



SECTION 08330

ROLLING STEEL DOORS

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rolling steel doors.
- B. Rolling steel fire doors.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
- C. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- D. Section 09900 - Painting: Field applied finish.
- E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator and from door operator to control station.
- F. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES

- A. ANSI/DASMA 108 - American National Standards Institute Standard Method For Testing Sectional Garage Doors And Rolling Doors: Determination Of Structural Performance Under Uniform Static Air Pressure Difference.
- B. ANSI/DASMA 203 - American National Standards Institute Specifications for non-rated fire rolling doors published by Door & Access Systems Manufacturers Association International.
- C. ASTM A 123 - Zinc hot-dipped galvanized] coatings on iron and steel products.

- D. ASTM A 229 - Steel wire, oil-tempered for mechanical springs.
- E. ASTM A 653 - Steel sheet, zinc-coated galvanized by the hot-dipped process, commercial quality.
- F. ASTM E 330 - Structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
- G. ASTM E 413 - Classification for Rating Sound Insulation

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.
- D. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 - 1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
 - 2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking, adjustment and lubrication of components.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum three years and an authorized Wayne Dalton installer.

- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with seals and labels intact until ready for installation.
- B. Store materials off the ground in a dry, warm, ventilated weathertight location.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. Provide Rolling Steel Service doors and Rolling Steel Fire doors with limited 2 Year Warranty on defects in materials and workmanship on the door; excludes the counterbalance spring and finish.
- B. Provide rolling steel Advanced Performance service doors with limited 5 Year Warranty on all doors system materials and workmanship.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Wayne Dalton; 2501 S. State Highway 121 Business, Suite 200, Lewisville, TX 75067. ASD. Phone: (800) 827-3667; Web Site: www.wayne-dalton.com. Email: info@wayne-dalton.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ROLLING STEEL SERVICE DOORS

- A. Wayne Dalton Model 800 Rolling Service Doors:
1. Description:
 - a. Maximum Width: 40 feet
 - b. Maximum Height: 40 feet
 - c. Windload Rated: plus or minus 20 PSF (design pressure)
 2. Curtain: composed of interlocking roll-formed slats.
 - a. Slat Profiles/Material:
 - 1) No. 4 Curved-faced single crown slat.
 - (a) 22-gauge steel.
 - (b) 20-gauge steel.
 - (c) 18-gauge steel.
 - (d) 16-gauge steel.
 - (e) 22-gauge stainless steel.
 - (f) 20-gauge stainless steel.
 - (g) 18-gauge stainless steel.
 - (h) 16-gauge aluminum.
 - (i) 14-gauge aluminum.
 - 2) No. 14 Flat-faced slat.
 - (a) 22-gauge steel.
 - (b) 20-gauge steel.
 - (c) 18-gauge steel.
 - (d) 16-gauge steel.
 - (e) 22-gauge stainless steel.
 - (f) 20-gauge stainless steel.
 - (g) 18-gauge stainless steel.
 - (h) 16-gauge aluminum).
 - (i) 14-gauge aluminum.
 - 3) Secur-Vent Perforated slat provides optimal security and ventilation. Slat consists of 1/16 inch diameter holes offering 41 percent open area over length of each slat. Available in No. 14 flat slat up to 22 feet wide by 20 feet high.
 - (a) 20-gauge steel.
 - (b) 20-gauge stainless steel.
 - b. Ends of alternate slats fitted with metal endlocks/windlocks.
 3. Bottom Bar: Consists of two equal angles, 0.12 inch minimum thickness, to stiffen curtain, with astragal. Angle shall be:
 - a. Steel.
 - b. Stainless steel.
 - c. Aluminum.
 4. Guides:
 - a. Roll-formed steel channel bolted to wall.
 - b. Roll-formed steel channel bolted to three structural angle guide angle assembly forming a slot to retain curtains in guides. Structural grade, three angle assembly fabricated of:
 - 1) Steel.
 - 2) Stainless steel.
 - 3) Aluminum.
 - c. Provide with integral windlock bars and removable bottom bar stops.
 5. Brackets: Design to enclose ends of coil and provide support for counterbalance pipe at each end. Fabricate of steel plates, with permanently sealed ball bearings. Thickness shall be:
 - a. 3/16 inch minimum.

