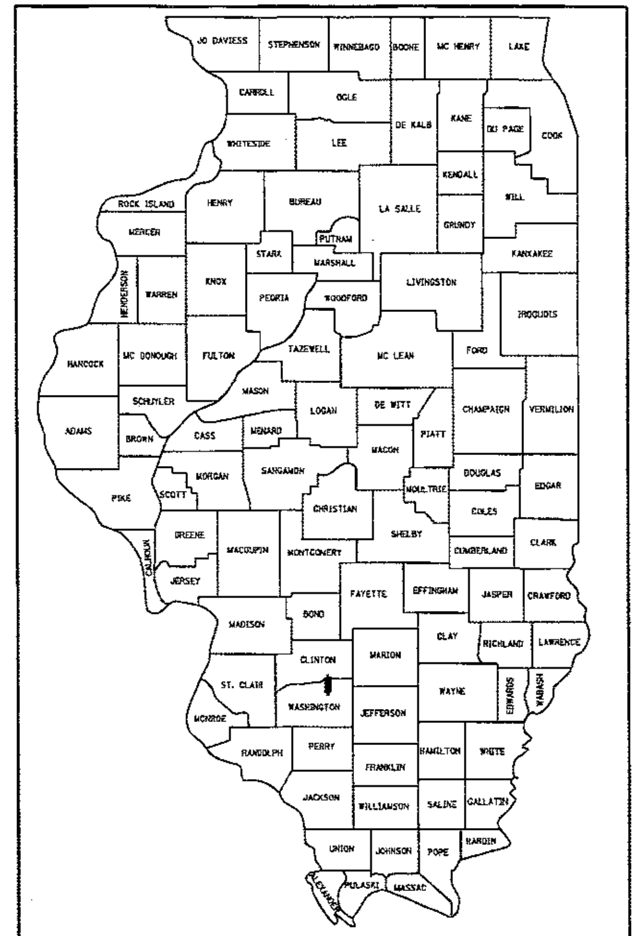
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 42 (IL RTE. 127)
SECTION 1B–R–1
PROJECT STP–V1XD(878)
BRIDGE REPAIR, JOINT REPAIR & DECK WATERPROOFING
WASHINGTON COUNTY

FOR INDEX OF SHEETS AND
LIST OF HIGHWAY STANDARDS
SEE SHEET NO. 2

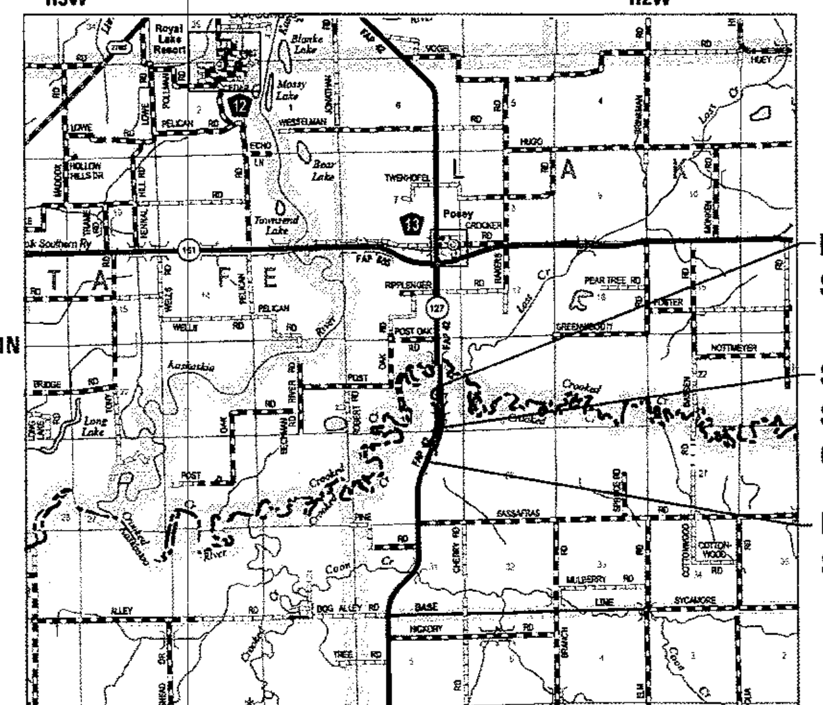
D–98–047–18



LOCATION OF SECTION INDICATED THUS:–

C–98–190–18

R3W   R2W   T1N



- BEGIN SECTION 1B–R–1
  STATION 396 + 77.00
- STATION 402 + 51.23, IL RTE. 127
  STRUCTURE OVER CROOKED CREEK
  OVERFLOW, SN 095–0023
- END SECTION 1B–R–1
  STATION 408 + 26.34

LOCATION MAP

0 0.5 1 2 3
1 IN. = 1 MILE

GROSS LENGTH = 1149.34 FT. = 0.218 MILE
NET LENGTH = 1149.34 FT. = 0.218 MILE

FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL
2017 ADT:	2700 (ACTUAL)
2037 ADT:	3200 (EST)
MU:	10%
SU:	7%

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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

LICENSED PROFESSIONAL ENGINEER
CINDY TRAVIS MUELLER
062-046699
OF ILLINOIS

Cindy Travis Mueller 1/17/18
CINDY TRAVIS MUELLER, P.E. DATE
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 062–046699
EXPIRES: 11–30–2019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan 22 20 18
Jeffrey L. Ke... REGIONAL ENGINEER
Mar 23 20 18
E. A. E... ENGINEER OF DESIGN AND ENVIRONMENT
Mar 23 20 18
Paul ... DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER TIM PADGETT (618) 346–3325
PROJECT MANAGER MESERET SIMA (618) 346–3141

CONTRACT NO. 76L36

INDEX OF SHEETS

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND A FOOT
701201-04	LANE CLOSURE, 2 LANE, 2 WAY, DAY ONLY, FOR SPEEDS ≥45 MPH
701301-04	LANE CLOSURE, 2 LANE, 2 WAY, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2 LANE, 2 WAY, SLOW MOVING OPERATIONS, DAY ONLY, FOR SPEEDS ≥45 MPH
701311-03	LANE CLOSURE, 2 LANE, 2 WAY, MOVING OPERATIONS, DAY ONLY
701321-17	LANE CLOSURE, 2 LANE, 2 WAY, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2 LANE, 2 WAY, PAVEMENT WIDENING FOR SPEEDS ≥45 MPH
701901-07	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE	POLY SURFACE	BASE CSE WIDE
AC/PG	SBS PG 76-22	PG 64-22
RAP %(MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=70
MIX COMPOSITION (GRADATION)	IL 9.5	IL 19.0
FRICTION AGG	MIXTURE "D"	
QUALITY MGMT PROGRAM	QC/QA	QC/QA

MIXTURE USE	SHOULDERS ≥ 2.25"	SHOULDERS < 2.25"
AC/PG	PG 64-22	PG 64-22
RAP %(MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0% @ Ndes=30	4.0% @ Ndes=30
MIX COMPOSITION (GRADATION)	IL 19.0L	IL 9.5L
FRICTION AGG		
QUALITY MGMT PROGRAM	QC/QA	QC/QA

PLAN QUANTITIES FOR BITUMINOUS CONCRETE SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LBS/SQ YD/IN (59.8 KG/SQ M/25 MM THICKNESS)

GENERAL NOTES

1. 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:

	ABOVE GROUND	BELOW GROUND
•TRI-COUNTY ELECTRIC COOPERATIVE, INC.	X	X

MEMBERS OF J.U.L.I.E. (800)-892-0123 OR 811 ARE INDICATED BY •. NON J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

2. THE CONTRACTOR AND ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING AND TOPOGRAPHY SHOWN IN THE PLANS WERE CREATED USING RECORD PLANS AND FIELD MEASUREMENTS MADE BY DESIGN PERSONNEL. BOTH SHALL BE ASSUMED TO BE APPROXIMATE.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
4. THE THICKNESS OF THE BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
5. THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKINGS, AS DIRECTED BY THE ENGINEER.
6. THE HMA OVERLAY ON THE BRIDGE APPROACH SHOULDER PAVEMENT SHALL BE HAND GRADED TO PROMOTE DRAINAGE INTO THE EXISTING INLET GRATES AT NO ADDITIONAL COST TO THE CONTRACT.

COMMITMENTS

NONE

FILE NAME = P:\Projects\634400 - PTB 176-19 08 Var Ph I and II\634405 - WO 4\CADD\CADD Drawings\CADD Sheets\08761.36-sht-Indexof shts&gennote.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND GENERAL NOTES

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	2
		CONTRACT NO. 76L36		
	ILLINOIS	FED. AID PROJECT		

			80% FED 20% STATE	CONSTR. CODE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0047 RURAL
20200600	EXCAVATING AND GRADING EXISTING SHOULDER	UNIT	4	4
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	200	200
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	1634	1634
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	107	107
40603540	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	266	266
44004250	PAVED SHOULDER REMOVAL	SQ YD	153	153
50102400	CONCRETE REMOVAL	CU YD	18.7	18.7
50300225	CONCRETE STRUCTURES	CU YD	2.3	2.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	21.5	21.5
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2570	2570
50800515	BAR SPLICERS	EACH	56	56
52000050	PREFORMED JOINT SEAL 4"	FOOT	136.5	136.5
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	3167	3167

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SUMMARY OF QUANTITIES

SCALE: N/A | SHEET 1 OF 4 SHEETS | STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	3
		CONTRACT NO. 76L36		
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	80% FED 20% STATE TOTAL QUANTITY	CONSTR. CODE BRIDGE 0047 RURAL
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	80	80
* 70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	12
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1904	1904
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48	48
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	3176	3176
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1144	1144
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1144	1144

14

	CODE NO.	ITEM	UNIT	80% FED 20% STATE TOTAL QUANTITY	CONSTR. CODE BRIDGE 0047 RURAL
	70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
	70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2663	2663
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	19	19
*	78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	92	92
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	19	19
	X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	900	900
	X1200030	FILLING INLETS, TEMPORARY	EACH	2	2
	X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	6679	6679
	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	1060	1060
	X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	12	12
	X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1
	Z0007114	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L SUM	1	1
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	332	332

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* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET 3 OF 4 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	5
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			

	CODE NO.	ITEM	UNIT	80% FED 20% STATE TOTAL QUANTITY	CONSTR. CODE BRIDGE 0047 RURAL
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	50	50
	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	1100	1100
Ø	Z0076600	TRAINEES	HOUR	500	500
	Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	1022	1022
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500

Ø 0042

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	PLOT DATE = 1/17/2008	DATE -	REVISED -

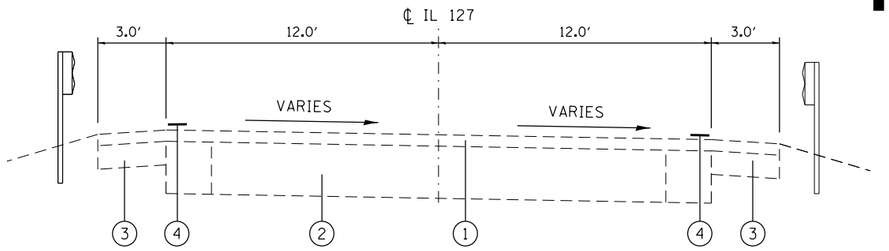
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET 4 OF 4 SHEETS | STA. N/A | TO STA. N/A

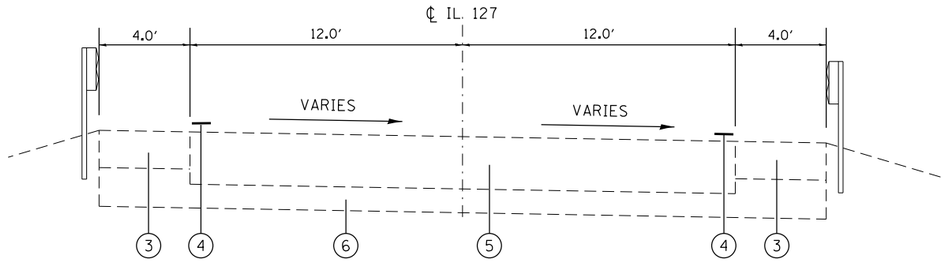
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	6
		CONTRACT NO. 76L36		
	ILLINOIS	FED. AID PROJECT		

TYPICAL SECTIONS



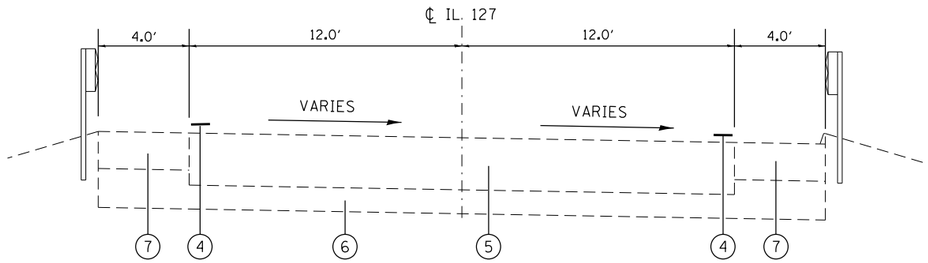
EXISTING TYPICAL SECTION

STA. 396+77.00 TO STA. 397+80.50
STA. 407+21.84 TO STA. 408+26.34



EXISTING TYPICAL SECTION

LT. STA. 397+80.50 TO LT. STA. 397+88.56
RT. STA. 397+80.50 TO RT. STA. 397+88.42
LT, STA. 407+13.78 TO LT. STA. 407+21.84
RT, STA. 407+13.93 TO LT. STA. 407+21.84



