

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

SPECIAL PROVISION

ATLANTA BELTLINE, INC.

BILL KENNEDY WAY INTERIM TRAIL

Section 900 – Bollards

900.1 General Description

This work includes furnishing and installing bollards as shown on plans, and shall include, but is not limited to, the following components:

- A. Bollards

900.1.01 Definitions

In addition to General Provisions 101 through 150:

Owner's Representative: Owner and Engineer will be accessible to the Contractor throughout the project to answer question in the form of RFIs.

900.1.02 Related References

General Provisions 101 through 150.

900.1.03 Submittals

Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, field-assembly requirements, and installation details.

For site and street furnishings. Use same designations indicated on Drawings.

Material Certificates: For bollards, signed by manufactures.

Maintenance Data: For bollards to include in maintenance manuals.

900.2 Materials

Furnish only new materials and equipment for this work. Subject to compliance with requirements, provide the following or equal:

Section 900 – Bollards

900.2.01 Bollards

Basis-of-Design Product: P-8303-E-Black, Heavy Removable Mount w/White Reflective tape as manufactured by Reliance Foundry, Unit 207, 6450 – 148 St. Surrey BC, Canada V3S-7G7.

Description:

- Thermal Stability: Good +/-10 Shore D (Medium hard, flexibility similar to tire tread)
- Working Temperature: -40/+60 Degree C (-104/+140 Degree F)
- Fire Resistance: Class E. as per UNE-EN-ISO 11925-2:2002, suitable for use as bollard in the street
- Impact Resistance: Test of 50 impacts, bending the bollard through 90 degree, simulation a 1500kg (3307lb) vehicle at 15 km/h (9.3mph)
- Fatigue Resistance: Test of 500 impacts, bending the bollard through 45 degree, at interval of 30 seconds.
- Height to be 38.4”, dia. to be 3.9”
- 1” reflective tape color to be white

Equivalent Design: None found – Contractor can submit equal alternatives for approval.

Anchors, Fasteners, Fittings, and Hardware: Manufacturer’s standards, corrosion-resistant-coated or non-corrodible materials; commercial quality; tamperproof, vandal and theft resistant; concealed, recessed, and capped or plugged. Provide as required from site and street furnishings’ assembly, mounting, and secure attachment.

Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer for exterior applications.

900.2.02 Delivery, Storage, and Handling

General Provisions 101 through 150.

900.3 Construction Requirements

This Work includes furnishing and installing bollards as shown on plans, and shall include, but is not limited to, the following components:

- Installation of bollards
- Cleaning of bollards after installation
- Repairing any damage to bollards per manufacturers recommendations
- Replacing any bollards that cannot be repaired per manufacturer’s recommendations.

900.3.01 Personnel

General Provisions 101 through 150.

Section 900 – Bollards

900.3.02 Equipment

General Provisions 101 through 150.

900.3.03 Preparation

Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, installation tolerances, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

900.3.04 Fabrication

General Provisions 101 through 150.

900.3.05 Construction

Installation: Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated by Owner or within the construction documents. Complete field assembly of bollards, where required. Unless otherwise indicated, install bollards after landscaping and paving have been completed. Install bollards level, plumb, true, and securely anchored at locations indicated on Drawings.

Cleaning: After completing site bollard installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

900.3.06 Quality Acceptance

Obtain each type of site furnishing through one source from a single manufacturer.

900.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

900.4 Measurement

The accepted bollard quantities are measured in per each fixture in place in the completed work.

900.5 Payment

Bollards are paid for at the unit price bid per each unit complete and in place as specified. The payment is full compensation for all excavation, furnishing and installation of each unit, including preparation of sand and mortar, disposal of excavated materials, and the cost of furnishing all tools, safety devices, labor, equipment and all other necessary items to complete the work.

Payment will be made under:

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|-------------------|--------------------|----------|
| Item No. 900-0526 | FLEXIBLE BOLLARDS | Per each |
| Item No. 900-0527 | REMOVABLE BOLLARDS | Per each |

900.5.01 Adjustments

General Provisions 101 through 150.

End of Section 900