

# SUMMARY OF QUANTITIES

S.N.:	002-0032	033-0012	033-0038	041-0007	041-0041	041-0042	041-0077	041-0078	041-0087	041-0088	041-0097
CODE:	0013	0013	0013	0013	0013	0013	0013	0013	0013	0013	0013
COUNTY:	ALEXANDER	HAMILTON	HAMILTON	JEFFERSON	JEFFERSON	JEFFERSON	JEFFERSON	JEFFERSON	JEFFERSON	JEFFERSON	JEFFERSON
ROUTE:	FAP 14	FAP 849	FAP 853	FAI 57 NB	FAP 849	FAP 849	FAI 64 EB	FAI 64 WB	FAI 64 WB	FAI 64 EB	FAS 2869
FUNDING:	80/20	80/20	80/20	90/10	80/20	80/20	90/10	90/10	90/10	90/10	80/20

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
50102400	CONCRETE REMOVAL	CU YD	71.8	7.3	5.4		20.5	6.8	5.4	13.2	13.2		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	72.0	7.3	5.4		20.3	6.9	5.4	13.4	13.3		
50300300	PROTECTIVE COAT	SQ YD	177	21.9	15.2		47.4		16.5	38.0	38.0		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	20,140			7900	2240					1575	1575
50500505	STUD SHEAR CONNECTORS	EACH	108				108						
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	9480	970	680		2250	1060	720	1900	1900		
50800515	BAR SPLICERS	EACH	130	12	12		26	12	12	28	28		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	601	90	69		110	87	79	83	83		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	36				12					12	12
52100520	ANCHOR BOLTS, 1"	EACH	256			80	48					24	24
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	18	1.5	1.5	2	2	2	2	2	2	1	1
67100100	MOBILIZATION	L SUM	1	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	4	1	1			1	1				
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	3				1			1	1		



△ REV. 1-2-2019

REV. - MS

FILE NAME =	USER NAME = porterc	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
p:\11\084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 9\Projects\78650\DRAWING\CAD\Sheets\D978650-Sheets.dgn		CHECKED -	REVISED -			VAR.	D9 BRIDGE REPAIR 2019-4	VARIOUS	61	3									
Default		DATE -	REVISED -			ILLINOIS FED. AID PROJECT													

**GENERAL NOTES**

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

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.

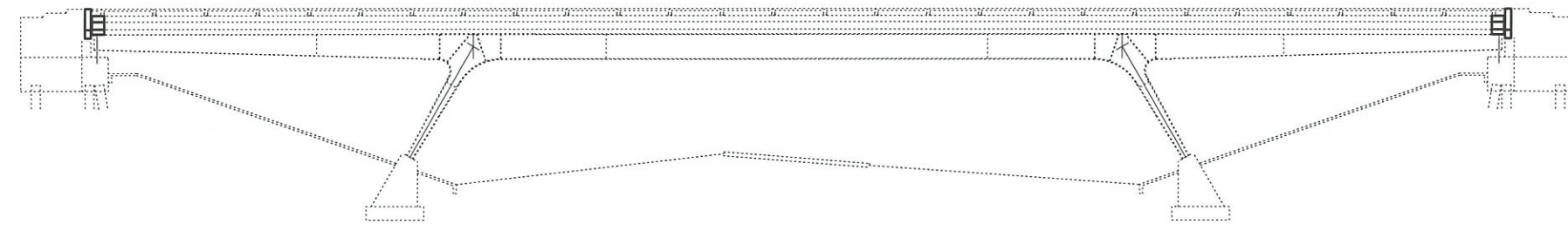
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods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

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.

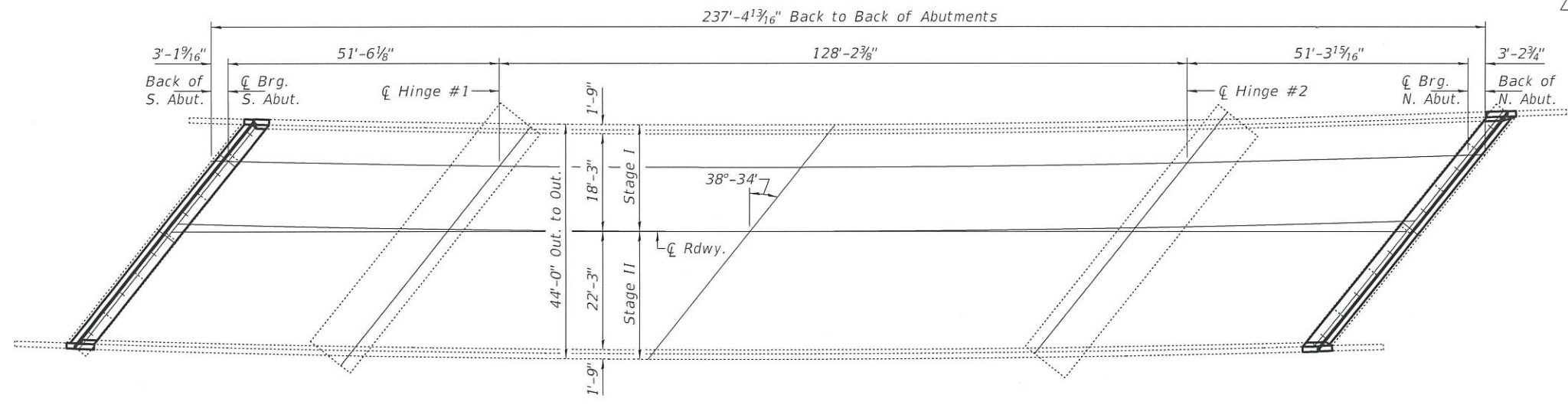
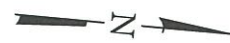
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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.

