

**DIVISION 26 00 00**  
SECTION 26 50 00  
SECTION 26 56 00

**ELECTRICAL**  
LIGHTING  
EXTERIOR LIGHTING  
LIGHT COLUMN BOLLARD

**Part 1 General**

01. Summary

A. Section Includes:

1. Series 500 bollard, 5" diameter column, illuminated
2. Series 500 bollard, 5" diameter column, non-illuminated
3. Series 600 bollard, 6" diameter column, illuminated
4. Series 600 bollard, 6" diameter column, non-illuminated

02. Submittals

A. Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.

B. Product data:

1. Manufacturer's standard product literature.
2. Shop drawings.
3. Installation instructions.
4. Maintenance instructions.

03. Quality Assurance

A. Manufacturer Qualifications:

1. Minimum 15 years experience in the manufacture of outdoor lighting.
2. Provide reference list of at least ten major transportation authorities, municipalities, universities, or other high-use public environments currently using outdoor lighting fabricated by the manufacturer.

04. Delivery, Storage and Handling

- A. Handle products in accordance with manufacturer's instructions.
- B. Store products in manufacturer's original packaging until ready for installation.
- C. Protect products from impacts and abrasion during storage.

05. Warranty

A. Provide manufacturer's standard warranty.

1. Warranty terms: one year from date of invoice against defects in materials and workmanship.

**Part 2 Products**

01. Manufacturer

A. Basis-of-design product: provide bollards based on the product named.

1. Light Column Bollard by Forms+Surfaces
2. Manufacturer Contact:  
Forms+Surfaces  
30 Pine Street  
Pittsburgh, PA 15223  
phone: 800-451-0410

fax: 412-781-7840

email: sales@forms-surfaces.com

website: www.forms-surfaces.com

## B. Bollards

### 1. Materials:

- a. Light Column Body: tubular stainless steel.
- b. Light Column Head (for illuminated bollards): .125" thick white-frosted acrylic tube with stainless steel cap.
- c. Optional standard shield configurations (Choose one below, if desired):
  - 1) Kente:
    - A) Series 600, 180° shield.
  - 2) Perforation:
    - A) Series 500, 180° shield.
    - B) Series 600, 180° shield.
    - C) Series 500, 360° shield.
    - D) Series 600, 360° shield.
  - 3) Scape:
    - A) Series 500, 180° shield.
    - B) Series 600, 180° shield.
    - C) Series 500, 360° shield.
    - D) Series 600, 360° shield.
  - 4) Bubbles:
    - A) Series 500, 180° shield.
    - B) Series 600, 180° shield.
    - C) Series 500, 360° shield.
    - D) Series 600, 360° shield.
- d. Ballast (linear fluorescent only): electronic, thermally protected, 120/277V combination for two F14T5 or two F24T5/HO lamps, -18°C starting temperature, <10% THD, class A sound rating.
- e. Driver (LED only): Input power is 100-277 V. Includes high efficiency constant output current with over-voltage, short circuit, overload protection, and has 0-10V dimming capabilities. Certifications include: IP66 (waterproof) enclosure and Class 2 rated output (UL 8750).
- f. Lamps (for illuminated bollards) (Choose one lamp below):
  - 1) LED 3000K:
    - A) 17W custom LED light engine.
    - B) Luminaire lumens: Series 500: 1542, Series 600: 1542.
    - C) Color temperature: 3,000K.
  - 2) LED 4000K:
    - A) 17W custom LED light engine.
    - B) Luminaire lumens: Series 500: 1542, Series 600: 1545.
    - C) Color temperature: 4,000K.
  - 3) (2) F14T5:
    - A) 14W T5 linear fluorescent.

B) Base: mini bi-pin.

C) Luminaire lumens: Series 500: 2220, Series 600: 2194.

D) Color temperature: 4,100K.

4) (2) F24T5/HO:

A) 24W T5HO linear fluorescent.

B) Base: mini bi-pin.

C) Luminaire lumens: Series 500: 3295, Series 600: 3287.

D) Color temperature: 4,100K.

g. GFCI outlet (Series 600 illuminated, non-security bollard only) (Optional)

2. Finish (Choose one finish below):

a. Satin.

b. Polyester powdercoat (Select one option below):

1) Standard Texture/Gloss from Forms+Surfaces Powdercoat Chart.

2) Premium Texture/Gloss from Forms+Surfaces Powdercoat Chart.

3) Custom RAL powdercoat color.

3. Dimensions (Choose model(s) below):

A) Series 500 bollard, illuminated:

1) Surface Mount with J-bolts:

a. 5" diameter x 45" high (standard).

b. 5" diameter x 45" high (LED).

1) Surface Mount with Removable Base:

a. 5" diameter x 45" high.

A) Series 500 bollard, non-illuminated:

1) Surface Mount with J-bolts:

1. 5" diameter x 45" high.

2) Surface Mount with Removable Base:

1. 5" diameter x 45" high.

A) Series 600 bollard, illuminated:

1) Surface Mount with J-bolts:

a. 6" diameter x 45" high (standard).

b. 6" diameter x 45" high (LED).

2) Surface Mount with Removable Base

a. 6" diameter x 45" high.

3) Embedded Security Core:

a. 6" diameter x 48" high (standard).

b. 6" diameter x 50" high (LED SEC).

B) Series 600 bollard, non-illuminated:

1) Surface Mount with J-bolts:

a. 6" diameter x 45" high.

2) Surface Mount with Removable Base

- a. 6" diameter x 45" high.
- 3) Embedded Security Core:
  - a. 6" diameter x 45" high.
- 4. Mounting (Choose one below):
  - A) Standard: Surface Mount with J-bolts: .50" thick base plate, slotted for rotational capability. Provide stainless steel cover and necessary hardware, template available upon request.
  - B) Optional: Removable Base: .50" thick base plate with 1/2"-13 x 5" epoxy anchors, slotted for rotational capability, and lock hasp. Provide stainless steel cover and anchor bolts.
  - C) Optional: Embedded Security Core (for Series 600 only).

### **Part 3 Execution**

#### 01. Examination

- A. Verify that substrates are stable and capable of supporting the weight of items covered under this section.
- B. Verify that substrates have been adequately prepared to securely anchor those items that will be surface mounted.

#### 02. Installation

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

**END OF SECTION**