



SECTION 08332 [08 33 13]

COILING COUNTER DOORS

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**** NOTE TO SPECIFIER ** Wayne Dalton; Coiling counter door products.**

This section is based on the products of Wayne Dalton, which is located at:
2501 S. State Highway 121 Business, Suite 200
Lewisville, TX 75067
Phone: (800) 827-3667
Web Site: www.wayne-dalton.com
Email: info@wayne-dalton.com.
[click Here] for additional information.

Since its inception in 1954, Wayne-Dalton has become known as a company with innovative ideas, which far exceed industry standards. Often, Wayne-Dalton is the only source for the latest garage door and garage door opener features. Because the company has always maintained a staunch commitment to developing innovative new products, Wayne-Dalton is now a world leader in the garage door and garage door opener industry.

Wayne-Dalton Rolling Doors have a long history of excellence in the design and construction of doors that have met and often exceeded the needs and expectations of even the most critical projects.

With numerous innovations created and experience acquired over the years, Wayne-Dalton continues to lead all other manufacturers with both standard and custom-made doors from a variety of materials and colors to meet almost any need.

So whether it's enormous Titan rolling doors, protective FireStar rolling steel fire doors, ventilated Secur-Vent doors, or secure Accordion-Folding Grilles, you can feel confident that with Wayne-Dalton's many years of knowledge and experience, you will get the best possible solution for your building application needs.

This specification includes 500 Series Shutters for use in applications that incorporate counter tops or openings that require the shutter to rest on a sill. With several different modes of operation including lift-up, awning crank and motor, the Wayne-Dalton Rolling Counter Shutter is the preferred solution for your application. Whether it's a concession stand, accounts payable window, sports arena or school food service, the 500 Series is the counter shutter of choice.

PART 1 GENERAL

1.1 SECTION INCLUDES

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

- A. Coiling Metal Counter Doors.
- B. Coiling Metal Counter Doors With Integral Frame
- C. Coiling Counter Fire Doors.
- D. Coiling Counter Fire Doors With Integral Frame.
- E. Coiling Wood Counter Doors.

1.2 RELATED SECTIONS

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

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
- C. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- D. Section 09900 - Painting: Field applied finishes.
- E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator and from door operator to control station.
- F. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES

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

- A. ASTM A 123 - Standard specification for Zinc (hot-dipped galvanized) coating on iron and steel products.
- B. ASTM A 229 - Standard specification for Steel wire, oil-tempered for mechanical springs.
- C. ASTM A 653 - Standard specification for Steel sheet, zinc-coated (galvanized) by the hot-dipped process, commercial quality.
- D. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- E. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- F. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- G. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
- H. NEMA MG 1 - Motors and Generators.

- I. NFPA-80 – Standard for Fire Doors and Fire Windows.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Fire Rated Assemblies: Provide assemblies complying with NFPA 80 and listed in UL Directory or Intertek Testing Services (Warnock Hersey Listed) Directory.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Details of construction and fabrication.
 - 4. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.

**** NOTE TO SPECIFIER ** Delete selection samples if colors have already been selected.**

- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking, adjustment and maintenance of all components.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum three years and approved by manufacturer.

**** NOTE TO SPECIFIER ** Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.**

- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
- C. Store materials in a dry, warm, ventilated weathertight location

1.8 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 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 absolute limits.

1.10 COORDINATION

- A. Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Wayne Dalton; 2501 S. State Highway 121 Business, Suite 200, Lewisville, TX 75067. ASD. Phone: (800) 827-3667; Web Site: www.wayne-dalton.com. Email: info@wayne-dalton.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 provisions of Section 01600.

