

# BEVEL™ LIGHT BOLLARD | CSI Guide Specification

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**DIVISION 12 00 00**  
**SECTION 12 93 00**  
**SECTION 12 93 53**

**FURNISHINGS**  
**SITE FURNISHINGS**  
**BOLLARDS**  
**BEVEL LIGHT BOLLARD**

## **PART 1 GENERAL**

### 1.01 WORK INCLUDED

- A. Section Includes: Factory molded, glass fiber reinforced ultra high performance concrete (UHPC) manufactured bollards for exterior and interior applications.

### 1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.03 SUBMITTALS

- A. Provide submittals in accordance with Division 01 Section – Submittal Procedures.
- B. Product data:
  - 1. Manufacturer's standard product literature.
  - 2. Shop drawings.
  - 3. Maintenance instructions.
- C. Samples: Representative of finished exposed face of UHPC. For each color specified, submit a minimum of two samples, each not less than 4 by 4 inches (101.6 by 101.6 mm).

### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver [exterior] [and] [interior] UHPC manufactured bollard components packaged to comply with UHPC bollard manufacturer's requirements and adequately protected from damage during shipment.
- B. Store products in manufacturer's original packaging, covered with tarpaulins or other suitable weather-tight ventilated covering until ready for installation.
- C. Protect products from impacts and abrasion during storage.

### 1.05 WARRANTY

- A. Provide manufacturer's standard warranty.
  - 1. Warranty terms: one year from date of invoice against defects in materials and workmanship.

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## PART 2 PRODUCTS

### 2.01 EXTERIOR [AND INTERIOR] UHPC BOLLARDS

- A. Basis of Design Product/Manufacturer: BEVEL™ [Exterior] [and] [Interior] Bollard Model #SLBBVL as distributed by SITU™ Urban Elements, manufactured with TAKTL® ultra high performance concrete and reinforced with alkali-resistant (AR) glass mesh. Subject to compliance with requirements, provide either the named product or approved equal.
1. Manufacturer Contact:  
SITU Urban Elements  
A TAKTL Company  
1120 William Flynn Highway  
Glenshaw, PA 15116  
phone: 412-486-1600  
email: info@situ-urban.com  
website: www.situ-urban.com | www.taktl-llc.com
- B. Bollards(s)
1. Materials:
    - a. Body: TAKTL glass fiber reinforced ultra high performance concrete (UHPC).
      - 1) TAKTL Material Performance Characteristics:
        1. Compressive Strength:  $\geq 18,275$  lbs./in<sup>2</sup> (126 MPa).
        2. Flexural Strength:  $\geq 2,756$  lbs./in<sup>2</sup> (19 MPa).
        3. Tensile Strength: 1,160 lbs./in<sup>2</sup> (8 MPa).
        4. Water Absorption:  $< [\text{measurable limit (kg/m} \times \text{h}0.5)] [ 3.5\%]$ .
    - b. Light and lens: Custom LED with acrylic lens.
    - c. Fasteners: AISI 316 stainless steel.
  2. Finish:
    - a. SITU Urban Elements "Matte" finish.
  3. Color:
    - a. SITU Urban Elements "Natural" finish.
  4. Color is integral throughout the material.
  5. Dimensions and Weight:
    - a. Bollard Dimensions: 7" long x 4.6" deep x 30" high.
    - b. Bollard Weight: 100 lbs. (45.36 kg).
  6. Mounting:
    - a. Surface mount. Provide installation hardware when surface mount is specified.
  7. Locations and Quantities: as indicated.

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## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Examine structures and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance of the Work.
- B. Verify that substrates are stable and capable of supporting the weight of items covered under this section.
- C. Verify that substrates have been adequately prepared to securely anchor those items that will be surface-mounted.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Install according to the manufacturer's written installation instructions.
- B. Install in conformance to applicable ADA guidelines and End User's established Accessibility policies.

## END OF SECTION