

**SECTION 32 17 13  
PARKING BUMPERS**

**PART 1 GENERAL**

1.1 SECTION INCLUDES:

- A. Precast concrete, recycled plastic, or recycled composite parking bumpers and anchorage.

1.2 REFERENCES

- A. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement
- B. ASTM C33/C33M - Standard Specification for Concrete Aggregates
- C. ASTM C150/C150M – Standard Specification for Portland Cement
- D. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete
- E. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete

1.3 SUBMITTALS FOR REVIEW

- A. Section 01 30 00 Submittals: Procedures for submittals
- B. Product Data: Provide unit configuration, dimensions

**PART 2 PRODUCTS**

2.1 CONCRETE BUMPERS

- A. Cement: ASTM C150/C150M, Portland Type I - Normal gray color
- B. Concrete materials: ASTM C33/C33M water and sand
- C. Reinforcing Steel: ASTM A615/A615M deformed steel bars; galvanized finish, strength, and size commensurate with precast unit design
- D. Air Entrainment Admixture: ASTM C260/C260M
- E. Concrete Mix: Minimum 3500 psi, 28-day strength, air entrained 5% to 7%
- F. Use rigid molds, constructed to maintain precast units uniform in shape, size, and finish.
  - 1. Maintain consistent quality during manufacture.
- G. Embed reinforcing steel, and drill or sleeve for two dowels.
- H. Cure units to develop concrete quality, and to minimize appearance blemishes such as non-uniformity, staining, or surface cracking.
- I. Minor patching in plant is acceptable, providing appearance of units is not impaired.

2.2 RECYCLED PLASTIC/COMPOSITE

- A. Color to be gray.
- B. Recycled Plastic: Recycled plastic, solid wheel stops.
- C. Recycled Composite: As manufactured by Xpotential Products, or equal.
- D. Provide minimum five-year product warranty.
- E. Products shall be chemical and weather resistant.

2.3 CONFIGURATION

- A. Concrete:
  - 1. Use the FDOT standard wheel stop, refer to FDOT Index 520-001, Sheet 3 of 3. Also refer to the detail at the end of this section. Preferred 5" height.
  - 2. Alternate wheel stop detail below. Preferred 5" height.
- B. Recycled Profile: Pentagonal section, non-equilateral, nominal size of 4" H x 6" W x 6' L.

2.4 ACCESSORIES

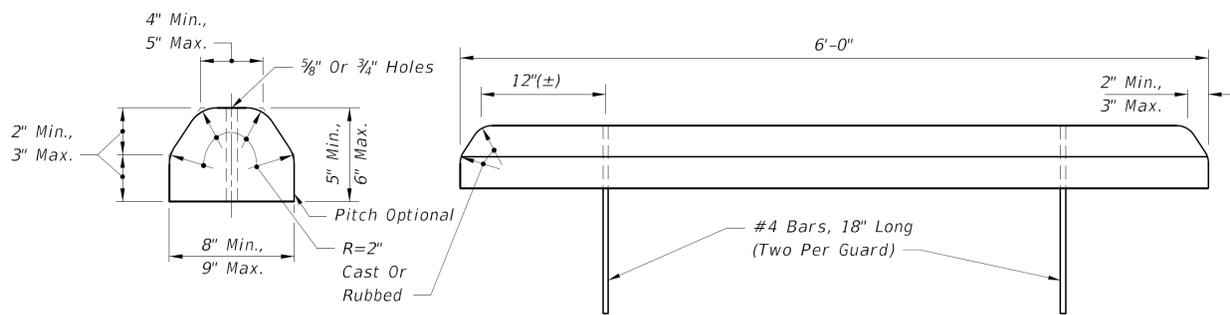
- A. Concrete Stops: Dowels, 2 per stop-Steel, #4 rebar (½" diameter), 18" long.
- B. Recycled Plastic or Composite: Use manufacturers required fasteners, at minimum provide 2-

galvanized steel dowels ½" diameter x 18" long per stop.

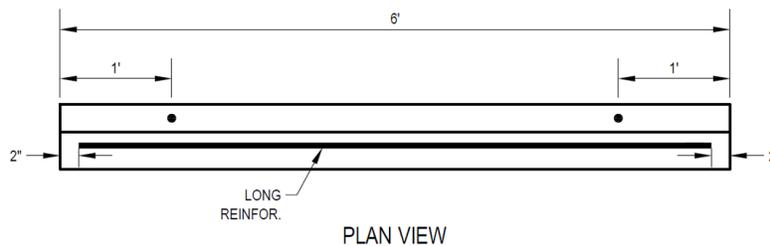
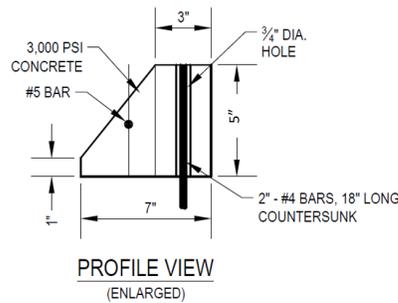
**PART 3 EXECUTION**

**3.1 INSTALLATION**

- A. Set wheel stop with anchors at each parking space as shown on the plans.
1. Grout bottom as required for firm bearing.
  2. Install units without damage to shape or finish, replace or repair damaged units.
  3. Install units in alignment with adjacent work.
  4. Fasten units in place with two anchors per unit bumper.
  5. Drive anchors to within 1" of top surface of wheel stop, then using a setting tool drive anchor at least ¼ inch below top of stop and then grout or caulk opening.



**FDOT STANDARD CONCRETE WHEEL STOP**



**ALTERNATE CONCRETE WHEEL STOP**

END OF SECTION