

SUMMARY OF QUANTITIES

0047

		COUNTY:	WHITE	WHITE	WHITE	
		ROUTE:	FAI 64	FAI 64	FAI 64	
		FUNDING:	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	
		LOCATION:	RURAL	RURAL	RURAL	
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	STRUCTURE 097-0040	STRUCTURE 097-0042(43)	STRUCTURE 097-0046(47)
50102400	CONCRETE REMOVAL	CU YD	29.2	11.8	4.6	12.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	11.8	11.8	0	0
50300300	PROTECTIVE COAT	SQ YD	1,874	596	298	980
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,740	1,740	0	0
50800515	BAR SPLICERS	EACH	24	24	0	0
50900200	STEEL RAILING, TYPE 2399	FOOT	560	0	134	426
52000110	PREFORMED JOINT STRIP SEAL	FOOT	90	90	0	0
* 6310087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	0	4	4
63200310	GUARDRAIL REMOVAL	FOOT	288	0	144	144
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	1	1	1
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	5	1	2	2

*

* SPECIALTY ITEM

REV. 12-23-2020

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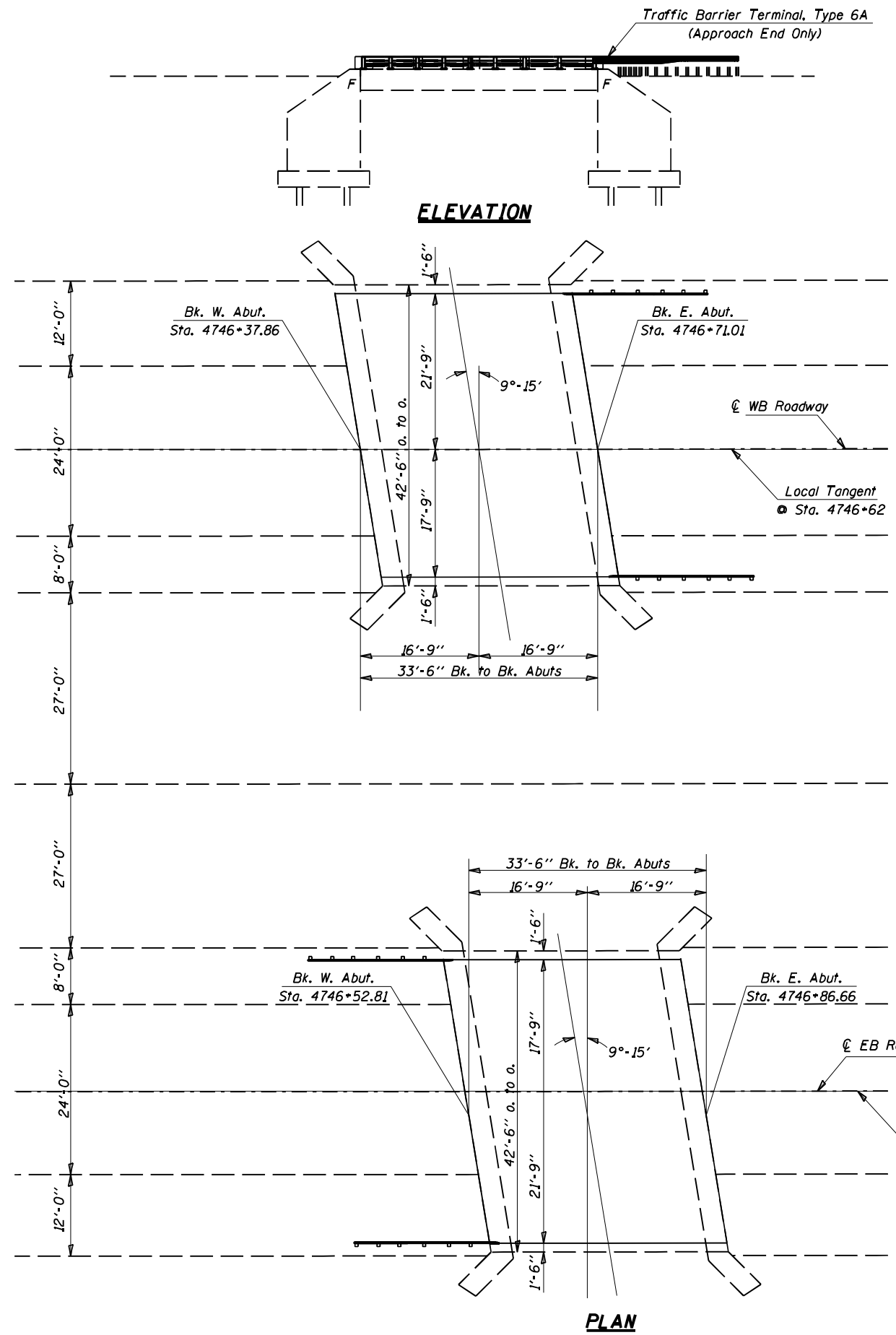
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PLOT DATE = 10/2/2020	DATE - 9/8/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	D9 BRIDGE DECK REPAIR 2020-1	WHITE	29	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78815	

