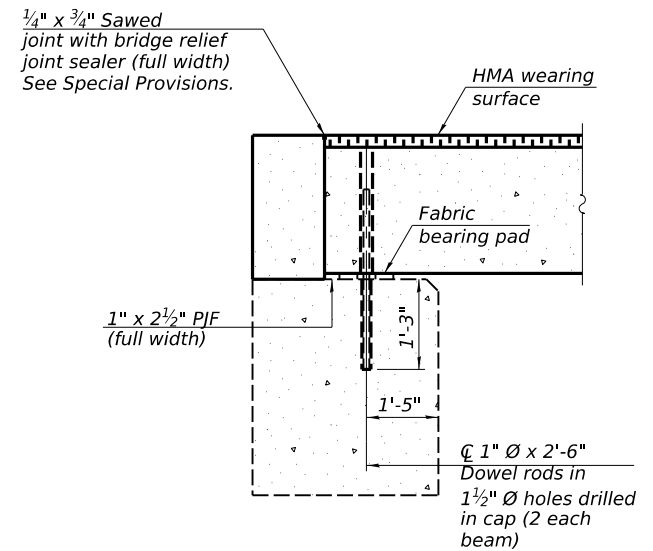
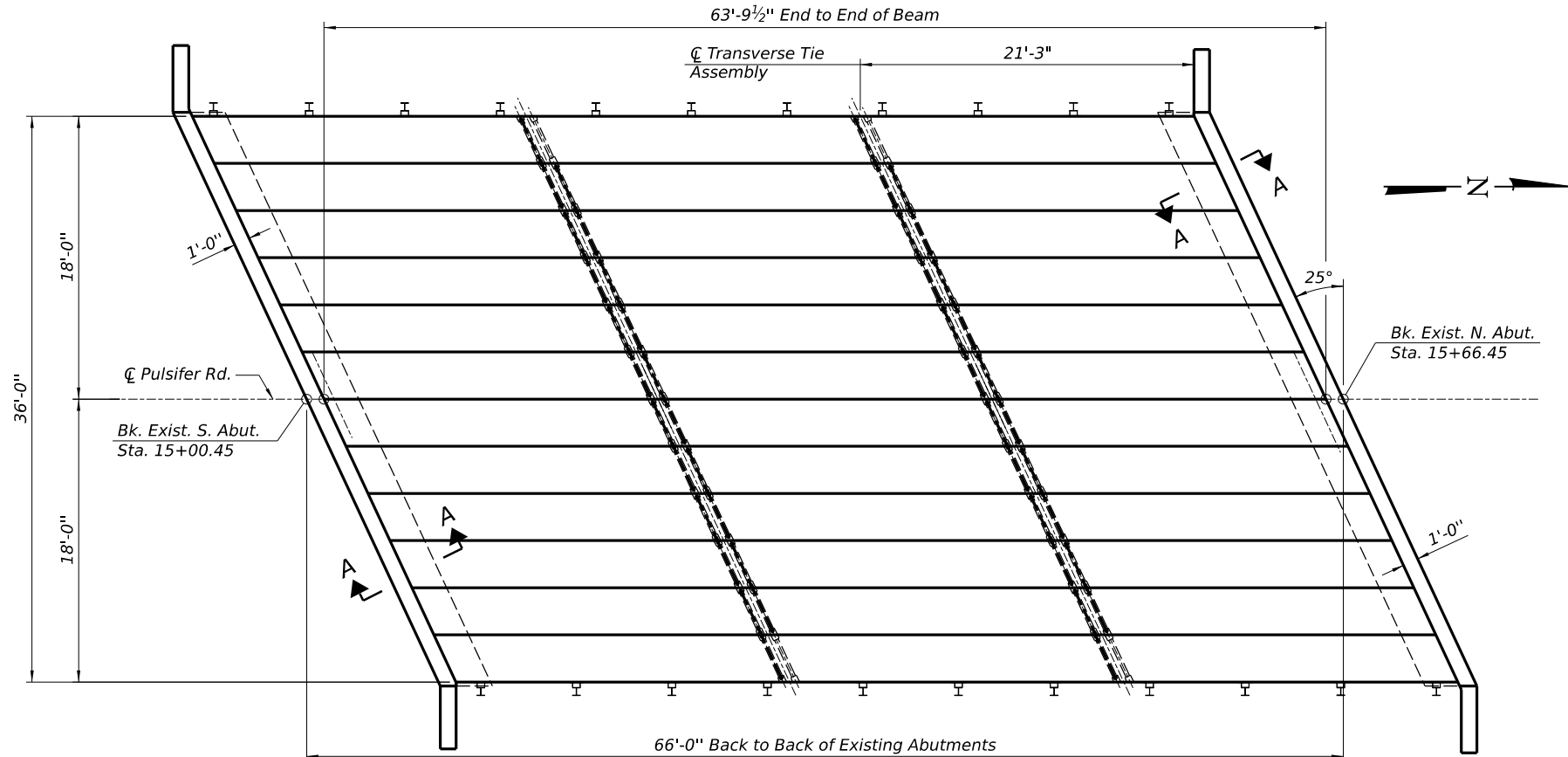


