

## **SECTION 00 91 13.01 - ADDENDUM 1**

### **PART 1 GENERAL**

#### **1.1 PROJECT INFORMATION:**

- A. Project Name: HMSU Commons Renovation.
- B. Owner: Indiana State University Board of Trustees.
- C. Owner Project Number: ISU Bid No. B0028743.
- D. Architect: arcDESIGN.
- E. Architect Project Number: 25139a.
- F. Date of Addendum: Friday, May 8, 2026.

#### **1.2 NOTICE TO BIDDERS**

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum, at same time and location.
  - 1. Bid Date: Thursday May 21, 2026, 2:00 PM local time.

#### **1.3 ATTACHMENTS**

- A. This Addendum includes the following attached Documents and Specification Sections:
  - 1. Pre-Bid Site Visit Agenda / Information, dated May 7, 2026, (Issued New).
  - 2. Specification Section 01 35 16 ALTERATION PROCEDURES, (reissued).
  - 3. Specification Section 08 71 00 DOOR HARDWARE, (reissued).
- B. This Addendum includes the following attached Sheets:
  - 1. Architectural Sheet A601 – OPENING TYPES, SCHEDULES, AND DETAILS, with Addendum 1 changes dated 05.08.2026, (reissued).

#### **1.4 REVISIONS TO DIVISION 00 PROCUREMENT REQUIREMENTS AND CONTRACTING REQUIREMENTS**

- A. Section 00 10 00 NOTICE TO BIDDERS, (not reissued).
  - 1. Revise ISU Bid No. to B0028743.
- B. Section 00 10 10 INSTRUCTIONS TO BIDDERS, (not reissued).
  - 1. Paragraph 1.09: Delete Paragraph 1.09 and all sub paragraphs in their entirety. Copeland Act does not apply to the project and certified payroll reporting is not required.
- C. Section 00 30 00 ISU SPECIAL REQUIREMENTS AND INFORMATION, (not reissued).
  - 1. Delete text "Reissued Addendum 1" below Section Title on Page One (1).

### **1.5 REVISIONS TO DIVISION 01 GENERAL REQUIREMENTS**

- A. Specification Section 01 35 16 ALTERATION PROCEDURES, (reissued).
  - 1. Replace Section 01 35 16 ALTERATION PROCEDURES in its entirety.

### **1.6 REVISIONS TO DIVISIONS 02 - 49 SPECIFICATION SECTIONS**

- A. Specification Section 08 71 00 DOOR HARDWARE, (reissued).
  - 1. Replace Section 08 71 00 DOOR HARDWARE in it's entirety.

### **1.7 REVISIONS TO DRAWING SHEETS**

- A. Sheet A601 – OPENING TYPES, SCHEDULES, AND DETAILS (reissued).
  - 1. Revised Door Hardware Sets included in the reissued Section 08 71 00 DOOR HARDWARE.

### **1.8 BIDDERS QUESTIONS**

- A. Question: Is the reseal at the clerestory part of the roof alternate [Alternate 1] or included in the base bid?
  - 1. Answer: Maintenance of the clerestory storefront is part of the base bid. There are active leaks at the storefront contributing to water damage of interior construction below which should be addressed prior new work at the roof or inside the Commons.
- B. Question: There are no door Hardware Sets included in the Project Manual.
  - 1. Answer: Hardware Sets will be issued in a revised 08 71 00 DOOR HARDWARE Section by Addendum 1.
- C. Question: Can you provide the approximate weight of the RTUs to be removed to aid in crane sizing required to remove / provide them?
  - 1. Answer: We will work to understand the weight of the existing units and share when available.
- D. Is the type of existing sprinkler heads in the clerestory known in order to determine if adequate coverage is provided?
  - 1. Answer: As-built data is not sufficient to establish the head-type at this time. We will share information by addendum if it becomes available.
- E. Question: Is there any concern areas of the existing clerestory roof deck not indicated to be scraped and sanded may actually be loose and need to be sand-blasted to ensure the proper finish?
  - 1. Answer: Thank you for the question. There is the potential risk of de-bonded of paint not observable from ground level. We will take it under advisement and review the scope in the bid documents over the next week. Any change in scope will be by Addendum.

**END OF SECTION 00 91 13.01**

**ISU Form PBA-20A/E**

**Pre-Bid Site Visit Agenda / Information**

DATE: May 7, 2026  
TIME: 10:30am  
LOCATION: HMSU Commons

**Introduce Project:** HMSU Commons Renovation, Bid Number B0028743

**Architect:** arcDESIGN

Main Contact: Greg Miller Phone 317-559-1044 Mobile 317-445-4373 E-mail [gmliller@arcdesign.us](mailto:gmliller@arcdesign.us)  
Alt Contacts: Navy Lohse Phone 317-951-9192 E-mail [nlohse@arcdesign.us](mailto:nlohse@arcdesign.us)

**Other A/E Contacts:**

MEPT Engineer: R.E. Dimond and Associates, Inc. 317-634-4672  
Contact: Dale Warner Phone 317-634-4672 E-mail [dale.warner@redimond.com](mailto:dale.warner@redimond.com)

**Introduce Owner's Team:**

Bryan Duncan, Dir Capital Planning & Improvements: 812-237-8195 e-mail [bryan.duncan@indstate.edu](mailto:bryan.duncan@indstate.edu)  
Scott Tillman, ISU Architect/Construction Manager: 812-237-8198 e-mail [scott.tillman@indstate.edu](mailto:scott.tillman@indstate.edu)  
Mark Pupilli, Mechanical/Electrical Rep: 812-237-8185 e-mail [mark.pupilli@indstate.edu](mailto:mark.pupilli@indstate.edu)

**Bidding Documents:**

Bidding Documents are available for download on-line from the ISU Plan Room at <http://www.indstateplanroom.com/> for \$5.50 which covers all downloads for that particular Project.  
Note: Bidders must register for a free account the first time they access the website.

The Bid Documents may be ordered on CD (at a cost of \$7.50 per CD) or on paper copy (at applicable printing costs) from:  
Rapid Reproductions, Inc. 812-238-1681  
129 South 11<sup>th</sup> Street  
Terre Haute, IN 47807

**Forms for Bidding:**

Refer to Section 00 10 10 Instructions to Bidders Part 3 for the forms required for Bidding and when they are due.

**Submit Bids and other information to:**

Office of the Purchasing Department  
Facilities Management and Purchasing Building  
951 Sycamore Street  
Terre Haute, Indiana 47809

Bid Date: **May 21, 2026** Time Due into ISU Purchasing: **2:00pm**

There will be no in person Public Bid Opening. The Bids will be opened at 2:15pm on the due date and read aloud via Teams conference call. For conference call access call 812-228-8187 and enter conference ID 424 176 10 followed by #.

**Type of Bid:** Single Prime

**Award Date:** Within seven (7) days or less

**Base Bid:** Renovation of the existing HMSU Commons.

**Alternates:** There are sixteen (16) Alternates requested, refer to Section **01 10 00** Summary of Work Part 1.04 Scope of Work - Alternates for full details.

**Allowances:** There are three (3) Allowance to the Base Bid Requested. See Section 01 23 60 item 3.03 for full details

**Subcontractor Supplier/Manufacturer list:** Appendix A, submit with Bid

**Comprehensive Subcontractor Supplier/Manufacturer list:**

Appendix B submit via e-mail by 4:30pm on the day of Bidding to:

Greg Miller [gmillier@arcdesign.us](mailto:gmillier@arcdesign.us)

Navy Lohse [nlohse@arcdesign.us](mailto:nlohse@arcdesign.us)

Dale Warner [dale.warner@redimond.com](mailto:dale.warner@redimond.com)

Bryan Duncan [bryan.duncan@indstate.edu](mailto:bryan.duncan@indstate.edu)

**Unit Prices:** Appendix C, No Unit Prices Requested

**Construction Dates:**

The Contractor shall begin Work within seven (7) days after Award preparing submittals and procuring material. Actual Work shall begin on or about June 14, 2026. The Retail Tenant white-box finish shall be substantially complete by November 13, 2026 to allow tenant-finish to begin. All Work shall be substantially completed by January 8, 2027. Final closeout shall be within sixty (60) calendar days thereafter. A warranty walk-thru may be held eleven (11) months from the date of substantial completion.

**Tax Exempt (non profit)**

Indiana State University is a Tax Exempt Institution and Indiana Sales Tax for products permanently incorporated in work shall not be included as part of the Bid or on any Application for Payment.

**Hours of Construction:**

Normal 7:00am-4:00pm Afterhours may be arranged with the Owner.

**Permits and fees:**

Include with Bid

**Asbestos or other hazardous materials:**

None Anticipated; if suspicious material is encountered, stop work immediately in the area and contact the Owner for clearance or removal.

**General Project Information and Requirements:**

Site protection: See Specifications Section **01 50 10**.

Material storage: On-site and Off-site the Owner will pay for stored materials with proof of materials stored (photo documentation, bill of lading, etc.) and proof of insurance on the storage facility.

Parking: See Section **00 30 00 1.09** for requirements

Communication: Job Superintendent shall have a cellular phone.

Fire Protection: See Section **00 30 00 1.11 C** for requirements.

Salvage: The Owner has the right of first salvage. The Owner will supply a list of any items, not slated for reuse, which the Owner wishes to salvage. All items to be salvaged will be delivered to a location on the ISU campus as directed by the Owner.

Coordination With Owner: A minimum of 48 Hours prior notification of any closings, areas to be blocked off or utility shutdowns.

Smoking Policy: See Section **00 30 00 1.08** for Rules

**MBE/WBE/VBE Participation:**

Indiana State University is committed to diversity and non-discrimination in all aspects of its operations. Refer to Section **00 10 30** for full information and links to websites of MBE/WBE/VBE

Firms, Each Prime contractor should actively solicit and include certified minority, women and veteran owned subcontractors in bid submissions if economically feasible.