EXISTING TYPICAL SECTION

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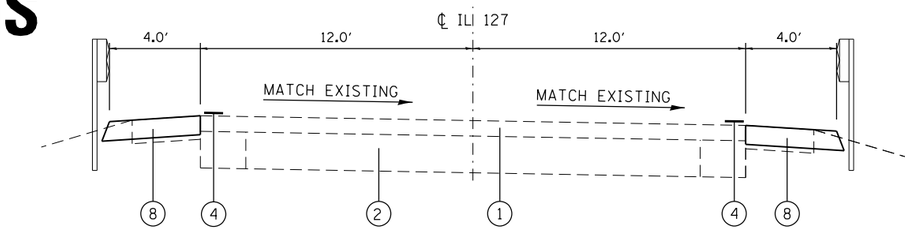
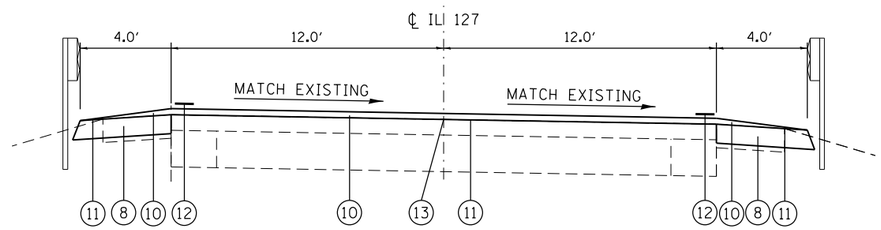
RT. STA. 397+88.42 TO RT. STA. 398+00
LT, STA. 407+02.34 TO LT. STA. 407+13.78
RT, STA. 407+02.34 TO LT. STA. 407+13.93



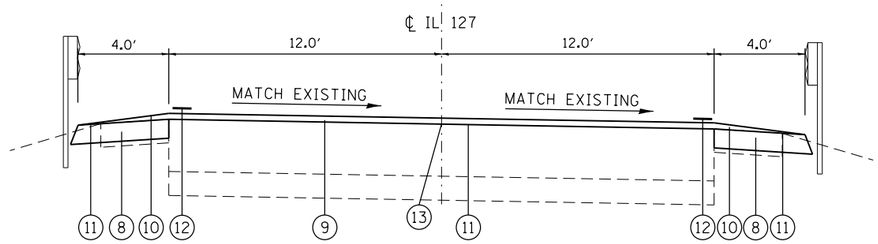
PROPOSED TYPICAL SECTION

STA. 396+77.00 TO STA. 397+40.50
STA. 407+61.84 TO STA. 408+26.34



PROPOSED TYPICAL SECTION

STA. 397+40.50 TO STA. 397+80.50
STA. 407+21.84 TO STA. 407+61.84



PROPOSED TYPICAL SECTION

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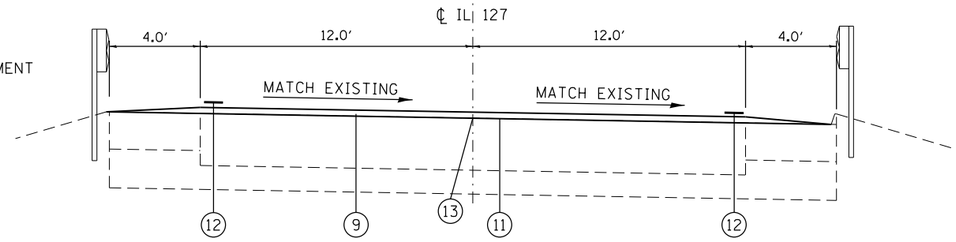
RT. STA. 397+80.5 TO LT, STA. 397+88.42
LT. STA. 407+13.78 TO STA. RT. 407+21.84
RT. STA. 407+13.93 TO STA. RT. 407+21.84



PROPOSED TYPICAL SECTION

LT. STA. 397+88.56 TO LT. STA. 398+00
RT. STA. 397+88.42 TO LT. STA. 398+00
LT. STA. 407+02.34 TO LT. STA. 407+13.78
RT. STA. 407+02.34 TO RT. STA. 407+13.93

LEGEND

1. EXISTING SURFACE COURSE
2. EXISTING PAVEMENT
3. EXISTING BASE COURSE WIDENING
4. EXISTING PAVEMENT MARKING LINE, 4″
5. EXISTING PCC BRIDGE APPROACH PAVEMENT
6. EXISTING SUBBASE GRANULAR MATERIAL, TYPE A
7. EXISTING PCC BRIDGE APPROACH SHOULDER PAVEMENT
8. PROPOSED HOT-MIX ASPHALT BASE COURSE WIDENING, 10″
9. PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, 2 INCH
10. PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, VARIES THICKNESS
11. PROPOSED POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)
12. PROPOSED PAVEMENT MARKING LINE, 4″
13. LONGITUDINAL JOINT SEALANT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1-B-R-1	WASHINGTON	23	7
		CONTRACT NO. 76L36		
		ILLINOIS FED. AID PROJECT		

FILE NAME = P:\Projects\634400 - PTB 176-19 DB Var Ph I and II\634405 - WO 4\CADD\CADD Drawings\CADD Sheets\D876L36-sht-typical.dgn

STAGING SCHEDULE

STAGE	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3	PAVEMENT MARKING TAPE, TYPE III 4"	TEMPORARY PAVEMENT MARKING LINE 6"	TEMPORARY PAVEMENT MARKING LINE 24"	PAVEMENT MARKING REMOVAL - GRINDING	TEMPORARY PAVEMENT MARKING REMOVAL	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	EXCAVATION AND GRADING EXISTING SHOULDER	PAVED SHOULDER REMOVAL	TEMPORARY RUMBLE STRIPS
(FOOT)	(FOOT)	(FOOT)	(EACH)	(EACH)	(FOOT)	(FOOT)	(FOOT)	(SQ FT)	(SQ FT)	(SQ YD)	(UNIT)	(SQ YD)	(EACH)
I	1144	0	2	0	1588	952	24	420	530	100	2	76.5	6
II	0	1144	0	2	1588	952	24	480	530	100	2	76.5	6
TOTAL	1144	1144	2	2	3176	1904	48	900	1060	200	4	153	12

NOTE: THE TEMPORARY PAVEMENT MARKING LINE 6" TO BE PLACED ON THE BOTTOM OF THE TEMPORARY BARRIER

PAVEMENT MARKING SCHEDULE

LOCATION			THERMOPLASTIC PAVEMENT MARKING - LINE 4"		RAISED REFLECTIVE PAVEMENT MARKERS	
STATION	TO	STATION	WHITE SOLID	YELLOW SKIP	AMBER	REMOVAL
			(FOOT)		(EACH)	
396+77		408+25	2296			
395+17		409+85		367	19	19
TOTAL			2663		19	19

RESURFACING SCHEDULE

LOCATION			POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	LONGITUDINAL JOINT SEALANT
STATION	TO	STATION	0.5 LB/SF		2"	1 1/2"	
			(POUND)	(SQ YD)	(TON)	(TON)	(FOOT)
397+40.50	TO	398+00.00	95	53.5	22	0	60
398+00.00	TO	407+02.34	1444	0	0	222	902
407+02.34	TO	407+61.84	95	53.5	22	0	60
TOTAL			1634	107	266		1022

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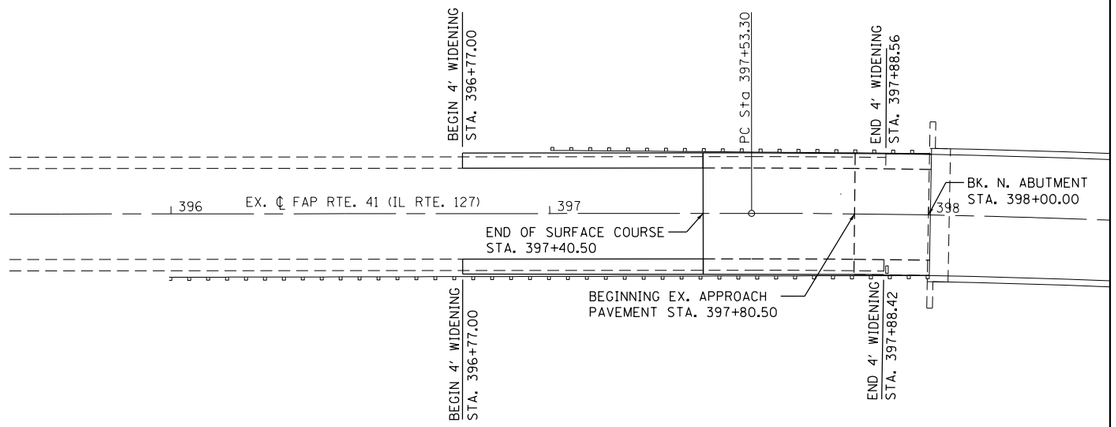
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

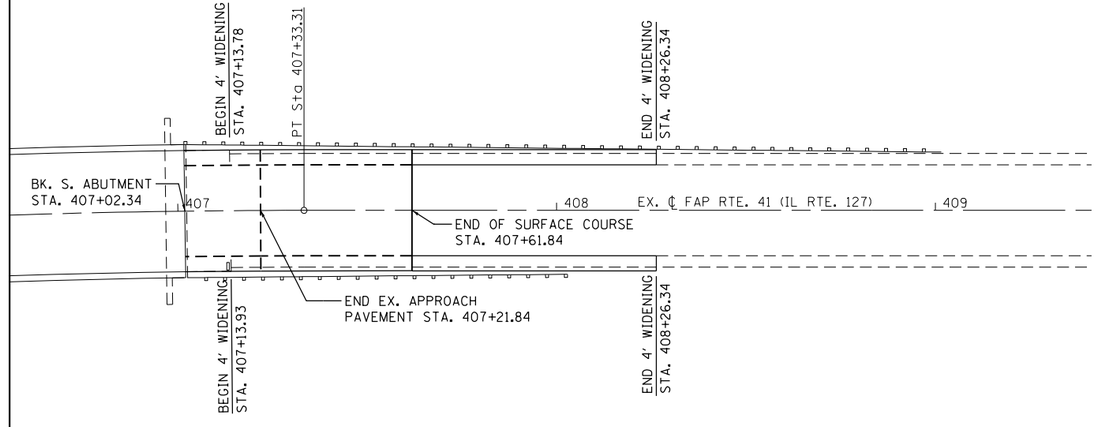
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	8
		CONTRACT NO. 76L36		
	ILLINOIS	FED. AID PROJECT		

NORTH APPROACH



SOUTH APPROACH

EXIST. CURVE DATA
PI STA. = 402+50.30
Δ = 23° 31' 13" (RT)
D = 2° 24' 00"
R = 2,387.32'
T = 497.00'
L = 980.01'
E = 51.19'
e = 0.0495 FT/FT
P.C. STA. = 397+53.30
P.T. STA. = 407+33.31



0 20 40 60
SCALE IN FEET

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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/17/2018	DATE -	REVISED -	

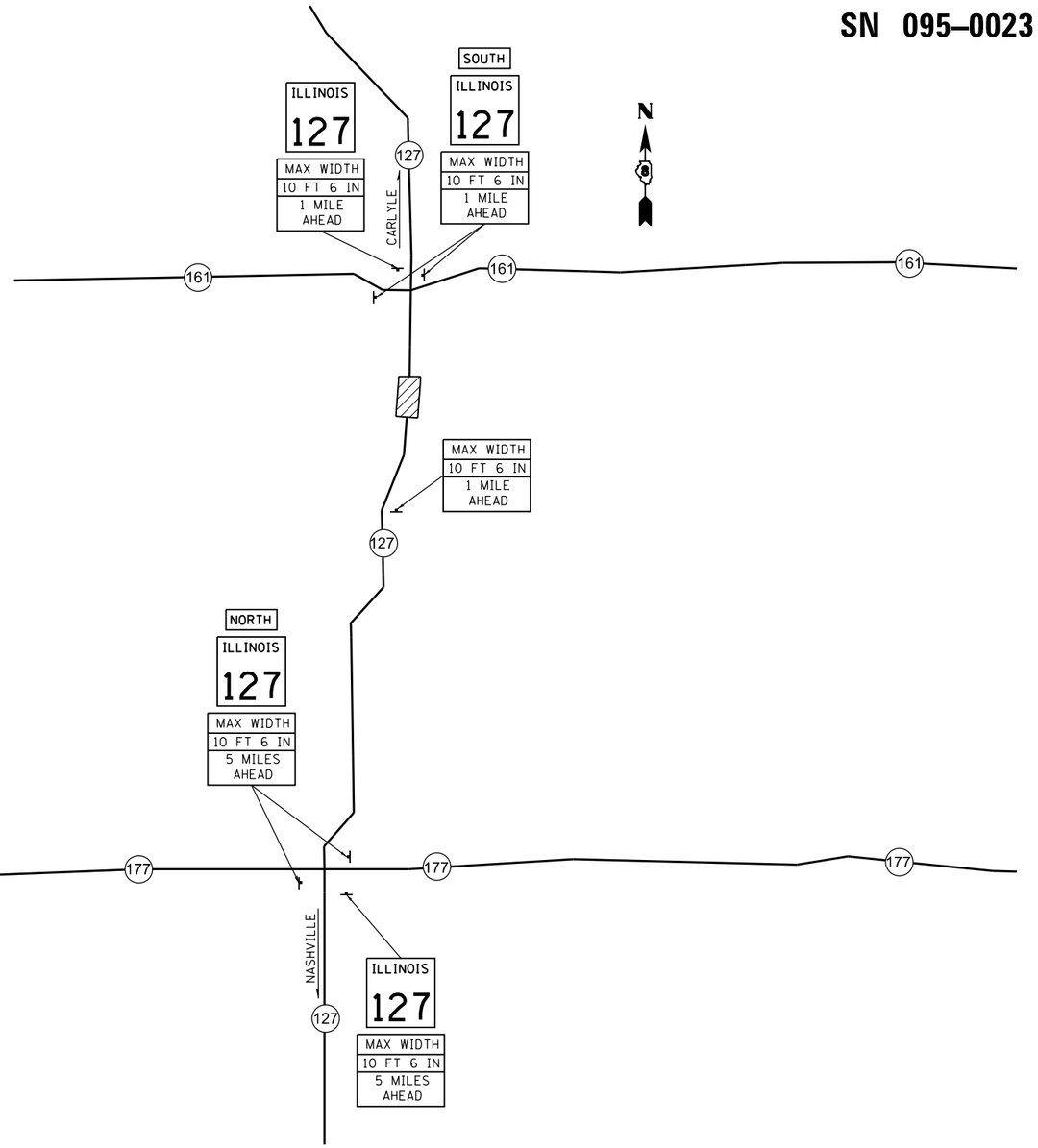
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN

SCALE: 1' = 20' | SHEET 1 OF 1 SHEETS | STA. 396+77.00 TO STA. 408+26.34

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	9
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			

WIDTH RESTRICTION SIGNING
IL RTE 127 OVER
CROOKED CREEK OVERFLOW
SN 095–0023



SIGNS REQUIRED

MAX WIDTH / 10 FT 6 IN / 1 MILE AHEAD	(4)	SOUTH	(2)
		NORTH	(2)
MAX WIDTH / 10 FT 6 IN / 5 MILES AHEAD	(3)	ILLINOIS 127	(6)

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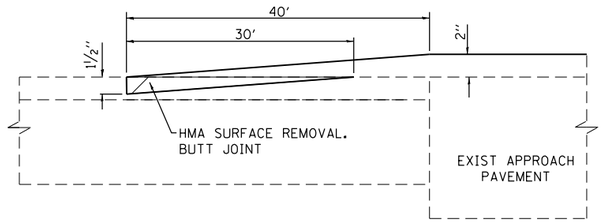
USER NAME = default	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/17/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING
SN 095–0023

SCALE: NO SCALE | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	10
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



BUTT JOINT DETAIL

NOTE: THE BUTT JOINT EXTENDS ACROSS THE WIDENING AS WELL AS THE PAVEMENT.

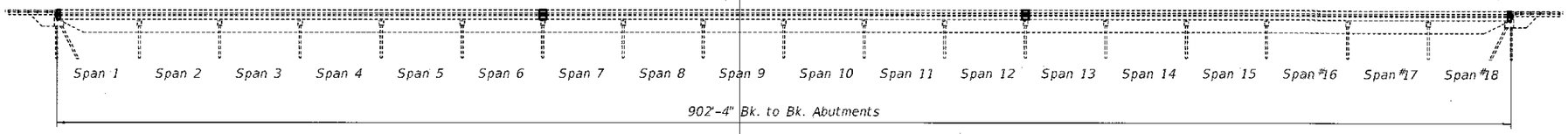
USER NAME = default	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/17/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

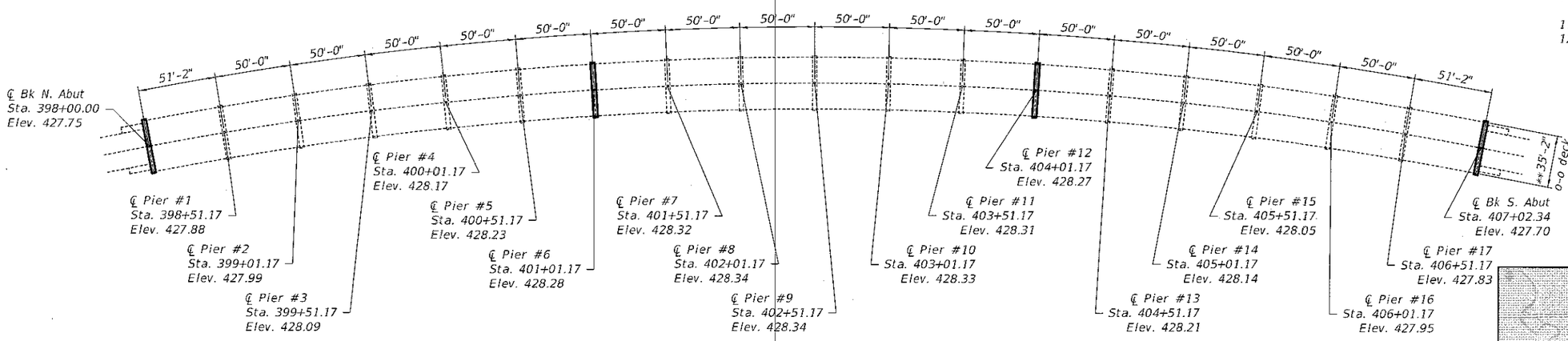
DETAILS

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	11
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



ELEVATION

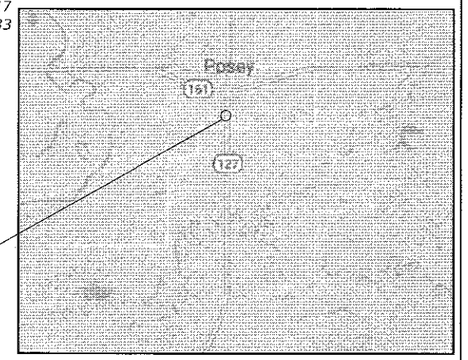


INDEX OF SHEETS

SCOPE OF WORK

- Replace deck and hatchblock at abutments and replace deck ends at piers 6 & 12.
- Install Preformed Joint Strip Seals
- Deck Slab Repair
- HMA overlay with WMS on deck

LOCATION SKETCH



PLAN

** Measured along the radii

GENERAL NOTES

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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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.

The bridge HMA is calculated based on 1.25" excluding $\frac{3}{4}$" for WMS.

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.

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.

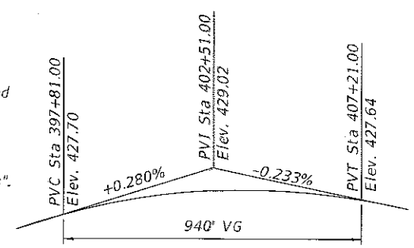
Joint openings shall be adjusted according to Article 520.04 of the Std Specs. when the deck is poured at an ambient temperature other than 50° F.

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

Cleaning and Painting of the exisiting structural steel and bearings shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings, 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 requirements of paint system 1 - OZ/E/U. The color of the final finish coat for all steel surfaces shall be Federal Color #595C 20045.

PROFILE GRADE



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Polymerized HMA Surface Course, Mix "D" N70	Ton	222
Concrete Removal	Cu. Yd.	18.7
Concrete Superstructure	Cu. Yd.	21.5
Concrete Structures	Cu. Yd.	2.3
Cleaning and Painting Structural Steel, Location No. 1	L. Sum	1
Reinforcement Bars, Epoxy Coated	Pound	2570
Bar Splicers	Each	56
Preformed Joint Strip Seal	Foot	136.5
Waterproofing Membrane System	Sq. Yd.	3167
Containment & Disposal of Non-Lead Paint Cleaning Residues No. 1	L. Sum	1
Bridge Deck Concrete Sealer	Sq. Ft.	6679
Structural Repair of Concrete (Depth <= 5")	Sq. Ft.	332
*Deck Slab Repair (Full Depth,Type II)	Sq. Yd.	50
*Deck Slab Repair (Partial)	Sq. Yd.	1100

* The quantity of deck slab repair is estimated. The engineer in the field shall determine the actual quantity and locations.

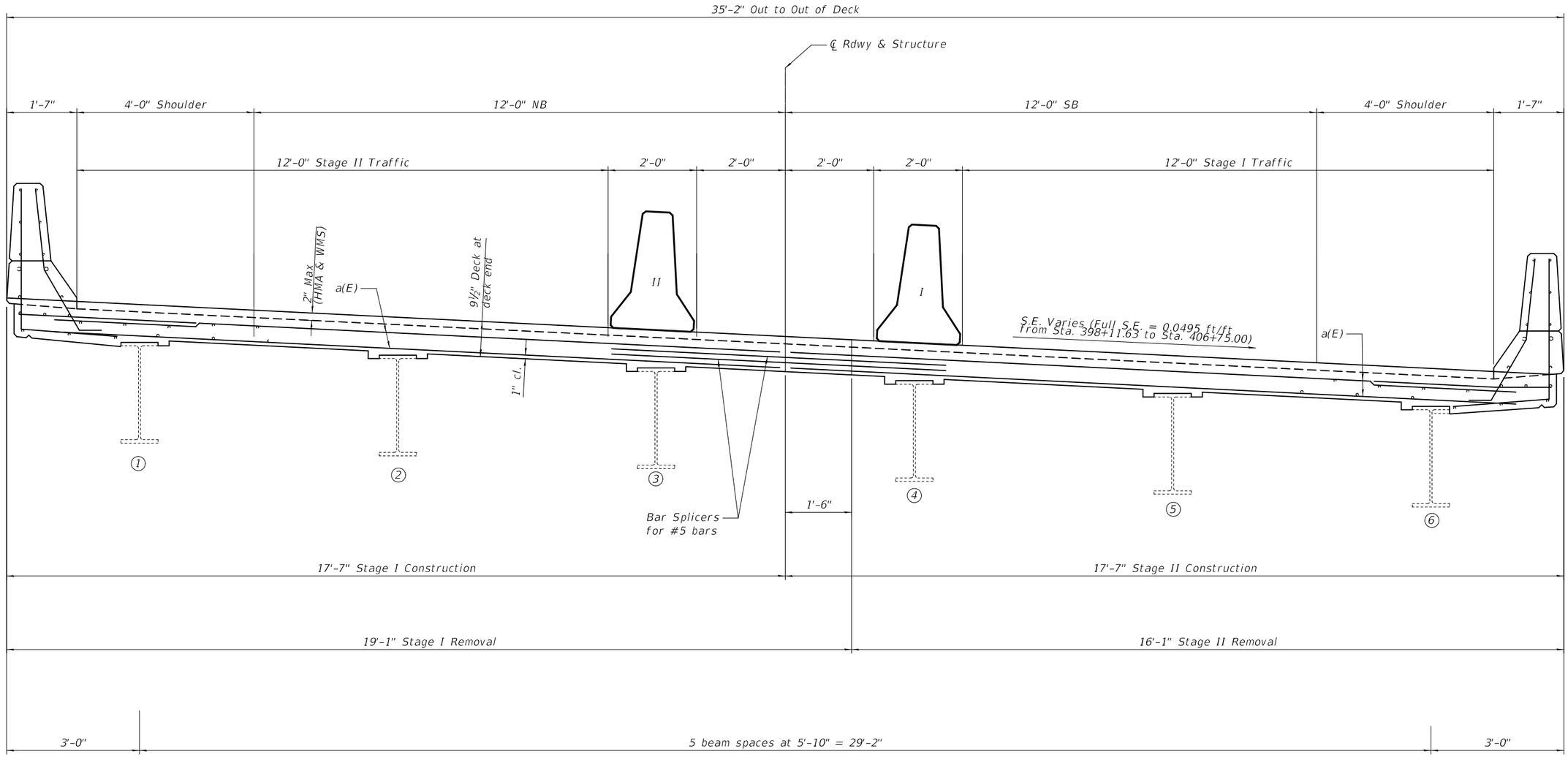
LICENSED STRUCTURAL ENGINEER
DAVID CARL PUSEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS
Expires 11/30/18

3/8/2018 5:01:20 PM

DESIGNED - BJW	PASSED	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - ATH		REVISED	
DRAWN - BJW	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	
CHECKED - ATH			

GENERAL PLAN & ELEVATION (IL 127 over Crooked Creek Overflow)
SN 095-0023
SHEET NO. 1 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	12
		CONTRACT NO. 76L36		
		ILLINOIS FED. AID PROJECT		



CROSS SECTION

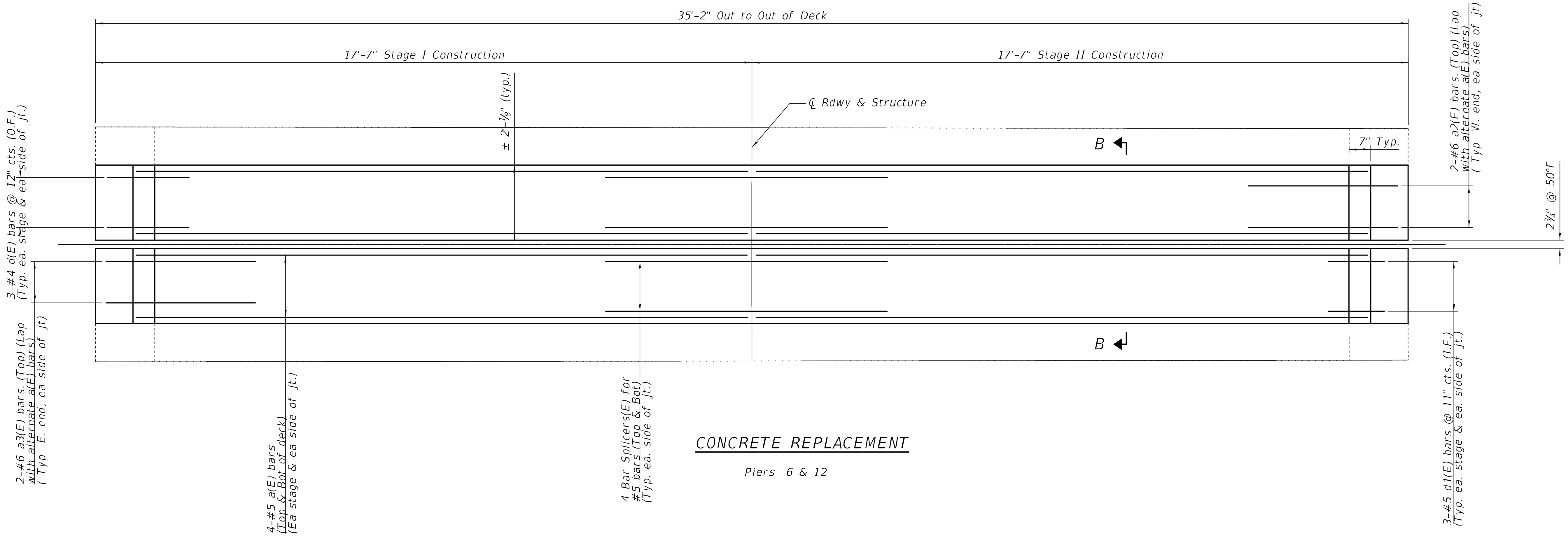
Looking South @ Joint Location

Note:

