

## Section 08 11 13 Steel Doors and Frames

Specifications

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### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Flush steel doors and frames; integral sidelites; non-rated and fire rated.
- B. Grouting of all interior and exterior frames.

#### 1.02 RELATED SECTIONS

- A. 08 71 00 – Finish Hardware

#### 1.03 SUBMITTALS

- A. Shop Drawings: Indicate door and frame elevations, internal reinforcement, cut-outs for glazing, louvers, and finish.
- B. Product Data: Indicate door and frame configurations, location of cut-outs for hardware reinforcement.

#### 1.04 QUALITY ASSURANCE

- A. Conform to the following:
  - 1. SDI-100 - Standard Steel Doors and Frames.
  - 2. DHI- Door Hardware Institute - The Installation of Commercial Steel Doors in Wood Frames and Builder's Hardware.
  - 3. Fire Rated Door Panel and Frame Construction: ASTM E152, NFPA 252, UL 10B, NFPA 80.
  - 4. Handicapped: ANSI A117.1.
  - 5. HMMA 861 - Commercial Hollow Metal Doors and Frames.

### PART 2 PRODUCTS

#### 2.01 DOORS AND FRAMES

- A. Manufacturers:
  - 1. CECO Corp.
  - 2. Steelcraft
  - 3. Curries
- B. Exterior Doors: Grade III, steel reinforced.
- C. Exterior & Interior Frames: 14 gage thick material at exterior, 16 gage at interior.
- D. Door Core: Polystyrene at rated interior; Polyurethane at all exterior doors.

#### 2.02 ACCESSORIES

- A. Silencers: Resilient rubber.
- B. Bituminous Coating: Fibered asphalt emulsion.
- C. Primer: Zinc chromate type.
- D. Anchors: Wire masonry type; drywall types; expansion anchor types; use types as appropriate for existing and new wall construction types.
- E. Door Louvers: Same material and finish as door; provide insect screens.

#### 2.03 FABRICATION - DOORS

- A. Fabricate doors with hardware reinforcement welded in place.
- B. Close top and bottom edge of exterior doors with inverted steel channel closure. Seal joints watertight.
- C. Provide face sheets, thicknesses, stiffeners, vertical, top, and bottom edges, glass stops in accordance with HMMA 861.

#### 2.04 FABRICATION - FRAMES

- A. Fabricate frames as welded unit.
- B. Fabricate frames with hardware reinforcement plates welded in place. Provide mortar guard boxes.

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- C. Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.
  - D. Prepare frame for silencers and install.
  - E. Attach fire rated label to each frame unit.
  - F. Frame dimensions:
    - 1. Face: 2 inches at gyp board, 2 inches at CMU.
    - 2. Width: 5 3/4 inches at 3 5/8" stud walls and CMU walls. Provide width and throat dimension as required at stud walls to accommodate finish wall thickness.
    - 3. Head: 2 inches at gyp board, 4 inches at CMU walls;
    - 4. Coordinate and verify requirements for frame dimensions with drawings and schedules.
  - G. Provide construction, floor and jamb anchors, mortar guards, and loose glazing stops in accordance with HMMA 861.
- 2.05 FINISH
- A. Steel Sheet: Galvannealed to ASTM A924 and A653.
  - B. Primer: Baked.
  - C. Coat inside of frame profile with bituminous coating.
  - D. To be field painted under Section 09 90 00.

### PART 3 EXECUTION

- 3.01 INSTALLATION
- A. Install doors and frames in accordance with ANSI/SDI-100.
  - B. Coordinate installation of doors and frames with installation of hardware specified in Section 08 71 00.
  - C. Coordinate with wall construction for frame anchor placement.
  - D. Glazing stops shall be applied at interior side of frames.
  - E. Fill frame perimeter crevasses at exterior frames with Thermafiber insulation or equal.
  - F. All interior and exterior frames shall be grouted.
  - G. If countersunk anchors are used, "Bondo" depressions prior to priming and painting frames.
- 3.03 TOLERANCES
- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

**END OF SECTION**

## Section 08 14 16 Flush Wood Doors

Specifications

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### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Pre-finished flush wood doors, to be installed in new steel frames; fire rated and non-rated.
- B. Doors shall be pre-machined.
- C. Contractor Option: provide factory-installed glass lites in hollow metal frames with safety glazing as required; coordinate supplier with Section 08 80 00.
- D. Louver grilles shall be clear finish aluminum.

#### 1.02 RELATED SECTIONS

- A. Section 08 11 13 - Steel Doors and Frames.
- B. Section 08 71 00 - Finish Hardware.
- C. Section 08 80 00 - Glazing.
- D. Section 09 90 00 - Painting: Site finishing of doors.

#### 1.03 REFERENCES

- A. AWI - Quality Standards of the Architectural Woodwork Institute.
- B. NFPA 80 - Fire Doors and Windows.
- C. NFPA 252 - Standard Method of Fire Tests for Door Assemblies.
- D. UL (Underwriter Laboratories) - Building Materials Directory.
- E. UL 10B - Fire Tests of Door Assemblies.
- F. WH (Warnock Hersey) - Directory of Listed Products.

#### 1.04 SUBMITTALS FOR REVIEW

- A. Submit schedule of doors to be provided with product data and fire rating required.
- B. Provide manufacturer's certification that door meets AWI standards and fire rating requirements.
- C. Provide manufacturer's standard color chip for selection of door finish; at Architect's request, manufacturer shall provide a 12" x 24" sample with selected finish, edge, lock cut-out (glass lite and frame if applicable.)
- D. Contractor shall provide hardware schedules, and relevant information for existing frames to door manufacturer prior to submittals of this Section to Architect.

#### 1.05 QUALITY ASSURANCE

- A. Perform work in accordance with AWI Quality Standard Section 1300, Custom Grade.
- B. Finish doors in accordance with AWI Quality Standard Section 1500.
- C. Fire Door Construction: Conform to NFPA 252.
- D. Fire Door Installation: Conform to NFPA 80 for fire rated class as scheduled.
- E. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- F. Provide limited lifetime warranty for workmanship of door construction.

#### 1.06 DELIVERY, STORAGE, AND PROTECTION

- A. Section 01 00 00 - Material and Equipment: Transport, handle, store, and protect products.
- B. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

#### 1.07 PROJECT CONDITIONS

- A. Coordinate work with door opening construction, new (and existing frame) and door hardware installation.