- b. 1/4 inch minimum.
- 6. Counterbalance: Curtain to be coiled on a pipe of sufficient size to carry door load with deflection not to exceed 0.033 inch per foot of door span. Curtain to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs will be used to anchor springs to tension shaft and pipe.
- 7. Hood: Hood to enclose curtain coil and counterbalance mechanism. Hood fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provide longitudinal stiffness. Fabricate of:
 - a. Minimum 22-gauge B&S aluminum.
 - b. Minimum 24-gauge galvanized steel.
 - c. Minimum 24-gauge stainless steel.
- 8. Finish: Shop coat of rust inhibitive primer on non-galvanized surfaces and operating mechanisms. Guides and bracket plates will be coated with a flat black prime paint.
 - a. Galvanized Steel:
 - 1) Gray baked on primer.
 - 2) White baked on primer.
 - 3) Beige baked on primer.
 - 4) Brown baked on primer.
 - 5) Powdercoat finish as selected from manufacturer's RAL color selections.
 - 6) Powdercoat finish in custom color as selected.
 - b. Aluminum Finish:
 - 1) Mill finish.
 - 2) Clear anodized.
 - 3) Bronze anodized.
 - c. Stainless Steel finish.
 - 1) #4 finish.
- 9. Operation: Door will be operated by means of:
 - a. Manual, lift-up.
 - b. Chain hoist.
 - c. Awning crank.
 - d. Wall crank box.
 - e. Motor operation.
 - f. Motor operation with electrical sensing edge attached to bottom bar to stop and reverse door when it contacts an object during the closing cycle.
 - g. Motor operation with pneumatic sensing edge attached to bottom bar to stop and reverse door when it contacts an object during the closing cycle.
- 10. Weatherstripping: Bottom astragal, optional surface guide weatherstrip, and internal hood baffle.
- 11. Locking:
 - a. Interior slide-bolts suitable for padlocks by others.
 - b. Chain-hoist door provided with chain keepers suitable for padlocks by others.
 - c. Electric-motor operation doors provided with lock through the operator gearing.
 - d. Provide with cylinder locks.
 - e. Provide with thumb turn.
- 12. Windload: Windload minimum ____ psf per DASMA 102-2012 and as required by local codes.
- 13. Mounting:
 - a. Steel jambs,

- b. Wood jambs.
- c. Masonry jambs.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install rolling fire doors in accordance with the manufacturer's instructions and in accordance with the requirements of the National Fire Protection Association Standard 80 (NFPA 80).
- C. Install door complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports in accordance with final shop drawings, manufacturers instructions, and as specified herein.
- D. Fit, align and adjust rolling door assemblies level and plumb for smooth operation.
- E. Upon completion of final installation, lubricate, test and adjust doors to operate easily, free from warp, twist or distortion and fitting for entire perimeter.

3.4 TESTING

- A. Drop-test rolling steel fire doors in accordance with NFPA 80 and witnessed, attesting to their successful operation at the time of installation.

3.5 MAINTENANCE

- A. Per NFPA 80, paragraph 15-2 4.3: All horizontal or vertical sliding and rolling fire doors shall be inspected and tested annually to check for proper operation and full closure. Resetting of the release mechanism shall be done in accordance with the manufacturers instructions. A written record shall be maintained by the building owner and made available to the authority having jurisdiction.

3.6 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.7 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

3.8 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.9 SCHEDULES

- A. :
 - 1.
 - 2.
 - 3.
- B. :
 - 1.
 - 2.
 - 3.

END OF SECTION