



**South Fayette Township School District
New District Maintenance and Bus Depot Facility**

Project No: 24-S49-01B

3631 Old Oakdale Road, McDonald, PA 15057

ADDENDUM 1

October 10, 2025

This Addendum forms part of the Contract Documents and modifies the original bidding documents dated October 1, 2025. Acknowledge receipt of this Addendum by inserting its number and date in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

BIDDING RFI & RESPONSES

The following bidding RFIs and responses are included for reference by all bidding contractors. Responses to RFIs are considered part of the project. All RFIs received to date are included below. Any un-answered RFIs are highlighted and shall be answered in future addenda.

RFI #	Bidding Contractor	Question	Response	Response By
###				

CHANGES TO PRIOR ADDENDA

N/A

CHANGES TO THE BIDDING DOCUMENTS

Item 1.01: GENERAL:

CHANGE all references to Project Site street address to "**3631** Old Oakdale Road."

CHANGES TO PROJECT MANUAL

Item 1.02: DOCUMENT 00 1113 – ADVERTISEMENT FOR BIDS

CHANGE Next-to-last paragraph to read as follows:

A **Pre-Bid Conference** will be held in the Pride Room at the District Administrative Offices at **11:00am** prevailing time, on **Monday, October 13, 2025**. After the meeting, Bidders will be permitted to examine the areas of the Work.

Item 1.03: SECTION 01 1000 - SUMMARY

Article 1.2: CHANGE Paragraph A. to read as follows:

- A. Project Identification:
DRAW Collective Project No. 24-S49-01B
New District Maintenance & Bus Depot Facility
3631 Old Oakdale Road, South Fayette Township, Allegheny County, Pennsylvania

Article 1.5: CHANGE SubParagraph C.4. to read as follows:

4. Substantial Completion**August 6, 2027**

Item 1.G01: SECTION 08 7100 – DOOR HARDWARE

ADD Section to Project Manual.

CHANGES TO DRAWINGS

Item 1.G02: A601-DOOR FRAME TYPES & FRAME DETAILS

- Entire sheet re-issued to detail revision to 2 door hardware sets, which are also reflected in new spec section 08 7100.

Item 1.G03: A902-INTERIOR DETAILS & SIGNAGE

- Entire sheet re-issued to highlight change in address.

SUPPLEMENTAL INFORMATION

N/A

END OF ADDENDUM 1

SECTION 08 7100 – DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes:

1. Hardware for aluminum, hollow metal, wood, and FRP doors.
2. Hardware for fire-rated doors.
3. Electrically operated and controlled hardware.
4. Lock cylinders for doors with balance of hardware specified in other sections.
5. Thresholds.
6. Weatherstripping and gasketing.

B. Related Requirements

1. Section 07 9213 - Elastomeric Joint Sealants: Sealants for setting exterior door thresholds.
2. Section 08 1213 - Hollow Metal Frames.
3. Section 08 1416 - Flush Wood Doors.
4. Section 08 3323 - Overhead Coiling Doors: Door hardware, except cylinders.
5. Section 08 4113 - Aluminum-Framed Entrances and Storefronts: Door hardware, except as noted in section.
6. Section 08 4115 – Aluminum-Framed FRP Doors.
7. Section 28 1500 - Access Control Hardware Devices: Electronic access control devices.
8. Section 28 0100 - Basic Electronic Safety and Security Requirements: Electrical connection to activate door closers and release magnetic holders.

C. Reference Standards

1. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
2. BHMA A156.1 - Standard for Butts and Hinges; 2021.
3. BHMA A156.3 - Exit Devices; 2025.
4. BHMA A156.4 - Door Closers and Pivots; 2024.
5. BHMA A156.5 - Cylinders and Input Devices for Locks; 2020.
6. BHMA A156.6 - Standard for Architectural Door Trim; 2021.
7. BHMA A156.7 - Template Hinge Dimensions; 2022.
8. BHMA A156.8 - Door Controls - Overhead Stops and Holders; 2021.
9. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.
10. BHMA A156.15 - Release Devices - Closer Holder, Electromagnetic and Electromechanical; 2021.
11. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.
12. BHMA A156.21 - Thresholds; 2025.
13. BHMA A156.22 - Standard for Gasketing; 2021.
14. BHMA A156.28 - Standard for Recommended Practices for Mechanical Keying Systems; 2023.
15. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.
16. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames; 2006.
17. DHI (H&S) - Sequence and Format for the Hardware Schedule; 2019.
18. DHI (KSN) - Keying Systems and Nomenclature; 2019.
19. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
20. ITS (DIR) - Directory of Listed Products; Current Edition.

21. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
22. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
23. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.
24. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.
25. UL (DIR) - Online Certifications Directory; Current Edition.
26. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
27. UL 1784 - Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure facility services connections are achieved in an orderly and expeditious manner.
- C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this Section; require attendance by affected installers and the following:
 1. Architect and Construction Manager.
 2. Installer's Architectural Hardware Consultant (AHC).
 3. Hardware Installer.
 4. Owner's Security Consultant.
- D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- E. Keying Requirements Meeting: Construction Manager will schedule meeting at project site prior to Contractor occupancy.
 1. Attendance Required:
 - a. Contractor.
 - b. Owner.
 - c. Architect.
 - d. Installer's Architectural Hardware Consultant (AHC).
 - e. Door Hardware Installer.
 - f. Owner's Security Consultant.
 2. Agenda:
 - a. Establish keying requirements.
 - b. Verify locksets and locking hardware are functionally correct for project requirements.
 - c. Verify that keying and programming complies with project requirements.
 - d. Establish keying submittal schedule and update requirements.
 3. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
 - a. Access control requirements.
 - b. Key control system requirements.
 - c. Schematic diagram of preliminary key system.
 - d. Flow of traffic and extent of security required.
 4. Construction Manager will record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
 5. Deliver established keying requirements to manufacturers.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- B. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.
 - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
 - 2. Comply with DHI (H&S) using door numbering scheme and hardware set numbers as indicated in Contract Documents.
 - 3. Submit in vertical format.
 - 4. List groups and suffixes in proper sequence.
 - 5. Include complete description for each door listed.
 - 6. Include manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
 - 7. Include account of abbreviations and symbols used in schedule.
- C. Shop Drawings - Electrified Door Hardware: Include diagrams for power, signal, and control wiring for electrified door hardware that include details of interface with building safety and security systems. Provide elevations and diagrams for each electrified door opening as follows:
 - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC).
 - 2. Elevations: Include front and back elevations of each door opening showing electrified devices with connections installed and an operations narrative describing how opening operates from either side at any given time.
 - 3. Diagrams: Include point-to-point wiring diagrams that show each device in door opening system with related colored wire connections to each device.
- D. Manufacturer's Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Supplier's qualification statement.
- F. Operation and Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- G. Include manufacturer's parts lists and templates.
- H. Keying Schedule:
 - 1. Submit three copies of Keying Schedule complying with requirements established during Keying Requirements Meeting unless otherwise indicated.
- I. Executed Warranty.
- J. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Tools: One set of each special wrench or tool applicable for each different or special hardware component, whether supplied by hardware component manufacturer or not.

1.04 QUALITY ASSURANCE

- A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by Construction Manager, Architect, and Contractor.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum three years of documented experience.
- C. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC) to assist in work of this Section.
- D. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.06 WARRANTY

- A. See Section 01 7700 - Closeout Procedures for additional warranty requirements.
- B. Manufacturer Warranty: Provide manufacturer warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
 - 1. Closers: Thirty five years.
 - 2. Exit Devices:
 - a. Mechanical: Five years.
 - b. Electrical: One year.
 - 3. Hinges: Limited Lifetime.
 - 4. Locksets:
 - a. Mechanical: Limited Lifetime.
 - b. Electrical: Five years.
 - 5. Cylinders: Three years.
 - 6. Other Hardware: Two years.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Locks: Provide a lock for each door, unless it's indicated that lock is not required.
 - 1. Lock Function: Provide lock and latch function numbers and descriptions of manufacturer's Series. As indicated in hardware sets.

2. Trim: Provide lever handle or pull trim on outside of each lock, unless otherwise indicated.
- D. Strikes:
1. Finish: To match lock or latch.
 2. Curved-Lip Strikes: Provide as standard, with extended lip to protect frame, unless otherwise indicated.
 3. Center Strike At Pairs of Doors: 7/8 inch (22.2 mm) lip.
- E. Door Pulls and Push Plates:
1. Provide door pulls and push plates on doors without a lockset, latchset, exit device, or auxiliary lock unless otherwise indicated.
 2. On solid doors, provide matching door pull and push plate on opposite faces.
 3. On glazed storefront doors, provide matching door pulls/push plates on both faces unless otherwise indicated.
- F. Closers:
1. Provide door closer on each exterior door, unless otherwise indicated.
 2. Provide door closer on each fire-rated and smoke-rated door.
 3. Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
- G. Overhead Stops and Holders (Door Checks):
1. Provide stop for every swinging door, unless otherwise indicated.
 2. Overhead Stop is not required if positive stop feature is specified for door closer; positive stop feature of door closer is not an acceptable substitute for a stop, unless otherwise indicated.
 3. Overhead stop is not required if a floor or wall stop has been specified for the door.
- H. Drip Guards: Provide at head of outswinging exterior doors unless protected by roof or canopy directly overhead.
- I. Thresholds:
1. Exterior Applications: Provide at each exterior door, unless otherwise indicated.
- J. Weatherstripping and Gasketing:
1. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
 2. Provide door bottom sweep on each exterior door, unless otherwise indicated.
- K. Electrically Operated and/or Controlled Hardware: Provide necessary power supplies, power transfer hinges, relays, and interfaces as required for proper operation; provide wiring between hardware and control components and to building power connection in compliance with NFPA 70.
- L. See Section 28 0100 for additional access control system requirements.
- M. Fasteners:
1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
 - a. Aluminum fasteners are not permitted.
 - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
 2. Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
 - a. Self-drilling (Tek) type screws are not permitted.

3. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.
4. Provide wall grip inserts for hollow wall construction.
5. Fire-Resistance-Rated Applications: Comply with NFPA 80.
 - a. Provide wood or machine screws for hinges mortised to doors or frames, strike plates to frames, and closers to doors and frames.
 - b. Provide steel through bolts for attachment of surface mounted closers, hinges, or exit devices to door panels unless proper door blocking is provided.

2.02 PERFORMANCE REQUIREMENTS

- A. Provide door hardware products that comply with the following requirements:
 1. Applicable provisions of federal, state, and local codes.
 2. Accessibility: ADA Standards and ICC A117.1.
 3. Fire-Resistance-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
 4. Hardware on Fire-Resistance-Rated Doors: Listed and classified by UL (DIR), ITS (DIR), or testing firm acceptable to authorities having jurisdiction as suitable for application indicated.
 5. Hardware for Smoke and Draft Control Doors (Indicated as "S" on Drawings): Provide door hardware that complies with local codes, and requirements of assemblies tested in accordance with UL 1784.
 6. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
 7. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.
 8. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.

2.03 HINGES

- A. Manufacturers: Conventional butt hinges.
 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Ives
 3. McKinney
- B. Manufacturers: Continuous hinges.
 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Select Hinges
 3. ABH Mfg
- C. Properties:
 1. Butt Hinges: As applicable to each item specified.
 - a. Template screw hole locations.
 - b. Bearing assembly installed after plating.
 - c. Bearings: Exposed fully hardened bearings.
 - d. Bearing Shells: Shapes consistent with barrels.
 - e. Pins: Easily seated, non-rising pins.
 - 1) Fully plate hinge pins.
 - 2) Non-Removable Pins: Slotted stainless steel screws.
 - f. UL 10C listed for fire-resistance-rated doors.
 2. Continuous Hinges: As applicable to each item specified.

- a. Geared Continuous Hinges: As applicable to each item specified.
 - 1) Non-handed.
 - 2) Anti-spinning through-fastener.
 - 3) UL 10C listed for fire-resistance-rated doors.
 - a) Metal Door Installation: Rated up to 90 minutes.
 - b) Wood Door Installation: Rated up to 60 minutes.
 - 4) Sufficient size to permit door to swing 180 degrees
- D. Sizes: See Door Hardware Schedule.
 1. Hinge Height: 3-1/2 by 3-1/2 inches (89 by 89 mm).
 2. Hinge Width: 1-3/8 inches (35 mm).
 3. Hinge Length: 83 inches (2108 mm).
 4. Sufficient size to allow 180 degree swing of door.
- E. Finishes: See Door Hardware Schedule.
 1. Fully polish hinges; front, back, and barrel.
- F. Grades:
 1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
- G. Material: Base metal as indicated for each item by BHMA material and finish designation.
- H. Types:
 1. Butt Hinges: Include full mortise hinges.
 2. Continuous Hinges: Include geared hinges.
- I. Options: As applicable to each item specified.
 1. Provide electric power transfer (EPT) as listed in hardware sets.
- J. Quantities:
 1. Butt Hinges: Three (3) hinges per leaves up to 90 inches (2286 mm) in height. Add one (1) for each additional 30 inches (762 mm) in height or fraction thereof.
 2. Continuous Hinges: One per door leaf.
- K. Hinge weight and size unless otherwise indicated in hardware sets:
 1. For doors up to 36 inches (914 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.134 inch (3.4 mm) and a minimum of 4-1/2 inches (114 mm) in height.
 2. For doors from 36 inches (914 mm) wide up to 42 inches (1067 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.145 inch (3.7 mm) and a minimum of 4-1/2 inches (114 mm) in height.
 3. For doors from 42 inches (1067 mm) wide up to 48 inches (1219 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.
 4. For doors greater than 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.
- L. Applications: At swinging doors.
 1. Provide non-removable pins at out-swinging doors with locking hardware and all exterior doors.

- M. Products:
1. Butt Hinges:
 - a. Ball Bearing, Five (5) Knuckle.
 2. Continuous Hinges:
 - a. Aluminum geared hinges.

2.04 EXIT DEVICES

- A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Von Duprin 98/99
 3. Sargent 80
- B. Properties:
1. Actuation: Full-length touchpad.
 2. Touchpads: "T" style metal touchpads and rail assemblies with matching chassis covers end caps.
 3. Latch Bolts: Stainless steel deadlocking with 3/4 inch (19 mm) projection using latch bolt.
 4. Lever Design: Match project standard lockset trims.
 5. Cylinder: Include where cylinder dogging or locking trim is indicated.
 6. Strike as recommended by manufacturer for application indicated.
 7. Sound dampening on touch bar.
 8. Dogging:
 - a. Non-Fire-Resistance-Rated Devices: Hex key 1/4 inch (6 mm) hex key dogging.
 - b. Fire-Resistance-Rated Devices: Manual dogging not permitted.
 9. Touch bar assembly on wide style exit devices to have a 1/4 inch (6.3 mm) clearance to allow for vision frames.
 10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
 11. Handing: Field-reversible.
 12. Fasteners on Back Side of Device Channel: Concealed - exposed fasteners not allowed.
 13. Vertical Latch Assemblies' Operation: Gravity, without use of springs.
- C. Grades: Complying with BHMA A156.3, Grade 1.
1. Provide exit devices tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
- D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.
- E. Options:
1. Electrified Devices:
 - a. Latchbolt Retraction: Motorized latchbolt retraction.
 2. Internally mounted switch used to signal other components.
 3. Electrified Device Voltage: 24 VDC.
 4. WTS touch bar switch.
- F. Products:
1. BEST, Precision 2000 Series.

2.05 LOCK CYLINDERS

A. Manufacturers:

1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Substitutions: Not permitted.

B. Properties:

1. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
 - a. Provide cylinders from same manufacturer as locking device.
 - b. Provide cams and/or tailpieces as required for locking devices.
 - c. Provide cylinders with appropriate format interchangeable cores where indicated.

C. Grades:

1. Standard Security Cylinders: Comply with BHMA A156.5.

D. Material:

1. Manufacturer's standard corrosion-resistant brass alloy.

E. Types: As applicable to each item specified.

F. Applications: At locations indicated in hardware sets, and as follows

1. As required for items with locking devices provided under other Sections, including at elevator controls and cabinets.
 - a. When provisions for lock cylinders are referenced elsewhere in the Project Manual to this Section, provide compatible type of lock cylinder, keyed to building keying system, unless otherwise indicated.

G. Products:

1. Rim/mortise.

2.06 MORTISE LOCKS

A. Manufacturers:

1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Schlage L9000
3. Sargent 8200

B. Properties:

1. Mechanical Locks: Manufacturer's standard.
 - a. Fitting modified ANSI A115.1 door preparation.
 - b. Door Thickness Coordination Fitting 1-3/4 inch (44 mm) to 2-1/4 inch (57 mm) thick doors.
 - c. Latch: Solid, one-piece, anti-friction, self-lubricating stainless steel.
 - 1) Latchbolt Throw: 3/4 inch (19 mm), minimum.
 - d. Auxiliary Deadlatch: One piece stainless steel, permanently lubricated.
 - e. Backset: 2-3/4 inch (70 mm).
 - f. Lever Trim:

- 1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
 - 2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs. (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
 - 3) Spindle: Designed to prevent forced entry from attacking of lever.
 - 4) Independent spring mechanism for each lever.
 - a) Trim to be self-aligning and thru-bolted.
- C. Finishes: See Door Hardware Schedule.
1. Core Faces: Match finish of lockset.
- D. Grades:
1. Comply with BHMA A156.13, Grade 1, Security; Grade 2.
- E. Options:
1. Regulatory Compliance: As required by authorities having jurisdiction the State in which the Project is located.
- F. Products: Mortise locks, including standard and electrified types.
1. BEST, 45H Series.

2.07 LADDER PULLS

- A. Manufacturers:
1. ABH Mfg.
 2. Burns Mfg
 3. Hager
- B. Properties:
1. Proper number of support fixings to accommodate length of pull as recommended by the manufacturer.
 2. Flat tops at pulls projecting past support fittings.
 3. Non-locking Ladder Pulls: Manufacturer's standard.
 - a. Bar diameter: 1.25 inch (31.75 mm).
 - b. Support Fitting Spacing: 49 inches (1245 mm) center-to-center.
 - c. Pull Projection off Door Face: 3-23/32 inches (94 mm).
- C. Material: Stainless steel, unless otherwise indicated.
- D. Types:
1. Offset.
- E. Installation:
1. Pull Handles Mounting Style: Use single-sided - SNG or back-to-back - B2B mounting methods, as appropriate for item specified and in coordination with door type and other hardware items.
- F. Products:
1. ABH, AB3300 Series.

2.08 CLOSERS

A. Manufacturers:

1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. LCN 4040XP
3. Sargent 281

B. Properties:

1. Surface Mounted Closers: Manufacturer's standard.
 - a. Construction: Cast iron single piece.
 - b. Maximum Projection from Face of Door: 2-1/8 inches (54 mm).
 - c. Mechanism: Separate tamper-resistant adjusting valves for closing and latching speeds.
 - 1) Spring size indicator and adjusting valves; front facing and adjustable without removing mechanism from installed surface
 - d. Hydraulic Fluid: All-weather type.
 - e. Arm Assembly: Standard for product specified.
 - 1) Include hold-open, integral stop, or spring-loaded stop feature, as specified in Door Hardware Schedule.
 - 2) Parallel arm to be a heavy-duty rigid arm.
 - 3) Where "IS" or "S-IS" arms are specified in hardware sets, if manufacturer does not offer this arm provide a regular arm mount closer in conjunction with a heavy-duty overhead stop equal to a dormakaba 900 Series.
 - f. Covers:
 - 1) Type: Standard for product selected.
 - a) Full.
 - 2) Material: Plastic.
 - 3) Finish: Painted.
 - 4) Attachment: Two-point flange mounting, dual-clamp friction fit closer cover.