New structural steel, bearing plates, steel extensions, shim plates, side retainers, anchor bolts, connection bolts, nuts and washers shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel".



**ELEVATION**



**PLAN**

- (A) - Remove & Replace Expansion Joints at Abutments
- (B) - Remove & Replace Bearings at Abutments
- (C) - Deck Patching (See sheet 9 of 9.)
- (D) - Remove & Replace Diaphragm



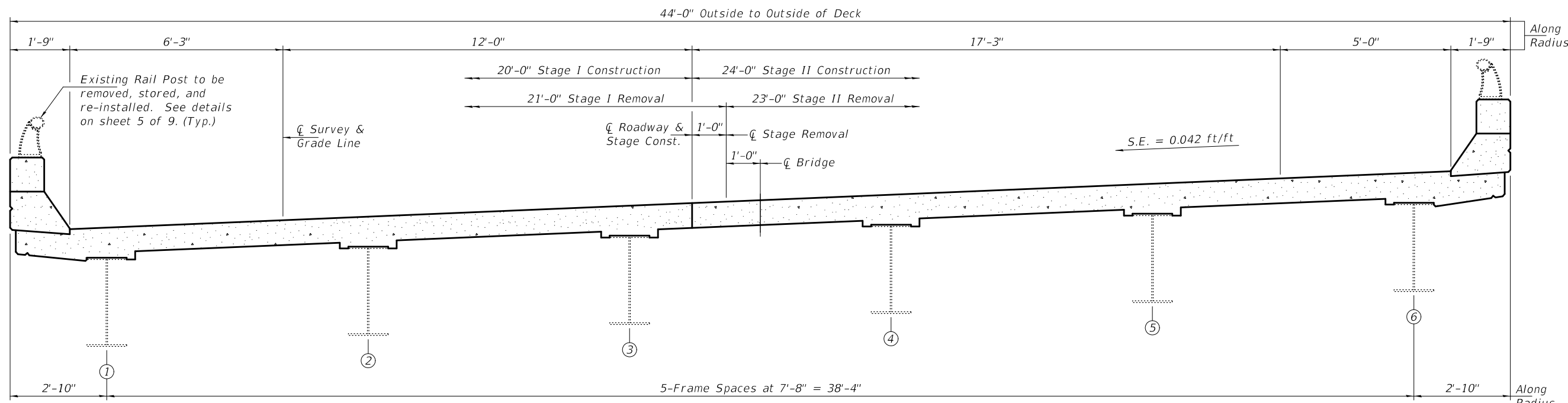
Expires: November 30, 2020

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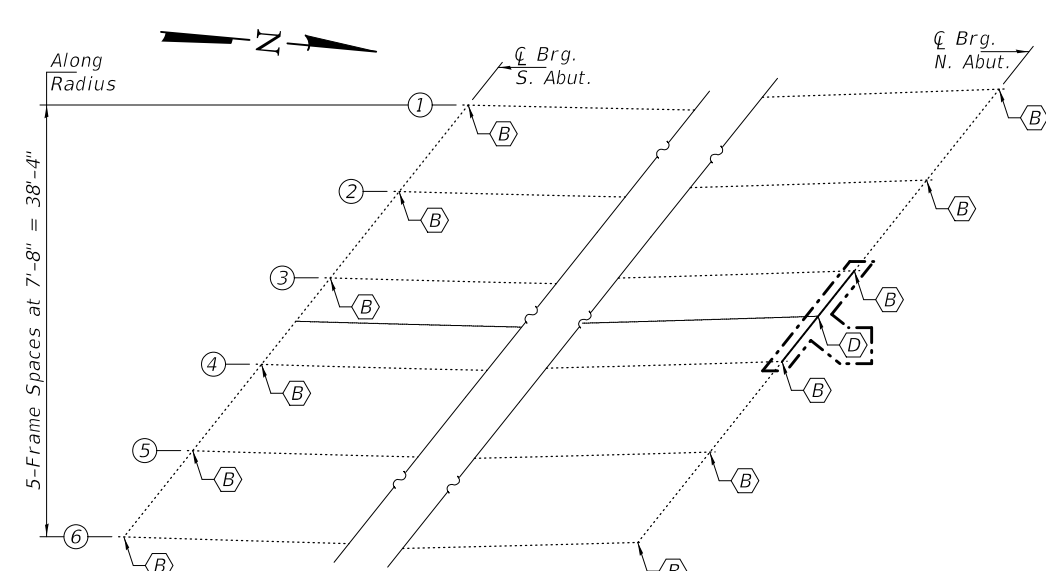
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	20.5
Concrete Superstructure	Cu. Yd.	20.3
Reinforcement Bars, Epoxy Coated	Pound	2250
Bar Splicers	Each	26
Preformed Joint Strip Seal	Foot	110
Jack & Remove Existing Bearings	Each	12
Elastomeric Bearing Assembly, Type I	Each	12
Furnishing & Erecting Structural Steel	Pound	2240
Anchor Bolts, 1"Ø	Each	48
Deck Slab Repair (Partial)	Sq. Yd.	6.0
Protective Coat	Sq. Yd.	47.3
Shear Stud Connectors	Each	108

