



SECTION 08330 (08 33 00)
COILING SHUTTERS

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**** NOTE TO SPECIFIER ** C.H.I. Overhead Doors; Overhead Doors.**

This section is based on the products of C.H.I. Overhead Doors, which is located at:
1485 Sunrise Drive.
Arthur, IL 61911.
Tel: (800) 677-2650.
Fax: (800) 738-5006.
E-mail: aia@chiohd.com
Web: www.chiohd.com.

[[Click Here](#)] for more information

C.H.I. Overhead Doors, a NUCOR (NYSE: NUE) company, has been manufacturing overhead doors for over 40 years. Through our authorized dealer network across North America, you can access our entire product line including commercial and residential sectional doors, rolling service and fire doors or shutters, and high-performance doors. C.H.I. integrates premium-quality materials with superior designs, workmanship, and a strong focus on end user satisfaction. Dedicated to continuing the best customer service and dealer support in the industry, it is apparent why C.H.I. is referred to as "The Door to Quality". C.H.I. is headquartered in Arthur, IL with additional manufacturing in Terre Haute, IN. For more information visit chiohd.com.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Overhead coiling counter shutters. (Model 6544)

1.2 RELATED SECTIONS

**** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.**

- A. Section 05 10 00 - Structural Metal Framing.
- B. Section 06 10 00 - Rough Carpentry.
- C. Section 09 90 00 - Painting and Coating.
- D. Section 26 05 00 - Common Work Results for Electrical.

1.3 REFERENCES

**** NOTE TO SPECIFIER ** Delete references from the list below that are not required by the text of the edited section.**

- A. ASTM International (ASTM):
 - 1. ASTM A480/A480M - Standard Specification for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
 - 2. ASTM A653/A653M - Standard Specification for Specification for Steel Sheet, Zinc-

Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

3. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
4. ASTM B209 - Standard Specification for Aluminum - Alloy Sheet and Plate.
5. ASTM B221 - Standard Specification for Aluminum - Alloy Extruded Bars, Rods, Wires, Shapes and Tubes.

- B. Consult factory for projects requiring Buy American requirements for American Recovery and Reinvestment Act, Build America Buy America Act or American Iron and Steel Certification

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Shop Drawings: Indicate opening dimensions and required tolerances, jamb connection details, anchorage spacing, hardware locations, installation details, and special conditions.
- C. Product Data: Provide information on components, application, hardware and accessories.

**** NOTE TO SPECIFIER ** Retain one or both paragraphs below. Retaining both paragraphs indicates "Two Stage Samples" process. Delete "Samples for Initial Selection" if colors have already been determined. Delete items not required.**

- D. Samples for Initial Selection: Provide manufacturer's finish charts showing full range of colors and textures available for units with factory applied finishes:
1. Include similar samples of accessories involving color selection.
- E. Samples for Verification: Provide for each type of exposed finish on the following components in manufacturer's standard sizes:
1. Curtain slats.

**** NOTE TO SPECIFIER ** Include the following for projects requiring LEED certification. Credits are available for the use of recycled materials and also for regional materials if the project is located within a 500-mile radius of the C.H.I. manufacturing facility in Arthur, IL.**

- F. Sustainable Design Submittals:
1. Recycled products: Indicate percentage of recycled material used in the manufacturing of products and percentage classified as post-consumer.
 2. Regional products: Indicate location of product manufacturer and distance from manufacturing facility to project site.

- G. Closeout Submittals: Operation and maintenance data.

1.5 QUALITY ASSURANCE

- A. Company specializing in the manufacturing of products specified in this section and with a minimum of five years' experience.
- B. Installer Qualifications: Installer shall be authorized and qualified to install overhead door systems on the type and scope of project specified.
- C. Source Limitations: Provide overhead coiling doors from one manufacturer for each type of door. Provide operators and other accessories from source acceptable to overhead coiling door manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of all materials in accordance with federal, state, and local laws.

1.7 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 recommended limits.

1.8 WARRANTY

- A. Provide an original of the manufacturer's limited warranty against manufacturing defects and product workmanship.
 - 1. 5-year limited warranty to be free from defects in materials and workmanship from date of manufacture.
 - 2. Spring wire is warranted for 1 year.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: C.H.I. Overhead Doors, which is located at: 1485 Sunrise Dr.; Arthur, IL 61911; Toll Free Tel: 800-677-2650; Fax: 800-738-5006; Email: aia@chiohd.com; Web: <http://www.chiohd.com>

**** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.**

- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.

