PART 1 - SCOPE
This work shall consist of the furnishing and placing handrail for locations other than bridges such as atop
retaining walls or at such other locations as shown on the plans. Handrail shall be placed at the locations and
in conformity with the lines, grades, and dimensions shown on the plans, the Design Standards, or as directed
by the Owner, all in accordance with this specification.

PART 2 - MATERIALS AND EQUIPMENT

2.01 MATERIALS.

A. Pipe for Rails and Posts.
   Pipe shall conform to the requirements of ASTM A 120, standard weight.

B. Concrete.
   Concrete for posts set in individual concrete foundations shall be Class A as specified in Specification
   Section 03050.

2.02 EQUIPMENT.
All equipment necessary for the satisfactory performance of this work shall be on hand and inspected before
work will be permitted to begin.

PART 3 - CONSTRUCTION REQUIREMENTS

3.01 FABRICATION.
Handrail shall be fabricated from pipe for rails and posts as shown on the plans and in the Design Standards.
Rails, posts and elbows at corner posts shall be fillet welded according to the Design Standards for Handrails.
All welds and joints shall be ground smooth prior to painting. Fabrication shall be done such that, when
erected, posts are in a vertical plane, and rails parallel to grade.

3.02 PAINTING.
Painting of handrail shall be in accordance with the requirements of the Design Standard for Handrail.

3.03 ERECTION.

A. When handrail is to be erected on the top of a concrete retaining wall or similar structure, handrail
   posts shall be set directly in the concrete to the depth shown in the Design Standard, but in no case
   less than 12 inches, with the posts held plumb until concrete has set. Alternatively, handrail post
   inserts of the required depth may be set in concrete and the posts set in the inserts after concrete has
   set. Inserts shall be of the sizes and constructed as specified for fence post inserts in Specification
   Section 02820 Paragraph 3.01. Where posts are not set directly in concrete and inserts have not
   been provided, post holes of the same diameter and depth as required for inserts shall be cored in the
   concrete. Handrail post shall be set in cored holes in the same manner as post set in inserts.

B. Where handrail is to be erected separately from a structure, posts shall be set directly in concrete
   footing of the dimensions of the dimensions shown on the plans or Design Standard but not less than
   8 inch diameter and 24 inch depth. Posts shall be held plumb until concrete is set.

PART 4 – MEASUREMENT

4.01 HANDRAIL.
This work shall be measured for payment in linear feet of accepted handrail of the specified height, measured
along the top rail, in place.
PART 5 – PAYMENT

5.01 HANDRAIL.
This work shall be paid for at the contract unit price per linear foot, which price will be the full compensation for furnishing all materials, fabrication painting and erection, either atop a retaining wall or other structure or separate from a structure including inserts, grouting, coring, excavation, concrete footings, and all other work associated with handrail construction.

5.02 PAYMENT WILL BE MADE UNDER:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
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<tbody>
<tr>
<td>05520-5.01</td>
<td>HANDRAIL</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>05520-5.01.___</td>
<td>(Ft) Height Handrail</td>
<td>Linear Foot</td>
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END OF SECTION 05520