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**PART 1 GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This section includes:
  - 1. Visibility Mirrors.
  - 2. Stop Lights.
  - 3. Exit Light/Alarm.
  - 4. Vehicle Detectors.

**1.3 QUALITY ASSURANCE**

- A. The work of this section shall be performed by a company which specializes in the type of parking accessories work required for this Project, with a minimum of 5 years of documented successful experience and shall be performed by skilled workmen thoroughly experienced in the necessary crafts.
  - 1. Work shall be performed in compliance with Owner's insurance underwriters' requirements and UL approvals and testing for materials, assemblies and procedures.
- B. Manufacturer's identification tags or marks are not acceptable on surfaces which will remain exposed to view after installation.
  - 1. Evidence of "patching" after removal of tags or marks is not acceptable.

**1.4 SUBMITTALS**

- A. Submit the following according to Conditions of the Construction Contract and Division 1 Specification Sections.
- B. Product Data: For each type of product.
- C. LEED Submittals:
  - 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
- D. Samples for Verification: For visibility mirrors, one complete mirror.
- E. Hazardous Materials Notification: In the event no product or material is available that does not contain asbestos, PCB or other hazardous materials as determined by the Owner, a "Material Safety Data Sheet" (MSDS) equivalent to OSHA Form 20 shall be submitted for that proposed product or material prior to installation.
- F. Asbestos and PCB Certification: After completion of installation, but prior to Substantial Completion, Contractor shall certify in writing that products and materials installed, and processes used, do not contain asbestos or polychlorinated biphenyls (PCB), using format in Article 3 of General Conditions.

**1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Comply with General Conditions and Division 1 Section "Product Requirements".

**1.6 WARRANTY**

- A. Comply with General Conditions and Division 1 Section "Product Requirements".

**PART 2 PRODUCTS****2.1 UNAUTHORIZED MATERIALS**

- A. Materials and products required for work of this section shall not contain asbestos, polychlorinated biphenyls (PCB) or other hazardous materials identified by the Owner.

**2.2 ACCEPTABLE MANUFACTURERS**

- A. Products of the manufacturers specified in this section establish the minimum functional, aesthetic and quality standards required for work of this section.
- B. Substitutions: Comply with General Conditions using form in Division 1 Section "Substitution Request Form".

**2.3 VISIBILITY MIRRORS**

- A. Type: 30" diameter Convex surveillance mirror.
- B. Materials: Acrylic mirror surface, with weather-resistant polycarbonate backing.
- C. Mounting Accessories: Heavy duty mounting brackets that allow for adjustment of mirror angle.
- D. Locations: Parking garage, as indicated on drawings.

**2.4 STOP LIGHTS**

- A. Type: TriLite SG20-NS, with red and green LED lamps.
  - 1. Housing: Safety Yellow.
  - 2. Power Source: 12 or 24V or 115V AC.
  - 3. Lens Diameter: 4-1/4".
- B. Lights at base of ramp at loading dock.
  - 1. Operation: Activated by vehicle detectors in pavement.
    - a. Light for Inbound Traffic: Default Green.
    - b. Light for Outbound Traffic: Default Red.

**2.5 EXIT LIGHT/ALARM**

- A. Type: Federal Signed Model AV1ST.
- B. Operation: Actuated by vehicle detectors in pavement.
  - 1. Light illuminates and alarm sounds upon detection of vehicle exiting parking ramp at sidewalk.
- C. Mounting: On exterior headache bar as detailed on drawings.

**2.6 VEHICLE DETECTORS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Amano Cincinnati, Inc.
  - 2. Amtel Security System Inc.
  - 3. Delta Scientific Corporation.
  - 4. Engineered Parking Systems, Inc.
  - 5. Federal APD, Inc.
  - 6. Magnetic Automation Corporation.
  - 7. Operator Specialty Co., Inc.; Linear LLC group member.
  - 8. Parking Systems, Inc.
  - 9. PTC Industries.
- B. Vehicle Loop Detector System: Provide self-tuning electronic presence detector with adjustable detection patterns, adjustable sensitivity and frequency settings, and panel indicator light designed to detect presence or transit of a vehicle over an embedded loop of wire and to emit signal activating stop light or exit alarm.

**PART 3 EXECUTION****3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, including accurate placement, critical dimensions; and other conditions affecting performance of the Work.

- B. Examine roughing-in for electrical systems to verify actual locations of connections before parking accessory installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

**3.2 INSTALLATION**

- A. General: Install parking accessories as required for a complete and integrated installation.
  - 1. Rough-in electrical connections according to requirements specified in Division 16 Sections.
- B. Visibility Mirrors: Install to concrete structure with mounting brackets.
  - 1. Adjust angle of mirror for proper viewing.
- C. Vehicle Loop Detectors: Bury and seal wire loop at locations indicated on Drawings according to manufacturer's written instructions. Connect to parking accessory equipment operated by detector.
- D. Stop Lights and Exit Alarm: Mount in locations as indicated on drawings according to manufacturers instructions.
  - 1. Connect to vehicle loop detectors.
- E. Connect wiring according to Division 16 Section "Conductors and Cables."
- F. Ground equipment according to Division 16 Section "Grounding and Bonding."

**END OF SECTION**