

GUIDE SPECIFICATION

All Glass Entrances

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SECTION 08450 ALUMINUM ENTRANCES AND STOREFRONTS

This suggested guide specification has been developed using the current edition of the Construction Specifications Institute (CSI) "Manual of Practice," including the recommendations for the CSI 3 Part Section Format and the CSI Page Format. Additionally, the development concept and organizational arrangement of the American Institute of Architects (AIA) MASTERSPEC Program was recognized in the preparation of this guide specification. Neither CSI nor AIA endorse specific manufacturers and products. The preparation of the guide specification assumes the use of standard contract documents and forms, including the "Conditions of the Contract," published by the AIA.

PART 1 – GENERAL

1.01 Summary

- A. Section Includes: All Glass Vestibule Doors matching entrance doors and sidelites by Coral Architectural Products.
 - 1. Types of Coral Architectural Products All Glass Doors;
 - a. [Type "A"] Swing Door; Fully Tempered Heavy Glass Door, Partial Rails or Patch Fittings at top and bottom pivot corners (locks are not available in Type "A" door) glass thickness range from 3/8", 1/2" and 3/4".
 - b. [Type "F"] Swing Door; Fully Tempered Heavy Glass Door, Partial Rails or Patch Fittings at top and bottom pivot corners and bottom lock, glass thickness range from 3/8", 1/2" and 3/4".
 - c. [Type "P"] Swing Door; Fully Tempered Heavy Glass Door, Full Width Top and Bottom Rails, glass thickness range from 3/8", 1/2" and 3/4".
 - d. [Type "AP"] Swing Door; Fully Tempered Heavy Glass Door, Top Patch Fitting and Full Width Bottom Rail, glass thickness range from 3/8", 1/2" and 3/4".
- B. Related Sections:
 - 1. Section 08450 – All Glass Entrances
 - 2. Section 08491 – Sliding Doors
 - 3. Section 08700 – Finish Hardware - Lock cylinders for tempered glass entrance doors are specified in Division 8 Section "Finish Hardware"

1.02 Submittals

- A. Product Data: Submit Manufacturer's product data for all glass entrance systems including:
 - 1. Standard details and fabrication method.
 - 2. Data on product finish, hardware and accessories.
 - 3. Recommendations for maintenance and cleaning of exterior finish surfaces.
 - 4. Test data on fabricated entrance system.
- B. Shop Drawings for each type of all glass entrance system are required, including:
 - 1. Layout and installation details.
 - 2. Elevations.
 - 3. Detail sections of fittings.
 - 4. Hardware mounting heights.
 - 5. Anchorage and reinforcement.
 - 6. Glazing details.
- C. Samples for approval:
 - 1. Submit pairs of samples of each specified metal color and finish on 9-inch long sections of extrusions or formed Shapes.
 - 2. Submit samples of glass approximately 6 inches square indicating the edge conditions.

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1.03 Warranty

- A. Project Warranty: Refer to “Conditions of the Contract” for project warranty provisions.
- B. Manufacturer’s Product Warranty: Submit, for Owner’s acceptance, manufacturer’s warranty for entrance system as follows:
 - 1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from the initial date of shipment by Coral Architectural Products.

1.04 Quality Assurance

- A. Qualifications:
 - 1. Installer Qualifications: Engage an experienced installer who has completed installations of all glass entrances that are similar in design and extent to those required for the project and whose work has resulted in construction with a record of successful service performance.
 - 2. Manufacturer Qualifications: Provide all glass entrances furnished by a firm experienced in manufacturing all glass entrance systems that are similar to those indicated for this project and that have a record of successful service performance (All door rail systems must be tested).
 - 3. Single Source Responsibility: Obtain all glass entrance systems from a single manufacturer, to ensure full compatibility and warranty of parts.
 - 4. Design criteria: The drawings indicate the size, profile and dimensional requirements of the all glass entrance system required and are based on the specific types and models indicated. All glass entrances by other manufacturers may be considered, provided deviations in dimensions and profiles are minor and do not change the design concept as judged by the architect. The burden of proof of equality is on the proposer.
 - 5. Safety glass standard: Provide tempered glass components that comply with ANSI Z97.1 and testing requirements of CPSC 16 CFR 1201 Category II.
 - 6. Testing criteria for Door Rail: The door rail must be tested to perform 1,000,000 cycles without any failures. The door rail should also be subject to a temperature pull-off test at temperatures from -10°F to 150°F (-23°C to 65.5°C). The rail shall remain stationary throughout this test while a 500 pound (227 kg) pressure is applied.
- B. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.