\* On new concrete areas only.

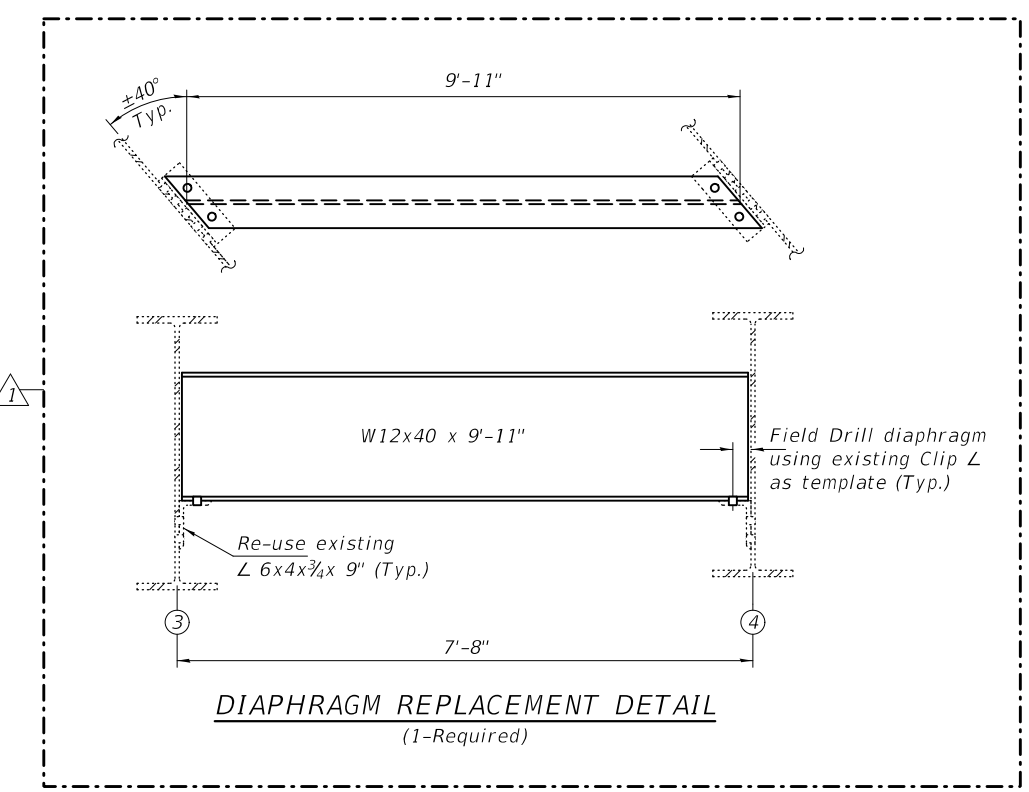


**CROSS SECTION**  
(Looking North)



**PARTIAL FRAMING PLAN**

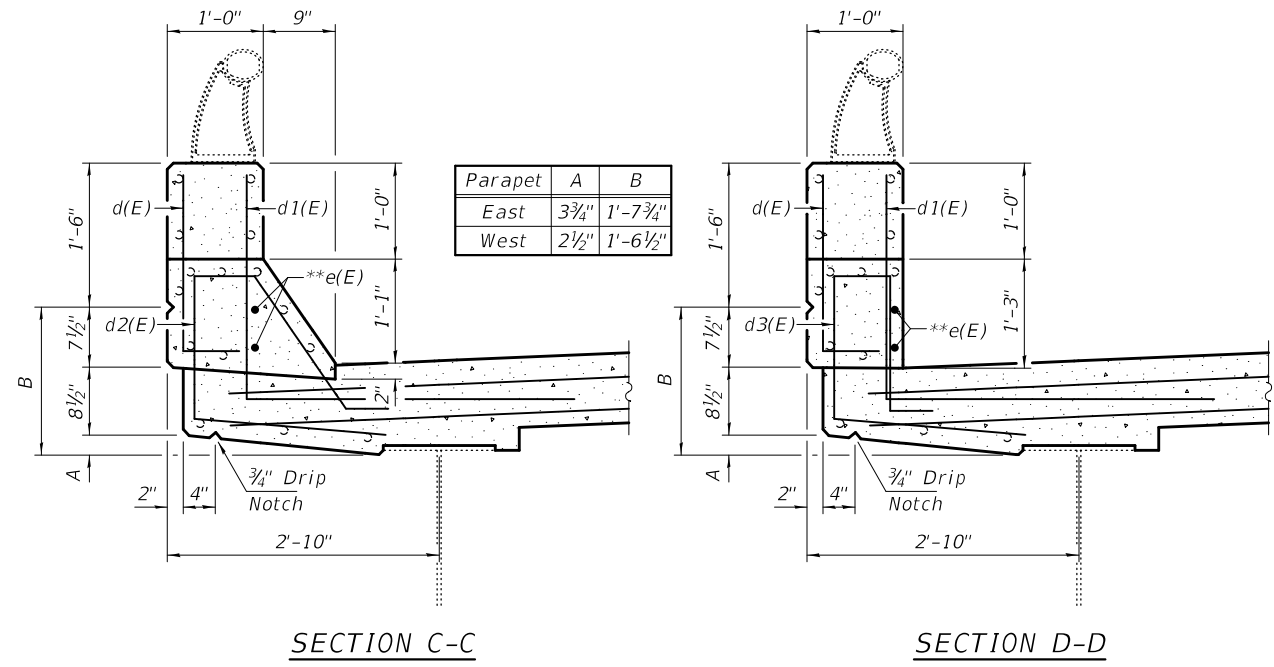
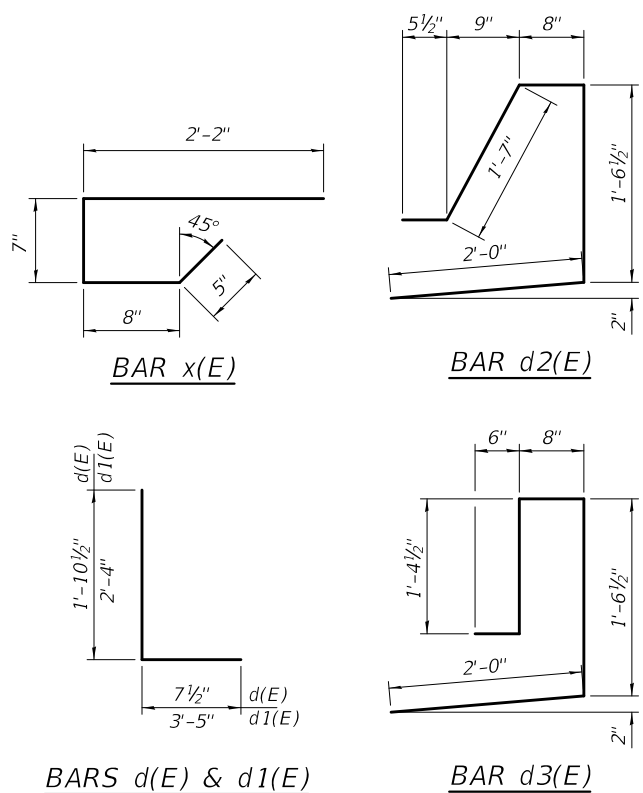
- B - Remove & Replace Expansion Bearings
- D - Remove & Replace Diaphragm



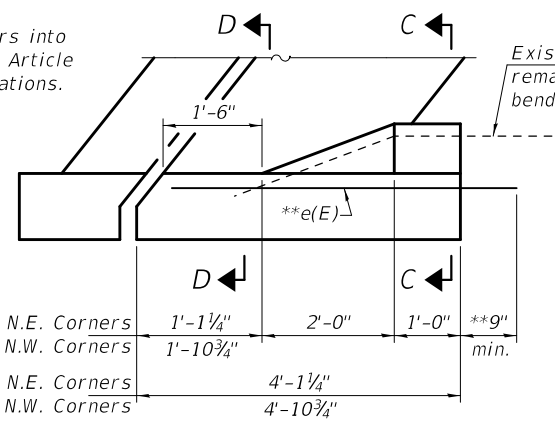
**DIAPHRAGM REPLACEMENT DETAIL**  
(1-Required)

