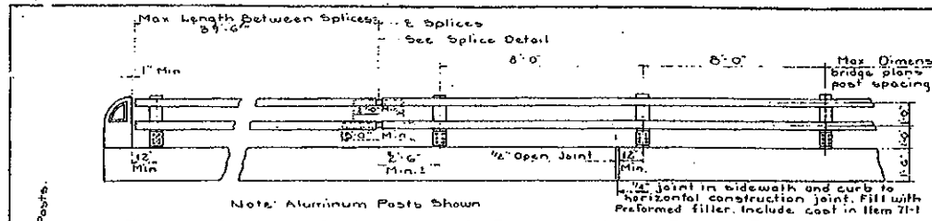
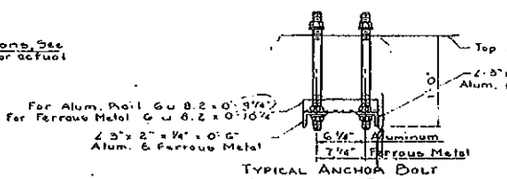
W.Va.	6		F-284 (10)	196	MARSHALL

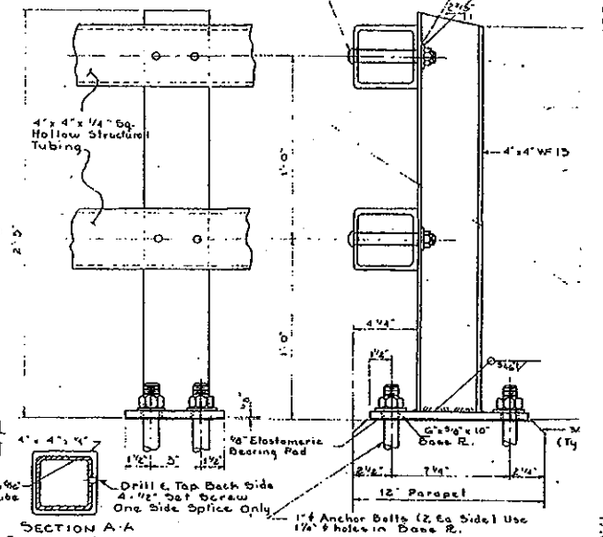


TYPICAL ELEVATION OF ALUMINUM & FERROUS METAL BRIDGE RAILING
Scale: 3/8" = 1'-0"

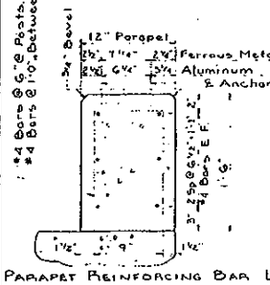


TYPICAL ANCHOR BOLT ASSEMBLY DETAIL
Scale: 1½" = 1'-0"

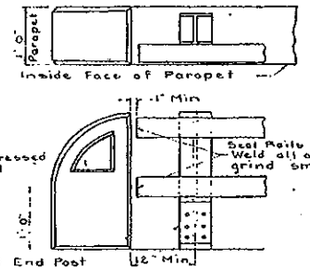
¾" Round head bolts ⅞" holes in tube 1" ϕ hole in post (before galvinizing).



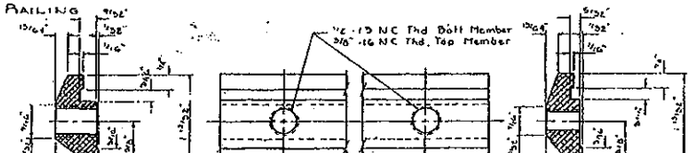
POST DETAIL
Scale: 3" = 1'-0"



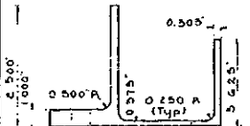
PARAPET REINFORCING BAR LAYOUT
Scale: 1½" = 1'-0"



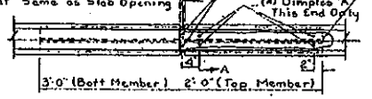
TYPICAL TERMINATION OF RAILING DETAILS
Scale: 1" = 1'-0"



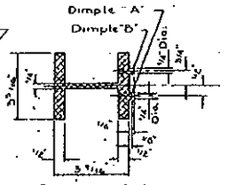
CLAMP BAR DETAILS

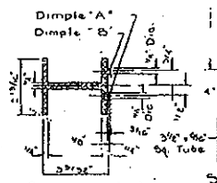


BASE PLATE
Scale: 3" = 1'-0"

