18

CONTRACT NO. 74884

STATE OF ILLINOIS 03-08-2019 LETTING ITEM 118 **DEPARTMENT OF TRANSPORTATION** D-97-071-18 0 **PROPOSED** FOR INDEX OF SHEETS, SEE SHEET NO. 2 **HIGHWAY PLANS** FAI ROUTE 72 (1-72) SECTION D7 BRIDGE REPAIRS 2019-1 **BRIDGE REPAIR MACON COUNTY** C-97-121-18 LOCATION OF SECTION INDICATED THUS: ... -STATE OF MUINOIS S.N. 058-0091 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. JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 0 PROJECT ENGINEER: TOM RONAN PROJECT MANAGER: RYAN WEI PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

INDEX OF SHEETS

SHEET NO.	<u>ITEM</u>
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES, & HIGHWAY STANDARDS
3 - 4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	SCHEDULES OF QUANTITIES
7 - 1 4	TRAFFIC CONTROL PLAN SHEETS
15-25	STRUCTURE PLAN SHEETS AND DETAILS
26	CONCRETE MEDIAN DETAIL

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STD. NO.	DESCRIPTION
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
606301-04	PC CONCRETE ISLANDS AND MEDIANS
701001-02	OFF-ROAD OPERATIONS, 2L,2W, 15' MINIMUM AWAY FROM PAVEMENT EDGE
701006-05	OFF-ROAD OPERATIONS, 2L,2W, 15' AWAY TO EDGE OF PAVEMENT
701101-05	OFF-ROAD OPERATIONS, MULTI-LANE, 15'AWAY TO EDGE OF PAVEMENT
701106-02	OFF-ROAD OPERATIONS, MULTI-LANE, 15' MINIMUM AWAY FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701316-12	LANE CLOSURE, 2L,2W, BRIDGE REPAIR, FOR SPEEDS >= 45 MPH
701400-09	APPROACH TO LANE CLOSURE, FREEWAY / EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY / EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-08	TRAFFIC CONTROL DEVICES

GENERAL NOTES

THIS PROJECT IS LOCATED OVER I-72 AT THE ARGENTA INTERCHANGE IN MACON COUNTY.
THIS WORK INCLUDES THE FOLLOWING REPAIRS TO STRUCTURE 058-0091 CARRYING CH-25
OVER I-72: PARTIAL AND FULL DEPTH DECK PATCHING, NEW WATERPROOFING MEMBRANE &
BITUMINOUS WEARING SURFACE, EXPANSION JOINT REPLACEMENT WITH NEW STRIP SEALS,
STRUCTURAL REPAIR OF CONCRETE ON THE SUBSTRUCTURE, REPLACEMENT OF BEARINGS ON THE
PLATE GIRDERS AT BOTH ABUTMENTS, AND ALL OTHER WORK NECESSARY TO COMPLETE THIS
PROJECT

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LINE 4" CONSISTS OF 922 FEET OF YELLOW.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LINE 4" CONSISTS OF 922 FEET OF WHITE.

TEMPORARY PORTABLE TRAFFIC SIGNALS SHALL ONLY BE USED FROM MARCH 1 TO NOVEMBER 1.

	AC/PG	DESIGN AIR	MIXTURE	FRICTION	QUALITY
APPLICATION		VOIDS	COMPOSITION	AGGREGATE	MANAGEMENT
HMA SURFACE COURSE, MIX "C", N70	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTUREC	QC/QA

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/3/2019	DATE -	REVISED -	

		INDEX,	STAND	ARDS		F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
& GENERAL NOTES						72	D7 BRIDGE REPAIRS 2	2019-1	MACON	26	2
	& GLIVENAL NOTES								CONTRACT	NO. 74	1884
	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOIS	FED. A	ID PROJECT		

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100% STATE 100% STATE

	CUMMADY OF QUANTITIES	JIAIL	CONSTRUCTION	TYPE CODE		CUMMADY OF QUANTITIES			CONS	TRUCTION TYPE CODE
	SUMMARY OF QUANTITIES	TOTAL	0047			SUMMARY OF QUANTITIES		TOTAL	0047	
CODE NO	ITEM U	NIT QUANTITIES			CODE NO	ITEM	UNIT	QUANTITIES		
35300400	PORTLAND CEMENT CONCRETE BASE COURSE 9" SO	YD 110	110		58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	2418	2418	
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 TO	N 204	204		67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	
42000060	WELDED WIRE REINFORCEMENT SO	YD 110	110		67100100	MOBILIZATION	L SUM	1	1	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2" SO	YD 2398	2398		70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1	
50102400	CONCRETE REMOVAL CU	YD 39.3	39.3			701316				
50157300	PROTECTIVE SHIELD SO	YD 911	911		70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	2	
50300255	CONCRETE SUPERSTRUCTURE CU	YD 38.9	38.9		70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1	
50300300	PROTECTIVE COAT SO	YD 119	119			701201				
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL PO	UND 4790	4790		70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1	
50800205	REINFORCEMENT BARS, EPOXY COATED PO	UND 6630	6630		70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1	
50800515	BAR SPLICERS EA	CH 38	38			701701				
52000110	PREFORMED JOINT STRIP SEAL FO	OT 244	244		70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I EA	CH 18	18		70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
52100520	ANCHOR BOLTS, 1" EA	CH 54	54		70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28	

MODEL: Default

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PLOT DATE = 1/3/2019	DATE	REVISED

STATE O	F ILLINOIS
DEPARTMENT OF	TRANSPORTATION

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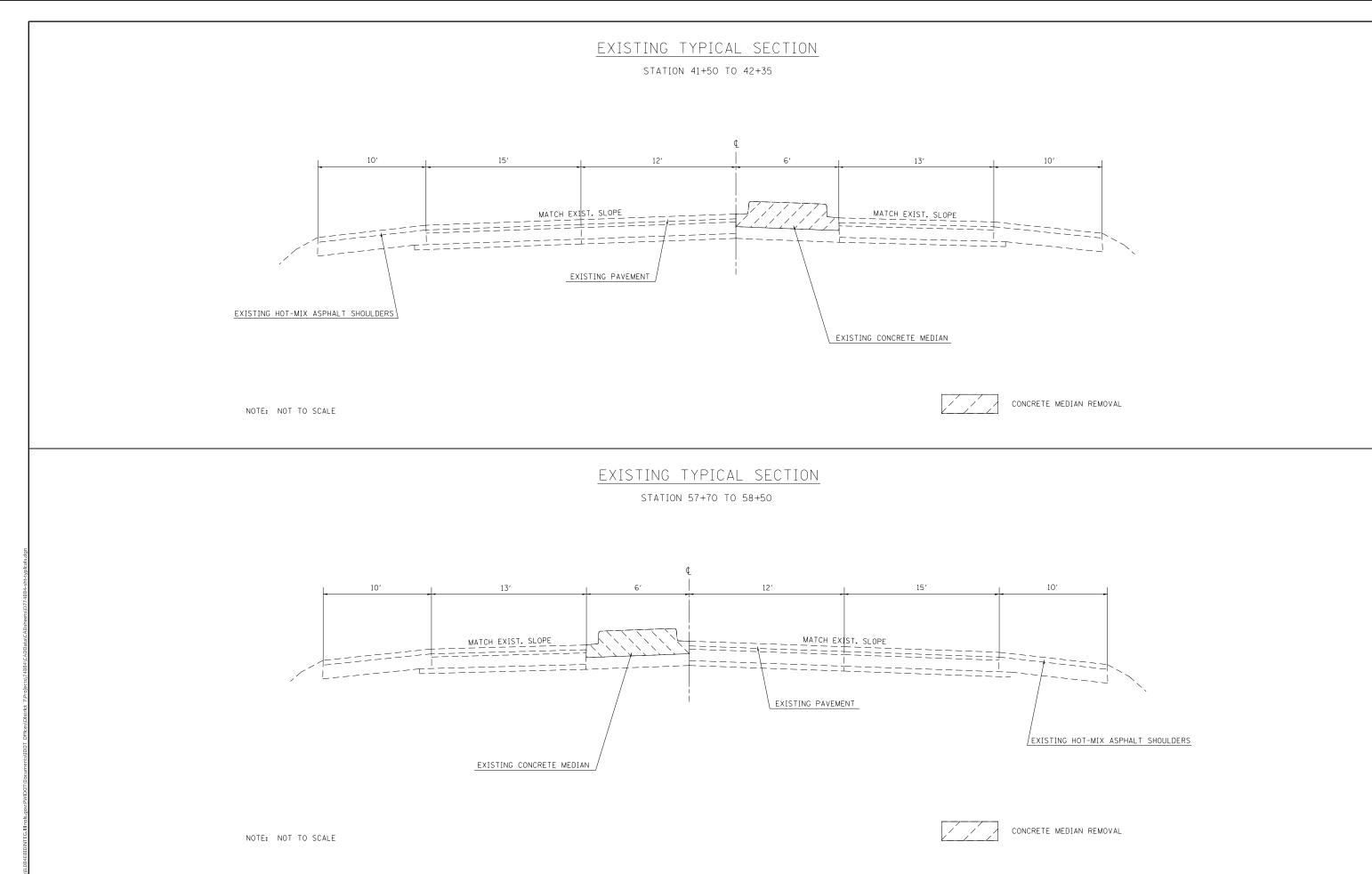
		SUN	IMARY	OF		F.A.I. RTE.	SECTI	ION		COUNTY	TOTAL SHEETS	SHEET NO.
		ΛIJ	ANTITIE	c		72	D7 BRIDGE REF	PAIRS 20	19-1	MACON	26	3
QUANTITIES										CONTRACT	NO. 74	4884
SHEET 1	OF	1	SHEETS	STA.	TO STA.			ILLINOIS	EED ΔI	D PROJECT		

100% STATE 100% STATE

	CUMMARY OF CHANTITIES		JIAIL	CONSTRUCTION TYPE CODE			SUMMARY OF QUANTITIES			JIAIL	CONSTRUCTION TYPE CODE		
1	SUMMARY OF QUANTITIES		TOTAL	0047			SUMMARY			TOTAL	0047		
CODE NO	ITEM	UNIT	QUANTITIES			CODE NO		ITEM	UNIT	QUANTITIES			
70300100	SHORT TERM PAVEMENT MARKING	FOOT	46	46		Z0016200	DECK SLAB REPAI	R (PARTIAL)	SQ YD	130	130		
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	15	15									
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	6067	6067									
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1844	1844									
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SO FT	2022	2022									
X4403300	CONCRETE MEDIAN REMOVAL	SO FT	990	990									
X6061702	CONCRETE MEDIAN, TYPE SM (DOWELLED)	SQ FT	990	990									
X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	1844	1844									
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	18	18									
Z0005010	HOT-MIX ASPHALT FOR PATCHING POTHOLES (COLD MIX)	TON	2	2									
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO	SO FT	120	120									
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SO YD	9	9									
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	62	62									
* SPECIA	ALTY ITEM] [

USER NAME = steffenmk	DESIGNED -	REVISED -
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PLOT DATE = 1/3/2019	DATE -	REVISED -

		SUI	/IMARY	F.A.I. SECTION			COUNTY	TOTAL SHEETS	SHEET NO.		
		ΛI	IANTITIE	72	D7 BRIDGE RI	EPAIRS 2019-1	MACON	26	4		
		- 40	MINITIE				CONTRACT	NO. 74	1884		
SCALE:	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PR				



JSER NAME = steffenmk DESIGNED -REVISED -SECTION STATE OF ILLINOIS **EXISTING TYPICAL SECTIONS** DRAWN REVISED -72 D7 BRIDGE REPAIRS 2019-1 MACON 26 5
CONTRACT NO. 74884 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED PLOT DATE = 1/3/2019 DATE REVISED SHEET OF 8 SHEETS STA. TO STA.

USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/3/2019	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

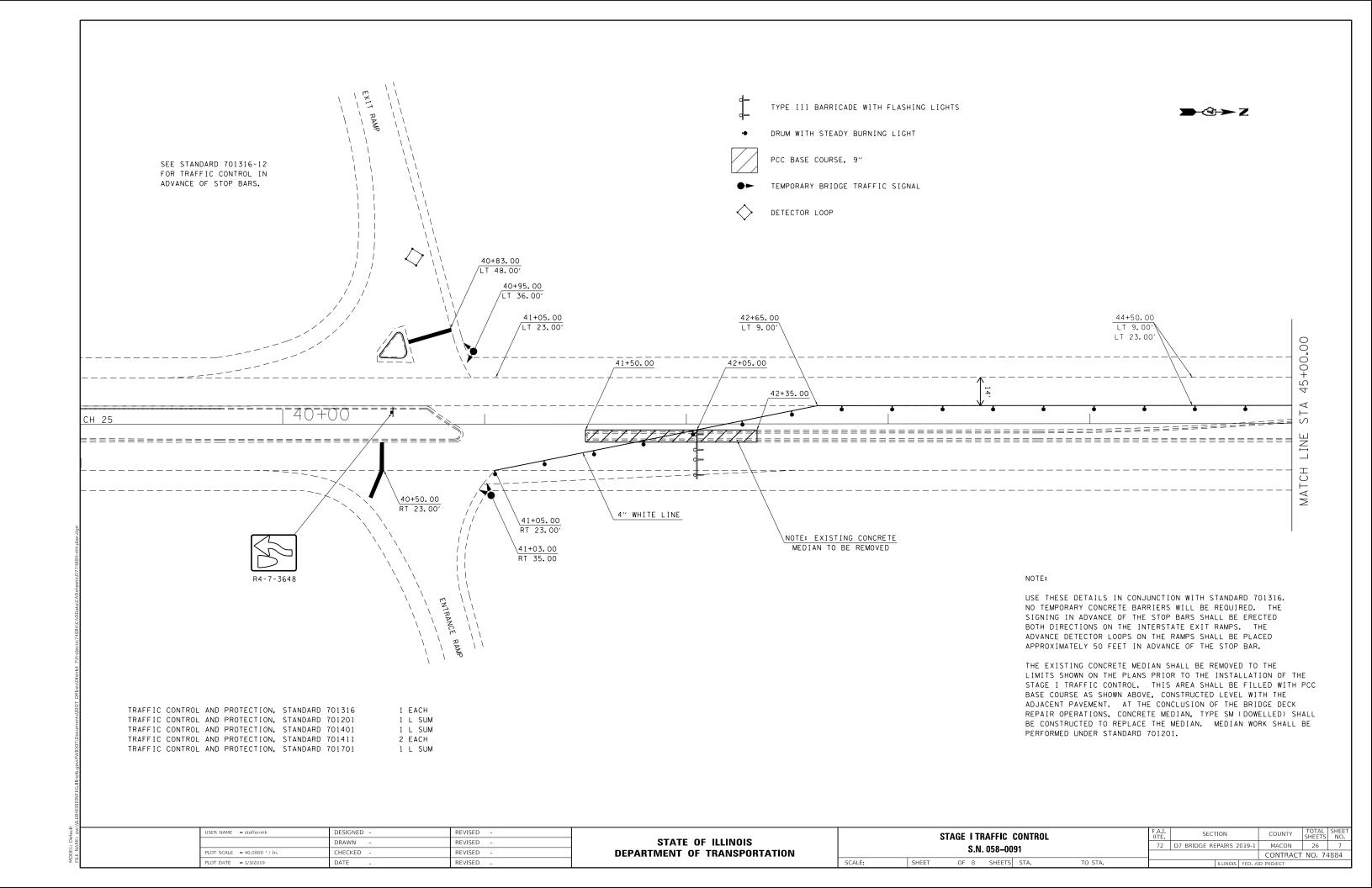
SCHEDULE OF Quantities								
SHEET	1	OF	4	SHEETS	STA.	TO STA.		
						•		

SCALE:

F.A.I. RTE	SECT	ΓΙΟΝ		COUNTY	TOTAL SHEETS	SHEET NO.
72	D7 BRIDGE RE	PAIRS 2	019-1	MACON	26	6
				CONTRACT	NO. 74	1884
		ILLINOIS	FED. A	ID PROJECT		

STATION	ТО	STATION	LENGTH	S CONCRETE BASE COURSE 9"	% WELDED WIRE A REINFORCEMENT	S CONCRETE MEDIAN H REMOVAL	S CONCRETE MEDIAN, TYPE SM (DOWELLED)
41+50.00	ТО	42+35.00	85	56.7	56.7	510	510
57+70.00	ТО	58+50.00	80	53.3	53.3	480	480
TOTALS			165	110	110	990	990

STATION TO STATION	LENGTH	PAINT PAVEMENT ☐ MARKING - LINE YELLOW 4"	PAINT PAVEMENT ☐ MARKING - LINE WHITE 4"	TEMPORARY PAVEMENT MARKING - WHITE LINE 4"	TEMPORARY PAVEMENT MARKING - YELLOW LINE 4"	☐ SHORT TERM ☐ PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	© PAVEMENT MARKING ☐ REMOVAL - WATER ☐ BLASTING	GROOVING FOR CECESSED PAVEMENT MARKING 5"
	1	1 1	1 1	1 1	1 1	1 1	JULI	JULI	1001
41+05 TO 59+06	1801	922	922	5145	922	46	15	2022	1844
	TOTALS	922	922	5145	922	46	15	2022	1844



 $\rightarrow \odot \rightarrow Z$ 45+00.00 LT 9.00' LT 23.00' 45+00.00 50+00.00 MATCH TYPE III BARRICADE WITH FLASHING LIGHTS DRUM WITH STEADY BURNING LIGHT PCC BASE COURSE, 9" TEMPORARY BRIDGE TRAFFIC SIGNAL DETECTOR LOOP JSER NAME = steffenmk DESIGNED -REVISED -STAGE I TRAFFIC CONTROL STATE OF ILLINOIS DRAWN REVISED -

PLOT SCALE = 40,0000 ' / in.

CHECKED -

REVISED -

DEPARTMENT OF TRANSPORTATION

S.N. 058-0091 SHEET 2 OF 8 SHEETS STA. TO STA. TEL SECTION COUNTY INTER NO. 1011A SHEETS NO. 172 D7 BRIDGE REPAIRS 2019-1 MACON 26 8 CONTRACT NO. 74884

→③→ Z 55+00.00 LT 9.00' LT 23.00' 50+00.00 LT 9.00' 50+00.00 STA MATCH МАТСН TYPE III BARRICADE WITH FLASHING LIGHTS DRUM WITH STEADY BURNING LIGHT PCC BASE COURSE, 9" TEMPORARY BRIDGE TRAFFIC SIGNAL DETECTOR LOOP JSER NAME = steffenmk DESIGNED -REVISED -STAGE I TRAFFIC CONTROL STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

S.N. 058-0091

TO STA.

SHEET 3 OF 8 SHEETS STA.