The Minority, Women's and Veteran's Business Enterprise Participation Plan Section **00 10 40** shall be **submitted with the Bid** of all Bidders. This Participation Plan will be considered during the proposal evaluation process. A standalone editable (fill in the blanks) PDF file has been uploaded to the plan room with the Bidding Documents to aid the Bidders in the submission of this required form.

**Mandatory Tier II Reporting (New dollar threshold)**

Mandatory Tier II Reporting Requirement for Projects equal to or greater than **\$150,000.00**. MBE/WBE/VBE utilization in the performance of this Contract must be reported with each Application for Payment using the ISU Business Diversity Spend Reporting Form for Construction/Renovation/Facilities Repair Projects  
Compliance with Owner's Mandatory Tier II Reporting Requirement is a condition for the approval of an Applications for Payment.

Contact Mike Bonnett in ISU Purchasing Department 812-237-3600 with any questions.

**Additional Site Visits:**

None Scheduled. The Commons may be visited during its regular hours of operation. Roof-top access may be arranged through the Facilities Management Office at 951 Sycamore Walk, Terre Haute, IN, or through the HMSU Information Desk.

**Owner Comments:**

1. The Contractor shall coordinate with the Owner to disable the existing fire alarm system for Construction. With the fire alarm shutdown, the Contactor shall comply with all requirements of Section **00 30 00 1.11 item C** and **1.14** for the duration of the Project.
2. The warranty remains in effect for the HMSU Commons roof (Garland) to remain. All roofing work must be done to maintain the Warranty.
3. The following is added to Section **00 30 00** ISU Special Requirements and Information Item **1.07** and is mandated by the State of Indiana and Indiana State University.

1.07 CONTRACTOR PUBLIC STATEMENTS

- A. No person or entity that enters a contract with the University shall be permitted to make any public statement in such contracting party's official capacity as a contractor of the University except where such public statement: a. relates to the business or operation of the University, or to a University sponsored event; or b. has been approved by the Board of Trustees of the University. 620.2.11.1. Certain Public Statements. This Policy 620.2.11 Contractor Public Statements shall not in any way prohibit a contracting party's exercise of any protected expressive activity that is not made in such contracting party's official capacity as a contractor of the University.

### **Owner Comments (continued):**

- *The start of the project coincides with the end of Special Olympics.*
- *Area on 5<sup>th</sup> St. near the loading dock will be made available for the duration of the project for a dumpster to serve the needs of the project.*
- *A couple of parking spaces at or near 5<sup>th</sup> St. will be made available to the Contractor for the duration of the project. Please contact Bryan Duncan regarding parking tickets received during the course of the project.*
- *5<sup>th</sup> St. is the preferred location for booming in roof-top equipment.*
- *Please contact Bryan Duncan if you are considering any social media posts about the project.*
- *Activity in the Commons area will pick up on or before August 15, 2026 as the start of Fall Semester 2026 nears. Student access to retail food establishments, the Banquet Center, and the remainder of Dede Activity Center.*

### **Consultant Comments:**

- *The project does not involve Federal funding and the Copeland Act requiring certified payroll is not required for the project. Addendum 1 will remove this requirement from Section 00 10 10 INSTRUCTIONS TO BIDDERS.*
- *The Owner is committed to getting the responsive and low bidder under contract to facilitate on-site operations by June 14, if not sooner.*
- *The Owner's goal is for completion of all the work prior to start of Spring Semester 2027.*
- *While the project is not the most expensive on Campus, the Commons is very important to the University and will have the attention of many who care about the quality of life at ISU.*
- *An Addendum will be issued Friday May 8, 2026 and will include this meeting information, Bidders Questions with Consultant Answers, and any necessary changes to the Bid Documents.*

### **Contractor questions:**

- *Will all cable terminations be by others?*
  - *Answer: Yes.*
- *Can the weight of the existing roof-top units be provided for assistance in determining equipment needed to boom equipment off the roof from 5<sup>th</sup> St.?*
  - *Answer: We will research the available data on building for an approximate weight of the units.*
- *Has coverage and type of existing sprinkler heads in the clerestory area been confirmed?*
  - *Answer: Consultants will follow and respond.*

e.c. Electronic Project Folder

07 MAY 2026

**HMSU COMMONS RENOVATION**
 Indiana State University Bid No. B0028743  
 aD Project # 25139
**MEETING NAME**

✓	NAME	ORGANIZATION	CONTACT INFO / EMAIL
✓	Bryan Duncan	ISU-FM	Bryan.duncan@indstate.edu
	Scott Tillman	ISU-FM	Scott.Tillman@indstate.edu
✓	Dale Warner	RE Dimond & Associates	Dale.warner@redimond.com
✓	Navy Lohse	arcDESIGN	nlohse@arcdesign.us
✓	Greg Miller	arcDESIGN	gmiller@arcdesign.us
	John Major	MSI	jmp@msi-construction.com
	Clint Burnett	FA Wilhelm	clintburnett@fawilhelm.com
	BRYAN SWAN	GARMONG	BSWAN@GARMONG.NET
	Trace Harruff	CDI, Inc.	estimating@cdiinc.net
	Spencer Hunsicker	Crown Electric	shunsick@crownelectricinc.net
	Jim Archer	SDR COATING	Jim.archer@sdrcoating.com
	Josh Clay	RSQ Fire	joshclay@RSQFP.COM
	Shane Bryson	F.E. Moren fire protection	shane.bryson@fehoren.com
	Alex Steele	SDR Coating	asteele@sdrcoating.com
	Jarrod Barrett	Freitag - Weinhardt	jarrodbarrett@freitag.com
	Derak Bridge	Strode Construction	derak@strode-construction.com
	Lathan Falls	Data Link	lathan.falls@datalink.com
	Carson Bradley	Wesco	Carson.bradley@arinter.com
	GREG LUKET	ISU - HFD	GREGORY.LUKET@INDSTATE.EDU
	Tyler Steichen	Penhall	tsteichen@penhall.com
	Wes Readinger	Hannig	wreadinger@hannigconstruction.com
	Bob Asnew	HMS Mechanical	bob.asnew@hmsmechanical.net
	Ryan Duhan	Rduhan@misco.clane.com	MISCO CLANE
	Mary Skinner	Guardian Fire	mary@guardianfiresystems.com



## **SECTION 01 35 16 - ALTERATION PROJECT PROCEDURES**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes special procedures for alteration work.

#### **1.2 RELATED SECTIONS**

- A. Section 01 73 10 - Cutting and Patching, for requirements for cutting and patching necessitated by the Work.
- B. Section 02 41 00 – Demolition for selective demolition of building elements and associated terms and definitions.

#### **1.3 DEFINITIONS**

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Consolidate: To strengthen loose or deteriorated materials in place.
- C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.
- D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.
- F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.
- G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- K. Retain: To keep an element or detail secure and intact.
- L. Strip: To remove existing finish down to base material unless otherwise indicated.

#### **1.4 REFERENCE STANDARDS**

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

#### **1.5 COORDINATION**

- A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
  - 1. Schedule construction operations in sequence required to obtain best Work results.
  - 2. Coordinate sequence of alteration work activities to accommodate the following:

- a. Owner's continuing occupancy of portions of existing building.
  - b. Owner's partial occupancy of completed Work.
  - c. Other known work in progress.
  - d. Tests and inspections.
3. Detail sequence of alteration work, with start and end dates.
  4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
  5. Use of elevator and stairs.
  6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.
- B. Pedestrian Circulation:
1. Coordinate alteration work with circulation patterns within Project building(s) and site. Work is near circulation patterns and adjacent to restricted areas or areas to remain with no direct work.
  2. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work. Access to restricted areas may not be obstructed without coordination with the Owner a minimum of 2 weeks prior to the planned date on which such access or obstruction is required to maintain schedule. Plan and execute the Work accordingly.

## 1.6 PROJECT MEETINGS FOR ALTERATION WORK

- A. Coordination Meetings: Reference Section 01 31 00 - Coordination and Meetings.
1. Review items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project including but not limited to:
    - a. Access to alteration work locations.
    - b. Effectiveness of fire-prevention plan.
    - c. Quality and work standards of alteration work.
    - d. Housekeeping and maintenance of Construction Barriers.
  2. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

## 1.7 MATERIALS OWNERSHIP

- A. Objects including, but not limited to, signage, commemorative plaques and tablets, equipment, items identified on the Drawings, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.
1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed on or near Campus.

## 1.8 QUALITY ASSURANCE

- A. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.
1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.

2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
- B. Fire-Prevention Plan:
  1. Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process.
  2. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.
- C. Safety and Health Standard: Comply with ANSI/ASSP A10.6.

### **1.9 STORAGE AND HANDLING OF SALVAGED MATERIALS**

- A. Salvaged Materials:
  1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
  2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- B. Salvaged Materials for Reinstallation:
  1. Repair and clean items for reuse as indicated.
  2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.
- D. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.
  1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
  2. Secure stored materials to protect from theft.
  3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F (3 deg C) or more above the dew point.
- E. Storage Space:
  1. Arrange for off-site locations for storage and protection of salvaged material that cannot be stored and protected on-site.

### **1.10 FIELD CONDITIONS**

- A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs.
- B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- C. Owner's Removals: Before beginning alteration work, verify in correspondence with Owner that the following items have been removed:
  1. Loose Food Service Equipment.
  2. Suspended or hanging signage or University – related promotional materials.