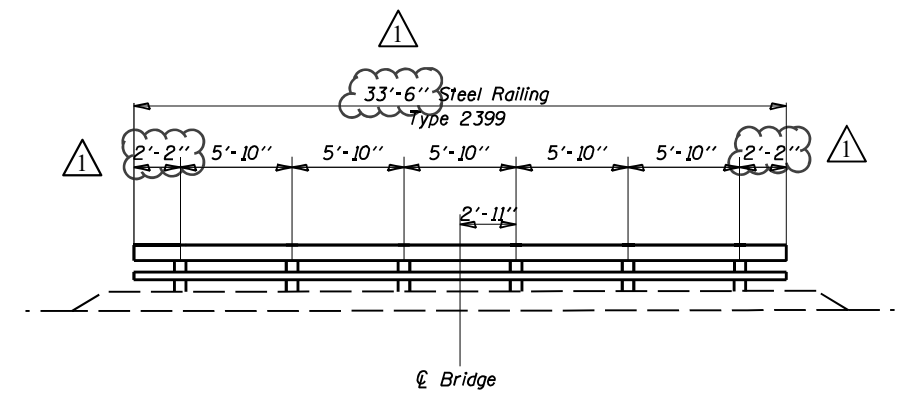


GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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

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



INSIDE ELEVATION OF NORTH RAILING
(South Railing Similar)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bridge Deck Scarification 3/8"	Sq. Yd.	298
Bridge Deck Microsilica Concrete Overlay 3/8"	Sq. Yd.	298
Protective Coat	Sq. Yd.	298
Polymer Modified Portland Cement Mortar	Sq. Ft.	106
Traffic Barrier Terminal Type 6A	Each	4
Steel Railing, Type 2399	Foot	134
Concrete Removal	Cu. Yd.	4.6
Guardrail Removal	Foot	144

EXISTING DESIGN STRESSES

$f_c = 1,000$ psi Sub
 $f_c = 14,000$ psi Super
 $f_s = 20,000$ psi Reinf.

SCOPE OF WORK

- Set up TC&P Standard 701402
- Install Temporary Concrete Barrier
- Bridge Deck Scarification 3/8"
- Bridge Deck Microsilica Concrete Overlay 3/8"
- Apply Protective Coat
- Concrete Removal
- Install Steel Railing, Type 2399
- Guardrail Removal
- Install Traffic Barrier Terminals Type 6A
- Polymer Modified Portland Cement Mortar

REV. 12-23-2020

DECK REPAIR
I-64 (FAI 64)
OVER TRIB TO RANDOLPH DITCH
WHITE COUNTY
D9 BRIDGE DECK REPAIR 2020-1
SN 097-0042(43)

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	DATE - 9/8/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 097-0042(43)
GENERAL PLAN & ELEVATION
 SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