**** NOTE TO SPECIFIER ** Edit the following paragraphs as required and applicable to project requirements. Delete the paragraphs that are not applicable.**

2.2 COILING METAL COUNTER DOORS

**** NOTE TO SPECIFIER ** Wayne-Dalton 500 Series are available for openings with a maximum clear opening of 18 feet wide if aluminum and 15 feet wide if steel or stainless steel and 7 feet high. Wall thickness limitations are 3-5/8 inches minimum and 21 inches maximum.**

- A. Coiling Metal Counter Doors: Model 500.
- B. Curtains:
1. Material: Flat faced, 2 inch, No. 17 slats fabricated of:
**** NOTE TO SPECIFIER ** Select the curtain and material required from the following paragraphs as required. Delete the paragraphs that are not applicable. Galvanized, bonderized, steel is standard.**
 - a. Galvanized, bonderized, steel 22 gauge.
 - b. Extruded aluminum 0.050 inch thick, 16 B&S gauge.
 - c. Stainless steel 22 gauge.**** NOTE TO SPECIFIER ** Select optional perforated slats if required from the following paragraphs as required. Available in steel and stainless steel. Delete if not applicable.**
 2. Provide perforated slats where indicated. Slat perforations are 1/16 inch diameter holes with 20 – 25 percent open area over length of each slat.
 3. Alternate slats will be fitted with end locks to hold curtain in alignment.
 4. Bottom of curtain finished with an extruded, tubular, or single angle bottom bar fitted with a continuous vinyl bumper to protect counter top.
- C. Guides: Extruded aluminum. Continuous strips of wool pile are inserted into guides to eliminate metal-to-metal contact and to provide dust-seal around curtain.
- D. Brackets: Metal plates with permanently sealed ball bearings designed to enclose ends of coil and provide support for counterbalance pipe at each end. Plated fabricated of:
**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable. Steel is standard.**
 1. Steel 3/16 inch thick minimum.
 2. Extruded aluminum 1/8 inch thick minimum.
 3. Stainless steel 3/16 inch thick minimum .
- E. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.
- F. Hood: Hood will enclose curtain coil and counterbalance mechanism and is fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provided longitudinal stiffness.
**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable.**
 1. Galvanized steel minimum 24-gauge
 2. Stainless steel minimum 24-gauge
 3. Aluminum, 22 gauge B&S
- G. Finish: Curtain, bottom bar, and hood to be finished as follows:
**** NOTE TO SPECIFIER ** Select the finish required from the following paragraph. Delete those not applicable. Powder coating is available in 180 colors. Gray, white, brown or beige baked-on primer is standard.**
 1. Gray, white, brown or beige baked-on primer on galvanized steel.
 2. Powder coating on galvanized steel with color as selected from the manufacturer's standard colors.
 3. Clear anodized aluminum.
 4. Bronze anodized aluminum.
 5. Stainless steel #4 finish.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs for manual operation or electric motor operation and delete the one not required.**

H. Manual Operation:

**** NOTE TO SPECIFIER ** Select one of the following manual operation paragraphs and delete the ones not required.**

1. Manual push-up.
2. Manual crank.

**** NOTE TO SPECIFIER ** Include the following paragraph if electric motor operation is required and delete if not required.**

I. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot or more than 1 foot per second.

1. Sensing Edge Protection:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- a. Electric sensing edge.
 - b. Pneumatic sensing edge.
2. Operator Controls:

**** NOTE TO SPECIFIER ** Select one of the following operation paragraphs and delete the one not required.**

- a. Push-button operated control stations with open, close, and stop buttons.
- b. Key operation with open, close, and stop controls.
- c. Push-button and key operated control stations with open, close, and stop buttons.

**** NOTE TO SPECIFIER ** Select one of the following location paragraphs and delete the one not required.**

- d. Controls for interior location.
- e. Controls for exterior location.
- f. Controls for both interior and exterior location.

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- g. Controls surface mounted.
- h. Controls flush mounted.

J. Locking

1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide.

**** NOTE TO SPECIFIER ** Select the following option if required from the following paragraph. Delete if not applicable.**

2. Provide cylinder lock at jambs or in center of bottom bar.

**** NOTE TO SPECIFIER ** Select the following option for power operated door from the following paragraph. Delete if not applicable.**

3. Locks on electric-motor operated doors, shall be provided with electric interlocks to prevent operation when lock bolts are engaged in the guides.

