

INDEX

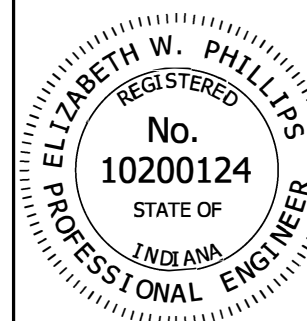
SHEET NO.	SUBJECT
1	Railing, TF-2 Index
2	Railing, TF-2 Elevation, Section, and Rail End Detail
3	Railing, TF-2 Steel Tube and Rail Splice Details
4	Railing, TF-2 Base Plate and Bar Bend Details


INDIANA DEPARTMENT OF TRANSPORTATION

RAILING, TF-2
INDEX

SEPTEMBER 2019

STANDARD DRAWING NO. E 706-BRTF-01

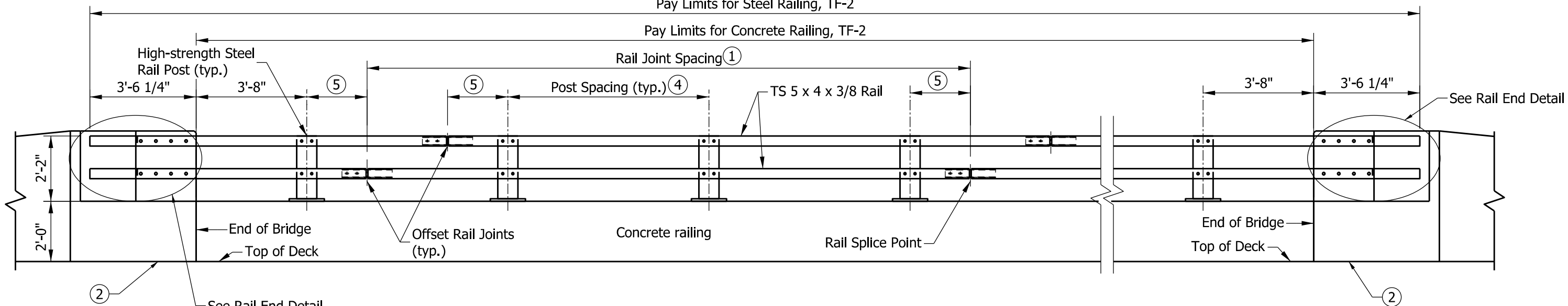



 DESIGN STANDARDS ENGINEER 5/2/2019
DATE


 CHIEF ENGINEER 6/5/2019
DATE

Pay Limits for Steel Railing, TF-2

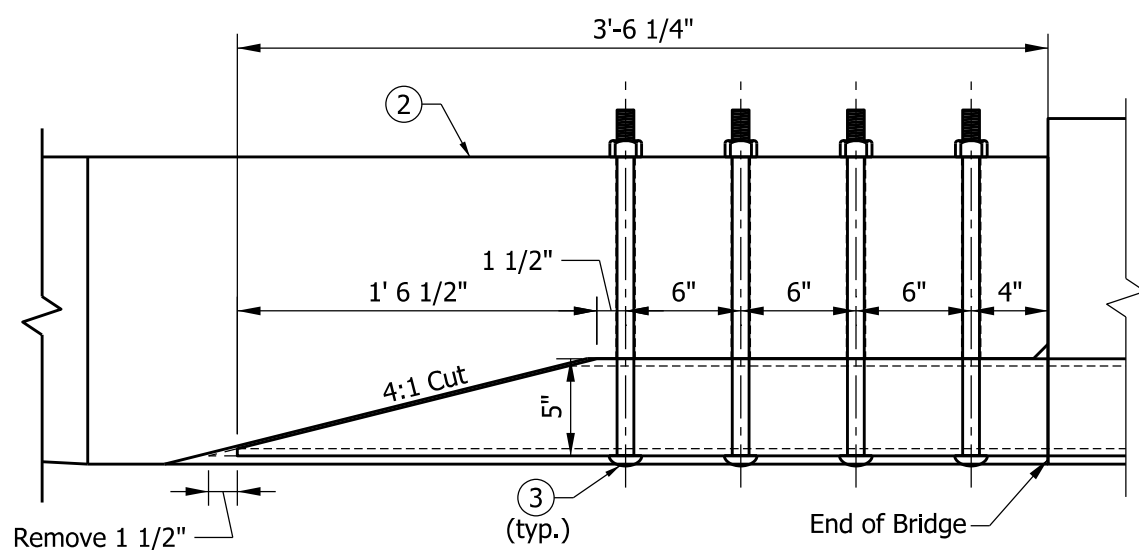
Pay Limits for Concrete Railing, TF-2



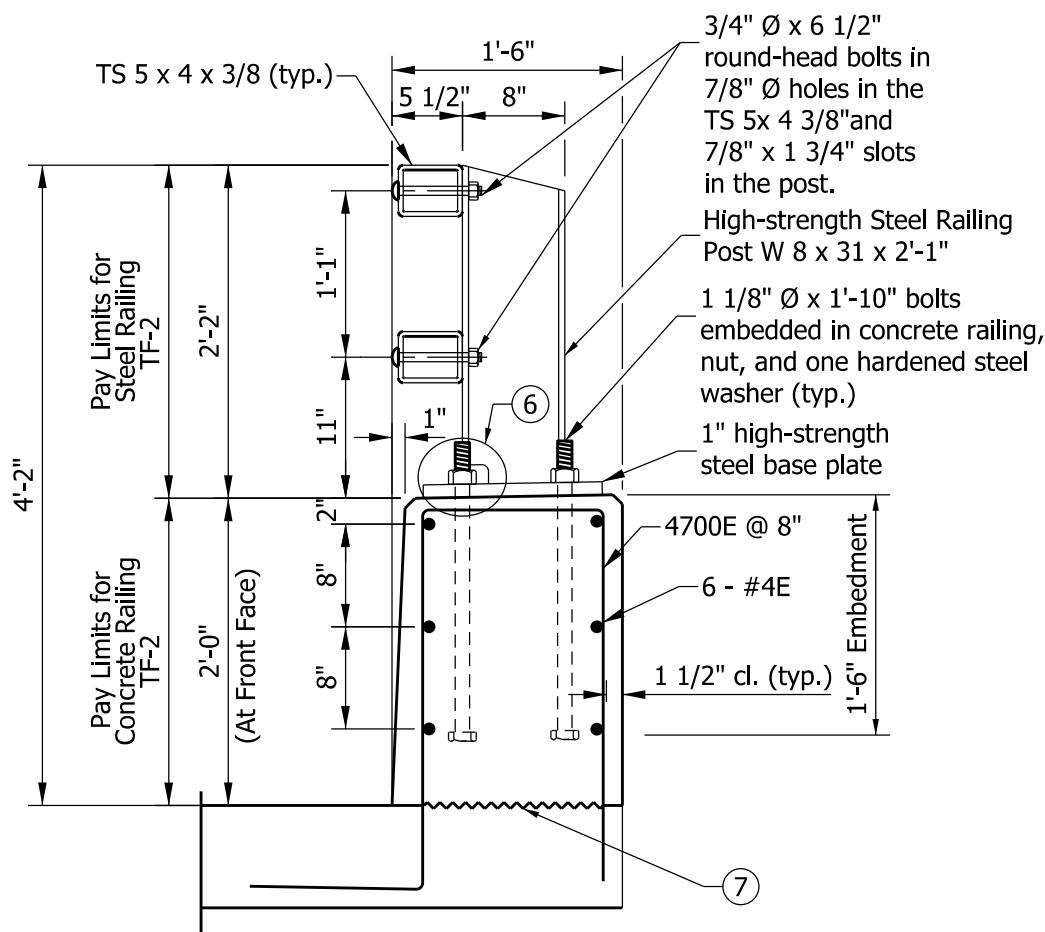
ELEVATION

NOTES:

- ① Spacing of joints in tube steel: 20 ft. min. to 40 ft. max.
- ② Concrete bridge railing transition type TTF-2. See Standard Drawing Series E 706-TTTF for details.
- ③ 7/8 in. diameter x 1 ft. 6 in. round-head bolt in 1 in. diameter hole. Hole is to be slotted as required for expansion.
- ④ Spacing of rail posts: 4 ft. 0 in. min. to 7 ft. 6 in. max.
- ⑤ Distance from centerline of rail splice to centerline of rail post: 18 in. min to 30 in. max.
- ⑥ See Standard Drawing E 706-BRTF-03 for weld access hole detail.
- ⑦ Construction joint type A. See Standard Drawing E 702-CJTA-01 for details.
8. TF-2 railing is acceptable as MASH Test Level 5.



