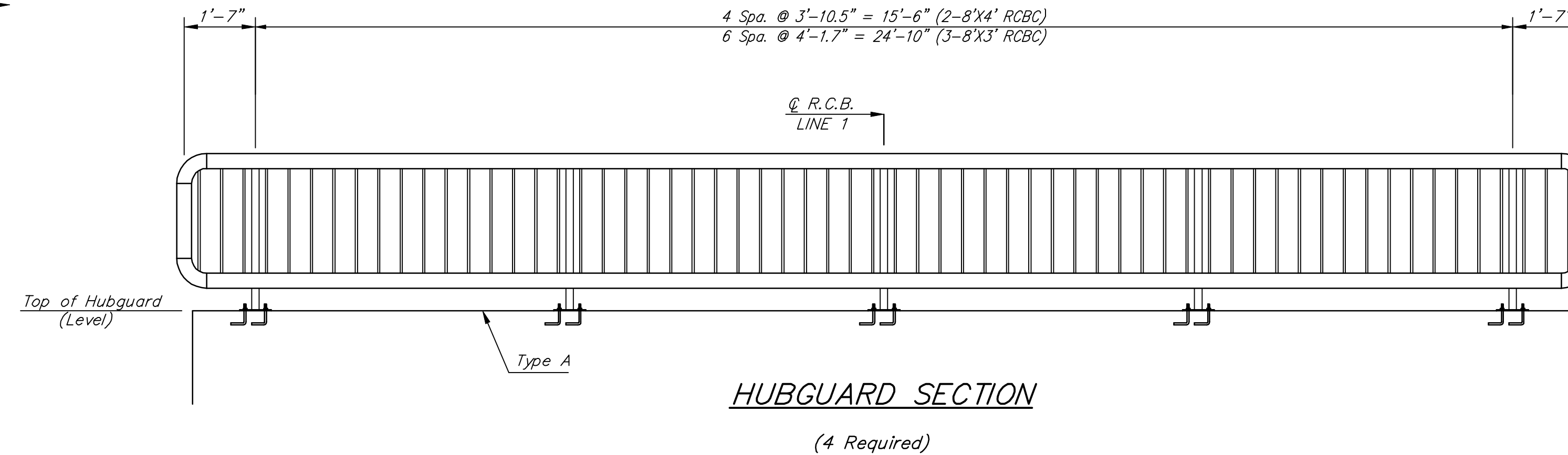