#### 1.08 WARRANTY

- A. Life of the installation against delaminating, telegraphing of core components, and warp or twist

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### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

- A. VT Industries
- B. Marshfield
- C. Graham

#### 2.02 DOOR TYPES

- A. Flush Interior Doors: 1-3/4 inches thick; solid core construction.

#### 2.03 DOOR CONSTRUCTION

- A. Core (Solid, Non-Rated): AWI Section 1300, Type PC - Particleboard.
- B. Core (Solid, Rated): AWI Section 1300, Type FD as necessary.

#### 2.04 FLUSH DOOR FACING

- A. Veneer Facing (Flush Wood Finish): AWI Custom species wood, plain sliced, white oak.

#### 2.05 VENTILATION LOUVER GRILLES

- A. Inverted vee-shaped with perimeter channel trim/frame; clear, smooth aluminum finish.
- B. Insect screen at exterior doors.

#### 2.06 FABRICATION

- A. Fabricate non-rated doors in accordance with AWI Quality Standards requirements.
- B. Fabricate fire rated doors in accordance with AWI Quality Standards and to UL or Warnock Hersey requirements. Attach fire rating label to door.
- C. Provide lock blocks at lock edge and top of door for closer for hardware reinforcement.
- D. Vertical Exposed Edge of Stiles: Of same species as veneer facing for transparent finish.
- E. Provide edge clearances in accordance with AWI 1600.
- F. Install fire rating label on hinge side of door.
- G. Machine doors for hinges, locksets, and all other hardware prior to finishing.

#### 2.07 FINISH

- A. Finish: Factory pre-finished stain; AWI Finish System TR-6, catalyzed polyurethane; Custom color stain to match existing wood doors.
- B. Finishing Process/ Requirements:
  - 1. Two UV (ultraviolet) sanding sealer coats.
  - 2. Sealer is sanded down between each coat.
  - 3. First top coat: Clear catalyzed polyurethane material applied.
  - 4. First top coat, sanded with fine sand paper, (200 - 320 grit)
  - 5. Final top coat: second coating applied of clear catalyzed polyurethane material.
  - 6. UV cure after finishing process is complete.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that opening sizes and tolerances are acceptable.
- B. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

#### 3.02 INSTALLATION

- A. Install non-rated doors in accordance with AWI Custom Quality Standards requirements.
- B. Trim doors only by approval of Architect; if doors are trimmed, re-seal and stain door edges (to match factory finish) prior to installation of door.
- C. Machine cut for hardware only by approval of Architect.
- D. Coordinate installation of doors with installation of frames specified in Section 08 11 13 or existing conditions at existing frames.
- E. Install fire-rated doors in accordance with AWI Quality Standard, NFPA 80, and to requirements for fire rating label by UL or Warnock Hersey.
- F. Fire rated doors: Trim door height only in accordance with fire rating requirements.

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**Flush Wood Doors**

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3.03 INSTALLATION TOLERANCES

- A. Conform to AWI requirements for fit and clearance tolerances.
- B. Conform to AWI Section 1300 requirements for maximum diagonal distortion.

3.04 ADJUSTING

- A. Adjust door for smooth and balanced door movement.
- B. Adjust closer for full closure.

3.05 SCHEDULE

- A. Refer to Door and Frame Schedule on drawings.

**END OF SECTION**

## Section 08 41 13 Aluminum Entrances and Storefronts

Specifications

08 41 13 -1

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Aluminum storefront framing, entrance doors and hardware.
- B. Storefront contractor shall be responsible for providing and matching existing locking mechanisms.

#### 1.02 RELATED SECTIONS

- A. Section 08 71 00 – Finish Hardware
- B. Section 08 80 00 – Glazing: Vision glass and glazing.

#### 1.03 REFERENCES

- A. AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. AAMA SFM-1 - Aluminum Storefront and Entrance Manual.
- C. ASTM E283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
- D. ASTM E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- E. ASTM E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

#### 1.04 SYSTEM DESCRIPTION

- A. Aluminum entrances and storefront system includes tubular aluminum sections with supplementary internal support framing, shop fabricated, factory finished, vision glass, related flashings, anchorage, and hardware.
- B. System Assembly: Shop unitized assembly.
- C. Cylinders: Provide new locks and keys to match those specified in 08 71 00.

#### 1.05 PERFORMANCE REQUIREMENTS

- A. System Design: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall:
  - 1. As calculated in accordance with code,
  - 2. As measured in accordance with ASTM E330.
- B. Deflection: Limit mullion deflection to 1/200 of span; with full recovery of glazing materials.
- C. System Assembly: Accommodate without damage to components or deterioration of seals, movement within system, movement between system and peripheral construction, dynamic loading and release of loads, deflection of structural support framing.
- D. Air Infiltration: Limit air leakage through assembly to 0.06 cfm/min/sq ft of wall area, measured at a reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E283.
- E. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
- F. Water Leakage: None, measured in accordance with ASTM E331 test pressure difference of 2.86 lbf/sq ft.
- G. Expansion / Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12-hour period without causing detrimental effect to system components and anchorage.
- H. System Internal Drainage: Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to the exterior by a weep drainage network.

#### 1.06 SUBMITTALS FOR REVIEW

- A. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware and internal drainage details. Provide cylinder information.
- B. Design Data: Provide framing member structural and physical characteristics, dimensional limitations.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.

#### 1.07 QUALITY ASSURANCE

- A. Perform Work in accordance with AAMA - Window, Storefront Entrance - Guide Specifications Manual.
- B. Conform to requirements of ANSI A117.1.
- C. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum three years experience.

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### 1.08 DELIVERY, STORAGE, AND PROTECTION

- A. Handle Products of this section in accordance with AAMA - Curtain Wall Manual #10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

### 1.09 WARRANTY

- A. Correct defective Work within a five year period after Substantial Completion.
- B. Warranty: Include coverage for complete system for failure to meet specified requirements.
- C. Provide five year manufacturer warranty for glazed units.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Kawneer.
- B. Vistawall.
- C. EFCO.