**** NOTE TO SPECIFIER ** Delete article if not required or delete models not required.**

2.2 OVERHEAD COILING COUNTER SHUTTERS

- A. Performance Requirements:

**** NOTE TO SPECIFIER ** Delete Seismic performance option if not required.**

- 1. Seismic Performance: Evaluated to withstand earthquake motions determined per ASCE/SEI 7.

**** NOTE TO SPECIFIER ** Operation of 20 cycles per day is standard. Delete operation options not required.**

- 2. Operation: 20 cycles per day for shutter assembly including operator.
- 3. Operation: High demand, 20,000 cycles for shutter assembly including operator.
- 4. Operation: High demand, 50,000 cycles for shutter assembly including operator.

**** NOTE TO SPECIFIER ** Delete if LEED certification is not required.**

- 5. LEED Requirements:
 - a. Recycled Content, Minimum Percent: _____.
 - b. Percent Classified as Post Consumer, Minimum Percent: _____.

- B. Model 6544 as manufactured by C.H.I. Overhead Doors.
 - 1. Curtain: Flat faced, full width, interlocking extruded aluminum slats. Individual slat profile is 1-1/2 x 1/2 inch (38 x 13 mm).
 - a. Slat Material: 16-gauge, 0.050 inch (1.27 mm) 5005-H34 aluminum.

**** NOTE TO SPECIFIER ** Clear anodized is standard. Delete finish options not required. RAL is an upgrade.**

- 1) Finish: Clear anodized
- 2) Finish: Powder Coat Upgrade. RAL# _____
- b. Door Size (WxH): Standard up to 14 ft 4 inches (4369 mm) x 8 ft 4 inches (2540 mm). Consult with C.H.I. up to 16 ft 0 inches (4877 mm) wide or 9 ft 0 inches (2743 mm) tall.
- c. End Locks: Nylon, attached to every other slat to act as wearing surface and prevent lateral movement.

**** NOTE TO SPECIFIER ** Delete bottom bar and finish options not required. Clear anodized is standard. RAL is an upgrade.**

- a. Bottom Bar: Extruded aluminum rectangular bar with integral lift handles
 - 1) Finish: Clear anodized
 - 2) Finish: Powder coat to match curtain.
2. Guides: Two-piece, extruded aluminum box shaped guides.

**** NOTE TO SPECIFIER ** Delete finish options not required. Clear anodized is standard. RAL is an upgrade.**

- a. Finish: Clear anodized.
- b. Finish: Powder coat to match curtain.
3. Head Plate: Minimum 11-gauge, 0.114 inch (2.90 mm) rectangular steel plate. Precision sealed ball bearings supporting drive side axle. Headplate covers to match hood.
4. Barrel Assembly:
 - a. Barrel: Steel pipe sized for maximum deflection under full load to not exceed 0.03 inch (0.76 mm) per 1 ft (305 mm) of span. Welded rings or threaded lugs to barrel assembly for curtain attachment.
 - b. Springs: Tension assembly supported in barrel by precision ball bearings. Curtain weight counterbalanced by oil tempered, helically wound torsion springs, grease packed and mounted on steel torsion shafts with cast spring plug.
5. Hood: Square hood for structural rigidity and aesthetic appeal. Fits within head plates with intermediate supports as required.
 - a. Material: 18-gauge, 0.040 inch (1.02 mm) 5005-H34 Aluminum

**** NOTE TO SPECIFIER ** Delete finish options not required. RAL is an upgrade.**

- 1) Finish: Clear anodized.
- 2) Finish: Powder coat to match curtain
6. Locking Mechanism:

**** NOTE TO SPECIFIER ** For specifying locks on motorized doors, locking must be used in conjunction with an interlock switch for each lock. Handle throw cylinder lock is standard. Delete locking mechanism and keying options not required.**

- a. Handle throw cylinder lock
- b. Cylinder lock for bottom bar
 - 1) Keyed on exterior of door with handle throw on interior.
 - 2) Keyed on both sides of the door.

**** NOTE TO SPECIFIER ** For specifying locks on motorized shutters. Delete if manually operated or does not require locks.**

- c. Interlock Switches: Equip power-operated shutters with safety interlock switch to disengage power supply when shutter is locked.

