PART 1 GENERAL

1.1 SECTION INCLUDES

A. Overhead Coiling Doors.

1.2 RELATED SECTIONS

A. Section 05100 - Structural Metal Framing.

B. Section 06100 - Rough Carpentry.

C. Section 09900 - Paints and Coatings.

D. Section 16050 - Basic Electrical Materials and Methods.

1.3 REFERENCES

A. ASTM A480/A480M-04; 2004 - Standard Specification for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.

B. ASTM A653/A653M-03; 2003 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

C. ASTM A666-00; 2000 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

D. ASTM B209-04; 2004 - Standard Specification for Aluminum - Alloy Sheet and Plate.

E. ASTM B221-02; 2002 - Standard Specification for Aluminum - Alloy Extruded Bars, Rods, Wires, Shapes and Tubes.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Shop Drawings: Indicate opening dimensions and required tolerances, jamb connection details, anchorage spacing, hardware locations, installation details, and special conditions.

C. Provide product literature for components, application, hardware and accessories.

D. Closeout Submittals:
1. Operation and maintenance data.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer shall provide a coiling door system capable of withstanding positive and negative design loads as required by local building codes.

B. Installer Qualifications: Installer shall be authorized and qualified to install overhead door systems on the type and scope of project specified.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Transport and inventory products in manufacturer's packaging until ready for installation.

B. Store and dispense of all unused materials in accordance with federal, state and local laws.

1.7 WARRANTY

A. Provide an original of the manufacturer's limited warranty against manufacturing defects and product workmanship for three years from date of delivery.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Janus International, 135 Janus International Blvd, Temple, GA 30179. 1.866.562.2580.

B. Substitutions: As approved per project manager.

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

2.2 MATERIALS

A. Galvanized Steel Sheet:
   1. Galvanized commercial steel, per ASTM A653/A653M.

B. Stainless Steel Sheet: ASTM A480/A480M or ASTM A666; Type 304 or 316, roll form temper.

C. Aluminum:
   1. Extrusions: ASTM B221, alloy and temper best suited to application.
   2. Sheet: ASTM B209, alloy and temper best suited to application.

2.3 Coiling overhead doors:

A. Construction:
   1. Curtain slat material: Galvanized steel.
      a. Gauge: Per design requirements.
      b. 18 gauge.
      c. 20 gauge.
      d. 22 gauge.
      e. 24 gauge.
   2. Curtain material: Pre-finished galvanized steel rolled to form interlocking slats:
      a. Windload design: Per code and design requirements.
      b.Slat Profile:
         1) Flat, non-insulated, 2.64 inches high by .66 inches deep.
         2) Curved, non-insulated, 1.87 inches high by .52 inches deep.
         3) Curved, non-insulated, 2.90 inches high by .73 inches deep.
   3. End locks: Galvanized, plated malleable iron, to act as a wear surface and to prevent lateral curtain movement.
   4. Wind locks: Plated malleable iron and provided per design and wind load requirements.
   5. Bottom bar:
      a. Extruded aluminum bottom bar with tubular compression weatherseal or optional safety edge to widths of 16’4”.
      b. Powder coated steel angles bolted back-to-back, with adjustable tubular compression weather seal or optional safety reversing edge.
   6. Hood: Half hexagonal shape fabricated from minimum 24 gauge pre-finished galvanized steel one piece to 20 foot opening with integrated intermediate structural supports as required per design.
   7. Headplates: Rectangular powder coated steel plate of suitable size to support barrel, curtain, spring counterbalance, drive and hood assemblies.

8. Guides:
   a. Three structural steel angles powder coated and bolted together to form a curtain guide channel and jamb mounting surface with flared bellmouths, bolted windlock bars per design requirements, removable curtain stops and removable service cutouts.
   b. Rolled galvanized steel shape forming a guide channel and jamb mounting surface.
   c. Windlock bars: Powder coated as required per design for maximum corrosion resistance and smoothness of operation.
9. Barrel Assembly: Steel pipe, sized to limit deflection to no more than .003" per foot of width, with graduated rings or lugs welded to barrel for curtain attachment.
10. Springs: Torsion springs, permanently lubricated and mounted on steel tension shafts, designed for 20,000 cycles.
11. Vision Lites: Rectangular, 5 inches wide by 1-1/8 inches high, clear acrylic panels set with silicone sealant and rivets.
12. Weatherstripping: Flat slat curtain with vinyl jamb seal and internal hood baffle.

B. Locking Mechanism:
1. Plated steel slide bolt locks with padlock provisions.
2. Cylinder locks with throw handle and thumb turn latch.
   a. Interior mounted cylinder (keyed, thumb turn).
   b. Exterior mounted cylinder (keyed, thumb turn).
   c. Keyed cylinder both sides.

C. Electric Operator:
1. Type: Externally mounted on drive side of coil.
   a. Input voltage:
      1)115 Volts AC.
      2) 230 Volts AC.
      3) 460 VOLTS AC.
2. Control Station:
   a. 24 Volt keyed Open/Close switch.
   b. 24 Volt two button Open / Close station.
   c. 24 Volt three button Open / Close/Stop station.
3. Electrical interlock switches required where bottom bar locks are used.
4. Manually operable by (push-up operation/ chain hoist operation) in case of power failure.
5. Provide (wall mount, front of hood mount) hood cover for exterior mount application.

D. Safety Equipment:
1. Photoelectric Sensor: Fail safe, self monitoring, non-contact sensor to reverse door without requiring contact with obstruction.
2. Electric Edge, Two Wire: Detect obstruction and reverse door upon contact with electric strips in vinyl housing.
3. Electric Edge, four wire, fail-safe, self monitoring: Detect obstruction and reverse door upon contact with electric strips in vinyl housing.
4. Pneumatic Reversing Edge: Pressure sensitive air switch attached to gum rubber hose located in bottom astragal of door section.
5. Inertia Brake: Prevent out-of balance curtain free-fall in the event of drive failure or disconnect by arresting barrel movement.

E. Design Cycle Life:

1. (50,000, 75,000, 100,000, Maximum)

F. Finishes:
1. Curtain and Hood: Baked enamel primer and polyester finish coat. Color to be selected from manufacturer's standard paint finishes. 188 standard powder coat colors or any custom powder coat color is optional.

2. Headplates, Steel Bottom Bar and Guides: Standard low gloss black powder coat.
3. Stainless Steel Finish: No. 4 satin.
4. Plain Galvanized Curtain: Clear polyester finish coat.
5. Aluminum Finish: Mill finish, clear anodized.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install door assemblies in accordance with manufacturer's written instructions.

B. Install 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 and minimum wear.

D. Make wiring connections between power supply and operator and between operator and controls.

3.2 ADJUSTMENTS

A. Adjust closures to operate smoothly throughout full operating range.

3.3 DEMONSTRATION

A. Demonstrate proper operation to Owner or Owner’s Representative.

END OF SECTION