

The Ross XT-2400-SLB (Heald Matador3) is the world's first surface mounted automated bollard system. The systems consists of two fixed bollards mounted on a plate; central to the fixed bollards are two automatic sliding bollards. On command, these bollards simply slide to the side to allow passage of the vehicle, and slide back to protect the location. For more information, please call our toll-free number above or visit our website.

## SECTION 323918

### SURFACE MOUNTED AUTOMATED BOLLARD SYSTEM

(ROSS XT-2400-SLB – HEALD MATADOR4)

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
  - 1. Two fixed bollards combined with two automatic sliding bollards that glides out of the way to allow traffic flow.

##### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of product.
- B. Shop Drawings: Submit shop drawings including the following:
  - 1. Complete list of equipment, materials, and manufacturer's descriptive and technical literature.
  - 2. Complete wiring and schematic diagrams, and details required to demonstrate that the system has been coordinated and will properly function as a unit.
  - 3. Proposed layout and anchorage of equipment and relationship to other parts of the work, including foundation and clearances for maintenance and operation.
- C. Reports and Certifications: Submit the following:
  - 1. Crash Performance Classification: V/7500[N2]/48/90:0.0/0.0.
- D. Operations and Maintenance Manuals: Submit at least two copies of operating and maintenance instructions at least two weeks prior to installation.
  - 1. Operating Instructions: Include step by step procedures required for system startup, operation, and shut down. Also include the manufacturer's name, manufacturer's contact information, model number, parts lists, and brief description of all equipment and their basic operating features.
  - 2. Maintenance Instructions: Include maintenance schedule, routine maintenance procedures, troubleshooting and repair procedures, and spare parts list.
- E. Welder's Certificates: Copy of current certificate for AWS D1.1.
- F. Warranty: Submit executed copy of manufacturer's warranty.

### 1.3 QUALITY ASSURANCE

- A. Installer: Minimum 2 year documented history of installing similar equipment, authorized and certified by the manufacturer. Installer shall accept responsibility for all field verifications, underground utility locations, and coordination of all controls and interfaces to the units. Installer shall be capable of bonding projects to relevant project amounts, and acceptable liability and vehicle insurance.
- B. Manufacturer's Services: If requested by the Owner, provide services of a manufacturer's representative who is experienced in the installation, adjustment, and operation of the equipment. The representative shall inspect the final installation and supervise final hookup, adjustment, and final testing of the equipment.

### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Store equipment in a location protected from the weather, humidity, temperature variation, dirt and dust, or other contaminants. Store materials on sleepers or pallets and protect from rust and objectionable materials such as dirt, grease or oil.

### 1.5 WARRANTY

- A. Warranty: Provide manufacturer's standard limited warranty.

## PART 2 - PRODUCTS.

### 2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Ross Technology Corporation, 104 North Maple Avenue, Leola, PA 17540. Toll-free 800-345-8170. www.rosstechnology.com. No substitutions.

### 2.2 SURFACE MOUNTED AUTOMATED BOLLARD SYSTEM

- A. Surface Mounted Automated Bollard System: Ross XT-2400-SLB (Heald MATADOR4) by Ross Technology Corporation complying with the following:
  - 1. Performance: Crash tested to PAS 68:2010 V/7500[N2]/48/90:0.0/0.0 = 7500 kg 2-axle cab-over truck @ 48 kph (30 mph) @ 90° impact angle, with zero penetration.
  - 2. Bollard Assembly: Surface mounted sliding bollard system with two fixed bollards and one moving bollard. Structural steel housing below; flush with roadway surface when installed, with no side pillars and/or buttresses attached to the hydraulic power unit or any above ground/grade assemblies.
  - 3. Operation: Hydraulic.
  - 4. Bollard Height: 44.9 inches (1140 mm) above road surface.
  - 5. Bollard Diameter: 8.7 inches (220 mm).
  - 6. Bollard Spacing: 55.7 inches (1415 mm).
  - 7. Clear Opening: 158.5 inches (4025 mm).
  - 8. Base Unit Size (width x length x height): 208.7 inches x 84.3 inches x 4.9 inches (5300 mm x 2140 mm x 125 mm).
  - 9. Deployment Time (approx.): 7-8 seconds.
  - 10. Steel Pipe: ASTM A53.
  - 11. Steel Shapes: ASTM A36.
  - 12. [Optional] Accessories:

- a. Integrated battery-powered uninterruptible power supply (UPS) to allow for barrier cycling without local power
- b. PLC-based, plus standard control enclosure.
- c. Heald HYDRA multi-head, universal command and control system.
- d. Wired remote control console.
- e. Wired master control console.
- f. Galvanized steel exterior barrier control enclosure.
- g. Aluminum NEMA barrier enclosure.
- h. Safety loops.
- i. Photo beams.
- j. Wrong-way detection.
- k. Overspeed detection.
- l. Heat trace.
- m. Pole-mounted traffic lights.
- n. Hydraulic oil heater.
- o. Hydraulic oil cooler.
- p. Low hydraulic fluid level switch.
- q. Spare parts kit.
- r. Extended warranty.

B. Finish:

- 1. Hot-dip galvanized per ASTM A123.
- 2. [Option] Wash primer after hot-dip galvanizing per ASTM A123.
- 3. [Option] Factory wash primer and finish after hot-dip galvanizing per ASTM A123; polyurethane top coat. Select colors from manufacturer's color range.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and site conditions for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work. Use concealed anchorages where possible.
  - 1. Protect adjacent areas against damage; repair or patch damaged areas. Restore damaged finishes so no evidence remains of corrective work.

### 3.3 FIELD TESTING AND TRAINING

- A. Notify Owner's representative at least 7 days prior to beginning of the field test.
- B. Upon completion of construction, perform a field test for the automated bollard system. The test shall include operating the bollard system through its complete range of operation.
- C. Continuously cycle each bollard for not less than 30 minutes to test for heat build-up in the hydraulic system.

- D. Installer shall furnish equipment and make necessary corrections and adjustments prior to test witnessed by the Owner's representative. Changes to site conditions and adjustments and repairs to bollard system shall be performed at no additional cost to the Owner or manufacturer. If adjustments are made to ensure correct functioning of components, complete field tests and cycle tests shall be performed after adjustments are made.
- E. Provide a field-training course for designated operating staff members by the installer. Field training shall cover all of the items contained in the operating and maintenance instructions..

#### 3.4 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION

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