K. Mounting: Overhead Structure with:

**** NOTE TO SPECIFIER ** Select the one of the following options as required from the following paragraphs. Delete those not applicable.**

1. Steel jambs.
2. Wood jambs.
3. Masonry jambs.
4. Drywall over 16 gauge minimum steel studs or wood stud jambs.

2.3 COILING METAL COUNTER DOORS WITH INTEGRAL FRAME

**** NOTE TO SPECIFIER ** Wayne-Dalton metal counter doors with integral frame are available for openings with a maximum clear opening of 14 feet wide and 7 feet high.**

A. Coiling Metal Counter Doors with Integral Frame: Wayne Dalton Coiling Metal Counter Doors with Integral Frame.

B. Curtains:

1. Material: Flat faced, 2 inch, No. 17 slats fabricated of:

**** NOTE TO SPECIFIER ** Select the curtain and material required from the following paragraphs as required. Delete the paragraphs that are not applicable.**

- a. Extruded aluminum 0.050 inch thick, 16 B&S gauge.
- b. Galvanized, bonderized, steel 20 gauge.
- c. Stainless steel 20 gauge.

**** NOTE TO SPECIFIER ** Select optional perforated slats if required from the following paragraphs as required. Available in aluminum, steel and stainless steel. Delete if not applicable.**

2. Provide perforated slats where indicated. Slat perforations consists of 1/16 inch diameter holes with 41 percent open area over length of each slat.
3. Alternate slats will be fitted with end locks to hold curtain in alignment.
4. Bottom of curtain finished with an extruded, tubular, or single angle bottom bar fitted with a continuous vinyl bumper to protect counter top.

**** NOTE TO SPECIFIER ** Select the frame if required from the following paragraph. Delete if not applicable. Sill may be omitted when so specified.**

C. Frame: Pre-assembled Integral stainless steel frame units to suit wall thickness, with 16 gauge jambs and head, hood and fascia, and 14 gauge sill. Grooves are formed into sides of frame for retaining curtain.

D. Guides: Extruded aluminum shapes of 6063 alloy, clear anodized extending above lintel to furnish support for brackets. Continuous strips of wool pile are inserted into guides to eliminate metal-to-metal contact and to provide dust-seal around curtain.

E. Brackets: Metal plates with permanently sealed ball bearings designed to enclose ends of coil and provide support for counterbalance pipe at each end. Plated fabricated of:

**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable.**

1. Extruded aluminum 1/8 inch thick minimum.
2. Steel 3/16 inch thick minimum.
3. Stainless steel 3/16 inch thick minimum.

F. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.

G. Hood: Hood will enclose curtain coil and counterbalance mechanism and is fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provided longitudinal stiffness.

**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable.**

1. Galvanized steel minimum 24-gauge
2. Stainless steel minimum 24-gauge

3. Aluminum, 22 gauge B&S

H. Finish: Curtain, bottom bar, and hood to be finished as follows:

**** NOTE TO SPECIFIER ** Select the finish required from the following paragraph. Delete those not applicable. Powder coating is available in 180 colors.**

1. Aluminum: Clear anodized.
2. Aluminum: Bronze anodized.
3. Aluminum: Powder coating as selected from the manufacturer's standard colors.
4. Steel: Gray baked-on primer.
5. Steel: Powder coating as selected from the manufacturer's standard colors.
6. Stainless steel #4 finish.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs for manual operation or electric motor operation and delete the one not required.**

I. Manual Operation:

**** NOTE TO SPECIFIER ** Select one of the following manual operation paragraphs and delete the ones not required.**

1. Manual push-up.
2. Manual crank

**** NOTE TO SPECIFIER ** Include the following paragraph if electric motor operation is required and delete if not required.**

J. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot or more than 1 foot per second.

