SECTION 08 3613

SECTIONAL DOORS

PART 1 GENERAL

1.1 SUMMARY

A. Work of this Section includes sectional door systems and includes, but is not limited to the following:

1. Sectional overhead doors.
2. Power operation.

B. Related Documents and Sections: Examine Contract Documents for requirements that directly affect or are affected by Work of this Section. A list of those Documents and Sections include, but is not limited to the following:

1. General provisions of the Contract, including General and Supplementary Conditions, and Division 01 General Requirements Specification Sections.
2. Section 05 5000 - METAL FABRICATIONS.
3. Section 08 7100 - DOOR HARDWARE.
4. Dicision 26 - ELECTRICAL.

C. Work of this Section is affected by Alternates. Refer to Section 01 2300.

1.2 SYSTEM DESCRIPTION

A. Performance Requirements

1. Structural Performance: Provide sectional doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:
   a. Wind Loads: Refer to Structural Drawings.
2. Operation-Cycle Requirements: Provide sectional overhead door components and operators capable of operating for not less than 20,000 cycles and for 10 cycles per day.

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, core descriptions, control sequence and interconnections.

B. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, accessories and anchors, jamb details, connection details, anchorage spacing, hardware locations, and installation details.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, minimum size 3 inches (150 mm) square, representing actual product, color, and patterns.

E. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

F. Operation and Maintenance Data.

G. Submit written agreement in manufacturer's standard form signed by manufacturer and installer agreeing to repair or replace defective doors that are warped, twisted, bowed or damaged as a result of defective product.

H. Quality Assurance Submittals

1. Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.
2. Certificates: Submit with manufacturer's signature certifying that each product and/or system meets the requirements of the performance characteristics, physical criteria, and applicable standards specified.
   a. Certification of performance for sound rated doors.
3. Manufacturer's Instructions: Installation.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: A firm experienced a minimum five (5) years in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
2. Installer Qualifications: Perform installation with skilled, experienced and trained workmen supervised by trained personnel who shall have at least three (3) years successful experience in installations of similar size and scope.

1.5 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of sectional overhead door that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Structural failures including, but not limited to, excessive deflection.
   b. Faulty operation of hardware.
   c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
2. Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 OVERHEAD DOORS

A. Steel Framed Counterweight Balanced Overhead Doors: Single panel tubular steel framed door weather lapped at horizontal joint; balanced with counterweights under constant suspension; roller and track system fixed to building structure guides door under lintel in the open position.

B. Framework: Welded construction fabricated from rolled hollow section steel members with minimum wall thickness of 0.125 inch (3.1 mm). Beams shall be designed for maximum dead load deflection of 1/300th part of the span.

C. Counter Balancing: Counterweight system with enclosed counterweights suspended by 7/19 flexible multi-strand steel cables with minimum safety factor of 6:1. Cable shall be guided in steel sheaves with a minimum sheave to cable diameter ratio of 19:1. Sheaves shall be capable of carrying design loads.

D. Construct steel door sections from carbon steel hot rolled tube complying with ASTM A-513 Type 1 and ASTM A-36.

E. Counterweight Covers: Counterweights shall be protected and covered with a removable pressed sheet (aluminum or steel).

F. Manual Operation: As indicated on the Drawings and Door Schedule.

1. Provide a manual operating handle and safety device to be used to manually open/close the door and to be stored in operating channel when door is in open position acting as a safety device preventing accidental closure of the door.
2. Door shall be equipped with keyed slide bar locking device located at lower panel adjacent to operating channel.

G. Size:

1. As indicated on Drawings.

H. Locking:

1. Internal slide locks, unless otherwise specified.

I. Escape and Access Doors: Outward opening doors with night latch.

2.2 FINISHES

A. Finish, Aluminum: Provide the following factory applied finish:

1. Powder coating.

B. Finish, Color:

1. As designated in Door Schedule

2.3 MOTORS

A. Jackshaft Operator:

1. Maintenance warning system notifies users when scheduled maintenance is due.
2. Motor: Switchless DC motor with the following:
   a. 120 volt.
   b. Single phase.
   c. Separate 8800 series 3 control panel.
   d. Diagnostic LEDs.
   e. Adjustable force memory, motor power settings.
   f. Automatic self-adjusting up/down stop system.
   g. Battery Backup available upon request.
3. Photo eye safety sensors.
4. Automatic obstruction sensing; motor reverses if door bottom contacts an obstruction.
5. Single wall button or 3 button wall control station
6. Warranty: 2 years.

B. Provide electrical service and wiring connection as specified in Division 26 for future electric operation.

PART 3 EXECUTION

3.1 EXAMINATION

A. Carefully examine installation areas with Installer present, for compliance with requirements affecting Work performance.

1. Verification of Conditions: Verify that field measurements, surfaces, substrates, structural support, utility connections, tolerances, levelness, plumbness, humidity, moisture content level, cleanliness and other conditions are as required by the manufacturer, and ready to receive Work.
2. Proceed with installation only after unsatisfactory conditions have been corrected.
    a. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting additional unsuitable conditions encountered at no additional cost to the Owner.

3.2 PREPARATION

A. Field Measurements: Verify actual dimensions by field measurement prior to fabrication.

1. Coordinate field measurements and fabricated items prior to shipping.

B. Prepare substrate(s) in accordance with manufacturer’s instructions, which may include the following:

1. Clean surfaces.
2. Level exposed and shim hidden substrate surfaces as needed.
3. Coat substrate when necessary to protect from galvanic action, separating dissimilar metal materials.
4. Framing, blocking or other necessary structural reinforcement.

3.3 INSTALLATION

A. General: Provide framing, headers, carrier assemblies, jamb guides, activation and safety devices, and accessories required for a complete installation.

B. Install in complete accordance with the manufacturer’s written instructions.

1. Install door assembly in accordance with manufacturer's instructions.
2. Anchor to adjacent construction without distortion or stress.
3. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
4. Fit and align door assembly including hardware, level and plumb, to provide smooth operation.

3.4 FIELD QUALITY CONTROL

A. Manufacturer’s Field Services: At Owner’s request, provide manufacturer’s field service consisting of product installation and use recommendations, and periodic site visits to observe and ensure product installation is done in accordance with manufacturer’s recommendations.

3.5 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free of warp, twist, or distortion.

END OF SECTION