3. Floor supported, portable informational signage standards.

## **PART 2 PRODUCTS - (NOT USED)**

## **PART 3 EXECUTION**

### **3.1 PROTECTION**

- A. Protect persons, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.
  1. Use only proven protection methods, appropriate to each area and surface being protected.
  2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
  3. Erect temporary barriers to form and maintain fire-egress routes.
  4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
  5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
  6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
  7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
  8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.
- B. Temporary Protection of Materials to Remain:
  1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
  2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.
- C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- D. Utility and Communications Services:
  1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
  2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
  3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.
  1. Prevent solids such as adhesive or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
  2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.
- F. Existing Roofing: Prior to the start of work at the following areas, install roofing protection surrounding portions of the roof indicated to be replaced.
  1. Roof-Mounted Mechanical and HVAC equipment.
  2. Restoration of Clerestory Glazed Aluminum Storefront Systems.

3. Replacement of Metal Panel Roofing Systems.

**3.2 PROTECTION FROM FIRE**

- A. General: Follow fire-prevention plan and the following:
1. Comply with NFPA 241 requirements unless otherwise indicated. Perform duties titled "Owner's Responsibility for Fire Protection." Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
    - a. If combustible material cannot be removed, provide fire blankets to cover such materials.
  - B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:
    1. Obtain Owner's approval for operations involving use of open-flame or welding or other high-heat equipment. Notify Owner at least 24 hours before each occurrence, indicating location of such work.
      - a. Contractor shall adhere to Factory Mutual Engineering and Research (FM) "Cutting and Welding" permit system. Permits are available through the Office of Environmental Safety's Fire Specialist Office at 812-237-4020.
      - b. Prime Contractor shall provide a one hour fire watch at the end of each workday when any cutting or welding occurred to assure that no possibility of fire exists from any work performed that day.
    2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
    3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
    4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
    5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
    6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
      - a. Train each fire watch in the proper operation of fire-control equipment and alarms.
      - b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
      - c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
      - d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
      - e. Maintain fire-watch personnel at Project site until 60 minutes after conclusion of daily work.
  - C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.
  - D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.

1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

### **3.3 PROTECTION DURING APPLICATION OF CHEMICALS**

- A. Protect surrounding surfaces and building elements from harm or spillage resulting from applications of chemicals and adhesives.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.
- C. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.
- D. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

### **3.4 GENERAL ALTERATION WORK**

- A. Have specialty work performed only by qualified specialists.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs or video recordings.
- D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.
- E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
  1. Do not proceed with the work in question until directed by Architect.

**END OF SECTION 01 35 16**

SECTION 087100 - DOOR HARDWARE [\(REISSUED ADDENDUM 1\)](#)

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 "General Requirements" sections for Allowances, Alternates, Owner Furnished Contractor Installed, Project Management and Coordination.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:
  - a. "Metal Doors and Frames"
  - b. "Flush Wood Doors"
  - c. "Stile and Rail Wood Doors"
  - d. "Interior Aluminum Doors and Frames"
  - e. "Aluminum-Framed Entrances and Storefronts"
  - f. "Stainless Steel Doors and Frames"
  - g. "Special Function Doors"
  - h. "Entrances"
6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
7. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

## B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

## C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

## D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

## 1.03 SUBMITTALS

## A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:
  - a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
  - b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

## B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
  - a. Wiring Diagrams: For power, signal, and control wiring and including:
    - 1) Details of interface of electrified door hardware and building safety and security systems.
    - 2) Schematic diagram of systems that interface with electrified door hardware.
    - 3) Point-to-point wiring.
    - 4) Risers.
3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.

- a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
4. Door Hardware Schedule:
  - a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
  - b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
  - c. Indicate complete designations of each item required for each opening, include:
    - 1) Door Index: door number, heading number, and Architect's hardware set number.
    - 2) Quantity, type, style, function, size, and finish of each hardware item.
    - 3) Name and manufacturer of each item.
    - 4) Fastenings and other pertinent information.
    - 5) Location of each hardware set cross-referenced to indications on Drawings.
    - 6) Explanation of all abbreviations, symbols, and codes contained in schedule.
    - 7) Mounting locations for hardware.
    - 8) Door and frame sizes and materials.
    - 9) Degree of door swing and handing.
    - 10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.
5. Key Schedule:
  - a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
  - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
  - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
  - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
  - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
  - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
- C. Informational Submittals:
  1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
  2. Provide Product Data:
    - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
    - b. Include warranties for specified door hardware.
- D. Closeout Submittals:
  1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

- a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
- b. Catalog pages for each product.
- c. Final approved hardware schedule edited to reflect conditions as installed.
- d. Final keying schedule
- e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
- f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
  - a. Fire door assemblies, in compliance with NFPA 80.
  - b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
  - a. For door hardware: DHI certified AHC or DHC.
  - b. Can provide installation and technical data to Architect and other related subcontractors.
  - c. Can inspect and verify components are in working order upon completion of installation.
  - d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.
4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:
  - a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.

- b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
  2. Smoke and Draft Control Door Assemblies:
    - a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
    - b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
  3. Electrified Door Hardware
    - a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
  4. Accessibility Requirements:
    - a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.
- C. Pre-Installation Meetings
1. Keying Conference
    - a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
      - 1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      - 2) Preliminary key system schematic diagram.
      - 3) Requirements for key control system.
      - 4) Requirements for access control.
      - 5) Address for delivery of keys.
  2. Pre-installation Conference
    - a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
    - b. Inspect and discuss preparatory work performed by other trades.
    - c. Inspect and discuss electrical roughing-in for electrified door hardware.
    - d. Review sequence of operation for each type of electrified door hardware.
    - e. Review required testing, inspecting, and certifying procedures.
    - f. Review questions or concerns related to proper installation and adjustment of door hardware.
  3. Electrified Hardware Coordination Conference:
    - a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping

- B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
- C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

#### 1.06 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

#### 1.07 WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.
  - 1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
  - 2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
    - a. Mechanical Warranty
      - 1) Locks
        - a) Schlage L Series: 10 years
        - b) Schlage ND Series: 10 years
      - 2) Exit Devices
        - a) Von Duprin: 10 years
      - 3) Closers
        - a) LCN 4000 Series: 30 years

#### 1.08 MAINTENANCE

- A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B. Turn over unused materials to Owner for maintenance purposes.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."
  - 1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.
- B. Approval of alternate manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category are only to be considered by official substitution request in accordance with section 01 25 00.
- C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

### 2.02 MATERIALS

- A. Fabrication
  - 1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
  - 2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
  - 3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.
- B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
  - 1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.
- C. Cable and Connectors:

1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

## 2.03 HINGES

### A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
  - a. Ives 5BB series
2. Acceptable Manufacturers and Products:
  - a. Hager BB1191/1279 series
  - b. McKinney TB series
  - c. Best FBB series

### B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
  - a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
  - b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
  - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
  - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
5. 2 inches or thicker doors:
  - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
  - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
7. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
8. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
9. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
  - a. Steel Hinges: Steel pins
  - b. Non-Ferrous Hinges: Stainless steel pins
  - c. Out-Swinging Exterior Doors: Non-removable pins
  - d. Out-Swinging Interior Lockable Doors: Non-removable pins
  - e. Interior Non-lockable Doors: Non-rising pins
10. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Select
  - b. Pemko

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Rockwood
  - b. Trimco

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.06 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

- a. Schlage L9000 series
2. Acceptable Manufacturers and Products:
  - a. Oak 1ML series
- B. Requirements:
  1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3-hour fire doors.
  2. Indicators: Where specified, provide indicator window measuring a minimum 2-inch x 1/2 inch with 180-degree visibility. Provide messages color-coded with full text and/or symbols, as scheduled, for easy visibility.
  3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
  4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
  5. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1-inch (25 mm) throw, constructed of stainless steel.
  6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
  7. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches. Provide motor based electrified and motor based latch retraction locksets that comply with the following requirements:
    - a. Universal input voltage – single chassis accepts 12 or 24VDC to allow for changes in the field without changing lock chassis.
    - b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case
    - c. Low maximum current draw – maximum 0.4 amps (Lever control) and maximum 2.0 amps (Latch retraction) to allow for multiple locks on a single power supply.
    - d. Low holding current (Lever control or latch retraction) – maximum 0.01 amps to produce minimal heat, eliminate "hot levers" in electrically locked applications and motorized latch retraction applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
    - e. Connections – provide quick-connect Molex system standard.
  8. Provide locks with a key override feature built into the chassis that allows the outside key to retract the deadbolt and/or latchbolt, overriding the inside thumbturn when it is being held in the locked position - where the XL13-439 option is specified in the hardware sets.
  9. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
    - a. Lever Design: 06A

## 2.07 CYLINDRICAL LOCKS – GRADE 1

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Schlage ND series
  2. Acceptable Manufacturers and Products:
    - a. Oak 1CL series

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide escutcheon with lock status indicator window on top of lockset rose:
  - a. Escutcheon height (including rose) 6.05 inches high by 3.68 inches wide.
  - b. Indicator window measuring a minimum 3.52-inch by .60 inch with 1.92 square-inches of front facing viewing area and 180-degree visibility with a total of .236 square-inches of total viewable area.
  - c. Provide snap-in serviceable window to prevent tampering. Lock must function if indicator is compromised.
  - d. Provide messages color-coded with full text and symbol, as scheduled, for easy visibility.
  - e. Unlocked and Unoccupied message will display on white background, and Locked and Occupied message will display on red background.
3. Cylinders: Refer to "KEYING" article, herein.
4. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
5. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
6. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
8. Provide electrified options as scheduled in the hardware sets.
9. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.
  - a. Provide levers that return to within 1/2 inch (13 mm) of door face.
  - b. Lever Design: RHO

## 2.08 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
  - a. Von Duprin 99/33A series
2. Acceptable Manufacturers and Products:
  - a. No Substitute

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide grooved touchpad type exit devices, fabricated from brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match the balance of door hardware.
4. Touchpad must extend a minimum of one-half of the door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with a deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices at pool gates with weather-resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.

