

SECTION 08337

OVERHEAD COILING FIRE SHUTTERS

*Select tools/options and on the view tab, click "Hidden Text" for editing details.

PART 1- GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Manually operated [steel] [stainless steel] overhead coiling counter fire shutters.
 - 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 shutters.

1.2 REFERENCES

- A. ASTM International (ASTM) :
 - 1. A480/A480M-04 - Standard Specification for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
 - 2. A653/A653M-03 - Standard Specification for Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 3. A666-00 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- B. National Fire Protection Association (NFPA) 80, 1999 Edition- Standard for Fire Doors and Fire Windows.
- C. Underwriters Laboratories (UL) 10B, 1997 Edition - Standard for Fire Tests of Door Assemblies.

1.3 SYSTEM DESCRIPTION

- A. Design shutters to withstand cycle life of [10,000] [20,000] [50,000] [___] cycles.
- B. Door Operation:
 - 1. [Manual push up] [Awning crank] operated, relying on partial spring tension release to initiate closure.
 - 2. Emergency closure achieved by means of gravity from fusible link separation.
 - 3. Speed governing achieved by viscous governor at 6 to 24 inches per second.
 - 4. Release initiated by fusible link [and fail safe, time delay release [with 72 hour battery backup to prevent nuisance drops]].
 - 5. Drop testing requires counterbalance release and governor systems to be reset by qualified personnel.

1.4 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Indicate opening dimensions and required tolerances, jamb connection details, anchorage spacing, hardware locations, installation details, and special conditions.
 - 2. Product Data: Provide information on components, application, hardware, and accessories.
- B. Closeout Submittals:
 - 1. Operation and Maintenance Data.
 - 2. Test Records: Drop test results.
- 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 QUALITY ASSURANCE

- A. Fire Door Construction: Conform to UL 10B.
- B. Installed Fire Door Assembly: Conform to NFPA 80.

1.6 WARRANTIES

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on Model 7500 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, G90 coating class.
 2. Recycled content: Minimum [75] [____] percent, with minimum [40] [____] percent classified as post consumer.]

**** OR ****

- B. Stainless Steel Sheet: ASTM A480/A480M or ASTM A666; Type 304 or 316, rollable temper.

2.3 COMPONENTS

- A. Curtain:
 1. Material: [22 gage galvanized steel.] [22 gage stainless steel.]
 2. Profile: Flat, 1-1/2 inches x 1/2 inch deep.
 3. End locks: Galvanized malleable iron, attached to every other slat to act as wearing surface and prevent lateral movement.
 4. Bottom bar: [Galvanized steel] [Stainless steel] angle.
- B. Hood: Minimum 24 gage galvanized steel sheet, rectangular.
- C. Guides: Two formed [steel] [stainless steel] shapes bolted together to form guide channel and mounting surface.
- D. Head Plate: Rectangular steel plate, with precision sealed ball bearings supporting drive side axle.
- E. Barrel Assembly: Steel pipe sized for maximum deflection under loading of 0.03 inch per foot of span, with threaded rings or lugs welded to barrel assembly for curtain attachment.
- F. Springs: Curtain weight counterbalanced by oil-tempered, helically wound torsion springs, grease packed and mounted on steel torsion shaft, designed for minimum 20,000 cycles.

- G. Locking: [[Interior] [Exterior] mounted plated steel slide bolt locks with padlock provisions.] [Removable crank handle.] [Master keyable cylinder operable from [coil] [fascia] [each] side of bottom bar.]
- H. Detection Devices: Three [165] [__] degree F fusible links [and] [smoke detectors.] [heat rise detectors.] [connection to building fire alarm and detection system.]
- I. Finish:
 - 1. Curtain: [Epoxy primer and polyester finish coat,] [Powder coat,] [____] color [to be selected from manufacturer's standards].
 - 2. Guides and head plates: [Rust inhibiting primer.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]
 - 3. Hood: [Epoxy primer and polyester finish coat.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]
 - 4. Bottom bar: [Galvanized.] [Painted to match guides.] [Powder coat, [____] color [to be selected from manufacturer's standards.]]

**** OR ****

- J. Finish: No. 4 satin.

PART 3- EXECUTION

3.1 INSTALLATION

- A. Install shutter assembly in accordance with manufacturer's instructions.
- B. Anchor to adjacent construction without distortion or stress.
- C. Fit and align shutter assembly including hardware, level and plumb, to provide smooth operation.

3.2 ADJUSTING

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

3.3 TESTING

- A. Perform field drop testing in presence of Owner.

3.4 DEMONSTRATION

- A. Demonstrate proper operation to Owner.

END OF SECTION