SECTION 08 11 10

FIRE-RATED STEEL ENTRANCE DOORS

JELD-WEN Contours 90 Minute Steel Edge Doors

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\*\* NOTE TO SPECIFIER \*\* JELD-WEN, Inc.; fire-rated steel entrance doors.  
This section is based on the products of JELD-WEN, Inc., which is located at:  
3737 Lakeport Blvd.  
Klamath Falls, OR 97601  
Toll Free Tel: 888-535-3936  
Tel: 541-850-2606  
Fax: 541-851-4333  
Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08110jwi):%20%20&mf=)  
Web: [www.jeld-wen.com](http://www.jeld-wen.com)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos33/arc33445.html) ] for additional information.  
As a JELD-WEN customer, you can count on us to provide reliable products and service. We are a comprehensive source for dependable wood, vinyl and aluminum windows; wood and wood composite interior doors; and wood, steel, wood composite and fiberglass exterior doors.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Fire-rated steel entrance doors, 90 minute rating.
  1. RELATED SECTIONS
     1. Section 06 10 00 - Rough Carpentry.
     2. Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies.
  2. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Architectural Manufacturer Association (AAMA):
       1. AAMA 1304 - Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems.
    2. ASTM International (ASTM):
       1. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Doors Under Specified Pressure Differences Across the Specimen.
       2. ASTM E330 - Standard Test Method for Structural Performance of Exterior Doors by Uniform Static Pressure Difference.
       3. ASTM E331 - Standard Test Method for Water Penetration of Exterior Doors by Uniform Static Air Pressure Difference.

\*\* NOTE TO SPECIFIER \*\* In applications where hurricane resistance is not required Delete ASTM E 1886 and E 1996 references.

* + - 1. ASTM E 996 - Standard Specification for Performance of Exterior Doors by Windborne Debris in Hurricanes.
      2. ASTM E1886 - Standard Test Method for Performance of Exterior Doors by Missile(s) and Exposed to Cyclic Pressure Differentials.
    1. Florida Building Code (FBC):
       1. FBC 1626 - High-Velocity Hurricane Zones - Wind Loads
       2. TAS 201 - Impact Test Procedures
       3. TAS 202 - Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure
    2. National Fenestration Rating Council (NFRC):
       1. NFRC 100 - Procedure for Determining Fenestration Thermal Properties.
       2. NFRC 200 - Solar Heat Gain Coefficient and Visible Transmittance.
    3. National Fire Protection Association (NFPA):
       1. NFPA 252 - Standard Methods of Fire Tests of Doors Assemblies.
    4. Underwriters Laboratories, Inc. (UL):
       1. UL 10B - Standard for Fire Test of Door Assemblies.
       2. UL 10C - Standard for positive Pressure Fire Tests of Doors Assemblies.
    5. Uniform Building Code Standard (UBC):
       1. UBC 7-2 (1994): Fire Tests of Door Assemblies. (Note: Neutral pressure testing standard).
       2. UBC 7-2 (1997): Fire Test of Door Assemblies. (Note: Positive pressure testing standard).
    6. Underwriters' Laboratories of Canada (ULC):
       1. CAN/ULC S104 - Standard Method for Fire Tests of Door Assemblies.
    7. Window and Door Manufacturers Association (WDMA):
       1. WDMA I.S.4; Water Repellent Preservative Non-Pressure Treatment for Millwork.
       2. Sponsored Hallmark Certification Program.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. 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.
     3. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.
     4. Verification Samples: For each factory-finished product specified, two samples, minimum size 6 inches (150 mm) square, representing actual finishes.
     5. Quality Assurance Submittals:

\*\* NOTE TO SPECIFIER \*\* Retain when other products may be submitted as substitution. If the section is to be proprietary, delete.

* + - 1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
      2. Manufacturer Instructions: Provide manufacturer's written installation instructions.
    1. Closeout Submittals: Refer to Section 01 70 00 - Execution and Closeout Requirements.
  1. QUALITY ASSURANCE
     1. Installer Qualifications: Minimum 2 years installing similar assemblies.
     2. Certifications: WDMA Hallmark certification label indicating assemblies meet the design requirements.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size or quality parameters warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
       1. Mock-ups shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with manufacturer's approved installation methods.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Rework mock-up as required to produce acceptable work.

