SECTION 08336

OVERHEAD COILING 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] [Electrically] operated [steel] [stainless steel] [aluminum] overhead coiling counter 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.
3. Section [_____] - [_____]: Connection to power supply and control devices.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA) 611 - Voluntary Specification for Anodized Architectural Aluminum.

B. 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.
4. B209-04 - Standard Specification for Aluminum-Alloy Sheet and Plate.
5. B221-02 - Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wires, Shapes and Tubes.

1.3 SYSTEM DESCRIPTION

A. Design shutters to withstand:
1. Positive and negative design wind loads [in accordance with Building Code.] [of [__] PSF.]
2. Cycle life of [10,000] [20,000] [50,000] [__] cycles.

B. Operation: [Manual push up.] [Awning crank.] [Electric.]

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.

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 five year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Contract Documents are based on Model 6500 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.

**** OR ****

C. Aluminum:
1. Extrusions: ASTM B221, alloy and temper best suited to application.
2. Sheet: ASTM B209, alloy and temper best suited to application.
3. Recycled content: Minimum [75] [__] percent, with minimum [40] [__] percent classified as post consumer.

2.3 COMPONENTS

A. Curtain:
1. Material: [22 gage galvanized steel.] [22 gage stainless steel.] [0.050 inch thick extruded aluminum.]
2. Profile: Flat, 1-1/2 inches x 1/2 inch deep.
3. End locks: Nylon, attached to every other slat to act as wearing surface and prevent lateral movement.
4. Bottom bar: [Extruded aluminum, box-shaped.] [[Galvanized steel] [Stainless steel] angle.]

B. Hood: Minimum 24 gage [galvanized steel] [aluminum] sheet, rectangular.

C. Guides: [Extruded aluminum, two piece, box-shaped], [Two piece formed [steel,] [stainless steel,] bolted together to form guide channel and mounting surface] with soft brush guide runners full height to prevent metal-to-metal contact.

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.] [Interlock switches.]

H. Electric Operator:
1. Type: Internally mounted in barrel.

**** OR ****

2. Type: Externally mounted on drive side of shutter.
3. Power supply: [115 VAC, single phase.] [220 VAC, [single] [three] phase.] [440-480 VAC, three phase.]
4. Sufficient power to operate shutter at average speed of 12 inches per second.
5. Disconnect for [manual lift up] [awning crank] operation in case of power failure.
6. Control station: 24 VDC; [push button] [keyed switch] station marked [OPEN and CLOSE.] [OPEN, CLOSE, and STOP.] [Furnish [four] [__] keys per station.]
7. Exterior operator cover: Cover exposed operator parts to provide weather and pest resistance for operator; finish to match hood.

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: [Clear anodized aluminum.] [Painted steel to match guides.] [Powder coated steel, [____] color [to be selected from manufacturer's standards.]] {No. 4 satin finish stainless steel.]

**** OR ****

J. Finish: No. 4 satin.

**** OR ****

K. Finish: AAMA 611, Class [I] [II] clear anodized.

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.

D. Make wiring connections between power supply and operator and between operator and controls.

3.2 ADJUSTING

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

3.3 DEMONSTRATION

A. Demonstrate proper operation to Owner.

END OF SECTION