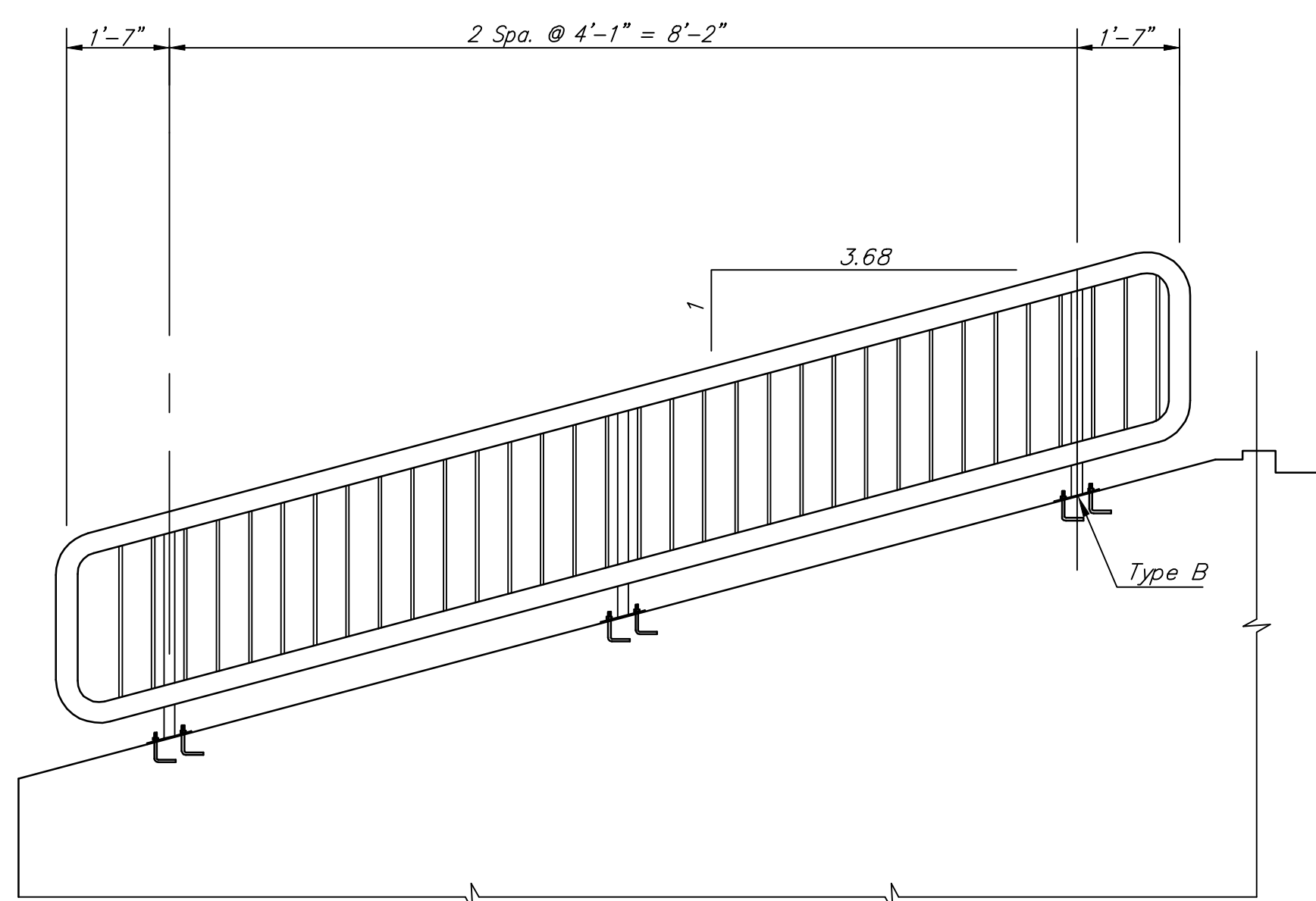