### 2.02 STOREFRONT EXTERIOR

- A. SYSTEM
  - 1. Vertical and horizontal framing members shall have a nominal face dimension of 2". Overall frame depth shall be 4 1/2". Glass stops are to be beveled. Entrance framing members shall be compatible with glass framing in appearance. All single acting entrance frames shall include positive barrier weathering.
- B. PRODUCTS
  - 1. Kawneer Trifab 451UT
  - 2. Equal to Trifab 451UT by Vistawall or EFCO

### 2.03 STOREFRONT INTERIOR

- A. SYSTEM
  - 1. Vertical and horizontal framing members shall have a nominal face dimension of 1 3/4". Overall frame depth shall be 4 1/2". Glass stops are to be beveled. Entrance framing members shall be compatible with glass framing in appearance. All single acting entrance frames shall include positive barrier weathering.
- B. PRODUCTS
  - 1. Kawneer Trifab VersaGlaze 450 Standard
  - 2. equal to Trifab VersaGlaze 450 Standard by Vistawall

### 2.04 ENTRANCE DOORS

- A. SYSTEM
  - 1. Heavy stile, single acting, custom height doors; see 2.07 for hardware.
  - 2. Muntins (where shown) are to be true dividing muntins with the smallest profile available (similar to Kawneer 200-055).
- B. PRODUCTS
  - 1. Kawneer 500 Tuffline
  - 2. equal to Tuffline by Vistawall

### 2.05 GLASS AND GLAZING MATERIALS

- A. Glazing Materials: Type to suit application to achieve weather, moisture, and air infiltration requirements. As specified in Section 08 80 00.

### 2.06 SEALANT MATERIALS

- A. Sealant and Backing Materials:
  - 1. Perimeter Sealant: As specified in Section 07 92 00.

### 2.07 HARDWARE

- A. Weather Stripping, Sill Sweep Strips: Manufacturers standard type to suit application.
- B. Balance of hardware supplied under Section 08 71 00.

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### Aluminum Entrances and Storefronts

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#### 2.08 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to conceal from view.
- E. Prepare components with internal reinforcement for door hardware.
- F. Reinforce framing members for imposed loads.

#### 2.09 ALUMINUM FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Exposed surfaces: Clear Anodized

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.

#### 3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Attach to structure to permit adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Coordinate attachment and seal of perimeter air and vapor barrier materials.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install flashings and trim.
- K. Install hardware using templates provided.
- L. Install glass in accordance with glazing method required to achieve performance criteria.
- M. Install perimeter sealant to method required to achieve performance criteria, backing materials, and installation criteria in accordance with Section 07 92 00.

#### 3.03 ERECTION TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 feet.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

#### 3.04 ADJUSTING/CLEANING

- A. Adjust operating hardware for smooth operation.
- B. Remove protective material from pre-finished aluminum surfaces.
- C. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- D. Remove excess sealant by method acceptable to sealant manufacturer.

**END OF SECTION**



## Section 08 71 00 Finish Hardware

Specifications

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### PART 1 - GENERAL

#### 1.1 WORK INCLUDED:

- A. The work in this section shall include the furnishing of all items of finish hardware as hereinafter specified, or obviously necessary to complete the building, except those items which are specifically excluded from this section of the specification.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 RELATED WORK:

- A. The following section of this specification should be examined in order to identify materials or equipment which may be obtained through this section.
  - 1. Section 08 11 13 – “Hollow Metal Doors and Frames”
  - 2. Section 08 14 16 – “Flush Wood Doors”
  - 3. Section 08 41 13 – “Aluminum Framed Entrances and Storefronts”
  - 4. Section 08 44 13 – “Glazed Aluminum Curtain Walls”

#### 1.3 DESCRIPTION OF WORK:

- A. Finish Hardware: Hardware used in building construction but particularly that used on or in connection with doors, frames, cabinets and other movable members. It also has a finished appearance as well as functional purpose and may be considered as a part of the decorative treatment of a room or building.

#### 1.4 QUALITY ASSURANCE:

- A. Hardware has been specified herein by manufacturers' name, brand and catalog numbers for the purpose of establishing a basis for quality, finish, design and operational function. No other products will be furnished unless approved by means of 1.4 Paragraph “D”.
- B. To insure a uniform basis of acceptable materials, it is the intention that only manufacturers' item specified as “acceptable and approved” be furnished for use on this project.
- C. Deviation from or modification of items will be permitted only for special instances caused by reason of construction characteristics and for the purpose of providing proper operational function. The contractor shall be responsible for checking any necessary deviations in order that hardware shall fit and function properly.
- D. Substitutions: Request for substitutions of items of hardware other than those listed as “acceptable and approved” shall be made to the architect no later than ten (10) days prior to bid opening. Approval of substitutions will only be given in writing or by Addenda. Requests for substitutions shall be accompanied by samples and/or detailed information for each manufacturer of each product showing design, functions, material thickness and any other pertinent information needed to compare your product with that specified. Substitution requests for mortise locks, door closers and exit devices shall include a physical sample. Lack of this information will result in a refusal.
- E. Supplier: A recognized builders hardware supplier whose principal office and place of business is located within 150 miles of the project site, who has been furnishing hardware in the project's vicinity for a period of not less than five (5) years; and who is, or has in full time employment an Architectural Hardware Consultant (AHC) in good standing as certified by the American Society of Architectural Hardware Consultants, or equivalent, and who is a factory direct distributor of the products approved, for warranty purposes. This paragraph will be strictly enforced. All schedules shall be signed by an AHC.

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- F. Products and installation under the work of this Section shall be in compliance with, in part, at least the more stringent provisions of the following, either the latest edition or latest adopted edition of the locality, and all revisions and amendments thereto:
1. Uniform Federal Accessibility Standards (UFAS).
  2. Americans With Disabilities Act of 1990 (ADA) "Accessibility Guidelines" (ADA-AG), and all revisions and amendments thereto.
  3. U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA "Accessibility Guidelines" (ADA-AG), Published in the Federal Register July 23, 2004, and revisions and amendments thereto.
  4. American National Standards Institute (ANSI), ANSI A 117.1, 2003.
  5. International Building Code, as applicable at the project locale.
  6. Where this requires any substitution of products specified herein, advise Architect in writing for necessary approvals.

### 1.5 **SUBMITTALS:**

- A. The finish hardware supplier shall, after award of a formal contract submit to the architect, six (6) complete computerized or typewritten (handwritten are not acceptable) copies of the proposed finish hardware schedule for approval. The schedule shall be prepared using the "sequence and format" for the Door and Hardware Institute (DHI). After approval of the schedule the hardware supplier shall provide three (3) copies of this approved schedule to the contractor for file and distribution purposes. Hardware will not be ordered by the hardware supplier until an approved schedule has been received. Horizontal schedules will not be acceptable. Provide vertical format.
- B. When submitting schedules for approval, include two manufacturers' cut sheets on each hardware item proposed. Index it with the use of number or letters or a combination of both, with the hardware schedule. The index numbers/letters are to be in right hand column on the same line as the respective manufacturers' numbers. All manufacturers' numbers shall be indexed even when appearing more than once.
- C. Templates: The hardware supplier shall provide necessary templates and/or physical hardware to all trades requiring them in order that they may cut, reinforce or otherwise prepare their material or product to receive the hardware item. If physical hardware is required by any manufacturer the hardware supplier shall ship to them such hardware via prepaid freight in sufficient time to prevent any delay in the execution of their work.

### 1.6 **DELIVERY, STORAGE, AND HANDLING:**

- A. All items of hardware to be delivered to the job site shall be of completely packaged with all necessary screws, bolts, miscellaneous parts, instructions and where necessary installation templates for manufacturers' suggested installation. All boxes are to have a typed label with door hand, room location, item number and keying to conveniently identify them and their intended location in the building.
- B. A representative of the general contractor shall receive the hardware when delivered at the job site. A dry locked storage space complete with shelving, shall be set aside for the purpose of unpacking, sorting, checking and storage.
- C. Finish hardware shall be delivered to the general contractor by the hardware supplier. Direct factory shipments to the job site are not acceptable.
- D. The hardware shall be jointly inventoried by the representative of the general contractor and the hardware supplier.
- E. Items damaged in shipment shall be replaced promptly and with proper material without additional cost to the general contractor.

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- F. All hardware shall be handled in a manner to minimize marring, scratching or damage.

### 1.7 WARRANTY:

- A. Provide manufacturers warranties from hardware supplier as follows:
1. Surface Door Closers: Ten years.
  2. Exit Devices: Mechanical: three years, Electro-Mechanical: one year.
  3. Locksets: Mortise: three years.
  4. All other Hardware: One year.
- B. The above warranties shall be in addition to, shall be in effect simultaneously with, and shall not alter other project or product warranties or guarantees, nor shall they serve as a limitation to other remedies available to the Owner.

## PART 2 - SPECIFIC REQUIREMENTS

### 2.1 ACCEPTABLE MANUFACTURERS:

- A. Requirements for design, grade, function, finish, size and other distinctive qualities of each type of finish hardware is indicated in the hardware schedule at the end of this section.

### 2.2 FINISH OF HARDWARE:

- A. Finish of hardware items shall conform to ANSI A156.18 and shall be as listed in the door hardware sets. All finishes should match existing.

### 2.3 BUTT HINGES, CONTINUOUS HINGES, AND PIVOTS:

- A. Templates Hinges: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template hinges which conform to ANSI whenever applicable.
- B. Hinge pins, except as otherwise indicated, shall be as follows:
1. Steel Hinges: Steel Pins.
  2. Non-Ferrous Hinges: Stainless Steel Pins
  3. Exterior Doors: Non-Ferrous, Non-Removable Pins (NRP) or Security Stud
  4. Out-Swing Corridor Doors: Non-Removable Pins (NRP), whether specified in the hardware sets or not.
  5. Interior Doors: Non-Rising Pins
  6. Tips: Flat button and matching plug, finished to match leaves, except where hospital tip indicated.
  7. Three Knuckle.
- C. Where projection of door trim is such as to prevent desired degree of opening, the proper hinge width shall be provided to allow the door to clear the trim.
- D. Acceptable and approved only as follows:
1. Ives
  2. Hager
  3. Bommer
- E. Substitutions allowed only as described under paragraph 1.4.D of this section.

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### 2.4 CYLINDERS, KEYS AND KEYING:

- A. Supplier shall provide **Yale KeyMark 7-pin**, full size, key removable cores and keys, along with associated rim and mortise cylinder housings that are compatible with the owner's existing master key system. Match existing keyways. Supplier to provide appropriate cylinder length, finish, collars, cams, etc. for each required installation.
- B. After the door hardware schedule has been approved by the architect, the General Contractor shall schedule a key meeting between hardware supplier, owner and architect's representative. The owner's specific keying requirements for lock cylinders shall be established at this meeting. After this meeting the hardware supplier shall submit a formal keying schedule to the architect for final approval. Supplier's key schedule shall be based upon recognized DHI format and shall list door numbers, door locations with room numbers, assigned key set symbols, key quantities, etc.
- C. **HARDWARE SUPPLIER shall provide brass temporary construction use cores for all exterior doors and all interior mechanical and electrical rooms. The HARDWARE SUPPLIER shall be responsible for removal of temporary cylinders/cores and for the installation of all permanent cylinders/cores at the completion of the project. HARDWARE SUPPLIER shall test all permanent keys and cores while installing permanent cores.**
- D. Key Quantities:
- |    |    |  |
|----|----|--|
| 1. | 2  | Temporary construction control keys                              |
| 2. | 12 | Temporary construction master keys                               |
| 3. | 3  | Permanent operating keys per cylinder, 8 for keyed alike groups. |
| 4. | 7  | Master keys for each master key group created.                   |
| 5. | 2  | Permanent Controls keys  |
- E. **Key and Core Stamping: Stamp or engrave all permanent cores in a concealed location with their assigned key set symbol. All keys shall be packed in envelopes marked with their assigned key set symbol. All keys shall be stamped with their assigned key set symbol. Stickers and key tags will not be accepted as methods of key and cylinder marking.**
- F. Provide one wall mount key storage box, equal to Lund Deluxe 1200 series, three tag key system. Provide in capacity 150% greater than required for project. **NOT REQUIRED FOR THIS PROJECT**
- G. **TAG KEYS WITH ROOM NUMBER:** Contractor shall turn over keys with key tags as indicated whether or not a new key cabinet is being provided: 1 White Tag (marked with room number and attached to corresponding key) and 1 Red Tag (marked with room number and attached to corresponding key).

### 2.5 LOCKSETS & LATCHSETS:

- A. Accepted and approved as follows:
- Schlage L9000 Series x 03L Design \*
  - Equal products by Corbin Russwin, Yale, and Best will also be accepted provided they are capable of accepting Yale KeyMark 7 pin key removable cores.
  - Ascension Parish School Board preferred lockset – Yale CRCN 8800 Series.**
- B. Provide function specified in the door hardware sets. All locks shall be equipped with strike dust boxes. Strike size shall be ASA 4 7/8". All locks shall be ANSI grade 1, UL listed for fire door use.
- C. Substitutions allowed only as described in paragraph 1.4.D of this section.

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## Section 08 71 00 Finish Hardware

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### 2.6 CLOSERS:

- A. Accepted and approved only as follows:
  - 1. LCN 4000 Series \*
  - 2. Equals by Corbin Russwin, Yale, and Norton will also be accepted.
  - 3. **Ascension Parish School Board preferred closer – Yale 4400 Series.**
- B. Substitutions allowed only as described in paragraph 1.4.D of this section.
- C. **All door closer bodies shall be mounted to wood doors using through-bolt method. At all hollow metal doors and frames drilling and tapping will be required. Self drilling and Self-tapping screws will not be permitted. Aluminum doors door closer bodies shall be drilled and tapped.**
- D. Closers shall have full covers, cast iron bodies and be capable of delayed action feature where specified in the hardware sets. Provide delayed action where specified. All regular arm mounted closers shall have forged steel main arms. Parallel arm mounted door closers shall have one piece forged steel arms equal LCN "EDA". Separate PA brackets are not permitted. Provide track arm closers where specified. Closers shall be capable of adjustment as required to meet all ADA-AG opening force requirements. Closer case piston diameter shall be minimum 1 1/2".
- E. All closers shall be U.L. listed and shall meet ANSI grade 1 requirements.

### 2.7 FLAT GOODS:

- A. Accepted and approved only as follows:
  - 1. Ives \*
  - 2. Hager
  - 3. Rockwood
- B. It is the responsibility of the hardware supplier to provide proper screw attachments per wall or floor conditions for door stops.
- C. Provide stops for each and every interior and exterior opening. Wall stops shall be of cast brass or bronze plated finish to match lock trim finish.
- D. Kickplates and armor plates shall be equal to Ives "8400 series" and shall be mounted by sheet metal screws where indicated in hardware sets. All kick plates shall be .050" satin stainless steel, **beveled all 4 edges**, with screw holes drilled.
- E. Substitutions allowed only as described under paragraph 1.4.D of this section.

### 2.8 THRESHOLDS AND WEATHERSTRIPPING:

- A. Accepted and approved as follows:
  - 1. Pemko \*
  - 2. National Guard
  - 3. Hager
- B. Substitutions allowed only as described under paragraph 1.4.D of this section.

### 2.9 CONTINUOUS GEAR HINGES AND PIN & BARREL HINGES:

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## Section 08 71 00 Finish Hardware

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- A. Accepted and approved only as follows:
  - 1. Stanley
  - 2. Select Products
  - 3. Ives \*
- B. Substitutions allowed only as described under paragraph 1.4.D of this section.
- C. Continuous gear hinges shall be factory cut to length and shall be factory prepared for electrical accessories as required (example: EPT notches).

### 2.10 **EXIT DEVICES (MECHANICAL AND ELECTRO-MECHANICAL):**

- A. Accepted and approved only as follows:
  - 1. Von Duprin (EL) 35/98 Series \*
  - 2. Corbin Russwin ED4200S/ED5200S Series
  - 3. **Ascension Parish School Board preferred exit device – Yale 7250/7150 Series with Yale 632F Exterior Trim.**
- B. Electrified exit devices shall be equal to Von Duprin EL series Electric Latch Retraction. Supplier shall provide appropriate power supply with the exit device.
- C. All exit devices shall be U.L. listed for safety and meet fire code requirements of NFPA 80.
- D. **All exit devices shall be mounted to wood doors door using through-bolt method. At all hollow metal doors and frames drilling and tapping will be required. Self drilling and self-tapping screws will not be permitted.**

## **PART 3 - EXECUTION**

### 3.1 **INSTALLATION:**

- A. Mount hardware units at heights indicated in “recommended locations for builders hardware” for (standard steel doors and frames), (custom steel doors and frames), (wood doors and frames) by the Door and Hardware Institute (DHI), except if otherwise specifically indicated or to comply with requirements of governing regulations, requirements for the disabled or handicapped, or if otherwise directed by the Architect.
- B. Degree of opening for doors with overhead holders, closers, etc., shall be included in the hardware schedule for the Architect's approval.
- C. All hardware shall be installed by tradesmen skilled in the application of commercial grade hardware.
- D. Install each hardware item in compliance with the instructions and recommendations. Securely fasten all parts to be attached. Fit faces of mortised parts snug and flush. Make sure all operating parts move freely and smoothly without binding, sticking or excessive clearance. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted and finished in another way, the hardware shall be removed and stored prior to the painting or finishing. Items shall then be reinstalled only when the finishes have been completed on the surface to which the hardware is to be applied.
- E. After installation, representative templates, instruction sheets and installation details shall be placed in a file folder to be turned over to the owner when the building is accepted. Included shall be at least five each of any special adjusting and/or installation tools furnished with the hardware by the manufacturers.

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## Section 08 71 00 Finish Hardware

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- F. Installers if other than employees of the permit holding general contractor must be properly licensed by the Louisiana State Fire Marshal for "Life Safety and Property Protection" with either a "Door Hardware" or "Locksmith" endorsement.

### 3.2 ADJUSTING AND CLEANING:

- A. Adjust and check each operating item of hardware to ensure correct operation and function. Units which cannot be adjusted to operate as intended for the application made shall be replaced.
- B. Final Adjustment: Wherever hardware installation is made more than one month prior to building acceptance or occupancy of a space or area. The installer shall return to the work during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items. Hardware shall be cleaned as necessary to restore current operation, function and finish. Door control devices shall be adjusted to compensate for final operation of heating and ventilating equipment.

### 3.3 PROTECTION:

- A. Whenever hardware is located in areas where it may be subject to damage during construction by handling, cleaning, etc., (e.g., painting, cleaning of bricks) it shall be protected and/or removed from its location until the hazardous condition is terminated.

### 3.4 GENERAL NOTES:

- A. Before installation of any hardware begins the contractor's installer shall contact the hardware supplier to discuss any special installation requirements for all hardware items. Their discussion shall include, but not be limited to such items as proper closer mounting, proper fasteners to be used for hardware, locksets and exit device backsets, etc.
- B. Electric power tools should not be used on hardware fasteners so as to prevent damage to screw heads.
- C. Hardware supplier should verify all quantities in the following schedule.

### 3.5 SCHEDULES:

- A. The following is a general listing of hardware requirements and is not intended for use as a final hardware schedule. Any items of hardware required by established standards of practice, or to meet state and local codes shall be furnished whether or not specifically called out in the following listed groups.
- B. Supplier shall supply hardware for every numbered opening, whether specified in the above hardware sets or not. Hardware shall be same as similar openings.
- C. **Aluminum door hardware is detailed in this section and is to be supplied under this section.**

#### HW SET: 001

DOOR #(S):

01                      02

PROVIDE EACH DBL. OPENING WITH THE FOLLOWING:

2	EA	CONT. HINGE	112HD EPT	628	IVE
2	EA	POWER TRANSFER	EPT2	689	VON
1	EA	KEYED REMOVABLE	KR4954	SP28	VON
		MULLION			

**Section 08 71 00**  
**Finish Hardware**

Specifications

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1	EA	ELEC PANIC HARDWARE	EL-98-NL-SNB	US26D	VON
1	EA	ELEC PANIC HARDWARE	EL-98-EO-SNB	US26D	VON
1	EA	MORTISE HOUSING	K860 X CAM AS REQUIRED	US26D	YAL
1	EA	RIM HOUSING	K880 X LENGTH AS REQUIRED	US26D	YAL
2	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
1	EA	PERMANENT CORE	K800 X KEYWAY AS REQUIRED	US26D	YAL
1	EA	PERMANENT CORE	REUSE EXISTING YALE CORE		
2	EA	SURFACE CLOSER	4040XP SCUSH TBWMS	689	LCN
2	EA	PA DROP PLATE	4040XP-18PA	689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30	689	LCN
2	EA	BLADE STOP SPACER	4040XP-61	689	LCN
2	EA	SWEEP STRIP	3452AV		PEM
1	EA	POWER SUPPLY	PS914	GRY	VON
1	EA	RELAY BOARD W/ LOGIC	900-2RS		VON

WEATHER SEALS AND THRESHOLD BY STOREFRONT MANUFACTURER

DOORS SHALL BE UNLOCKED DURING SCHOOL HOURS WITH THE ABILITY TO BE REMOTELY LOCKED FROM THE RECEPTIONIST'S DESK BY WAY OF WIRELESS PUSH BUTTON. HARDWARE SUPPLIER SHALL VERIFY SPECIFIED PANIC DEVICE IS COMPATIBLE WITH STILE WIDTH OF THE SPECIFIED ALUMINUM STOREFRONT DOORS.

**HW SET: 002**

DOOR #(S):

09                      10

PROVIDE EACH SGL OPENING WITH THE FOLLOWING:

1	EA	CONT. HINGE	224HD EPT	628	IVE
1	EA	POWER TRANSFER	EPT2	689	VON
1	EA	ELEC PANIC HARDWARE	EL-98-L	US26D	VON
1	EA	MORTISE HOUSING	K860 X CAM AS REQUIRED	US26D	YAL
1	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
1	EA	PERMANENT CORE	K800 X KEYWAY AS REQUIRED	US26D	YAL
1	EA	SURFACE CLOSER	4040XP CUSH TBWMS	689	LCN
3	EA	MUTES	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS914	GRY	VON
1	EA	RELAY BOARD W/ LOGIC	900-2RS		VON

DOORS SHALL BE LOCKED DURING SCHOOL HOURS WITH THE ABILITY TO BE REMOTELY UNLOCKED FROM THE RECEPTIONIST'S DESK BY WAY OF WIRELESS PUSH BUTTON.

**HW SET: 003**

DOOR #(S):

11                      12

PROVIDE EACH SGL. OPENING WITH THE FOLLOWING:

3	EA	HINGE	5BB1 4.5" X 4.5"	626	IVE
1	EA	PANIC HARDWARE	98-L	US26D	VON



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**Finish Hardware**

Specifications

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1	EA	RIM HOUSING	K880 X LENGTH AS REQUIRED	US26D	YAL
1	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
1	EA	PERMANENT CORE	REUSE EXISTING YALE CORE	US26D	YAL
1	EA	SURFACE CLOSER	4040XP REG TBWMS	689	LCN
1	EA	KICKPLATE	8400 10" X 2"LDW	US32D	IVE
1	EA	WALL STOP	WS407-CVX	US32D	IVE
3	EA	MUTES	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS902	GRY	VON
1	EA	MAG HOLD OPEN	SEM7840	SP28	LCN

DOORS SHALL BE HELD OPEN BY MAGNETS WITH THE ABILITY TO BE REMOTELY DE-ENERGIZED FROM THE RECEPTIONIST'S DESK BY WAY OF WIRELESS PUSH BUTTON.

**HW SET: 004**

DOOR #(S):

03                      13

PROVIDE EACH PR. OPENING WITH THE FOLLOWING:

3	EA	HINGE	5BB1 4.5" X 4.5"	626	IVE
1	EA	STOREROOM LOCK	L9080L X 03L	626	SCH
1	EA	MORTISE HOUSING	K860 X CAM AS REQUIRED	US26D	YAL
1	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
1	EA	PERMANENT CORE	REUSE EXISTING YALE CORE	US26D	YAL
1	EA	SURFACE TRACK CLOSER	4023T BUMPER TBWMS	689	LCN
1	EA	KICKPLATE	8400 10" X 2"LDW	US32D	IVE
1	EA	SMOKE SEALS	S88D 17		PEM
3	EA	MUTES	SR64	GRY	IVE

**HW SET: 005**

DOOR #(S):

04                      07                      08

PROVIDE EACH SGL. OPENING WITH THE FOLLOWING:

3	EA	HINGE	5BB1 4.5" X 4.5"	626	IVE
1	EA	SEC. CLASSROOM LOCK	L9071L X 03L	626	SCH
2	EA	MORTISE HOUSING	K860 X CAM AS REQUIRED	US26D	YAL
2	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
2	EA	PERMANENT CORE	K800 X KEYWAY AS REQUIRED	US26D	YAL
1	EA	SURFACE CLOSER	4040XP REG TBWMS	689	LCN
1	EA	KICKPLATE	8400 10" X 2"LDW	US32D	IVE
1	EA	WALL STOP	WS407-CVX	US32D	IVE
1	EA	SOUND SEAL	S88D 17		PEM
3	EA	MUTES	SR64	GRY	IVE

**Section 08 71 00**  
**Finish Hardware**

Specifications

08 71 00 -10

**HW SET: 006**

DOOR #(S):  
 06

PROVIDE EACH SGL OPENING WITH THE FOLLOWING:

3	EA	HINGE	5BB1 4.5" X 4.5"	626	IVE
1	EA	SEC. CLASSROOM LOCK	L9071L X 03L	626	SCH
2	EA	MORTISE HOUSING	K860 X CAM AS REQUIRED	US26D	YAL
2	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
2	EA	PERMANENT CORE	K800 X KEYWAY AS REQUIRED	US26D	YAL
1	EA	SURFACE CLOSER	4040XP REG TBWMS	689	LCN
1	EA	KICKPLATE	8400 10" X 2"LDW	US32D	IVE
1	EA	WALL STOP	WS407-CVX	US32D	IVE
1	EA	SOUND SEAL	S88D 17		PEM
3	EA	MUTES	SR64	GRY	IVE

**HW SET: 007**

DOOR #(S):  
 05

PROVIDE EACH SGL. OPENING WITH THE FOLLOWING:

3	EA	HINGE	5BB1 4.5" X 4.5"	626	IVE
1	EA	PANIC HARDWARE	98-L	US26D	VON
1	EA	RIM HOUSING	K880 X LENGTH AS REQUIRED	US26D	YAL
1	EA	TEMP. CONSTRUCTION CORE	1220	US26D	YAL
1	EA	PERMANENT CORE	REUSE EXISTING YALE CORE	US26D	YAL
1	EA	SURFACE CLOSER	4040XP CUSH TBWMS	689	LCN
1	EA	KICKPLATE	8400 10" X 2"LDW	US32D	IVE
1	EA	SOUND SEAL	S88D 17		PEM
3	EA	MUTES	SR64	GRY	IVE

**HW SET: 008**

DOOR #(S):  
 MISC.

PROVIDE THE FOLLOWING:

1	EA	WIRELESS PUSH BUTTON TRANSMITTER	6 BUTTON TRANSMITTER
1	EA	WIRELESS RECEIVER WITH RELAY BOARD	CAPABLE OF CONTROLLING 6 INDEPENDENT RELAYS WITH SELECTABLE ON/OFF TOGGLE AND MOMENTARY ON/OFF FEATURES.
1	EA	WIRING DIAGRAM	PROVIDE WIRING DIAGRAM SHOWING HOW ALL ITEMS INTEGRATE AND TERMINATE.

**NARRATIVE OF OPERATION:**

**Section 08 71 00**  
**Finish Hardware**

Specifications

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- 1) DOOR OPENING NUMBERS 01, 02, 09, AND 10 SHALL BE INDEPENDENTLY CONTROLLED AND ACTIVATED BY WAY OF WIRELESS PUSH BUTTON STATION LOCATED AT THE RECEPTIONIST'S DESK.
- 2) DOOR OPENING NUMBERS 11 AND 12 SHALL BE DE-ENERGIZED SIMULTANEOUSLY BY WAY OF WIRELESS PUSH BUTTON STATION LOCATED AT THE RECEPTIONIST'S DESK.

**END OF SECTION 087100**

## Section 08 80 00 Glazing

Specifications

08 80 00-1

### PART 1 GENERAL

- 1.01 INCLUDES
- A. Glass at Aluminum Entrances and Storefronts.
- 1.02 RELATED SECTIONS
- A. Section 07 90 00 - Joint Sealers: Sealant and back-up material at perimeter of system/installation.
  - B. Section 08 41 00 – Aluminum Entrances and Storefront: Entrance doors and surrounding frames to receive glass.
- 1.03 REFERENCES
- A. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Used in Buildings.
  - B. ASTM C804 - Use of Solvent-Release Type Sealants.
  - C. ASTM C864 - Dense Elastomeric Compression Seal Gaskets, Setting Blocks.
  - D. ASTM E84 - Surface Burning Characteristics of Building Materials.
  - E. ASTM E546 - Test Method For Frost Point of Sealed Insulating Glass Units.
  - F. ASTM E576 - Test Method For Dew/Frost Point of Sealed Insulating Glass Units.
  - G. ASTM E773 - Test Method for Seal Durability of Sealed Insulating Glass Units.
  - H. ASTM E774 - Sealed Insulating Glass Units.
  - I. FGMA - Glazing Manual.
  - J. SIGMA - Sealed Insulated Glass Manufacturers Association.
- 1.04 PERFORMANCE REQUIREMENTS
- A. Provide glass materials for continuity of building enclosure vapor retarder and air barrier:
    - 1. In conjunction with materials described in Section 07 90 00.
    - 2. To utilize the inner pane of multiple pane sealed units for the continuity of the air barrier and vapor retarder seal.
    - 3. To maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.
  - B. Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass as calculated in accordance with IBC and FGMA code.
  - C. Limit glass deflection to 1/200 or flexure limit of glass with full recovery of glazing materials.
  - D. Provide tempered glazing as required by International Building Code.
- 1.05 SUBMITTALS FOR REVIEW
- A. Section 01 33 00 - Submittals: Procedures for submittals.
  - B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
  - C. Product Data on Glazing Compounds: Provide functional and environmental characteristics.
  - D. Product Data on Decorative Glazing Films: Provide functional and environmental characteristics.
  - E. Samples: Submit one sample 12 x 12 inch in size, exemplifying each glass coloration and design.
  - F. Certificates: Certify that Products meet or exceed specified requirements
- 1.06 QUALITY ASSURANCE
- A. Perform Work in accordance with FGMA Glazing Manual and Sealant Manuals.
  - B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.
  - C. Provide a five (5) year warranty to include faulty tempering for tempered glass.
  - D. Provide a five (5) year warranty for deterioration of decorative glazing film.
- 1.07 ENVIRONMENTAL REQUIREMENTS
- A. Do not install glazing when ambient temperature is less than 50 degrees F.

## Section 08 80 00 Glazing

Specifications

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- B. Maintain ambient temperature before, during and 24 hours after installation.

### PART 2 PRODUCTS

#### 2.01 GLASS MATERIALS

- A. Manufacturers:
1. PPG: Solarban 60
  2. Viracon: 1" VE1 – 2M Insulating HS/HS
  3. Oldcastle Glass
  4. AFG / AGC
  5. Substitutions: 01 25 00
- B. Aluminum Doors: FG-1 - 1/4" tempered glazing, clear.
- C. Aluminum Storefront:
1. IG-1: 1" insulated, low-e glazing to match existing.
    - a. 1/4" clear annealed outboard lite, with low-e coating on #2 surface
    - b. 1/2" airspace
    - c. 1/4" clear annealed inboard lite
    - d. Insulated glazing shall match existing in appearance. Verify with Architect in field prior to submittal
  2. IG-2: 1" insulated, tempered, low-e glazing (provide at sidelights, transoms or as required by IBC) to match existing.
    - a. 1/4" clear tempered outboard lite, with low-e coating on #2 surface
    - b. 1/2" airspace
    - c. 1/4" clear tempered inboard lite
    - d. Insulated glazing shall match existing in appearance. Verify with Architect in field prior to submittal.
  3. FG-1 1/4" tempered glazing, clear/
  4. FG-2: 1/4" annealed glazing, clear.
- D. Low-E Coating: PPG SolarBan 60 Low-E Coating (Basis of Design) on No. 2 surface (or approved equal, to achieve glazing unit with minimum properties as noted)
- |                    |       |
|--------------------|-------|
| 1. VLT:            | 70%   |
| 2. SC              | 0.44% |
| 3. SHGC            | 0.38% |
| 4. U-Value Winter: | 0.29% |
| 5. U-Value Summer: | 0.27% |

#### 2.02 GLAZING ACCESSORIES

- A. Setting Blocks: Silicone, 80 to 90 Shore A durometer hardness, length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- B. Spacer Shims: Silicone, 50 to 60 Shore A durometer hardness, minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
- C. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
- D. Glazing Clips: Manufacturer's standard type.

#### 2.03 SOURCE QUALITY CONTROL AND TESTS

- A. Test samples in accordance with ANSI Z97.1, ASTM E773, ASTM E546, and ASTM E576.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement; weeps are clear, and ready to receive glazing.

## **Section 08 80 00 Glazing**

Specifications

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- C. Decorative Glazing Film: Examine glass and surrounding adjacent surfaces for conditions affecting installation.

### **3.02 PREPARATION**

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.
- D. Install sealant in accordance with manufacturer's instructions.
- E. Decorative Glazing Film: Comply with manufacturer's written instructions for surface preparation.

### **3.03 INSTALLATION**

- A. Apply glazing in accordance with framing system manufacturer's recommendation.

### **3.04 CLEANING**

- A. Remove glazing materials from finish surfaces and labels after Work is complete.
- B. Clean glass and adjacent surfaces; protect installed work.

**END OF SECTION**

## Section 09 29 16 Gypsum Board Systems

Specifications

09 29 16-1

### PART 1 - GENERAL

- 1.01 SECTION INCLUDES
- A. Metal stud framed interior partitions and exterior assemblies
  - B. Metal suspension systems
  - C. Metal stud soffit framing and exterior sheathing
  - D. Taped and sanded joint treatment.
  - E. Expansion controls, corner edges and beads.
- 1.02 RELATED SECTIONS
- A. Section 06 10 00 - Rough Carpentry: Wood blocking for support of misc. items.
  - B. Section 07 21 00 – Building Insulation: Thermal insulation also used for sound attenuation.
  - C. Section 09 90 00 - Painting: Surface finish.
- 1.03 REFERENCES
- A. ASTM C36 - Gypsum Wallboard.
  - B. ASTM C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
  - C. ASTM C514 - Nails for the Application of Gypsum Wallboard.
  - D. ASTM C645 - Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
  - E. ASTM C840 - Application and Finishing of Gypsum Board.
  - F. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board.
  - H. GA-201 - Gypsum Board for Walls and Ceilings.
  - I. GA-216 - Specifications for the Application and Finishing of Gypsum Board.
  - J. ASTM C79 – Test Method for Gypsum Sheathing Board
  - K. ASTM C473 – Test Methods for Physical Testing of Gypsum Panel Products.
  - L. ASTM C630 – Specifications for Water Resistant Gypsum Backing Board.
  - M. ASTM C1280 – Specification for Application of Gypsum Sheathing
  - N. GA – 214 – Recommended Specifications: Levels of Gypsum Board Finish.
- 1.04 SUBMITTALS
- A. Submit under provisions of Section 01 33 00.
  - B. Product Data: Provide data on metal framing, gypsum board, and joint tape.
- 1.05 QUALITY ASSURANCE
- A. Perform Work in accordance with GA-201, GA-216 and GA-600; note that reference to specific individual provisions and standards (of the GA specifications) elsewhere in this Section does not exclude the requirement for compliance with all the applicable provisions of the GA specifications.
- 1.06 QUALIFICATIONS
- A. Applicator: Company specializing in performing the work of this section with minimum three years documented experience.
- 1.07 PERFORMANCE REQUIREMENTS
- A. Select steel studs in accordance with the manufacturer's standard load tables and following design pressures and deflections:
    - 1. All partitions: L/240 at 5 psf.

### PART 2 - PRODUCTS

- 2.01 MANUFACTURERS - GYPSUM BOARD SYSTEM
- A. United States Gypsum Company
  - B. Other acceptable manufacturers offering equivalent products
    - 1. National Gypsum
    - 2. Temple Inland
  - C. Manufacturers of Metal Studs (In addition to manufacturers noted above):

Specifications