DIVISION 08 - OPENINGS  
SECTION 08 42 29.23 SLIDING AUTOMATIC ENTRANCES

Specifier Note: Coordinate and edit articles and paragraphs below to suit project requirements. Add section numbers and titles per CSI "MasterFormat" and specifier's practice. Consult with manufacturer regarding performance requirements for units applicable to project, as well as, related equipment and accessories required.

PART I – GENERAL

1.01 SUMMARY

A. WORK INCLUDED: Furnish complete automatic aluminum door system, as specified, that has been manufactured, fabricated and installed as per manufacturer's criteria without defects, damage or failure.

B. RELATED WORK:
   1. Openings: Division 08, applicable sections.
   2. Electrical: Division 26, applicable sections.

1.02 REFERENCES

A. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA) 101: Dissimilar Materials

B. AMERICAN ASSOCIATION OF AUTOMATIC DOOR MANUFACTURERS (AAADM).

C. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):
   2. ANSI A156.10: For Power Operated Pedestrian Doors; Sliding Doors section.
   3. ANSI A156.5: Standard for Auxiliary Locks and Associated Products

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) B221: Aluminum-Alloy Extruded Bars, Rods, Shapes and Tubes.

E. BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL (BOCA)

F. INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS / UNIFORM BUILDING CODE (ICBO/UBC)

G. INTERNATIONAL CODE COUNCIL / INTERNATIONAL BUILDING CODE (ICC/IBC)

H. INTERTEK, WARNOCK HERSEY (ETL): Testing Laboratory and Certification Agency joined with ETL SEMKO


K. UNDERWRITERS LABORATORY, INC. (USA & CANADA) UL 325: Electrical Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.03 SUBMITTALS

A. SHOP DRAWINGS & PRODUCT DATA: Submit drawings and product data showing layout, profiles, product components including anchorage, accessories, finish and glazing details (where required).

B. CLOSEOUT SUBMITTALS: Submit the following:
2. AAADM inspection compliance form completed and signed by certified AAADM inspector prior to doors being placed in operation as proof of compliance with ANSI A156.10.

1.04 QUALITY ASSURANCE AND PERFORMANCE REQUIREMENTS

A. INSTALLERS QUALIFICATIONS: Installer shall be factory trained, certified by AAADM, and experienced to perform work of this section.

B. MANUFACTURER'S QUALIFICATIONS: Manufacturer to have minimum (5) five years successful experience in the fabrication of automatic doors of the type required for this project. Manufacturer capable of providing field service representation during installation, approving acceptable installer and approving application method.

C. CERTIFICATIONS: Automatic sliding door systems and options shall be factory certified to meet performance design criteria in accordance with the following standards:
   1. ANSI A156.10: For Power Operated Pedestrian Doors; Sliding Doors section.
   3. ETL Listed: Tested to UL 325 Standard
   4. BOCA: Means of Egress, Power Operated Doors
   5. ICBO/UBC: Egress Through Lobbies
   6. ICC/IBC: Egress Section

D. OPERATING RANGE: -30° F to 130° F (-34° C to 54° C)

E. OPENING FORCE REQUIREMENTS FOR Emergency Egress:
   1. Slide-swing panels shall require no more than 50 lbf. (222 N) of force to swing open. Slide-swing panels shall be capable of swinging out 90° from any position of slide movement.
   2. Slide-swing panels shall have torsion spring designed to re-close panel if pushed open in the direction of egress. Total weight of ETL listed slide-swing panel shall not exceed 156 lbs. (70.7 kg).
   3. If power fails, slide panels can be manually slid open with no more than 15 lbf (222 N) of force.
   4. Units are ETL listed as an exit way and are compliant with NFPA 101.

F. CLOSING FORCE REQUIREMENTS: Maximum force required to prevent sliding panel from closing = 28 lbf. (124.5 N) Adjustable Reversing Circuit will reopen door unit if closing path is obstructed.