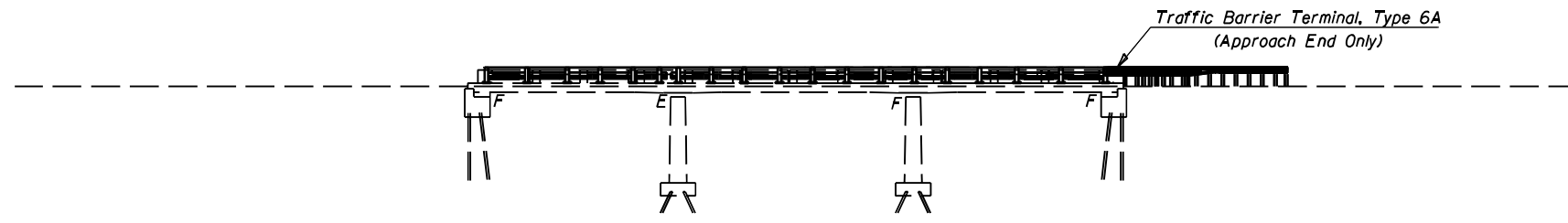
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64	D9 BRIDGE DECK REPAIR 2020-1	WHITE	29	16
CONTRACT NO. 78815				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

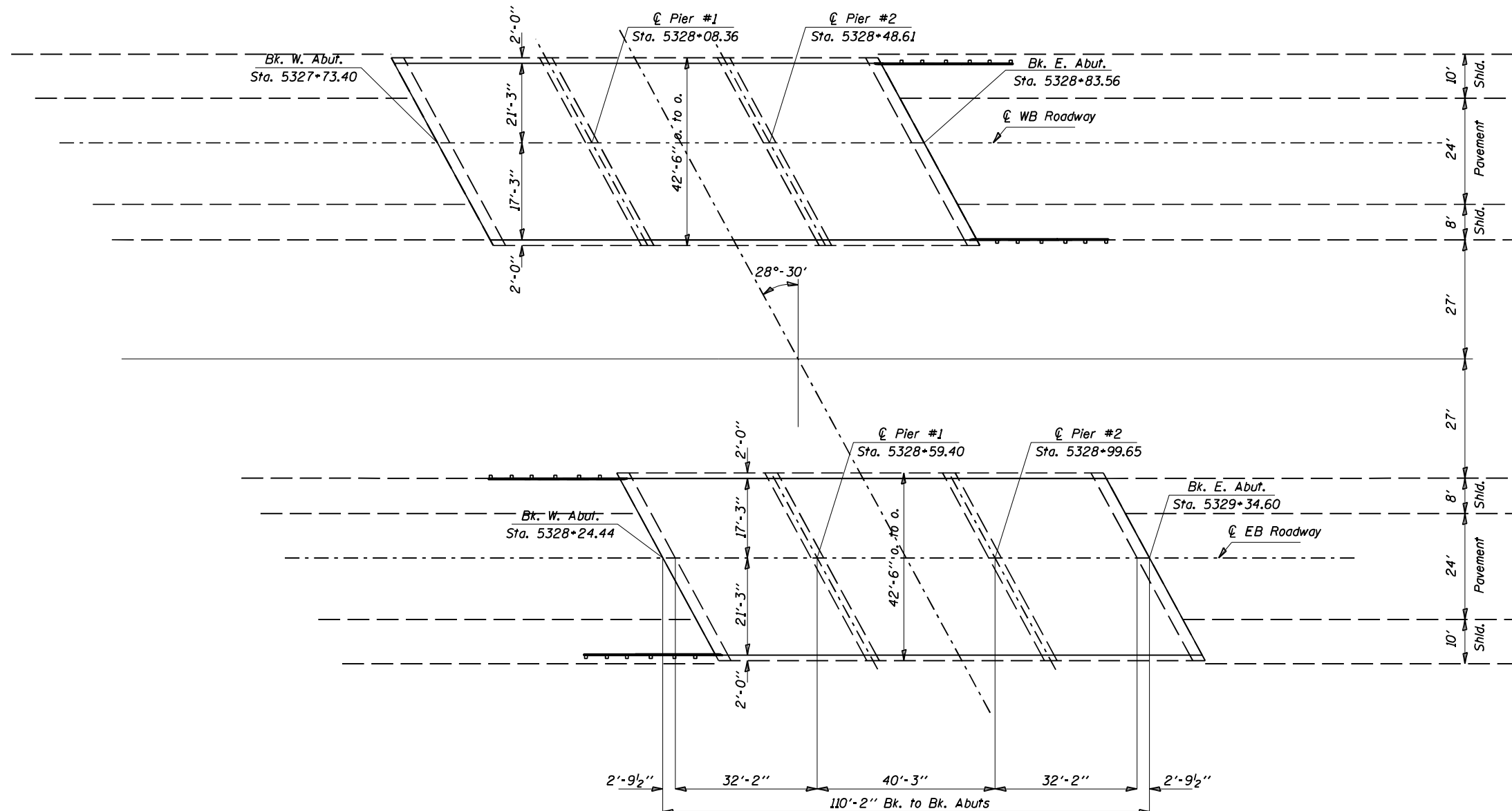
Reinforcement bars designated (E) shall be epoxy coated.