HANDRAIL ELEVATION



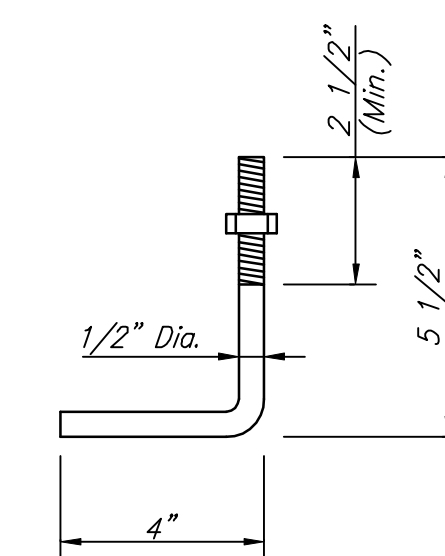
HUBGUARD SECTION

(4 Required)



HANDRAIL ELEVATION

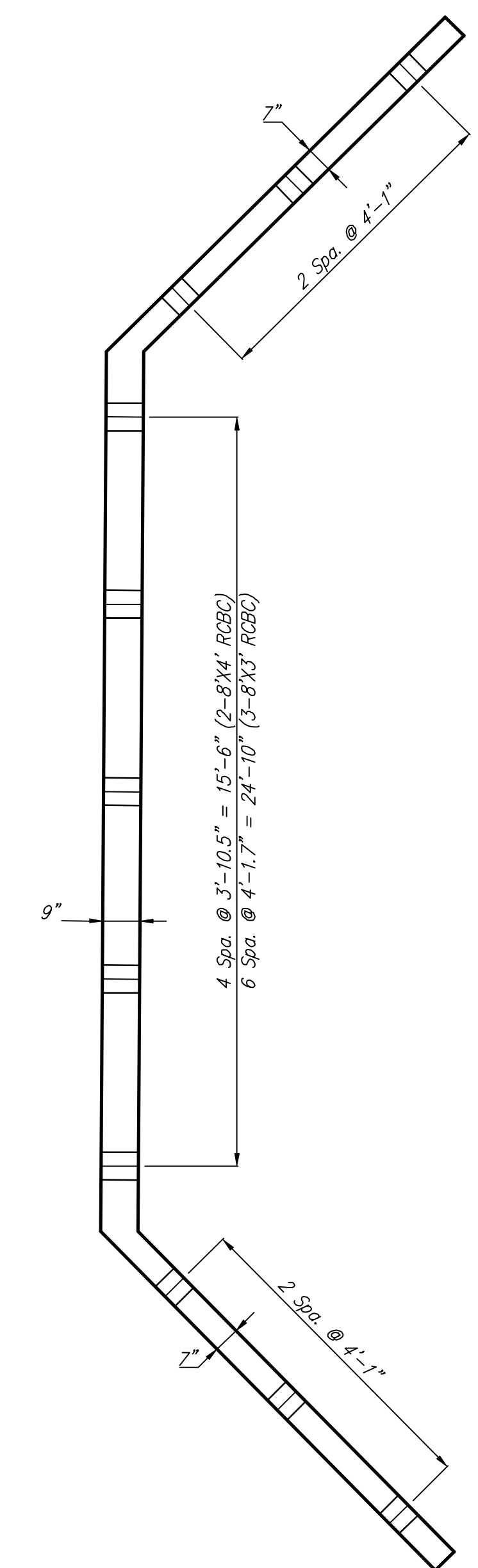
(8 Required)



Galvanized (ATSM A153)
(May Substitute expandable anchor bolts when approved by the Engineer)

