

**GENERAL NOTES**

The horizontal members of the rail and 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 Handrail shall be sandblasted prior to painting.

The Handrail shall be painted shop and field with an inorganic zinc-vinyl paint system complying with the Standard Specifications for State Road and Bridge Construction, 1990 Edition Kansas Department of Transportation. Color of paint shall be "Black" and shall be approved by the Engineer before application.

Material and construction shall conform to the Structural Welding Code A.W.S. D1.1-88.

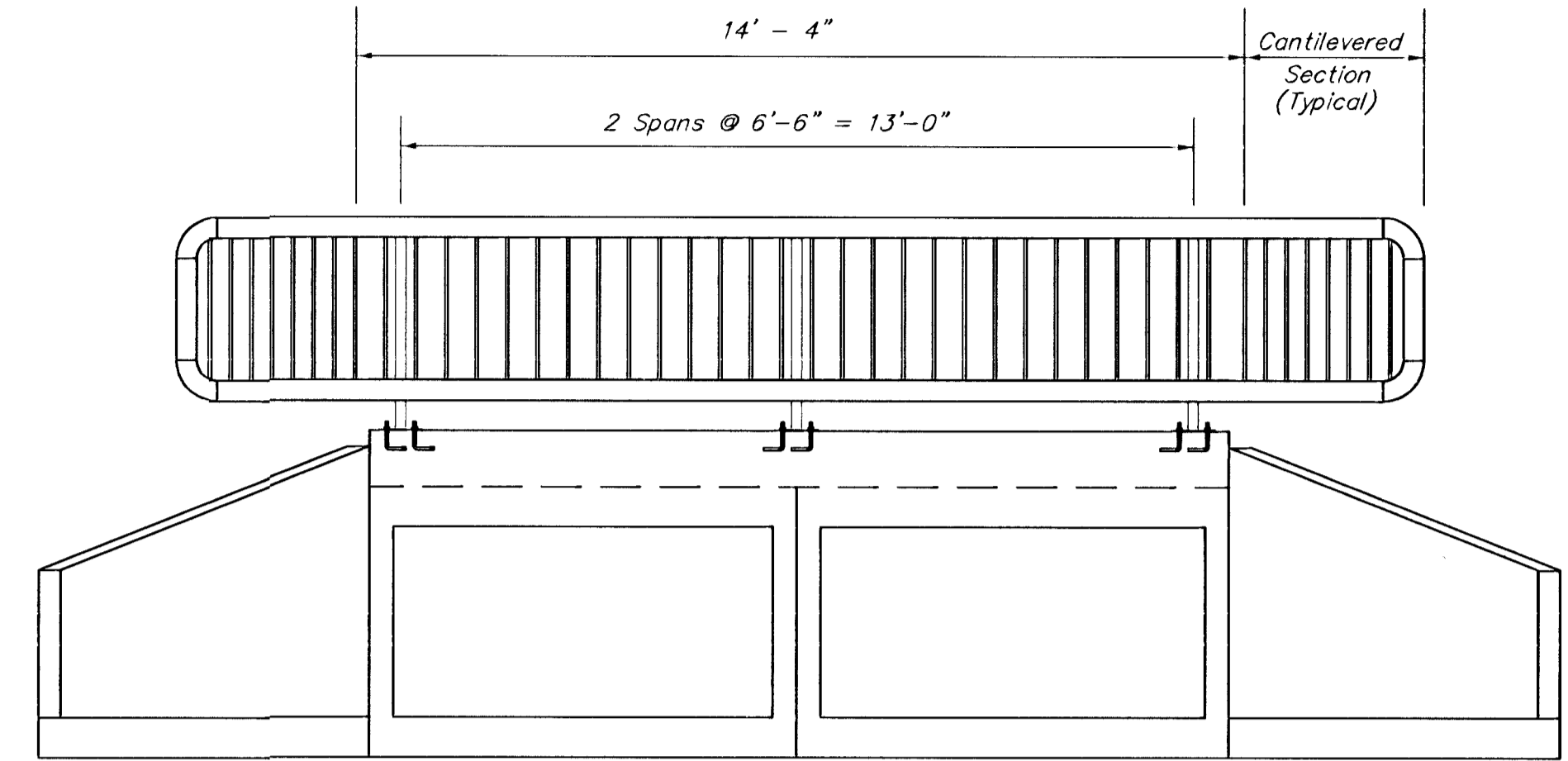
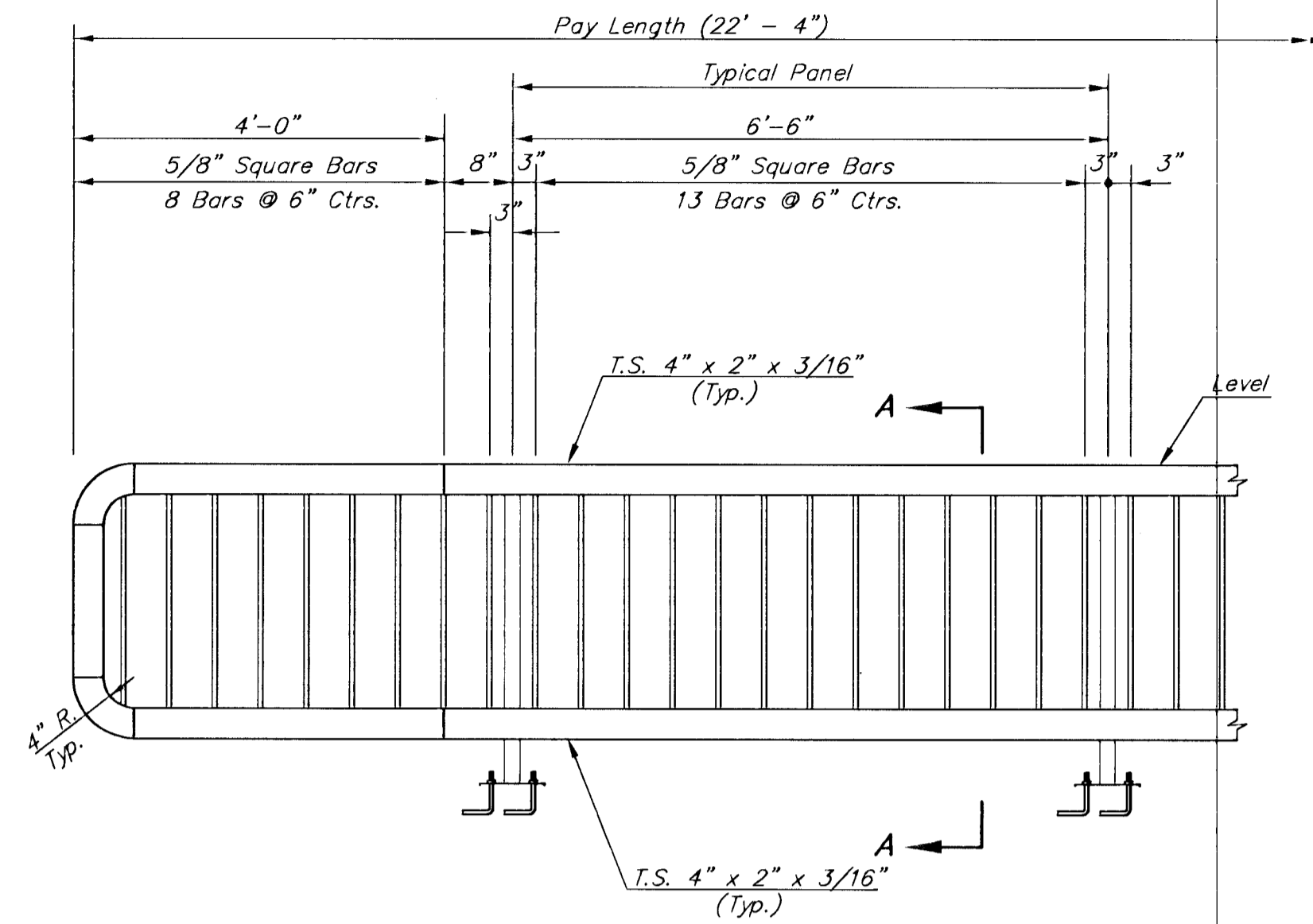
Shop details must be submitted to and approved by the Engineer.

All dimensions are ± and shall be field verified.