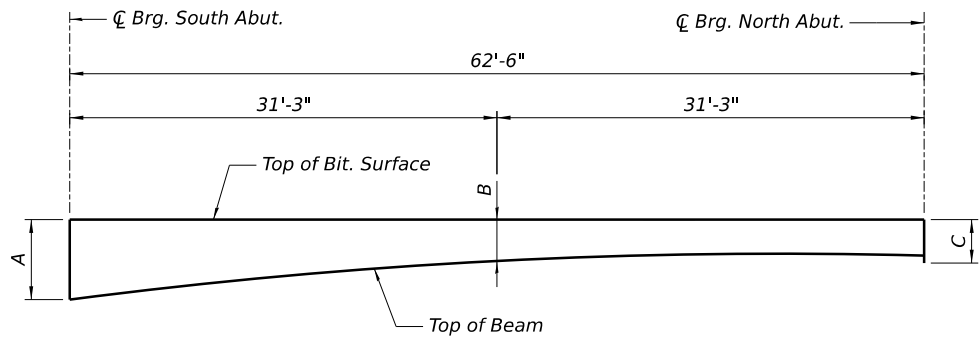
**DECK CROSS SECTION**  
 (Looking North)



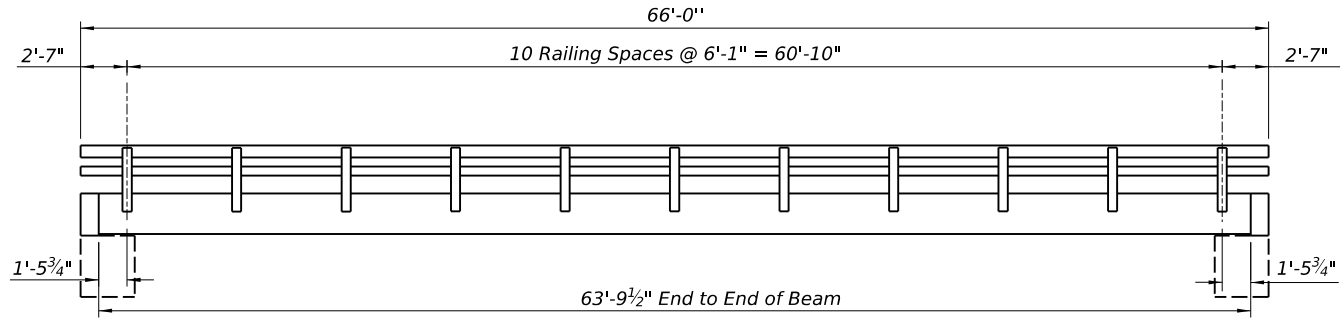
**SECTION A-A**  
 (Dimensions are at Rt. L's)



**PLAN - DECK BEAMS**



**ANTICIPATED HMA WEARING SURFACE PROFILE**



**RAILING ELEVATION**  
 (Dimensions are measured along face of beam)

	A	B	C
W. Edge	7 1/4"	4 1/2"	5"
Midspan	5 1/2"	2 3/4"	3 1/4"
E. Edge	5"	2 1/4"	2 3/4"

DESIGNED	
DRAWN	
REVIEWED	

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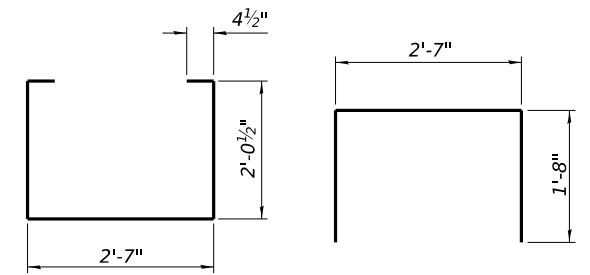
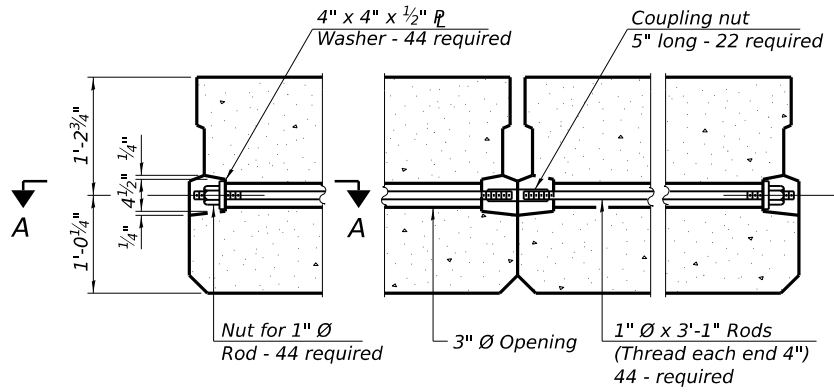
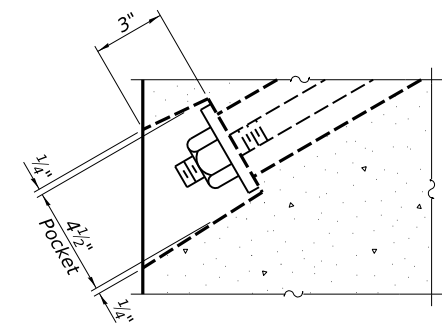
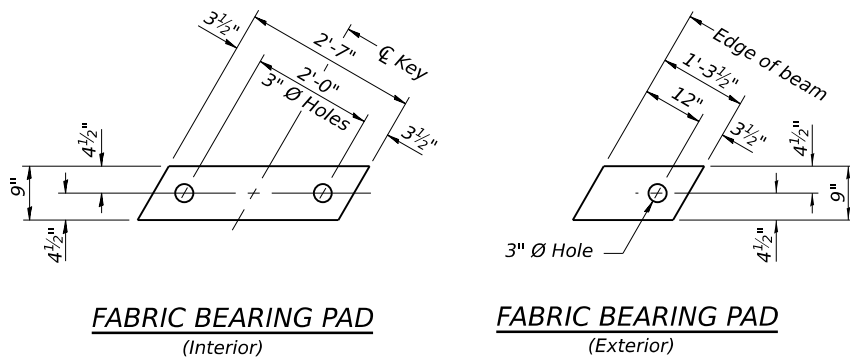
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	PLOT SCALE = 0.1667' / in.	DRAWN - R. JOHNSON	REVISED -
	PLOT DATE = 1/4/2023	CHECKED - J. THOELE	REVISED -
		DATE - 6/30/2022 12:00:00	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