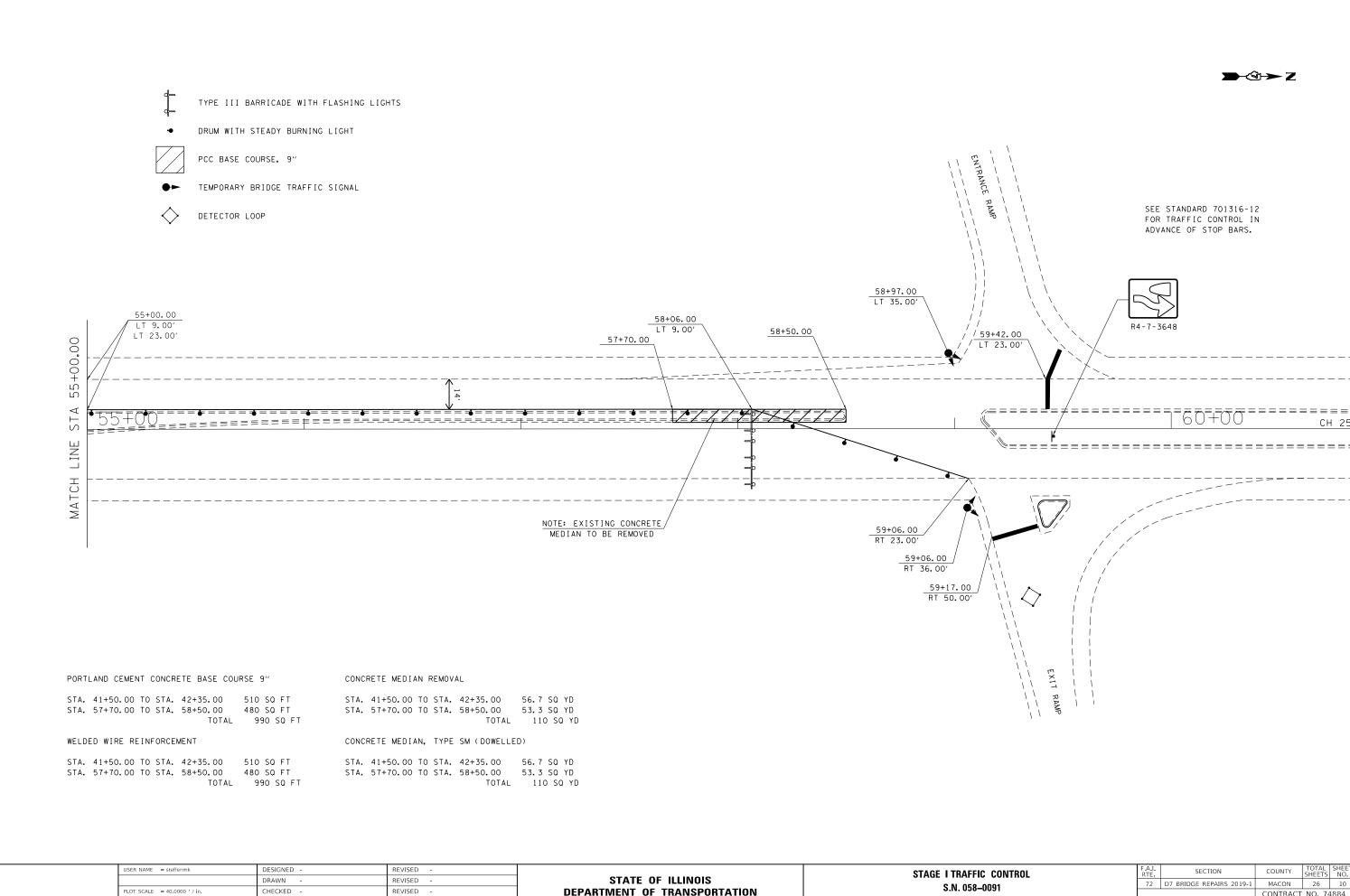
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PLOT SCALE = 40,0000 ' / in.

REVISED -

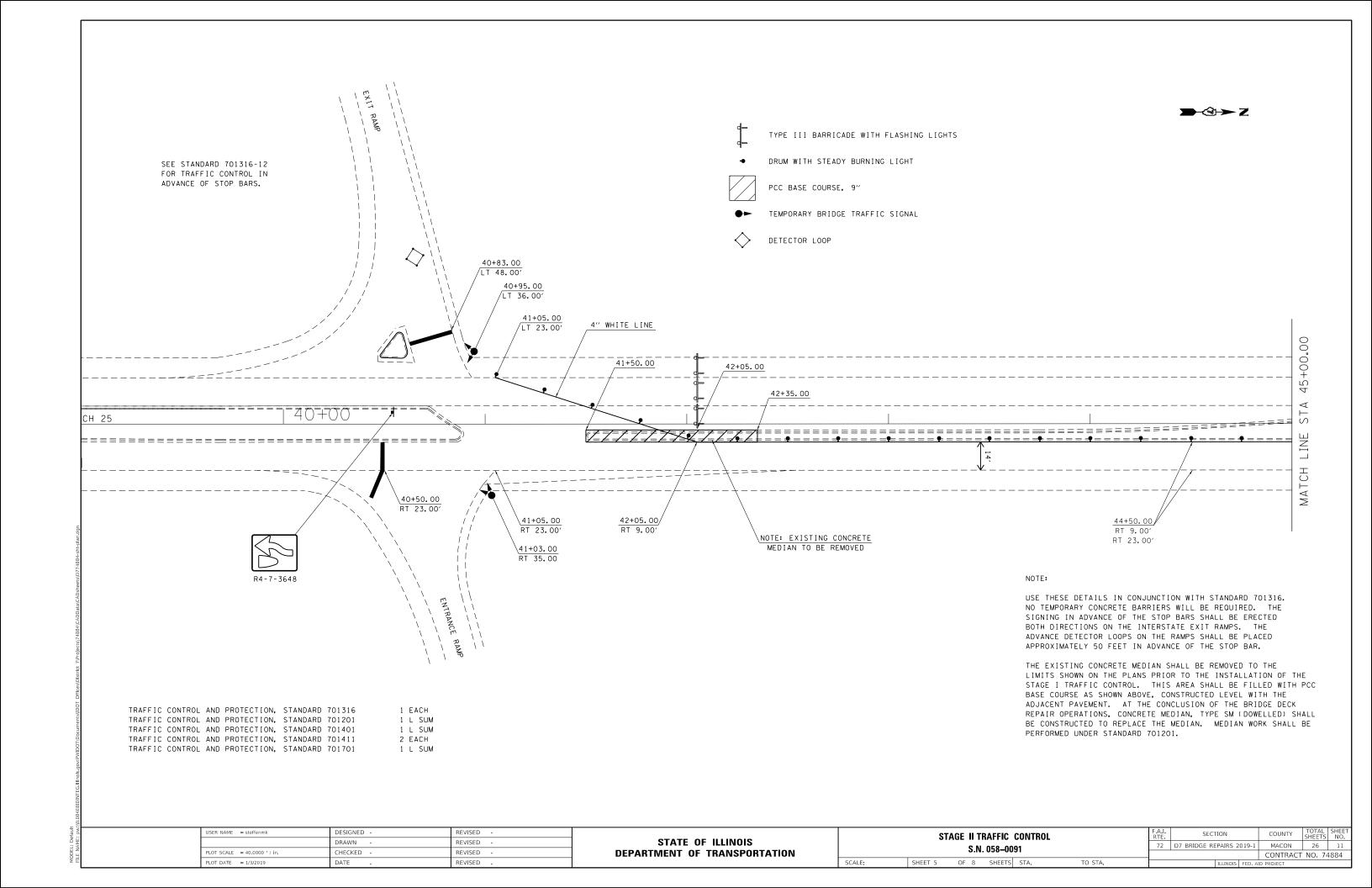
REVISED -



DATE

DEPARTMENT OF TRANSPORTATION

S.N. 058-0091 CONTRACT NO. 74884 SHEET 4 OF 8 SHEETS STA. TO STA.



→③→ Z 45+00.00 50+00.00 MATCH MATCH 45+00.00 RT 9.00′ RT 23.00' TYPE III BARRICADE WITH FLASHING LIGHTS DRUM WITH STEADY BURNING LIGHT PCC BASE COURSE, 9" TEMPORARY BRIDGE TRAFFIC SIGNAL DETECTOR LOOP JSER NAME = steffenmk DESIGNED -REVISED -SECTION STAGE II TRAFFIC CONTROL TEL SECTION COUNTY SHEETS NO.

72 D7 BRIDGE REPAIRS 2019-1 MACON 26 12 STATE OF ILLINOIS DRAWN REVISED -S.N. 058-0091 **DEPARTMENT OF TRANSPORTATION** PLOT SCALE = 40.0000 ' / in. CHECKED -REVISED -CONTRACT NO. 74884 DATE SHEET 6 OF 8 SHEETS STA. TO STA.

→③→ Z 50+00.00 55+00.00 STAMATCH MATCH 50+00.00 RT 9.00' 55+00.00 RT 9.00' RT 23.00' TYPE III BARRICADE WITH FLASHING LIGHTS DRUM WITH STEADY BURNING LIGHT PCC BASE COURSE, 9" TEMPORARY BRIDGE TRAFFIC SIGNAL DETECTOR LOOP JSER NAME = steffenmk DESIGNED -REVISED -STAGE II TRAFFIC CONTROL STATE OF ILLINOIS DRAWN -REVISED -S.N. 058-0091 **DEPARTMENT OF TRANSPORTATION** PLOT SCALE = 40,0000 ' / in. CHECKED -REVISED -DATE SHEET 7 OF 8 SHEETS STA. TO STA.