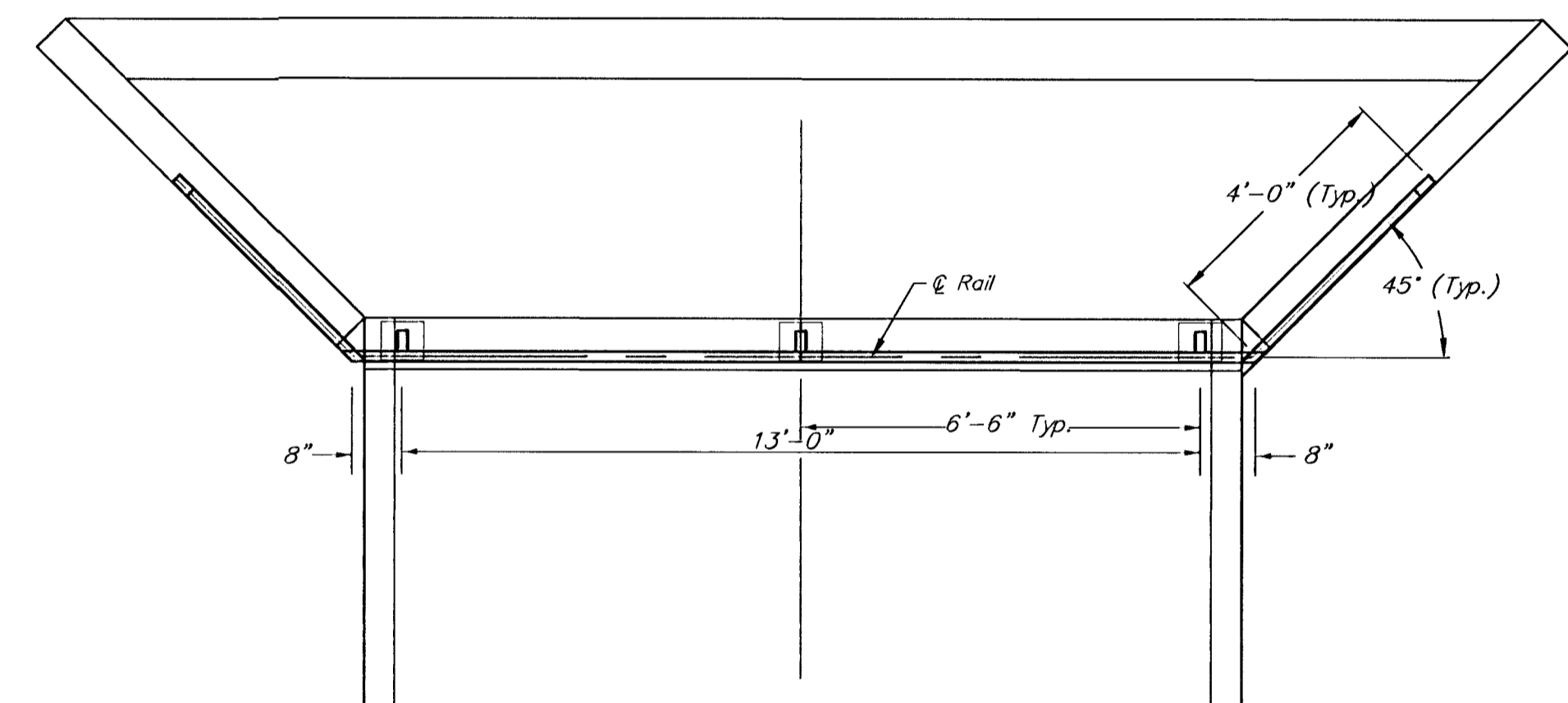
Class A Concrete (AE) - 4000 p.s.i. @ 28 days.

Rebar - A615, #4, Gr. 60

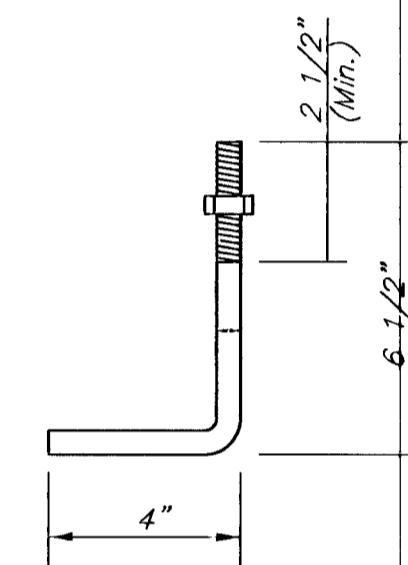
Chamfer exposed edges 3/4" (Typical).