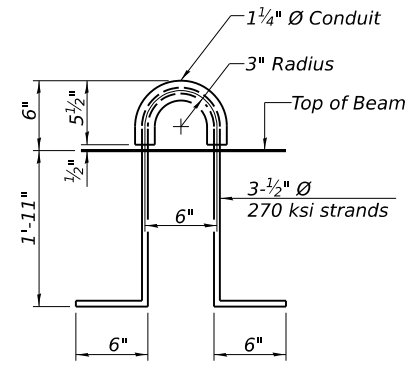
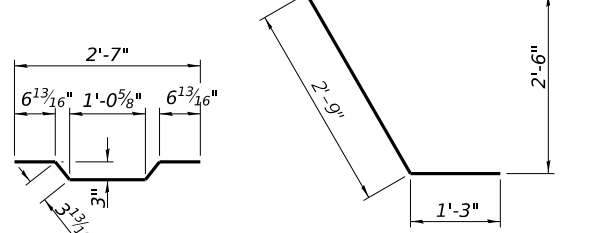
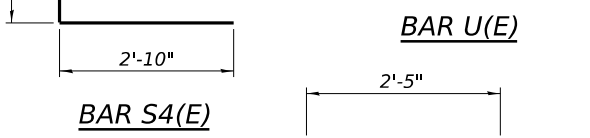
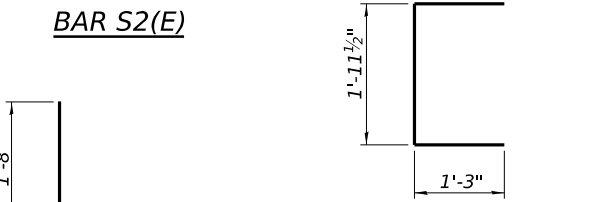
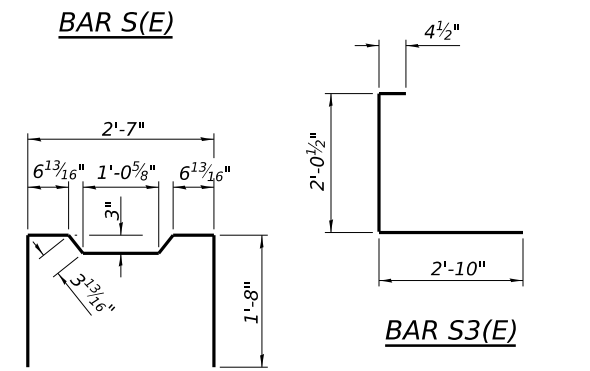
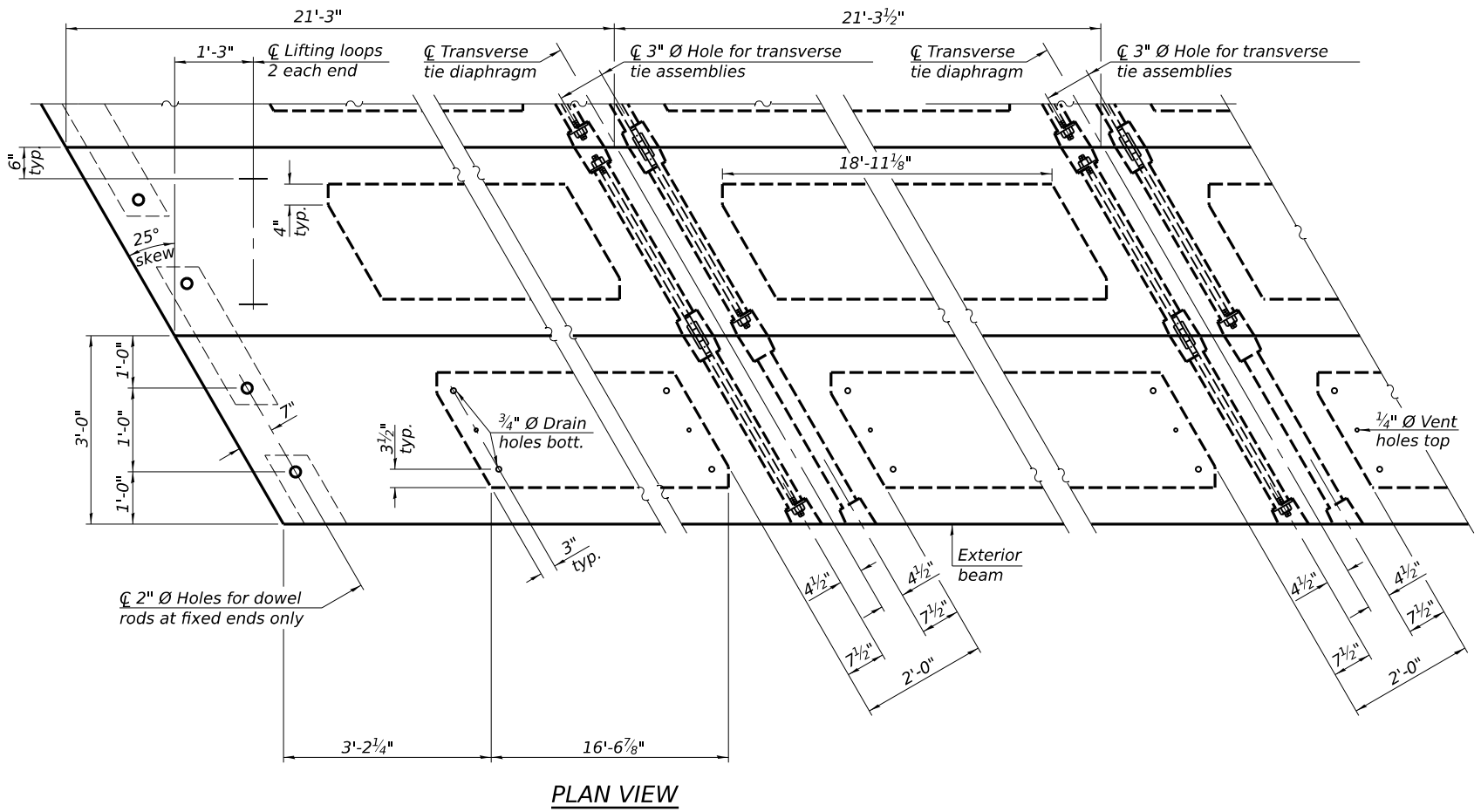
SCALE:	SHEET 3	OF 8 SHEETS	STA.	TO STA.
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**SUPERSTRUCTURE  
 STRUCTURE NO 072-3132**

