

SECTION 34500  
PRECAST CONCRETE CURBING, CONCRETE RETAINING WALL UNITS AND STEPS

PART 1 - GENERAL REQUIREMENTS

1.1 PROVISIONS INCLUDED

- A. The Conditions of the Contract and Division 1 - General Requirements apply to Work under this Section.
- B. Examine all Drawings and other Sections of the Specifications for requirements therein affecting the work under this Section.
- C. As used in this Section, the word "provide" means "furnish and install."

1.2 SCOPE OF WORK

- A. Perform all Work and provide all materials and equipment as shown on the Drawings, Details, or as specified under this section. All work shall be completely coordinated with the work of all trades and shall provide for a complete and fully functional installation in all respects.
- B. Drawings, Details and Specifications shall be taken together; provide as though mentioned in both, work specified but not shown, or work shown but not specified. Although such work is not specifically shown or specified, provide as part of this work all materials incidental to or necessary to complete the paved roadway and parking areas.
- C. Work includes the manufacture, delivery and installation of concrete retaining wall units as required by the drawings and specifications.
  - 1. Precast concrete curbing
  - 2. Concrete retaining wall units (The retaining wall in parking lot to the south of the building is in the Base Bid. The retaining wall to the west of the building is an Add Alternate. See Section 00432 Alternates)
  - 3. Concrete steps (Add Alternate, See Section 00432 Alternates)

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. The following work is not included in this Section and is to be performed under other Sections.
  - 1. Earthwork Section 31200
  - 2. Planting, Trees, Shrubs, Groundcovers 32930

1.4 SUBMITTALS

A. Shop Drawings and/or manufacturer's specifications shall be submitted for the following in accordance with the requirements of Section 01330 - Submittals.

1. Shop Drawings and samples shall be submitted for precast concrete curbing prior to installation.
2. Shop Drawings and samples shall be submitted for modular concrete retaining wall prior to installation.
3. Shop Drawings and samples shall be submitted for the steps prior to installation.

B. Furnished work shall conform to approval samples and suppliers specifications or material data.

C. Contractor shall construct an 8-foot-long sample of the retaining wall in accordance with the approved shop drawing for approval by Landscape Architect prior to completion of wall.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. A sample of StoneWall SELECT Retaining Wall units, color C2 shall be provided for approval by the Landscape Architect prior to installation.

2.2 PRECAST CONCRETE CURBING is manufactured by  
United Concrete Products Inc.  
173 Church Street  
Yalesville, CT  
[www.unitedconcrete.com](http://www.unitedconcrete.com)  
contact person: Stan  
Toll-free: 800-234-3119

A. Precast concrete curb units shall consist of casting conforming to the size and dimensions shown on the plans, or approved equal. Concrete curbing shall be 20" H x 6"W (top) x 7" W (base) with 6" exposed above finish grade. Straight curb shall be cast in standard lengths of six (6) feet. Straight and curbed curb may be cast in lengths of not less than three (3) feet where needed and as directed.

B. Curb shall be made of Portland cement Types I and III, conforming to Federal Specifications SS-C192a, or to Sec. C-1, of the "Standard Specifications of Highways and Bridges" of the Commonwealth of Massachusetts Department of Public Works. Forms shall be made of metal or concrete (wood, not allowed), to tight, rigid construction with true surfaces.

2.3 CONCRETE RETAINING WALL UNITS are manufactured by  
ICD Corporation, Innovative Concrete Design  
3934 N. Ridgefield Circle  
Milwaukee, WI 53211  
Email: [info@selecticd.com](mailto:info@selecticd.com)  
Web site: [www.selecticd.com/stonewall.html](http://www.selecticd.com/stonewall.html)  
Toll Free: 800/394-4066  
Phone: 414/962-4065

Fax: 414/332-9678

One local supplier is Chicopee Mason Supplies, 413-534-4516; contact person Robert Lussier.