**HANDRAIL DETAIL**



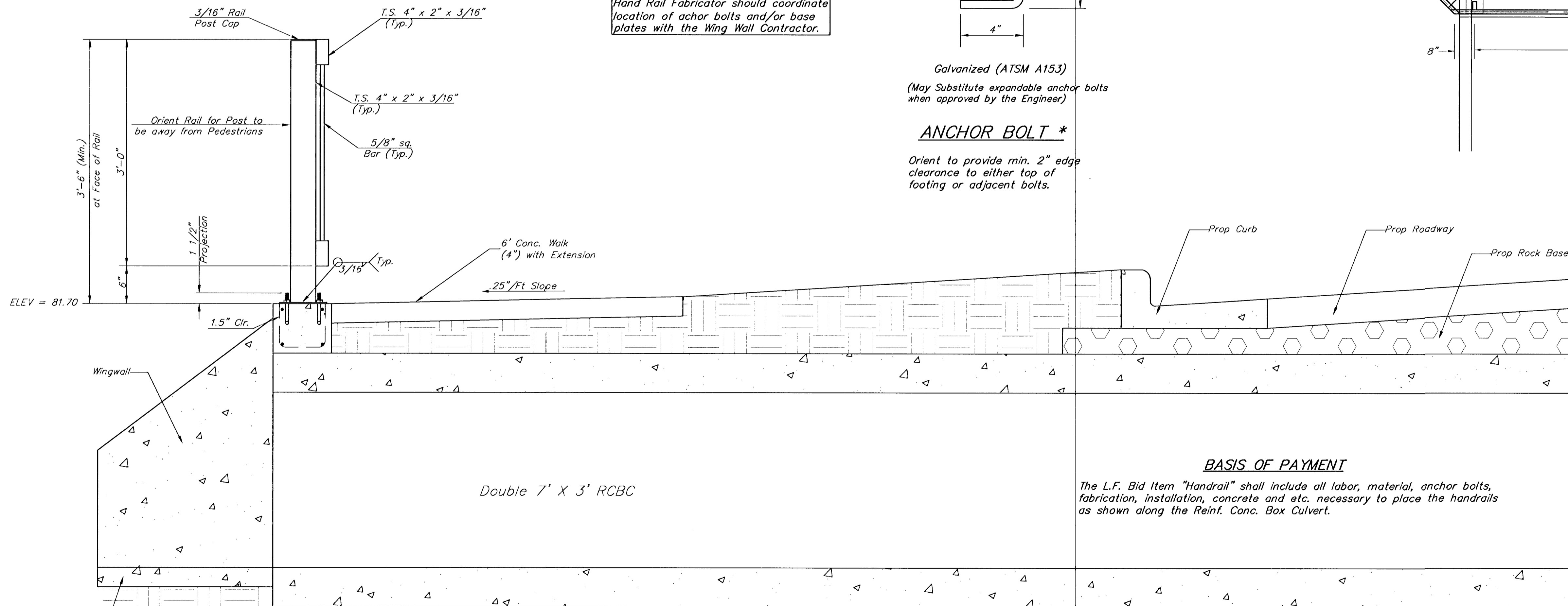
\* Hand Rail Fabricator should coordinate location of anchor bolts and/or base plates with the Wing Wall Contractor.