All transverse dimensions are measured along the radii

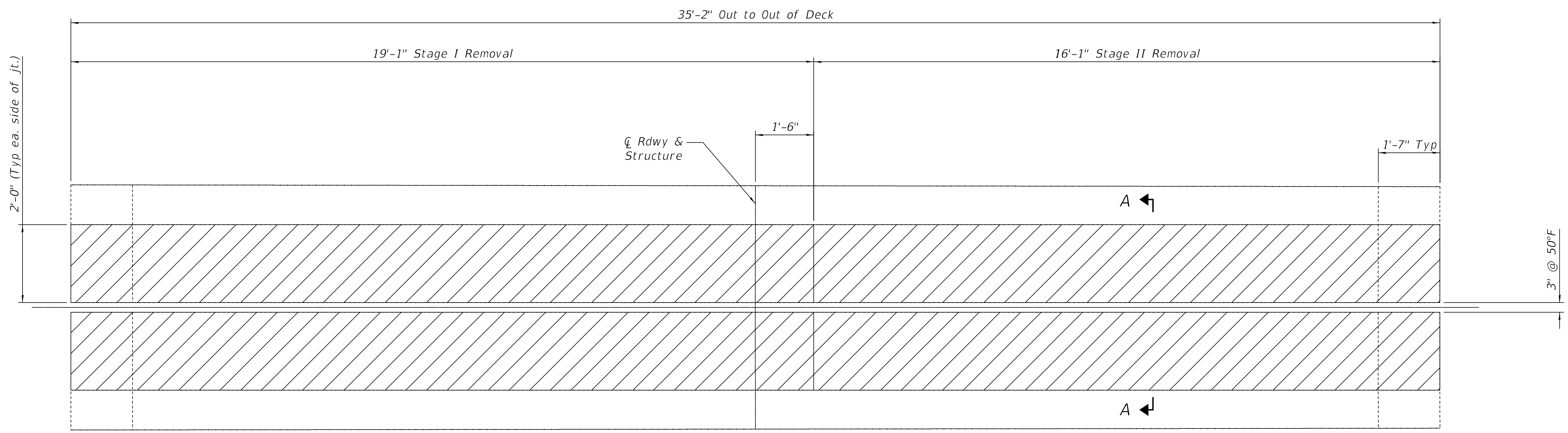
1/16/2018 3:36:27 PM

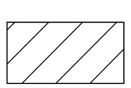
DESIGNED _ AYV	PASSED	DATE _	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**DECK CROSS SECTION SN 095-0023**	F.A.P RTE.	SECTION	COUNTY / TOTAL SHEETS / SHEET NO.
CHECKED _					42	1B-R-1	WASHINGTON / 23 / 13
DRAWN _ AYV		REVISED					CONTRACT NO. 76L36
CHECKED _	ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 2 OF 12 SHEETS		ILLINOIS	FED. AID PROJECT



CONCRETE REPLACEMENT

Piers 6 & 12





Concrete Removal

CONCRETE REMOVAL

Piers 6 & 12

Note:

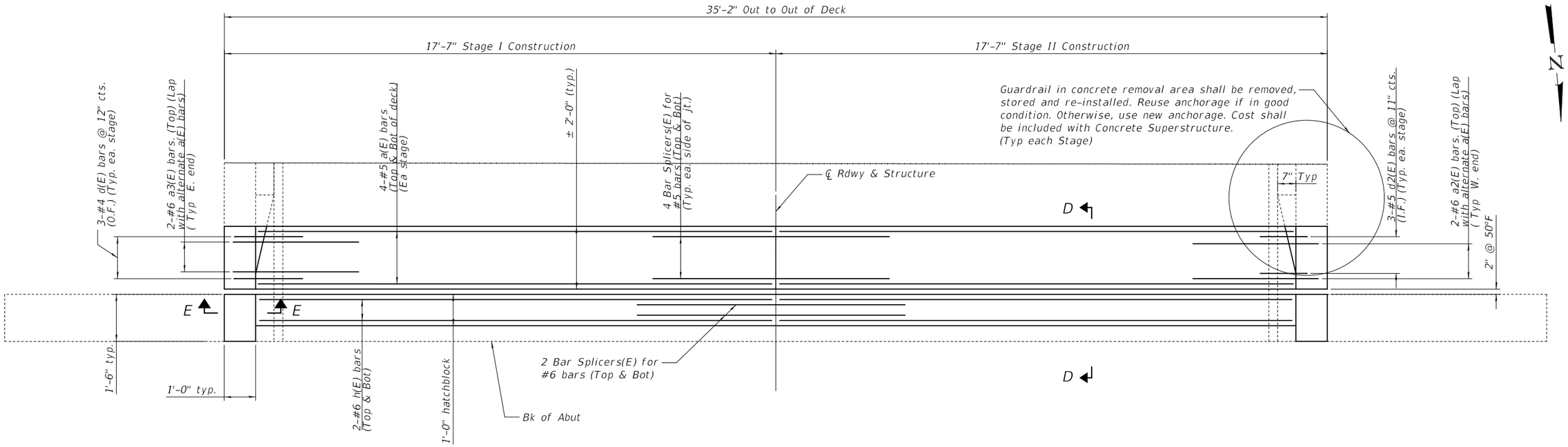
See sheet 5 of 9 for Bill of Material & Section A-A & B-B.

All transverse dimensions are measured along the radii

1/16/2018 3:36:28 PM

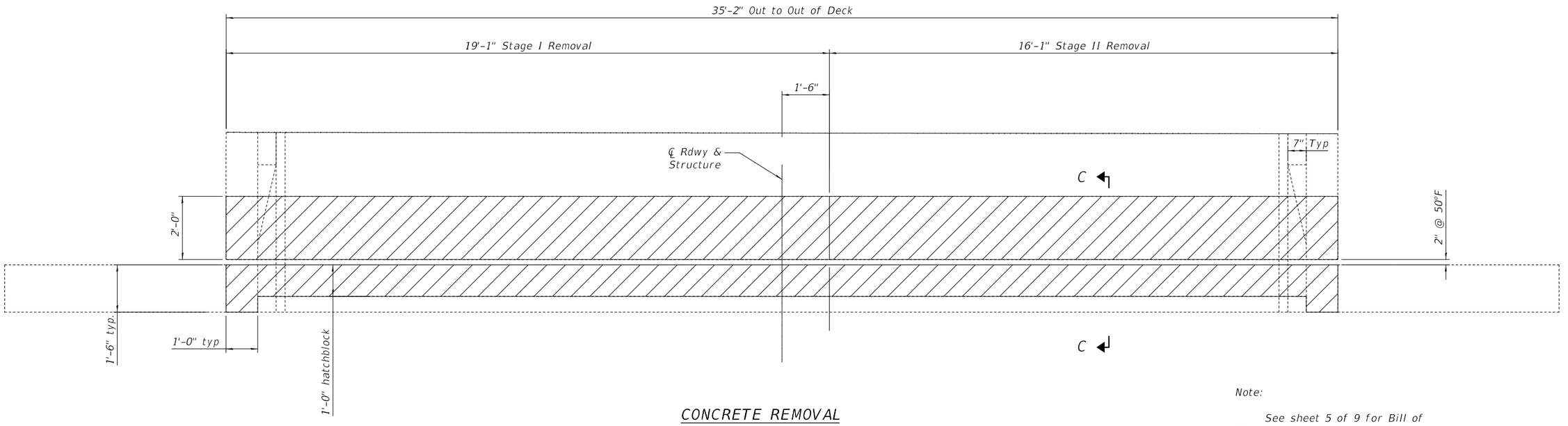
DESIGNED - AYV	PASSED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	JOINT REMOVAL & REPLACEMENT (Piers 6 & 12) SN 095-0023
CHECKED -		REVISED		
DRAWN - AYV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 3 OF 12 SHEETS
CHECKED -				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	14
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



CONCRETE REPLACEMENT

N Abut shown, S Abut opposite



CONCRETE REMOVAL

N Abut shown, S Abut opposite

Note:

See sheet 5 of 9 for Bill of Material & sections C-C & D-D

All transverse dimensions are measured along the radii.

1/16/2018 3:36:28 PM

DESIGNED - AYV	PASSED	DATE -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED -			
DRAWN - AYV		REVISED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

JOINT REMOVAL & REPLACEMENT (Abutments)
SN 095-0023
SHEET NO. 4 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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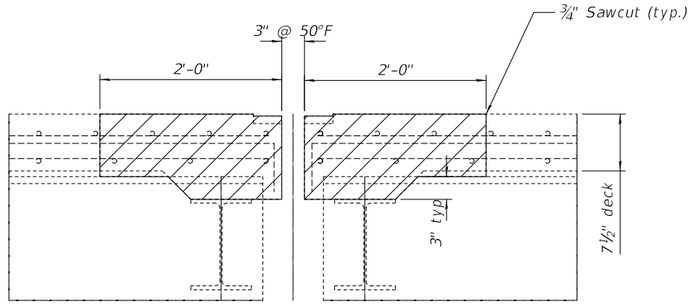
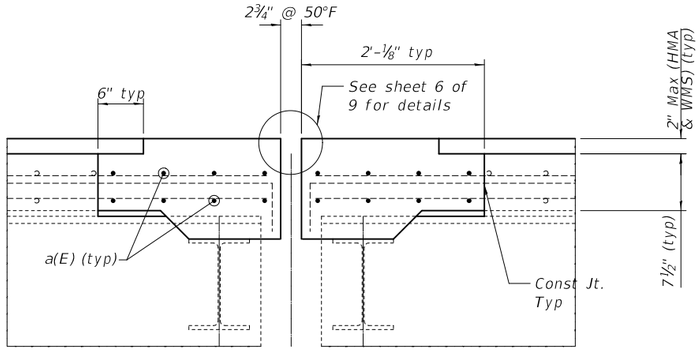
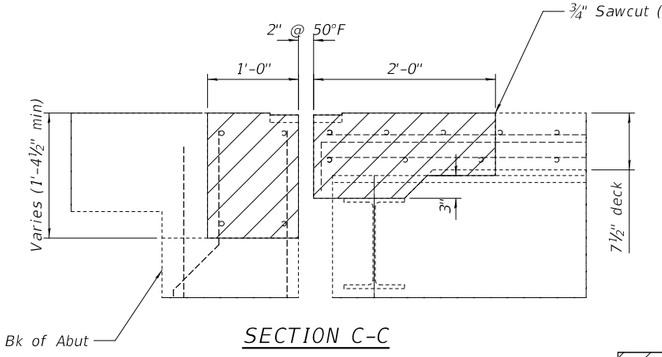
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