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

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



ELEVATION



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bridge Deck Scarification 3/8"	Sq. Yd.	980
Bridge Deck Microsilica Concrete Overlay 3/8"	Sq. Yd.	980
Protective Coat	Sq. Ft.	980
Polymer Modified Portland Cement Mortar	Sq. Ft.	288
Traffic Barrier Terminal Type 6A	Each	4
Steel Railing, Type 2399	Foot	426
Concrete Removal	Cu. Yd.	12.8
Guardrail Removal	Foot	144

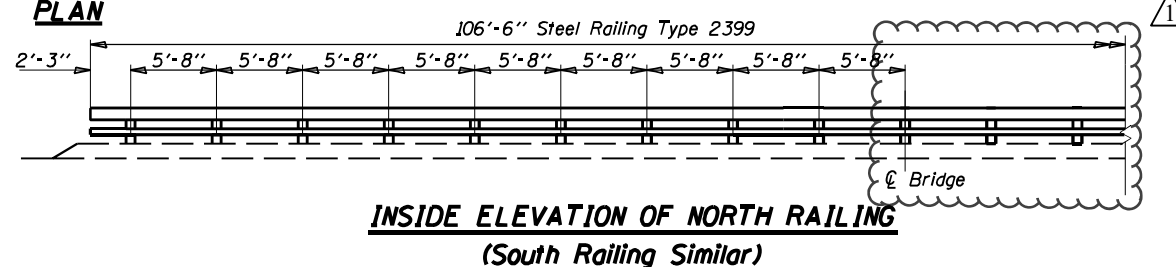
SCOPE OF WORK

- Set up TC&P Standard 701402
- Install Temporary Concrete Barrier
- Bridge Deck Scarification 3/8"
- Bridge Deck Microsilica Concrete Overlay 3/8"
- Apply Protective Coat
- Concrete Removal
- Install Steel Railing, Type 2399
- Guardrail Removal
- Install Traffic Barrier Terminals Type 6A
- Polymer Modified Portland Cement Mortar

EXISTING DESIGN STRESSES

$f_c = 14,000$ psi Super & Sub
 $f_s = 20,000$ psi Reinf.