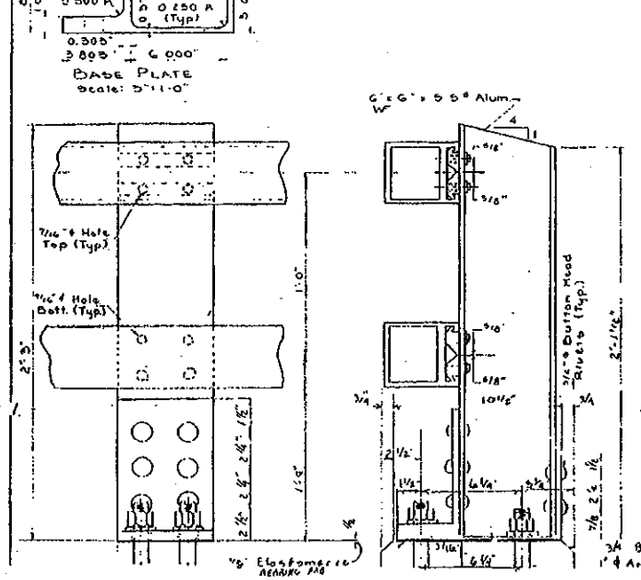


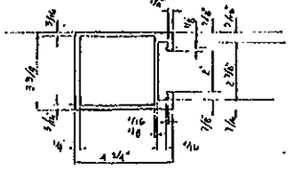
SPLICE DETAIL
Scale: 1½" = 1'-0"

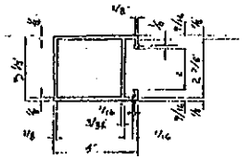




Note: Aluminum Railing:
Posts, rails and base plates shall be extruded shapes as detailed, in accordance with ASTM B-221, alloy 6061-T6 or 6063-T6.
All rivets and set screws shall be ASTM B-221 or B-211 alloy 6061 T-6 temper.
Weld filler wire shall be ASTM B-285, alloy ER-5356.
Anchor bolts, washer, nuts and assembly shall be of same material and finish as ferrous metal.
End closure for rails shall be a ⅛" plate fitted to the inside of the tubing, welded all around with an ⅛" weld and ground smooth.
Rails on curved sections shall be bent to the correct radius in the shop.
Anchor bolts to be cast in place.
Posts shall be set normal to grade unless otherwise noted on the plans.
Cost of anchor bolts, railing, rail posts, hardware, and elastomeric pads shall be included in the price bid for Item 75-4 Aluminum Railing, per linear foot.
No painting of posts and railing is required.
All sharp edges shall be rounded.







Art. 8.17.14 - Elastomeric Bearing Pads for Bridge Railing Posts:
(A) General. These specifications cover an elastomeric bearing pad used for bridge railing posts. The thickness shall be as designated on plans. It shall be cast in molds under pressure and heat. The samples for test shall be prepared according to ASTM Tentative Method D-15. The pad shall meet the following requirements:

(B) Physical Requirements:	
(1) Tensile Strength ASTM D412 (PSI)	2500+
(2) Durometer hardness ASTM D676	70 ± 5
(3) Compression set ASTM D395 (22 hrs. @ 158°F) (Percent)	25-
(4) Change in Durometer hardness, heat aged 70 hrs. @ 212°F	15-

Note - Ferrous Metal Railing:
All rails, posts, base plates and anchor bolt assemblies shall be A36 steel.
All anchor bolts, round head bolts, set screw nuts and washers shall be ASTM A 307-GIT, Grade A.
Round head bolts shall conform to ASA B 18.5 with one regular semi-finished hexagon nut. Threads to be NC, Class 2. One lock washer to be furnished for each bolt.
All rails, posts and base plates, after all welding and drilling is completed, to be galvanized with hot-dipped zinc coating in accordance with AASHO Designation M111-60 (ASTM A123).
All bolts, nuts, washers and miscellaneous hardware to be galvanized in accordance with ASTM-A-153.
Anchor bolt assemblies (channels and angles) not to be galvanized or painted.
Provide a ½" hole in bottom of sealed end for drainage.
End closure for rails shall be ⅛" plate fitted to the inside of the tubing, welded all around with an ⅛" weld ground smooth.
Rails on curved sections shall be bent to the correct radius in the shop.
Anchor bolts to be cast in place.
Posts shall be set normal to grade unless otherwise noted on plans.
Cost of anchor bolts, railing, rail posts, hardware and elastomeric pads shall be included in the price bid for Item 75-5, Ferrous Metal Railing, per linear foot.
No painting of posts and railing is required.
All sharp edges shall be rounded.

FERROUS METAL BRIDGE RAILING
Railing designed in accordance with AASHTO Interim Specifications, 1961, Sect. 1.7.4.