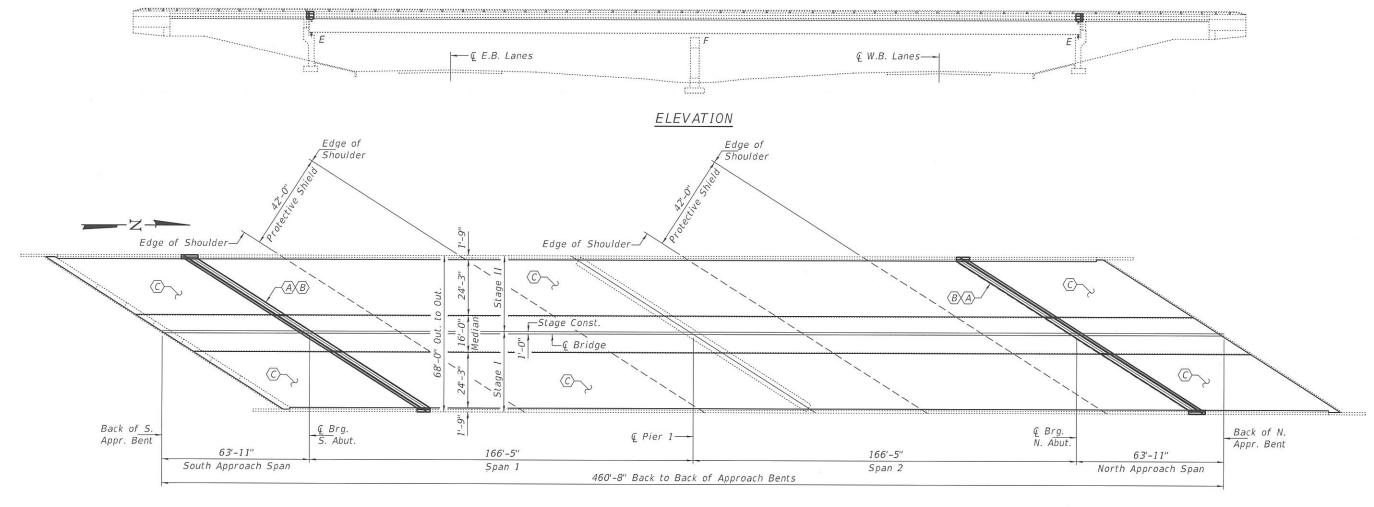


→③→ Z TYPE III BARRICADE WITH FLASHING LIGHTS DRUM WITH STEADY BURNING LIGHT PCC BASE COURSE, 9" TEMPORARY BRIDGE TRAFFIC SIGNAL SEE STANDARD 701316-12 DETECTOR LOOP FOR TRAFFIC CONTROL IN ADVANCE OF STOP BARS. 59+02.00 LT 30.00' 57+70.00 58+50.00 58+97.00 55+00,00 LT 35.00' STAMATCH 59+07.00/ NOTE: EXISTING CONCRETE / 57+65.00 55+00.00 59+06.00 MEDIAN TO BE REMOVED RT 9.00' RT 9.00' RT 36.00' RT 23.00' 59+17.00 RT 50.00' EXIT RAMP PORTLAND CEMENT CONCRETE BASE COURSE 9" CONCRETE MEDIAN REMOVAL STA. 41+50.00 TO STA. 42+35.00 510 SQ FT STA. 41+50.00 TO STA. 42+35.00 56.7 SQ YD STA. 57+70.00 TO STA. 58+50.00 480 SQ FT STA. 57+70.00 TO STA. 58+50.00 53.3 SQ YD TOTAL 990 SQ FT TOTAL 110 SQ YD WELDED WIRE REINFORCEMENT CONCRETE MEDIAN, TYPE SM (DOWELLED) STA. 41+50.00 TO STA. 42+35.00 510 SQ FT STA. 41+50.00 TO STA. 42+35.00 56.7 SO YD STA. 57+70.00 TO STA. 58+50.00 53.3 SQ YD STA. 57+70.00 TO STA. 58+50.00 480 SQ FT TOTAL 990 SQ FT TOTAL 110 SQ YD JSER NAME = steffenmk DESIGNED -REVISED SECTION STAGE II TRAFFIC CONTROL STATE OF ILLINOIS DRAWN REVISED 72 D7 BRIDGE REPAIRS 2019-1 MACON 26 14 S.N. 058-0091 CHECKED -REVISED **DEPARTMENT OF TRANSPORTATION**

SHEET 8 OF 8 SHEETS STA.

TO STA.

CONTRACT NO. 74884



PLAN

- (A) Remove Existing Neoprene Exp. Jt. and Install Preformed Strip Seal.
- (B) Remove Existing Abutment Bearings and Install new Elastomeric Bearings, Type I
- (C) Remove & Replace Existing HMA Surface & Waterproofing Membrane System.

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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.

Removal and reinstallation of the handrail sections and support posts at both abutments will be necessary for construction of the expansion joints. The existing handrail sections and support posts shall be reused. New bolts, shim plates, and post support anchor assemblies, as detailed in the plans, are to be provided and installed for the replacement of the handrail sections. This work and all materials shall be included in the contract unit price for Concrete Superstructure.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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

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

The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beam.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Full depth deck slab repairs performed in the exterior bays of the bridge deck (between the parapet walls and the first interior beams) shall be limited to individual lengths no greater than 10'. In these portions of the deck, repair areas longer than 10' shall be divided into segments not greater than 10' in length, and the segments shall be poured in alternating sequence. Subsequent segments repaired in sequence shall not be removed until 72 hours shall have elapsed from the end of the previous, adjacent pour, and the adjacent pour shall have attained a minimum modulus of rupture of 650 psi.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	39.3
Concrete Superstructure	Cu. Yd.	38.9
Reinforcement Bars, Epoxy Coated	Pound	6630
Bar Splicers	Each	38
Hot-Mix Asphalt Surface Removal, 11/2"	Sq. Yd.	2398
Hot-Mix Asphalt Surface Course, Mix "C", N70	Ton	204
Waterproofing Membrane System	Sq. Yd.	2418
Preformed Joint Strip Seal	Foot	244
Protective Coat	Sq. Yd.	119
Jack & Remove Existing Bearings	Each	18
Elastomeric Bearing Assembly, Type I	Each	18
Furnishing & Erecting Structural Steel	Pound	4790
Anchor Bolts, 1"Ø	Each	54
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	120
Deck Slab Repair (Partial)	Sq. Yd.	130
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	9
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	62
Protective Shield	Sq. Yd.	911
* O		

26 15

EXPIRES 11-30-2020

DAVID CARL

PUZEY

081-003470

SPRINGFIELD

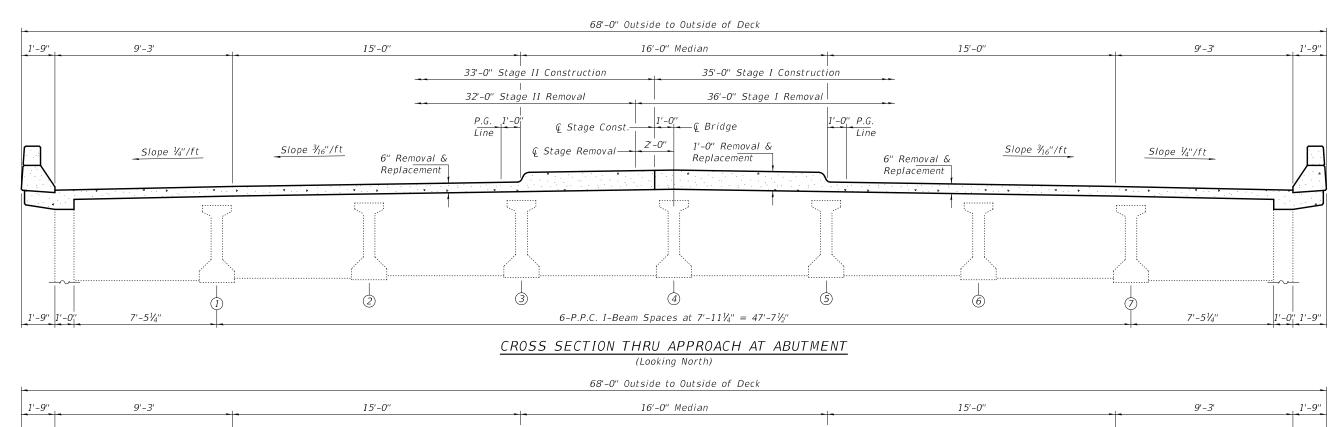
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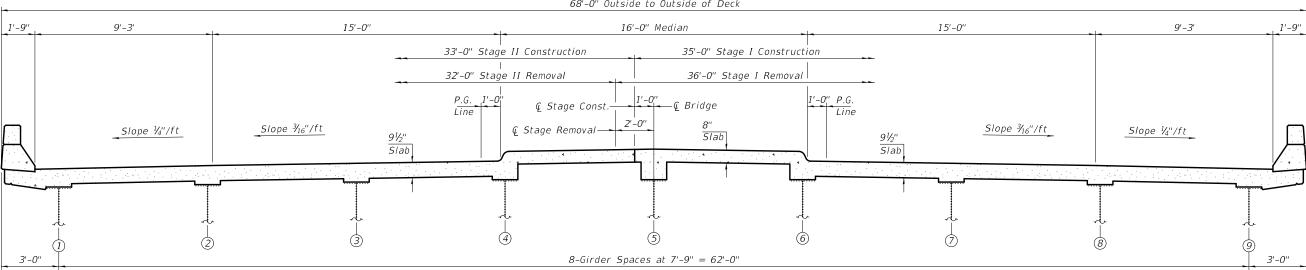
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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

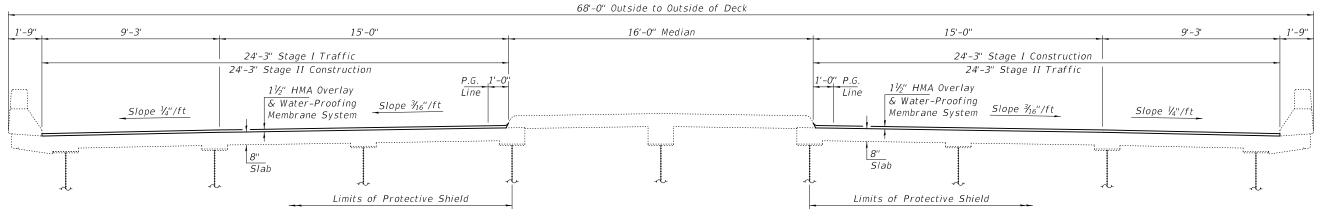
GENERAL PLAN AND ELEVATION SECTION COUNTY TOTAL SHEE NO. F.A.S. ROUTE 544 OVER F.A.I. ROUTE 72 D7 BRIDGE REPAIRS 2019-1 MACON SN 058-0091 CONTRACT NO. 74884 SHEET NO. 1 OF 11 SHEETS ILLINOIS FED. AID PROJECT

^{*} On new concrete areas only.



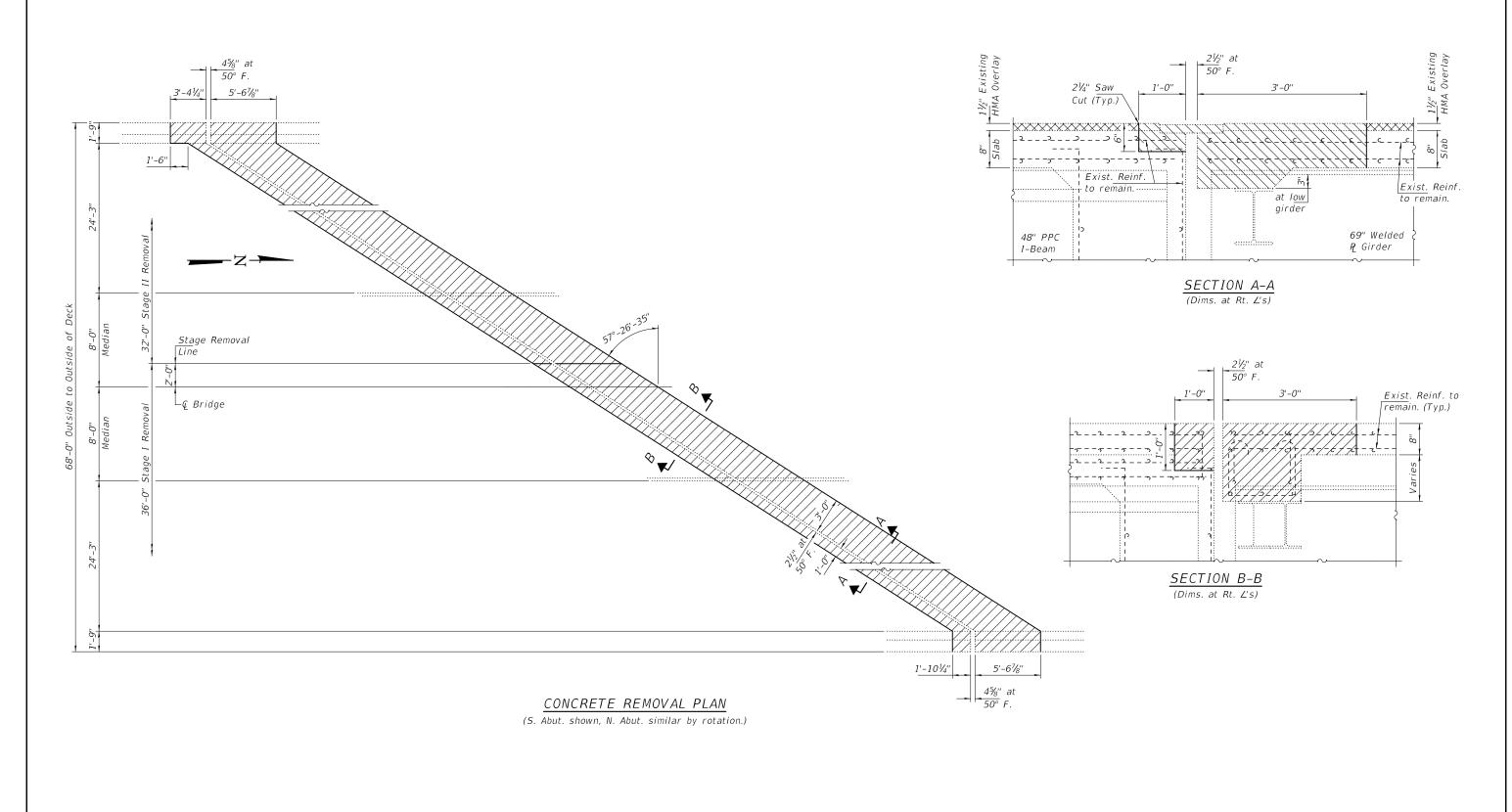


CROSS SECTION THRU BRIDGE DECK AT ABUTMENT (Looking North)



CROSS SECTION THRU BRIDGE DECK AT MID-SPAN (Looking North)

DESIGNED - JOV	EXAMINED	I mot A All Gt	DATE - JANU	NUARY 22, 2019	OTATE OF HANGIO	STAGING DETAILS	F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	_	ENGINEER OF STRUCTURAL SERVICES			STATE OF ILLINOIS	SN 058-0091	72	D7 BRIDGE REPAIRS 2019-1	MACON	26	16
DRAWN - STEFFEN	PASSED	& Carl Prayey	REVISED -	-	DEPARTMENT OF TRANSPORTATION	314 000-0031			CONTRAC	T NO. 748	884
CHECKED - JOV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	-		SHEET NO. 2 OF 11 SHEETS		ILLINOIS FED.	AID PROJECT		



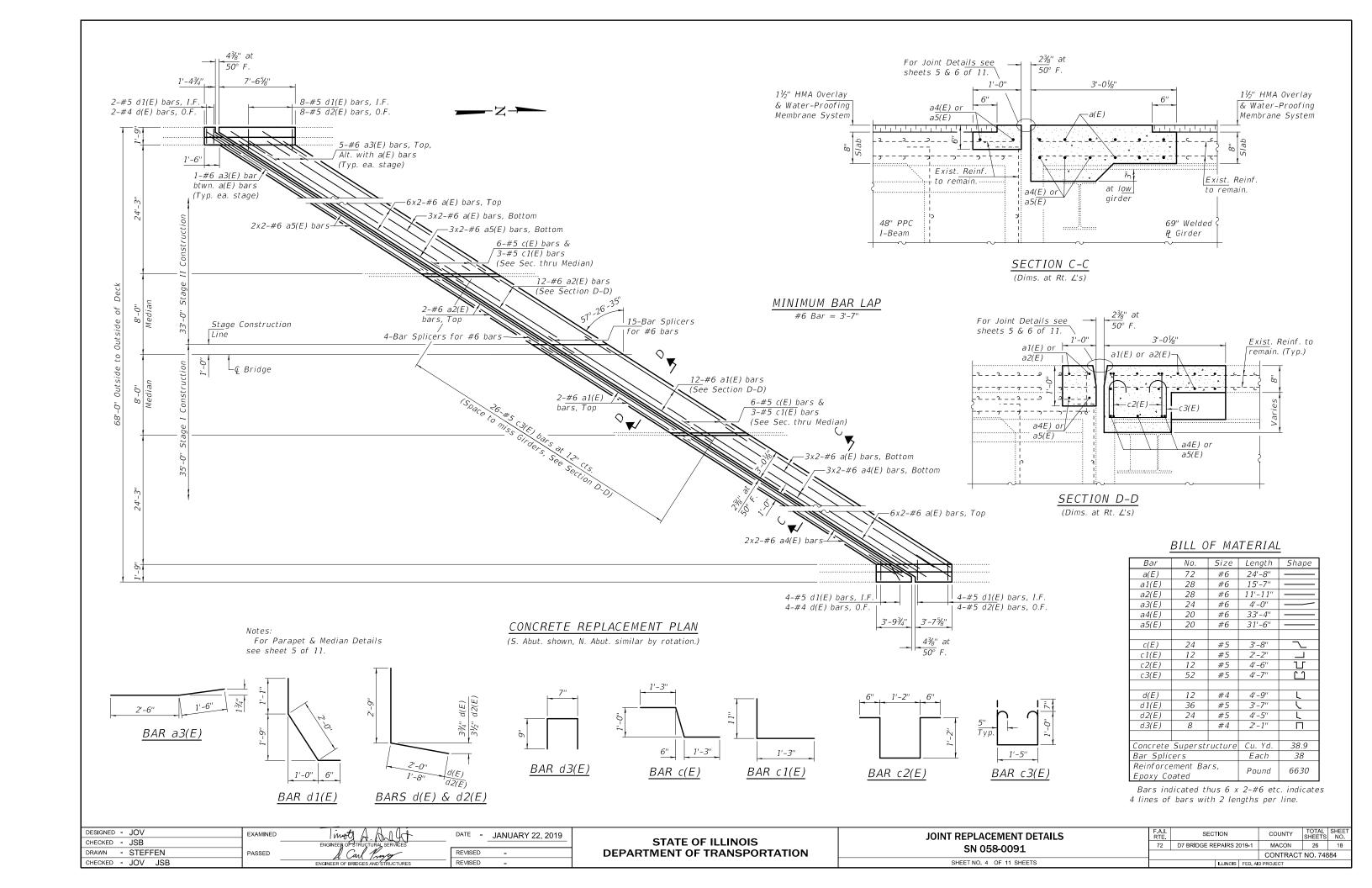
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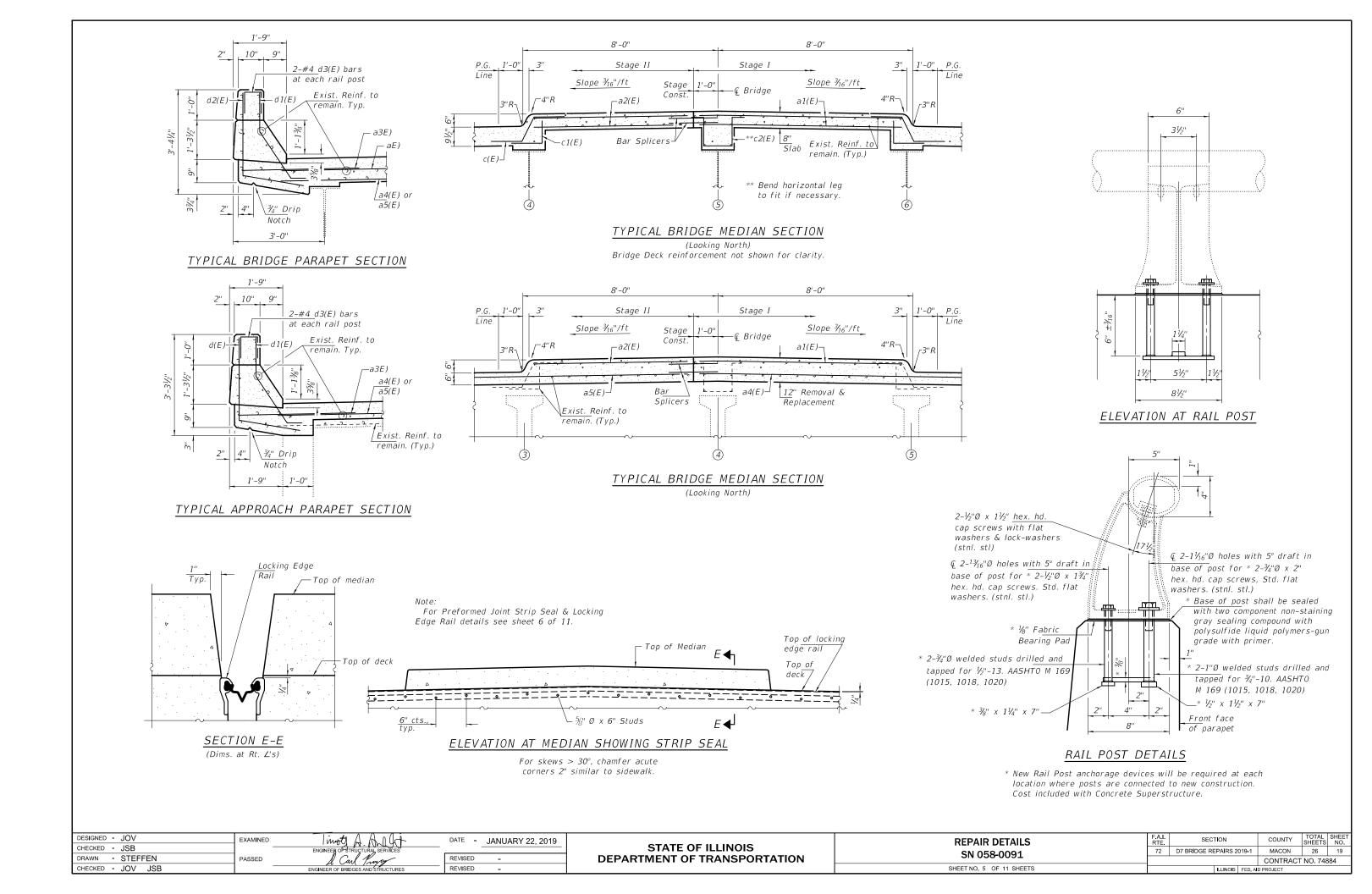
Hatched areas indicate Concrete Removal. Cross Hatched areas indicate HMA Surface Removal. For parapet & median details see sheet 5 of 11.