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R23	20-00155-00-BR	PEORIA	37	20
2110103		CONTRACT NO. 89821		
ILLINOIS   FED. AID PROJECT ###				



**FIXED**  
 Notes:  
 All bearing pads shall be 1" thick. An additional 1" thick bearing pad shall be provided and installed for each beam at South Abutment.  
 Omit holes when using expansion bearings.  
 Expansion bearing pad shall be bonded to the substructure.



**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	2297
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**NOTES**  
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
 Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
 A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
 Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
 Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Note: Connect beams in pairs with the transverse tie configuration shown.

DESIGNED: C. PUZEY 2022 12:00:00 AM  
 DRAWN: R. JOHNSON 2022 12:00:00 AM  
 REVIEWED: J. THOELE 2022 12:00:00 AM

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	PLOT SCALE = 0.1667' / in.	DRAWN - R. JOHNSON	REVISED -
	PLOT DATE = 1/4/2023	CHECKED - J. THOELE	REVISED -
		DATE - 6/30/2022 12:00:00	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

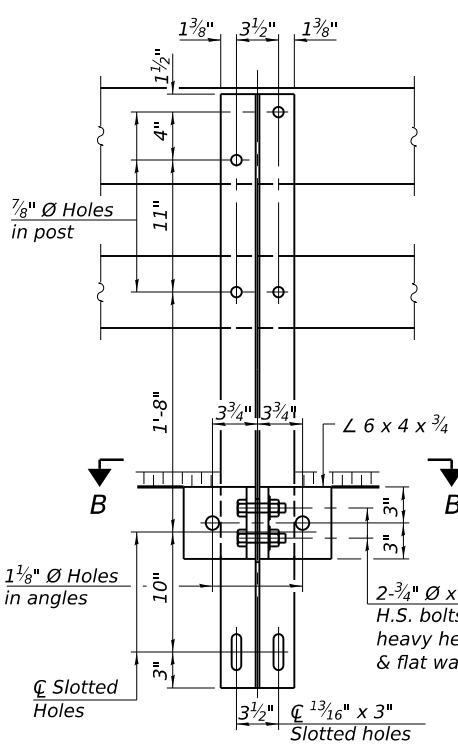
**27" X 36" DECK BEAM DETAILS  
 STRUCTURE NO 072-3132**

SCALE: SHEET 5 OF 8 SHEETS STA. TO STA.

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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2110103		CONTRACT NO. 89821		
ILLINOIS FED. AID PROJECT #####				

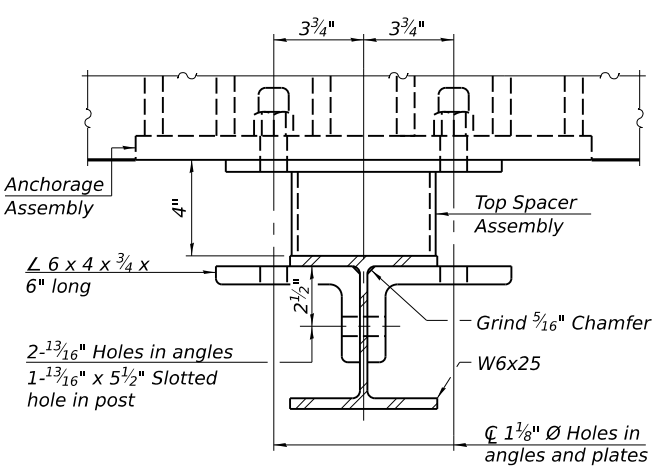
DESIGNED C. PUZEY/2022 12:00:00 AM  
 DRAWN R. JOHNSON/2022 12:00:00 AM  
 REVIEWED J. THOELE/2022 12:00:00 AM

