

**SECTION 9.14  
METAL HANDRAIL**

**9.14.01--Description:** This item shall consist of furnishing and installing a 38 mm Welded and Seamless Steel pipe hand-railing on the proposed concrete steps, as shown on the plans, or as directed by the Engineer.

**9.14.02--Materials:** All pipe for railing and posts shall be standard mass 38 mm Welded and Seamless Steel pipe conforming to the requirements of Subarticle M.06.02-8.

Caps shall be malleable iron conforming to the requirements of Subarticle M.06.02-9(d) except that the grade shall be 32510.

Paint shall conform to the requirements of Section M.07.

**9.14.03--Construction Methods:** The rail elements shall be erected to produce a smooth, continuous rail as shown on the plans.

Pipe posts shall be set in sleeves and fastened by means of setscrews. The sleeves for the post shall be firmly embedded in concrete to the depth shown on the plans. The Contractor shall seal annular space between the pipe and the sleeve with a bituminous compound satisfactory to the Engineer to prevent water from entering.

The top rail shall consist of a single, continuous pipe and shall be welded to posts.

The lower rail shall be welded to the posts.

All joints shall be finished smooth. No rough or sharp projections will be permitted.

The entire railing and exposed portion of the sleeve into which the railing is set shall be thoroughly cleaned before painting and shall be painted with a field coat of zinc rich primer, ready-mixed paint and two field coats of paint to be selected by the Engineer and meeting the pertinent requirements of Section 6.03.

**9.14.04--Method of Measurement:** This work will be measured for payment by the number of meters of railing measured along the top of the rail from end to end of the rail.

**9.14.05--Basis of Payment:** This work will be paid for at the contract unit price per meter for "Metal Handrail," complete in place, which price shall include all materials, including sleeves and fastening devices in which the posts are set, and all equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
Metal Handrail	m