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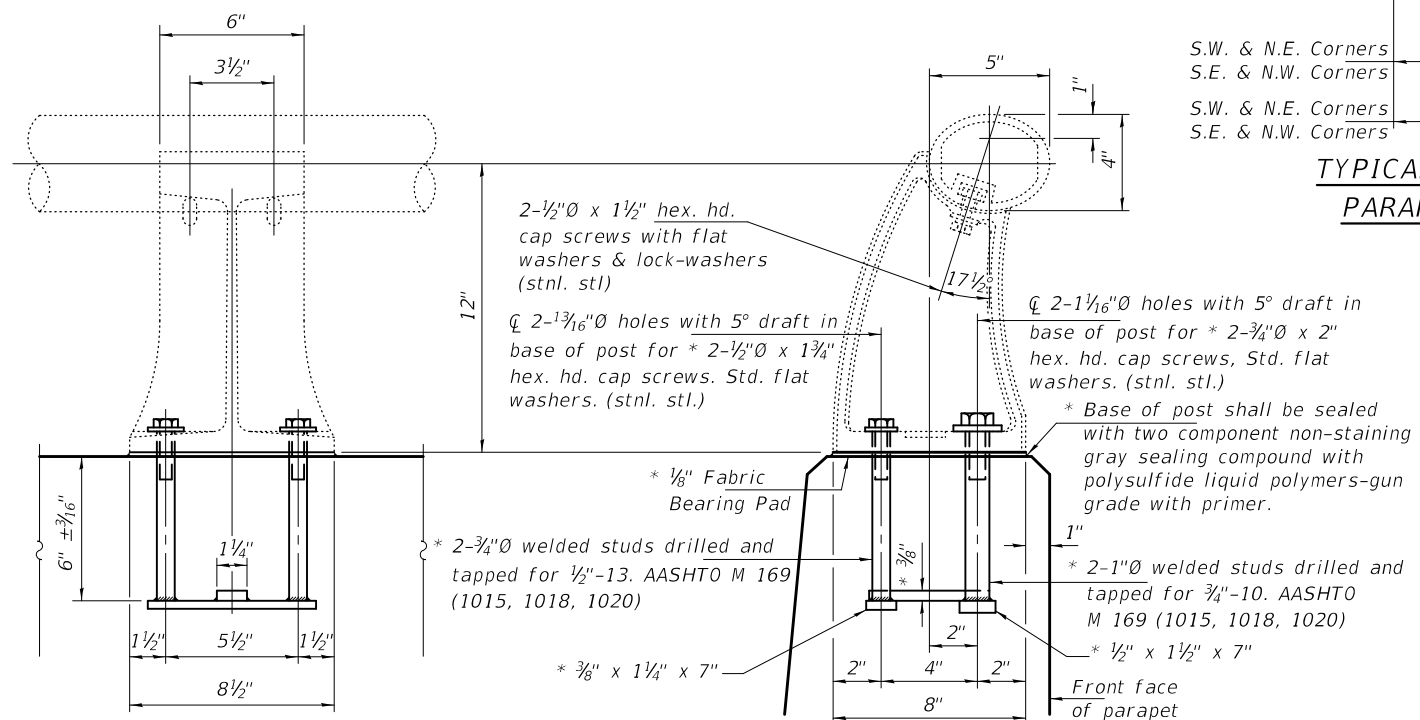
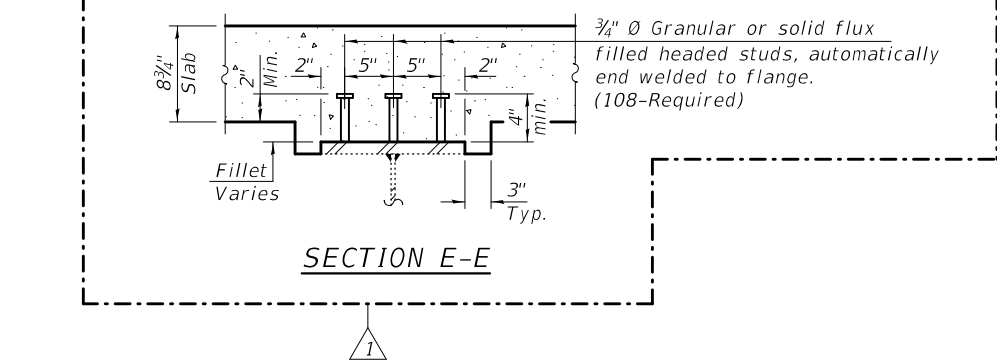
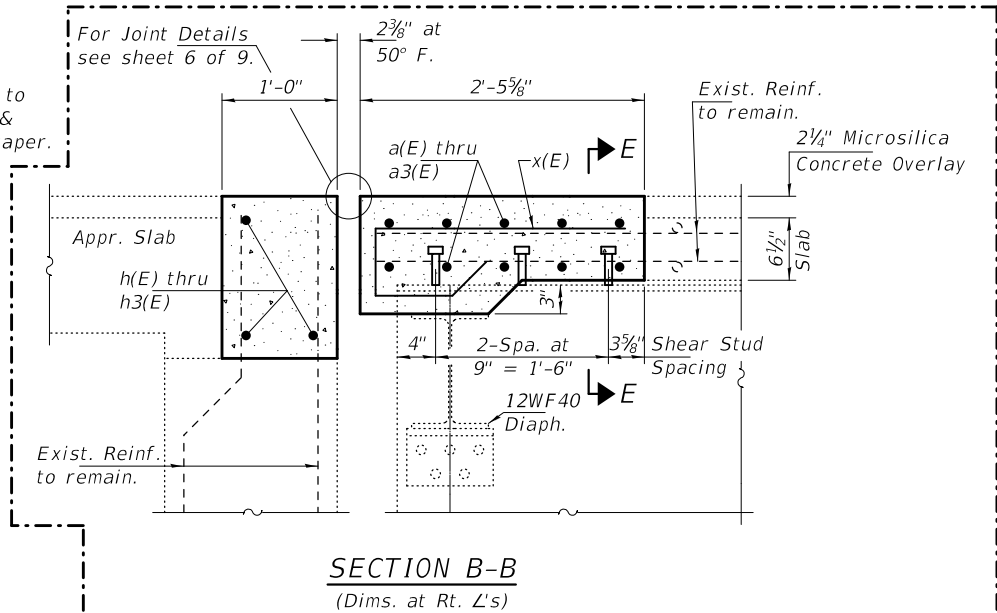
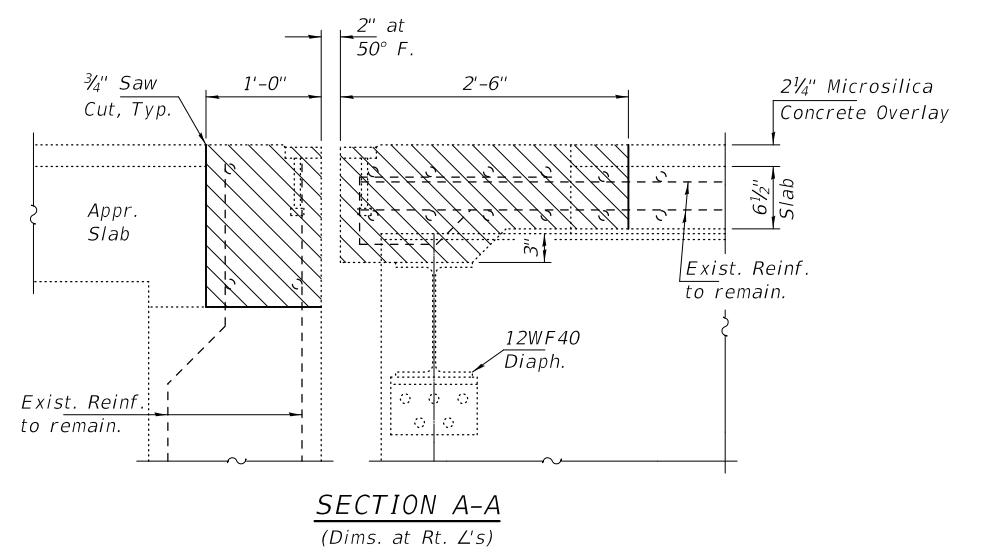
DESIGNED - CDK	EXAMINED - <i>Timothy A. Daulton</i> ENGINEER OF STRUCTURAL SERVICES	DATE - DECEMBER 5, 2018	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTION, STAGING DETAILS &amp; FRAMING PLAN SN 041-0007</b>	F.A.I. RTE. 57	SECTION D9 BRIDGE REPAIR 2019-4	COUNTY JEFFERSON	TOTAL SHEETS 61	SHEET NO. 33	
CHECKED - JSB	PASSED - <i>Carl Rieger</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED 12/20/2018 CDK			CONTRACT NO. 78650					
DRAWN - STEFFEN		REVISED -			ILLINOIS FED. AID PROJECT					
CHECKED - CDK JSB					SHEET 2 OF 9 SHEETS					