ANCHOR BOLT

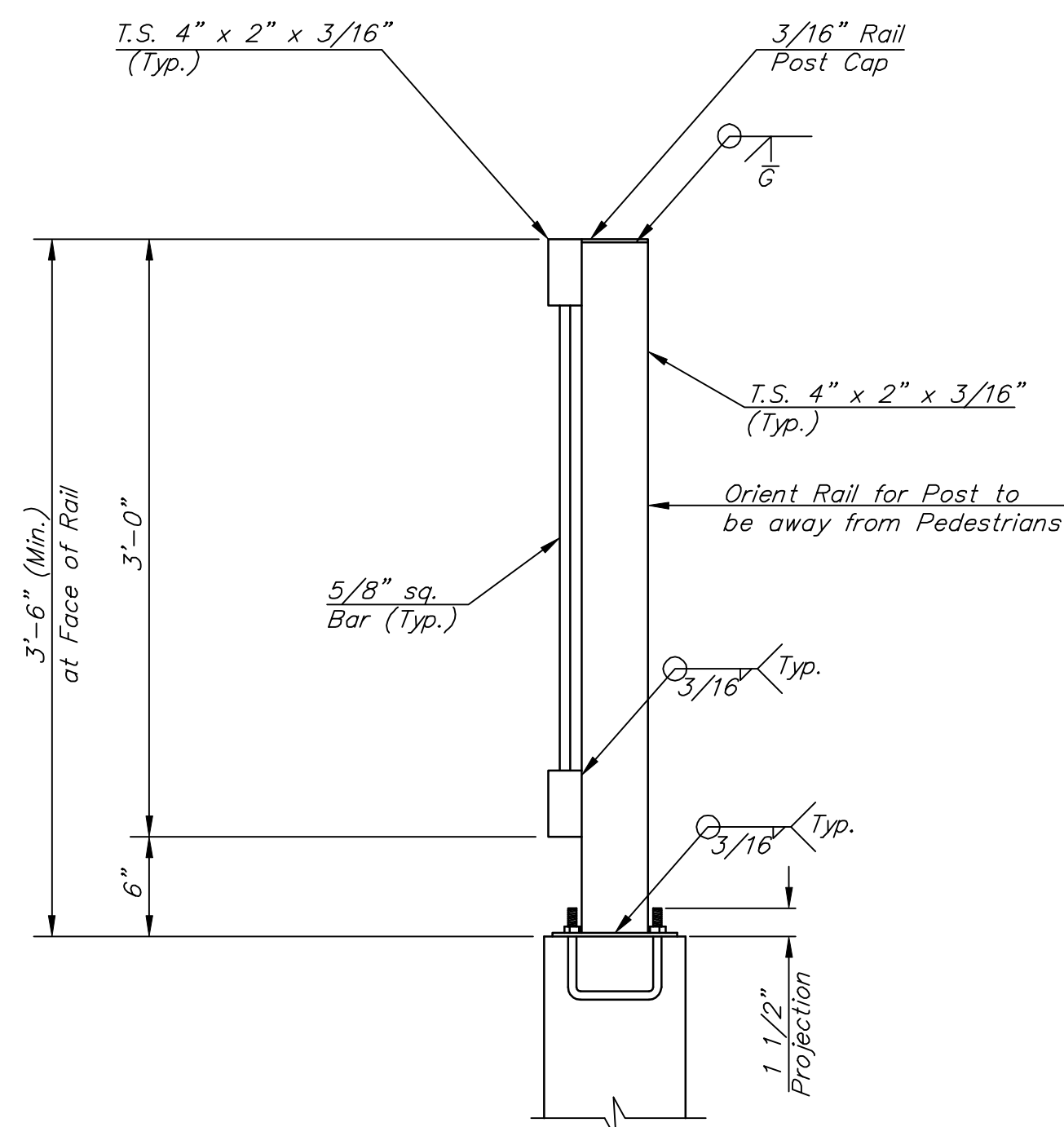
Orient to provide min. 2" edge clearance to either hubguard face or adjacent bolts