SECTION A-A

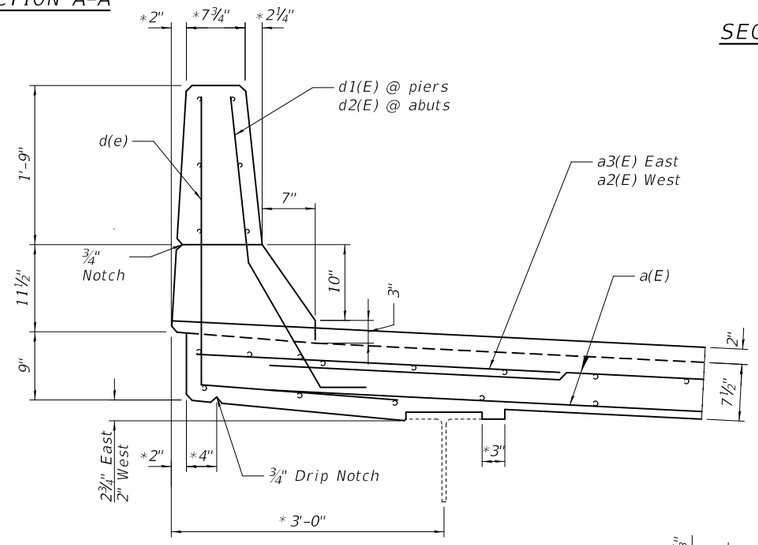


SECTION B-B

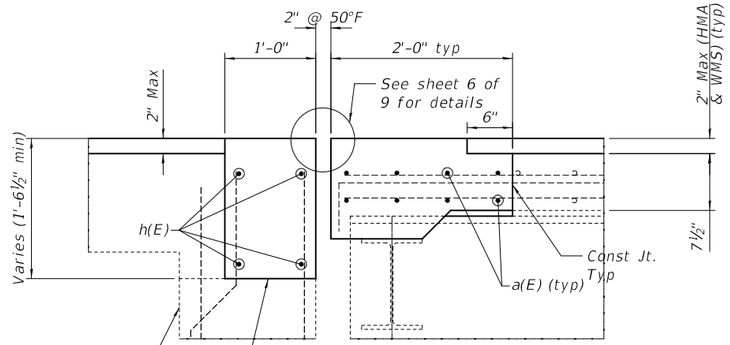


SECTION C-C

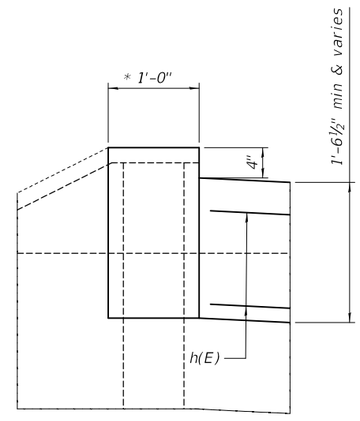
Concrete Removal



PARAPET SECTION

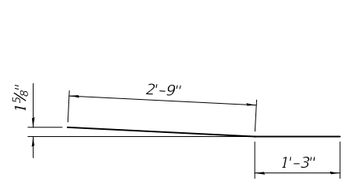


SECTION D-D

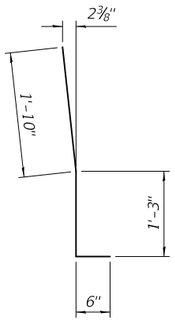


SECTION E-E

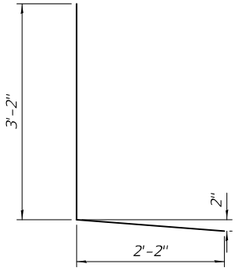
* Measured along the radii



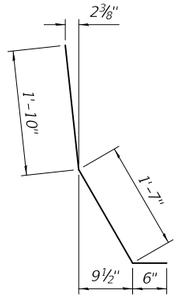
BAR a2(E)



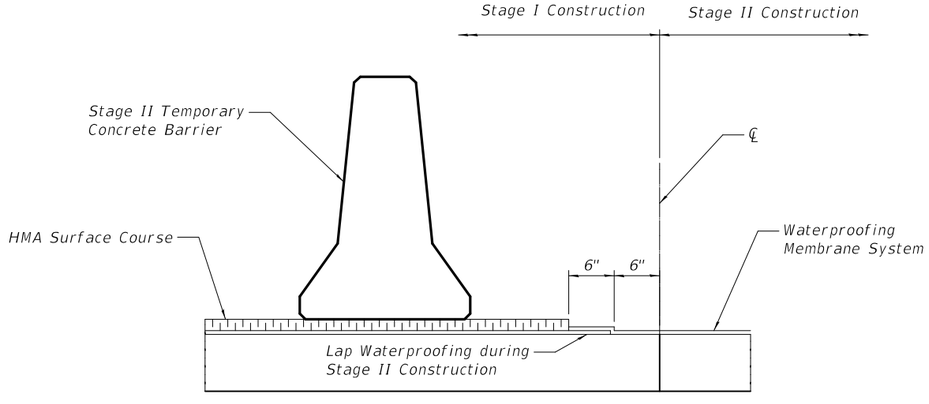
BAR d2(E)



BAR d(E)



BAR d1(E)



WATERPROOFING STAGING

(Looking South)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	96	#5	16'-5"	—
a2(E)	8	#6	4'-0"	—
a3(E)	8	#6	4'-0"	—
d(E)	36	#4	5'-4"	L
d1(E)	24	#5	3'-11"	L
d2(E)	12	#5	3'-7"	L
h(E)	16	#6	16'-4'	—
v(E)	24	#6	4'-6'	—
Reinforcement Bars, Epoxy Coated			Lbs.	2570
Concrete Superstructure			Cu. Yds.	21.5
Concrete Removal			Cu. Yds.	18.7

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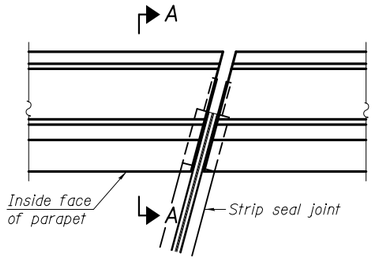
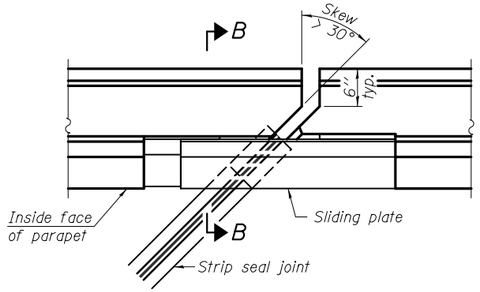
DESIGNED - AYV	PASSED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED -		REVISED	
DRAWN - AYV	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	
CHECKED -			

JOINT & WATERPROOFING STAGING DETAILS
SN 095-0023
SHEET NO. 5 OF 12 SHEETS

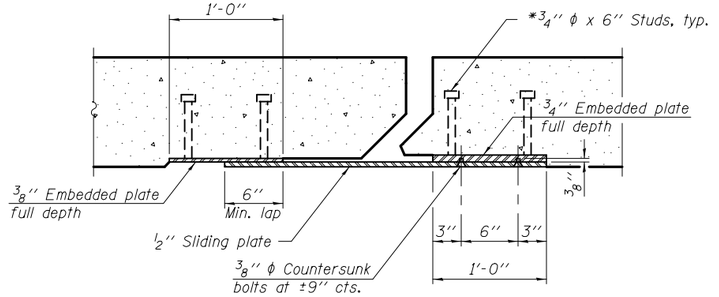
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	16
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



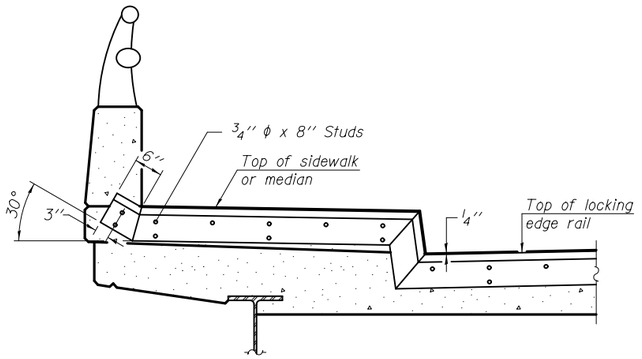
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

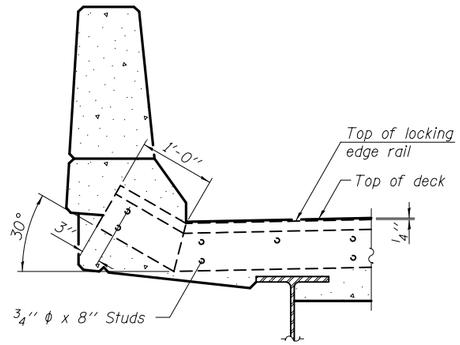


SECTION C-C

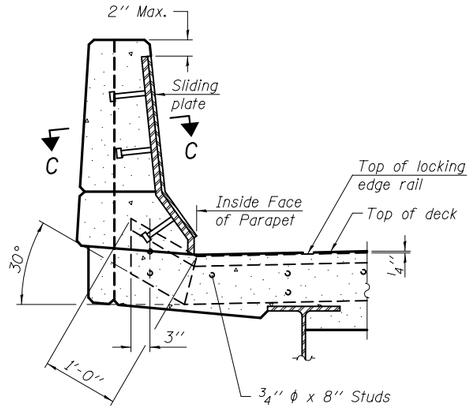


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

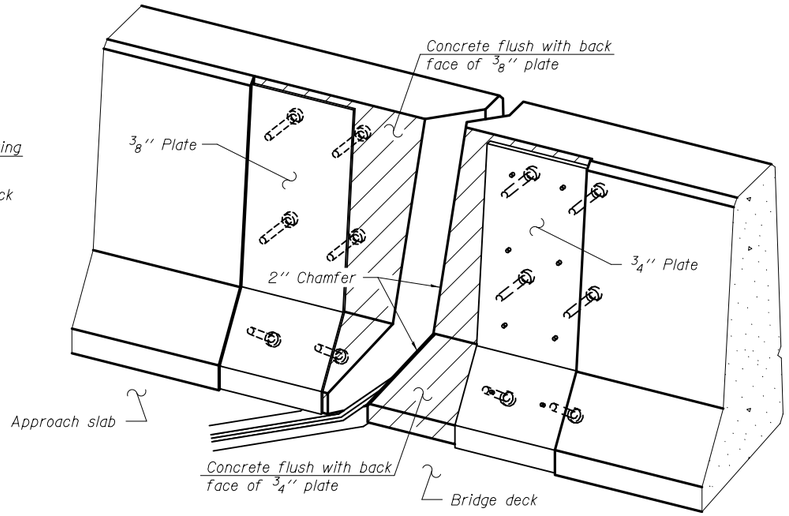
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



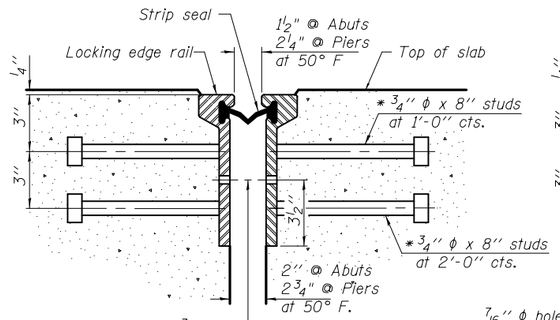
SECTION A-A



SECTION B-B

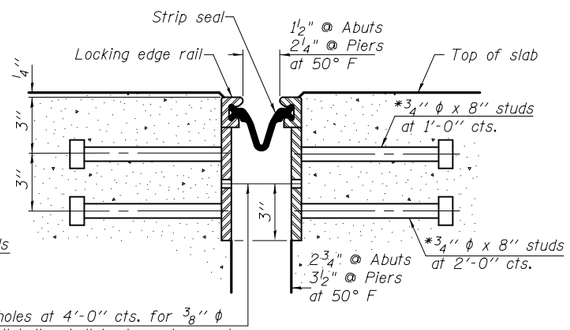


TRIMETRIC VIEW
(Showing back plates only)



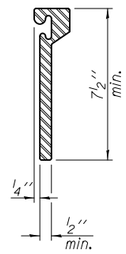
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT

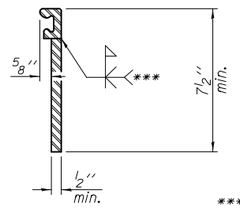


7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

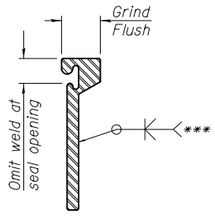
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



*** 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.

LOCKING EDGE RAILS

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

Notes:

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

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

The manufacturer's recommended installation methods shall be followed.

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

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

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

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	136

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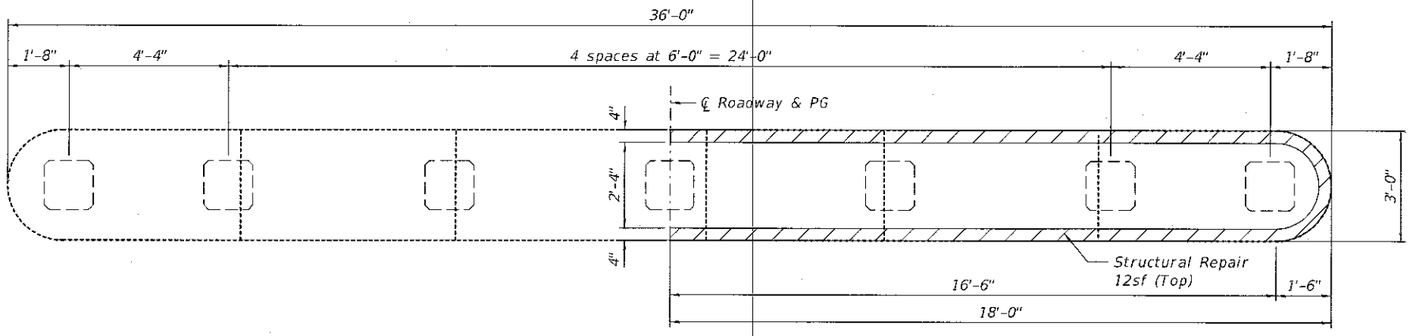
EJ-SSJ 11-22-2016

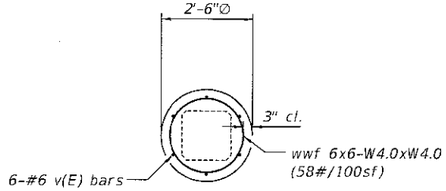
DESIGNED - AYV	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED -	ACTING ENGINEER OF STRUCTURAL SERVICES		
DRAWN - AYV	PASSED	REVISED	
CHECKED -	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 095-0023
SHEET NO. 6 OF 12 SHEETS