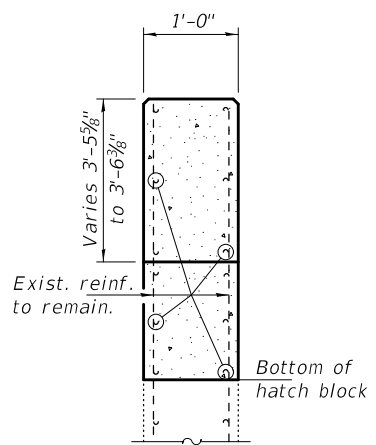
\*\* Drill and epoxy grout e(E) bars into existing parapet according to Article 584 of the Standard Specifications.



S.W. & N.E. Corners	1'-1 1/4"	2'-0"	1'-0"	**9"
S.E. & N.W. Corners	1'-10 3/4"			min.
S.W. & N.E. Corners	4'-1 1/4"			
S.E. & N.W. Corners	4'-10 3/4"			

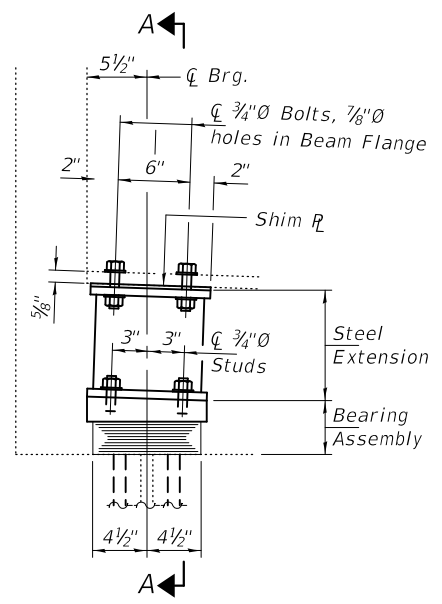


\* New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost included with Concrete Superstructure.

