

SECTION 08361

STEEL SECTIONAL OVERHEAD DOORS

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PART 1- GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. [Manually] [Electrically] operated steel sectional overhead doors.
 - 2. Operating hardware, controls, and supports.
- B. Related Sections:
 - 1. Division 1: Administrative, procedural, and temporary work requirements.
 - 2. Section [09910 - Paints:] [] - []: Field painting of doors.
 - 3. Section [] - []: Connection to power supply and control devices.

1.2 REFERENCES

- A. ASTM International (ASTM) A653/A653M-03 - Standard Specification for Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

1.3 SYSTEM DESCRIPTION

- A. Design doors to withstand:
 - 1. Positive and negative design wind loads [in accordance with Building Code.] [of [] PSF.]
 - 2. Cycle life of [10,000] [25,000] [50,000] [100,000] [] cycles.
- B. Operation: [Electric.] [Manual.] [Chain hoist.]
- C. Track and Operating Hardware: [Standard lift] [Vertical lift] [High lift] [Roof pitch] [Low headroom] type.

1.4 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
 - 2. Product Data: Provide information on component construction, anchorage method, and hardware.
- B. Closeout Submittals:
 - 1. Operation and Maintenance Data.
- C. Sustainable Design Submittals:
 - 1. Recycled products: Indicate percentage of recycled material used in manufacture of products, and percentage classified as post consumer.
 - 2. Regional products: Indicate location of product manufacturer and distance from manufacturer to project site.

1.5 WARRANTIES

- A. Provide manufacturer's one year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on Model 3206 by C.H.I. Overhead Doors.

B. Substitutions: Under provisions of [Section ____].] [Division 1.]

**** OR ****

C. Substitutions: Not permitted.

2.2 MATERIALS

A. Galvanized Steel Sheet:

1. ASTM A653/A653M, Structural Quality, G60 coating class.
2. Recycled content: Minimum [75] [] percent, with minimum [40] [] percent classified as post consumer.

B. Glazing: Clear [1/8 inch float glass] [1/4 inch tempered glass.] [1/8 inch polycarbonate sheet.] [insulating glass.]

2.3 COMPONENTS

A. Door Sections:

1. Type: Micro-grooved sandwich style.
2. Material: Galvanized steel.
3. Gauge: 28 gauge exterior skin with 28 gauge interior skin, polyurethane core sections.
4. R-Value: 13.68
5. Thickness: Nominally 1.5 inches.
6. Rails: Tongue-and-groove.
7. End caps: Wrap-around box style, 20 gauge galvanized steel, full height of section.
8. Insulation: 95 percent closed cell, foamed-in-place polyurethane with thermal break.
9. Vision lites:
 - a. Rectangular, [6 x 24] [12 x 24] [16 x 34] inches, set with silicone sealant and screws.
 - b. Pattern: [] wide x [] high, [centered.] [left side looking out.] [right side looking out.]
10. Exhaust ports: Aluminum, with hinged cover.

B. Tracks:

1. 2 inches wide, roll-formed galvanized steel, 16 gauge for doors up to 10 feet high, 14 gauge for doors exceeding 10 feet high.

**** OR ****

2. 3 inches wide, roll-formed 13 gauge galvanized steel, with galvanized steel mounting brackets.
3. Lower track sections adjustable for weathertight fit.
4. Horizontal tracks reinforced with minimum 13 gauge galvanized steel angle according to door weight and size.

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

D. Spring Counterbalance:

1. Oil tempered torsion springs mounted on cross-header shaft supported by galvanized steel ball bearing end plates and center carrier brackets as required.
2. Counterbalance transferred to doors via aircraft quality braided steel lift cables.

E. Bottom Weatherstripping: Vinyl weatherseal, full width of door.

F. Head and Jamb Weatherstripping: Flexible one piece vinyl extrusions.

G. Lock: [Inside slide] [Outside keyed T-handle] [Outside cylinder] type, adjustable keeper, spring activated.

- H. Electric Operator:
 - 1. Power supply: [115 VAC, single phase.] [220 VAC, [single] [three] phase.] [440-480 VAC, three phase.]
 - 2. Sufficient power to operate door at average speed of 12 inches per second.
 - 3. Disconnect for [manual push-up] [chain hoist] operation in case of power failure.
 - 4. Control station: [24 VDC;] [115 VAC;] [push button] [keyed switch] station marked [OPEN and CLOSE.] [OPEN, CLOSE, and STOP.] [Furnish [four] [] keys per station.]
- I. Safety Device: [Photoelectric sensor; detect obstruction and reverse door without requiring door to contact obstruction.] [Electric pneumatic edge; detect obstruction and reverse door upon contact with pneumatic hose.] [Electric edge; detect obstruction and reverse door upon contact with electric strips in vinyl housing.] [Electric edge; fail-safe, self monitoring.]
- J. Finish:
 - 1. Exterior panel surfaces: Baked-on enamel primer and polyester finish coat in white color.
 - 2. Interior panel surfaces: Baked-on polyester primer.

PART 3- EXECUTION

3.1 INSTALLATION

- A. Install door assembly in accordance with manufacturer's instructions.
- B. Anchor to adjacent construction 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, level and plumb, to provide smooth operation.
- E. Position head and jamb weatherstripping to contact door sections when closed; secure in position.
- F. Make wiring connections between power supply and operator and between operator and controls.

3.2 ADJUSTING

- A. Adjust to operate smoothly throughout full operating range.

END OF SECTION