PLAN



INSIDE ELEVATION OF NORTH RAILING
 (South Railing Similar)

REV. 12-23-2020

**DECK REPAIR
 I-64 (FAI 64)
 OVER RANDOLPH DRAINAGE DITCH
 WHITE COUNTY
 D9 BRIDGE DECK REPAIR 2020-1
 SN 097-0046(47)**

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USER NAME = porterc	DESIGNED - ASH	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN - ASH	REVISED -
PLOT DATE = 12/22/2020	CHECKED - MAS	REVISED -
	DATE - 9/8/2020	REVISED -

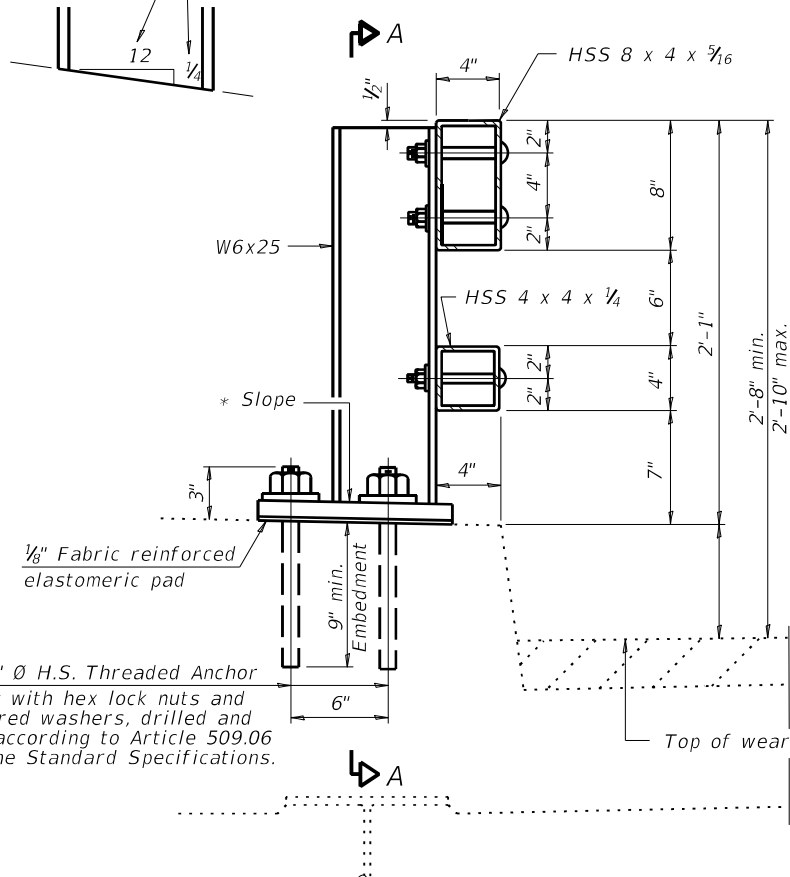
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SN 097-0046(47)
 GENERAL PLAN & ELEVATION**

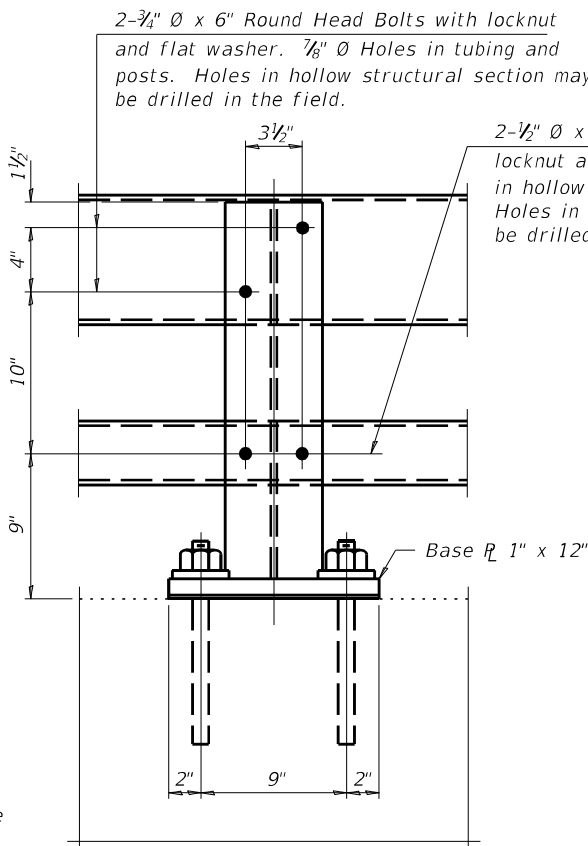
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	D9 BRIDGE DECK REPAIR 2020-1	WHITE	29	23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78815	

* Cut bottom end of post to curb slope.