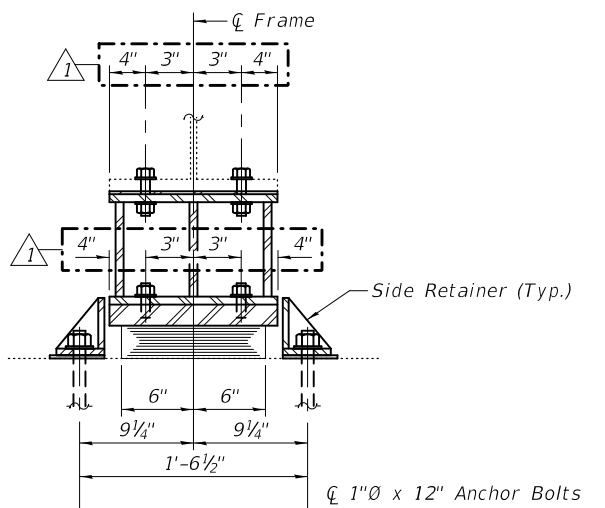


**SECTION THRU ABUTMENT WINGWALL**

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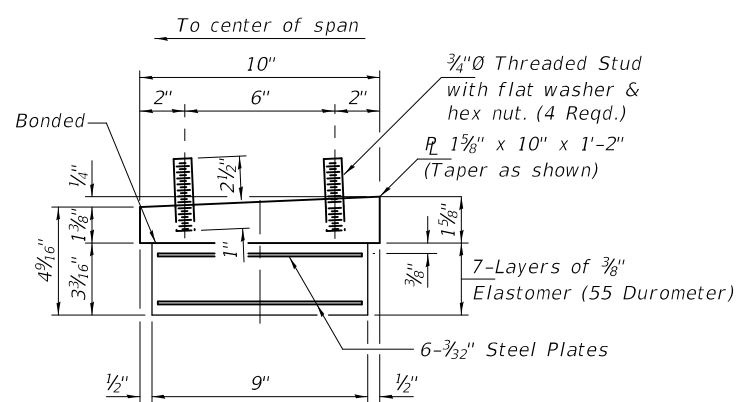


ELEVATION AT ABUTMENT



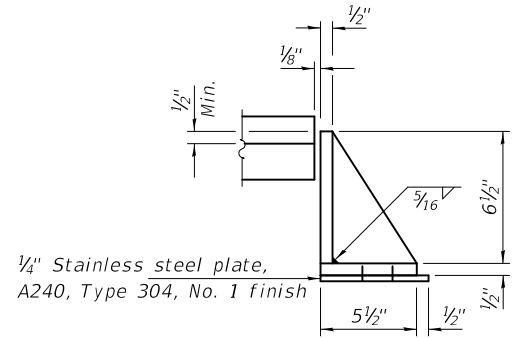
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:  
Shim plates shall not be placed under Bearing Assembly.  
Place 3/4" Ø Threaded Studs in Bearing Assembly perpendicular to the top surface of the Bearing Plate



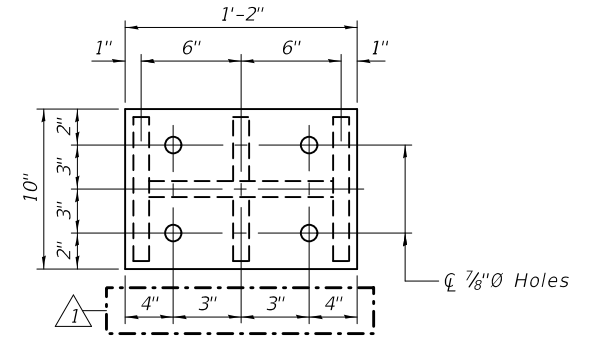
SIDE RETAINER

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

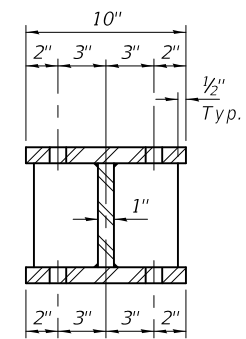
BEAM REACTIONS

R <sub>D</sub>	(K)	16.9
R <sub>L</sub>	(K)	40.1
Imp.	(K)	10.7
R (Total)	(K)	67.7

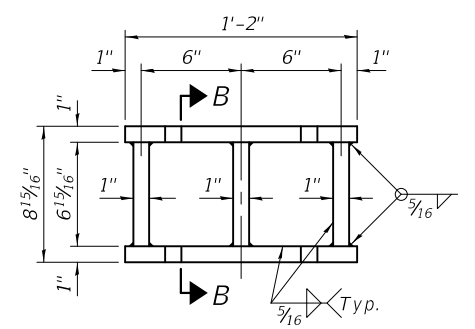
Notes:  
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
New steel extensions, shim plates, hold down plates, and connection bolts are included with Furnishing and Erecting Structural Steel.  
Prior to ordering 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 = 32 Tons.  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



