RAYNOR - DuraGrille
SECTION 08 33 26 - ROLLING GRILLE DOORS

"Specifier Notes" may be hidden or shown by using "Tools"/"Options"/"View"/"Hidden Text".

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Rolling Security Grille Doors.

B. Electric Operators

1.2 RELATED SECTIONS

A. Section 05 50 00 - Metal Fabrications.

B. Section 06 10 00 - Rough Carpentry. Door opening jamb and head members

C. Section 08 71 53 - Security Door Hardware.

D. Section 09 90 00 - Painting and Coating.

E. Section 11 12 00 - Parking Control Equipment.

F. Section 26 05 00 - Common Work Results for Electrical.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM) A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

B. American Society for Testing and Materials (ASTM) B 209 Aluminum and Aluminum-Alloy Sheet and Plate.

C. American Society for Testing and Materials (ASTM) A 240 Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, Strips.

D. ASTM A 123 – Standard Specification for Zinc (hot-dipped galvanized) coatings on iron and steel products.

E. ASTM A 229 - Steel wire, oil-tempered for mechanical springs.

F. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

G. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

H. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

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. Installation methods.

C. Shop Drawings:
   1. Provide drawings indicating guide details, head and jamb conditions, anchorage, accessories, finish colors, patterns and textures, operator mounts and other related information.
   2. Regulatory Requirements and Approvals: Provide shop drawings in compliance with local Authority Having Jurisdiction (AHJ).

D. Certifications:
   1. Submit manufacturer's certificate that products meet or exceed specified requirements.
   2. Submit installer qualifications.

E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Utilize an authorized installer of door manufacturer who has demonstrated experience on projects of similar size and complexity.

B. Manufacturer Qualifications: Company with a minimum of five-year experience in producing the specified type of doors.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

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 absolute limits.

1.8 WARRANTY

A. Raynor warrants the door and its component parts for one (1) year against defects in material and workmanship.

B. Raynor warrants the electrical operator and its component parts for two (2) years against

defects in material and workmanship.

C. Raynor warrants the electrical operator and its component parts for three (3) years against defects in material and workmanship, on the operator only, when purchased with any model of Raynor rolling service door.

D. Raynor warrants ArmorBrite™ powder coat finish against cracking or peeling for three (3) years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Raynor, which is located at: 1101 East River Rd. P. O. Box 448 ; Dixon, IL 61021-0448; Toll Free Tel: 800-4-RAYNOR; Tel: 815-288-1431; Fax: 888-598-4790; Email: architectsupport@raynor.com; Web: www.raynor.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 ROLLING SECURITY GRILLE DOORS

A. DuraGrille as manufactured by Raynor Garage Doors:
1. Doors:
a. Operation:
1) Provide doors designed for push-up operation.
2) Provide doors designed for hand chain operation.
3) Provide doors designed for hand crank operation.
4) Provide doors designed for electric motor operation.
b. Mounting: Door guide mounting configuration.
1) Interior face of wall on each side of door opening.
2) Exterior face of wall on each side of door opening.
3) Between jamb of wall opening.
2. Curtain: Horizontal diameter rods with vertically interlocking links to form a pattern. Bottom bar extruded aluminum tubular shape.
a. Pattern Type:
1) **Straight Pattern**: Horizontal aluminum rods 5/16 inch (7.9 mm) spaced vertically at 2 inch (50.8 mm) O.C. with vertical link assemblies spaced horizontally at **6 inch** (152.4 mm) O.C. Lateral movement of the vertical link assemblies to be contained by C-clips. Vertical link assemblies to be held together by brass eyelets.
2) **Straight Pattern**: Horizontal aluminum rods 5/16 inch (7.9 mm) spaced vertically at 2 inch (50.8 mm) O.C. with vertical link assemblies spaced horizontally at **9 inch** (228.6 mm) O.C. Lateral movement of the vertical link assemblies to be contained by C-clips. Vertical link assemblies to be held together by brass eyelets.
3) **Brick Pattern**: Horizontal aluminum rods 5/16 inch (7.9 mm) spaced vertically at 2 inch (50.8 mm) O.C., with links spaced horizontally at **6 inch** (152.4 mm) O.C. to form a brick pattern with aluminum spacers at the top and bottom of each link.
4) **Brick Pattern**: Horizontal aluminum rods 5/16 inch (7.9 mm) spaced

vertically at 2 inch (50.8 mm) O.C., with links spaced horizontally at **9 inch** (228.6 mm) O.C. to form a brick pattern with aluminum spacers at the top and bottom of each link.