RAIL LOCATION LINE 1 PLAN

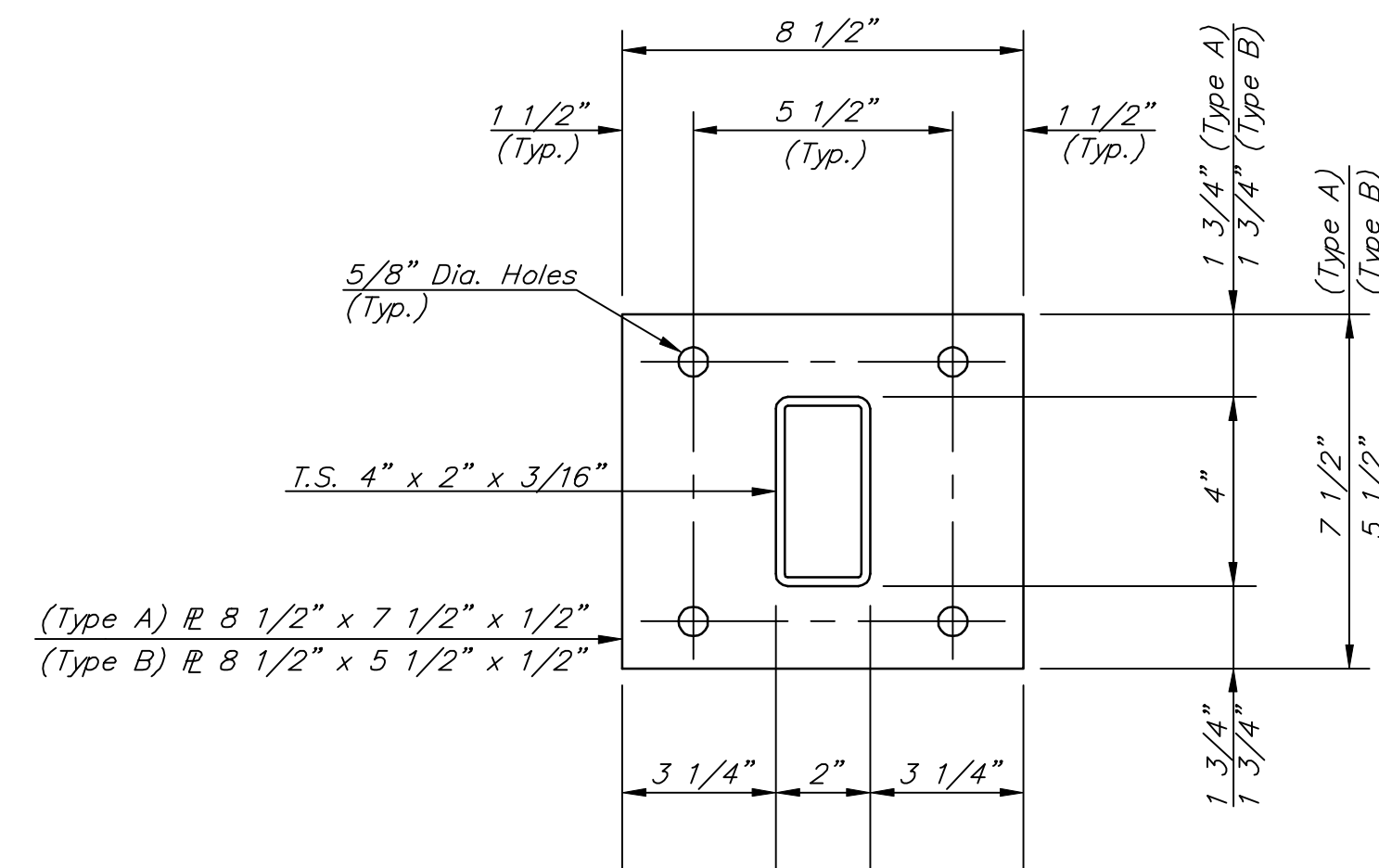
1" = 20'

The Bid Item "L.F. Handrail" Shall Include all labor, Materials, Anchor Bolts, Fabrication, Installation, and Ect. Necessary to Place the Handrails As Shown Along the Box Culvet. (Both Sides)



SECTION A-A

Note:
Rail Post on Hubguard shown,
Rail Posts on Wingwalls not shown
but similar controlling criteria.



BASE PLATE

24 Required (Type A)
24 Required (Type B)

GENERAL NOTES

The posts shall be hollow structural tubing. All structural steel and tubing shall comply to A.S.T.M. Designation A36 or A500 Grade B respectively.

Rail shall be fabricated in lengths as shown.

Posts and bars shall be set vertical and shimmed if required.

The paint system shall be provided by Carboline: 350 Hanley Industrial Ct., St. Louis, MO. The application will be in accordance with the manufacturers recommendations. The paint procedure is as follows:

1. Abrasive blast to commercial finish SSPC-SP6 to obtain a surface profile of 1-1/2 mils.
2. Apply 2 coats of Carboline GP 818 Primer (2 to 4 mils per coat).
3. Apply one topcoat of Subsil 30 HS (2 to 3 Mil) (Color Carboline 2277). An approved substitution of the total paint system will be allowed with the approval of the Engineer.

Material and construction shall conform to the Structural Welding Code A.W.S. D1.1-00.

Shop details must be submitted and approved by the Engineer.

	COPPER GATE ESTATES HANDRAIL DETAIL STORM WATER DRAIN #196	
	<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>	
PROJECT NUMBER 468-83556	DESIGN Staff	DRAWN Staff
REVISIONS:	APPROVED	DATE 2/09/05
SCALE Noted		SHEET 8 OF 14