



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; fire-rated. (Model 7522)

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. National Fire Protection Association NFPA 80 - Standard for Fire Doors and Fire Windows.
- C. Underwriters Laboratories (UL) 10B - Standard for Fire Tests of Door Assemblies.
- D. 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.

**** NOTE TO SPECIFIER ** Delete the following if fire doors are not specified.**

- D. Performance Requirements:
 - 1. Fire Door Construction: Conform to UL 10B.
 - 2. Installed Fire Door Assembly: Conform to NFPA 80.

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, FIRE RATED

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

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

- 3. 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.**

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

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

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

B. Model 7522 as manufactured by C.H.I. Overhead Doors.

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

1. Fire Rating: 3/4 hour. UL listed.
2. Fire Rating: 1-1/2 hours. UL listed.
3. Fire Rating: 3 hours. UL listed.
4. Curtain: Flat faced, full width, interlocking roll formed slats. Individual slat profile is 1-1/2 x 1/2 inch (38 x 13 mm).
 - a. Slat Material: Exterior Slat Material: 22-gauge, 0.028 inch (0.72 mm) polyester painted (G90 coating) galvanized steel.

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

- 1) Finish: Gray
- 2) Finish: White
- 3) Finish: Galvanized. Clear coated in place of paint.
- 4) Finish: Powder Coat Upgrade. RAL# _____
- b. Door Size (WxH): Standard up to 13 ft 0 inches (3962 mm) x 8 ft 4 inches (2540 mm).
- c. End locks: Galvanized malleable iron, attached to every other slat to act as wearing surface and prevent lateral movement. Riveted in place.

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

- d. Bottom Bar: 1/8 inch (3.17 mm) steel angle bolted to curtain, with adjustable tubular compression weather seal.
 - 1) Finish: Galvanized
 - 2) Finish: Powder coat to match curtain
5. Guides: Formed two-piece primed steel angles with removable stops as standard.

**** NOTE TO SPECIFIER ** Delete finish options not required. Black is standard.**

- a. Finish: Primed Black
- b. Finish: Powder Coat to match curtain
6. Head Plate: Minimum 1/4 inch (6.34 mm) rectangular steel plate. Precision sealed ball bearings supporting drive side axle.
7. 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.
8. Hood: Square hood for structural rigidity and aesthetic appeal. Fits within head plates with intermediate supports as required.
 - a. Material: 24-gauge, 0.022 inch (0.57 mm) polyester painted (G90 coating) galvanized steel
 - 1) Finish: To match curtain interior.

**** NOTE TO SPECIFIER ** Delete if smoke seals and labels are not required.**

9. Smoke Seals: Replaceable smoke seal perimeter gaskets or brushes for smoke and draft control as required for door listing and labeling by a qualified testing agency.
 - a. Jamb and header mounted smoke seals, shipped loose
 - b. Smoke Label: Provide doors with U.L. "S" label in addition to the fire door label to certify smoke control listing

10. Locking Mechanism:

**** NOTE TO SPECIFIER ** Delete locking options not required. Plated steel slide bolt lock is standard.**

- a. Plated steel slide bolt locks. Padlock provisions.
- b. Stainless steel slide bolt locks. Padlock provisions.

**** NOTE TO SPECIFIER ** Delete mounting options and jamb construction options not required. Comply with fire door listing.**

11. 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.

12. Jamb Construction: Comply with fire door listing.

- 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.

13. Automatic Closing Device: Or release holder mechanism and governor unit complying with NFPA 80. Automatic closing device activated by the following:

**** NOTE TO SPECIFIER ** Delete paragraphs below not required. Meet project requirements and requirements of authorities having jurisdiction. If more than one option is required, identify primary and secondary closing devices. Fusible links comply with NFPA 80 requirements for fusible links on both sides of the shutter opening. Revise paragraph if not required on both sides of the shutter opening or add fusible link ceiling unit for use with suspended ceilings. Rating of 165 degrees Fahrenheit is standard for rolling steel fire shutters.**

- a. Fusible Links: Interconnected. On both sides of shutter opening.

**** NOTE TO SPECIFIER ** Delete melting point option not required.**

- 1) Melting Point: 165 degrees F (74 degrees C).
- 2) Melting Point (F/C): _____ degrees.
- b. Smoke Detectors: Manufacturer's standard UL labeled. On both sides of wall and shutter holder release device.

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

- 1) Type: Ionization.
- 2) Type: Photo electric.
- c. Heat Rise Detectors: Manufacturer's standard UL labeled. On both sides of wall and shutter holder release device.
- d. Connected to building fire detection, smoke detection, and alarm systems through manufacturer's UL labeled release device.

**** NOTE TO SPECIFIER ** Delete release holder option if automatic closing device specified included a release holder.**

- e. Release Holder: Fail safe as an interface between detection device specified and fire rated shutter.

**** NOTE TO SPECIFIER ** Select all options required.**

- 1) Provide adjustable time delay for up to 10 seconds.

**** NOTE TO SPECIFIER ** The following option should be included if release holder needs to be equipped with a stand-alone battery backup system. If backup power is available from building alarm system, the release holder can receive backup power from that source and does not require a built-in battery backup feature.**

- 2) Provide battery back-up system.
- 3) Provide speaker and verbal warning when activated.
- 4) Provide warning strobe light when activated.
- 5) Provide warning horn when activated.

14. Operation:

**** NOTE TO SPECIFIER ** Delete manual operation option not required or delete both. Manual push up**

is available for shutters 12 ft-4 inches (3759 mm) wide and 10 ft-4 inches (3150 mm) high. Chain hoist operation is available for shutters up to 256 sq ft (23.78 sq m). Shutters larger than 256 sq ft (23.78 sq m) require motor operation.

- a. Manual Push Up Operation: Utilize partial spring tension release to initiate closure on alarm.
 - 1) Governor: If required by size of shutter. To maintain closing speed range of 6 to 24 inches (152 to 610 mm) per sec per NPFA 80.
- b. Manual Awning Crank Operation: Utilize partial spring tension release to initiate closure on alarm.
 - 1) Governor: If required by size of shutter. To maintain closing speed range of 6 to 24 inches (152 to 610 mm) per sec per NPFA 80.
- c. Electric Motor Operation: Fail safe operator unit, listed and approved for use on shutter. Capacity as recommended and provided by shutter manufacturer. Maintains spring tension when activated by alarm, and easily reset from floor without requiring tools.

**** NOTE TO SPECIFIER ** Delete if electric motor operation is not required.**

- 1) Usage Classification: Electric operator and components capable of operating for not less than number of cycles indicated for each shutter.
- 2) Operator Location: Externally mounted on drive side of shutter.
- 3) Power Supply: 115 VAC, single phase.

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

- 4) Control Station: 24 V, 3-button. Open, close, stop.
- 5) Control Station: 24 V, 3-button. Open, close, stop. Keyed lockout.
- 6) Control Station: 24 V, key with open and close contacts.
- 7) Control Station: 24 V, key with open/close contacts and stop button.

**** NOTE TO SPECIFIER ** Delete control station mounting options not required. The first control station mounting option is standard.**

- 8) Control Station Mounting: NEMA 1 Surface. Interior.
- 9) Control Station Mounting: NEMA 1 Flush. Interior.

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