RAIL END DETAIL
(Plan view of both TS 5 x 4 x 3/8 rails)

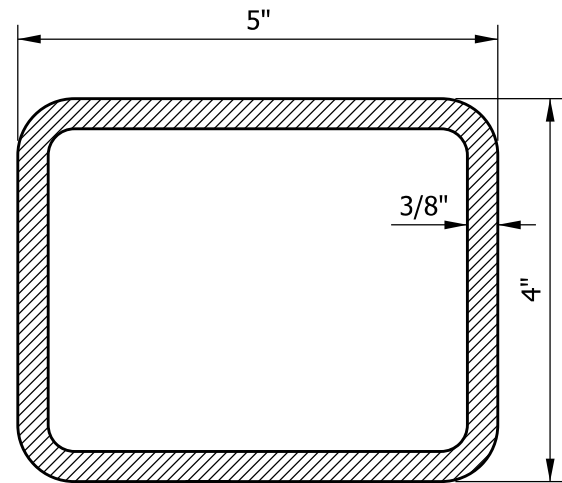


TYPICAL SECTION

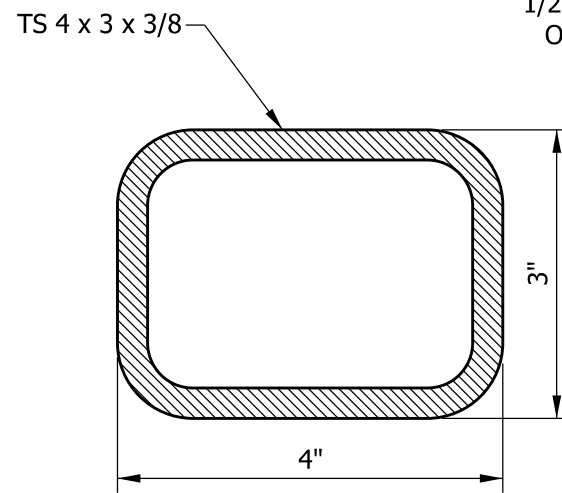
QUANTITIES FOR ONE RUNNING FOOT OF RAILING	
Concrete, class C	2.92 CFT
Reinforcing bars*	11.3 LBS

* Wt. of reinforcing bars doesn't include allowance for splices in longitudinal bars

