SECTION 605
CONCRETE BARRIER RAIL

605.01 DESCRIPTION
This work is the constructing and installation of concrete barrier rail.

605.02 MATERIALS

605.02.1 Concrete
Furnish Class Deck concrete in accordance with Section 551.

605.02.2 Reinforcing Steel
Furnish reinforcing steel in accordance with Section 555 and Subsection 711.01.

605.03 CONSTRUCTION REQUIREMENTS

605.03.1 Fabrication Submittals
Submit the following information to the Project Manager 10 business days prior to casting members:
1. A tentative fabrication schedule;
2. A mix design in accordance with Section 551;
3. The product data sheet for proposed cure and seal product.
4. Any other information necessary to fabricate and install the product.
Do not begin fabrication until the Department approved submittals are received by both the Contractor and the Project Manager.
Coordinate the fabrication schedule with the Project Manager.

605.03.2 Sampling, Handling, Batching, and Mixing
Sample, handle, batch, and mix materials for concrete in accordance with Subsection 551.03.3.

605.03.3 Forms and Forming
Meet the form requirements in Subsection 552.03.3.

605.03.4 Placing Concrete
Place concrete in accordance with Subsection 552.03.4 and 551.03.5.

605.03.5 Weather and Temperature Limitations.
Meet the requirements of Subsection 551.03.6 when constructing concrete barrier rail in hot or cold weather conditions.

605.03.6 Curing Concrete Barrier Rail
Cure concrete barrier rail in accordance with 551.03.7 using material in accordance with Subsection 717.01.4 requirements.

605.03.7 Testing and Acceptance of Concrete Barrier Rail
A. Sampling and Testing. Sample and test in accordance with Subsection 551.03.8(B).
B. Acceptance of Concrete Barrier Rail. Concrete Barrier Rail is evaluated on a lot-by-lot basis in accordance with 551.03.8(C) for Class Deck Concrete except for the following:
1. An individual lot is defined as 30 concrete barrier rail units or one day’s production, whichever is less.
2. A minimum of one standard compressive strength set will be made for each lot.

605.03.8 Form Removal
Remove lateral support forms only when it does not damage the concrete. Do not interrupt curing and protection in excess of 30 minutes for form removal. Replace all damaged units at Contractor expense.

605.03.9 Finish on Exposed Surfaces
Produce concrete surfaces free from rock pockets, depressions, or projections. Scattered holes from surface trapped air are not considered defects. Point holes larger than ½-inch (13 mm) in any direction with mortar and strike off even with the surface. Apply an ordinary finish to surfaces not smooth and uniform in texture and appearance in accordance with Subsection 552.03.11.

605.03.10 Handling, Transporting, and Storage
The concrete barrier rail may be moved from the casting area to an adjacent staging area when they have reached 75% of design strength and the strength is adequate to prevent damage. Replace all cracked or broken items at Contractor expense.
Handle, transport, and store precast concrete items without damage. Replace or repair all damaged units at Contractor expense. Transport the concrete barrier rail from their casting or adjacent staging location only after strength tests indicate the lot they represent has reached the design strength. If shipping is desired before the Department’s 28-day acceptance tests are performed, supply compressive strength results representing the lot of concrete to the Department indicating design strength has been met. Ensure this testing is conducted by an ACI certified technician. Final acceptance of the concrete barrier rail will be based on the Department’s test results for acceptance.

605.03.11 Install Concrete Barrier Rail
Install concrete barrier rail meeting the contract requirements and the Detailed Drawings.

605.03.12 Reset Concrete Barrier Rail
Reset concrete barrier rail as specified in the contract.

605.04 METHOD OF MEASUREMENT

605.04.1 Concrete Barrier Rail
Concrete barrier rail is measured by each 10-foot (3.05 m) section. Connections to the existing barriers are included in the cost of the rail.
Measurement does not include those portions of barrier constructed as an integral part of sign foundations.

605.04.2 Reset Concrete Barrier Rail
Reset concrete barrier rail is measured by each 10-foot (3.05 m) section.

605.04.3 Concrete Barrier Rail Transition
Concrete barrier rail transitions are measured by each 10-foot (3.05 m) section.

605.04.4 Concrete Barrier Rail Terminal Section
Concrete barrier rail terminal sections are measured by each 10-foot (3.05 m) section.

605.04.5 Remove Concrete Barrier Rail
Remove concrete barrier rail is measured by each 10-foot (3.05 m) section.

605.05 BASIS OF PAYMENT
Payment for the completed and accepted quantities is made under the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
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<tbody>
<tr>
<td>Concrete Barrier Rail</td>
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Payment at the contract unit price is full compensation for all necessary resources to complete the item of work in accordance with the contract.

**COMMENTS:**

1. Subsection 605.03.9 Finish on Exposed Surfaces- Change the first word in the third sentence to “patch”.

Response: “Point” is the correct term for this type of concrete finishing. However, with the reference to the “ordinary finish” in the next sentence, the subject sentence is not necessary.

**FINAL**

**EFFECTIVE March 10, 2016**

**SECTION 605**

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