

ITEM 11609.0701 M - PRECAST COLORED CONCRETE CURB

DESCRIPTION

The work shall consist of furnishing and installing precast colored concrete curb in conformance with the details shown on the Contract Drawings, and where directed by the Engineer.

MATERIALS

- A. Precast Colored Concrete Curb - Fabricate precast curb to meet the requirements of subsection 714-05 - Precast Concrete Curb except as noted herein:
 - 1. Portland Cement
 - a. Use only one brand, type, and color of cement from the same mill throughout project.
 - b. Standard gray Portland Cement may be used for non-exposed back-up concrete.
 - 2. Connection Materials
 - a. Stainless Steel Plate: ASTM A666, Type 304, of grade suitable for application.
 - b. Stainless Steel Bolts and Studs: ASTM F593, alloy 304 or 316, hex-head bolts and studs; stainless steel nuts; and flat, stainless steel washers.
 - c. Accessories: Provide clips, hangers, plastic shims, and other accessories required to install precast concrete units.
 - 3. Grout Materials - Grout shall conform to Subsection 705-21.
 - 4. Coloring Agent: ASTM C979, synthetic mineral oxide pigments, color stable, non-fading, resistant to lime and other alkalis.
- B. Quality Assurance
 - 1. Installer Qualifications: Engage an experienced installer who has completed precast concrete work similar in material, design and extent to that indicated for this project and with a record of successful in-service performance.
- C. Submit product data and instructions for manufactured materials and products.
- D. Submit shop drawings through the Engineer to the Materials Bureau for approval. Shop drawings shall be prepared by or under the supervision of a qualified professional engineer detailing fabrication and installation of precast colored concrete units. Indicate member locations, plans, elevations, dimensions, shapes, cross sections and types of reinforcement, including special reinforcement. Include locations and details of hoisting points and lifting devices for handling

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and erection.

1. Indicate welded connections by AWS standard symbols. Detail loose, cast-in, and field hardware, inserts, connections, and joints including accessories.
 2. Indicate locations and details of anchorage devices that are to be embedded in other construction.
- E. Submit samples to the Regional Landscape Architect for approval, approximately 300 by 300 by 50 mm, to illustrate quality of finishes, colors and textures of exposed surfaces of precast colored concrete units. The approved samples will be returned to the precaster for use by the Department's inspector.
- F. Mockup: Prior to installing precast colored concrete curb, construct mockup to verify selections made under sample submittals and to demonstrate aesthetic effects. Build mockup to comply with the following requirements, using materials indicated for final unit of work.
1. Locate mockup on-site in the location and the size indicated or, if not indicated, as directed by the Engineer.
 2. Notify Engineer one week in advance of the dates and times, when mockup will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship. Obtain Engineer's approval of mockup before start of final unit of work.
 4. Retain and maintain mockup during construction in an undisturbed condition as a standard for judging the completed work.
 - a. Approved mockup in an undisturbed condition at the time of substantial completion may become part of the completed work.

CONSTRUCTION DETAILS

- A. Examination:
1. Examine substrates and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance of precast colored concrete curb. Do not proceed with installation until unsatisfactory conditions have been corrected.
 2. Do not install precast colored concrete curb until supporting concrete has attained minimum allowable design compressive strength.
- B. Installation:
1. Install clips, hangers, and other accessories required for connecting precast colored concrete curb to supporting members and back-up materials.

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2. Install precast colored concrete curb plumb, level, and in alignment. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected.
 3. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
 - a. Remove projecting hoisting devices and cement-grout fill recessed hoisting devices.
 4. Anchor precast colored concrete curb in position as indicated. Remove temporary shims, wedges, and spacers as soon as possible after anchoring and grouting are completed.
 5. Welding: Perform welding in compliance with AWS D1.1 and AWS D1.4, with qualified welders.
 - a. Protect precast colored concrete curb and bearing pads from damage by field welding or cutting operations and provide noncombustible shields as required.
 - b. Repair damaged steel surfaces by cleaning and applying a coat of galvanizing repair paint to galvanized surfaces.
 6. Grouting Connections: Grout connections where required or indicated. Retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, plumb, and level with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it hardens.
- C. Erection and Location Tolerances:
1. Install precast colored concrete curb level, plumb, square, and true without exceeding the recommended erection and location tolerances of MNL-117.
- D. Repairs:
1. Repair exposed exterior surfaces of precast concrete curb to match color, texture, and uniformity of surrounding concrete when permitted by Engineer.
 2. Remove and replace damaged precast colored concrete curb when repairs do not meet requirements.
- E. Cleaning:
1. Clean exposed surfaces of precast colored concrete curb after erection to remove weld marks, other markings, dirt, and stains.

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- a. Wash and rinse according to precast colored concrete fabricator's recommendations. Protect other work from staining or damage due to cleaning operations.
- b. Do not use cleaning materials or processes that could change the appearance of exposed precast colored concrete finishes.

METHOD OF MEASUREMENT

Precast colored concrete curb will be measured by the actual number of linear meters to the nearest meter of curb installed.

BASIS OF PAYMENT

The unit price bid per linear meter of precast colored concrete curb shall include all labor, material (including granite curb base), equipment, stainless steel attachments and all incidentals and appurtenances necessary to satisfactorily complete the work.

Payment will not be made for repairs to damaged areas caused by the Contractor's operations. No payment will be made for installing precast colored concrete curb or work related thereto that has not been accepted by the Engineer or that has degraded due to the Contractor's negligence, material failure, or improper storage of the material.

Excavation, cast-in-place concrete, epoxy coated bar reinforcement and subbase course will be paid for under other Items of the Contract.