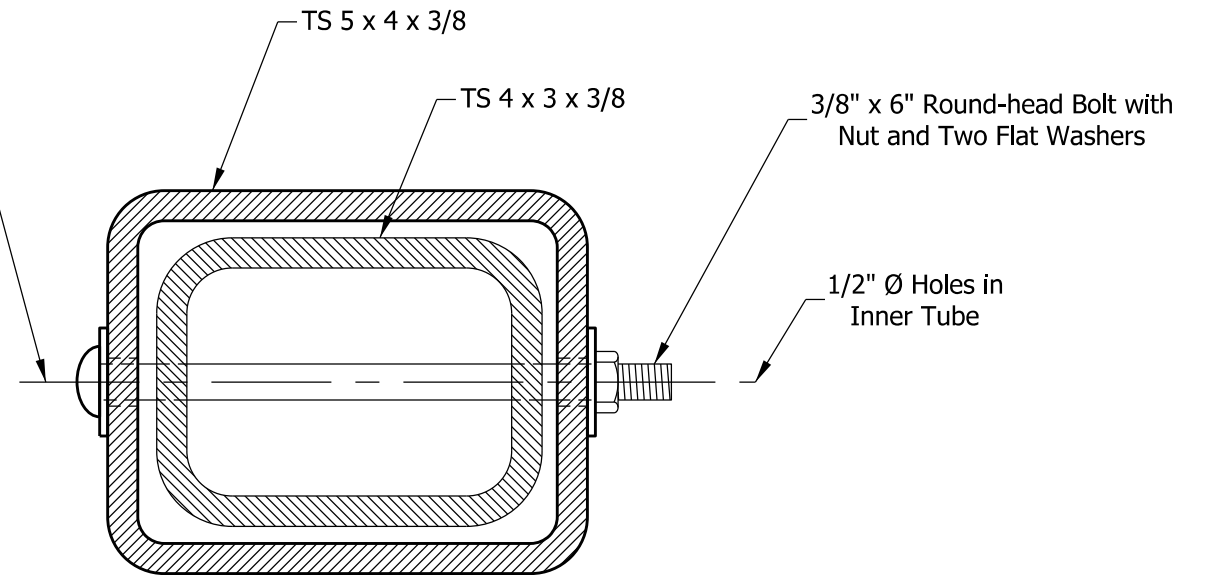
INDIANA DEPARTMENT OF TRANSPORTATION	
RAILING, TF-2 ELEVATION, SECTION, AND RAIL END DETAIL	
SEPTEMBER 2019	
STANDARD DRAWING NO.	E 706-BRTF-02
	 DESIGN STANDARDS ENGINEER 5/2/2019 DATE
 CHIEF ENGINEER	6/5/2019 DATE