G. HEADER CAPACITY: Header shall be capable of supporting:
   1. Biparting: Up to 300 lbs. (136 kg) per slide panel over spans up to 14'-0" (4280mm) without intermediate supports.
   2. Single Slide: Up to 500 lbs. (227 kg) per slide panel over spans up to 9'-0" (2743mm) without intermediate supports

1.05 WARRANTIES

A. MANUFACTURER'S WARRANTY: Units to be warranted against defect in material and workmanship for a period of one year from the Date of Substantial Completion. Manufacturer's warranty is in addition to, and not limited to, other rights owner may have under Contract Documents.

B. DISTRIBUTOR'S WARRANTY: One year warranty: Labor/transportation charges for defective parts replacement.
1.06 PROJECT CONDITIONS

FIELD MEASUREMENTS: Verify actual dimensions/openings by field measurements before fabrication and record on shop drawings. Coordinate with fabrication and construction schedule to avoid construction delays.

1.07 DELIVERY, STORAGE AND HANDLING

A. ORDERING AND DELIVERY: Comply with factory's ordering instructions and lead time requirements. Delivery shall be in factory's original, unopened, undamaged containers with identification labels intact.

B. STORAGE AND PROTECTION: Provide protection from exposure to harmful weather conditions and vandalism.

PART II – PRODUCTS

2.01 MANUFACTURER

HORTON AUTOMATICS, a division of Overhead Door Corporation, shall manufacture automatic sliding door(s) of type(s) and size(s) specified on plans and door schedule.

2.02 EQUIPMENT

A. MANUFACTURED DOOR UNITS: Shall include operator, header with roller track, carrier assemblies, framing, sliding door panel, sidelite, activation, safety devices and accessories required for complete installation.

1. Configuration: Single Slide or biparting
2. Mounting Type:
   a. Perimeter mounted within rough opening
   b. Surface mounted
3. Door Type:
   a. Type 010: Sliding panel(s) ‘X’ shall slide along interior side.
   b. Type 110: Slide-swing panel(s) ‘SX’ shall slide along exterior side.
   c. Type 310: Slide-swing panel(s) ‘SX’ shall slide along interior side. Unit has Swing-out sidelite ‘SO’.

B. OPERATOR: The operator shall be mounted and concealed within the header.

1. The Electric Operating Mechanism shall be HD-Slide® Series 2001 Belt Drive. Maximum current draw shall not exceed 3.15 amps. Operating force shall be accomplished through a 1/8 HP DC permanent magnet motor with heavy duty worm gear transmission and 1800 RPM working with reinforced drive belt, attached 1/4” thick steel door hangers, and idler pulley (1/4 HP motor required for door panels weighing 500 lbs). Drive belt to be steel reinforced nylon, 1” (25mm) wide. Idler pulley to be reinforced, metallic material.

2. Microprocessor-based control shall include a 40-character alphanumeric display to provide ease of adjustment and comprehensive diagnostics, including error and alarm logging. All speeds, forces and time delays shall be independently adjustable. Actuating and safety sensors that provide self-monitoring are supported. Supported operating modes include 2-Way Automatic / 1-Way Exit, Full / Reduced Door Opening, and Day / Night Operation.

3. On/Off Switch shall be supplied. When switched OFF, unit reverts to free manual operation (likewise during electrical power failure).

C. Security and Safety Power Fail Options:

1. Automatic lock: Automatically locks slide function of door when in closed position. Additional power supply for autolock not acceptable.
   a. Autolock Fail Secure: If power fails the lock engages.
   b. Autolock Fail Safe: If power fails the lock disengages.
2. Monitored Power Fail Options (battery back-up):
   a. Software Selectable Power Fail Open: If power fails the door slides open.
   b. Software Selectable Power Fail Close: If power fails the door slides closed.

D. HD-Slide® HEADER: Shall be 6" (152mm) deep by 8" (203mm) high, heavy duty aluminum construction with removable face plate and extruded support brackets for dead load and lateral strength.