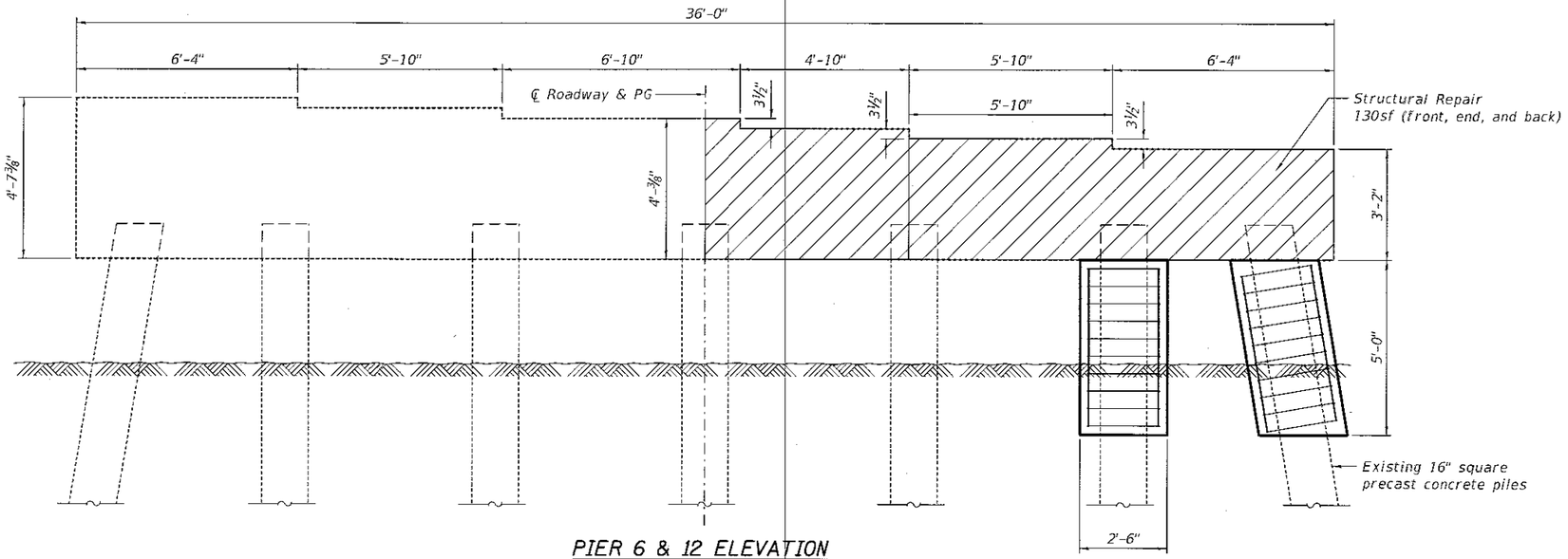
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	17
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



PLAN

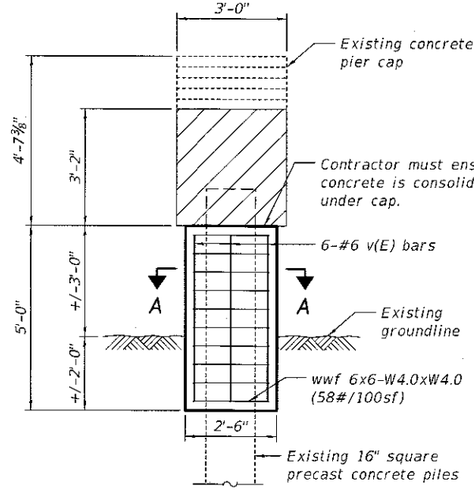


SECTION A-A



PIER 6 & 12 ELEVATION

(Looking South)



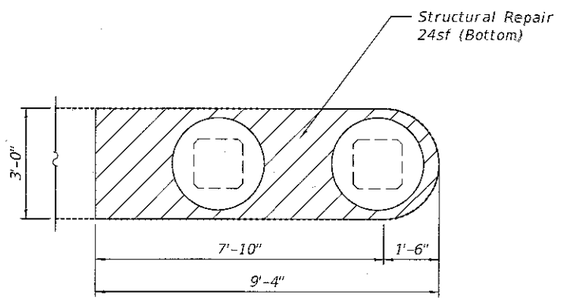
PILE ENCASEMENT DETAIL

(Looking East)

NOTES

Hatched areas indicate "Structural Repair of Concrete, (Depth <= 5").
The areas are estimated and shall be verified by the Engineer.
Shotcrete is not allowed, except on bottom of cap.

"Concrete Structures" quantity is for encasing the 2 west piles at Piers 6 & 12 (4 piles total).
All loose and unsound concrete shall be removed from the piles.
The cost for this removal is included with "Concrete Structures".
Welded wire fabric is included with "Concrete Structures".
Excavation and backfilling around the piles shall be included with "Concrete Structures".



BOTTOM OF CAP

(Looking Up)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
v(E)	24	#6	4'-6"	
Structural Repair of Concrete (Depth <= 5")			Sq. Ft.	332
Reinforcement Bars, Epoxy Coated			Pound	160
Concrete Structures			Cu. Yd.	2.3

3/8/2018 5:01:22 PM

DESIGNED	J. Uehle		
CHECKED	C. Sanders		
DRAWN	J. Uehle		
CHECKED	C. Sanders		

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

DATE MARCH 8, 2018

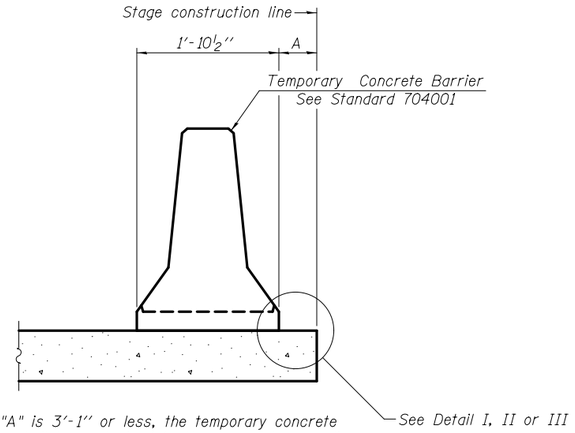
REVISED

REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

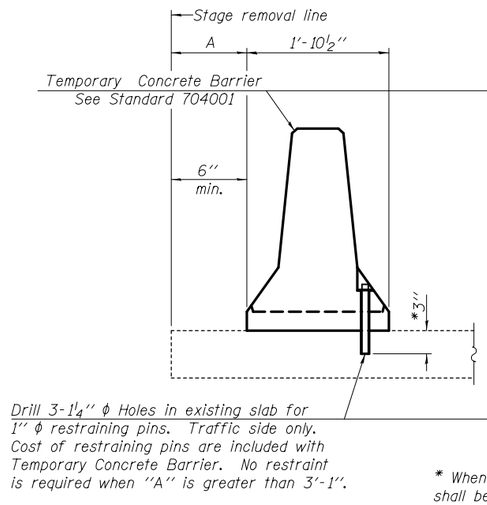
PIER 6 & 12 REPAIRS
095-0023
SHEET NO. 7 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	1B-R-1	WASHINGTON	23	18
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			



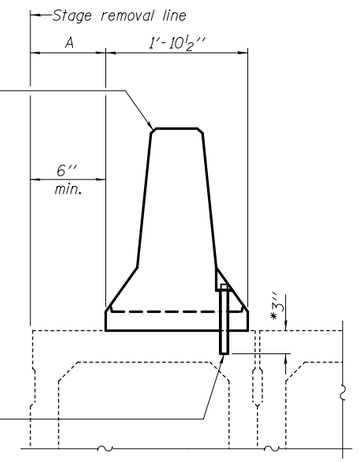
When "A" is 3'-1'' or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1''.

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼'' ϕ Holes in existing slab for 1'' ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1''.

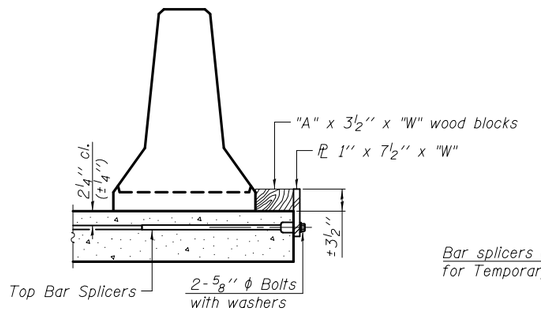
EXISTING SLAB



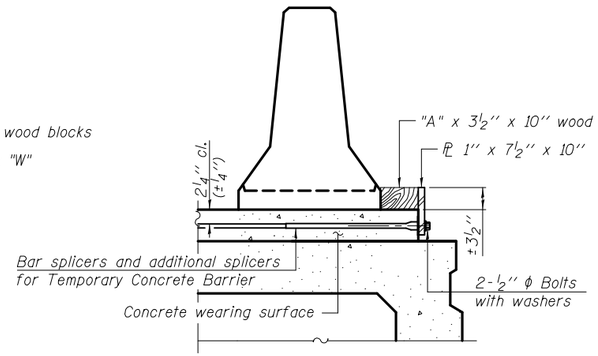
* When hot-mix asphalt wearng surface is present, embedment shall be 3'' plus the wearing surface depth.

EXISTING DECK BEAM

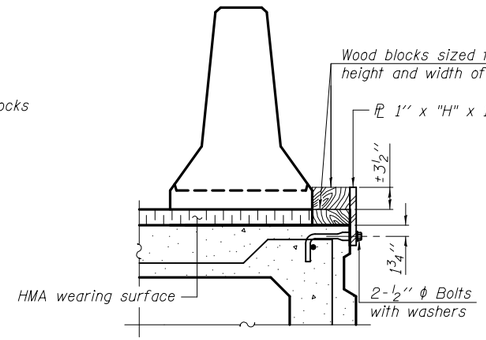
SECTIONS THRU SLAB OR DECK BEAM



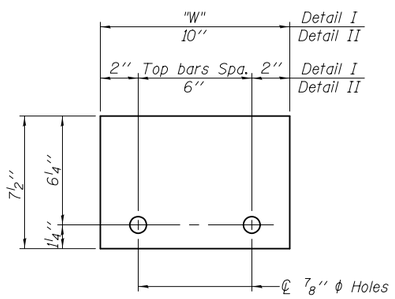
DETAIL I



DETAIL II

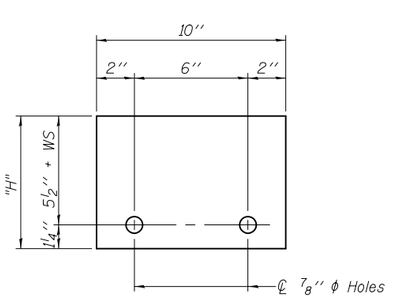


DETAIL III



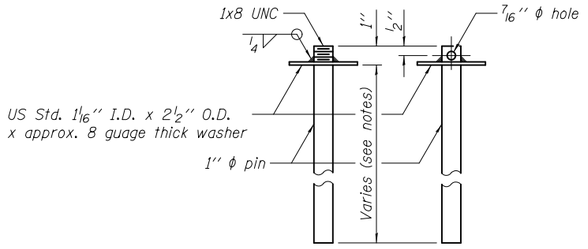
STEEL RETAINER ℄ 1'' x 7½'' x "W"

(Detail I and II)

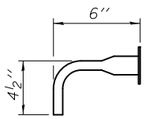


STEEL RETAINER ℄ 1'' x "H" x 10''

(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½'', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6'' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0'' centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6'' apart, shall be placed at 6'-0'' centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27

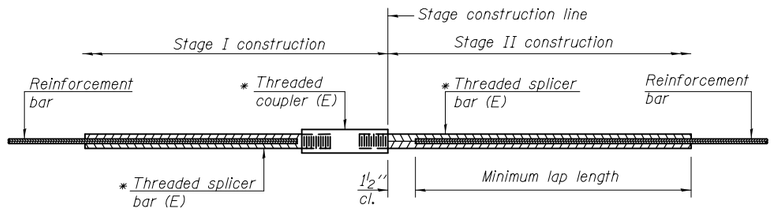
11-22-2016

DESIGNED - AYV	EXAMINED	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED -	ACTING ENGINEER OF STRUCTURAL SERVICES		
DRAWN - AYV	PASSED	REVISED	
CHECKED -	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 095-0023

SHEET NO. 8 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	19
		CONTRACT NO. 76L36		
		ILLINOIS FED. AID PROJECT		

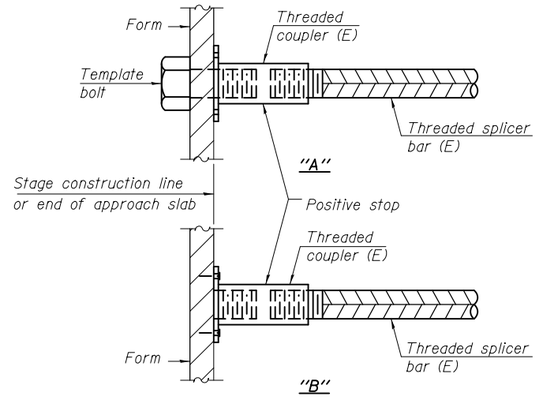


STANDARD BAR SPLICER ASSEMBLY

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

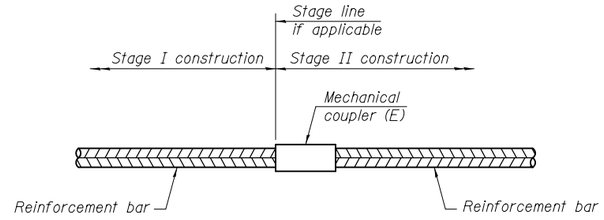
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
N Hatchblock	#6	4	4'-0"
N Abut Deck	#5	8	3'-6"
Pier 6	#5	16	3'-6"
Pier 12	#5	16	3'-6"
S Abut Deck	#5	8	3'-6"
S Hatchblock	#6	4	4'-0"