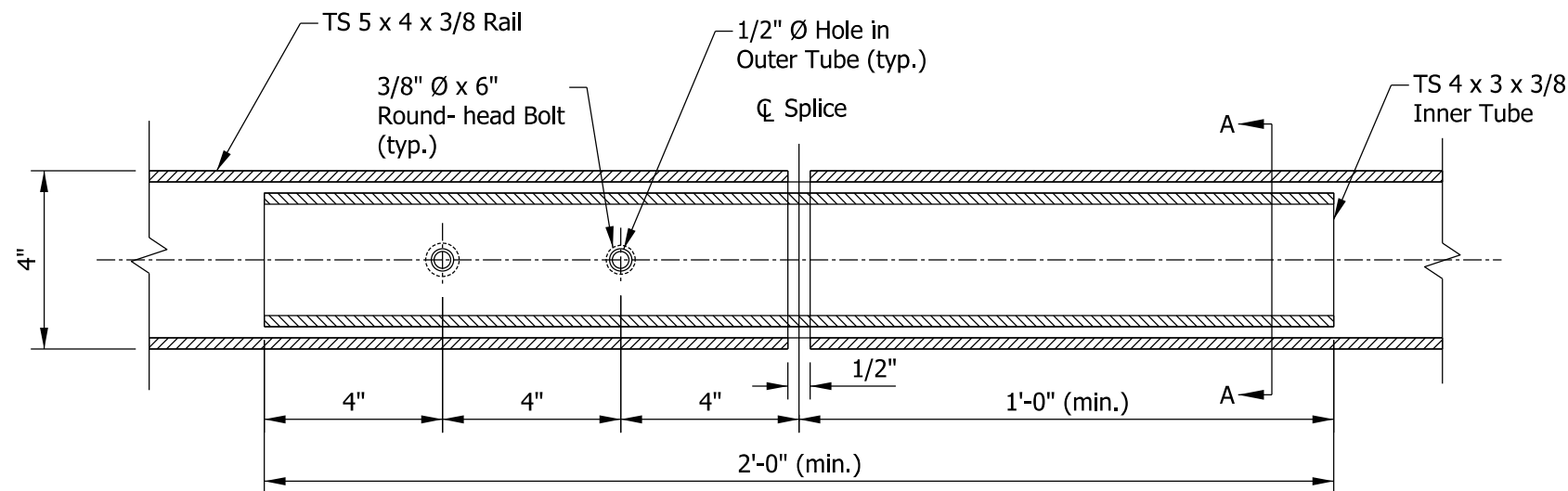
RAIL
TS 5 x 4 x 3/8



INNER TUBE
TS 4 x 3 x 3/8

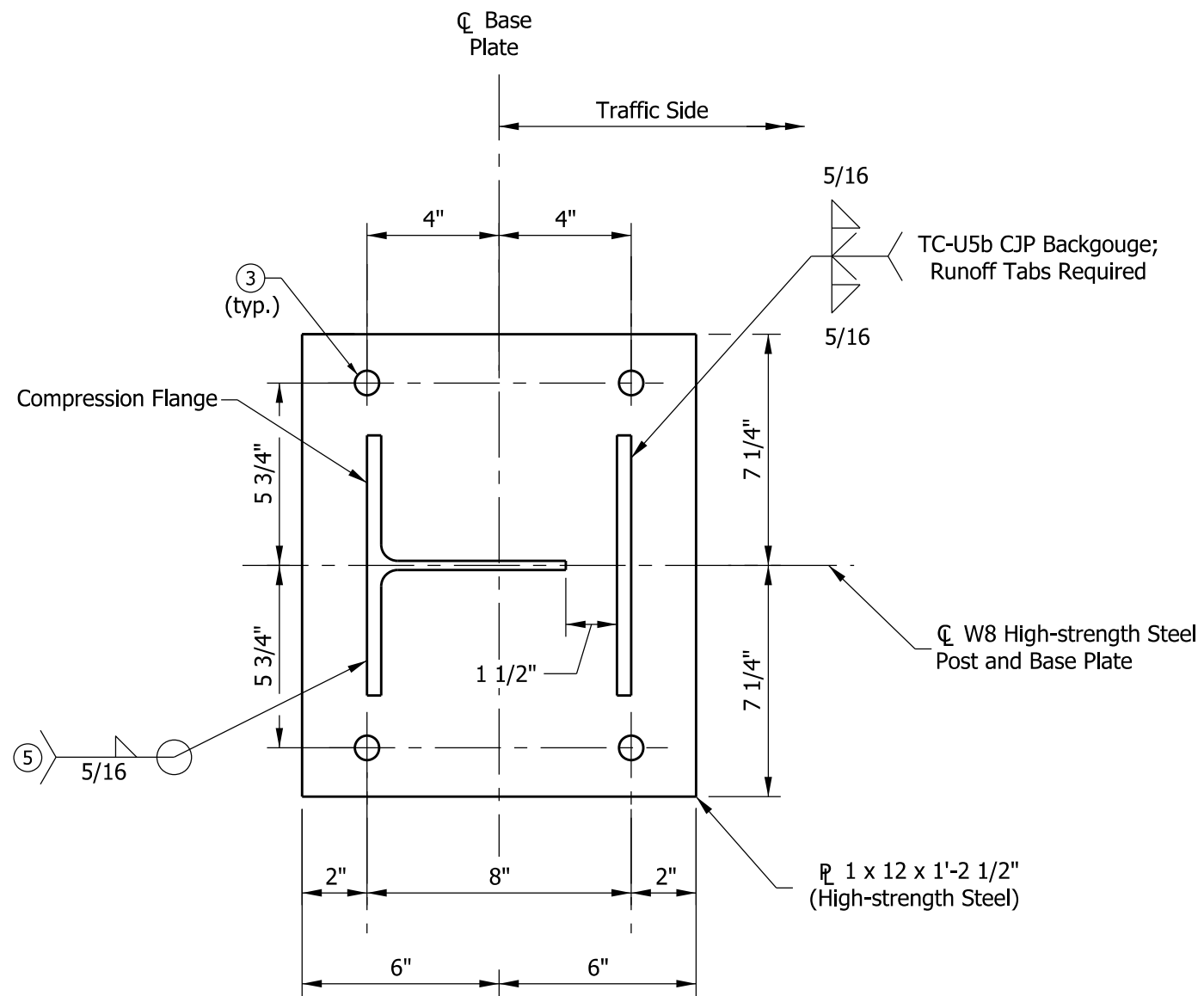


SECTION A-A

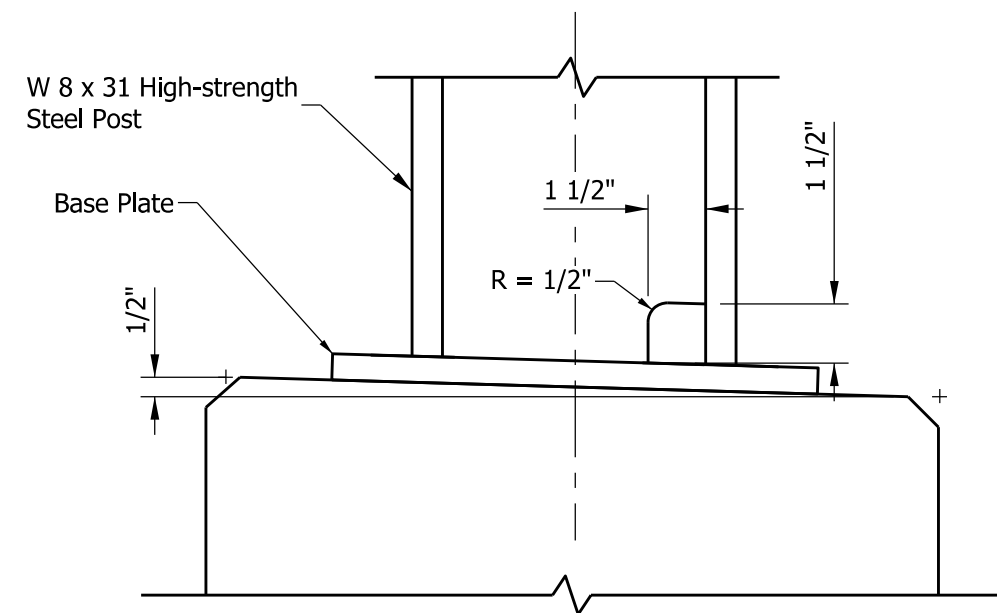


SPLICE ASSEMBLY
FOR TS 5 X 4 X 3/8 RAIL

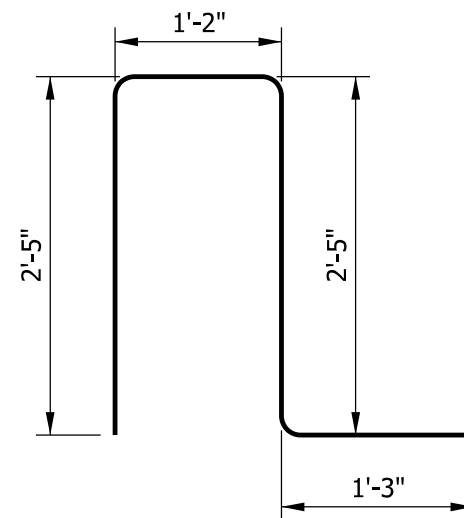
INDIANA DEPARTMENT OF TRANSPORTATION	
RAILING, TF-2 STEEL TUBE AND RAIL SPLICE DETAILS	
SEPTEMBER 2019	
STANDARD DRAWING NO.	E 706-BRTF-03
	 DESIGN STANDARDS ENGINEER 5/29/2019 DATE
	 CHIEF ENGINEER 6/5/2019 DATE



BASE PLATE DETAIL



WELD ACCESS HOLE DETAIL



4700E x 7'-3"

NOTES:

1. See Standard Drawing E 703-BRST-01 for reinforcing-bar bending details and notes.
2. All chamfered edges shall be 3/4 in.
- ③ 1 3/8 in. diameter holes for 1 1/8 in. anchor bolts.
4. All reinforcing bars designated E shall be epoxy coated.
- ⑤ Mill to bear flush with base plate prior to welding to ensure that the final position of the post is vertical.

INDIANA DEPARTMENT OF TRANSPORTATION	
RAILING, TF-2 BASE PLATE AND BAR BEND DETAILS	
SEPTEMBER 2019	
STANDARD DRAWING NO.	E 706-BRTF-04
	 DESIGN STANDARDS ENGINEER 5/29/2019 DATE
	 CHIEF ENGINEER 6/5/2019 DATE