E. CARRIER ASSEMBLIES AND HEADER ROLLER TRACK: Carrier assemblies shall support door panels with minimum four rollers per panel. Rollers will be non-metallic high quality ball bearing wheels 2" (51mm) diameter. Anti-Derailing shall be accomplished by means of a continuous aluminum extrusion full length of slide panel travel. Overhead header roller track shall be continuous aluminum.

F. SLIDING PANEL(S) AND SIDELITE(S): Shall be 1/2" (13 mm) thick clear tempered glass with polished vertical edges mounted in top and bottom horizontal aluminum rails. Standard bottom horizontal rail shall be 4 5/8" (117mm). Weather-stripping retained in top and bottom rails and in clear acrylic extrusions mounted along vertical edges of sliding glass panel.
   1. Optional 10" (254mm) bottom rail.
   2. Glass Options:
      a. Tinted Grey or Bronze
      b. Frosted
      c. Low Iron “Starphire” Glass
   3. Optional extra wide fixed sidelite(s). Note: Center seam required for sidelites exceeding 54" (1371mm)
   4. Optional Recessed sidelite and track (Type 310) and non-threshold application (Type 010 & 110).

G. BREAKOUT PANELS: Slide-swing panels can swing out minimum 90° from any position of slide movement and require no more than 50 lbf. (222 N) of force applied at the lock stile to open. Slide-swing panels shall utilize spring loaded ball detent. Power will be cut off from the operator.
   1. Breakout mechanism shall provide support across full width of the door, in normal operating mode. In breakout mode, torsion assembly shall support weight of the door to minimize drop during emergency egress. Total weight of ETL listed slide-swing panel shall not exceed 156 lbs. (70.7 kg).
   2. Units with breakout feature are ETL listed as an exit away and are compliant with NFPA 101.

H. JAMBS/FRAME: Shall be aluminum and 1 3/4" (44mm) deep by 4 1/2" (114mm) wide with or without pocket. Maximum height: 9'-0" (2743mm).
   1. Optional Jambs: 1 3/4" (44mm) deep by 6" (152mm) wide with or without pocket.
   2. Optional Transom: Up to 12'-0" (3658) mounted on header with optional one or two verticals and optional tube on header. Note: Transom on Type 310 biparting unit 10'-0" and wider requires header tube and minimum one vertical.
   3. Transom Glass prep:
      a. ¼" (6mm) to 1" (25mm) with non-pocketed jambs
      b. ¼" (6mm) with pocketed jambs.

I. THRESHOLD: Shall be aluminum, 1/2" (25mm) tall by 4" (102 mm) wide.
   1. Optional Threshold for Type 010 & 110 units:
      a. ½" (25mm) tall by 7" (178mm) wide.
      b. Non-Threshold application
2. Optional Threshold for Type 310 units:
   a. ½" (25mm) tall by 7" (178mm) wide.
   b. ½" (25mm) Recessed Threshold
   c. Continuous 1/2" (25mm) tall by 7" (178mm) wide Threshold

J. HARDWARE: Provided and installed in bottom rail shall be Maximum Security Lock with 31/32" (25mm) backset and two-point keyed 1 5/32" (29mm) standard size cylinder. Deadlock drop bolt into threshold.

2.03 RELATED EQUIPMENT

BASIC SENSOR SYSTEM: Shall be 24 VDC, class II circuit and shall be adjusted and installed in compliance with ANSI A156.10. System shall include the following:

A. ACTIVATION SENSORS: Microwave or active infrared sensor shall be header-mounted each side of door unit for detection of traffic from each direction.

B. THRESHOLD PRESENCE SENSORS:
   1. Header mounted sensors shall provide active infrared presence detection on each side of the door unit and shall remain active throughout the entire door opening and closing cycle.
   2. Hold-open beams: Two pulsed infrared photoelectric beams to be mounted in jambs. Sender/receiver arrangement parallels door opening.

2.04 RELATED WORK REQUIREMENTS

A. ELECTRICAL: 120 VAC, 50/60 cycle, single phase, dedicated 20 amp circuit per operator. Non-North American voltages can be 240 VAC 50/60 cycle (operator must have 240 volt power supply).