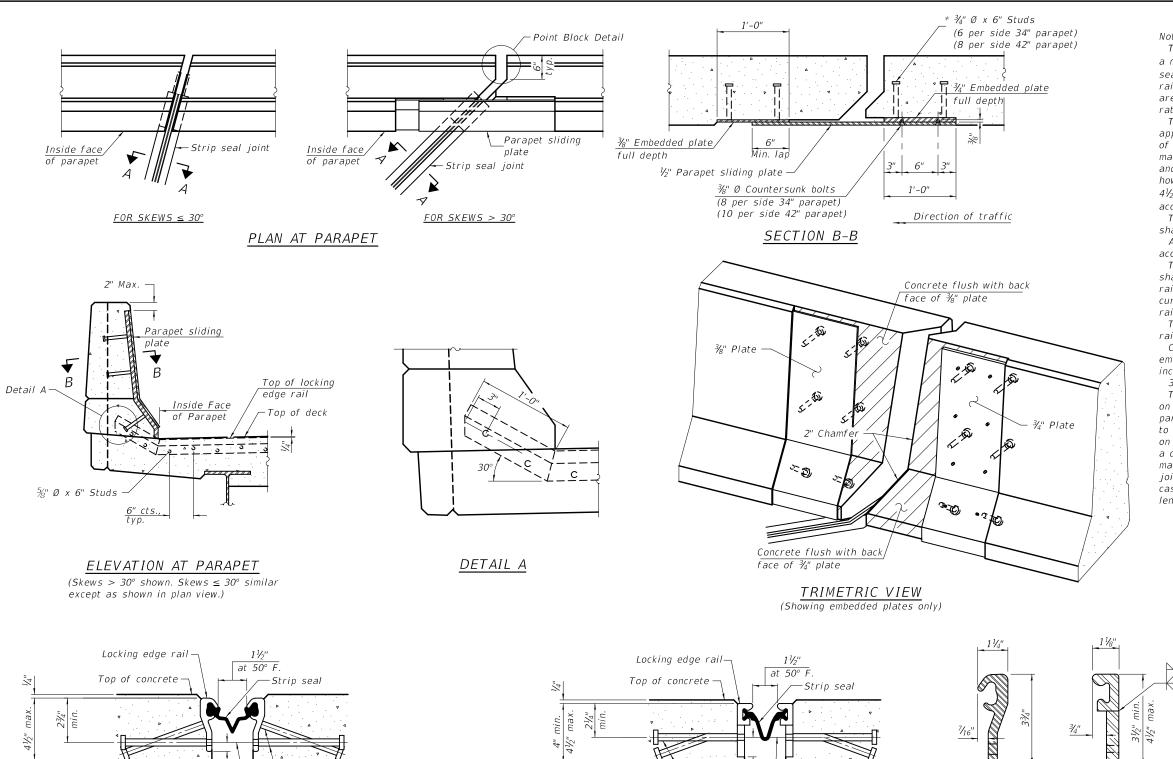
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	39.3

DESIGNED - JOV	EXAMINED	I mot A. And It	DATE - JANUARY 22, 2019	CTATE OF ILLINOIS	JOINT REMOVAL DETAILS	F.A.I. SECTION	COUNTY	TOTAL S SHEETS	SHEET NO.
CHECKED - JSB	_	ENGINEER OF STRUCTURAL SERVICES		STATE OF ILLINOIS	SN 058-0091	72 D7 BRIDGE REPAIRS 2019-1	MACON	26	17
DRAWN - STEFFEN	PASSED	& Carl Prayey	REVISED -	DEPARTMENT OF TRANSPORTATION	314 030-0031		CONTRAC	T NO. 7488	34
CHECKED - JOV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 3 OF 11 SHEETS	ILLINOIS FED, A	JD PROJECT		







The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

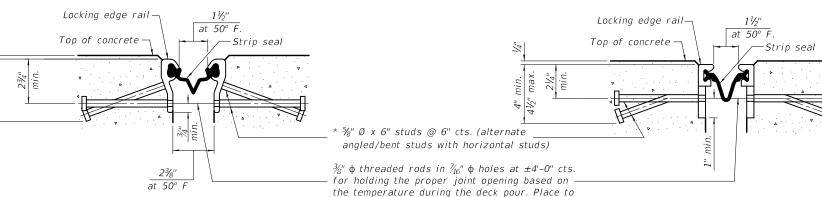
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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

The top surface of sidewalk sliding plates shall have a raised pattern according to ASTM A786.

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

34" F-shape barrier shown, 42" F-shape similar as noted. The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



miss studs. All rods shall be burned, or sawed

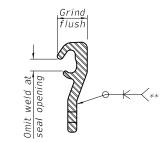
off flush with the plates after concrete is set.

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

<u>ROLLED</u> WELDED RAIL (EXTRUDED) RAIL

LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	244

EJ-SS-S 8-11-17

DESIGNED - JOV	EXAMINED	I mot A All It	DATE -	JANUARY 22, 2019
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		
DRAWN - STEFFEN	PASSED	& Carl Prayer	REVISED	-
CHECKED - JOV JSB	1	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	_

