Display hidden notes to specifier by using ‘Tools’/‘Options’/‘View’/‘Hidden Text’. On newer versions of Microsoft Word click on round Windows logo in top left corner, Click on ‘Word Options’ button at bottom of drop down menu. Click on ‘Display’ on left menu bar, and check the box for ‘Hidden Text’.

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Advanced Performance Overhead Coiling Grille.

1.2 RELATED SECTIONS

A. Section 05500 - Metal Fabrications: Support framing and framed opening.
B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
C. Section 08332 - Overhead Coiling Counter Doors.
D. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to grille operator and from grille operator to control station.
F. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES

A. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
B. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
F. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
G. NEMA MG 1 - Motors and Generators.

1.4 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. Installation methods.

C. Shop Drawings: Include detailed plans, elevations, details of framing members, required clearances, anchors, and accessories. Include relationship with adjacent materials.

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, representing actual product, color, and patterns.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 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: Company specializing in performing Work of this section with minimum three years and approved by manufacturer.

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

1.6 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.

1.7 COORDINATION

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

1.8 WARRANTY

A. RapidGrille AP Model 676: Motor 5 year limited warranty; other components 2 year or 300,000 cycle limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS
A. Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: info@overheaddoor.com.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ADVANCED PERFORMANCE OVERHEAD COILING GRILLE

A. RapidGrille AP Model 676 by Overhead Door Corporation.

1. Curtain: Horizontal 5/16 inch (7.8 mm) diameter rods with network of vertically interlocking links to form a pattern. Vertical rod 2 inch (51 mm) on center spacing. Continuous spacer tubes. Bottom bar extruded aluminum tubular shape.
   a. Material:
      1) Stainless Steel Link, Rod, and Spacer: No. 4 finish.
      2) Stainless Steel Link, Rod, and Spacer: No. 2B finish.
      3) Galvanized w/ Rust Inhibitor Steel Link, Rod, and Mill Aluminum Spacer.
      4) Mill Aluminum Link, Spacer and Galvanized Steel Rod.
      5) Clear Anodized Aluminum Link, Spacer and Galvanized Steel Rod.
   b. Pattern:
      1) Straight lattice; horizontal spacing 9 inches (228 mm) on center.
      2) Brick pattern; horizontal spacing 4-1/2 inches (114 mm) on center.

2. Performance:
   a. Opening speed: up to 24 inches/second.
   b. Closing speed: no higher than 12 inches/second.
   c. Springless direct drive mechanism without chain and sprocket connecting the drive mechanism to the door.
   d. System cycle of no less than 300,000 cycles.

3. Finish:
   a. Prime all non-galvanized, exposed ferrous surfaces with one coat of rust-inhibitive primer
   b. Powder coat: PowderGuard Premium powder coat, color as selected by the Architect.

   a. Finish:
      1) PowderGuard Premium powder coated in black color.
      2) PowderGuard Premium Powder coated, color as selected by the Architect.
      3) PowderGuard Textured powder coat, select from 11 colors.
      4) PowderGuard Zinc powder coat, color as selected by Architect.

5. Bottom Bar: Reinforces curtain in the guides and incorporating a wireless, monitored safety edge.
   a. Tubular extruded aluminum
      1) Finish: Mill finish aluminum
   b. Double structure steel angle.
      1) Material:
         (a) Steel.
         (b) Stainless steel with a brushed finish.
      2) Finish:
(a) PowderGuard Premium powder coat in black color.
(b) PowderGuard Premium powder coat, color as selected by Architect.
(c) PowderGuard Zinc powder coat, color as selected by the Architect.

6. Motor: Direct drive, integrated gear motor/brake assembly sized for openings. Provide with a manual hand chain for operation during power outages. Operator and drive assembly is factory pre-assembled and provided with all wiring harnesses where required.
   b. Supply Voltage: 230V AC, 3-phase (operating range 208-245V).
   c. Supply Voltage: 460V AC, 3-phase (operating range 456-495V).
   d. Supply Voltage: 575V AC, 3-phase (will require appropriate transformer to step down to 460V).
   e. Left hand mount.
   f. Right hand mount.

7. Control Panel: Provide electronic Variable Frequency drive controller with microprocessor self-diagnostics. LCD readout indicates door action, alarm conditions, and fault conditions. Timer to close programming options and non-resettable cycle counter are included. Enclosure is NEMA 4X rated. Control system is UL508A certified. The junction box is IP67 rated.

8. Door Roll: Directly driven, springless roll shall be steel tube with integral shafts, keyed on the Drive End and supported by self-aligning grease-able sealed bearings. Door shall not require any counterbalance device.

9. Hood, operator end cover and bracket end cover: Protecting drive motor, barrel, chain, and sprocket from dirt and debris and extending between the support brackets.
   a. Material:
      1) Steel.
      2) Aluminum.
      3) Stainless steel with a brushed finish.
   b. Finish:
      1) Polyester paint in black (steel only).
      2) PowderGuard Premium powder coat, color as selected by the Architect.
      3) Clear anodized (aluminum only).
   c. Provide with sloped top for exterior mounting.

10. Brackets: Provide steel brackets to support motor, curtain, and hood:
    a. PowderGuard Premium powder coat in black color.
    b. PowderGuard Premium powder coat, color as selected by Architect.
    c. PowderGuard Zinc powder coat, color as selected by the Architect.

11. Safety Devices: Provide door with following safety devices:
    a. Photoelectric sensors that cast an invisible beam across the door opening and reverses the downward motion of the door when an object enters the path of the beam.
    b. Wireless, monitored safety edge reverses downward motion upon impact.
    c. Built-in (to motor assembly) brake mechanism eliminates uncontrolled curtain travel independent of other safeties.

12. Actuators:
    a. One Open/Close/Stop push button station incorporated into Control Panel.
    b. Loop detectors.
    c. Radio control.
    d. Interior Push buttons.
    e. Exterior Push buttons.
f. Interior Key switch.
g. Exterior Key switch.
h. Motion detectors.
i. Warning light.
j. Horns and/or strobes.
k. Second set of photoelectric sensors.

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.

3.4 ADJUSTING

A. Test security grilles 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.

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

3.6 PROTECTION

A. Protect installed products until completion of project.

END OF SECTION