SECTION 08251 - INTEGRATED WOOD DOOR SYSTEMS

PART 1 GENERAL

1.1 GENERAL NOTE

A. The General Conditions, Supplementary General Conditions, and Division 1 - General Requirements are hereby made a part of this Section as fully as if repeated herein.

1.2 SUMMARY

A. Section Includes
   1. Integrated wood door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.

1.3 RELATED SECTIONS

A. Section 01300, Submittal Procedures.

B. Section 01630, Product Substitution Procedures.

C. Section 08710, Door Hardware.

1.4 REFERENCES

A. ANSI Z97.1 – Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test, American National Standards Institute, 1984 (R1994).

B. ANSI/BHMA A156.3 – Exit Devices, American National Standards Institute/ Building Hardware Manufacturers Association, 2001.

C. ANSI/BHMA A156.4 – Closers, American National Standards Institute/ Building Hardware Manufacturers Association, 2000.

D. ANSI/BHMA A156.13 – Mortise Locks/Latches, American National Standards Institute/ Building Hardware Manufacturers Association, 2002.

E. ANSI/BHMA A156.26 – Continuous Hinges, American National Standards Institute/ Building Hardware Manufacturers Association, 2000.

F. ASTM C1036 – Standard Specification for Flat Glass, American Society of Testing and Materials, 1991 (1997).

G. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings, American Society of Testing and Materials, 2004e1.

H. ASTM E2010 - Standard Test Method for Positive Pressure Fire Tests of Window Assemblies, American Society of Testing and Materials, 2001.

I. ASTM E2074 - Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies, American Society of Testing and Materials, 2000.

J. AWI AWQS - Architectural Woodwork Quality Standards P-208; The Architectural Woodwork

Institute; 8th Edition.

K. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials - codified at Title 16, Part 1201 of the Code of Federal Regulations, Consumer Products Safety Commission, 1977.

L. AWI AWQS - Architectural Woodwork Quality Standards P-208; The Architectural Woodwork Institute; 8th Edition.

M. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.

N. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.

O. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.

P. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.

Q. UL 305 - Standard for Panic Hardware, Underwriters Laboratories Inc., 1997

1.5 SYSTEM DESCRIPTION

A. Performance Requirements
   1. Integrated wood door opening assemblies: Exceed minimum performance standards.
      a. Not less than 5,000,000 cycles.
      b. Exit Devices: In accordance with ANSI/BHMA A156.3, Grade 1, but not less than 5,000,000 cycles.
      c. Mortise Locks/Latches: In accordance with ANSI/ BHMA A156.13, Grade 1, but not less than 5,000,000 cycles.
      d. Full-height Hinges: In accordance with ANSI/ BHMA A156.26, Grade 1, but not less than 5,000,000 cycles.

1.6 SUBMITTALS

A. Shop Drawings
   1. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical rough-in requirements.

B. Samples
   1. Three (3) samples of door construction.

1.7 QUALITY ASSURANCE

A. Qualifications
   1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated wood door opening assemblies with full-height latch/lock and full-height hinge.
   2. Supplier: Authorized distributor of manufacturer.
   3. Installer: Manufacturer certified, employed by supplier.

B. Regulatory Requirements
   1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.

1.8 DELIVERY, STORAGE AND HANDLING

A. Packaging: Polyvinyl wrapped clearly marked for each opening.

B. Delivery: Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.

C. Store: Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.

D. Receiving, off loading, and site distribution should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.

1.9 PROJECT CONDITIONS

A. Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.

B. Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity range between 30 and 60 percent. Stack doors flat and off the floor to prevent warpage.

1.10 WARRANTY

A. Integrated wood door opening assembly: Manufacturer's standard 2-year warranty against defects in material and workmanship.

B. Locks, hanger rods, and panic exit devices: Manufacturer's lifetime limited warranty against defects in material and workmanship.

C. Unfinished wood veneers on wood doors are subject to atmospheric changes and moisture collection, and shall be finished within 10 days from factory ship date or warranty on lamination is made void. Building shall be stabilized at 30 to 60 percent humidity.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Integrated wood door opening systems.
   1. Total Door: www.totaldoor.com or approved equal.

B. Hardware
   1. Total Door: www.totaldoor.com

2.2 MATERIALS

A. Frames
   1. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
   2. Construction: All-welded unit type.

3. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
4. Fire Resistance Rating: Where indicated in Contract Documents for doors.
5. Spreader Bar: Removable, at sill.

B. Frame Anchorage Devices
1. To securely fasten to wall construction without distortion or stress.
2. In accordance with fire resistance rating indicated in Contract Documents.

C. Door Systems
1. In accordance with ANSI/SDI A250.8.
2. General Use, Interior
a. Top and Bottom Rails: 5-1/2 inch, kiln-dried lumber.
b. Stiles: Aluminum
c. Cores: Composite wood.
d. Thickness: 1-3/4 inches.
e. Face veneer:
1) Maple, select White

3. System Accessories
a. Gasketing
1) U.L. approved for fire doors.
2) Jambs: Factory applied to latch/locking and full-height hinge channels.
3) Locations at doors indicated.

D. System Hardware
1. Full-height Hinge
a. Full-height, semi-concealed.
b. Acceptable products:
1) Total Door: H-13.
2. Full-height Latching/Locking Channel
a. Full-height.
b. Acceptable products:
1) Total Door: L-11.

2.3 FINISHES

A. Frames: Factory prime painted for field-applied finish.

B. Hinge and Locking Channel
1. Finish: 2 part infrared baked polyurethane paint.
2. Color: Custom color selected by Architect.

C. Door Faces
1. Wood Veneer:
a. Species: White Maple
b. Cut: Flat
c. Finish: Clear

D. System Hardware

2.4 FABRICATION

A. Unless modified by Contract Documents, construct integrated wood door opening assemblies in accordance with manufacturer's published specifications and applicable Code requirements.

B. Factory assemble with full-height hinges and latching/locking channels, locksets, exit devices, closers, lite kits, glazing, kickplates, stretcher plates, and armor plates.

PART 3 EXECUTION

3.1 EXAMINATION

A. Field Conditions
   1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
   2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.

B. Field Dimensions
   1. Where possible, verify frame tolerances before fabrication of door systems.
   2. Notify Architect of variances with reviewed shop drawings.

C. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.

D. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.

3.2 INSTALLATION

A. Install work in accordance with Contract Documents and reviewed shop drawings.
   1. Install door systems and hardware according to manufacturer's recommendations.

B. Frames
   1. Set plumb and square in accordance with DHI standards.
      a. Out-of-square at frame head: Not to exceed 1/16 inch.
      b. Out-of-plumb for each frame jamb: Not to exceed 1/16 inch.
      c. Out-of-alignment for each side in plan: Not to exceed 1/16 inch.
      d. Twist dimension: Not to exceed 1/16 inch.
   2. Brace until adjacent wall is constructed.
   3. Securely anchor to adjacent wall.
   4. Furnish and install clips, fastenings, and anchorages and conceal unless otherwise noted.

C. Door systems
   1. Hang to maintain manufacturer's installation tolerances.
   2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.

D. Hardware: When installation is otherwise complete, adjust hardware for proper operation and function.

PART 4 SCHEDULE

A. Hardware set as indicated in Division 8 Section "Door Hardware".

END OF SECTION 08251