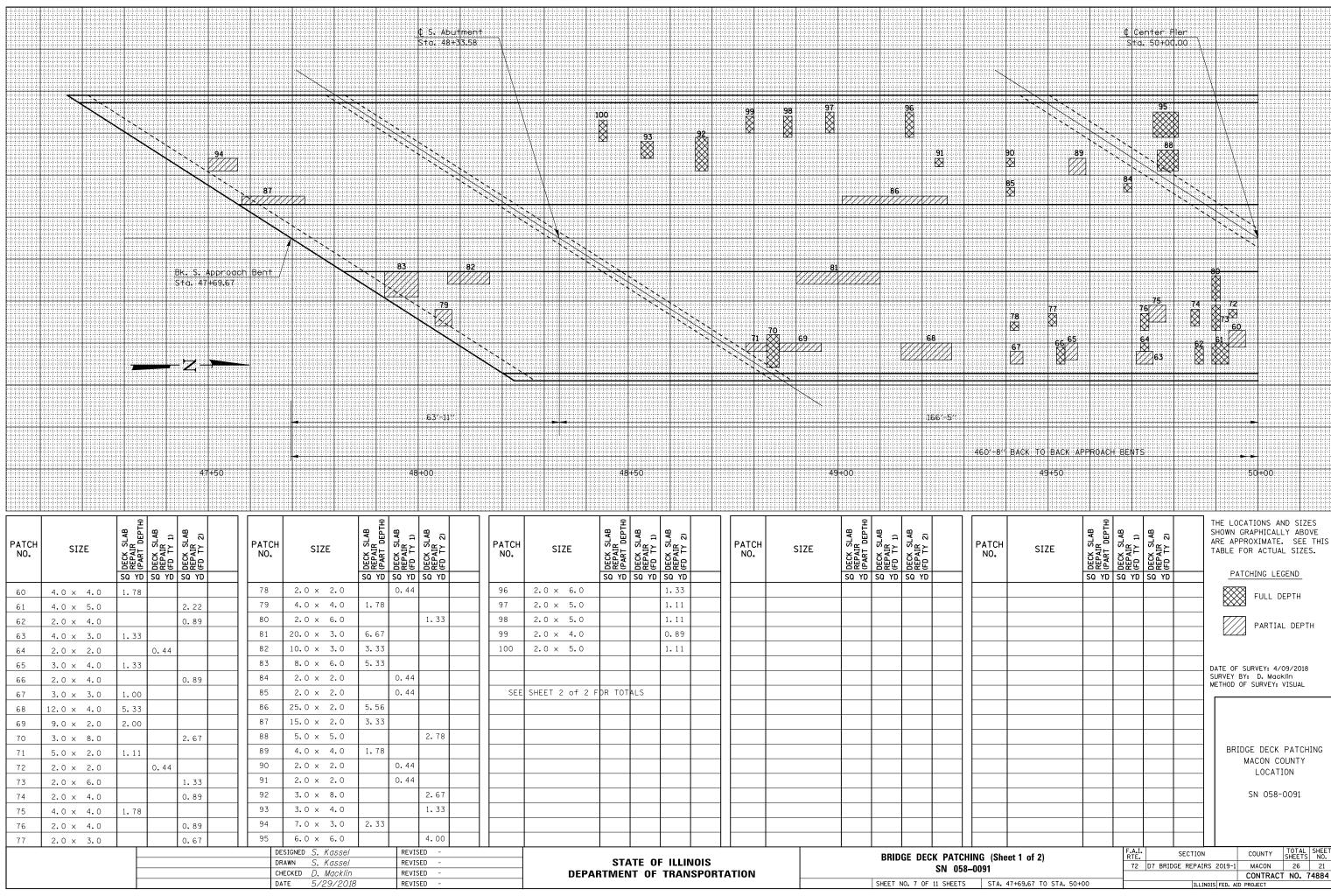
SHOWING ROLLED RAIL JOINT

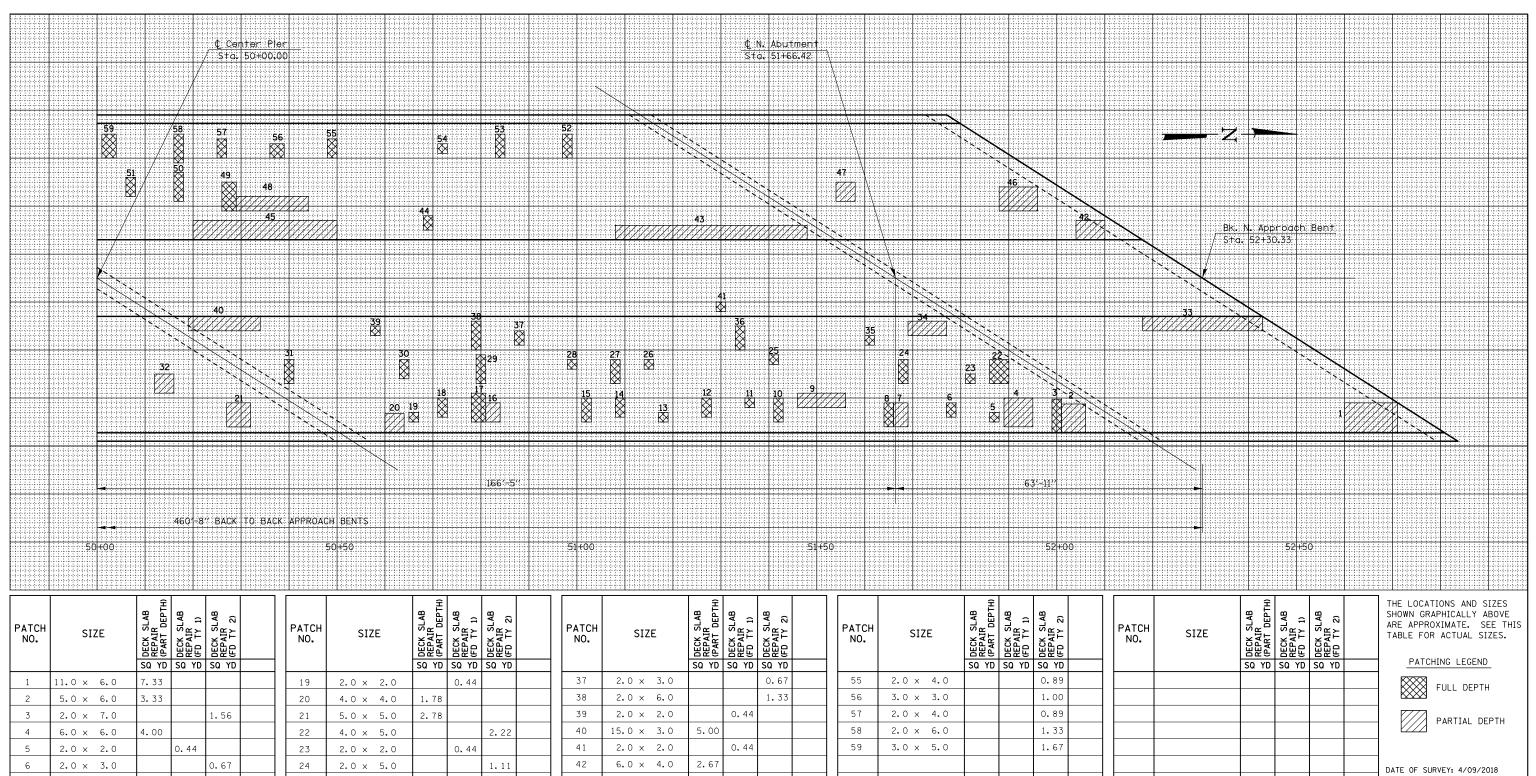
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SHOWING WELDED RAIL JOINT

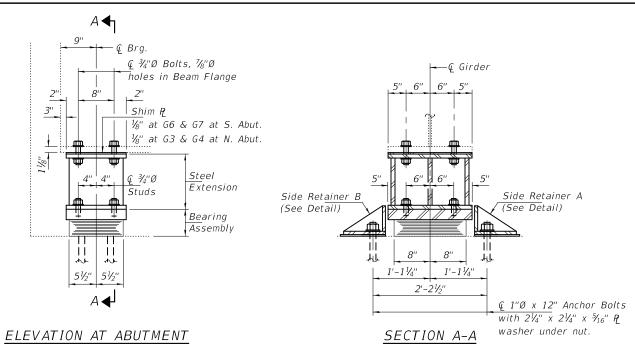
PREFORMED JOINT STRIP SEAL DETAILS SN 058-0091 SHEET NO. 6 OF 11 SHEETS

F.A.I. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
72	D7 BRIDGE REPAIRS 2	019-1	MACON	26	20
		CONTRACT	NO. 748	384	
	ILLINOIS	D PROJECT			





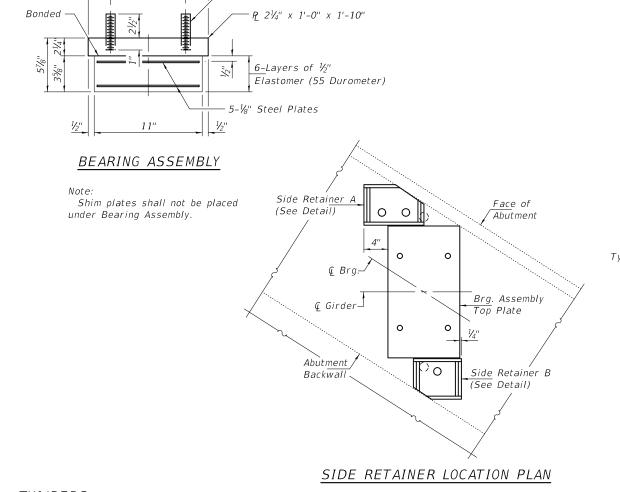
PATCH NO.	SIZE	S DECK SLAB REPAIR G (PART DEPTH)	S DECK SLAB REPAIR FFD TY 1)	DECK SLAB REPAIR GFD TY 2)	PATCH NO.	SIZE	DECK SLAB REPAIR (PART DEPTH)	S DECK SLAB REPAIR FFD TY 1)	© DECK SLAB © REPAIR ☐ (FD TY 2)	PATCH NO.	SIZE	DECK SLAB REPAIR G (PART DEPTH) S DECK SLAB REPAIR G (FD TY 1)	FEPAIR FEPAIR FED TY 2)	PATCH NO.	SIZE	S DECK SLAB REPAIR G (PART DEPTH)	S DECK SLAB REPAIR G (FD TY 1)	S DECK SLAB REPAIR 5 (FD TY 2)		PATCH NO.	SIZE	S DECK SLAB REPAIR (PART DEPTH)	SO DECK SLAB REPAIR G (FD TY 1)	S DECK SLAB REPAIR 5 (FD TY 2)		THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES. PATCHING LEGEND
1	11.0 × 6.0	7. 33	34 10	30 10	19	2.0 × 2.0	34 15	0.44	34 15	37	2.0 × 3.0		0.67	55	2.0 x 4.0	34 15	3 u 10	0.89	_			30 10	30 10	30 10		
2	5.0 × 6.0	3. 33			20		1 70	0. 44		38	2.0 × 6.0		1. 33	56	3.0 × 3.0			1.00	+							FULL DEPTH
- 2		3, 33		1 56		4.0 × 4.0	1. 78			39	2.0 x 2.0	0, 44	1. 33	57	2.0 × 4.0			0.89	+							V-7-7
3	2.0 × 7.0	1 00		1.56	21	5.0 x 5.0	2. 78			40	15.0 × 3.0	5,00		58	2.0 × 6.0			1. 33								PARTIAL DEPTH
4	6.0 × 6.0	4.00			22	4.0 x 5.0	-		2.22	\dashv	+	0.44		59	3.0 × 5.0			1. 67	+							
5	2.0 x 2.0		0.44		23	2.0 x 2.0		0.44		41	2.0 × 2.0			23	3.0 x 5.0			1.67	+							
6	2.0 × 3.0			0.67	24	2.0 x 5.0			1.11	42	6.0 × 4.0	2.67			T0.T.1.	1.00 -	 		+							DATE OF SURVEY: 4/09/2018 SURVEY BY: D. Macklin
7	3.0 × 5.0	1.67			25	2.0 x 2.0		0.44		43	40.0 × 3.0	13. 33			TOTAL	129.7	8. 4	62.1								METHOD OF SURVEY: VISUAL
8	2.0 × 5.0			1.11	26	2.0 x 2.0		0.44		44	2.0 × 3.0		0.67						\perp							
9	10.0 × 3.0	3, 33			27	2.0 x 5.0			1.11	45	30.0 × 4.0	13. 33			TOTAL PAR	TIAL D	1	1								.
10	2.0 × 5.0			1.11	28	2.0 x 2.0		0.44		46	8.0 x 5.0	4.44			USE	130	SQ YD									.
11	2.0 × 2.0		0.44		29	2.0 x 6.0			1.33	47	4.0 × 4.0	1.78														.
12	2.0 × 4.0			0.89	30	2.0 × 4.0			0.89	48	15.0 × 3.0	5.00			TOTAL FULL DE	.Ртн, т	YPE 1	= 8.4								BRIDGE DECK PATCHING
13	2.0 x 2.0		0.44		31	2.0 × 5.0			1.11	49	3.0 × 6.0		2.00		USE	9	SQ YD									MACON COUNTY LOCATION
14	2.0 × 4.0			0.89	32	4.0 × 4.0	1.78			50	2.0 x 6.0		1.33													LOCATION
15	2.0 × 5.0			1.11	33	25.0 x 3.0	8.33			51	2.0 × 4.0		0.89		TOTAL FULL DE	ЕТН, Т	YPE 2	62.1								SN 058-0091
16	3.0 × 4.0	1.33			34	8.0 × 3.0	2.67			52	2.0 × 5.0		1.11		USE	62	SQ YD									
17	3.0 × 6.0			2.00	35	2.0 x 2.0		0.44		53	2.0 × 5.0		1.11													
18	2.0 × 4.0			0.89	36	2.0 × 5.0			1.11	54	2.0 x 2.0	0.44														
			l		<u> </u>	DESIGNED S. Kassel	1	REVIS	SED -	- ! !				-	BRIDGE DECK PATCHING (Sheet 2 of 2)			F.A.I RTE.		SECTION	COUNTY TOTAL SHEET NO.					
						RAWN S. Kassel		REVIS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORT					DNIL	OL DE	SN 058		. 01 2/				DGE REPAI	RS 2019-1 MACON 26 22	
		-				CHECKED <i>D. Macklin</i> DATE 5/29/201	8	REVIS					AIIUN			SHEET	NO. 8 OF	11 SHEETS		0 TO STA. 52+	30.33			Tur	CONTRACT NO. 74884	
						3, 23, 201	<u> </u>	1			1						0			0.7.2.0010					1,000	BRIDGE DECK PATCHING



TYPE I ELASTOMERIC EXP. BRG.

3/4"Ø Threaded Stud with flat washer &

hex nut. (4 Regd.)