SECTION AT RAIL POST

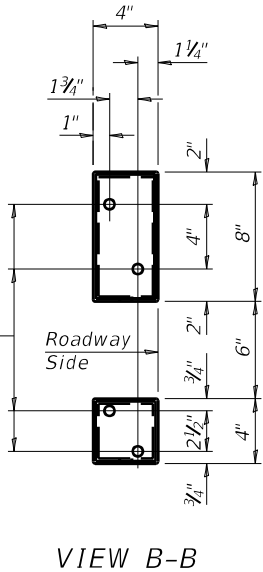


SECTION A-A

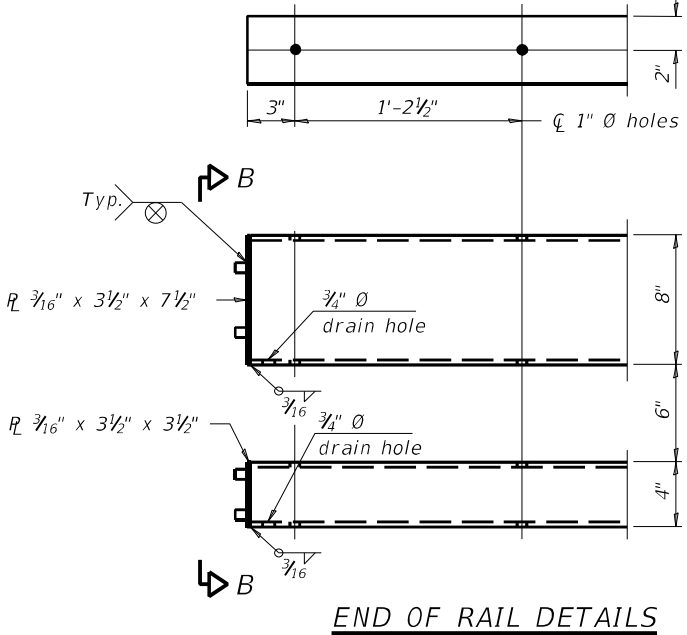
2-3/4" Ø x 6" Round Head Bolts with locknut and flat washer. 7/8" Ø Holes in tubing and posts. Holes in hollow structural section may be drilled in the field.

2-1/2" Ø x 6" Round Head Bolts with locknut and flat washer. 5/8" Ø Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

4 - 3/8" reduced base welded studs. Provide 4 - 3/8" washers and lock nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