1. Sensing Edge Protection:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- a. Electric sensing edge.
2. Operator Controls:

**** NOTE TO SPECIFIER ** Select one of the following operation paragraphs and delete the one not required.**

- a. Push-button operated control stations with open, close, and stop buttons.
- b. Key operation with open, close, and stop controls.
- c. Push-button and key operated control stations with open, close, and stop buttons.

**** NOTE TO SPECIFIER ** Select one of the following location paragraphs and delete the one not required.**

- d. Controls for interior location.
- e. Controls for exterior location.
- f. Controls for both interior and exterior location.

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- g. Controls surface mounted.
- h. Controls flush mounted.

K. Locking

1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide.

**** NOTE TO SPECIFIER ** Select the following option if required from the following paragraph. Delete if not applicable.**

2. Provide cylinder lock at jambs or in center of bottom bar.

**** NOTE TO SPECIFIER ** Select the following option for power operated door from the following paragraph. Delete if not applicable.**

3. Locks on electric-motor operated doors, shall be provided with electric interlocks to prevent operation when lock bolts are engaged in the guides.

L. Mounting: Integral Frame Self Supporting with structural tubes:

**** NOTE TO SPECIFIER ** Select the one of the following options as required from the following paragraphs. Delete those not applicable.**

1. Steel.
2. Extruded Aluminum.
3. Stainless Steel.

2.4 COILING COUNTER FIRE DOORS

**** NOTE TO SPECIFIER ** Wayne-Dalton Fire Counter Doors are available for openings with a maximum clear opening of 16 feet wide and 9 feet high.**

A. Coiling Counter Fire Doors

**** NOTE TO SPECIFIER ** Select the Model required from the following two paragraphs. Delete the paragraph that is not applicable.**

1. Model 540, Galvanized steel.
2. Model 550, Stainless steel.

B. Label: Provide rolling fire doors certified with the following listing.

**** NOTE TO SPECIFIER ** Select one or more of the following paragraphs to suit the projects requirements for the door size(s) required and delete the ones not required. Note that UL Labels are standard and FM labels are optional.**

1. UL 3-Hour Class A Label for installation on masonry or steel jamb walls (face mounted). Door may be welded to the face of steel jambs.
2. ULC 3-Hour Class A Label for installation on masonry or steel jamb walls (face mounted). Door may be welded to the face of steel jambs.
3. FM 3-Hour Class A Label for masonry or concrete walls, steel wall jambs or with steel tubes set against fire walls (masonry or non-masonry construction).
4. UL 1-1/2-Hour Class B Label for installation in non-masonry walls, face mounted or between jambs.
5. ULC 1-1/2-Hour Class B Label for installation in non-masonry walls, face mounted or between jambs.
6. FM 3/4-Hour Class B Label when installed on fire-rated gypsum dry walls.

C. Curtain:

1. Material: Flat faced, 2 inch, No. 17 slats fabricated of:

**** NOTE TO SPECIFIER ** Select the material and Model required from the following two paragraphs. Delete the paragraph that is not applicable.**

- a. Galvanized, bonderized, steel 22 gauge, Model 540.
- b. Stainless steel 22 gauge #4 finish, Model 550.
- c. Alternate slats shall be fitted with end locks to hold curtain in alignment.

**** NOTE TO SPECIFIER ** Select the following paragraph as required for smoke protection and delete if not required.**

2. Smoke Seal Package: Provide UL Labeled smoke protection including full perimeter seal, flat slat, caulking. Comply with with UL label for "Leakage Rated Assembly" or "S" label.
3. Curtain Finish: Curtain to be finished as follows:

**** NOTE TO SPECIFIER ** Select the finish required from the following paragraph. Delete those not applicable. Galvanized with primer is standard for Model 540. Powder coating is available in 180 colors.**

- a. Galvanized with gray, white, brown or beige baked-on primer, Model 540.
- b. Galvanized steel, Model 540.
- c. Powder coating, Model 540 with color as selected from the manufacturer's standard colors.
- d. Stainless steel #4 finish, Model 550.

