SECTION 08330 (08 33 00)

COILING DOORS

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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

** NOTE TO SPECIFIER ** Delete items below not required for project.

A. Overhead Coiling Service Doors:
   1. Non-insulated, heavy duty. (Model 6244)

B. Electric motor operation for overhead coiling service doors.

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:

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. Manufacturer Qualifications: 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. Five-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 SERVICE DOORS; NON-INSULATED, INDUSTRIAL DUTY

A. Performance Requirements:

** NOTE TO SPECIFIER ** Certified wind load is not available for aluminum service doors (model 6244), or in conjunction with vision lites.

1. Wind Loads: Door assembly to withstand 20 psf (958 Pa) per ASTM E330 using a 1.0 factor of safety. Certified wind load is also available.
2. Windborne-Debris Impact Resistance: Design door assembly to pass missile impact and cyclic pressure tests in accordance with ANSI/ DASMA 108 and/or ANSI/DASMA 115 and to withstand wind load pressures indicated.

** 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 ** 20,000 cycles is standard. Delete operation options not required.

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

7. Operation: High demand, 100,000 cycles for door assembly including operator.

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

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

B. Model 6244 as manufactured by C.H.I. Overhead Doors:
1. Openings up to (WxH): 14 ft 4 inch x 18 ft 4 inch (4369 x 5588 mm).
2. Curtain: Flat faced, full width, interlocking roll formed aluminum slats. Individual slat profile is 2-3/4 x 3/4 inch (70 x 19 mm).
   a. Slat Material: 16 ga, .0500 inch (1.27 mm) 5005-H34 aluminum.
      1) Finish: Clear anodized.

** NOTE TO SPECIFIER ** Slat design is optional. Delete if not required.

   b. Slat Design: Fenestrated with rectangular 5 x 1-1/8 inch (127 x 29 mm) openings, on 7 inch (178 mm) centers.
      1) Pattern: As shown on drawings.
      2) Pattern: No. of Openings Wide: ___. No. of Openings High: ___.
         a) Bottom Height of Openings Above Floor: _____.
   c. End Locks: Galvanized malleable iron, attached to every other slat to act as wearing surface and prevent lateral movement. Riveted in place.
   d. Wind locks: Per design. Certified wind load not available.

** NOTE TO SPECIFIER ** Steel angles are standard. Extruded aluminum tube bottom bar is available for doors up to 20 ft (6096 mm) wide, for manual operated doors when cylinder locks are required. Delete bottom bar and finish options not required. Black finish is standard. RAL is an upgrade.

   e. Bottom Bar: Two steel angles bolted back-to-back. 11 ga, .114 inch (2.90 mm).
      1) Finish: Primed black.
      2) Finish: Powder coat.
   f. Bottom Bar: Extruded aluminum tube type bottom bar, 2 x 4 inches (51 x 102 mm). Available up to 20 ft 4 inches (6198 mm).

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

      1) Finish: Clear anodized.
      2) Finish: Powder coat.

** NOTE TO SPECIFIER ** Delete if vision lites are not required.

   g. Vision Lites, Rectangular (WxH): 5 x 1-1/8 inch (127 x 29 mm), on 7 inch (178 mm) centers. Clear acrylic glazing.

** NOTE TO SPECIFIER ** Delete pattern option not required.

      1) Pattern: As shown on drawings.
      2) Pattern: Number of Lites Wide: _____. Number of Lites High: _____.
         a) Bottom Height of Lites Above Floor (in/mm): _____.
3. Guides: Three, minimum 3/16 inch (4.76 mm) structural angles bolted together to form guide and mounting surface. Removable 24-inch (610 mm) service panel for easy access to slats and bottom bar. Steel guides are standard. Aluminum upgrade available.

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

   a. Finish: Primed black.
   b. Finish: Hot dipped galvanized.
   c. Finish: Powder coat.
   d. Finish: Clear anodized aluminum.
   e. Finish: Aluminum with powder coat.
4. Head Plate: Minimum 1/4 inch (6.34 mm) rectangular steel plate. Precision sealed ball bearings supporting drive side axle.