C. Grades:

1. Closers: Comply with BHMA A156.4, Grade 1.
 - a. Underwriters Laboratories Compliance:
 - 1) Product Listing: UL (DIR) and ULC for use on fire-resistance-rated doors.
 - a) UL 228 - Door Closers-Holders, With or Without Integral Smoke Detectors.

D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

1. Devices listed with California Department of Forestry and Fire Protection, Office of the State Fire Marshal.

E. Types:

1. Rack-and-pinion, surface-mounted. 1-1/2 inches (38 mm) minimum bore.

F. Options:

1. Delayed action, adjustable with an independent valve.
2. Advanced backcheck.

- G. Installation:
1. Mounting: Includes surface mounted installations.
 2. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.
 3. At outswinging exterior doors, mount closer on interior side of door.
 4. Provide adapter plates, shim spacers, and blade stop spacers as required by frame and door conditions.
 5. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order.
- H. Products:
1. Surface Mounted:
 - a. BEST, EHD9000 Series.

2.09 OVERHEAD STOPS AND HOLDERS

- A. Manufacturers:
1. dormakaba: www.dormakaba.com/#sle.
 2. ABH Mfg.
 3. Glynn Johnson
 4. Rixson
- B. Properties:
1. Stop Settings: At 90 degrees opening.
 - a. Adjustable friction tension.
- C. Sizes: Manufacturer's standard for the application.
- D. Finishes:
1. Arms and Brackets: Zinc-plated.
- E. Grades: As applicable to item specified.
1. Comply with BHMA A156.8, Grade 1.
- F. Material: Base metal as indicated for each item by BHMA material and finish designation.
1. Track Channel: Extruded aluminum alloy.
 2. Slide Block: Machined from solid brass alloy.
- G. Types:
1. Surface-applied.
 2. Concealed.
- H. Products:
1. Surface Overhead Stops and Holders:
 - a. dormakaba Architectural Hardware 900 Series (Heavy Duty)
 2. Concealed Overhead Stops and Holders:
 - a. dormakaba Architectural Hardware 910 Series (Heavy Duty)

2.10 PROTECTION PLATES

- A. Manufacturers:
 - 1. Burns Manufacturing, Inc.: <https://www.burnsmfg.com>.
 - 2. Hager
 - 3. Trimco
 - 4. Rockwood
- B. Properties:
 - 1. Plates:
 - a. Kick Plates: Provide along bottom edge of push side of every door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
 - b. Mop Plates: Provide along bottom edge of pull side of doors to provide protection from cleaning liquids and equipment damage to door surface.
 - c. Edges: Beveled, on four (4) unless otherwise indicated.
- C. Grades: Comply with BHMA A156.6.
- D. Material: As indicated for each item by BHMA material and finish designation.
 - 1. Metal Properties: Stainless steel.
 - a. Metal, Standard Duty: Thickness 0.050 inch (1.27 mm), minimum.
- E. Installation:
 - 1. Fasteners: Countersunk screw fasteners
- F. Products:
 - 1. Kick-Mop Plates.

2.11 STOPS AND HOLDERS

- A. Manufacturers:
 - 1. Burns Manufacturing, Inc.: <https://www.burnsmfg.com>.
 - 2. Trimco
 - 3. Rockwood
- B. General: Provide overhead stop/holder when wall or floor stop is not feasible.
- C. Grades:
 - 1. Wall Bumpers: Comply with BHMA A156.16 and Resilient Material Retention Test as described in this standard.
- D. Material: Base metal as indicated for each item by BHMA material and finish designation.
- E. Types:
 - 1. Wall Bumpers: Bumper, concave, convex, wall stop.

- F. Installation:
 - 1. Non-Masonry Walls: Confirm adequate wall reinforcement has been installed to allow lasting installation of wall bumpers.
- G. Products:
 - 1. Wall Bumpers.

2.12 ELECTROMAGNETIC DOOR HOLDERS

- A. Manufacturers:
 - 1. dormakaba: www.dormakaba.com/#sle.
 - 2. Rixson
 - 3. LCN
- B. Properties:
 - 1. Holding Force, Standard Duty: 40 lbs.-force (177 N), minimum.
 - 2. Power Loss Status: Fail safe; door released to close.
 - 3. Life Safety Interface: With fire detectors, fire-alarm system, and smoke detectors for fire-resistance-rated door assemblies.
- C. Grades: Comply with BHMA A156.15.
- D. Types: Wall mounted, single unit, standard duty, with strike plate attached to door.
- E. Options: As applicable to each item specified.
 - 1. Voltage: 24 VDC.
- F. Products:
 - 1. dormakaba Architectural Hardware EM Series.

2.13 THRESHOLDS

- A. Manufacturers:
 - 1. National Guard Products, Inc (NGP): www.ngpinc.com/#sle.
 - 2. Pemko
 - 3. Zero
- B. Properties:
 - 1. Threshold Surface: Fluted horizontal grooves across full width.
- C. Threshold Grades: Comply with BHMA A156.21.
- D. Material: Base metal as indicated for each item by BHMA material and finish designation.
 - 1. Threshold Assemblies: Aluminum.

- E. Types: As applicable to project conditions. Provide barrier-free type at every location where specified.
 - 1. Saddle Thresholds: Without thermal break.
 - 2. Bumper Seal Thresholds with Gasket: Use silicone gaskets.
- F. Products:
 - 1. Thresholds.

2.14 WEATHERSTRIPPING AND GASKETING

- A. Manufacturers:
 - 1. National Guard Products, Inc (NGP): www.ngpinc.com/#sle.
 - 2. Pemko
 - 3. Zero
- B. Properties:
 - 1. Adhesive-Backed Perimeter Gasketing: Silicone gasket material applied to frame with self- adhesive.
 - 2. Rigid, Housed, Perimeter Gasketing: Silicone bulb gasket material held in place by aluminum housing; fastened to frame stop with screws.
 - 3. Meeting Astragals for Meeting Stiles: Silicone bulb gasket material held in place by aluminum housing; mounted with screws.
 - a. Mounting: Surface mounted on face of each door.
 - 4. Door Sweeps: Silicone gasket material held in place by flat aluminum housing or flange; surface mounted to face of door with screws.
 - 5. Automatic Door Bottoms: Sponge neoprene gasket material held in place by aluminum housing that automatically drops to form seal when door is closed.
 - a. Mounting: Surface mounted with screws on bottom edge of door.
- C. Grades: Comply with BHMA A156.22.
- D. Products:
 - 1. Weatherstripping: See Door Hardware Schedule.
 - 2. Smoke Seals: See Door Hardware Schedule.
 - 3. Meeting Stile Seals: See Door Hardware Schedule.
 - 4. Door Bottom Seals:
 - a. Door Sweeps: See Door Hardware Schedule.
 - b. Automatic Door Bottoms: See Door Hardware Schedule.

2.15 MISCELLANEOUS ITEMS

- A. Manufacturers:
 - 1. Burns Manufacturing, Inc: www.burnsmfg.com/#sle.
 - 2. Rockwood
 - 3. Ives

B. Properties:

1. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.
 - a. Single Door: Provide three on strike jamb of frame.
 - b. Pair of Doors: Provide two on head of frame, one for each door at latch side.
 - c. Material: Rubber, gray color.

C. Products:

1. Silencers

2.16 ELECTRIFIED HARDWARE

A. Manufacturers:

1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. dormakaba: www.dormakaba.com/#sle.
3. Von Duprin
4. Securitron

B. Properties:

1. Door Position Switches: Recessed devices with magnetic contacts.
 - a. Power Requirement: 50mA Max, 100 VDC.
 - b. SPDT configuration.
2. Power Supply Units: Manufacturer's standard.
 - a. Enclosures: Lockable NEMA Type 1, with hinged cover and knockouts.
 - b. Power: 24 VAC, 10 Amp; field-selectable.
 - c. Emergency Release Terminals: Designed to release devices upon activation of fire alarm system.
 - d. Auxiliary contacts for remote signaling.
 - e. User-selectable time delay from 0 to 4 minutes.
 - f. Fire Alarm System Interface: Standard.
 - g. Fire alarm terminal with green LED indicating power is available.
 - h. Output Distribution Board with indicator LEDs.
 - i. On/Off LED power indicator.
3. Power Transfers: Manufacturer's standard.
 - a. Mortised Type with Wires & Connectors:
 - 1) Listed by UL and ULC.
 - 2) Stainless steel housing and spring conduit.
 - 3) Wire Harness: Pre-installed, twelve wire, equipped with ten (10) 24 gauge wires and two 18 gauge wires.
 - 4) Accommodate 180 degree door swing.
 - 5) Quick-Connect Plugs: Pre-installed.
4. Wire Harnesses: Of sufficient length, with quick connectors.
 - a. Wire Harness End Connection to Power Supply or Junction Box: One end with bare leads.

5. Key Switches: Include single gang, with bi-color LED.
 - a. Power: 24 VDC.
 - b. Operation: As indicated in Door Hardware Schedule.
 - c. Operating Temperature: 32 to 110 degrees F (0 to 43 degrees C).
 - d. Faceplates: Provide 1/4 inch (6.35 mm) thick extruded aluminum faceplate with beveled edges.
 - 1) Finishes: As indicated in Door Hardware Schedule.