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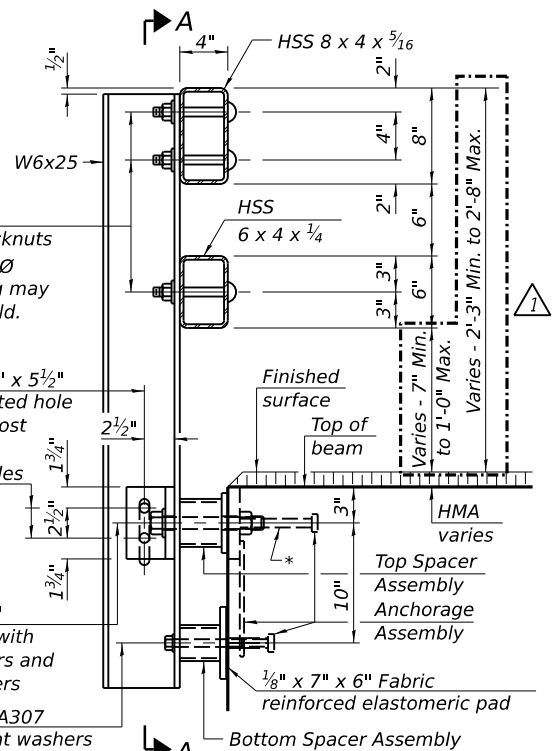


4-<sup>3</sup>/<sub>4</sub>"  $\varnothing$  x 6" Round Head Bolts with locknuts & flat washers. <sup>7</sup>/<sub>8</sub>"  $\varnothing$  holes in HSS tubing may be drilled in the field.

**SECTION A-A**

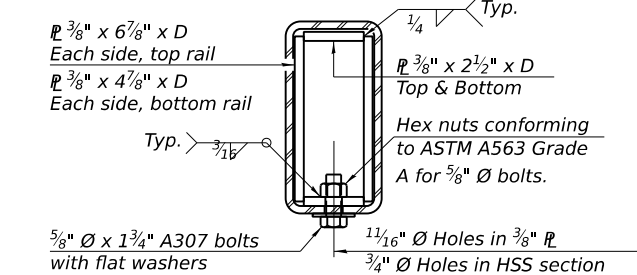


**SECTION B-B**

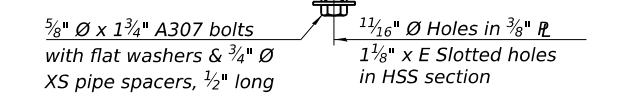


**SECTION AT RAIL POST**

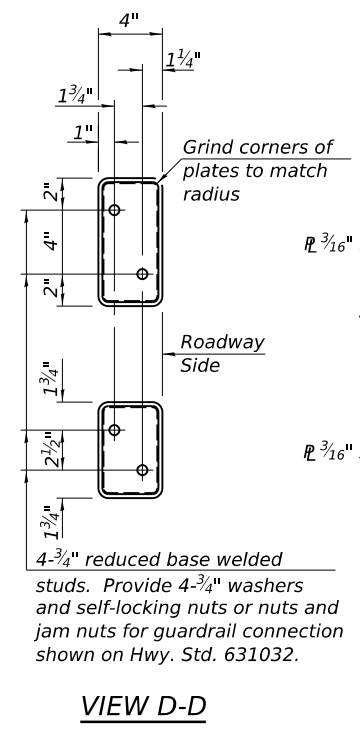
\* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.



**SECTION AT RAIL SPLICE**

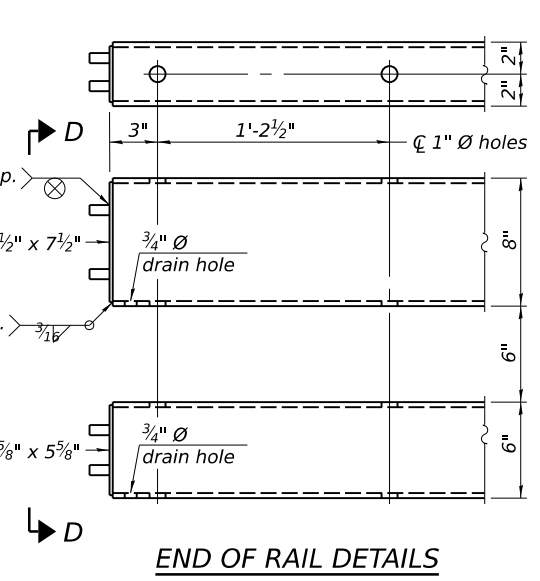


**RAIL SPLICE CONNECTION AT EXPANSION JT.**



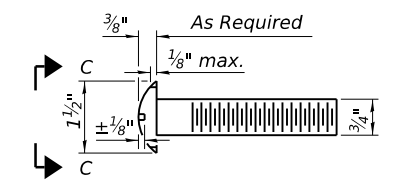
**VIEW D-D**

4-<sup>3</sup>/<sub>4</sub>" reduced base welded studs. Provide 4-<sup>3</sup>/<sub>4</sub>" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Hwy. Std. 631032.

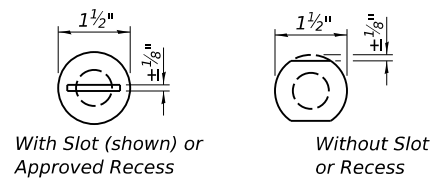


**END OF RAIL DETAILS**

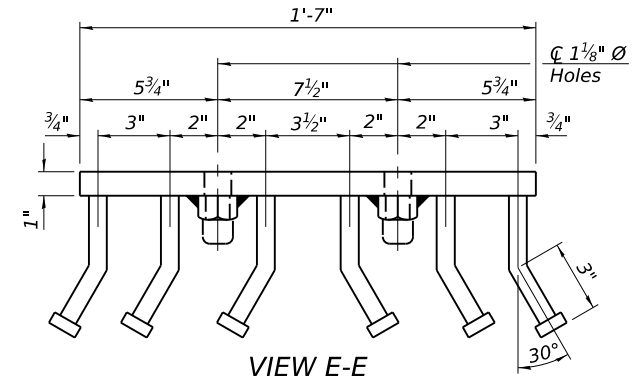
**Notes:**  
 A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11 1/2", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or 1/2" (bottom), longer bolts are required. Cost included with Steel Railing, Type SM.  
 All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.  
 All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.  
 Rail splice inserts may be built out of 2-<sup>3</sup>/<sub>8</sub>" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.  
 All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.