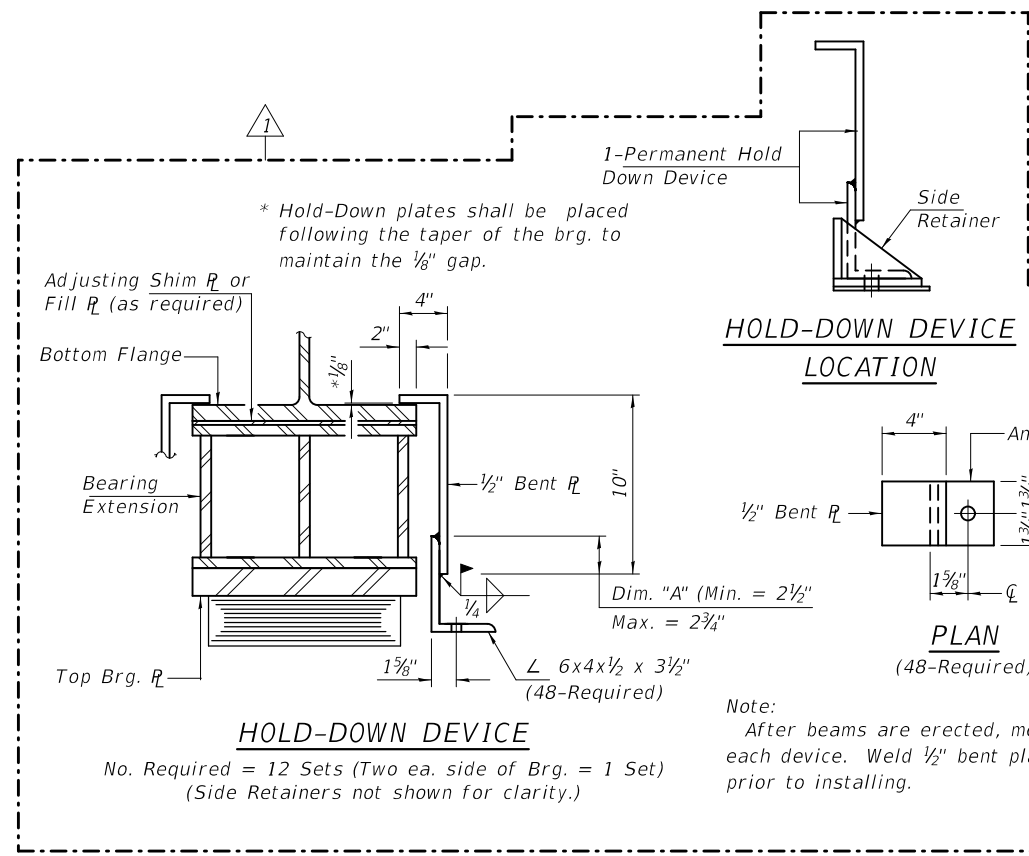
PLAN TOP AND BOTTOM PLATE



SECTION B-B



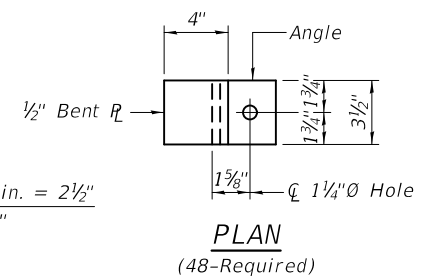
STEEL EXTENSION DETAIL



HOLD-DOWN DEVICE

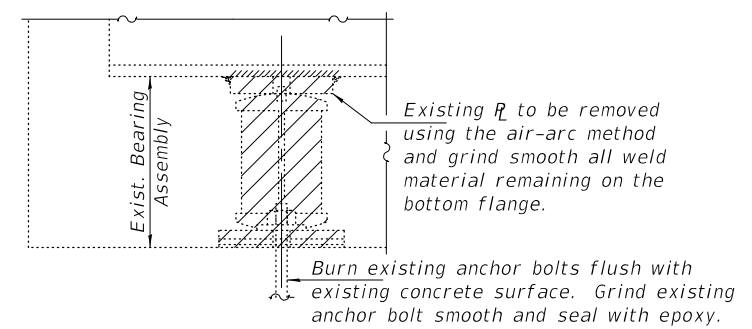
No. Required = 12 Sets (Two ea. side of Brg. = 1 Set) (Side Retainers not shown for clarity.)

HOLD-DOWN DEVICE LOCATION



PLAN (48-Required)

Note:  
After beams are erected, measure Dim. "A" for each device. Weld 1/2" bent plate and 1/2" angle prior to installing.



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	2240
Anchor Bolts, 1"Ø	Each	48

DESIGNED - CDK	EXAMINED - <i>Timothy A. Daulton</i>	DATE - DECEMBER 5, 2018
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED - <i>Carl Ringer</i>	REVISED 12/20/2018 CDK
CHECKED - CDK JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ELASTOMERIC BEARING ASSEMBLY DETAILS  
SN 041-0007

SHEET 7 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE REPAIR 2019-4	JEFFERSON	61	38
CONTRACT NO. 78650				
ILLINOIS FED. AID PROJECT				

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