C. Products:

1. Door Position Switches:
 - a. RCI 9540 Recessed Magnetic Contact/Door Position Switch
2. Power Supplies:
 - a. BEST Precision RPSMLR2 Series
3. Power Transfers:
 - a. BEST EPT-12C (Mortise Type with Wires and Connectors)
4. Wire Harnesses:
 - a. BEST Wire Harnesses
5. Key Switches:
 - a. 960RO.

2.17 KEYS AND CORES

A. Manufacturers:

1. BEST, dormakaba Group: www.bestaccess.com/#sle.
2. Substitutions: Not permitted.

B. Properties: Complying with guidelines of BHMA A156.28.

1. Provide small format interchangeable core.
2. Provide keying information in compliance with DHI (KSN) standards.
3. Keying Schedule: Arrange for a keying meeting, with Construction Manager, Architect, Owner, and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.
4. Keying: Master keyed.
5. Include construction keying and control keying with removable core cylinders.
6. Do not make brass construction cores and construction control and operating keys a part of Owner's permanent keying system, nor furnish in the same keyway (or key section) as Owner, permanent keying system.
7. Key to existing keying system.
8. Supply keys in following quantities:
 - a. Master Keys: 4 each.
 - b. Construction Master Keys: 6 each.
 - c. Construction Keys: 15 each.
 - d. Construction Control Keys: 2 each.
 - e. Control Keys if New System: 2 each.
9. Provide key collection envelopes, receipt cards, and index cards in quantity suitable to manage number of keys.
10. Deliver keys with identifying tags to Owner by security shipment direct from manufacturer.

11. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."
12. Include installation of permanent cores and return construction cores to hardware supplier. Construction cores and keys to remain property of hardware supplier.

C. Products:

1. Cores-Keys.

2.18 FINISHES

- A. Finishes: Identified in Hardware Sets.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.
- B. Correct all defects prior to proceeding with installation.
- C. Verify that electric power is available to power operated devices and of correct characteristics.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Install hardware using the manufacturer's fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.
- C. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.
- D. Install hardware for smoke and draft control doors in accordance with NFPA 105.
- E. Use templates provided by hardware item manufacturer.
- F. Do not install surface mounted items until application of finishes to substrate are fully completed.
- G. Wash down masonry walls and complete painting or staining of doors and frames.
- H. Complete finish flooring prior to installation of thresholds.
- I. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
 1. Mounting heights in compliance with ADA Standards:
 - a. Locksets: 40-5/16 inch (1024 mm).
 - b. Push Plates/Pull Bars: 42 inch (1067 mm).
 - c. Deadlocks (Deadbolts): 48 inch (1219 mm).
 - d. Exit Devices: 40-5/16 inch (1024 mm).
 - e. Door Viewer: 43 inch (1092 mm); standard height 60 inch (1524 mm).

- J. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.
 - 1. See Section 07 9213 for additional requirements.
- K. Include in installation for existing doors and frames any necessary field modification and field preparation of doors and frames for new hardware. Provide necessary fillers, reinforcements, and fasteners for mounting new hardware and to cover existing door and frame preparations.

3.03 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under provisions of Section 01 4000 - Quality Requirements.

3.04 ADJUSTING

- A. Adjust work under provisions of Sections 01 7300 and 01 7700 - Execution and Closeout Procedures.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation activities.
- C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.06 PROTECTION

- A. Protect finished Work under provisions of Section 01 7300 and 01 7700 - Execution and Closeout Procedures.
- B. Do not permit adjacent work to damage hardware or finish.

Manufacturer list

ABH	Architectural Builders Hardware
BES	Best
BES	BEST
PRE	BEST (Precision)
BRN	Burns Manufacturing
DKA	dormakaba Architectural
NGP	National Guard Products
RCI	Rutherford Controls Inc
YAL	Yale

Option list

Code:	Name:
PC90	PC90 Full Size Plastic
EHD90	EHD9000 Series Closer
EHD9016AF90P689	EHD9016AF90P689
R	Classroom Function
TS	Touchbar Monitoring Switch
N	Passage Function
FBB199	BLL BRNG FL MRT HW
36"	36" Length
LD	Less Dogging
16	16 adjustable size 1-6
S	Stop Only
2914	Lever always active
7	7 Pin
45X45	4.5X4.5>
EPT12C	PRECISION
EHD9016SDS90689	EHD9016SDS90689
EHD9016IS90689	EHD9016IS90689
WTS	Weatherized Touchbar Monitoring Switch
4908	Key controls lever/knob
(1/4-20 SS MS/EA)	1/4-20 Mach. Screw/Exp Anchor
S	Silicone
SDS90	SDS90 HD comp
UL	UL Certification
SPA90	SPA90 HD
D	Storeroom Function
AVB	AVB Advanced Variable Backchk
B4E Heavy	Heavy Bevel Edges
IS90	IS90 HD Inte HO REG TJ0-3-1/2
STD	Standard
FL	Fire Rated Hardware
ISH90	ISH90 HD regTJ HO
CSK	CounterSunk Holes
CHW	COMMERCIAL HINGES
VIBE	Double Visual Indicator
AF90P	AF90P Stard flat m tri-pack
2	Standard Length
10"	Height
NCA-03	Cylinder Attachment Kit
Door Width less 2"	Width
4903	Key retracts latchbolt
MLR	Motorized Latch Retraction
4" ODW	4" Over Door Width
C	Pre-Terminated Quick Connect Plug
4	Standard Mortise
EHD9016SPA90689	EHD9016SPA90689

STD	Standard keyed core
L	Privacy Function
FBB168	BLL BRNG FL MRT HW
Head & Jambs (2)	Provide at the head and both jambs
C	Quick Connect
LAR	Length as Required
83IN	
AT	Office Function
NRP	NON-REMOVABLE PINS
DEU	Single Key Latch Fail Secure
STC 2	Sound seal
661HDUL	661HDUL>

Finish list

Code:	Name:
28	Brushed Anodized Aluminum
689	Aluminum
32D	Stnls Stl Mtl Satin
626	Satin Chromium Plated
626	Satin Chrome
US27	Mill Finish
B	Black
Gray	#N/A
630	Satin stainless steel
626	Satin chromium plated
A	Anodized Aluminum
26D	Chromium Plated Satin
630	Satin Stainless Steel
C	Charcoal
AL	Alum Clear Coated

Schedule of Hardware Sets

Set #001 - ALD EXTERIOR PAIR CARD READER

Doors: 100/1

2.0	Hinge	661HDUL EPT12C	AL	BES
2.0	Power Transfer	EPT-12C		PRE
1.0	Exit Device	C MLR WTS 2603 LD NCA-03	630	PRE
1.0	Exit Device	C MLR WTS 2602 LD	630	PRE
1.0	Rim Cylinder	12E 7 2	626	BES
4.0	Pull Handle	AB3311 36"	US32D	ABH
2.0	Door Closer	EHD90 16 SPA90	689	BES
2.0	Overhead Stop	910 S	626	DKA
1.0	Threshold	896 S LAR (1/4-20 SS MS/EA)	A	NGP
2.0	Sweep	200S LAR	A	NGP
1.0	Power Supply	RPSMLR2		PRE
2.0	Door Position Switch	9540	B	RCI
2.0	Wiring Harness	WH-192P		BES
2.0	Wiring Harness	WH-LAR		BES
1.0	Wiring Diagram	BY HARDWARE SUPPLIER		

NOTE: GASKETING BY DOOR SUPPLIER. CARD READER BY OWNER'S SECURITY VENDOR. OPERATIONS NARRATIVE: DOORS NORMALLY CLOSED AND LOCKED. VALID CARD READ RETRACTS VERTICAL RODS FOR INGRESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. WTS SWITCH SHUNTS ALARM. EXIT DEVICES ARE FAIL SECURE.

Set #002 - ALD EXTERIOR CARD READER

Doors: 101/1

1.0	Hinge	661HDUL EPT12C	AL	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Exit Device	2403 C MLR WTS LD NCA-03	630	PRE
1.0	Rim Cylinder	12E 7 2	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Overhead Stop	910 S	626	DKA
1.0	Threshold	896 S LAR (1/4-20 SS MS/EA)	A	NGP
1.0	Sweep	200S LAR	A	NGP
1.0	Power Supply	RPSMLR2		PRE
1.0	Door Position Switch	9540	B	RCI
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-LAR		BES
1.0	Wiring Diagram	BY HARDWARE SUPPLIER		

NOTE: GASKETING BY DOOR SUPPLIER. CARD READER BY OWNER'S SECURITY VENDOR. OPERATIONS NARRATIVE: DOOR NORMALLY CLOSED AND LOCKED. VALID CARD READ RETRACTS LATCHBOLT FOR INGRESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. WTS SWITCH SHUNTS ALARM. EXIT DEVICE IS FAIL SECURE.

Set #003 - ALD EXTERIOR CARD READER

Doors: 211/1

1.0 Hinge	661HDUL EPT12C	AL	BES
1.0 Power Transfer	EPT-12C		PRE
1.0 Exit Device	2403 C MLR WTS LD NCA-03	630	PRE
1.0 Rim Cylinder	12E 7 2	626	BES
2.0 Pull Handle	AB3311 36"	US32D	ABH
2.0 Door Closer	EHD90 16 SPA90	689	BES
2.0 Overhead Stop	910 S	626	DKA
1.0 Threshold	896 S LAR (1/4-20 SS MS/EA)	A	NGP
1.0 Power Supply	RPSMLR2		PRE
1.0 Door Position Switch	9540	B	RCI
1.0 Wiring Harness	WH-192P		BES
1.0 Wiring Harness	WH-LAR		BES
1.0 Wiring Diagram	BY HARDWARE SUPPLIER		

NOTE: GASKETING BY DOOR SUPPLIER. CARD READER BY OWNER'S SECURITY VENDOR.