B. GLASS AND GLAZING: Glass stops, glazing vinyl and setting blocks for field glazing as per Safety Glazing standard ANSI Z97.1.2. Contractor to coordinate acquisition of glass in thickness and type in accordance with manufacturer's recommendations for prescribed design.

2.05 MATERIALS, FINISHES AND FABRICATION

A. EXTRUDED ALUMINUM: ASTM B221, 6063-T5 alloy and temper, anodized:
   1. Structural Header Sections: Minimum 3/16" (5 mm) thickness.
   2. Structural Frame Sections: Minimum 1/8" (3 mm) thickness.
   3. Structural Panel Sections: Commercial grade.

B. FINISHES (for all exposed aluminum surfaces): Shall be one of the following:
   1. 215-R1 Clear: Arch. Class 1 Clear Anodized Coating, AA-M12C22A44.
   2. 313-R1 Dark Bronze: Arch. Class 1 Anodized Coating, AA-M12C22A44.
   3. 312-R1 Medium Bronze: Arch. Class 1 Anodized Coating, AA-M12C22A44.
   4. 311-R1 Light Bronze: Arch. Class 1 Anodized Coating, AA-M12C22A44.
   5. Champagne: Arch. Class 1 Anodized Coating, AA-M12C22A44.
   6. Gold: Arch. Class 1 Anodized Coating, AA-M12C22A44.
   7. Paint Coating:
      b. Wet Paint: Standard and custom colors available.
   8. Clad with stainless steel or muntz metal (brass alloy): #7 mirror finish or #4 brushed finish.
C. PANEL CONSTRUCTION:
   1. Corner block type with 3/16” steel backup plate construction, mechanically secured with minimum of four hardened steel screws. Sash consists of snap-in glass stops, snap-in glazing beads and vinyl gaskets.
   2. Slide-swing doors to be supplied with adjustable glass setting block to allow for adjusting of door to meet site conditions eliminating the need for additional shims.

D. FRAME CONSTRUCTION: Butt joints, mechanically secured with screws and formed alum. corner brackets.

E. OPERATOR CONSTRUCTION: Electromechanical, modular type construction.

PART III - EXECUTION

3.01 EXAMINATION

SITE VERIFICATION OF CONDITIONS: Installer must verify that base conditions are acceptable for product installation according to with manufacturer's instructions. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of work. Do not start work until all negative conditions are corrected.

3.02 INSTALLATION

A. GENERAL: Installer shall be factory trained, certified by AAADM, and experienced to perform work of this section. Install door units plumb, level and true to line, without warp or rack of frames or sash with manufacturer's prescribed tolerances. Provide support and anchor in place.

B. DISSIMILAR MATERIALS: Comply with AAMA 101, Appendix Dissimilar Materials by separating aluminum materials and other corroisible surfaces from sources of corrosion or electrolytic action contact points.

C. WEATHER-TIGHT CONSTRUCTION: Install header and framing members in a bed of sealant or with joint filler or gaskets. Coordinate installation with wall flashings and other components of construction.

D. ELECTRICAL: General or electrical contractor to install all wiring to operator on a separate circuit breaker routed into header. General or electrical contractor also to install all necessary power and low voltage wiring for proper operation of associated security systems.

3.03 CLEANING, ADJUSTMENT AND PROTECTION

A. CLEANING: After installation, installer to take following steps:
   1. Remove temporary coverings and protection of adjacent work areas.
   2. Remove construction debris from construction site and legally dispose of debris.
   3. Repair or replace damaged installed products.
   4. Clean product surfaces and lubricate operating equipment for optimum condition and safety.

B. ADJUSTMENT: AAADM certified technician to inspect and adjust installation. Comply with ANSI A156.10.

C. ADVISE CONTRACTOR: Of precautions required through the remainder of the construction period, to ensure that doors will be without damage or deterioration (other than normal weathering) at the time of acceptance.

Note: Horton Automatics reserves the right to make product improvements and change specifications without notice.

END OF SECTION