1.05 Delivery, Storage, and Handling

- A. Deliver all glass entrances and related components in the manufacturer’s original protective packaging. Do not deliver entrance units until the work is ready for their installation.
 - 1. Inspect components for damage upon delivery. Unless minor defects in metal components can be made to meet the Architect’s specifications and satisfaction, damaged parts should be removed and replaced.

1.06 Project Conditions

- A. Field Measurements: Check opening by accurate field measurement before fabrication. Show recorder measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of the work and possible damage to the finished product.
 - 1. Where necessary, proceed with fabrication without measurement and coordinate fabrication tolerances to ensure proper fit.

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PART 2 – PRODUCTS

2.01 Manufacturers (Acceptable Manufacturers/Products)

- A. Basis of design: Design is based on an “All-Glass” Entrance Door System featuring heavy tempered glass secured to a CRL Wedge-Lock® Door Rail System, manufactured by:
C.R. Laurence Co., Inc. (CRL)
Tel: (800) 421-6144 Fax: (800) 587-7501
Email: architectural@crlaurence.com
www.crlaurence.com
fabricated by:
Coral Architectural Products, A Division of Coral Industries
Tel: (800) 772-7737 Fax: (800) 443-6261
Website: www.coralap.com
- B. Subject to compliance with requirements, “all glass” entrances from other manufacturers meeting the specified requirements may be acceptable.

2.02 Materials

- A. Glass: Provide flat, fully tempered glass in thickness indicated for doors and sidelites. Comply with requirements of ASTM C 1048 for FT (fully tempered), Condition A (uncoated surfaces), Type 1 (transparent) Class 1 (clear) glass. Provide products of thickness indicated that have been tested for surface and edge compression according to ASTM C 1048 and for impact strength according to 16 CFR Part 1201 for Category II materials.
1. Thickness: ⅝ inch (10 mm)
 2. Thickness: ½ inch (12 mm)
 3. Thickness: ⅜ inch (16 mm)
 4. Thickness: ¾ inch (19 mm)
 5. Edge treatment: Provide machine ground and polished edges for exposed glass edges of doors and sidelites and flat ground edges for butting glass edges.
 6. Glass Manufacturers: _____.
- B. Fittings, General: Provide CRL Wedge-Lock® Door Rails in required profile, size and glass thickness as selected by the Architect. Comply with requirements indicated for kind and form of metal finish.
1. Aluminum: Provide fittings fabricated from aluminum extrusions of alloy and temper recommended by manufacturer for use intended and required for application of finish indicated, but not less than strength and durability properties specified in ASTM B 221 for 6063-T5.
- C. Door Rail Systems: Provide door rail systems matching metal and finish of door fittings. The system shall include, but not limited to, door rails, patches, vertical stiles, center locks, and strike housings. Comply with GANA guidelines, and hardware manufacturer requirements for size restrictions. Door rails shall allow for jamb adjustment in or out with standard hardware. System shall include, but not limited to, end caps, blocking and preparation.
1. Profile: Square
 2. Profile: Beveled (Only available in 4 inch [102 mm] high profile)
 3. Height: 2-⅝ inch (59 mm)
 4. Height: 4 inch (102 mm)
 5. Height: 6 inch (152 mm)
 6. Height: 10 inch (254 mm)
 7. Height: Custom as indicated on drawings
- D. Accessory Fittings: Provide manufacturer’s standard accessory fittings of the type indicated. Comply with requirements indicated for kind and form of metal and finish of door fittings.
- E. Anchors and Fasteners: Manufacturer’s standard concealed anchors and fastenings. Do not use exposed fasteners.
- F. Weatherstripping: Can be applied to edges of glass and top/bottom door rails to help reduce air and water infiltration. The weatherstripping shall be pile and replaceable without removing doors from opening.