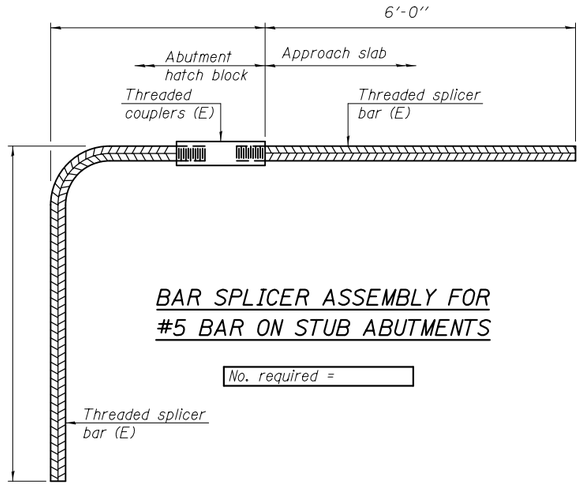
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

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

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

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

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BSD-1

11-22-2016

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

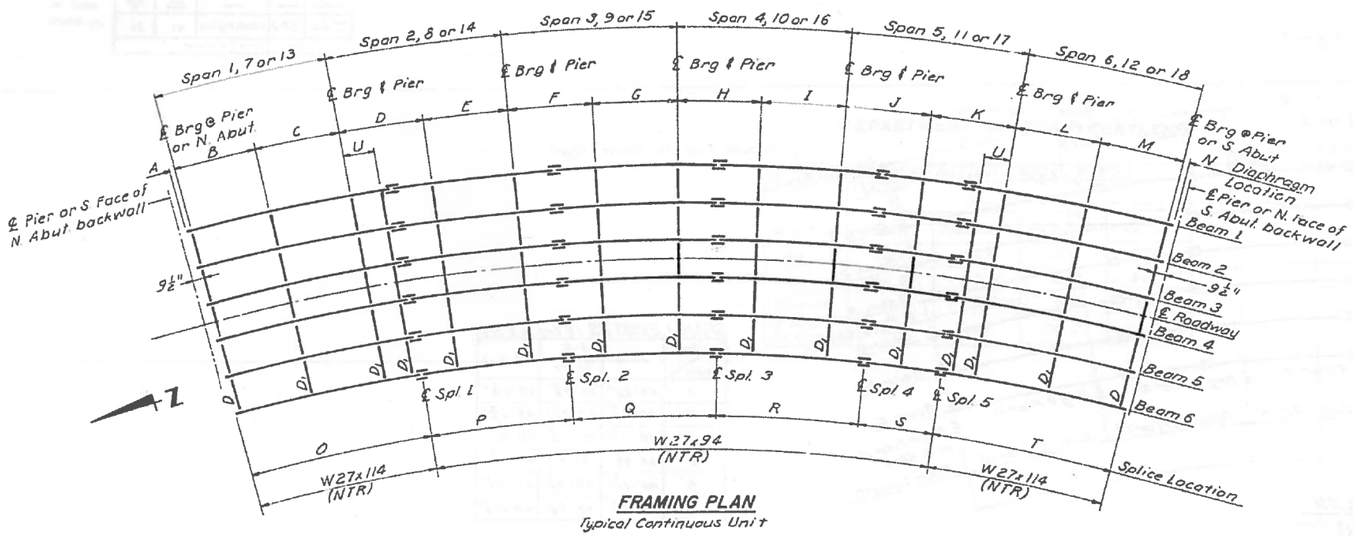
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 095-0023
SHEET NO. 9 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	20
		CONTRACT NO. 76L36		
	ILLINOIS FED. AID PROJECT			

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42 IBR-2	Washington	47	25

SHEET NO. 16
26

Note:
All diaphragms are radial except for Diaphragm D at ℄ Brg at double expansion piers and abutments. D diaphragms are parallel to ℄ Piers 6, 12 or back of abutment respectively.



FRAMING PLAN
Typical Continuous Unit

N.T.R. indicates Notch Toughness Requirement.

DIAPHRAGM LOCATION for SPANS 1 to 6 (in feet)

Beam	A	B	C	D	E	F	G	H	I	J	K	L	M	N	U
1	5½"	24'-7"	24'-7"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-9"	24'-9"	5½"	9'-0⅜"
2	5½"	24'-6⅜"	24'-6⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-8⅜"	24'-8⅜"	5½"	9'-0⅜"
3	5½"	24'-5⅜"	24'-5⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	24'-7⅜"	24'-7⅜"	5½"	9'-0⅜"
4	5½"	24'-4⅜"	24'-4⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-6⅜"	24'-6⅜"	5½"	8'-11⅜"
5	6½"	24'-4⅜"	24'-4⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-6⅜"	24'-6⅜"	5½"	8'-11⅜"
6	5½"	24'-3½"	24'-3½"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-5½"	24'-5½"	5½"	8'-11⅜"

DIAPHRAGM LOCATION for SPANS 7 to 12 (in feet)

Beam	A	B	C	D	E	F	G	H	I	J	K	L	M	N	U
1	5½"	24'-9"	24'-9"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-9"	24'-9"	5½"	9'-0⅜"
2	5½"	24'-8⅜"	24'-8⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-8⅜"	24'-8⅜"	5½"	9'-0⅜"
3	5½"	24'-7⅜"	24'-7⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	24'-7⅜"	24'-7⅜"	5½"	9'-0⅜"
4	5½"	24'-6⅜"	24'-6⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-6⅜"	24'-6⅜"	5½"	8'-11⅜"
5	5½"	24'-6⅜"	24'-6⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-6⅜"	24'-6⅜"	5½"	8'-11⅜"
6	5½"	24'-5½"	24'-5½"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-5½"	24'-5½"	5½"	8'-11⅜"

DIAPHRAGM LOCATION for SPANS 13 to 18 (in feet)

Beam	A	B	C	D	E	F	G	H	I	J	K	L	M	N	U
1	5½"	24'-9"	24'-9"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-7"	24'-7"	5½"	9'-0⅜"
2	5½"	24'-8⅜"	24'-8⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	25'-1⅜"	24'-6⅜"	24'-6⅜"	5½"	9'-0⅜"
3	5⅝"	24'-7⅜"	24'-7⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	25'-0⅜"	24'-5⅜"	24'-5⅜"	5½"	9'-0⅜"
4	5½"	24'-6⅜"	24'-6⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-11⅜"	24'-4⅜"	24'-4⅜"	5½"	8'-11⅜"
5	6½"	24'-6⅜"	24'-6⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-4⅜"	24'-4⅜"	5½"	8'-11⅜"
6	5½"	24'-5½"	24'-5½"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-10⅜"	24'-3½"	24'-3½"	5½"	8'-11⅜"

SPLICE LOC. for SPANS 1 to 6 (in feet)

Beam	O	P	Q	R	S	T
1	63'-2⅜"	46'-3⅜"	51'-9⅜"	50'-3⅜"	25'-7⅜"	63'-6⅜"
2	63'-0⅜"	46'-2"	51'-8¼"	50'-2¼"	25'-7⅜"	63'-4⅜"
3	62'-10⅜"	46'-0⅜"	51'-6⅜"	50'-0⅜"	25'-6⅜"	63'-2⅜"
4	62'-9⅛"	45'-11⅜"	51'-5¼"	49'-11⅜"	25'-5⅜"	63'-1⅜"
5	62'-7¼"	45'-10"	51'-3⅝"	49'-9½"	25'-4⅜"	62'-11⅝"
6	62'-5⅜"	45'-8⅜"	51'-2⅛"	49'-8⅜"	25'-4⅜"	62'-9⅜"

SPLICE LOC. for SPANS 7 to 12 (in feet)

Beam	O	P	Q	R	S	T
1	63'-6⅜"	46'-3⅜"	51'-9⅜"	50'-3⅜"	25'-7⅜"	63'-6⅜"
2	63'-4⅜"	46'-2"	51'-8¼"	50'-2¼"	25'-7⅜"	63'-4⅜"
3	63'-2⅜"	46'-0⅜"	51'-6⅜"	50'-0⅜"	25'-6⅜"	63'-2⅜"
4	63'-1⅜"	45'-11⅜"	51'-5¼"	49'-11⅜"	25'-5⅜"	63'-1⅜"
5	62'-11⅛"	45'-10"	51'-3⅝"	49'-9½"	25'-4⅜"	62'-11⅝"
6	62'-9⅜"	45'-8⅜"	51'-2⅛"	49'-8⅜"	25'-4⅜"	62'-9⅜"

SPLICE LOC. for SPANS 13 to 18 (in feet)

Beam	O	P	Q	R	S	T
1	63'-6⅜"	46'-3⅜"	51'-9⅜"	50'-3⅜"	25'-7⅜"	63'-6⅜"
2	63'-4½"	[illegible]	51'-8¼"	50'-2¼"	25'-7⅜"	63'-4⅜"
3	63'-2⅜"	[illegible]	51'-6⅜"	50'-0⅜"	25'-6⅜"	62'-10⅜"
4	63'-1⅜"	45'-11⅜"	51'-5¼"	49'-11⅜"	25'-5⅜"	62'-9⅜"
5	62'-11⅛"	45'-10"	51'-3⅝"	49'-9½"	25'-4⅜"	62'-7¼"
6	62'-9⅜"	45'-8⅜"	51'-2⅛"	49'-8⅜"	25'-4⅜"	62'-5⅜"

TOP OF BEAM ELEVATION (For Fabrication Only)

	BEAM #1	BEAM #2	BEAM #3	BEAM #4	BEAM #5	BEAM #6
℄ BRG N. ABUT	427.732	427.472	427.205	426.934	426.662	426.372
℄ BRG PIER #1	427.819	427.537	427.252	426.968	426.683	426.394
SPLICE 1-1	427.843	427.554	427.261	426.977	426.688	426.399
℄ BRG PIER #2	427.922	427.633	427.344	427.055	426.767	426.478
SPLICE 2-1	427.942	427.653	427.365	427.076	426.787	426.498
℄ BRG PIER #3	428.017	427.728	427.440	427.151	426.862	426.573
SPLICE 3-1	428.037	427.749	427.460	427.171	426.882	426.594
℄ BRG PIER #4	428.098	427.809	427.520	427.231	426.943	426.654
SPLICE 4-1	428.115	427.826	427.537	427.248	426.960	426.671
SPLICE 5-1	428.148	427.859	427.571	427.282	426.993	426.704
℄ BRG PIER #5	428.185	427.896	427.607	427.318	427.030	426.741
℄ BRG PIER #6-1	428.318	428.029	427.740	427.452	427.163	426.874
℄ BRG PIER #6-2	428.319	428.030	427.742	427.453	427.164	426.875
℄ BRG PIER #7	428.270	427.981	427.692	427.403	427.115	426.826
SPLICE 1-2	428.256	427.967	427.679	427.390	427.101	426.812
℄ BRG PIER #8	428.268	427.979	427.690	427.402	427.113	426.824
SPLICE 2-2	428.271	427.982	427.693	427.405	427.116	426.827
℄ BRG PIER #9	428.272	427.983	427.694	427.406	427.117	426.828
SPLICE 3-2	428.272	427.983	427.695	427.406	427.117	426.828
℄ BRG PIER #10	428.261	427.972	427.684	427.395	427.106	426.817
SPLICE 4-2	428.258	427.969	427.680	427.392	427.103	426.814
SPLICE 5-2	428.245	427.956	427.667	427.379	427.090	426.801
℄ BRG PIER #11	428.257	427.968	427.679	427.390	427.102	426.813
℄ BRG PIER #12-2	428.300	428.011	427.722	427.434	427.145	426.856
℄ BRG PIER #12-3	428.298	428.010	427.721	427.432	427.143	426.855
℄ BRG PIER #13	428.159	427.870	427.581	427.292	427.004	426.715
SPLICE 1-3	428.120	427.832	427.543	427.254	426.965	426.677
℄ BRG PIER #14	428.065	427.777	427.488	427.199	426.911	426.622
SPLICE 2-3	428.051	427.762	427.474	427.185	426.896	426.607
℄ BRG PIER #15	427.978	427.689	427.401	427.112	426.823	426.534
SPLICE 3-3	427.958	427.670	427.381	427.092	426.803	426.515
℄ BRG PIER #16	427.876	427.587	427.298	427.010	426.721	426.432
SPLICE 4-3	427.853	427.564	427.275	426.986	426.698	426.409
SPLICE 5-3	427.793	427.504	427.216	426.927	426.638	426.349
℄ BRG PIER #17	427.747	427.475	427.197	426.918	426.637	426.348
℄ BRG S. ABUT	427.581	427.370	427.132	426.886	426.633	426.345

UNIT 1
UNIT 2
UNIT 3

DESIGNED	JFJ
CHECKED	WCC
DRAWN	DEH
CHECKED	JFJ

FOR INFORMATION ONLY

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 42
CROOKED CREEK OVERFLOW BRIDGE
SECTION IBR-2
WASHINGTON COUNTY
STA. 402+51.23

Prepared by DAILY & ASSOCIATES, ENGINEERS, INC. CHAMPAIGN PEORIA & BLOOMINGTON ILLINOIS

D/A JOB NO. 43774

1/16/2018 3:36:31 PM

DESIGNED - AYV	DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FOR INFORMATION ONLY–EXISTING FRAMING PLAN SN 095–0023
CHECKED -			
DRAWN - AYV	PASSED	REVISED	SHEET NO. 10 OF 12 SHEETS
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	21
		CONTRACT NO. 76L36		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18R-2	Washington	47	27
FED. ROAD DIST. NO.	FED. AID PROJECT			

SHEET NO. 18
26 SHEETS

INTERIOR BEAM REACTION TABLE (KIPS)

REACTIONS	ABUT	PIER 1 or 5	PIER 2 or 4	PIER 3
RDL	19.4	56.0	47.9	50.6
RLL	26.9	33.8	32.6	33.1
R Impact	8.3	9.0	8.7	8.8
R Total (DL+LL+I)	54.6	98.8	89.2	92.5

