

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

ELECTRICAL
LIGHTING
EXTERIOR LIGHTING
HELIO BOLLARD WITH SECURITY CORE

Part 1 General

01. Summary

A. Section Includes:

1. Helio Security Bollard, Series 600, 6" diameter column, illuminated
2. Helio Security Bollard, Series 600, 6" diameter column, non-illuminated

02. References

- A. ASTM A 53 – Standard Specification for Pipe, Steel, Black, and Hot-Dipped, Zinc Coated, Welded and Seamless.
- B. ASTM A 123 – Specification for Zinc (hot-dip galvanized) Coatings on Iron and Steel Products.

03. Performance Requirements

- A. Bollards must meet minimum level of K2.7 impact kinetic energy designation as identified by the ASTM Standard Test Method for Vehicle Crash Testing of Perimeter Barriers. Manufacturer must provide documentation confirming that a finite element analysis has been completed for this product. A K2.7 rating is equivalent to stopping a 5,500 lb. vehicle traveling at 40 mph.

04. Submittals

- A. Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
- B. Product data: Manufacturer's standard data sheets on each product to be used, including:
 1. Manufacturer's standard product literature.
 2. Shop Drawings.
 3. Installation instructions.
 4. Maintenance instructions.
- C. Submit finish samples for approval.

05. 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 site products fabricated by the manufacturer.

06. 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.

07. 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. Helio Security 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. Security Bollards:

1. Materials:

a. Body: Stainless steel.

b. Base: Aluminum.

c. Head Cap: Stainless steel casting.

d. Lens: .118" thick colorless acrylic.

e. LED Driver: Input voltage is 120-220 VAC nominal. Includes 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 (UL8750).

f. LED Light Engine (for illuminated bollards) (select color temperature below):

1) LED 3000K:

A) 32W custom LED light engine.

B) Luminaire lumens: 643.

C) Color temperature: 3,000K.

2) LED 4000K:

A) 32W custom LED light engine.

B) Luminaire lumens: 643.

C) Color temperature: 4,000K

g. Mounting: cast in place extra-heavy wall steel security core with welded cross supports. 48" Security core minimum 24" embed into concrete and minimum 24" internal to bollard.

h. Heavy steel wall security core set in 18" by 18" by 30" concrete footer minimum.

2. Finishes:

a. Body and Head Cap:

1) Satin.

2) Polyester powdercoat (Select one option below):

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

B) Premium Texture/Gloss from Forms+Surfaces Powdercoat Chart

C) Custom RAL powdercoat color.

3. Dimensions: 41" high x 6" diameter.

- 4. Mounting:
 - a. Embedded security core.

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 foundation, applied finishes, and adjacent construction are ready to receive bollards and are level, plumb, and square within tolerances acceptable to manufacturer.
 - C. Verify that required utilities are in correct location and are of correct capacities for specified products.
- 02. Installation
 - A. Install in accordance with manufacturer's installation instructions.
 - B. Install in conformance to applicable ADA guidelines and End User's established accessibility policies.

END OF SECTION