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following subparagraphs.

* + - 1. At Substantial Completion, approved mockups may become part of completed Work.
      2. Demolish mockups and remove from site.
    1. Pre-installation Meeting: Conduct pre-installation meeting on site two weeks prior to commencement of installation.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
     2. Deliver and store assembly materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
        1. Protect from damage and exposure to direct sunlight during storage.
        2. Store in a dry, well-ventilated area off of the floor.
        3. During storage, do not remove paper or cardboard placed between products for shipment.

\*\* NOTE TO SPECIFIER \*\* The subparagraph below is the manufacturer's recommendation and not a mandatory requirement. Delete if no0t required.

* + - 1. Store in a humidity and temperature controlled facility. Recommended conditions: 30 to 50 percent relative humidity and 50 to 90 degrees F (10 to 32 degrees C)
    1. Handling: Handle with clean hands and equipment. Lift and carry the products when moving them. Do not drag across one another.
  1. PROJECT CONDITIONS
     1. Maintain environmental conditions; temperature, humidity, and ventilation, within limits recommended by manufacturer for optimum results. Install only in vertical walls and when conditions are dry. Do not install products under environmental conditions outside manufacturer's recommended limits.
  2. WARRANTY
     1. Manufacturer's Standard Warranty: Assemblies will be free from defects in materials and workmanship from the date of manufacture for the time periods indicated below:

\*\* NOTE TO SPECIFIER \*\* Delete options for products not required.

* + - 1. Door Slab: 10 Years.
      2. Steel Frame: See manufacturer separate warranty.

\*\* NOTE TO SPECIFIER \*\* Product Information is proprietary to JELD-WEN. If additional products are required for competitive procurement, contact JELD-WEN for assistance in listing competitive products that may be available.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: JELD-WEN, Inc., which is located at: 3737 Lakeport Blvd.; Klamath Falls, OR 97601; Toll Free Tel: 888-535-3936; Tel: 541-850-2606; Fax: 541-851-4333; Email: [request info (Architectural\_Inquiries@jeld-wen.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=JELD-WEN,+Inc.&coid=33445&rep=&fax=541-851-4333&message=RE:%20Spec%20Question%20(08110jwi):%20%20&mf=); Web: [www.jeld-wen.com](http://www.jeld-wen.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. STEEL ENTRANCE DOORS
     1. Basis of Design: Contours 90 Minute Steel Edge Doors by JELD-WEN, Inc.

\*\* NOTE TO SPECIFIER \*\* The UBC 7-2 though discontinued (replaced by UL 10C and NFPA 252) is still recognized by some authorities having jurisdiction and is therefore included in this specification. Delete if not required.

* + 1. Fire-Rated Door Assemblies: Meet or exceed fire-protection ratings indicated when tested in accordance with the following: NFPA 252, UL 10B, UL 10C, and CAN/ULC S104, and UBC 7-2. Provide doors complying with specified requirements, based on testing manufacturer's doors representative of those specified: AAMA 1304, ASTM E283, ASTM E330, and ASTM E331.
    2. Structural Design Pressure:

\*\* NOTE TO SPECIFIER \*\* Design pressure ratings and related door size and style are available at www.jeld-wen.com or by contacting a JELD-WEN representative.

* + - 1. \_\_\_\_\_\_.
      2. As indicated on drawings.
    1. Impact (Windborne-Debris) Resistance: Capable of resisting impact, in accordance with ASTM E1886 and ASTM E1996.

\*\* NOTE TO SPECIFIER \*\* The subparagraph below are Florida Building Code requirements. Delete if not required.

* + - 1. Provide doors tested in accordance with FBC Section 1626.
      2. Provide doors tested in accordance with FBC, TAS 201, and TAS 202.
    1. NFRC Requirements:

\*\* NOTE TO SPECIFIER \*\* NFRC ratings and related JELD-WEN door size and styles are available at www.jeld-wen.com or by contacting a JELD WEN representative.

