

ITEM 11587.42 M - ALUMINUM PEDESTRIAN BRIDGE RAILING

DESCRIPTION

The Contractor shall furnish and place aluminum railing as shown on the plans and in accordance with the Specifications.

MATERIAL

Aluminum railing components shall be furnished in the alloy and temper, listed below.

<u>Component</u>	<u>ASTM Specification</u>	<u>ANSI H35.1 (M) Alloy and Temper</u>
Posts	B308M	6061-T6
Rail End Caps	B221M	6061-T6
Cast Shims	B209M	6061-T6
Wrought Shims	B209M	1100-0
Rails	B308M	6061-T6
Set Screws	F468M	2024-T4

Set screws shall be given an anodic coating conforming to the requirements of Aluminum Anodic Coatings, Type 205.

Anchor bolts, nuts and washers, unless otherwise indicated on the plans, shall meet the requirements of the following:

Anchor Bolts:	ASTM F 568 Class 4.6
Nuts:	ASTM A 563 M Carbon and Alloy Steel Nuts, Grade A, Heavy Hex Style
Washers:	ASTM F 436 M Hardened Steel Washers or ASTM F 844 with a hardness of Rockwell C31 - C38 or Brinell 295 - 352.

Nuts, washers and the top third of anchor bolts shall be hot dipped with aluminum coating.

CONSTRUCTION DETAILS

- A. ***Fabrication.*** Welding will not be permitted unless directly called for on the contract plans. Flame cutting will not be permitted.

Material 13mm thick or less may be sheared, sawed or milled. Material over 13mm thick shall be sawed or milled only. Cut edges shall be true and smooth and free from excessive burrs or ragged breaks.

Rails may be heated to a temperature not exceeding 204°C for a period not exceeding 30 minutes to facilitate bending.

The railing shall not be painted except as follows: Where aluminum railing rests on a preformed surface (except steel) the contacting aluminum surface shall be thoroughly coated with an aluminum impregnated caulking compound.

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- B. ***Inspection of Railing.*** Immediately prior to erection, the railing shall be inspected for damage. Bends or kinks in the railing not specifically called for in the contract documents shall constitute sufficient cause for rejection. Straightening of such bends or kinks shall not be allowed. Bending or curving rails in the field in order to fit alignment requirements, shall not be permitted.
- C. ***Erection.*** All railing shall be erected in accordance with approved shop drawings.
- D. ***Positioning Railing.*** Railing shall be erected so that the rails are parallel to each other and to the top of parapet, sidewalk or structural slab.
- E. ***Positioning Posts.*** Posts shall be set vertical.
- F. ***Base Plates.*** Post base plates shall be perpendicular to the post, unless otherwise noted. When the railing is to be placed on a preformed surface, the base plate may be placed parallel to the grade or may be perpendicular to the post and made level by the use of beveled shims.
- G. ***Inspection.*** All erection shall be subject to the inspection of the Engineer who shall be given all facilities required for a visual inspection of workmanship and materials.

METHOD OF MEASUREMENT

The quantity to be paid for shall be the number of meters measured along the centerline of railing anchorage between the extreme outer limits indicated on the contract plans.

BASIS OF PAYMENT

The unit price bid shall include the cost of furnishing all labor, materials and equipment necessary to complete the work. All pads, shims, splices with their hardware, railing anchor studs with nuts and washers, drill and grout anchor studs shall also be included in the price bid.

No payment shall be made for those railing pieces which are replacements for those railing pieces that have been rejected.

Progress payments will be made when the railing is erected in accordance with approved shop drawings. Payment will be made at the unit price for 90% of the quantity erected. The balance of the quantity will be paid for upon completion of the work.