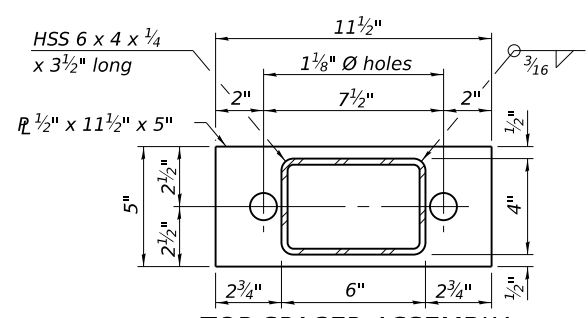
**ROUND HEAD BOLT DETAIL**



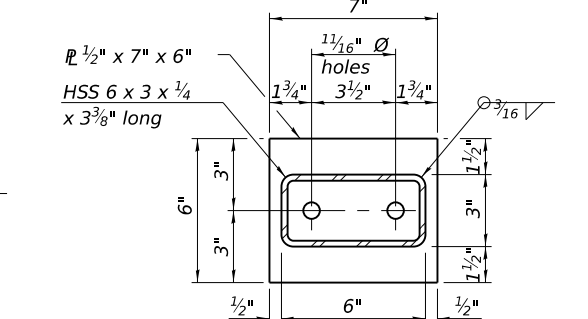
**VIEW C-C**



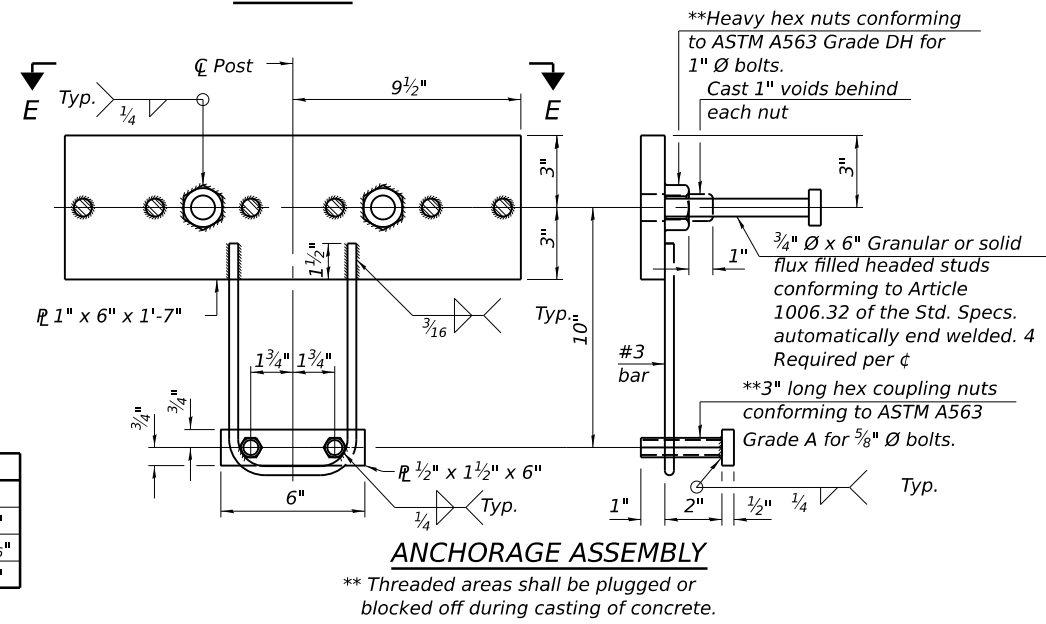
**VIEW E-E**



**TOP SPACER ASSEMBLY**



**BOTTOM SPACER ASSEMBLY**



**ANCHORAGE ASSEMBLY**

\*\* Threaded areas shall be plugged or blocked off during casting of concrete.

**RAILING CRITERIA**

MASH 2016 Test Level	2
Railing Weight (plf)	90
Min f'c (psi)	5,000
Max Post Spacing	6'-3"
HMA thickness range (in)	1 1/4" - 8 3/8"

**SPLICE DIMENSIONS**

Location	T	A	B	C	D	E
All locs. not over exp. jts.	0	1/4"	4"	4"	1'-8"	-
Over Strip Seal Jt.	≤ 4"	2 1/2"	4 5/8"	4 3/8"	1'-10"	3 1/16"
Over Finger or Modular Jt.	≤ 9 1/2"	5 1/2"	7 3/8"	7 1/4"	2'-9 1/4"	5 13/16"
Over Finger or Modular Jt.	≤ 15"	8 1/4"	10 1/8"	10"	3'-8 1/4"	8 9/16"

T = ; total movement along centerline of roadway at expansion joint.