OPERATIONS NARRATIVE: DOOR NORMALLY CLOSED AND LOCKED UNLESS SCHEDULED TO BE UNLOCKED. VALID CARD READ AND/OR SIGNAL FROM ACCESS CONTROL SYSTEM RETRACTS LATCHBOLT FOR INGRESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. WTS SWITCH SHUNTS ALARM.

Set #004 - FRP EXTERIOR DOOR CARD READER

Doors: 119/2, 119/1

3.0 Hinge	FBB199 NRP 45X45	32D	BES
1.0 Power Transfer	EPT-12C		PRE
1.0 Exit Device	C MLR WTS 2103 LD 4903 D	630	PRE
1.0 Rim Cylinder	12E 7 2	626	BES
1.0 Door Closer	EHD90 16 SPA90	689	BES
1.0 Overhead Stop	910 S	626	DKA
1.0 Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0 Threshold	896 S LAR (1/4-20 SS MS/EA)	A	NGP
1.0 Gasketing	700S Head & Jambs (2)	A	NGP
1.0 Sweep	200S LAR	A	NGP
1.0 Drip Cap	16 4" ODW	A	NGP
1.0 Power Supply	RPSMLR2		PRE
1.0 Door Position Switch	9540	B	RCI
1.0 Wiring Harness	WH-192P		BES
1.0 Wiring Harness	WH-LAR		BES
1.0 Wiring Diagram	BY HARDWARE SUPPLIER		

NOTE: CARD READER BY OWNER'S SECURITY VENDOR.

OPERATIONS NARRATIVE: DOOR NORMALLY CLOSED AND LOCKED. VALID CARD READ AND/OR SIGNAL FROM AI PHONE RETRACTS LATCHBOLT FOR INGRESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. WTS SWITCH SHUNTS ALARM. EXIT DEVICE IS FAIL SECURE.

Set #005 - FRP EXTERIOR DOOR

Doors: 103/2

3.0	Hinge	FBB199 45X45	32D	BES
1.0	Mortise Lock	45H 0 N 15 H	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Threshold	896 S LAR (1/4-20 SS MS/EA)	A	NGP
1.0	Gasketing	700S Head & Jambs (2)	A	NGP
1.0	Sweep	200S LAR	A	NGP
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN
1.0	Wall Stop	570/575	630	BRN

Set #006 - FRP EXTERIOR DOOR

Doors: 118/1, 118/2

3.0	Hinge	FBB199 45X45	32D	BES
1.0	Mortise Lock	45H 0 N 15 H	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Gasketing	700S Head & Jambs (2)	A	NGP
1.0	Sweep	200S LAR	A	NGP

Set #007 - WD CARD READER

Doors: 211/2

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Exit Device	C MLR TS 2103 LD CA-03	630	PRE
1.0	Rim Cylinder	12E 7 2	626	BES
1.0	Pull Handle	AB3311 36"	US32D	ABH
1.0	Door Closer	EHD90 16 SPA90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Power Supply	RPSMLR2		PRE
1.0	Door Position Switch	9540	B	RCI
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-LAR		BES
1.0	Wiring Diagram	BY HARDWARE SUPPLIER		YAL
1.0	Wall Stop	570/575	630	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

NOTE: CARD READER BY OWNER'S SECURITY VENDOR. OPERATIONS NARRATIVE: DOOR NORMALLY CLOSED AND LOCKED. VALID CARD READ AND/OR REMOTE SIGNAL RETRACTS LATCHBOLT FOR INGRESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. TS SWITCH SHUNTS ALARM. EXIT DEVICE IS FAIL SECURE.

Set #008 - WD UL EXIT DEVICE

Doors: S-1/1, S-1/2

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Exit Device	FL 2414 2914 D	630	PRE
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	C	NGP
1.0	Wall Stop	570/575	630	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #009 - WD EXIT DEVICE

Doors: 114/2, 114/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Exit Device	2108 4908 D	630	PRE
1.0	Rim Cylinder	12E 7 2	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Stop / Holder	533	626	BRN
3.0	Silencer	500	Gray	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #010 - FRP DOOR OFFICE LOCKSET

Doors: 102/1

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 7 AT 15 H	626	BES
1.0	Door Closer	EHD90 16 IS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Gasketing	5075 Head & Jambs (2)	C	NGP
1.0	Gasketing	5060 Head & Jambs (2)	C	NGP
2.0	Gasketing	60FP		NGP
1.0	Automatic Door Bottom	335S STC 2	US27	NGP
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #011 - WD UL STOREROOM LOCKSET

Doors: 115/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 15 H	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	C	NGP
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #012 - WD CLASSROOM LOCKSET

Doors: 113/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 R 15 H STD	626	BES
3.0	Silencer	500	Gray	BRN
1.0	Wall Stop	570/575	630	BRN

Set #013 - WD STOREROOM LOCKSET

Doors: 203/1

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 15 H	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0	Silencer	500	Gray	BRN
1.0	Wall Stop	570/575	630	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #014 - WD STOREROOM LOCKSET

Doors: 206/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 15 H	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0	Silencer	500	Gray	BRN
1.0	Wall Stop	570/575	630	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #015 - WD STOREROOM LOCKSET

Doors: 108/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 15 H	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0	Silencer	500	Gray	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #016 - WD STOREROOM LOCKSET

Doors: 204/1

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 15 H	626	BES
1.0	Door Closer	EHD90 16 IS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0	Silencer	500	Gray	BRN
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #017 - WD STOREROOM LOCKSET

Doors: 116/1, 117/1

3.0 Hinge	FBB168 NRP 45X45	26D	BES
1.0 Mortise Lock	45H 7 D 15 H	626	BES
1.0 Overhead Stop	900 S	626	DKA
3.0 Silencer	500	Gray	BRN

Set #018 - WD OFFICE LOCKSET

Doors: 112/1, 209/1, 207/1, 208/1, 201/1, 205/1, 210/1

3.0 Hinge	FBB168 45X45	26D	BES
1.0 Mortise Lock	45H 7 AT 15 H	626	BES
3.0 Silencer	500	Gray	BRN
1.0 Wall Stop	570/575	630	BRN

Set #019 - WD PASSAGE SET

Doors: 111/1

3.0 Hinge	FBB168 45X45	26D	BES
1.0 Mortise Lock	45H 0 N 15 H	630	BES
1.0 Door Closer	EHD90 16 AF90P	689	BES
1.0 Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0 Silencer	500	Gray	BRN
1.0 Wall Stop	570/575	630	BRN
1.0 Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #020 - WD INDICATOR PRIVACY SET

Doors: 110/1, 107/1, 109/1, 213/1, 214/1

3.0 Hinge	FBB168 45X45	26D	BES
1.0 Mortise Lock	45H 0 L 15 H VIBE	626	BES
1.0 Door Closer	EHD90 16 AF90P	689	BES
1.0 Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0 Silencer	500	Gray	BRN
1.0 Wall Stop	570/575	630	BRN
1.0 Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #021 - FRP CLASSROOM LOCKSET

Doors: 103/1

3.0 Hinge	FBB168 NRP 45X45	26D	BES
1.0 Mortise Lock	45H 7 D 15 H	626	BES
1.0 Door Closer	EHD90 16 SDS90	689	BES
1.0 Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
1.0 Threshold	8144 LAR	A	NGP
1.0 Gasketing	5075 Head & Jambs (2)	C	NGP
1.0 Gasketing	5060 Head & Jambs (2)	C	NGP
2.0 Gasketing	60FP		NGP
1.0 Automatic Door Bottom	335S STC 2	US27	NGP
1.0 Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

Set #022 - OVERHEAD DOOR

Doors: 119/7, 119/6, 119/5, 119/4, 119/3

2.0	Mortise Cylinder	1E 7 4 STD	626	BES
1.0	Rim Cylinder	12E 7 2	626	BES
1.0	Key Switch	960RO	28	RCI

Set #023 - OVERHEAD DOOR CARD READER

Doors: 118/4, 118/3

1.0	Rim Cylinder	12E 7 2	626	BES
1.0	Mortise Cylinder	1E 7 4 STD	626	BES
1.0	Key Switch	960RO	28	RCI

NOTE: CARD READER BY OWNER'S SECURITY VENDOR.

Set #024 - CASED OPENING

DOORS: 113/2, 212/2, 202/1, 212/1

NOTE: NO HARDWARE REQUIRED.

Set #025 - WD CR LOCKSET

Doors: 106/1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Electromechanical Lock	45HW 7 DEU 15 H STD C	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" Door Width less 2" CSK B4E Heavy	630	BRN
3.0	Silencer	500	Gray	BRN
1.0	Door Position Switch	9540	B	RCI
1.0	Wiring Harness	WH-LAR		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Diagram	BY HARDWARE SUPPLIER		YAL
1.0	Mop Plate	MP50 Door Width less 1" 4" CSK B4E Heavy UL	630	BRN

NOTE: CARD READER AND POWER SUPPLY BY OWNER'S SECURITY VENDOR.

OPERATIONS NARRATIVE: DOOR NORMALLY CLOSED AND LOCKED. VALID CARD READ MOMENTARILY UNLOCKS DOOR FOR ACCESS. EMERGENCY INGRESS BY KEY. FREE EGRESS AT ALL TIMES. LOCK IS FAIL-SECURE.