**** NOTE TO SPECIFIER ** Select the following paragraph if glazing is required and delete if not required.**

- 4. Glazing: Fire-rated vision panels, four panels 3 inch by 5/8 inch (76 by 16 mm).

**** NOTE TO SPECIFIER ** Select one of the following bottom bar paragraphs and delete the ones not required. Galvanized steel single angle is standard for Models 540 and 550. Stainless steel bottom bars are available for Model 550 only.**

- 5. Bottom Bar:
 - a. Galvanized steel single angle.
 - b. Galvanized steel single angle with powder coat finish.
 - c. Stainless steel single angle #4 finish.

**** NOTE TO SPECIFIER ** Select the following optional vinyl astragal paragraph if required and delete if not required**

- d. Provide with vinyl astragal.

D. Guides:

**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable. Steel primed painted black is standard. Stainless steel bottom bars are standard for Model 550 only.**

- 1. Steel primed construction with black finish, Model 540.
- 2. Stainless steel #4 finish, Model 550.

E. Brackets: fabricated of:

**** NOTE TO SPECIFIER ** Select the material required from the following paragraph. Delete those not applicable. Steel primed painted black is standard. Stainless steel bottom bars are standard for Model 550 only.**

- 1. Steel primed painted black.
- 2. Galvanized (hot dipped).
- 3. Powder coating as selected from the manufacturer's standard colors.
- 4. Stainless steel.

F. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.

G. Hood: Hood will enclose curtain coil and counterbalance mechanism and is fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provided longitudinal stiffness.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs and delete any not required. Galvanized steel with primer is standard for Model 540. Stainless steel is standard for Model 550 only.**

- 1. Galvanized steel with gray baked-on primer minimum 24-gauge.
- 2. Galvanized steel, 24 gauge.
- 3. Powder coating as selected from the manufacturer's standard colors.
- 4. Stainless steel #4 finish, 24-guage material.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs for manual operation or electric motor operation and delete the one not required.**

H. Manual Operation:

**** NOTE TO SPECIFIER ** Select one of the following manual operation paragraphs and delete the ones not required.**

1. Push-up (standard).
2. Awning crank operation.

**** NOTE TO SPECIFIER ** Include the following paragraph if electric motor operation is required and delete if not required.**

- I. Electric Motor Operation: Provide electric operator as listed in the door UL file, for size as recommended by manufacturer to move door in either direction.

**** NOTE TO SPECIFIER ** Select following paragraphs if required and delete if not required.**

1. Sensing Edge Protection:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- a. Electric sensing edge.
- b. Pneumatic sensing edge.

2. Operator Controls:

**** NOTE TO SPECIFIER ** Select one of the following operation paragraphs and delete the one not required.**

- a. Push-button operated control stations with open, close, and stop buttons.
- b. Key operation with NEMA 1 interior, NEMA 4 exterior, surface and flush mounted open, close, and stop controls.

**** NOTE TO SPECIFIER ** Select one of the following location paragraphs and delete the one not required.**

- c. Controls for interior location.
- d. Controls for exterior location.
- e. Controls for both interior and exterior location.

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- f. Controls surface mounted.
- g. Controls flush mounted.

**** NOTE TO SPECIFIER ** Select the following paragraphs for standard fire door manual operation or for electric motor operation and delete if not required.**

3. Automatic Closure:

- a. Doors will be equipped with FireStar release mechanism, requiring only one cable to be routed to the operated side (cable not required to be routed to adjusting wheel side). Doors will close by a thermally actuated link rated at 165 degrees F, or by an optional listed releasing device, or by manually operating the release handle.

**** NOTE TO SPECIFIER ** Select the following optional accessory paragraph for the fire door release device if required and delete if not required. Available for use with either motor or non-motor fire doors to allow interface with auxiliary fire protection devices to control the doors' closure.**

4. Time-delay release mechanism provides an added measure of safety to control the doors' closure.

J. Locking

1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide (standard on push up).

