MaxiForce

Collapsible Bollards

GUIDE SPECIFICATIONS IN PDF FORMAT • SECTION 129301 (02871)
MAXIFORCEBOLLARDS.COM • BLUE EMBER TECHNOLOGIES, LLC.

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Collapsible bollards and base (ground sleeve) units for traffic control.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's product literature, including color charts and installation details.
B. USGBC LEED Materials and Resources Credit MR 4 - Recycled Content: For projects seeking LEED certification, submit manufacturer's documentation of recycled content for steel for products provided under this specification section.
C. Buy American Requirements: For projects subject to Buy American 49 CFR Part 661 requirements, submit manufacturer's documentation that iron, steel, and manufactured products provided under this specification section are produced in the United States.
D. ARRA Requirements: For projects subject to the US American Recovery and Reinvestment Act (ARRA), submit manufacturer's documentation that products provided under this specification section are produced in the United States.

1.3 QUALITY ASSURANCE

A. Performance: Bollard shall collapse down to not more than 3-5/8 inches above finished ground surface.
B. Manufacturer: Bollard units of all types must be supplied by a single manufacturer having the resources to provide consistent quality in appearance and physical properties.
C. Materials: Steel shall be US domestic mill certified steel. The main body of the product must be constructed from ASTM A500 steel and be accompanied with steel mill certifications/test reports for the steel being used to ensure the durability and performance of the product. Secondary and non-ASTM steel may not be substituted.

1.4 DELIVERY, STORAGE AND HANDLING

A. Package units appropriately to protect finish. Inspect materials to ensure that specified materials have been received.
B. Store units to avoid damage from moisture, abrasion, and other construction activities.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer: Blue Ember Technologies, LLC MaxiForce Bollards line of products, Sykesville, MD 21784, Tel 410-552-9888, Fax 410-552-9939, Website: http://www.maxiforcebollards.com

2.2 COLLAPSIBLE BOLLARDS

A. Collapsible Bollards: Provide MaxiForce Collapsible Bollards by Blue Ember Technologies.
   1. Head Style: Removable and interchangeable.
      a. SS1 - Standard Style 1 Head.
      b. SS2 - Standard Style 2 Head.
      c. SS3 - Standard Style 3 Head.
   2. Base Type: As required for installation.
      a. U - Universal Base.
      b. S - Simple Base.
      c. EZ - Easy Base, with rebar.
   3. Wrench Operated Unit (without padlock operation): Unit released by applying torque to a fire hydrant type nut releasing the locking mechanism allowing the bollard unit to be removed. Bollard may be returned to its original locked position without the use of any tools or other devices.

a. Hydrant Nut Type: P-180 Standard 5-sided AWWA Hydrant Nut with a 1-3/8 inch face (standard).
b. Hydrant Nut Type: P-181 Standard 5-sided AWWA Hydrant Nut with a 1-1/8 inch face.
c. Hydrant Nut Type: P-182 3-sided Philadelphia Style triangular Hydrant Nut.
d. Hydrant Nut Type: P-183 4-sided Kennedy Square Hydrant Nut.

4. Padlock Operated Unit (without wrench operation): Unlock and remove the padlock then remove the locking bolt/pin to allow the bollard to pivot and lie down. Reverse the sequence to return bollard to its original and locked position.
   a. P-185 Standard 1-sided Locking Bolt for use with 1 padlock (standard).
   b. P-186 2-sided Locking Pin for use with 2 padlocks.
5. Breakaway Feature (Standard): Bollard unit will shear off from the base when pushed on by a vehicle at low speeds. Bollard may be reused by replacing the inserts and re-bolting to the base. The bollard unit will break away when impacted at any angle without causing operational damage to the bollard body, head, or base.
   a. P-145 Standard Aluminum (standard).
   b. P-150 Heavy Duty Aluminum (medium resistance).
   c. P-151 Steel (high resistance).
6. Non Breakaway Feature (Option): When impacted, the Bollard unit will not shear off without damage occurring to the unit due to use of a non-breakaway insert.
   a. P-152 Non Breakaway.
7. Emergency Operation: The collapsible units that contain break-away inserts may be pushed over by a vehicle during circumstances that require emergency access. A unit is pushed over by slowly easing a vehicle's bumper to contact the bollard body and then slowly and steadily easing the vehicle through the bollard until the unit breaks away from the base and collapses to the ground. The unit is set back into place by replacing two release inserts.
8. Materials: Free from surface blemishes and defects where exposed to view in the finished installation.
   a. Steel Plate: A36; ASTM A36/A36M.
   b. Steel Tube: A500; ASTM A500.
   c. Fasteners: Series 300 Stainless Steel.
9. Finish: Factory applied after surface imperfections removed and exposed faces of welded joints dressed smooth.
   a. Powder Coat Finish (Standard): Factory applied TIGER Drylac Powder Coatings Essentials Chart color or equivalent.
   b. Powder Coat Finish (Option): DRYZINC zinc rich undercoated primer and factory applied TIGER Drylac Powder Coatings Essentials Chart color or equivalent.
   c. Galvanizing (Option): Hot Dipped galvanized.
   d. Galvanizing and Powder Coat Finish (Option): Hot Dipped galvanized and powder coated.
   e. Base (Ground Sleeve) Units: Powder coated with a black textured powder coating to help reduce slippery surfaces when the bollard units are removed.
   f. Factory Applied Reflective Tape (Option): Manufacturer's standard tape, color, size and configuration unless custom application is required.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's recommendations for installation and approved submittals and the following:
   1. Install bollards level and true and in proper relation to adjacent surfaces.
   2. Install base units with top plate flush with the finished surface to avoid tripping hazard. This method does not apply to epoxy-installed EZ base.
   3. Secure bollard to base unit after the base is leveled and cured.
   4. Test for proper operation and adjust if necessary.

B. Protect bollards from damage during construction operations.

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