END OF SECTION 08 7100

UPPER LEVEL												
2011	3'-0"	7'-2"	1'-3 1/4"	WD	N1		HM	HM-1	8 1/4	018		
2021	4'-0"	7'-0"	1'-3 1/4"				HM	HM-1	8 1/4	024		
2031	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	8 1/4	013	F1	
2041	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	8 1/4	016		
2051	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	018		
2061	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	8 1/4	014		
2071	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	018		
2081	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	018		
2091	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	018		
2101	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	018		
2111	3'-0"	7'-0"	1'-3 1/4"				ALUM	SGF 27	4	018	H2, H3	
2121	3'-0"	7'-2"	1'-3 1/4"	WD	N1	2	HM	HM-1	8 1/4	007		
2121	3'-0"	7'-0"	1'-3 1/4"	-	-	-	HM	HM-1	7/8	024	F1	
2122	4'-0"	7'-0"	1'-3 1/4"	-	-	-	HM	HM-1	8 1/4	024		
2131	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	8 1/4	020		
2141	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	8 1/4	020		
S-12	3'-0"	7'-2"	1'-3 1/4"	WD	F		HM	HM-1	5/34	45 MIN	008	H4

The image contains two technical drawings of window details. The left drawing is a cross-section of a window head, showing a vertical metal tubed box beam at the top, an ashed line for glass and applied stop fastener and glazing tape, and a dashed line for random windows-stop. The right drawing is a cross-section of a window jamb, showing a sealant full perimeter, metal studs, and a dashed line for glass and applied stop fastener and glazing tape. Both drawings include dimensions and labels for various components.

HEAD DETAIL

1/2" 7 1/4" OR LESS 1/2"

VERT METAL TUBED BOX BEAM

ASHED LINE - INDICATES GLASS AND APPLIED STOP FASTENER AND GLAZING TAPE @ 2"

GYP BD - TYPICAL BOTH SIDES - UNO

SEALANT FULL PERIMETER - TYP BOTH SIDE

HM FRAME - SPOT GROUT AT ALL ANCHORS

DASHED LINE INDICATES GLASS AND APPLIED STOP FASTENER AND GLAZING TAPE @ 2"

GYP BD - TYPICAL BOTH SIDES - UNO

JAMB DETAIL

SEALANT FULL PERIMETER - TYP BOTH SIDE

METAL STUDS @ 16" OC

1/2" 7 1/4" OR LESS 1/2"

HM FRAME - SPOT GROUT AT ALL ANCHORS

DASHED LINE INDICATES GLASS AND APPLIED STOP FASTENER AND GLAZING TAPE @ 2"

GYP BD - TYPICAL BOTH SIDES - UNO

The image contains two technical cross-section drawings of window frames, labeled 'TYPE A' and 'TYPE B'.

TYPE A (Left): This drawing shows a cross-section of a window frame with a width of 1/2" to 7/16" or less. It features a 6" vertical metal stud boxed beam on the left. The frame is supported by metal studs at 16" OC. The glazing is held in place by a GYP BD (typical) on both sides, which is uncoated (UNO). A sealant full perimeter (typical) is applied to the bottom side. The HM frame is spot gouted at all anchors. A dashed line indicates the glass and applied stop w/ fastener and glazing tape @ TRANSOM / WINDOW. The windows / tape shall be on the inside of the frame, typical.

TYPE B (Right): This drawing shows a cross-section of a window frame with a width of 1/2" to 7/16" or less. It features a sealant full perimeter (typical) on both sides. The frame is supported by metal studs at 16" OC. The glazing is held in place by a GYP BD (typical) on both sides, which is uncoated (UNO). The HM frame is spot gouted at all anchors. A dashed line indicates the glass and applied stop w/ fastener and glazing tape @ TRANSOM / WINDOW. The windows / tape shall be on the inside of the frame, typical.

ANCHOR NOTE:

- JAMB ANCHORS: PROVIDE NUMBER AND SPACING OF ANCHORS AS FOLLOWS:
 - MASONRY TYPE: LOCATE ANCHORS NOT MORE THAN 18 INCHES FROM TOP AND BOTTOM OF FRAME.
 - SPACE ANCHORS NOT MORE THAN 32 INCHES OC AND AS FOLLOWS:
 - TWO ANCHORS PER JAMB UP TO 60 INCHES HIGH
 - THREE ANCHORS PER JAMB FROM 60 TO 90 INCHES HIGH
 - FOUR ANCHORS PER JAMB FROM 90 TO 120 INCHES HIGH
 - FOUR ANCHORS PER JAMB PLUS 1 ADDITIONAL ANCHOR PER JAMB FOR EACH 24 INCHES OR FRACTION THEREOF ABOVE 120 INCHES HIGH
- STUD-WALL TYPE: LOCATE ANCHORS NOT MORE THAN 18 INCHES FROM TOP AND BOTTOM OF FRAME. SPACE ANCHORS NOT MORE THAN 32 INCHES OC AND AS FOLLOWS:
 - THREE ANCHORS PER JAMB UP TO 60 INCHES HIGH
 - FOUR ANCHORS PER JAMB FROM 60 TO 90 INCHES HIGH
 - FIVE ANCHORS PER JAMB FROM 90 TO 96 INCHES HIGH
 - FIVE ANCHORS PER JAMB PLUS 1 ADDITIONAL ANCHOR PER JAMB FOR EACH 24 INCHES OR FRACTION THEREOF ABOVE 96 INCHES HIGH
 - TWO ANCHORS PER HEAD FOR FRAMES ABOVE 42 INCHES WIDE AND MOUNTED IN METAL-STD PARTITIONS
- COMPRESSION TYPE: NOT FOR LESS THAN TWO ANCHORS IN EACH JAMB.
- POST INSTALLED EXPANSION TYPE: LOCATE ANCHORS NOT MORE THAN 6 INCHES FROM TOP AND BOTTOM OF FRAME. SPACE ANCHORS NOT MORE THAN 26 INCHES OC