**** NOTE TO SPECIFIER ** Select the following option if required from the following paragraph. Delete if not applicable.**

2. Provide cylinder lock at jambs or in center of bottom bar.
3. Provide thumb turn lock at jambs or in center of bottom bar.

K. Wall Mounting Condition:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

1. Face-of-wall mounting.
2. Between jambs mounting.

**** NOTE TO SPECIFIER ** The following laminated countertop paragraphs are optional. delete if not required.**

- L. Plastic Laminated Fire Rated Countertops: Provide counter fire doors with laminated fire rated countertops to the size and shape indicated on the Drawings.
1. Label: Plastic laminated fire rated countertops shall bear Warnock Hersey International 1-1/2 hour label for countertops up to 8 feet by 4 feet (2.44 m by 1.22 m). Sizes over 8 feet by 4 feet (2.44 m by 1.22 m) will bear a Warnock Hersey International Oversize Label.
 2. Shape: Provide: I or T copable for face mounted doors; Rectangular H (no cope), I or T copable for between mounted doors. No aprons or additional pieces shall be allowed.
 3. Core: Interior core of Georgia Pacific Firestop composite and high density particleboard.
 4. Finish: Top, bottom and all edges shall be covered with plastic laminate.
 5. Color: Top and all edges as selected by the Architect from any color from Formica, Wilsonart or Nevamar brands of plastic laminate.
 6. Mounting Hardware: Provide with all necessary mounting hardware.

2.5 COILING COUNTER FIRE DOORS WITH INTEGRAL FRAMES

A. Coiling Counter Fire Doors with Integral Frames: Model 570 Integral Frame Fire-Rated Counter Doors.

1. Label: Rolling fire doors shall bear the UL 1-1/2 Hour Class B label for masonry or non-masonry fire walls.
2. Curtain:

**** NOTE TO SPECIFIER ** Select one of the following curtain paragraphs and delete the those not required.**

- a. Interlocking roll-formed 22 gauge #4 stainless steel, flat profile slats with endlocks for curtain alignment and single angle bottom bar.
- b. Interlocking roll-formed 22 gauge galvanized steel with baked-on polyester finish in gray, flat profile slats with endlocks for curtain alignment and double angle bottom bar.
3. Integral Frame and Guides: 16 gauge #4 stainless steel.
4. Sill: 14 gauge #4 stainless steel sill enclosed with fireproof acoustic filler.
5. Hood: Stainless steel with a #4 finish.
6. Finish:
 - a. Non-galvanized exposed ferrous surfaces shall receive one coat of rust-inhibitive primer.
7. Bottom Bar:
 - a. Finish:

**** NOTE TO SPECIFIER ** Select one of the following bottom bar paragraphs and delete the those not required.**

- 1) Double Angle stainless steel with a #4 finish standard with stainless curtain.
- 2) Double Angle galvanized steel, gray primed standard with galvanized curtain.
- 3) Tubular stainless steel with a #4 finish, required if cylinder locking is required.

- b. Smoke seal.
- 8. Brackets: Minimum 12 gauge steel.
- 9. Counterbalance: Helical torsion spring type. Counterbalance housed in a steel tube or pipe barrel, supporting the curtain with deflection limited to 0.03 inches per foot of span. Counterbalance is adjustable by means of an adjusting tension wheel.
- 10. Operation:

**** NOTE TO SPECIFIER ** Select one of the following operation paragraphs and delete the one not required.**

- a. Manual push up operation (standard).
- b. Crank operation.
- 11. Locking:

**** NOTE TO SPECIFIER ** Select one of the following locking paragraphs and delete the one not required.**

- a. Interior slide bolts.
- b. Cylinder lock.
- 12. Mounting: Between jambs.