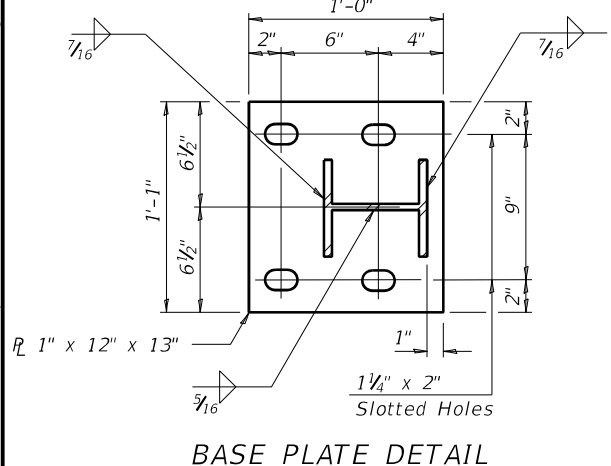


VIEW B-B

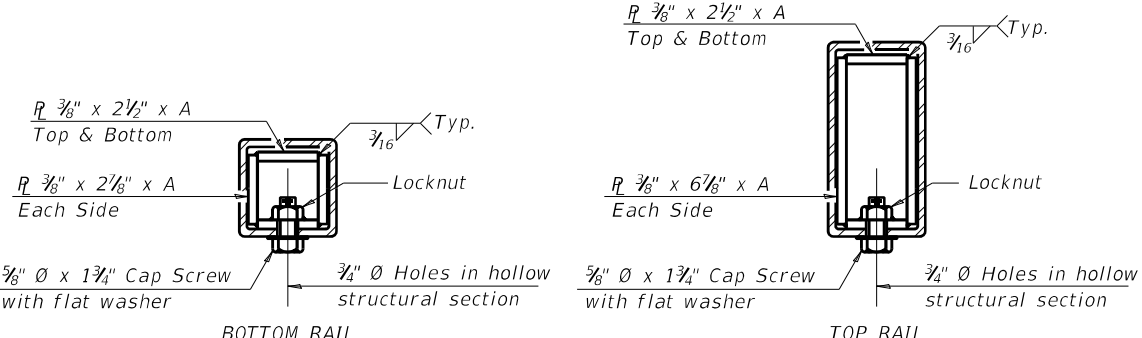


END OF RAIL DETAILS

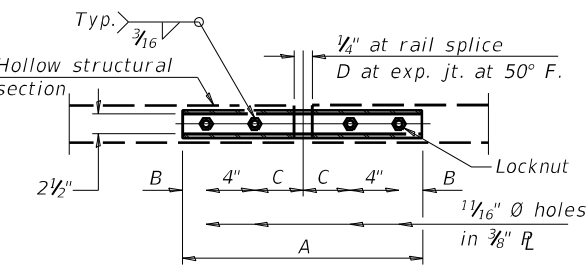
4- 1" Ø H.S. Threaded Anchor Rods with hex lock nuts and tapered washers, drilled and set according to Article 509.06 of the Standard Specifications.



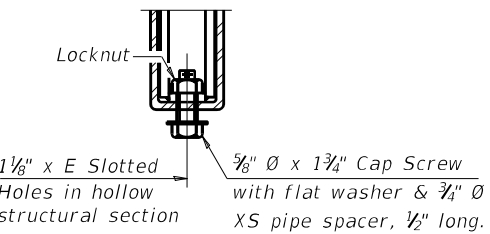
BASE PLATE DETAIL



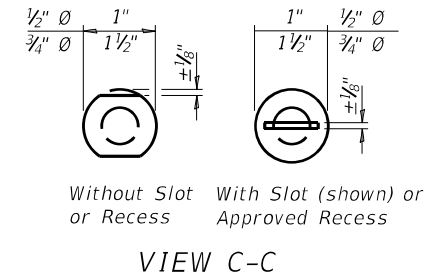
SECTIONS AT RAIL SPLICE



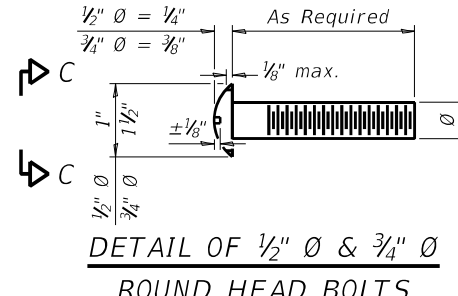
PLAN-BOTT. SPLICE R TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.



VIEW C-C



DETAIL OF 1/2" Ø & 3/4" Ø ROUND HEAD BOLTS

Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	426

NHCRP 350 Test Level	4
Max Post Spacing (ft)	6'-3"
Railing Weight (plf)	70
Railing Require CVN	yes

R-31 2-17-2017

REV. 12-23-2020

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE 2399
 STRUCTURE NO. 097-0046(47)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	D9 BRIDGE DECK REPAIR 2020-1	WHITE	29	28
CONTRACT NO. 78815				

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

ILLINOIS FED. AID PROJECT

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