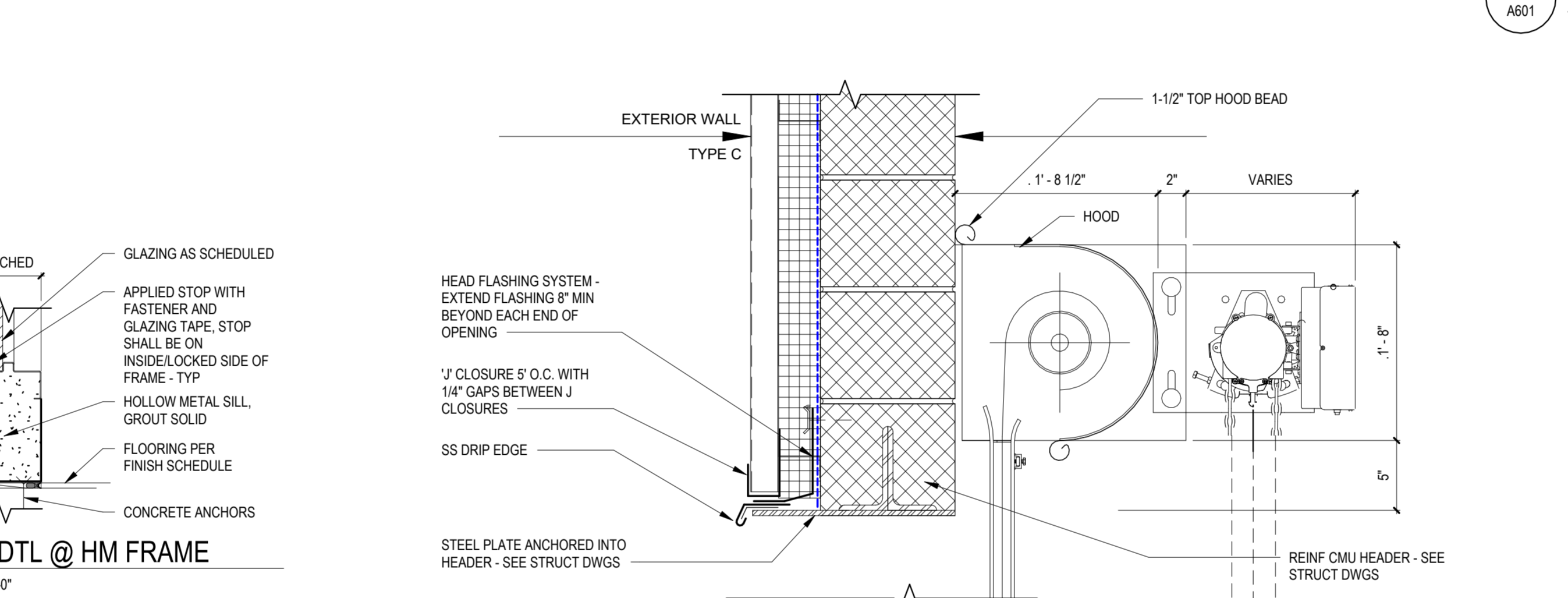
JAMB ANCHORS

JAMB

ALTERNATE JAMB

FRAME FOR S

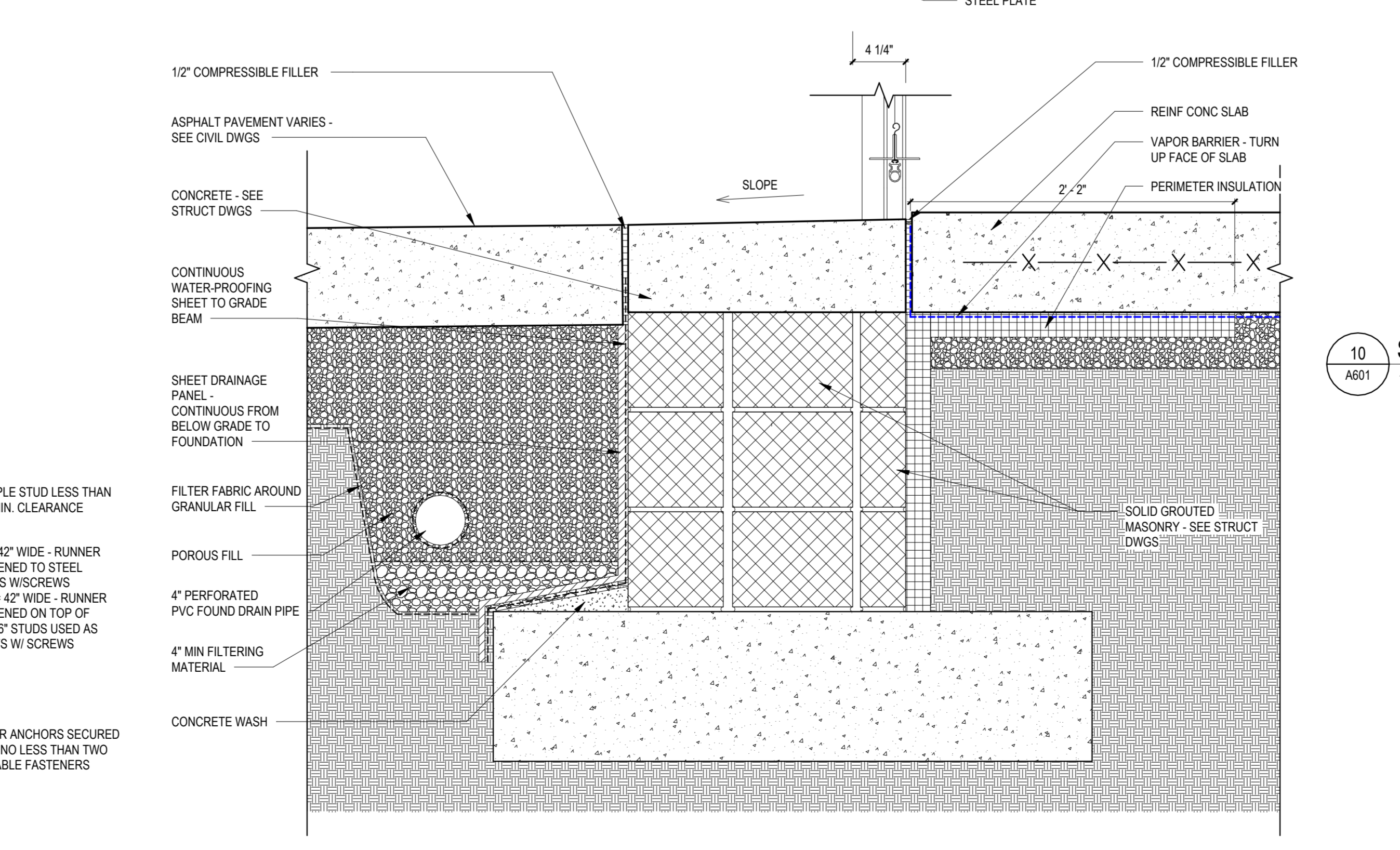
NOTE:
'SF' ON DOOR SCHEDULE DESIGNATES STOREFRONT FRAMES
'HM' ON DOOR SCHEDULE DESIGNATES HOLLOW METAL FRAMES
'CW' ON DOOR SCHEDULE DESIGNATES CURTAIN WALL FRAMES



The diagram illustrates a cross-section of a typical jamb detail. The components and their labels are as follows:

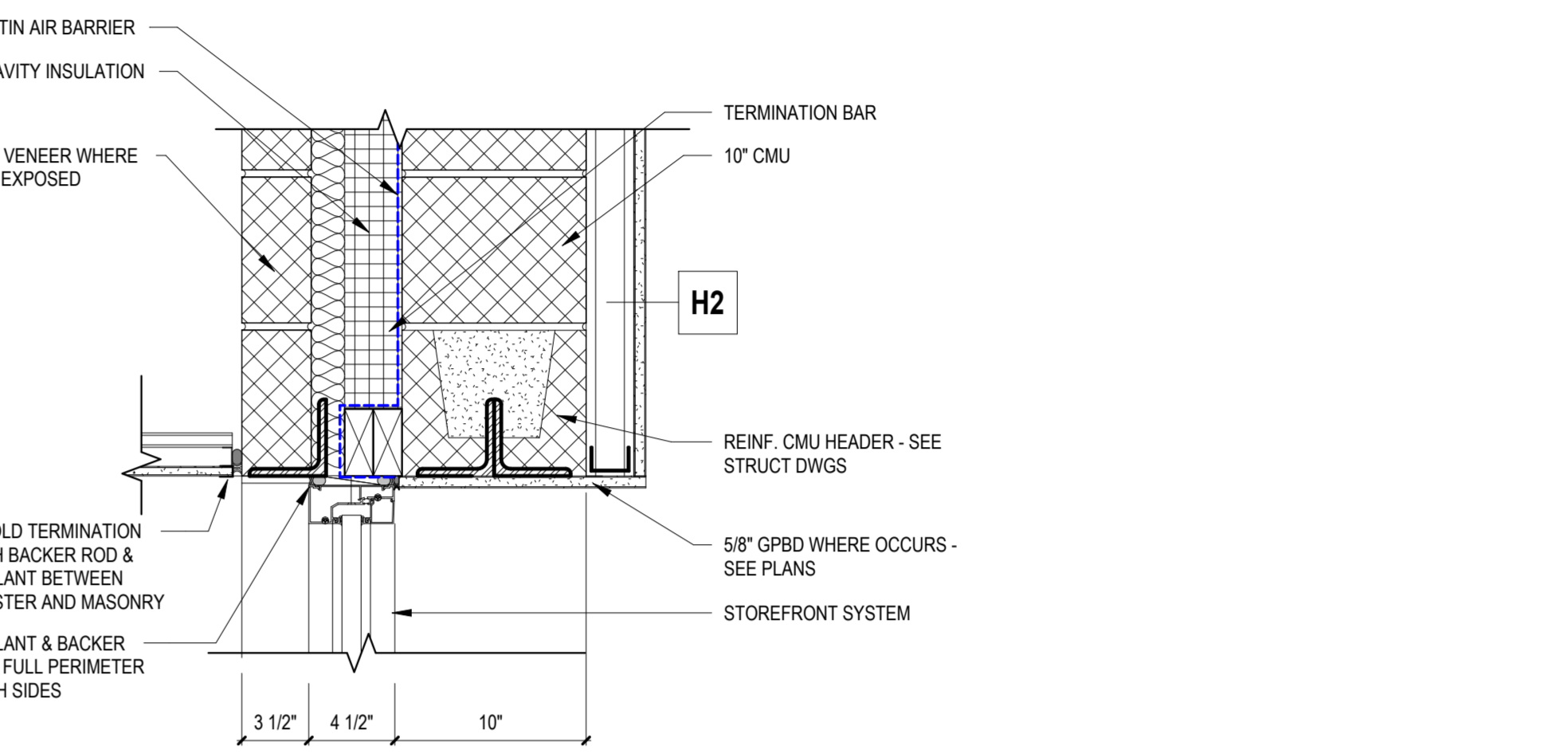
- CONTIN AIR BARRIER
- CAVITY INSULATION
- EXPOSED FASTENER RIBBED METAL PANEL - VERTICAL PROFILE
- CONTIN 2X WOOD BLKG
- J CLOSURE
- TYP JAMB DTL
- COILING DOOR GUIDE
- STEEL PLATE
- AUXILIARY HAND CHAIN