BEAM REACTIONS

R₽	(K)	84.2
R Ł	(K)	52.6
Imp.	(K)	9.0
R (Total)	(K)	145.8

Notes:

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

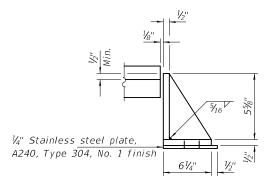
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 87 Tons.

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

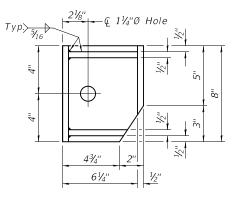
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

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



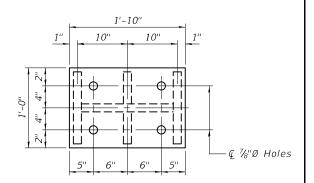
TYPICAL SECTION THRU SIDE RETAINERS "A" & "B"

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

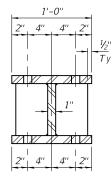


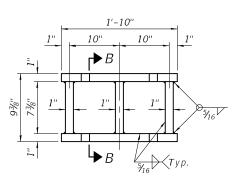
SIDE RETAINER "B"

(18-Required)



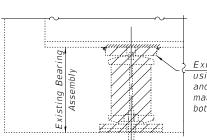
PLAN TOP AND BOTTOM PLATE





SECTION B-B

STEEL EXTENSION DETAIL



Existing P_L to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Unit	Total
Each	18
Each	18
Pound	4790
Each	54
	Each Pound

TYI/REPS 5-17-2018

1'-0"

DESIGNED - JOV	EXAMINED	I mot A A 1 A	DATE -	JANUARY 22, 2019
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		
DRAWN - STEFFEN	PASSED	de Carl Prayer	REVISED	-
CHECKED - JOV JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

31/4"

SIDE RETAINER "A"

(18-Required)

61/4"

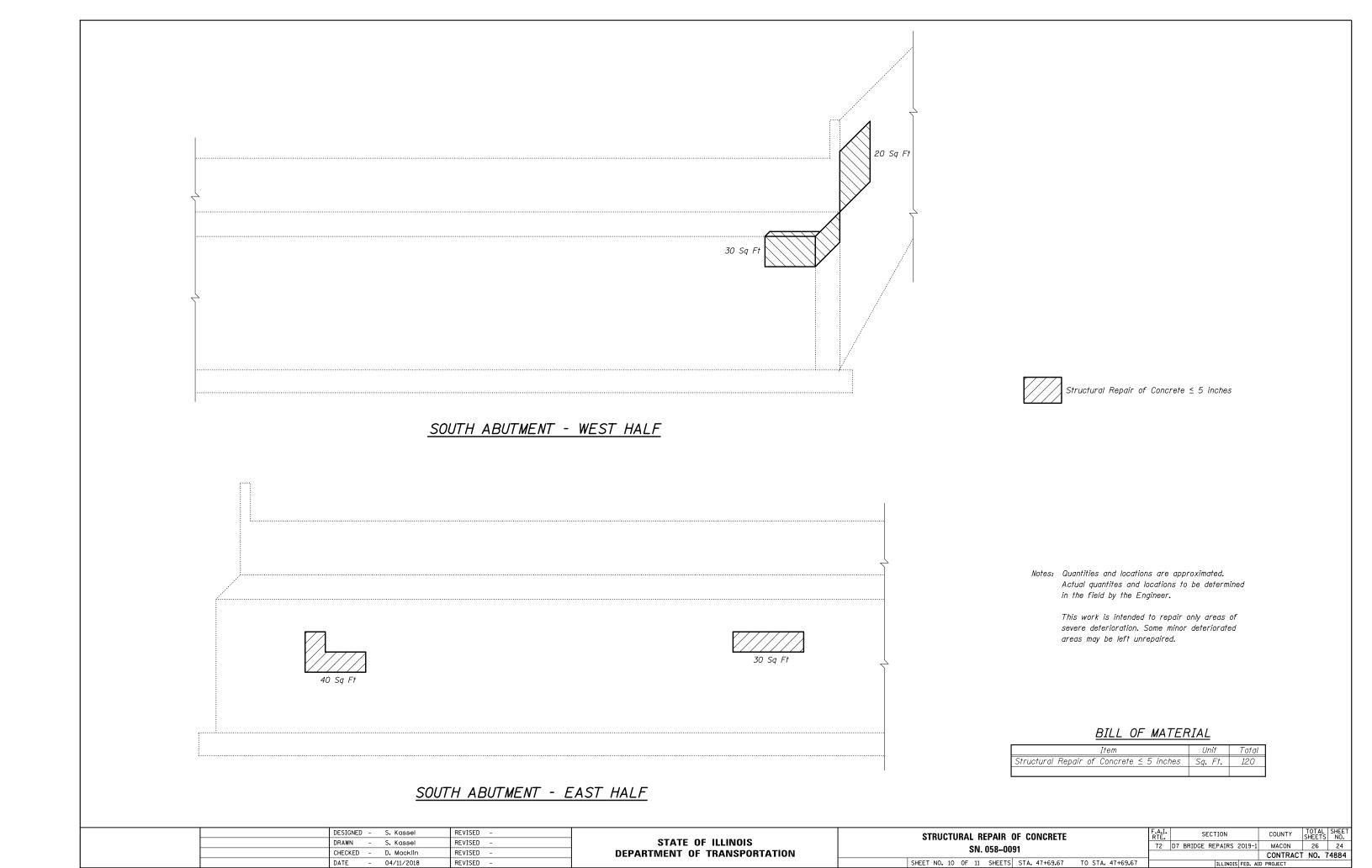
- 4 11/4" Ø Holes

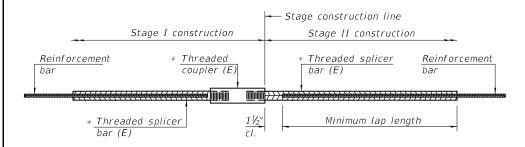
BEARING REPLACEMENT DETAILS AT ABUTMENTS
SN 058-0091
SHEET NO. 9 OF 11 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS NO.
 SHEETS NO.

 72
 D7 BRIDGE REPAIRS 2019-1
 MACON
 26
 23

 CONTRACT NO. 74884



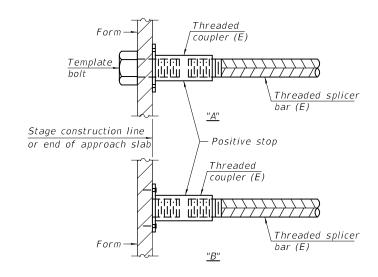


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

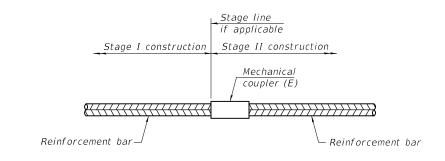
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar	No. assemblies	Minimum		
Location	size	required	lap length		
South Abutment	#6	19	3'-7"		
North Abutment	#6	19	3'-7"		



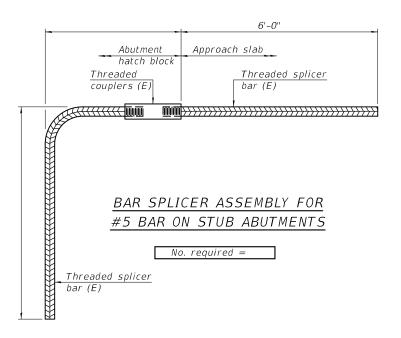
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



NOTES

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

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

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

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

BSD-1

2-17-2017

DESIGNED - JOV	EXAMINED	Timoty A. And Gr	DATE -	JANUARY 22, 2019
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		
DRAWN - STEFFEN	PASSED	de Carl Prayer	REVISED	-
CHECKED - JOV JSB]	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

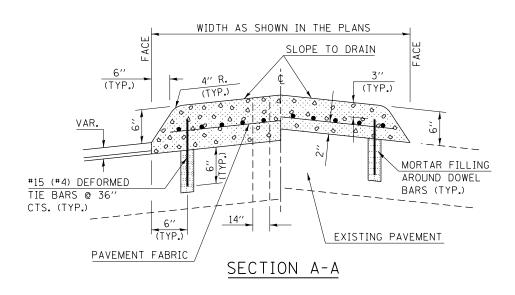
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 058-0091
SHEET NO. 11 OF 11 SHEETS

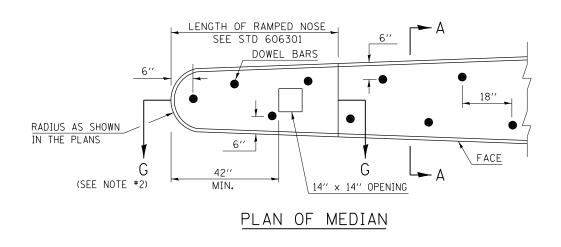
 F.A.I. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS NO.

 72
 D7 BRIDGE REPAIRS 2019-1
 MACON
 26
 25

 CONTRACT NO. 74884

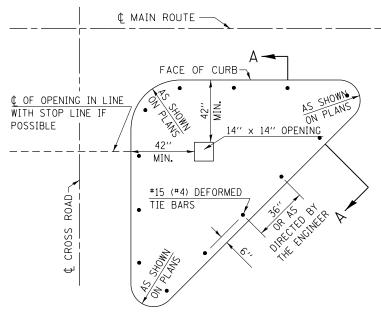
DETAIL OF CONCRETE MEDIAN, TYPE SM-6 (SM-15) (DOWELED)





GENERAL NOTES

- 1. THE GENERAL NOTES FOR STANDARD 606301 SHALL APPLY.
- 2. SECTION G-G SHALL BE THE SAME AS SHOWN ON STANDARD 606301.
- 3. DOWEL BARS @ 36" CTS. OR AS DIRECTED BY THE ENGINEER.
- 4. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ FOOT FOR CONCRETE MEDIAN, TYPE SM-6 (SM-15) (DOWELED), INCLUDING THE COST OF FURNISHING AND INSTALLING THE DOWEL BARS, MORTAR FILLING, PAVEMENT FABRIC AND THE REMOVAL AND DISPOSAL OF THE EXISTING PAVEMENT FOR THE 14" × 14" OPENING, IF REQUIRED, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



PLAN OF CORNER ISLAND

USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 1/3/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DT Offices\District 7\Projects\74884\CADData\CADsheets\D7

MODEL: Default