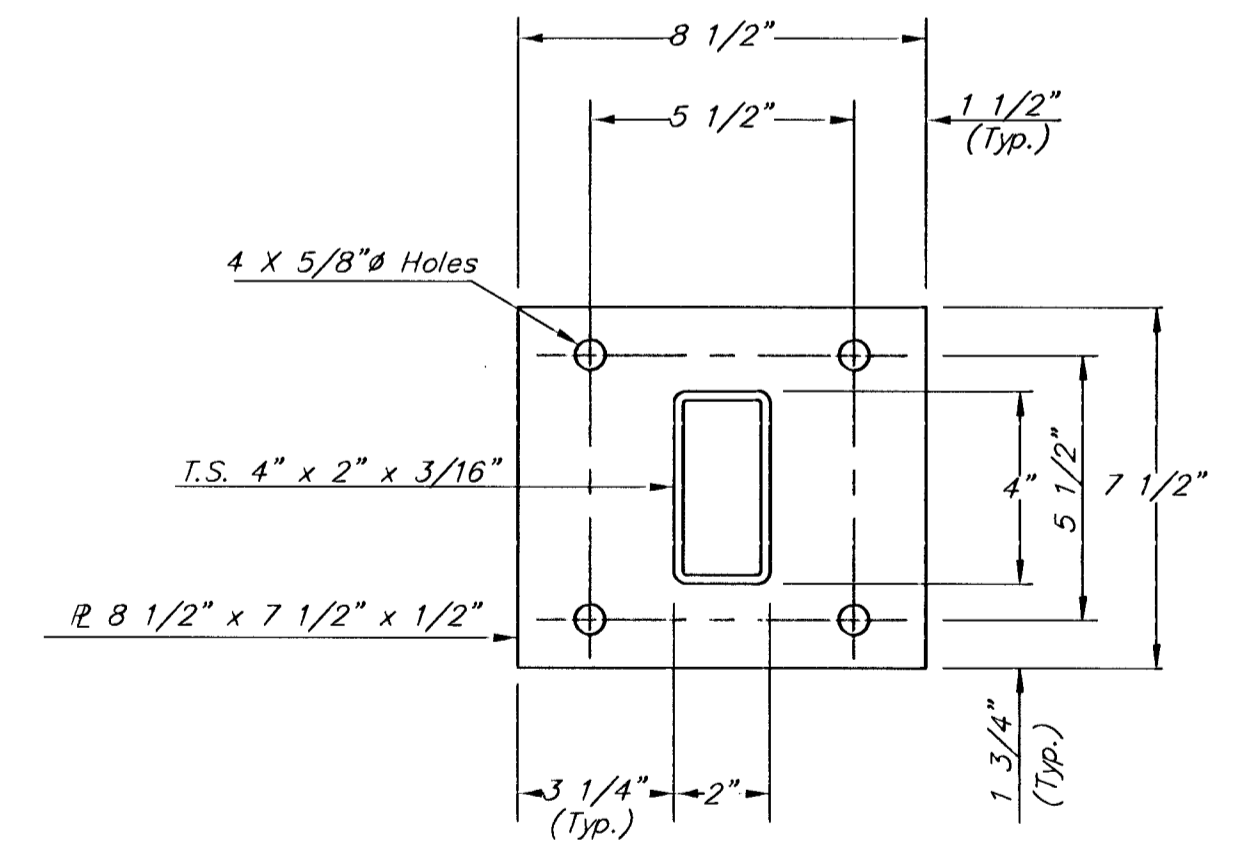
Galvanized (ATSM A153)  
(May Substitute expandable anchor bolts when approved by the Engineer)

**ANCHOR BOLT \***

Orient to provide min. 2" edge clearance to either top of footing or adjacent bolts.



**HANDRAIL SECTION A-A**



**BASE PLATE**  
(3 Required)

**BASIS OF PAYMENT**

The L.F. Bid Item "Handrail" shall include all labor, material, anchor bolts, fabrication, installation, concrete and etc. necessary to place the handrails as shown along the Reinf. Conc. Box Culvert.

PROJECT NUMBER 472-76-245-83324	SHEET NAME Handrail	ENGINEERING DIRECTORY F:\Hydraulic\Pond
DESIGN JFB	DRAWN Azire	APPROVED JFB
DATE Sept 2001	SCALE None	BAUGHMAN NO. 99-09-E453

CAPITAL IMPROVEMENT PROJECT  
**HAND RAIL DETAIL**  
HYDRAULIC AVENUE PAVING - INCIDENTAL DRAINAGE PROJECT - PHASE 2

**BAUGHMAN COMPANY, P.A.**  
ENGINEERING, SURVEYING, & PLANNING  
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SHEET  
OF  
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