7. Weather Seal:

**** NOTE TO SPECIFIER ** Delete weather seals not required. Bottom astragal is standard. Jamb brush is not available for between jamb mounting. Header brush is not available for under lintel mounting.**

- a. Bottom astragal
- b. Rubber hood baffle
- c. Jamb brush seal
- d. Header brush seal

**** NOTE TO SPECIFIER ** Delete mounting options and jamb construction options not required.**

8. Mounting:
 - a. Face of wall and above lintel.
 - b. Face of wall and under lintel.
 - c. Between jamb and above lintel.
 - d. Between jamb and under lintel.
9. Jamb Construction:
 - a. Solid Masonry: Anchor bolt fasteners.
 - b. Hollow Masonry: Through bolt fasteners and crush plates.
 - c. Stacked Brick: Through bolt fasteners and crush plates.
 - d. Steel Jambs: Self tapping fasteners.
 - e. Steel Frame Covered With Gypsum: Self tapping fasteners.
 - f. Wood Jambs: Provide wood lag bolts.
10. Operation:

**** NOTE TO SPECIFIER ** Delete operation options not required.**

- a. Manual Push Up. Standard up to 10 ft-4 inch (3150mm) wide curtains
- b. Manual Awning crank.
- c. Electric Motor Operator: UL listed and labeled. Size as recommended by manufacturer.
 - 1) Shutter Operation Speed: 8 to 12 inches per second.
 - 2) Operator Location:
 - a) Internally mounted in barrel.

**** NOTE TO SPECIFIER ** If more than one operator location is selected, note which shutters are associated with each requirement. Delete operator location option not required.**

- b) Externally mounted on drive side of shutter.
- 3) Power Supply: 115 VAC, single phase.
- 4) Control Station:

**** NOTE TO SPECIFIER ** First control station option is standard. Delete control station options not required.**

- a) 24 V, 3-button. Open, close, stop.
- b) 24 V, 3-button. Open, close, stop. Keyed lockout.
- c) 24 V, key with open and close contacts.
- d) 24 V, key with open/close contacts and stop button.

**** NOTE TO SPECIFIER ** NEMA 1 Surface- Interior is standard. Delete control station mounting options not required.**

- 5) Control Station Mounting:
 - a) Control Station Mounting: NEMA 1 Surface. Interior.
 - b) Control Station Mounting: NEMA 1 Flush. Interior.
 - c) Control Station Mounting: NEMA 4 Surface. Exterior.
 - d) Control Station Mounting: NEMA 4 Flush. Exterior.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for substrate construction and other conditions affecting performance of the work.
- B. Examine locations of electrical connections.
- C. Proceed with installation only after all unsatisfactory conditions have been corrected.

3.2 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, plumb, level and square to ensure smooth operation.

**** NOTE TO SPECIFIER ** Delete the following paragraph if shutters are manually operated.**

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

3.3 ADJUSTING

- A. Adjust hardware and moving parts so that doors operate smoothly throughout full operating range.
- B. Adjust seals to provide a tight fit around the entire perimeter.

3.4 DEMONSTRATION

- A. Demonstrate proper operation to Owner.
- B. Perform fire door and shutter drop tests in presence of Owner or owner's representative. Require signature for manufacturer supplied drop test form.

**** NOTE TO SPECIFIER ** Delete the following paragraph if maintenance service is not required for this project.**

3.5 MAINTENANCE SERVICE

**** NOTE TO SPECIFIER ** Maintenance service frequency should be determined by the usage of the door and the environment in which they are installed.**

- A. Initial Maintenance Service: Beginning at Substantial Completion.

**** NOTE TO SPECIFIER ** Delete full maintenance options not required.**

1. Full Maintenance: 3 months by skilled employees of installing company.
2. Full Maintenance: 6 months by skilled employees of installing company.
3. Full Maintenance: 9 months by skilled employees of installing company.
4. Full Maintenance: 12 months by skilled employees of installing company.
5. Preventative Maintenance: Repair or replace worn or defective components. Lubricate, clean, and adjust as required for door or shutter operation.

**** NOTE TO SPECIFIER ** Delete maintenance frequency options not required.**

- a. Maintenance Frequency: Monthly.
- b. Maintenance Frequency: Quarterly.
6. Parts and Supplies: Manufacturer's authorized replacement parts and supplies.

**** NOTE TO SPECIFIER ** The second paragraph adds appreciable cost and is general retained only for critical locations. Delete callback service option not required.**

7. Callback Service: Maintenance, including emergency callback service during normal working hours.
8. Callback Service: Maintenance, 24 hours per day, seven days per week, emergency callback service.

END OF SECTION