R-34HMAWS 10-12-2021

PRE-FINAL USER NAME = Johns00944  
 DESIGNED - C. PUZEY  
 DRAWN - R. JOHNSON  
 CHECKED - J. THOELE  
 DATE - 6/30/2022 12:00:00

DESIGNED - C. PUZEY  
 DRAWN - R. JOHNSON  
 CHECKED - J. THOELE  
 DATE - 6/30/2022 12:00:00

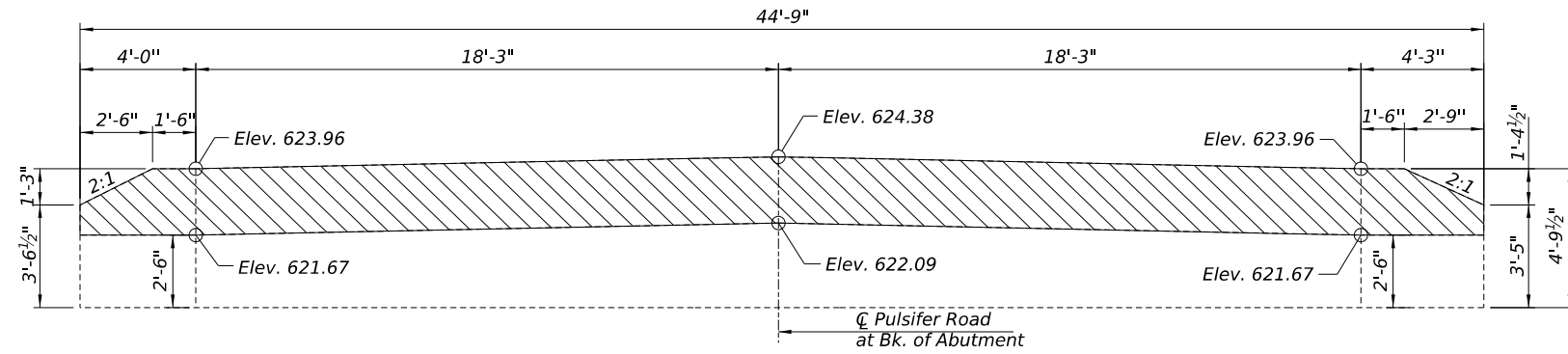
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE SM STRUCTURE NO 072-3132**  
 SCALE: SHEET 6 OF 8 SHEETS STA. TO STA.

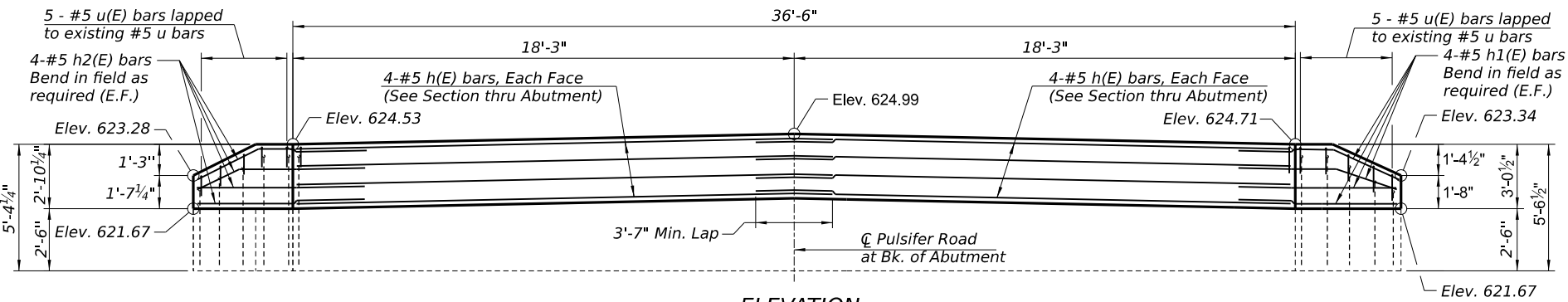
**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type SM	Foot	132

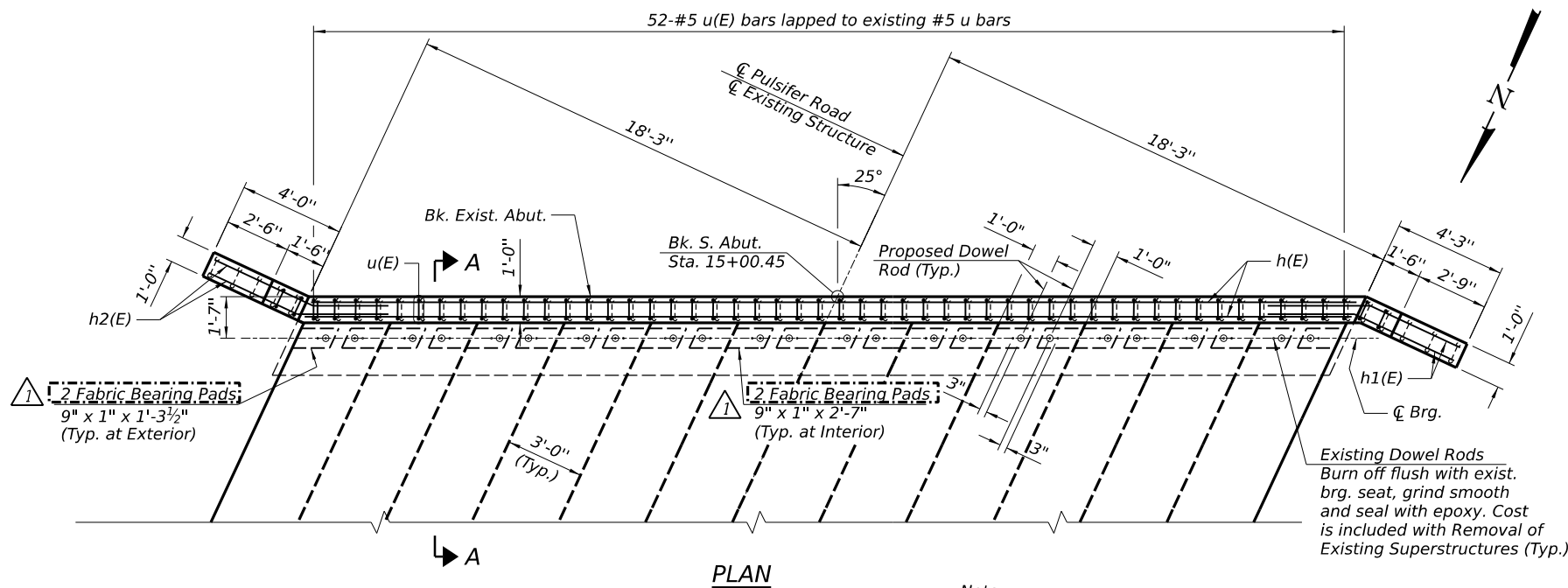
CH SECTION COUNTY TOTAL SHEETS SHEET NO.  
 R23 20-00155-00-BR PEORIA 37 23  
 2110103 CONTRACT NO. 89821  
 ILLINOIS FED. AID PROJECT