* + - 1. U-Factor, in accordance with NFRC 100: \_\_\_\_\_\_.
      2. Solar Heat Gain Coefficient (SHGC), in accordance with NFRC 200: \_\_\_\_\_\_.
    1. Materials:
       1. Steel Skins: Galvanized steel; 0.021 inches (.53 mm) plus or minus 0.003 (0.07 mm).
       2. Stiles and Rails.
          1. Top Rail and Stiles Steel Edge Construction: Galvanized steel; 0.028 inches (.71 mm) plus or minus 0.003 (0.07 mm).
          2. Bottom Rail: Galvanized steel; 0.018 inches (.46 mm) plus or minus 0.003 (0.07 mm).
       3. Core: Custom-fitted Polystyrene.

\*\* NOTE TO SPECIFIER \*\* For true fire protection rating these doors must be used with certified frames and hardware.

* + 1. Thickness: 1-3/4 inch (44 mm).
    2. Edge Construction: Steel.
    3. Door Design:
       1. Door Surface: Smooth.
       2. Door Shape: Squared top.
       3. Door Style: Opaque.

\*\* NOTE TO SPECIFIER \*\* Select one of the following subparagraphs. Delete those not required.

* + - 1. Face Pattern: Flush.
      2. Face Pattern: 2-panel Arch Top.
      3. Face Pattern: 2-panel Square Top.
      4. Face Pattern: 2-panel Arch Top Plank.
      5. Face Pattern: 3-panel.
      6. Face Pattern: 4-panel.
      7. Face Pattern: 6-panel.
      8. Face Pattern: 8-panel.
      9. Face Pattern: 9-panel.
      10. Face Pattern: Craftsman.
    1. Sticking Profile:
       1. Beaded Ovolo.
       2. Tiered.
    2. Finish: Two-coats, low-sheen, baked-on enamel primer.

\*\* NOTE TO SPECIFIER \*\* Doors are available as prehung or slabs with hinge and lockset prep. Retain one of two paragraphs below.

* + 1. Hardware: None. Prep door for owner supplied hinge and lockset.
    2. Hardware Finish: Owner specified.
  1. CONSTRUCTION ACCESSORIES

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following paragraphs.

* + 1. Flashing: Refer to appropriate sections in Division 04 for flashing in reference to unit masonry.
    2. Flashing: Refer to appropriate sections in Division 07 for flashing in reference to flashing and sheet metal.

\*\* NOTE TO SPECIFIER \*\* Delete one of the two following paragraphs.

* + 1. Sealants: Refer to appropriate sections in Division 07 for sealants.
    2. Sealants: Provide manufacturer recommended sealants to maintain watertight conditions.
  1. FABRlCATlON
     1. One-piece polystyrene custom fitted in standard steel stile and rail frame. Steel skin coated with epoxy primer before attachment to core and frame.

1. EXECUTION
   1. EXAMINATION AND PREPARATION
      1. Inspect and prepare openings and substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.
         1. Inspect door and components prior to installation.
         2. Verify rough opening conditions are within recommended tolerances.
         3. Prepare assembly components for installation in accordance with manufacturer's recommendations.
      2. Do not proceed with installation until openings and substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
      3. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
   2. INSTALLATION
      1. Install doors in accordance with manufacturer's installation guidelines and recommendations and approved submittals.
   3. FIELD QUALITY CONTROL
      1. Manufacturers' Field Services: Field inspections.
   4. CLEANING AND PROTECTION
      1. Protect installed doors from damage.

\*\* NOTE TO SPECIFIER \*\* Below are sample schedules that require editing for specific project. When a single type of door is utilized on a project, Specifier may elect to delete the schedule in its entirety. When Schedules are included on the drawings, schedule should be deleted from the specification.)

* 1. SCHEDULES
     1. Door Type A:
        1. Basis of Design: Contours.
        2. Thickness: 1-3/4 inches (44 mm).
        3. Skin Thickness: 0.021 inches (.53 mm).
        4. Fire Rating: 90 min.
        5. Edge Construction: Steel.
        6. Door Design
           1. Surface: Smooth.
           2. Shape: Squared.
           3. Style: \_\_\_\_\_\_.
           4. Face Pattern: \_\_\_\_\_\_.
        7. Casing: \_\_\_\_\_\_.
        8. Hinges: \_\_\_\_\_\_.
        9. Sill: \_\_\_\_\_\_.

END OF SECTION