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

   a. Finish: Primed black.
   b. Finish: Powder coat.

5. Barrel Assembly:
   a. Barrel: Steel pipe sized for maximum deflection under full load to not exceed .03 inch (.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.
6. Hood: Half-hexagonal hood for structural rigidity and aesthetic appeal. Fits within head plates with intermediate supports as required. Steel hood is standard. Aluminum upgrade available.

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

   a. Material: 24 ga, .022-inch (.57 mm) polyester painted (G90 coating) galvanized steel
      1) Finish: Gray.
      2) Finish: Galvanized. Clear coated in place of paint.
      3) Finish: Powder coat.
   b. Material: 18 ga, .040 inch (1.02 mm) 5005-H34 Aluminum
      1) Finish: Clear anodized.
      2) Finish: Powder coat.

** NOTE TO SPECIFIER ** Delete weather seals not required. The first 3 are standard. Jamb brush is not available for between jamb mounting. Header brush seals are not available for under lintel mounting.

7. Weather Seals: Bottom astragal.
8. Weather Seals: Vinyl guide seal.
9. Weather Seals: Rubber hood baffle.
10. Weather Seals: Jamb brush.
11. Weather Seals: Header brush.

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

12. Locking Mechanism: Two plated steel slide bolt locks. Padlock provisions.
13. Locking Mechanism: Chain keeper suitable for padlocking.
14. Locking Mechanism: Cylinder lock for bottom bar.
    a. Keyed on exterior of door with handle throw on interior.
    b. Keyed on both sides of the door.

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

15. Interlock Switches: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

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

16. Mounting: Face of wall and above lintel.
17. Mounting: Face of wall and under lintel.
18. Mounting: Between-jamb and above lintel.
19. Mounting: Between-jamb and under lintel.
20. Jamb Construction, Solid Masonry: Anchor bolt fasteners.
21. Jamb Construction, Hollow Masonry: Through bolt fasteners and crush plates.
22. Jamb Construction, Stacked Brick: Through bolt fasteners and crush plates.
23. Jamb Construction, Steel Jambs: Self tapping fasteners.
24. Jamb Construction, Steel Frame Covered With Gypsum: Self tapping fasteners.
25. Jamb Construction, Wood Jambs: Provide wood lag bolts.
26. Operation:

** NOTE TO SPECIFIER ** Delete manual options not required. The push up option is available for units up to 10 ft 4 inch (3150 mm) wide x 8 ft 4 inch tall (2540 mm).

   a. Manual: Push-up.
   b. Manual: Chain hoist.

c. Electric: See article "Electric Motor Operation for Overhead Coiling Service Doors."

** NOTE TO SPECIFIER ** Delete article if not required

2.3 ELECTRIC MOTOR OPERATION FOR OVERHEAD COILING SERVICE DOORS

A. Electric Motor Operator: UL listed and labeled. Sized by manufacturer.

1. Drive Speed of Door: 8 to 12 inches (203 to 305 mm) per sec.

** NOTE TO SPECIFIER ** Delete usage classifications not required. If more than one is selected, note which doors are associated with each requirement.

2. Usage Classification: Heavy Duty: 25 or more cycles per hr. Over 90 cycles per day.
3. Usage Classification: Standard Duty: 25 cycles per hr. 90 cycles per day.
4. Usage Classification: Medium Duty: 12 cycles per hr. 50 cycles per day.
5. Usage Classification: Light Duty: Up to 10 cycles per hr.

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

6. Operator Location: Front of hood.
7. Operator Location: Wall.
8. Operator Location: Opposite side of wall. Connection through wall.
9. Operator Location: As shown on drawings.

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

10. Operator Exposure: Interior.
11. Operator Exposure: Exterior; wet and humid. Provide operator cover to protect operator from weather.