b. Curtain Material and Finish:
   1) Aluminum with a mill finish.
   2) Aluminum with a clear anodize finish.
   3) Aluminum with a bronze anodize finish.

c. Bottom Bar: Bottom of curtain reinforced with extruded aluminum tubular bottom bar.

d. Bottom Bar Material and finish:
   1) Aluminum with a clear anodize finish.
   2) Aluminum with a bronze anodize finish.

3. Guides: Extruded aluminum shapes with retainer grooves and continuous pvc strips inserts to reduce wear and noise. Guides to be provided with removable curtain stops.
   a. Material and Finish:
      1) Aluminum with a clear anodize finish.
      2) Aluminum with a bronze anodize finish.
   b. Guide Mounting:
      1) Extruded aluminum guides will be attached to structural steel angles.
      2) Extruded aluminum guides will be attached to structural steel support tubes.
      3) Extruded aluminum guides will be attached directly to the jambs.
4. Counterbalance:
   a. Barrel: Minimum 4-1/2 inches (114.3 mm) O.D. and 0.120 inch (3.1 m) wall thickness structural steel pipe. Deflection of pipe under full load shall not exceed 0.03 inch (0.8 mm) per foot of span.
   b. Counterbalance: Provide counterbalance mechanism with helical torsion springs, grease packed and mounted on a continuous steel torsion shaft.
      1) Standard 15,000 cycles.
      2) High _____ cycles.
5. Brackets: 3/16 inch (4.8 mm), minimum, steel plate, attached to wall angle of guide assembly with 1/2 inch (12.7 mm) diameter Grade 5 bolts. Inside of drive bracket fitted with sealed ball bearing.
   a. Finish:
      1) Provide brackets with one coat of rust-inhibitive primer.
      2) Provide brackets with one coat of hot-dipped galvanized.
      3) Provide brackets with one coat of ArmorBrite Powdercoat finish.
         a) Color: _____.
6. Enclosures:
   a. Hood Type:
      1) Round Hood.
      2) Square Hood.
   b. Bracket Covers: Covers to enclose door mechanisms.
   c. Material:
      1) 24 gauge steel (0.022 inch minimum thickness) commercial quality hot-dipped galvanized steel in accordance with ASTM A-653.
      2) 24 gauge stainless steel (0.024 inch minimum thickness) in accordance with ASTM A-240, type 304.
      3) 18 gauge aluminum (0.040 inch minimum thickness) in accordance with ASTM B-209, alloy 5005, temper H34.
   d. Color and Finish:
      1) Gray polyester paint.

2) Tan polyester paint.
3) Galvanized.
4) Stainless steel #4 finish.
5) Clear anodize finish.
6) ArmorBrite Powdercoat finish.
a) Color: _____.

7. Locks: Furnish door system with the following:
a. Hand Chain Lock: To receive padlock provided by Owner; for doors operated with hand chain.
b. Cylinder Lock: For push-up doors and doors operated with hand chain or hand crank, locks to be keyed cylinders and bars to engage both guides.
c. Cylinder Lock for Motor Operated Doors: Provide interlock switch with cylinder lock.
d. Auto-Lock: For doors operated with hand chain, crank, or motor operated.