8. Provide exit devices with manufacturers' approved strikes.
9. Provide exit devices cut to the door width and height. Install exit devices at a height recommended by the exit device manufacturer, allowable by governing building codes, and approved by the Architect.
10. Mount the mechanism case flush on the face of the doors or provide spacers to fill gaps behind the devices. Where glass trim or molding projects off the face of the door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non-fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide a type that can be removed by use of a keyed cylinder, which is self-locking when reinstalled.
13. Provide factory-drilled weep holes for exit devices used in full exterior applications, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors, eliminating the requirement of tabs, and double tab mount for wood doors.
16. Accessibility: Require not more than 5 lb. to retract the latchbolt, per CBC 2019 11B-404.2.7 and 11B-309.4.
  - a. Mechanical method: Von Duprin AX feature, where touchpad directly retracts the latchbolt with 5 lb. or less of force. Provide testing lab certification confirming that the mechanical device is independent third-party tested to meet this 5 lb. requirement.
  - b. Electrical method: Von Duprin's RX-QEL feature, where lightly pressing the touchpad with 5 lb. or less of force closes an electric switch, activating quiet electric latch retraction.
17. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.
  - a. Provide levers that return to within 1/2 inch (13 mm) of the door face.
18. Special Options:
  - a. SI
    - 1) Provide dogging indicators for visible indication of dogging status.
  - b. XP
    - 1) Rim Exit Devices: provide devices with a non-tapered smart latchbolt with a 90° latchbolt to strike engagement under stress and a Static Load Resistance of 2000 pounds.
  - c. QM
    - 1) Rim Exit Devices: provide devices with damper-controlled re-latching to reduce operational noise. Where lever trim is specified, provide damper controlled lever return.
  - d. HH
    - 1) Provide wind and impact-rated hurricane exit devices and mullions certified to comply with Florida Building Code (FBC) TAS 201, 202, 203.
  - e. HW
    - 1) Provide wind-rated hurricane exit devices and mullions certified to comply with ANSI-ASTM E330.
  - f. CX
    - 1) Provide delayed egress devices, where scheduled, that are UL 294 listed, meet National Fire Protection Association (NFPA) and International Building Code (IBC) governing delayed egress, and/or other local and national fire codes acceptable to the authority having jurisdiction as required.

- a) Provide a non-handed and field-sizable device with a 3/4 (19mm) throw deadlocking latch bolt. The device incorporates an internal RX switch that detects an attempt to exit from applying less than 15lbs to the push pad, which causes this switch to start an irreversible alarm cycle. The key switch in the device is capable of arming, disarming, or resetting the device, and the indicator lamp determines the status of the device
  - b) Provide devices capable of standard 15-second release delay and indefinite release delay as required by code, when tied into a fire alarm system, that will release immediately when an alarm condition exists.
  - c) Provide devices with all control inputs – door position input, external inhibit input, fire alarm input; auxiliary locking; nuisance alarm and internal horn; and remote signaling output self-contained in the device assembly.
- g. CVC
- 1) Provide a cable-actuated concealed vertical latch system in a two-point configuration for non-rated or fire-rated wood doors up to a 90-minute rating and a less bottom latch (LBL) configuration for non-rated or fire-rated wood doors up to a 20-minute rating. Vertical rods are not permitted.
    - a) Cable: Stainless steel with abrasive-resistant coating. Conduit and core wire ends snap into the latch and center slides without the use of tools.
    - b) Wood Door Prep: Maximum 1 inch x 1.1875 inch x 3.875 inches top latch pocket and 1 inch x 1.1875 inch x 5 inches bottom latch pocket, which does not require the use of a metal wrap or edge for non-rated or fire-rated wood doors up to a 45-minute rating.
    - c) Latchbolts and Blocking Cams: Manufactured from sintered metal, low-carbon copper-infiltrated steel, with molybdenum disulfide low-friction coating.
    - d) Top Latchbolt: Minimum 0.38 inch (10 mm) and greater than 90-degree engagement with strike to prevent door and frame separation under high static load.
    - e) Bottom Latchbolt: Minimum of 0.44-inch (11 mm) engagement with strike.
    - f) Product Cycle Life: 1,000,000 cycles.
    - g) Latch Operation: Top and bottom latch operate independently of each other. Top latch fully engages top strike even when bottom latch is compromised. Separate trigger mechanisms not permitted.
    - h) Latch release does not require a separate trigger mechanism.
    - i) Cable and latching system characteristics:
      - i. Installed independently of exit device installation, and capable of functioning on the door prior to device and trim installation.
      - ii. Connected to exit device at single point in steel and aluminum doors, and two points for top and bottom latches in wood doors.
      - iii. Bottom latch height adjusted, from a single point for steel and aluminum doors and two points for wood doors, after the system is installed and connected to exit device, while door is hanging
      - iv. Bottom latch position altered up and down minimum of 2 inches (51 mm) in steel and aluminum doors without additional adjustment. Bottom latch deadlocks in every adjustment position in wood doors.
      - v. Top and bottom latches in steel and aluminum doors and top latch in wood doors may be removed while door is hanging.

## 2.09 LOCKDOWN HARDWARE

### A. Manufacturers:

#### 1. Scheduled Manufacturer and Product:

a. Trimco LDH100 Series

2. Acceptable Manufacturers and Products:  
a. No Substitute

B. Requirements:

1. Provide patented one-touch panic release button for non-fire rated exit devices at points of egress requiring quick lockdown without hex wrench or key.
2. Lockdown hardware is compatible with exit devices manufactured by Von Duprin (98/99 and 33/35 series). Coordinate with Trimco for compatibility with additional device manufacturers.

## 2.10 CYLINDER HOUSINGS/THUMBTURNS

A. Manufacturers and Products:

1. Scheduled Manufacturer:  
a. Schlage
2. Acceptable Manufacturers and Products:  
a. Best

B. Requirements:

1. Provide cylinders/cores compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset; manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.  
a. Open: cylinder with small format interchangeable core (SFIC) core with open keyway

## 2.11 CYLINDERS/CORES

A. Manufacturers:

1. Scheduled Manufacturer and Product:  
a. BEST
2. Acceptable Manufacturers and Products:  
a. No Substitute

B. Requirements:

1. Provide cylinders/cores to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.

## 2.12 KEYING

A. Scheduled System:

1. Existing factory registered system:

- a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:
  - a. Replaceable Construction Cores.
    - 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
      - a) 3 construction control keys
      - b) 12 construction change (day) keys.
    - 2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.
2. Permanent Keying:
  - a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
    - 1) Master Keying system as directed by the Owner.
  - b. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
  - c. Provide keys with the following features:
    - 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
    - 2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
  - d. Identification:
    - 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
    - 2) Identification stamping provisions must be approved by the Architect and Owner.
    - 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
    - 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
    - 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
  - e. Quantity: Furnish in the following quantities.
    - 1) Permanent Control Keys: 3.
    - 2) Master Keys: 6.
    - 3) Change (Day) Keys: 3 per cylinder/core that is keyed differently
    - 4) Key Blanks: Quantity as determined in the keying meeting.

2.13 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
  - a. LCN 4040XP series
2. Acceptable Manufacturers and Products:
  - a. No Substitute

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter piston with 5/8-inch (16 mm) diameter double heat-treated pinion journal. QR code with a direct link to maintenance instructions.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards. Provide snap-on cover clip, with plastic covers, that secures cover to spring tube.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck. Provide graphically labelled instructions on the closer body adjacent to each adjustment valve. Provide positive stop on reg valve that prevents reg screw from being backed out.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.
11. Closers shall be capable of being upgraded by adding modular mechanical or electronic components in the field.

## 2.14 DOOR TRIM

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Trimco
  - b. Rockwood

### B. Requirements:

1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

## 2.15 PROTECTION PLATES

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Trimco
  - b. Rockwood

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

## 2.16 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:
  - a. Glynn-Johnson
2. Acceptable Manufacturers:
  - a. No Substitute

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.

## 2.17 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Trimco
  - b. Rockwood

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

## 2.18 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Scheduled Manufacturer:

1. Zero International

B. Acceptable Manufacturers:

1. National Guard
  2. Reese
- C. Seals and Gasketing: Provide continuous gasketing on exterior openings, to the head and jambs, forming a continuous seal between the door and the frame. Provide smoke, light, or sound gasketing on interior doors where indicated.
1. (NOTE TO SPECIFIER Remove Seals and Gasketing subparagraph 2 in full if Zero Everyday products are scheduled in any hardware set) Provide Neoprene, EPDM, Silicone, or Nylon Brush inserts. Provide non brush inserts of solid or sponge cell, as indicated in hardware sets.
- D. (NOTE TO SPECIFIER Remove Sound-Rated Gasketing paragraph if Zero Everyday products are scheduled in any hardware set) Sound-Rated Gasketing: Provide acoustic gasketing to meet Sound Transmission Class (STC) rating required.
- E. Door Sweeps or Shoes: Where indicated, apply to the bottom of the door to close the gap between the door bottom and finished floor or saddle threshold.
1. (NOTE TO SPECIFIER Remove Door Sweeps or Shoes subparagraph 1 in full if Zero Everyday products are scheduled in any hardware set) Provide solid neoprene, EPDM, Silicone, or nylon brush type of seal as indicated in hardware sets.
- F. Automatic Door Bottoms:
1. (NOTE TO SPECIFIER Remove Automatic Door Bottoms subparagraph 2 in full if Zero Everyday products are scheduled in any hardware set) Door bottom to be minimum of 0.72 inch thickness mortised, semi mortised, or surface mount as required.
- G. Thresholds: Provide threshold units not less than 4 inches wide, formed to accommodate change in floor elevation where indicated, and fabricated to accommodate door hardware and fit door frames.
1. (NOTE TO SPECIFIER Remove Thresholds subparagraphs 1 and 2 in full if Zero Everyday products are scheduled in any hardware set) Threshold extrusion to be a minimum of .125 inches thick, as indicated in the hardware sets.

## 2.19 FINISHES

- A. FINISH: BHMA 626/652 (US26D); EXCEPT:
1. Hinges at Exterior Doors: BHMA 630 (US32D)
  2. Aluminum Geared Continuous Hinges: BHMA 628 (US28)
  3. Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
  4. Protection Plates: BHMA 630 (US32D)
  5. Overhead Stops and Holders: BHMA 630 (US32D)
  6. Door Closers: Powder Coat to Match
  7. Wall Stops: BHMA 630 (US32D)
  8. Latch Protectors: BHMA 630 (US32D)
  9. Weatherstripping: Clear Anodized Aluminum
  10. Thresholds: Mill Finish Aluminum
- B. FINISH: BHMA 643E/716 (US11); EXCEPT:

1. Door Closers: Powder Coat to Match.
2. Weatherstripping: Dark Bronze Anodized Aluminum.
3. Thresholds: Extruded Architectural Bronze, Oil-Rubbed

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
  1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
  2. Custom Steel Doors and Frames: HMMA 831.
  3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
  4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.

- I. Lock Cylinders:
  - 1. Install construction cores to secure building and areas during construction period.
  - 2. Replace construction cores with permanent cores as indicated in keying section.
  - 3. Furnish permanent cores to Owner for installation.
  
- J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:
  - 1. Conduit, junction boxes and wire pulls.
  - 2. Connections to and from power supplies to electrified hardware.
  - 3. Connections to fire/smoke alarm system and smoke evacuation system.
  - 4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
  - 5. Connections to panel interface modules, controllers, and gateways.
  - 6. Testing and labeling wires with Architect's opening number.
  
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
  
- L. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.
  
- M. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
  
- N. Overhead Stops/holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
  
- O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
  
- P. Thresholds:
  - 1. Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
  - 2. Aluminum thresholds to be cut-in, and scribed around mullions, frame members, and stops. Do not butt to thresholds. Provide a continuous surface across full width of opening from jamb to jamb.
  - 3. Where aluminum panic-type (rabbeted) thresholds with neoprene inserts are specified, undercut doors as required to properly mate with seal in threshold.
  
- Q. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
  
- R. Perimeter Gasketing:
  - 1. Apply to head and jamb, forming seal between door and frame.
  - 2. Install gasketing in a manner eliminating need to cut any seal to install surface mounted hardware. Install compatible mounting bracket for surface mounted hardware unless minimum 1/4 inch thick solid aluminum seals are provided for mounting of surface applied hardware.

- S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- T. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

### 3.03 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
  - 1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
  - 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
  - 3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

### 3.04 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

### 3.05 DOOR HARDWARE SCHEDULE

- A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
- B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
- C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.
- D. Hardware Sets:

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ISU HMSU Commons Renovation  
Indiana State University  
aD#25139a  
151089 OPT0482538 Version 3

DOOR HARDWARE  
08 71 00 - 23  
arcDESIGN

Hardware Group No. 01

100X1            100X3

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	FLOOR STOP	FS444	626	IVE
1	EA	THRESHOLD	655A-V3-223	A	ZER

NOTE: BALANCE OF HARDWARE IS EXISTING TO REMAIN.

Hardware Group No. 02

100X2            100X4            102X1            104X1

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	THRESHOLD	655A-V3-223	A	ZER

NOTE: BALANCE OF HARDWARE IS EXISTING TO REMAIN.

Hardware Group No. 03

101B

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
2	EA	PUSH/PULL BAR	9103EZHD-10"-NO	630-316	IVE
2	EA	SURFACE CLOSER	4040XP EDA TBWMS	689	LCN
2	EA	ARMOR PLATE	8400 34" X 1" LDW B-CS	630	IVE
2	EA	WALL STOP/HOLDER	WS40	626	IVE

Hardware Group No. 04

101G

Provide each RU door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	MORTISE CYLINDER	BEST AS REQUIRED	626	BES

NOTE: BALANCE OF HARDWARE BY ROLL UP DOOR SUPPLIER.

NOTE: OMIT CYLINDER IF KEYED LOCKING IS NOT NEEDED.

ISU HMSU Commons Renovation  
 Indiana State University  
 aD#25139a  
 Hardware Group No. 05

DOOR HARDWARE  
 08 71 00 - 24  
 arcDESIGN

103A

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY	710	IVE
1	EA	PANIC HARDWARE	CD-9947-EO-LBR	710	VON
1	EA	PANIC HARDWARE	CD-9947-NL-OP-LBR-110MD	710	VON
2	EA	LOCKDOWN HARDWARE	LDH100-VD	690	TRM
2	EA	MORTISE CYL TURN	09-9XX NH 114 XB11-720(ADA) XQ11-948(INVERTED CAM) X STRAIGHT CAM X COLLAR AS REQ'D	643e	SCH
1	EA	RIM CYL HOUSING (SFIC)	80-116 (W/ DISP CONST CORE)	643e	SCH
1	EA	SFIC PERMANENT CORE	AS REQ. MATCH OWNER'S EXISTING SYSTEM	606	BES
2	EA	90 DEG OFFSET PULL	8190EZHD 10" O	695	IVE
2	EA	SURFACE CLOSER	4040XP SHCUSH TBWMS	695	LCN
2	EA	PA MOUNTING PLATE	4040XP-18PA	695	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30	695	LCN
2	EA	BLADE STOP SPACER	4040XP-61	695	LCN

Hardware Group No. 06

106A

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	SFIC PERMANENT CORE	AS REQ. MATCH OWNER'S EXISTING SYSTEM	626	BES
1	EA	OH STOP & HOLDER	90F	630	GLY

Hardware Group No. 07

106B

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	MANUAL FLUSH BOLT	FB458 12"	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	SFIC PERMANENT CORE	AS REQ. MATCH OWNER'S EXISTING SYSTEM	626	BES
2	EA	WALL STOP	WS406/407CVX	630	IVE

DOOR HARDWARE

087100-24  
 05/07/2026

ISU HMSU Commons Renovation  
 Indiana State University  
 aD#25139a  
 Hardware Group No. 08

DOOR HARDWARE  
 08 71 00 - 25  
 arcDESIGN

106X

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	ENTRANCE LOCK	ND53BDC RHO	626	SCH
1	EA	SFIC PERMANENT CORE	AS REQ. MATCH OWNER'S EXISTING SYSTEM	626	BES
1	EA	WALL STOP	WS406/407CVX	630	IVE

NOTE: PROVIDE ANY AND ALL PLATES REQUIRED TO COVER/BLANK EXISTING UNUSED DOOR AND FRAME PREPS. PROVIDE RIV-NUT TYPE FASTENERS WHERE PROPER REINFORCEMENT IN THE FRAME IS NOT PRESENT. FIELD VERIFY ALL EXISTING OPENINGS TO CONFIRM FUNCTIONALITY OF NEW HARDWARE ITEMS.

Hardware Group No. 09

107                      108

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY W/COIN TURN W/ OUTSIDE INDICATOR	L9044 06A L583-363 OS-OCC	626	SCH
1	EA	WALL STOP	WS406/407CVX	630	IVE

Hardware Group No. 10

109                      110                      111

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE W/SIM RETRACT	L9056BDC 06A L583-363	626	SCH
1	EA	SFIC PERMANENT CORE	AS REQ. MATCH OWNER'S EXISTING SYSTEM	626	BES
1	EA	WALL STOP	WS406/407CVX	630	IVE

END OF SECTION

GLAZING

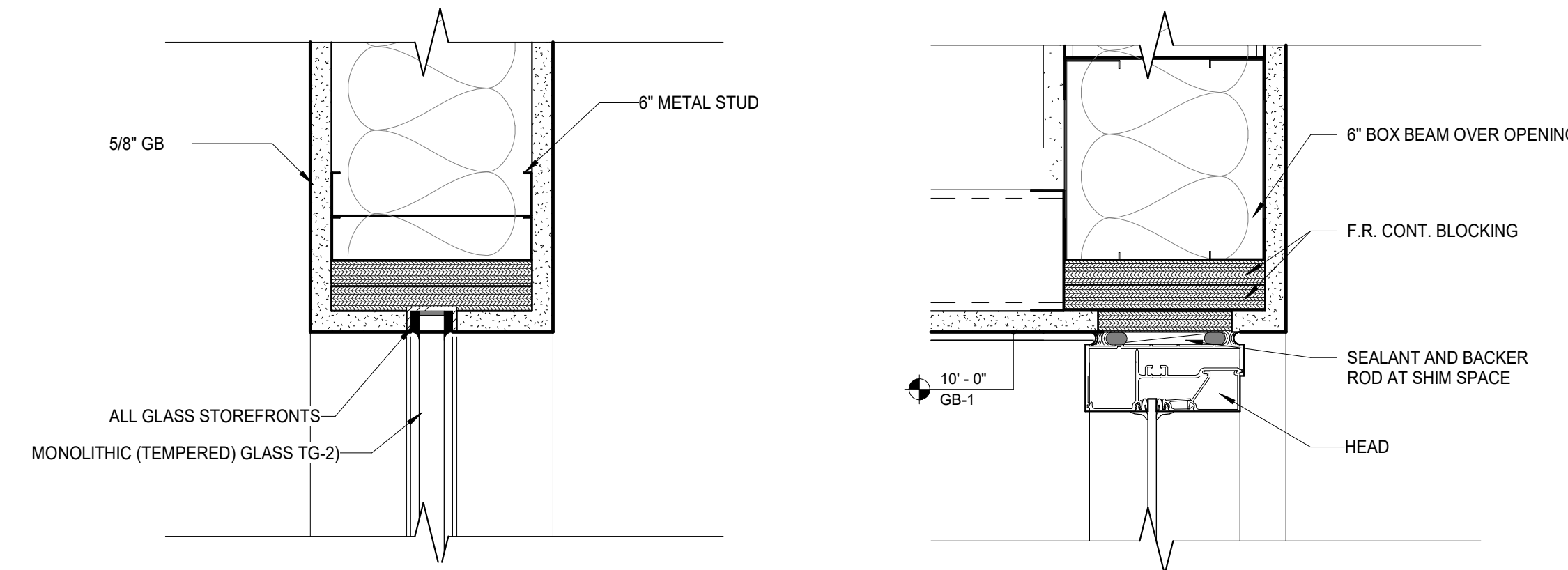
GLAZING (GL-1)  
THICKNESS: 1/4" (6mm) / ULTRA CLEAR (LOW-IRON) TEMPERED

GLAZING (GL-2)  
THICKNESS: 5/8" (16mm) / ULTRA CLEAR (LOW-IRON) TEMPERED

MARK	LOCATION		DOOR			FRAME		FIRE RATING	VOLTAGE	HARDWARE GROUP	REMARKS	
	FROM	TO	W	H	MATL	PANEL	GLAZING					TYPE
101B		COMMONS	6'-0"	7'-0"		F/F				S00		3
101G		COMMONS	6'-4"	9'-9"								4
103A	BOOKSTORE TENANT	COMMONS	6'-0.34"	9'-10"		AL						5
106A	STORAGE	BOOKSTORE TENANT	3'-0"	7'-0"		F				S00		6
106B	BOOKSTORE TENANT	STORAGE	6'-0"	7'-0"		F/F				S00		7
107	BOOKSTORE TENANT	FITTING	3'-0"	7'-0"		F				S00		9
108	BOOKSTORE TENANT	FITTING	3'-0"	7'-0"		F				S00		9
109	BOOKSTORE TENANT	SERVICE	3'-0"	7'-0"		F				S00		10
110	BOOKSTORE TENANT	SERVICE	3'-0"	7'-0"		F				S00		10
111	SERVICE	OFFICE	3'-0"	7'-0"		F				S00		10

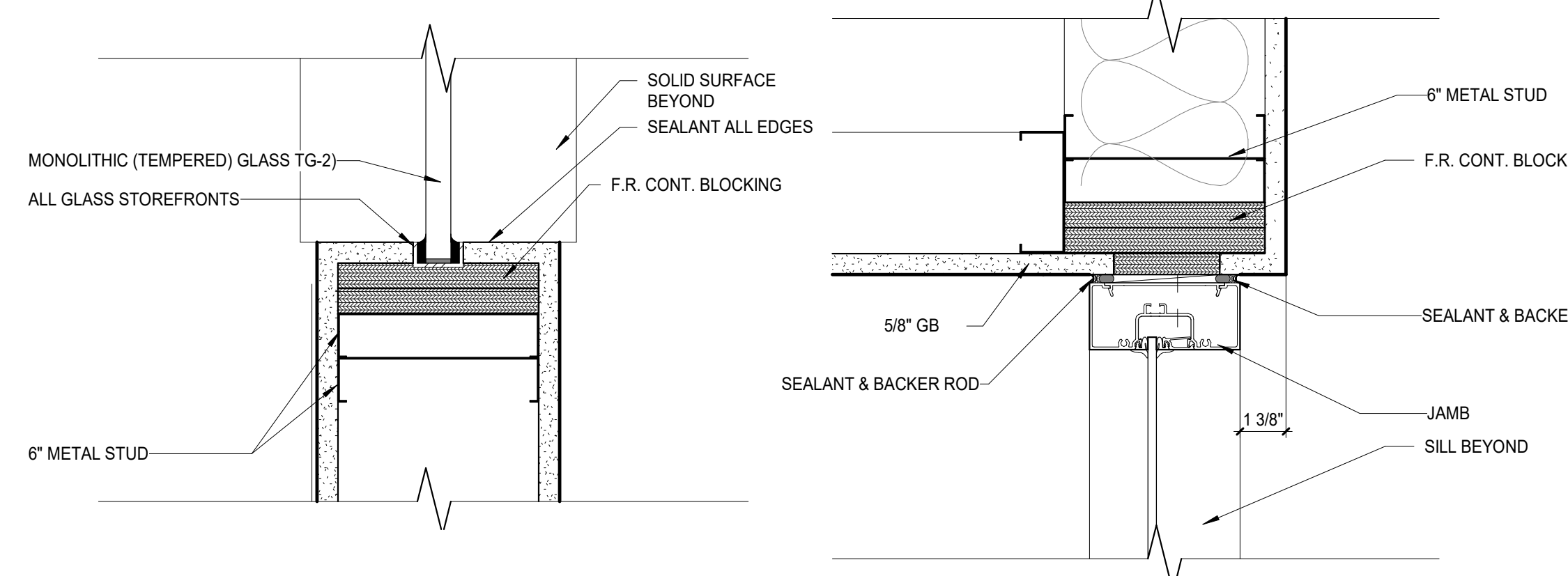
MARK	LOCATION		DOOR	FRAME	HARDWARE GROUP	REMARKS
	FROM	TO	MATL	MATL		
100X1	VESTIBULE	VESTIBULE	AL	AL	1	
100X2	COMMONS	VESTIBULE	AL	AL	2	
100X3	VESTIBULE	VESTIBULE	AL	AL	1	
100X4	COMMONS	VESTIBULE	AL	AL	2	
102X1	VESTIBULE	VESTIBULE	AL	AL	2	
104X1	VESTIBULE	VESTIBULE	AL	AL	2	

ABBR.	DESCRIPTION
AL	ALUMINUM
FO	FRAMED OPENING
HM	HOLLOW METAL
HO	HOLD OPEN
SCW	SOLID-CORE WOOD
STL	STEEL
WD	WOOD



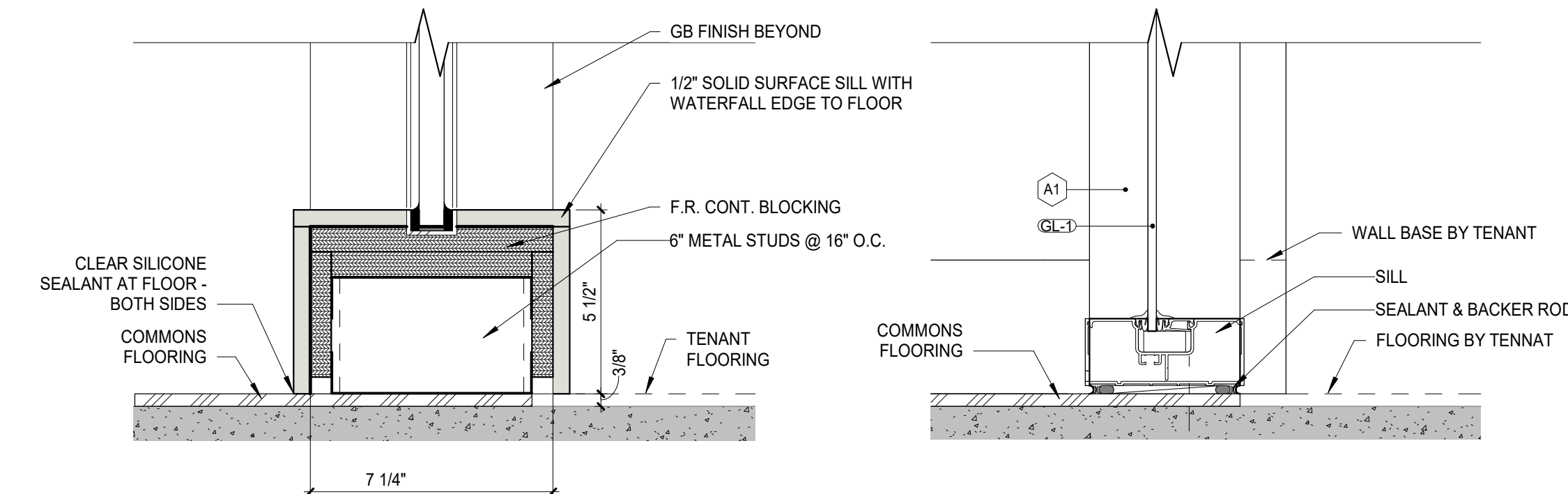
4D HEAD DETAIL  
3" = 1'-0" REF: 2A/A601

3D HEAD DETAIL  
3" = 1'-0" REF: 4A/A601



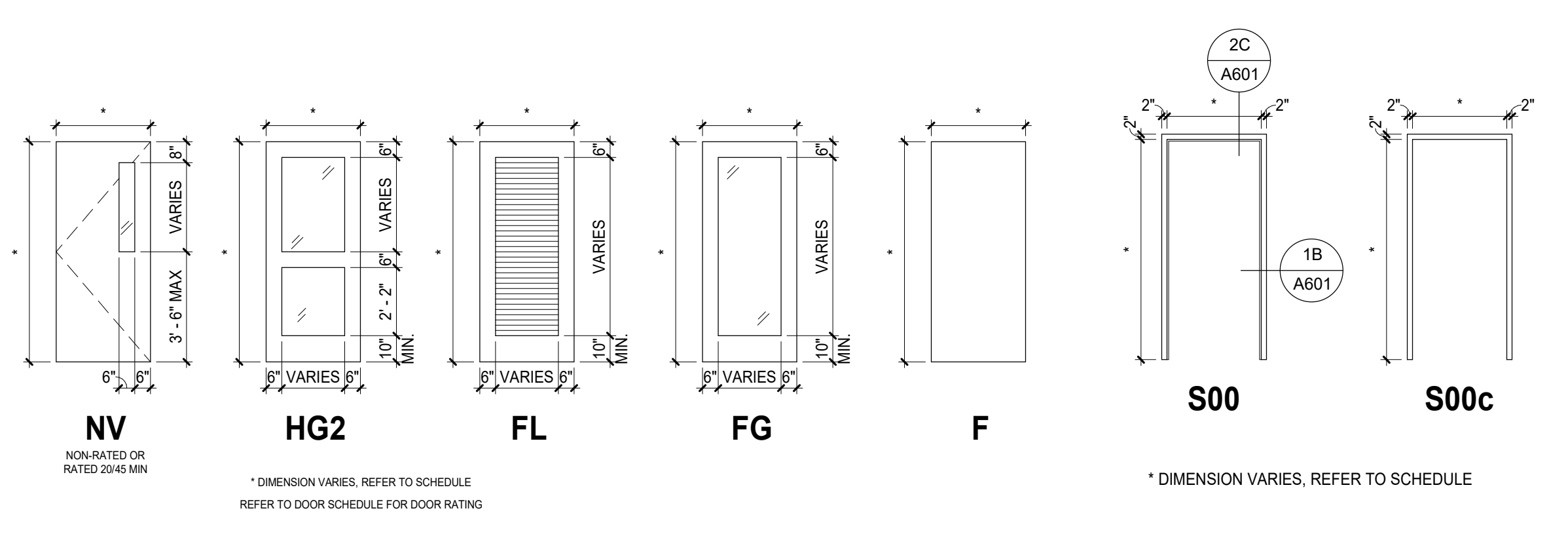
4C PLAN DETAIL  
3" = 1'-0" REF: 4A/A601

3C JAMB DETAIL  
3" = 1'-0" REF: 1/A601



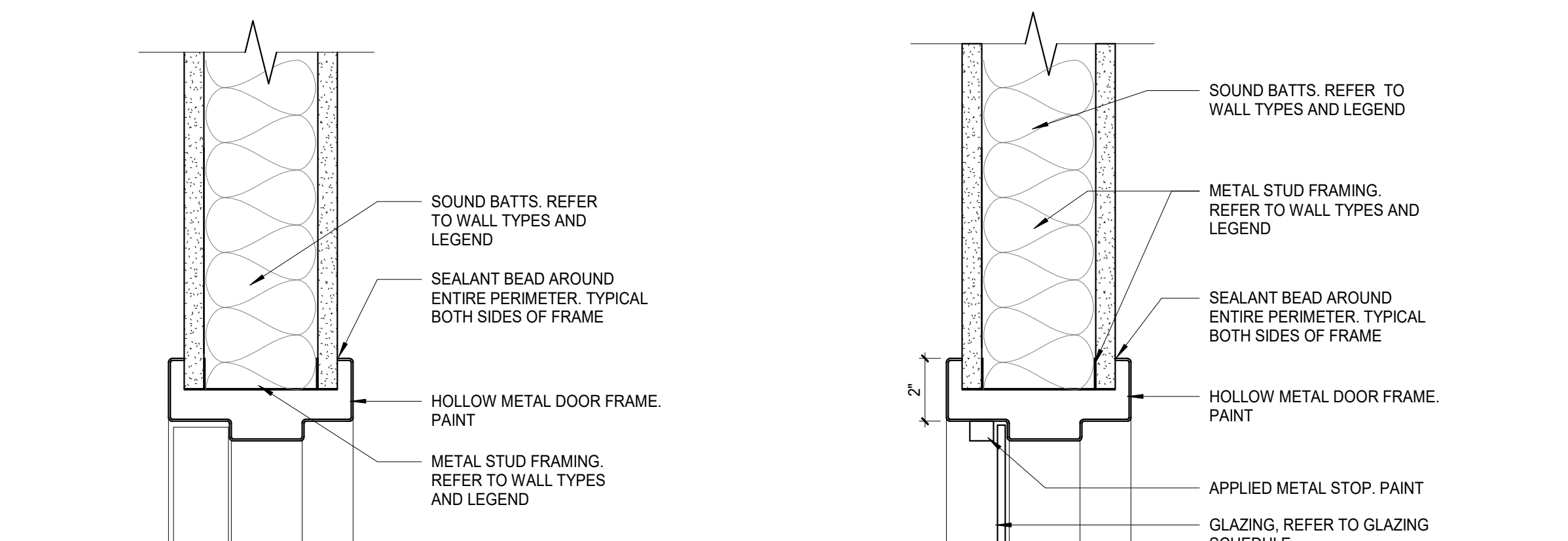
4B SILL DETAIL  
3" = 1'-0" REF: 2A/A601

3B SILL DETAIL  
3" = 1'-0" REF: 4A/A601



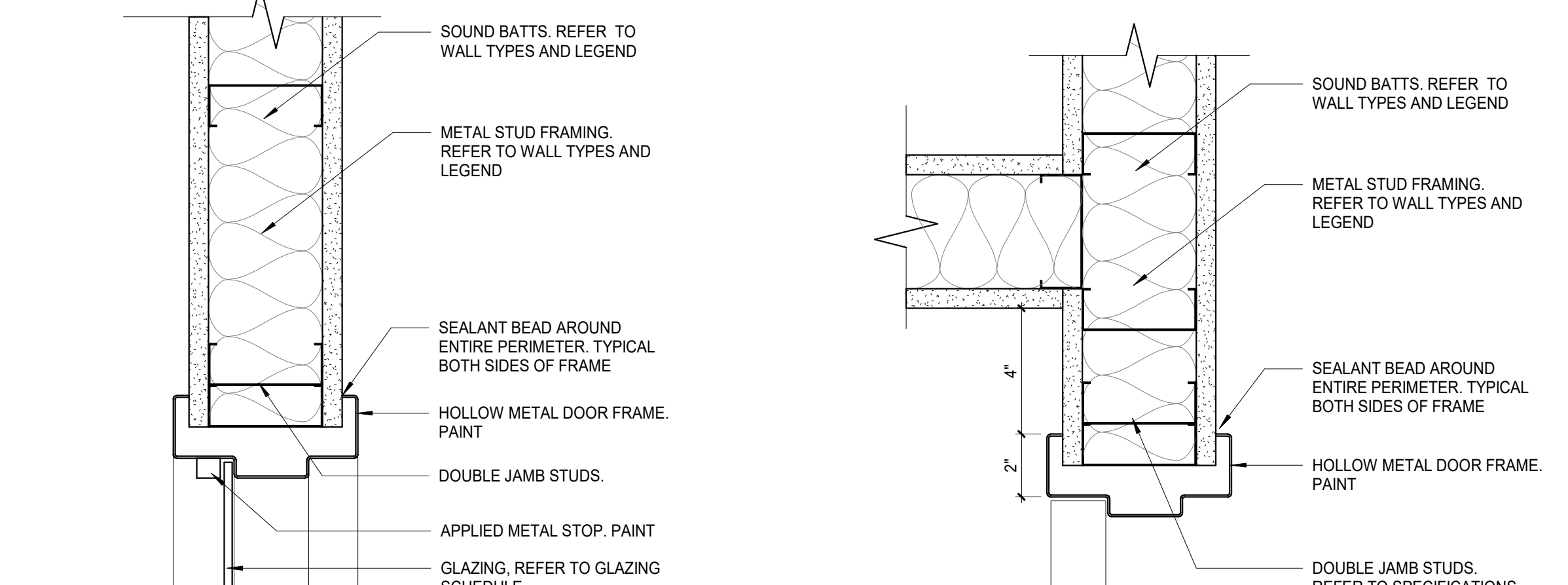
DOOR TYPES

DOOR FRAME TYPES



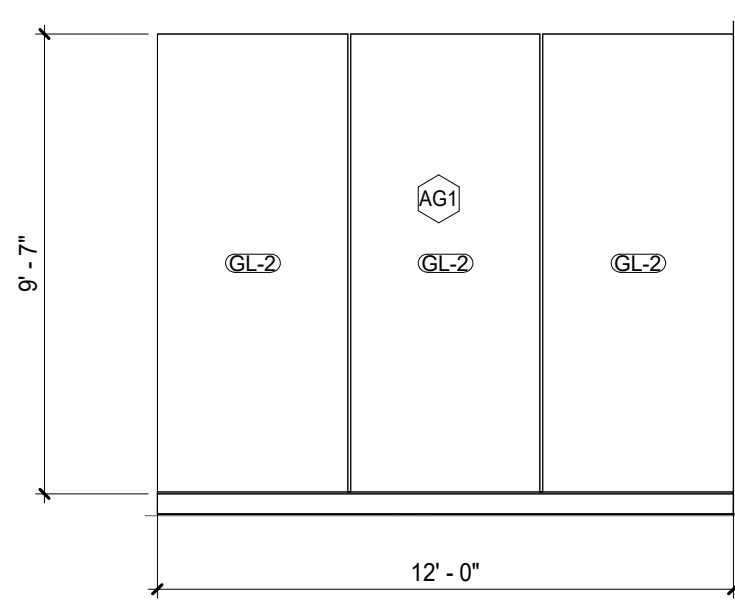
2C HEAD DETAIL  
3" = 1'-0" REF: 1/A601

1C HEAD DETAIL  
3" = 1'-0" REF: 1/A601

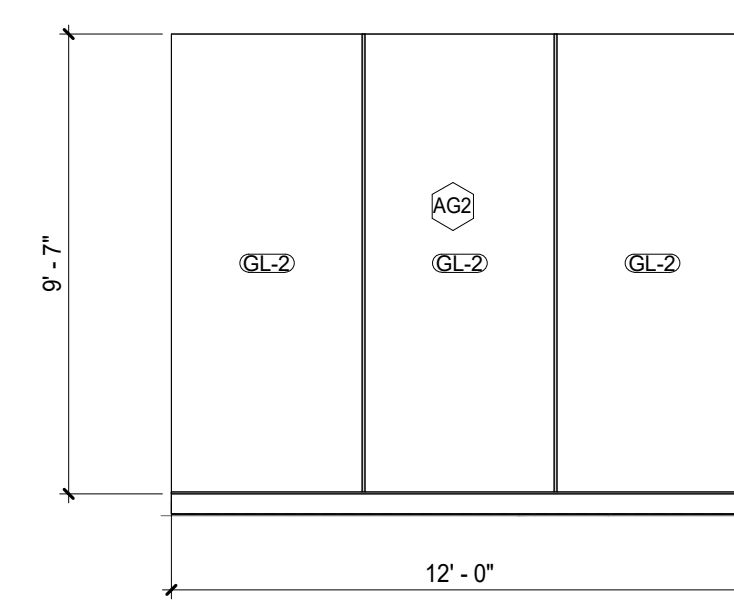


2B JAMB DETAIL  
3" = 1'-0" REF: 1/A601

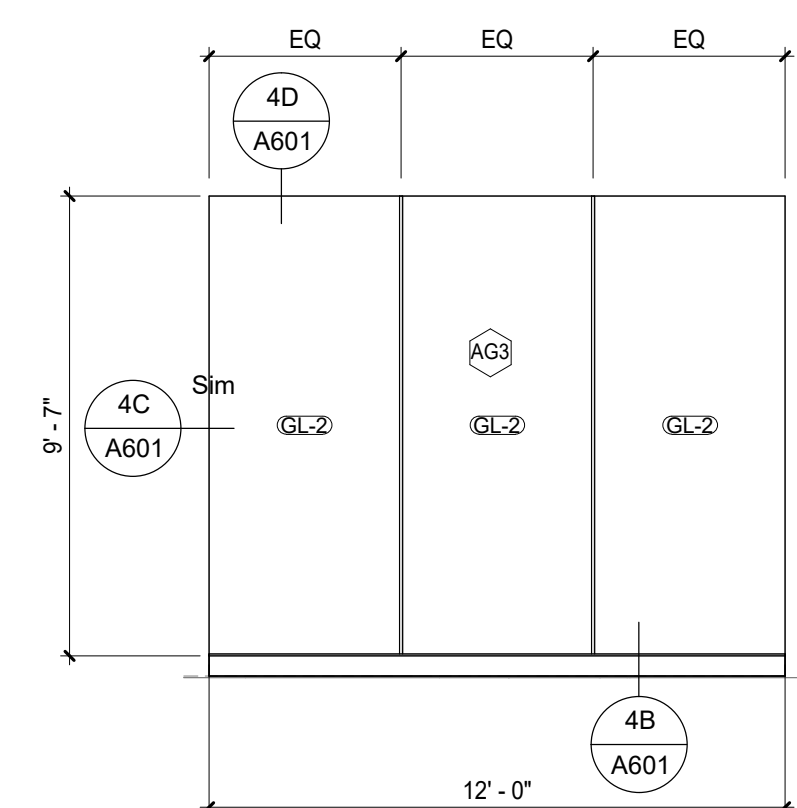
1B JAMB DETAIL  
3" = 1'-0" REF: 1/A601



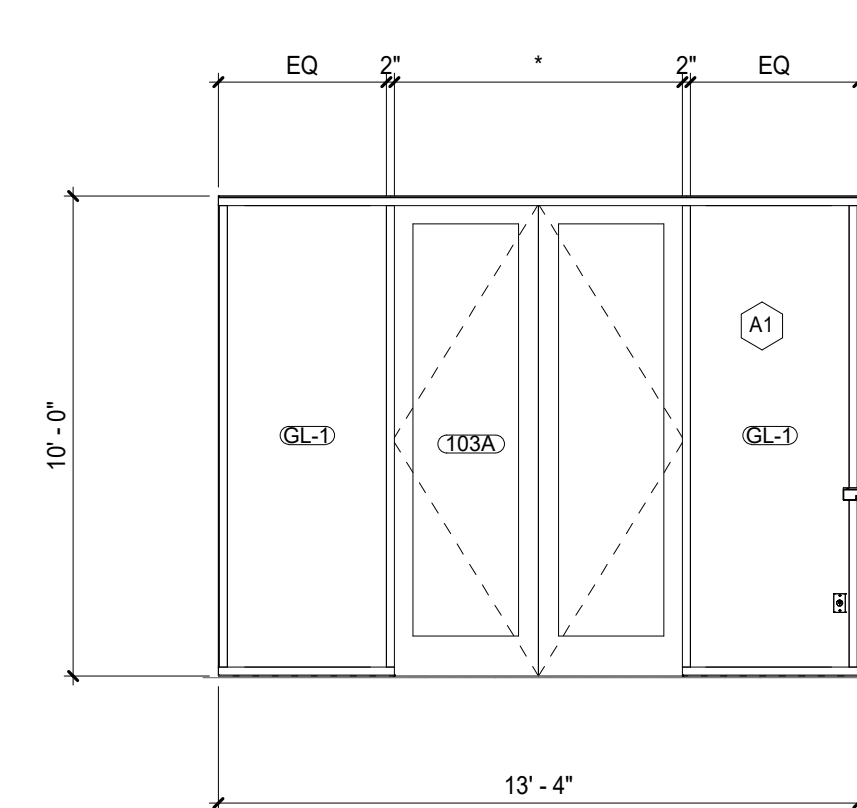
6A GLAZING ELEVATION  
1/4" = 1'-0" REF: 2A/A601



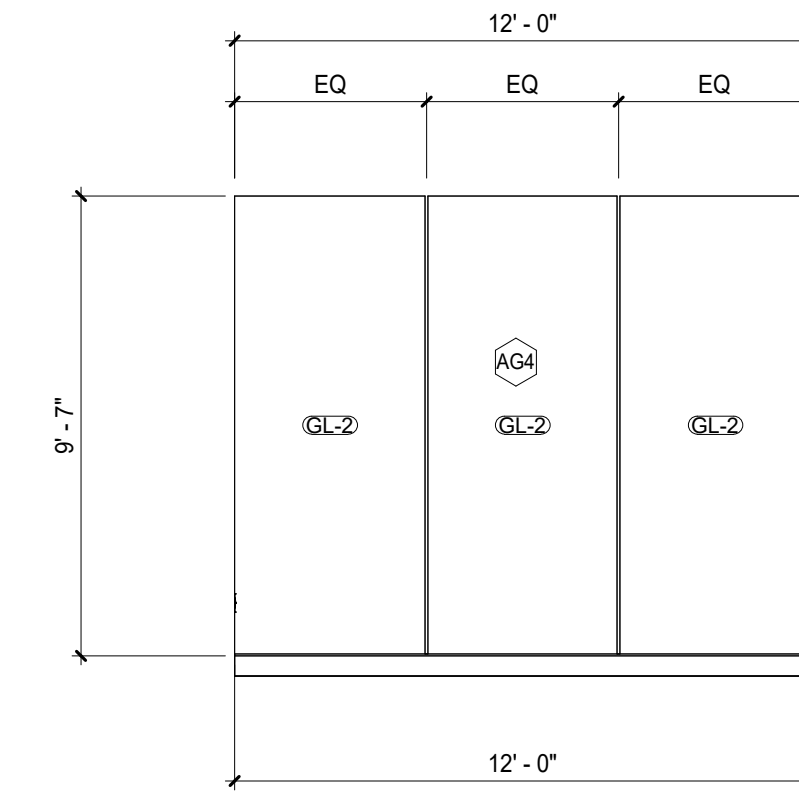
5A GLAZING ELEVATION  
1/4" = 1'-0" REF: 2A/A601



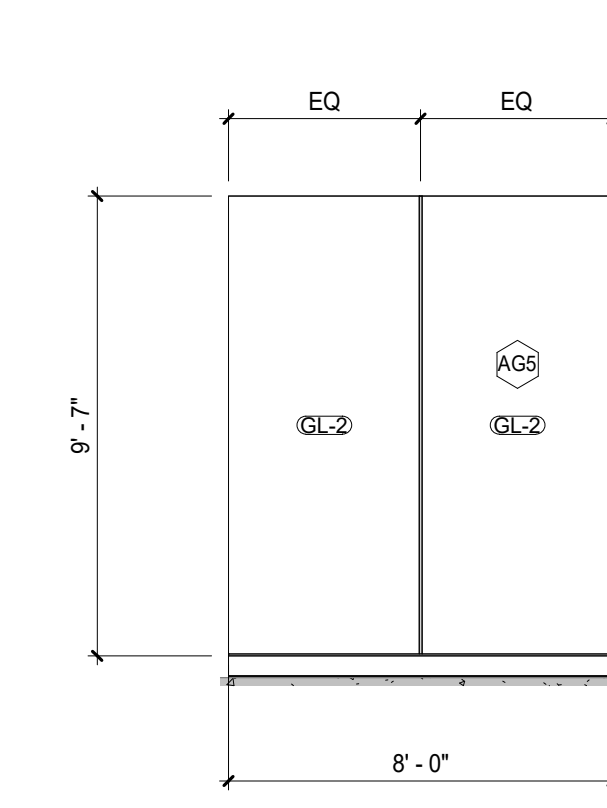
4A GLAZING ELEVATION  
1/4" = 1'-0" REF: 2A/A601



3A GLAZING ELEVATION  
1/4" = 1'-0" REF: 2A/A601



2A GLAZING ELEVATION  
1/4" = 1'-0" REF: 2A/A601



1A GLAZING ELEVATION  
1/4" = 1'-0" REF: 1A/A601