** NOTE TO SPECIFIER ** Delete one of the following options. If both are required, note which doors are associated with each requirement.

a. Operator Cover Finish: Match hood.
b. Operator Cover Finish: Galvanized.

** NOTE TO SPECIFIER ** Delete power supply options not required.

12. Power Supply: 115 VAC, single phase.
13. Power Supply: 230 VAC, single phase.
14. Power Supply: 208/230 VAC, three phase.
15. Power Supply: 460 VAC, three phase.
16. Power Supply: 575 VAC, three phase.

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

17. Control Station: 24 V, 3-button. Open, close, stop.
18. Control Station: 24 V, 3-button. Open, close, stop. Keyed lockout.
19. Control Station: 24 V, key with open and close contacts.
20. Control Station: 24 V, key with open/close contacts and stop button.

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

21. Control Station Mounting: NEMA 1 Surface. Interior. (standard)
22. Control Station Mounting: NEMA 1 Flush. Interior.
23. Control Station Mounting: NEMA 4 Surface. Exterior.
24. Control Station Mounting: NEMA 4 Flush. Exterior.

** NOTE TO SPECIFIER ** Delete the following paragraph if remotes are not required.

B. Remote Controls:

** NOTE TO SPECIFIER ** Three button remote controls can operate up to three doors or can be programmed to function as Open / Close / Stop control. Delete radio receiver option not required.

1. Radio Receiver: Single button remote control.
2. Radio Receiver: Three button remote controls.

** NOTE TO SPECIFIER ** Include subparagraph if Open / Close / Stop function is required.

a. Program remote controls to Open / Close / Stop the door.

3. Transmitters: _____.

** NOTE TO SPECIFIER ** Delete paragraph if special controls are not required or delete controls not required. How special controls are used in operation of door may determine which entrapment protection devices are specified. Sequence of operation is another factor that may determine which controls are best suited to provide the desired operation. Contact the manufacturer for more detail.

C. Special Controls:

1. Keypad entry system. Mounting post.
2. Card reader system. Mounting post.
3. Internet connectivity.
4. Door timer.
5. Loop detector.
6. Pull cord.
7. Vehicle detector.

D. Primary Entrapment Protection Devices:

** NOTE TO SPECIFIER ** For operators complying with UL 325, one of the following monitored entrapment protection devices must be connected or constant contact on the 3-button station "Close" button is required to lower the door. Delete options not required.

1. NEMA 1 Monitored Photo Sensors: Photo eyes fully monitored, non-contact, infrared beam photo sensor system. Reverses closing door to full open position when obstruction is sensed. Photo sensors to be mounted no higher than 6 inches (152 mm) above floor.
2. NEMA 4 Monitored Photo Sensors: Photo eyes fully monitored, non-contact, photo beam reversing photo sensor system with NEMA 4 watertight enclosure. Reverses closing door to full open position when obstruction is sensed. Photo sensors to be mounted no higher than 6 inches (152 mm) above floor.
3. Monitored Electric Sensing Edge: Electric sensing edge fully monitored and connected to operator shall reverse a closing door to full open position when an obstruction is sensed.

** NOTE TO SPECIFIER ** Devices are optional. Delete protection device not required or delete both. Used to supplement, but not replace, primary entrapment protection devices for operators complying with UL 325.

4. Ancillary Entrapment Protection Device: Non-Monitored Electric Sensing Edge. Reverses closing door to full open position when obstruction is sensed.
5. Ancillary Entrapment Protection Device: Pneumatic Sensing Edge. Reverses closing door to full open position when obstruction is sensed.

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 door and shutter assembly in accordance with manufacturer's instructions.

B. Anchor to adjacent construction without distortion or stress.

C. Fit and align door and shutter assembly including hardware, plumb, level, and square to

ensure smooth operation.

** NOTE TO SPECIFIER ** Delete the following paragraph if doors and 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 generally 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