2.6 COILING WOOD COUNTER DOORS

**** NOTE TO SPECIFIER ** Wayne-Dalton 500 Series are available for openings with a maximum clear opening of 14 feet wide and 7 feet high. Wall thickness limitations are 3-5/8 inches minimum and 21 inches maximum.**

- A. Coiling Wood Counter Doors: Wayne Dalton Wood Rolling Counter Shutters.
- B. Curtain:
 - 1. Double rabbeted wood slats 1-3/4 inches high by 1/2 inch thick.
 - 2. Material:

**** NOTE TO SPECIFIER ** Select one of the following slat material paragraphs and delete the ones not required.**

- a. Poplar.
- b. Red oak.
- c. Ash.
- d. As selected by the Architect from manufacturer's standard finishes.

- C. Guides:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

- 1. Wood matching slat material.
- 2. Aluminum guides with wool pile lining.
- D. Brackets: Metal plates with permanently sealed ball bearings designed to enclose ends of coil and provide support for counterbalance pipe at each end. Plated fabricated of:
 - 1. Steel 3/16 inch thick minimum.
- E. Counterbalance: Curtain is coiled on a pipe of sufficient size to carry door load with a deflection not to exceed 0.033 inch per foot of door span and to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs are used to anchor springs to tension shaft and pipe.
- F. Hood: Provide intermediate support brackets as required. Hood fabricated of:
 - 1. Wood matching slats.

G. Finish: Clear finish as specified in Section 09900.

**** NOTE TO SPECIFIER ** Select one of the following paragraphs for manual operation or electric motor operation and delete the one not required.**

H. Manual Operation:

**** NOTE TO SPECIFIER ** Select one of the following manual operation paragraphs and delete the ones not required.**

1. Manual push-up.
2. Manual crank.

**** NOTE TO SPECIFIER ** Include the following paragraph if electric motor operation is required and delete if not required.**

I. Electric Motor Operation: Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot or more than 1 foot per second.

1. Sensing Edge Protection:

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

a. Electric sensing edge.

2. Operator Controls:

**** NOTE TO SPECIFIER ** Select one of the following operation paragraphs and delete the one not required.**

a. Push-button operated control stations with open, close, and stop buttons.

b. Key operation with open, close, and stop controls.

c. Push-button and key operated control stations with open, close, and stop buttons.

**** NOTE TO SPECIFIER ** Select one of the following location paragraphs and delete the one not required.**

d. Controls for interior location.

e. Controls for exterior location.

f. Controls for both interior and exterior location.

**** NOTE TO SPECIFIER ** Select one of the following two paragraphs and delete the one not required.**

g. Controls surface mounted.

h. Controls flush mounted.

J. Locking

1. Curtain to be locked at each end of bottom bar by concealed slide bolts which engage in a developed slot in each guide.

**** NOTE TO SPECIFIER ** Select the following option if required from the following paragraph. Delete if not applicable.**

2. Provide cylinder lock at jambs or in center of bottom bar.

**** NOTE TO SPECIFIER ** Select the following option for power operated door from the following paragraph. Delete if not applicable.**

3. Locks on electric-motor operated doors, shall be provided with electric interlocks to prevent operation when lock bolts are engaged in the guides.

K. Mounting: Overhead Structure with:

**** NOTE TO SPECIFIER ** Select the one of the following options as required from the following paragraphs. Delete those not applicable.**

1. Steel jambs.

2. Wood jambs.

3. Masonry jambs.

4. Drywall over 16 gauge minimum steel studs or wood stud jambs.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify opening sizes, tolerances and conditions are acceptable.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.
- F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.
- G. Install perimeter trim and closures.
- H. Instruct Owner's personnel in proper operating procedures and maintenance schedule.

3.4 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.5 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.7 SCHEDULES

**** NOTE TO SPECIFIER ** Retain Paragraph below if required to suit project requirements. Identify products by name on the Drawings or use this paragraph to define the location of each type of material to be used. The following are some examples of schedule references. Edit as required to suit project or delete and identify products on the Drawings.**

- A. :
 - 1.
 - 2.
 - 3.
- B. :
 - 1.
 - 2.
 - 3.

END OF SECTION