6 CONTINUOUS SPAN UNIT
INTERIOR BEAM MOMENT TABLE (Load Factor Design)

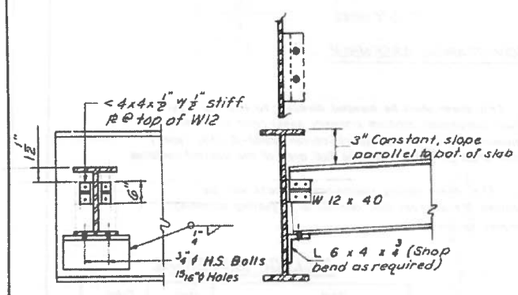
GENERAL	NON-COMPOSITE					
	BRACED-NONCOMPACT		UNBRACED			
	0.4 SPAN 1 or 0.6 SPAN 6	PIER 1 or PIER 5	0.5 SPAN 2 or 0.5 SPAN 5	PIER 2 or PIER 4	0.5 SPAN 3 or 0.5 SPAN 4	PIER 3
Is (in.⁴)	4090	4090	3270	3270	3270	3270
Ss (in.³)	299	299	243	243	243	243
Z (in.³) N/A						
DL (K ft.)	.974	.974	.974	.974	.974	.974
MDL (ft. K)	184.2	263.2	83.8	192.4	107.4	214.7
MLL (ft. K)	264.0	196.3	205.9	175.8	207.8	178.5
MIMP (ft. K)	75.5	56.2	58.9	50.3	59.4	51.0
5/3 (MLL+I) (ft. K)	565.8	420.8	441.3	376.8	445.3	382.5
Ma (ft. K)	975.0	889.2	682.6	740.0	718.5	776.4
fs DL non-comp. (k.s.i.)	7.39	10.56	4.14	9.50	5.30	10.60
fs 5/3 (LL+I) (k.s.i.)	22.71	16.89	21.79	18.61	21.99	18.89
fs DL lat	1.34	1.92	0.30	0.69	0.38	0.38
fs 5/3(LL+I) lat	4.13	3.07	1.59	1.35	1.60	0.69
fs (Overload) (k.s.i.)	35.57	32.44	27.82	30.15	29.27	30.56
* fs (Total) (k.s.i.)	46.24	42.17	36.17	39.20	38.05	39.72
Allowable fs (Total) (k.s.i.)	50.00	50.00	50.00	45.40	50.00	45.40
Allowable fs (Overload) (k.s.i.)	40.00	40.00	40.00	40.00	40.00	40.00
VR (K)	43.5	—	46.6	—	46.6	—

fs (Total) is the sum of the stresses due to 1.3[MDL+5/3(MLL+I)]
fs (Overload) is the sum of the stresses due to MDL+5/3(MLL+I)
Is & Ss are the moment of inertia and section modulus of the steel section.
VR is the maximum LL+Impact shear range in span.

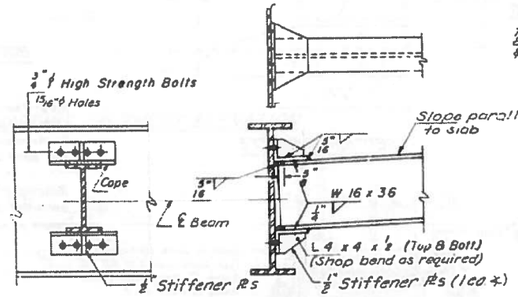
* Non-compact section
Ma (Applied Moment) = 1.3[MDL+MsDL+5/3(MLL+I)]
fs DL lat is the max lat flange DL bending stress due to curvature.
fs 5/3 (LL+I) lat is the max lat flange factored LL+I bending stress due to curvature

Notes:
1. All bolts shall be 3/4"ø and 7/8"ø AASHTO M164 Type 3 high strength bolts.
2. Diaphragms to be sloped parallel to the bottom of slab.
3. Two hardened washers shall be required over all 15/16"ø holes at diaphragms.

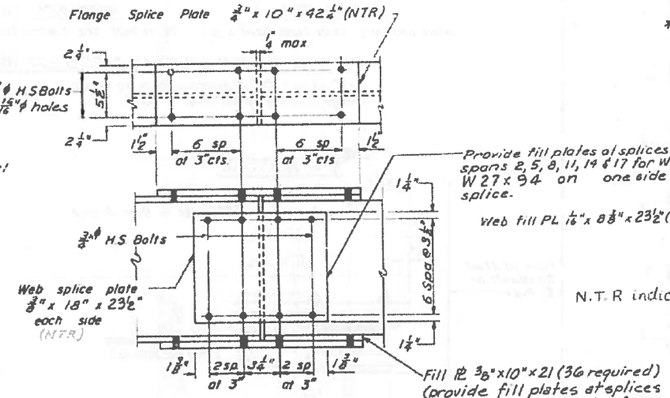
FOR INFORMATION ONLY



DIAPHRAGM D
(30 Required)



DIAPHRAGM D1
(195 Required)



SPLICE

N.T.R indicates Notch toughness requirement

DESIGNED	JFJ
CHECKED	WCC
DRAWN	DEH
CHECKED	JFJ

I-2-D 8-30-80

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 42
CROOKED CREEK OVERFLOW BRIDGE
SECTION 18R-2
WASHINGTON COUNTY
STA. 402+51.23

Prepared by DAILY & ASSOCIATES, ENGINEERS, INC. CHAMPAIGN, PEORIA & BLOOMINGTON ILLINOIS

D/A JOB NO. 437.74

1/16/2018 3:36:50 PM

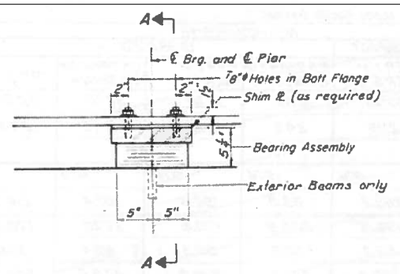
DESIGNED - AYV		DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FOR INFORMATION ONLY–EXISTING STRUCTURAL STEEL DETAILS SN 095–0023
CHECKED -				
DRAWN - AYV	PASSED	REVISED		SHEET NO. 11 OF 12 SHEETS
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	22
			CONTRACT NO. 76L36	
		ILLINOIS	FED. AID PROJECT	

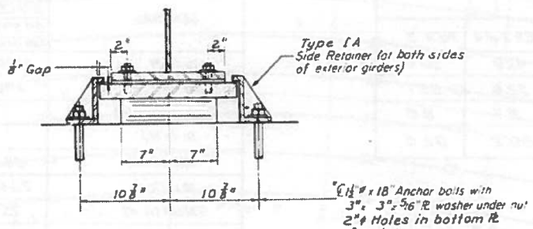
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

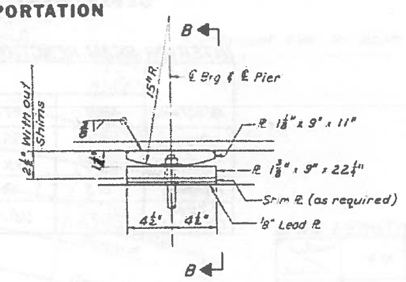
					SHEET NO. 19
42	18R-2	Washington	47	28	26 SHEETS



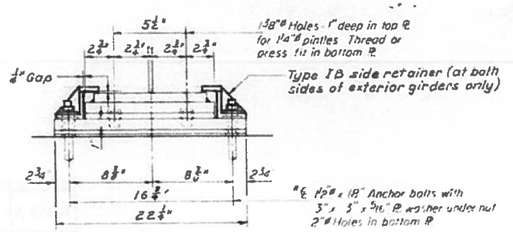
ELEVATION AT PIERS



SECTION A-A



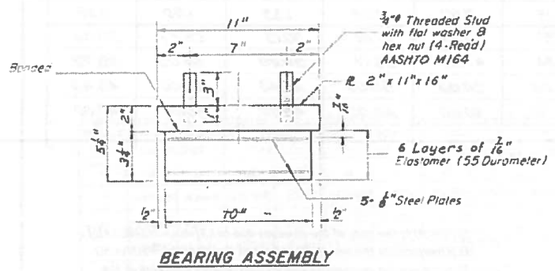
ELEVATION AT PIER



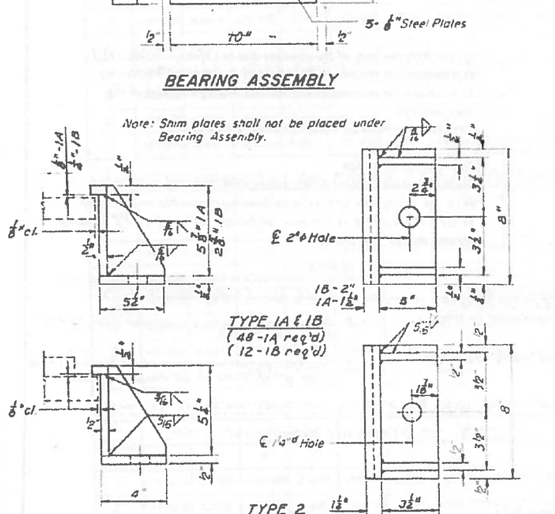
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

(Use at Piers 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17)



BEARING ASSEMBLY



SIDE RETAINER HOLD-DOWN DETAILS

(Hold down required for possible hydrostatic uplift) Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

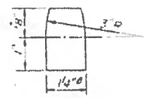
DESIGNED	JPJ
CHECKED	WCC
DRAWN	DEH
CHECKED	JPJ

I-2-E1 12-1-83

TYPE I ELASTOMERIC EXP. BRG.

(Use at Piers 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17)

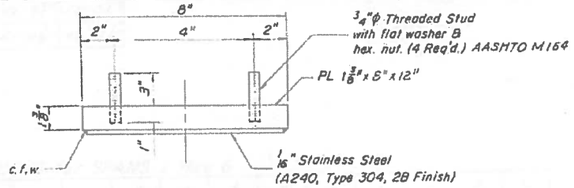
*Notes: Anchor bolts at fixed and Type I bearings may be built into the masonry. See sheet No 20 for Anchor Bolt Installation.



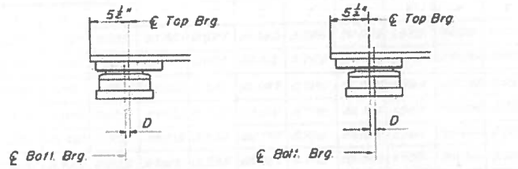
PINTLE

FIXED BEARING

(Use at Piers 3, 9, and 15)



TOP BEARING ASSEMBLY

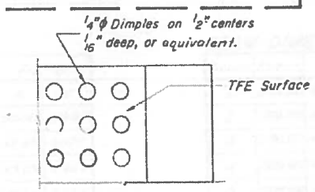


BELOW 50°F. (Move bott. brg. away from fixed brg.)

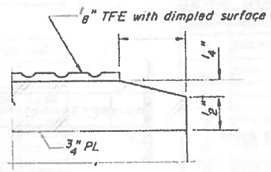
ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT TYPE II EXP. BRG.

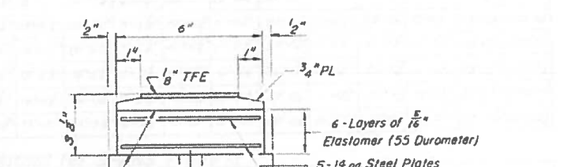
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



PLAN-TFE SURFACE



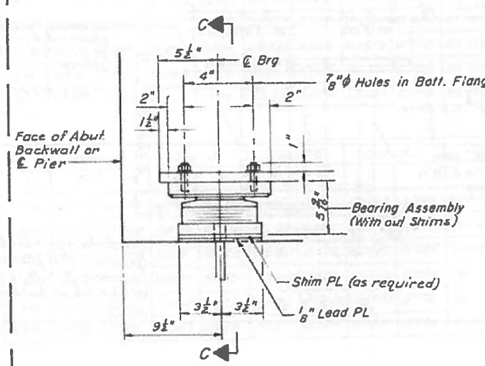
SECTION THRU TFE



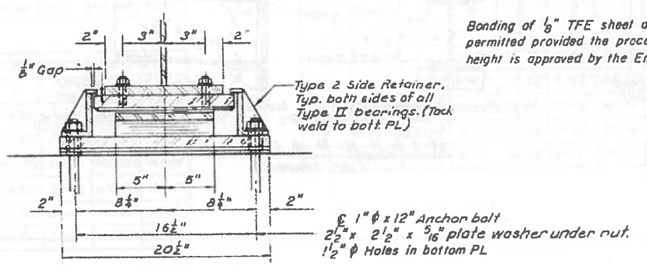
BOTTOM BEARING ASSEMBLY

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.



ELEVATION



SECTION C-C

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	72
Elastomeric Bearing Assembly Type II	Each	36

TYPE II TFE ELASTOMERIC EXP. BRG.

(Use at Abutments and Piers 6 & 12)

BEARING DETAILS
F.A.P. ROUTE 42
CROOKED CREEK OVERFLOW BRIDGE
SECTION 13R-2
WASHINGTON COUNTY
STA. 402+51.23

Prepared by DAILY & ASSOCIATES, ENGINEERS, INC. CHAMPAIGN, PEORIA, & BLOOMINGTON, ILLINOIS

D/A JOB NO. 437.74

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DESIGNED - AYV		DATE -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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DRAWN - AYV	PASSED	REVISED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

FOR INFORMATION ONLY–EXISTING BEARING DETAILS
SN 095–0023
SHEET NO. 12 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	18-R-1	WASHINGTON	23	23
		CONTRACT NO. 76L36		
		ILLINOIS FED. AID PROJECT		