SECTION 083323

OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Overhead coiling doors , operating hardware , fire-rated and exterior, electric operation.
B. Wiring from electric circuit disconnect to operator to control station.

1.02 RELATED REQUIREMENTS
A. Division 1 Sustainable Design Specification.
B. Section 087100 - Door Hardware: Cylinder cores and keys.
C. Section 099000 - Painting and Coating: Field paint finish.

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; 2013.
B. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc.; current edition.
C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); National Electrical Manufacturers Association; 2008.
D. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated 600 2000 Volts; National Electrical Manufacturers Association; 2000 (R2008).
E. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.
F. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.
G. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

1.04 SUBMITTALS
A. Product Data: Provide general construction, component connections and details, electrical equipment .
B. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details.
C. Samples: Submit two slats, 6 inch in length, illustrating shape, color and finish texture.
D. Manufacturer's Instructions: Indicate installation sequence and procedures, adjustment and alignment procedures.
E. Maintenance Data: Indicate lubrication requirements and frequency and periodic adjustments required.

1.05 QUALITY ASSURANCE
A. Products Requiring Electrical Connection: Listed and classified by testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. Overhead Coiling Doors:
1. Cornell Iron Works, Inc: www.cornelliron.com.
2. The Cookson Company: www.cooksondoor.com.
3. Wayne-Dalton, a Division of Overhead Door Corporation: www.wayne-dalton.com.
4. McKeon Door Company; Basis of Design Product(s) as indicated below.
a. Exterior Coiling Doors (Type K1): SD3000 Series
b. Fire-Rated Coiling Doors (Type J1): Auto-Set Model FSFD

2.02 COILING DOORS
A. Exterior Coiling Doors: Steel slat curtain.
1. Capable of withstanding positive and negative wind loads of 20 psf, without undue deflection or damage to components.
2. Sandwich slat construction with insulated core of manufacturer's standard type insulation; insulation (u-) value: 0.50 BTU/hr sq ft deg F
3. Nominal Slat Size: 2 inches wide x required length.
4. Finish: Galvanized.
5. Guides: Angles; galvanized steel.
6. Hood Enclosure: Manufacturer's standard; primed steel.
7. Electric operation.
8. Mounting: As indicated.
B. Fire-Rated Coiling Doors: Steel slat curtain; conform to NFPA 80.
1. 1 hour fire rating.
2. Provide products listed and labeled by UL or ITS (Warnock Hersey) as suitable for the purpose specified and indicated.
3. Oversized Openings: Provide certificate of compliance from authority having jurisdiction indicating approval of fire rated units and operating hardware assembly.
4. Finish: Galvanized.
5. Guides: Angles; galvanized steel.
6. Hood Enclosure: Manufacturer's standard; galvanized steel.
7. Electric operation.
8. Mounting: As indicated.

2.03 MATERIALS
A. Curtain Construction: Interlocking slats.
1. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
2. Curtain Bottom: Fitted with angles to provide reinforcement and positive contact in closed position.
3. Weatherstripping: Moisture and rot proof, resilient type, located at jamb edges, bottom of curtain, and where curtain enters hood enclosure of exterior doors.
B. Steel Slats: Minimum 18 gage ASTM A653/A653M galvanized steel sheet.
1. Galvanizing: Minimum G90/Z275 coating.
C. Guide Construction: Continuous, of profile to retain door in place with snap-on trim, mounting brackets of same metal.
D. Steel Guides: Formed from galvanized steel sheet, ____ gage; ____ inch wide; complying with ASTM A653/A653M.
1. Galvanizing: Minimum G90/Z275 coating.
E. Hood Enclosure: Internally reinforced to maintain rigidity and shape.
F. Roller Shaft Counterbalance: Steel pipe and helical steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and capable of holding position at mid-travel; with adjustable spring tension; requiring 25 lb nominal force to operate.

2.04 ELECTRIC OPERATION
A. Operator, Controls, Actuators, and Safeties: Comply with UL 325; provide products listed by a testing agency acceptable to authorities having jurisdiction.
B. Electric Operators:
1. Motor Rating: 1/3 hp; continuous duty.
2. Motor Controller: NEMA ICS 2, full voltage, reversing magnetic motor starter.
3. Controller Enclosure: NEMA 250 Type 1.
4. Opening Speed: 12 inches per second.
5. Brake: Adjustable friction clutch type, activated by motor controller.

6. Manual override in case of power failure.

C. Control Station: Standard three button (OPEN-STOP-CLOSE) momentary control for each operator.
1. 24 volt circuit.
D. Safety Edge: Located at bottom of curtain, full width, electro-mechanical sensitized type, wired to stop operator upon striking object, hollow neoprene covered.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify that opening sizes, tolerances and conditions are acceptable.

3.02 INSTALLATION
A. Install units in accordance with manufacturer's instructions.
B. In addition, install fire-rated doors in accordance with NFPA 80.
C. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
D. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
E. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
F. Coordinate installation of electrical service with Section 262717.
G. Complete wiring from disconnect to unit components.
H. Install perimeter trim and closures.

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

3.04 ADJUSTING
A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING
A. Clean installed components.
B. Remove labels and visible markings.

END OF SECTION 083323