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A601

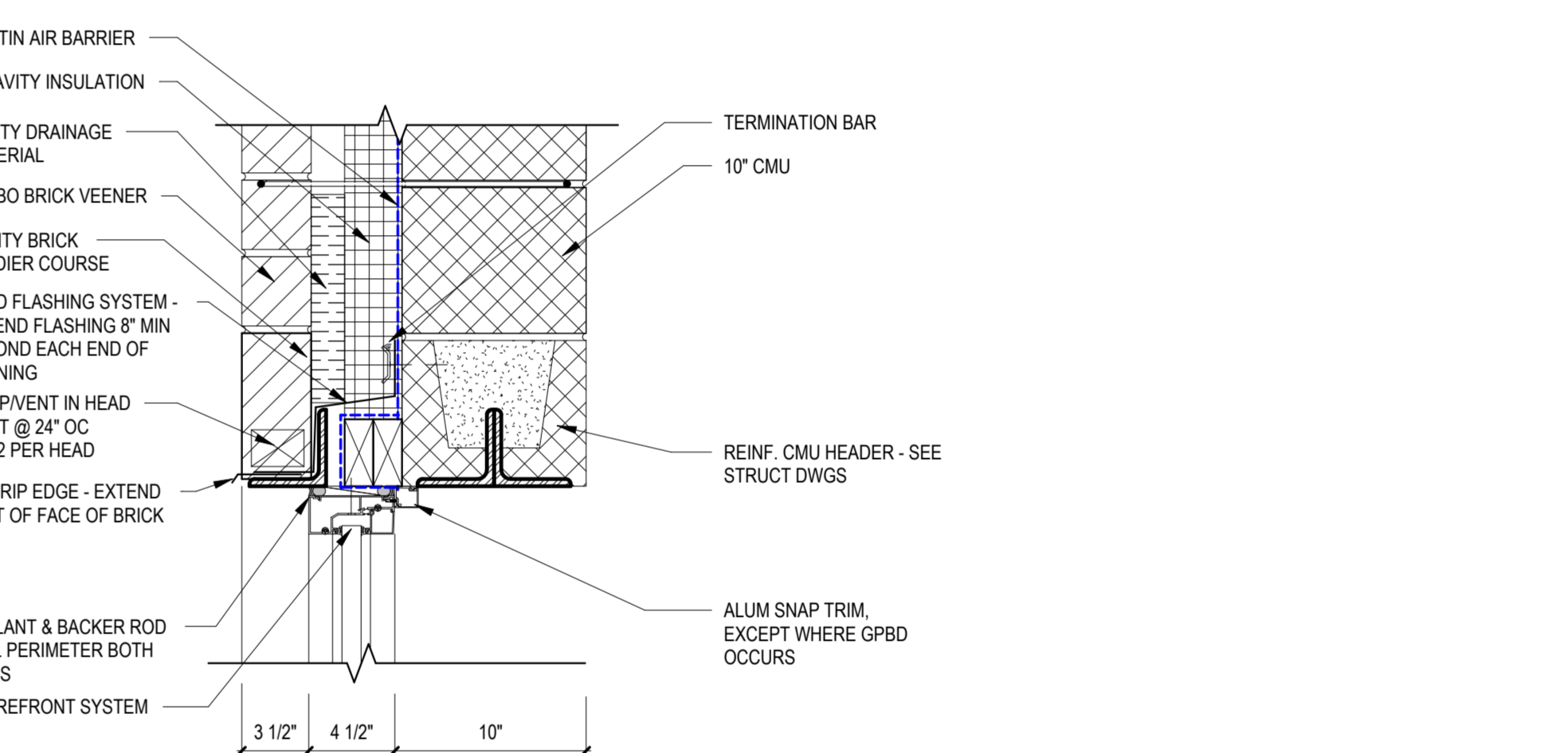


- H1. PROVIDE SOUND GASKETING
- H2. PROVIDE WEATHER-STRIPPING
- H3. ACCESS ELECTRICALLY MONITORED OR CONTROLLED - COORDINATE WITH SECURITY SYSTEM
- H4. DOOR SHALL RESIST THE PASSAGE OF SMOKE (CLOSERS & SEALS REQUIRED)
- H5. DOOR BY ENCLOSURE MFR. GC TO PROVIDE DOOR HARDWARE AND CYLINDER TO MATCH OWNER'S KEYING SYSTEM

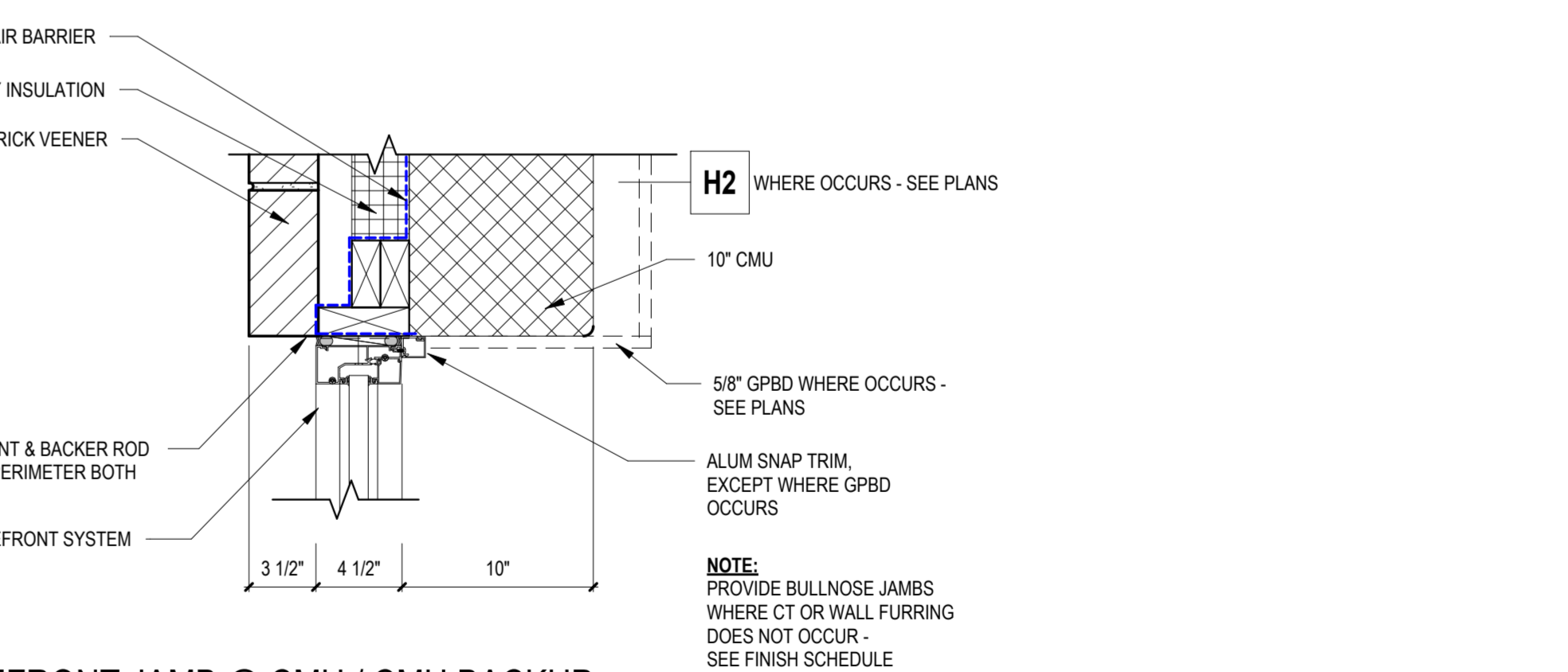
SOUND	1	7/16" LAMINATED SOUND-REDUCING TEMPERED GLASS
	2	TYP INTERIOR LINO • 1/4" TEMPERED GLASS
BASIC - INTERIOR	2 1/2	INTERIOR • 3/8" TEMPERED GLASS
	3	3/16" FIRE RESISTANCE RATED - 60 MIN (EXIT ENCLOSURES)
FIRE	4	1" INSULATED - TYP EXTERIOR LINO • 1/4" TEMPERED INBOARD & OUTBOARD • LOW E COATING 2ND SURF
	5	1" INSULATED - TYP EXTERIOR LINO • 1/4" TEMPERED INBOARD & OUTBOARD • LOW E COATING 2ND SURF
INSULATED	6	1" INSULATED - TYP EXTERIOR LINO • 1/4" TEMPERED INBOARD & OUTBOARD • LOW E COATING 2ND SURF
	7	1" INSULATED - TYP EXTERIOR LINO • 1/4" TEMPERED INBOARD & OUTBOARD • LOW E COATING 2ND SURF



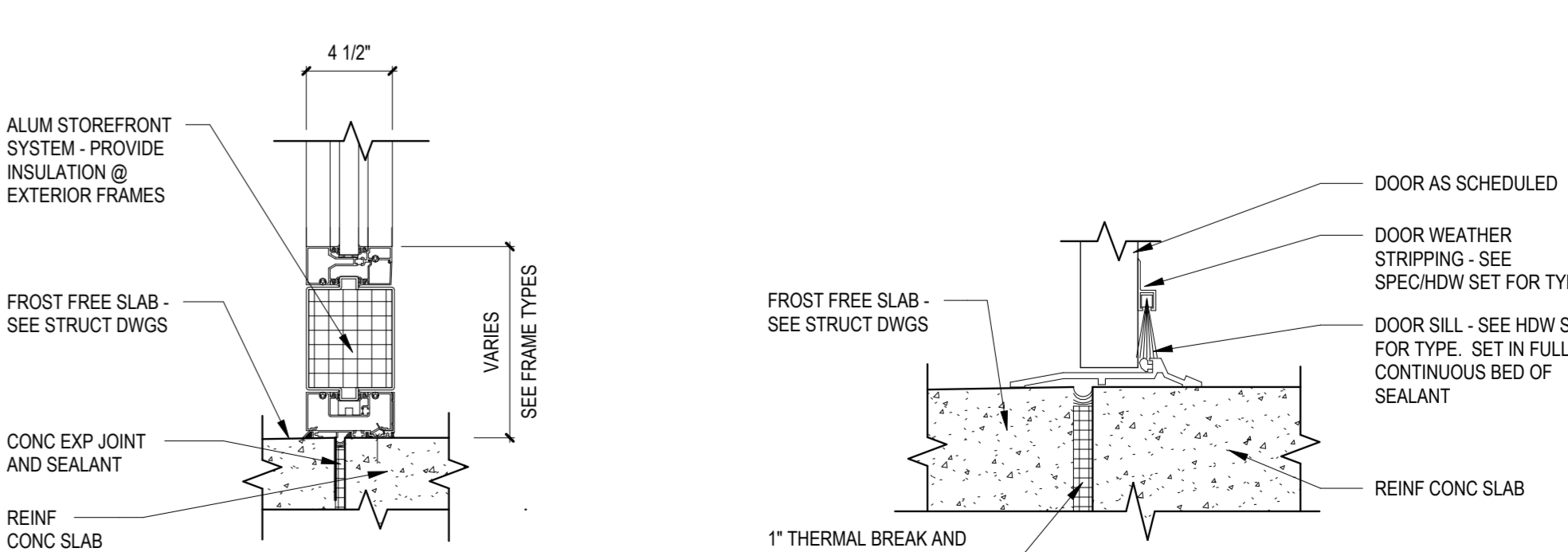
FRONT HEAD @ CANOPY



FRONT HEAD @ BRICK / CMU BACKUP



FRONT JAMB @ CMU / CMU BACKUP



FRONT SILL @ SIDELIGHT



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A601

THRESHOLD DTL @ EXTERIOR DOOR

3" = 1'-0"

5 THRESHOLD DTL @ EXTERIOR DOOR
501 3" = 1'-0"