**CONCRETE REMOVAL ELEVATION**  
 (Looking South)  
 (Dimensions are at Rt. L's)



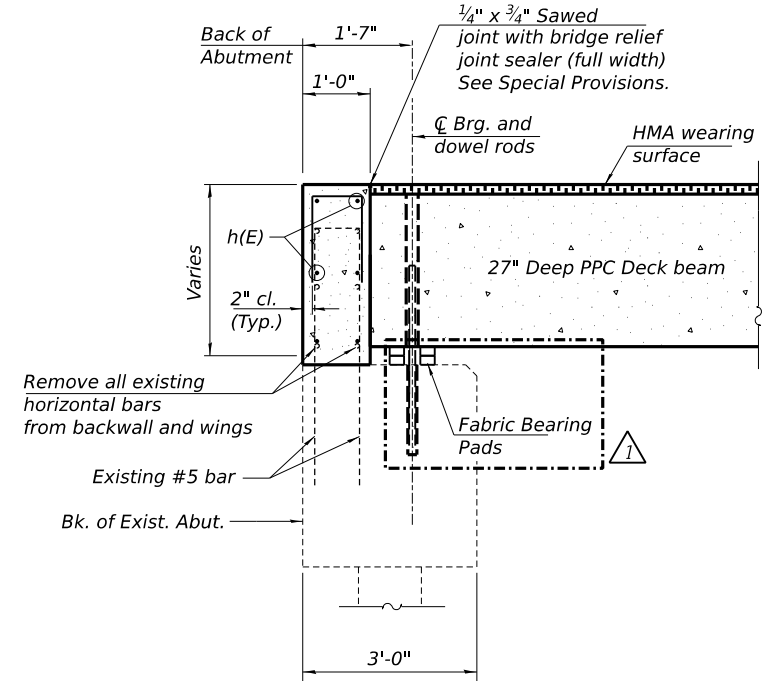
**ELEVATION**  
 (Looking South)  
 (Dimensions are at Rt. L's)



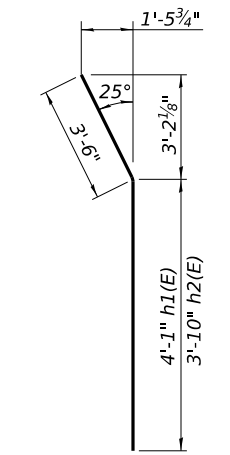
**PLAN**

\* Cast top of wingwall flush with exterior beam face after beams have been erected.

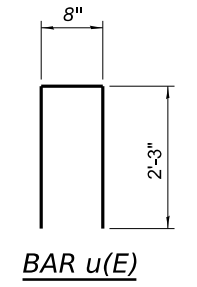
Note:  
 Existing reinforcement extending out of existing abutment cap in the backwall shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement extending out of existing abutment cap that is damaged or not salvaged shall be replaced with either drilled or epoxy grouted bars. Bars epoxy grouted shall have an embedment sufficient to develop 1.25 times the capacity of the reinforcement bar.



**SECTION A-A**  
 (Dimensions at right L's)



**BARS h1(E) & h2(E)**



**BAR u(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	16	#5	20'-1"	—
h1(E)	8	#5	7'-7"	—
h2(E)	8	#5	7'-4"	—
u(E)	62	#5	5'-2"	□
Concrete Removal			Cu. Yd.	4.0
Reinforcement Bars, Epoxy Coated			Pound	790
Concrete Structures			Cu. Yd.	5.1

DESIGNED - C. PUZEY 2022-12-00 10:40 AM  
 DRAWN - R. JOHNSON 2022-12-00 10:40 AM  
 REVIEWED - J. THOELE 2022-12-00 10:40 AM

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		DRAWN - R. JOHNSON	REVISED -
	PLOT SCALE = 0.1667' / in.	CHECKED - J. THOELE	REVISED -
	PLOT DATE = 1/4/2023	DATE - 6/30/2022 12:00:00 AM	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT DETAILS**  
**STRUCTURE NO 072-3132**

SCALE: SHEET 7 OF 8 SHEETS STA. TO STA.

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R23	20-00155-00-BR	PEORIA	37	24
21L0103		CONTRACT NO. 89821		
ILLINOIS   FED. AID PROJECT   ###				