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2.03 Hardware

- A. General: Provide heavy-duty hardware units as indicated, scheduled or required for operation of each type of door, including the following items of sizes, numbers and type recommended by the manufacturer for the type of service required. Provide metal and finish for exposed parts to match the finish of the door rails.
- B. CRL by C.R. Laurence Co., 9100 Series Medium Duty extended spindle Overhead Concealed Door Closers and 9200 Series Heavy-Duty extended spindle Overhead Concealed Door Closers are double acting and fit into CRL 4- $\frac{1}{2}$ " x 1- $\frac{3}{4}$ " Single or Double Closer Headers. Closers secure to the center hung arm in the top door rail. Provide top adjustable arm, bottom adjustable pivot and finished cover plate if required. Comply with manufacturer's recommendations for closer size, depending upon door size, exposure to weather and anticipated frequency of use.
- C. C.R. Laurence Co., J990 Series Heavy Weight Floor Mounted Closers are double acting and supplied with cement box and Brushed S/S cover plate. Cover plates in other finishes are available. Provide bottom adjustable arm, top adjustable pivot and finished cover plate if required. Comply with manufacturer's recommendations for closer size, depending upon door size, exposure to weather and anticipated frequency of use.
Include the following:
1. Non-hold-open closers must comply with ADA Handicap requirements.
 2. Consult manufacturer for closer recommendations on doors over 264 lbs.
- D. Push-Pull Set: Provide handles selected by the Architect and supplied by C.R. Laurence.
- E. Concealed PA100 and PA110 Panic Handles: Panic device shall be 1- $\frac{1}{4}$ " diameter C.R. Laurence's PA100 or PA110 with interior operating panic handle in combination with exterior fixed pull handles designated by letters. Panic mechanism shall be concealed within the brass or stainless steel tubing. Entrance from exterior by a keyed cylinder is optional.
- F. Deadbolt Lock Handles: Shall be C.R. Laurence's DB100, DB110, DB130, DB140, DB150, DB160, DB170 with interior fixed handle and any of the fixed exterior pull handles designated by letters. Operating mechanism shall be concealed within the 1- $\frac{1}{4}$ " brass or stainless steel tubing. There shall be a keyed cylinder on both sides or a thumbturn on the interior side where indicated. The locking mechanism shall be on the interior side of the door.
- G. Electronic Egress Control Handles: Shall be C.R. Laurence's EG100 or EG110 with interior operating egress handle in combination with exterior fixed pull handles designated by letters. Panic mechanism shall be concealed within the brass or stainless steel tubing. Entrance from exterior by a keyed cylinder is optional.
- H. Electric Strikes: Shall be Folger Adams 310-1 with $\frac{3}{4}$ " straight latch bolt keeper without signal switches using PA 100 Panic Handles. Electric strikes are mounted in the header or transom bar.
- I. Locks: Equip exterior doors with manufacturer's locksets that accept a standard cylinder with related components. Comply with the following:
1. Location and function: Provide round throw deadbolt in continuous bottom fitting. Lock to be operated by key outside and thumbturn inside with end load capability.
- J. Cylinders or Magnetic Locks: Supplied as described under Division 8 section, for keying into building system.
- K. Threshold: Provide manufacturer's standard extruded aluminum threshold in mill finish. Coordinate cutouts with operating hardware. Include anchors and jamb clips.