SECTION 08.36.13
OVERHEAD SECTIONAL DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Overhead sectional doors, electrically operated.
B. Operating hardware and supports.
C. Electrical controls.

1.02 RELATED REQUIREMENTS
A. Section 07.92.00 - Joint Sealants: Sealing joints between frames and adjacent construction.
B. Section 08.43.13 - Aluminum Framed Storefront, for aluminum framing for attachment and support of sectional door vertical tracks.
C. Section 09.91.23 - Interior Painting: Finish painting.
D. Section 26.05.16 - Conduit: Conduit from electric circuit to operator and from operator to control station.

1.03 REFERENCE STANDARDS
A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
G. NEMA MG 1 - Motors and Generators; National Electrical Manufacturers Association; 2014.
H. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
I. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

1.04 SUBMITTALS
A. See Section 01.30.00 - Administrative Requirements, for submittal procedures.
B. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
C. Product Data: Show component construction, anchorage method, and hardware.
D. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
B. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience.

C. Conform to applicable code for motor and motor control requirements.

D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified.

1.06 WARRANTY

A. See Section 01.78.21 - Closeout Submittals for warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

C. Warranty: Include coverage for electric motor and transmission.

D. Provide five year manufacturer warranty for electric operating equipment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Sectional Doors - Basis of Design: Overhead Door, Series 521, RSX lift system.

B. Other Acceptable Manufacturers:
   1. Entrematic; Amarr 3552 Aluminum Full View Door: www.amarr.com/commercial.
   2. Substitutions: See Section 01.60.00 - Product Requirements.

2.02 ALUMINUM DOOR COMPONENTS

A. Aluminum Doors: Flush aluminum, insulated; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
   1. Door Nominal Thickness: 1-3/4 inches thick.
   2. Finish: Factory anodized; clear anodized.
   3. Glazed Lights: Full panel width, 5 rows; set in place with resilient glazing channel.

B. Door Panels: Paneled aluminum construction; extruded aluminum stiles and rails; 1-1/2 inch thick infill panels of sheet aluminum; stile and rail joints welded; rabbeted weather joints at meeting rails.

C. Window Frame: Manufacturers standard, finish to match.

D. Glazing: Fully tempered glass; single pane; clear; 1/2 inch thick.

2.03 DOOR COMPONENTS

A. Track: Galvanized steel angles, 0.094 inch minimum thickness; 2-5/16 x 4 inch size, continuous one piece per side; galvanized steel mounting brackets 1/4 inch thick.

B. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.

C. Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables.

D. Sill Weatherstripping: Resilient hollow rubber strip, one piece; fitted to bottom of door panel, full length contact.

E. Jamb Weatherstripping: Roll formed steel section full height of jamb, fitted with resilient weatherstripping, placed in moderate contact with door panels.

F. Head Weatherstripping: EPDM rubber seal, one piece full length.

G. Panel Joint Weatherstripping: Neoprene foam seal, one piece full length.
H. Lock: Inside center mounted, adjustable keeper, spring activated latch bar with feature to retain in locked or retracted position; interior handle.

2.04 MATERIALS
A. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G60/Z180 coating, plain surface.
B. Aluminum Sheet: ASTM B209 (ASTM B209M), 5005 alloy, H14 temper, plain surface.
C. Aluminum Extrusions: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.
D. Float Glass: Provide float glass glazing, unless noted otherwise.
   2. Tinted Types: Color and performance characteristics as indicated; color to match skybox blue tinted glass.

2.05 ELECTRICAL OPERATION
A. Operator, Controls, Actuators, and Safeties: Comply with UL 325; provide products listed by a testing agency acceptable to authorities having jurisdiction.
B. Electrical Characteristics:
   1. 1 hp; manually operable in case of power failure, transit speed of 12 inches per second.
   2. 208/230 volts, single phase, 60 Hz.
C. Motor: NEMA MG 1, Type 1.
D. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
E. Disconnect Switch: Factory mount disconnect switch in control panel.
F. Electric Operator: Side mounted on cross head shaft, adjustable safety friction clutch; brake system actuated by independent voltage solenoid controlled by motor starter; enclosed gear driven limit switch; enclosed magnetic cross line reversing starter; mounting brackets and hardware.
G. Safety Edge: At bottom of door panel, full width; electro-mechanical sensitized type, wired to stop door upon striking object; hollow neoprene covered to provide weatherstrip seal.
H. Control Station: Standard three button (open-close-stop) momentary type control for each electric operator.
   1. 24 volt circuit.
   2. Surface mounted.
   3. Locate at inside door jamb.
I. Interconnection to Security System:
J. Hand Held Transmitter: Digital control, resettable.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
B. Verify that electric power is available and of the correct characteristics.

3.02 PREPARATION
A. Prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.
B. Apply primer to wood frame.
3.03 INSTALLATION

A. Install door unit assembly in accordance with manufacturer's instructions.
B. Anchor assembly to wall construction and building framing without distortion or stress.
C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
D. Fit and align door assembly including hardware.
E. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.
F. Install perimeter trim.

3.04 TOLERANCES

A. Maximum Variation from Plumb: 1/16 inch.
B. Maximum Variation from Level: 1/16 inch.
C. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch from 10 ft straight edge.
D. Maintain dimensional tolerances and alignment with adjacent work.

3.05 ADJUSTING

A. Adjust door assembly for smooth operation and full contact with weatherstripping.
B. Have manufacturer's field representative present to confirm proper operation and identify adjustments to door assembly for specified operation.

3.06 CLEANING

A. Clean doors and frames and glazing.
B. Remove temporary labels and visible markings.

3.07 PROTECTION

A. Protect installed products from damage until Date of Substantial Completion.
B. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

END OF SECTION