- A. Units shall be StoneWall SELECT Retaining Wall units manufactured in color C2, or approved equal.
- B. Retaining wall units shall be manufactured in accordance with ASTM C 1372. Minimum compressive strength 3,000 psi. Maximum absorption 5-9% in lbs/cu.ft.
- C. Exterior dimensions for StoneWall SELECT units shall be 12" x 8" x 16" to cover 1.13 units per square foot.
- D. Color used in units shall not exceed 10% of the weight of the Portland cement in the unit.
- E. Units shall be capable of making inside and outside curves that meet a variety of radii, but not less than a 4'9" radius. Remove the knock-off wings for outside curves.
- F. Units shall provide a weight of approximately 120 psf when filled with aggregate. The unit fill shall be measured at an effective weight of 80%.
- G. Units shall be interlocked with glass filled polymer clips, 2 per StoneWall SELECT unit. The clips will be installed at the job site in the indented slots in the rear face shell of the unit so that the long leg of the clip is adjacent to the back face of the unit and the short leg projects into the core of the unit.
- H. The interlock system shall provide a setback of 3/4" per layer of StoneWall SELECT for a wall batter of 5°.
- I. Interlocking Clips:
  - 1. Clips shall be molded, glass filled polymer composite.
  - 2. Clips shall have the following tested properties: Shear resistance - the clips provide 440 lbs/ft of shear resistance at zero normal load for 16".
- J. Base Material:
  - 1. Base material for the granular wall footing shall be well graded gravel with a Unified Soil Classification of GW. A minimum of 6" of compacted base is required.
  - 2. A concrete footing may be substituted for the granular base.
- K. Unit Fill:
  - 1. Unit fill shall be clean, crushed stone, or well graded aggregate with a GW Unified Soil Classification. The fill shall have a maximum size of 3/4" and shall not have a fine content (passes #200 sieve) greater than 10% such as AASHTO No. 57 or 67.

2. Unit fill shall extend at least 6" behind the rear face shell of the concrete unit.

L. Wall Backfill and Compaction:

1. Existing soil on site may be used for backfill behind the unit fill unless deemed unsuitable by the engineer. When the backfill material contains excessive fines a protective fabric will be used to insure against contamination of the unit fill.
2. Always compact the backfill behind the wall, to 95% of maximum density, after each course is laid. A hand operated mechanical plate should be used within 3 ft. of the StoneWall SELECT units.

M. Drain Tile:

1. Drain tile shall be plastic, concrete, or equal with a minimum diameter specified by the engineer or designer.

2.4 Steps are manufactured by  
Hanson Hardscapes

[http://www.permapavingstone.com/site/sub/installation\\_overview.php?region=4](http://www.permapavingstone.com/site/sub/installation_overview.php?region=4)

One local supplier is Chicopee Mason Supplies, 413-534-4516; contact person Robert Lussier.

A. Steps shall be Natural Cast™ Accents, Valencia Terrace Steps 59.06 x 19.69 x 5.91 in., color Sorrento (or approved equal). Landscape Architect shall approve an actual sample for color match in relationship to the retaining wall prior to installation.

B. Install according to manufacturer's instructions.

C. Railings to match other railings on site shall be added (see Sheet L.5)

### PART 3 - EXECUTION

#### 3.1 GENERAL

#### 3.2 PRECAST CONCRETE CURBS

A. Curb shall be set in a trench which shall be excavated to a width of 18". The subgrade of the trench shall be at a depth below proposed finish grade of the curb to 6" plus the depth of the curbstone. Subgrade shall then be filled to proper level to support curb at final grade. Fill for this purpose shall consist of fine gravel or very coarse sand thoroughly tamped. Curb units shall then be placed in accurate line, each piece butting the next with maximum joint spacing no larger than 1/4". Final points may be joined by closure pieces made to order. After alignment, curb shall be carefully back-filled with suitable material. Extreme care shall be taken not to destroy alignment.

#### 3.3 RETAINING WALL INSTALLATION

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- A. Excavation:
  - 1. Contractor shall excavate the site as required by the construction drawings.
- B. Foundation Soil Preparation:
  - 1. The foundation soil shall be excavated as required by the construction drawings.
  - 2. The engineer shall examine the foundation soil for approval. Unsuitable soil will be removed and replaced with acceptable soil.
- C. Base Footing:
  - 1. Install footing as shown on the construction drawings. A 6" minimum thickness is required.
  - 2. Granular footing material shall be compacted with a mechanical plate compactor to 95% of maximum modified proctor density (see ASTM D1557 for testing soil compaction characteristics).
  - 3. Prepare the base footing so that the entire length and width of the StoneWall SELECT unit is in contact with the footing.

END OF SECTION