2.3 ELECTRIC OPERATORS

A. ControlHoist (UL Listed) as manufactured by Raynor Garage Doors:
1. Model:
a. Raynor ControlHoist Optima:
1) Type: Jackshaft with manual chain hoist.
2) Motor Horsepower Rating: Per the manufacturer's recommended size for door.
3) Motor Horsepower Rating: Continuous 1/2 HP.
4) Motor Horsepower Rating: Continuous 3/4 HP.
5) Motor Horsepower Rating: Continuous 1 HP.
6) Motor Horsepower Rating: Continuous 1-1/2 HP.
7) Motor Horsepower Rating: Continuous 2 HP.
8) Electrical Requirements: 115 volt single phase.
9) Electrical Requirements: 230 volt single phase.
10) Electrical Requirements: 208-230 volt three phase.
11) Electrical Requirements: 460 volt three phase.
12) Duty Cycle: 30 cycles/hour or 300 cycles/day.
13) Control Wiring: Solid state circuitry with provisions for connection of a monitored reversing device, external radio control hook-up and maximum run timer. Provisions for timers to close and mid stop and lock bar sensor capability.
a) Provide three button momentary contact "open-stop", constant pressure on close (can be changed to momentary to close).
b) Custom wiring.
c) Monitored electric reversing edge on door.
d) Monitored photo electric eyes mounted on jambs.
b. Raynor ControlHoist Standard:
1) Type: Jackshaft.
2) Type: Jackshaft with manual chain hoist.
3) Motor Horsepower Rating: Per the manufacturer's recommended size for door.
4) Motor Horsepower Rating: Continuous 1/3 HP.
5) Motor Horsepower Rating: Continuous 1/2 HP.
6) Motor Horsepower Rating: Continuous 3/4 HP.
7) Electrical Requirements: 115 volt single phase.
8) Electrical Requirements: 230 volt single phase.

9) Electrical Requirements: 208-230 volt three phase.
10) Electrical Requirements: 460 volt three phase.
11) Duty Cycle: 30 cycles/hour or 300 cycles/day.
12) Control Wiring: Solid state circuitry with provisions for connection of a monitored reversing device, external radio control hook-up and maximum run timer. Provisions for timers to close and mid stop and lock bar sensor capability.
    a) Provide three button momentary contact "open-stop", constant pressure on close (can be changed to momentary to close).
    b) Custom wiring.
    c) Monitored electric reversing edge on door.
    d) Monitored photo electric eyes mounted on jambs.

c. Raynor ControlHoist Basic:
2) Type: Jackshaft.
3) Type: Jackshaft with manual chain hoist.
4) Motor Horsepower Rating: Intermittent 1/2 HP.
5) Electrical Requirements: 115 volt single phase.
6) Duty Cycle: 14 cycles/hour.
7) Control Wiring: Solid state circuitry with provisions for connection of a monitored reversing device, external radio control hook-up and maximum run timer. Provisions for timers to close and mid stop and lock bar sensor capability.
    a) Provide three button momentary contact "open-stop", constant pressure on close (can be changed to momentary to close)
    b) Monitored electric reversing edge on door.
    c) Monitored photo electric eyes mounted on jambs.

d. Raynor ControlHoist LGE:
13) Type: Jackshaft.
14) Motor Horsepower Rating: Per the manufacturer's recommended size for door.
15) Motor Horsepower Rating: Continuous 1/2 HP.
16) Motor Horsepower Rating: Continuous 1 HP.
17) Electrical Requirements: 115 volt single phase.
18) Electrical Requirements: 208-230 volt single phase.
19) Electrical Requirements: 208-230 volt three phase.
20) Electrical Requirements: 460 volt three phase.
21) Duty Cycle: 30 cycles/hour or 300 cycles/day.
22) Control Wiring: with provisions for connection of a monitored reversing device.
    a) Provide three button momentary contact "open-stop", constant pressure on close (can be changed to momentary to close).
    b) Monitored electric reversing edge on door.
    c) Monitored photo electric eyes mounted on jambs.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared. Verify that site conditions are acceptable for installation of doors, operators, controls and accessories. Ensure that openings are square, flush and plumb.

B. 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. General: Install door, guides and operating equipment complete with all necessary accessories and hardware according to shop drawings, manufacturer's instructions.

B. Lubricate bearings and sliding parts and adjust doors for proper operation, balance, clearance and similar requirements.

3.4 PROTECTION

A. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and legally dispose of construction debris from project site.

B. Remove temporary coverings and protection of adjacent work areas. Repair or replace installed products damaged prior to or during installation.

C. Protect installed products until completion of project.

D. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION