

**Addendum
No. 1****Date:** May 16, 2014**Project:** John R. Price Building Window Replacement
DSU Contract #PC-2014-PBWR**Project No:** 14018

The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

<i>Item</i>	<i>Description</i>
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REVISED DATES: Due to the delay in document release, the following key event dates have been revised:

1. Deadline for Questions shall be revised to May 23, 2014 (4pm).
2. Posting of Answers to Contractor Questions shall be revised to May 26, 2014.
3. Final Date for Addendums shall be revised to May 26, 2014.
4. The **bid due date shall be revised to May 30th, 2014 at 10am**, EST, public bid opening will occur immediately following, at the location indicated in the invitation to bid.
5. Contractor Selection Date shall be revised to June 6, 2014.
6. Anticipated Start of Construction Date shall be revised to June 16, 2014 (subject to change).
7. Contract Award shall be revised to June 30, 2014.

Clarifications:

1. The demolition of the Type "S-1" and "S-2" existing window units will be provided under a separate contract by an abatement contractor is not considered a part of the scope of work of this project. After the window units are removed, the preparation of the existing masonry opening to receive new storefront units, is included in the scope of work of this contract and is considered to be the responsibility of the successful bidder for this project. This preparation includes but is not limited to, removal of wood blocking, removal of fasteners and removal of caulk from the surfaces of existing masonry. See attached revised sketch "SK-A.1".
2. Prior to removal of existing window unit by others, the G.C. for this contract is to remove a portion of the existing acoustical ceiling and grid as required to remove the window unit and provide temporary suspension of the ceiling. See attached revised sketch "SK-A.1".
3. The "D-2" existing window A/C units are to be removed by the window demolition contractor. See attached revised sketch "SK-A.2".
4. The demolition at the existing Type "S-3" and Type "D-1" openings, are sliding door unit demolition and will not be provided by the abatement contractor. They will be included in the scope of work of this project.
5. Temporary protection at the existing window openings, is to be provided under this contract. See attached revised sketch "SK-A.1".
6. The G.C. is responsible for coordinating with the window demolition contractor. See attached revised sketch "SK-A.1".
7. The existing drapery rod in Classroom 102 is to be removed under this contract. See attached revised sketch "SK-A.2".

Changes to Drawings:

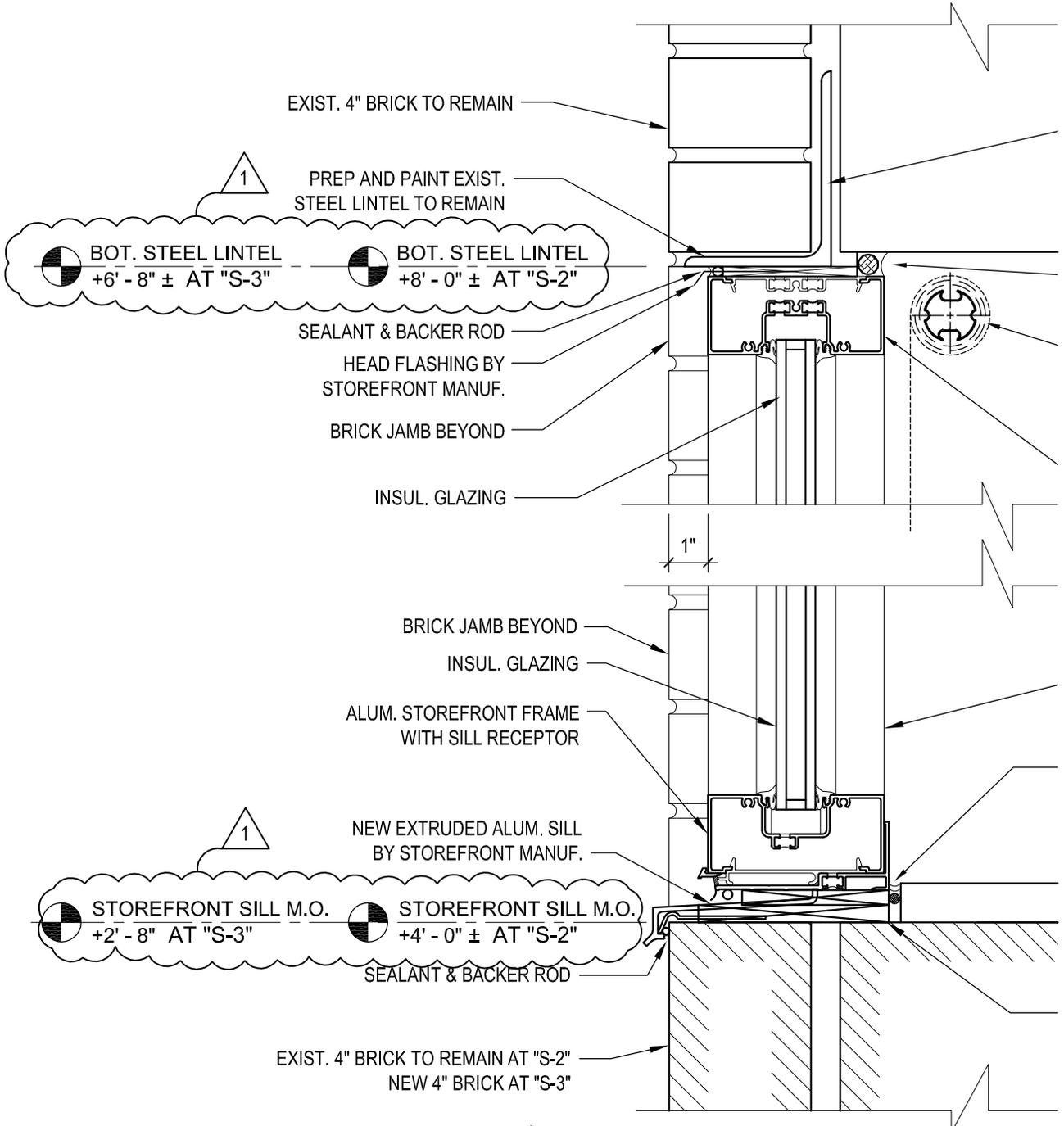
1. Drawing "A3.1": The "S-3" opening is to receive a new storefront unit in addition to masonry infill. The "D-1" opening is to receive a new HM door, HM frame and door hardware in addition to masonry infill. See attached revised sketch "SK-A.3".
2. Drawing "A4.1": Change note #1 in "Construction Notes". Delete note #4 in "Construction Notes" (there are no new roller shades in this project). At "Storefront

Types” change sheet number on storefront section tags and add dimension for new “S-3” storefront unit. At “First Floor Plan – South Wing”, add new door at “D-1” opening, add new storefront unit at “S-3” opening, add “SIM” to section tag at “S-3” opening. At “S-1 Vertical Section”, change window shade note, change ceiling patch note.

At “S-2/S-3 Vertical Section”, change window shade note. At “Infill Wall Section” add note “tooth-in masonry at jambs”. Add “D-1 Jamb Details”, “D-1 Head Detail”, “Door Hardware Schedule”. See attached revised sketches “SK-A.4” thru “SK-A.-9”.

Changes to Specification Manual:

1. Add Sections 08 11 13 Hollow Metal Doors and Frames and 08 71 00 Door Hardware to the Project Manual



1
SK-A.9

S-2 / S-3 VERTICAL SECTION

SCALE: 3" = 1'-0"

May 14, 2014
DATE
14018
PROJECT NO.

A4.1
SHEET NO.
SK-A.9

PROJECT:
**DELAWARE STATE UNIVERSITY
WINDOW REPLACEMENT**
JOHN R. PRICE BUILDING
1200 NORTH DUPONT HIGHWAY
DOVER, DE 19901

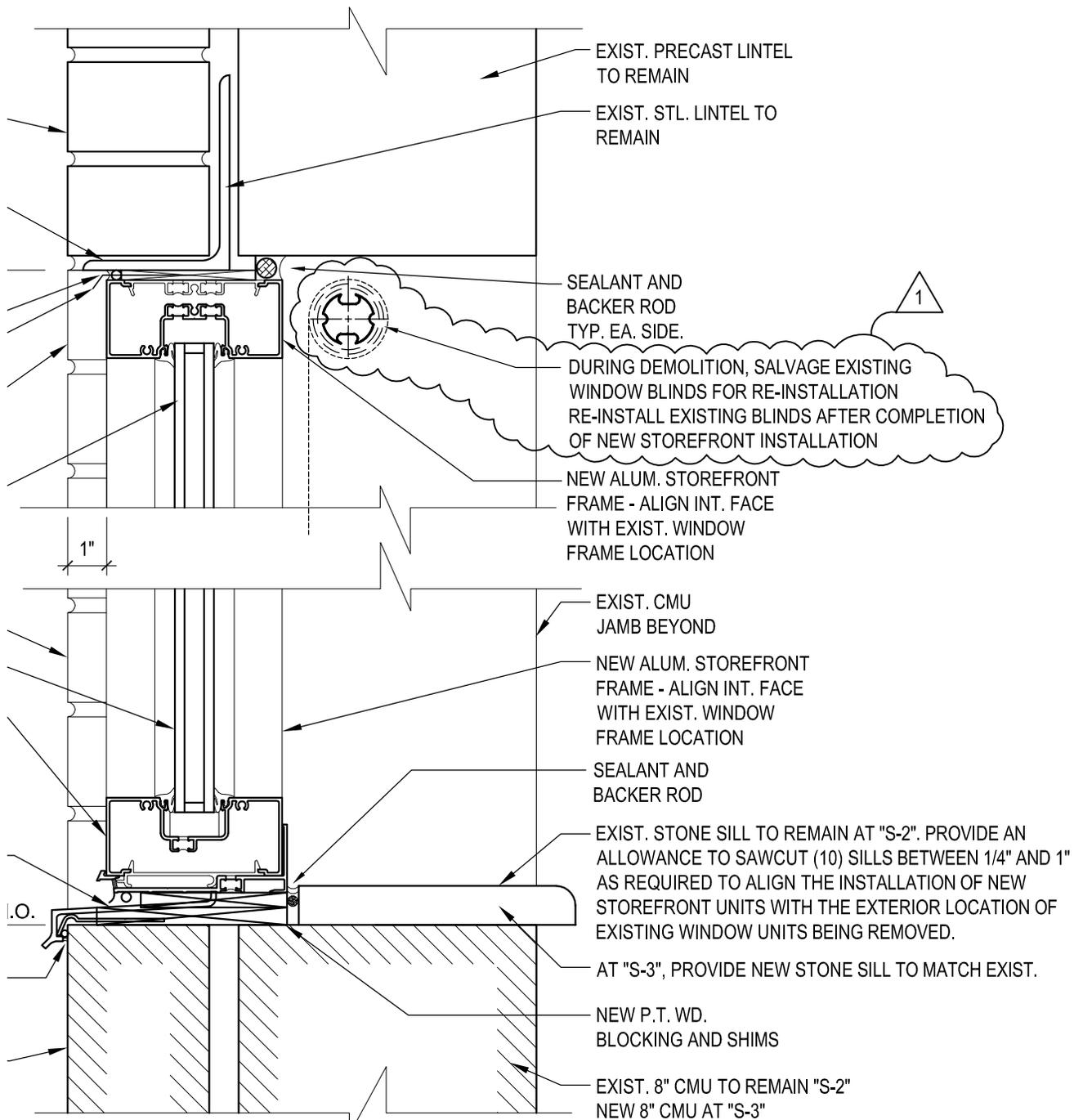
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1
SK-A.8

S-2 / S-3 VERTICAL SECTION

SCALE: 3" = 1'-0"

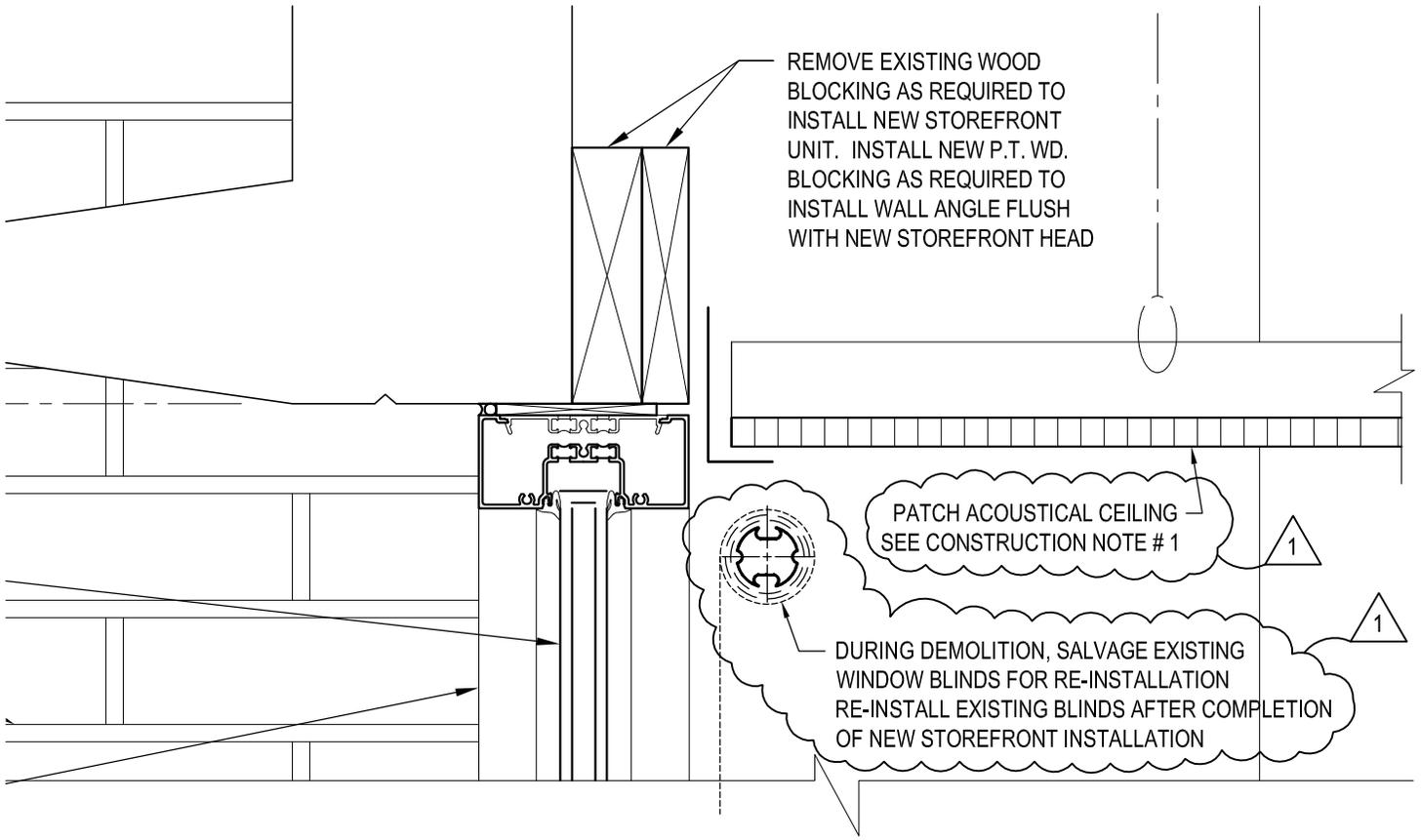
May 14, 2014 DATE 14018 PROJECT NO.	A4.1 SHEET NO. SK-A.8	PROJECT: DELAWARE STATE UNIVERSITY WINDOW REPLACEMENT JOHN R. PRICE BUILDING 1200 NORTH DUPONT HIGHWAY DOVER, DE 19901	 ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS <small>CORPORATE HEADQUARTERS 250 WINDGATE HILL ROAD, STE. 110 BOJAL, DE 19713 P: (302) 852-1452 F: (302) 852-1423 Website: www.studiojaed.com E-Mail: info@studiojaed.com</small>	REVISIONS: △ ADDENDUM # 1
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CONSTRUCTION NOTES

1. AT EXISTING WINDOW OPENING HEADS, PROVIDE SELECTIVE DEMOLITION OF CEILING AS REQUIRED TO REMOVE EXIST. WINDOW AND INSTALL NEW STOREFRONT SYSTEM. PROVIDE PARTIAL NEW CEILING INSTALLATION AND SUSPENSION SYSTEM TO PATCH EXISTING CEILING AFTER NEW STOREFRONT IS INSTALLED.
2. AT STOREFRONT / CURTAINWALL TAGS # INSTALL NEW STOREFRONT OR CURTAINWALL SYSTEM IN EXISTING OPENING PER DETAILS. PROVIDE NEW BRACKETS AND WOOD BLOCKING AS REQUIRED.
3. REMOVE EXISTING VINYL SOFFIT AT NORTH, EAST AND SOUTH SIDES OF THE BUILDING AND REPLACE WITH NEW VINYL SOFFIT TO MATCH EXISTING.

1

1



5

SK-A.7

Partial S-1 Vertical Section

SCALE: 3" = 1'-0"

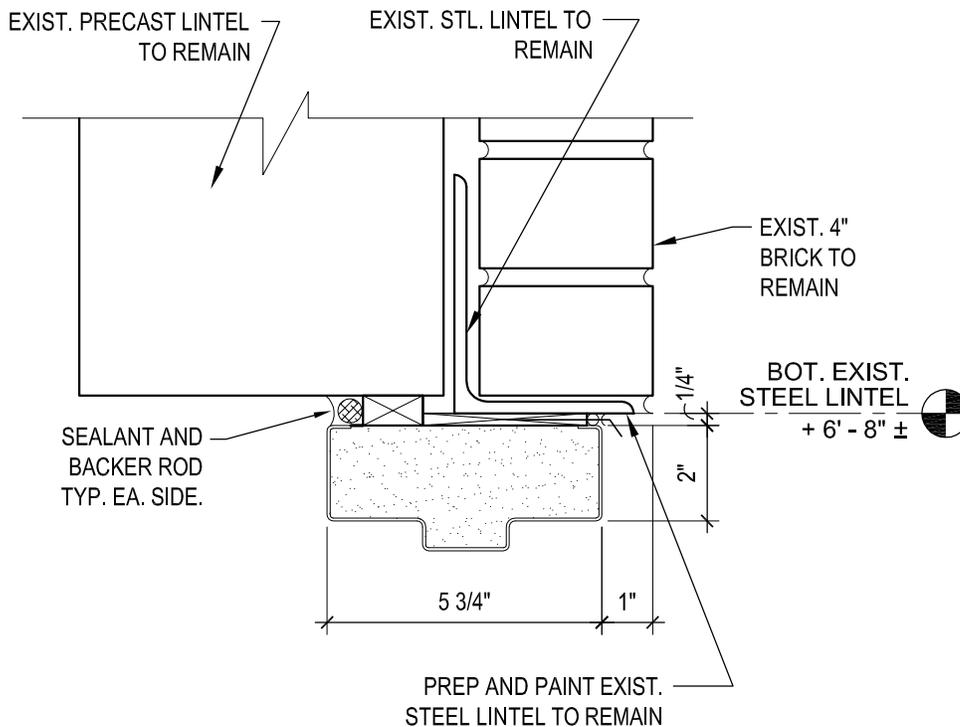
May 14, 2014 DATE	A4.1 SHEET NO.	PROJECT: DELAWARE STATE UNIVERSITY WINDOW REPLACEMENT JOHN R. PRICE BUILDING 1200 NORTH DUPONT HIGHWAY DOVER, DE 19901	 ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS <small>CORPORATE HEADQUARTERS 2500 WINDLEHILL ROAD, STE. 110 BOON, DE 19931 P: (302) 838-1402 F: (302) 838-1423 Website: www.studiojaed.com Email: info@studiojaed.com</small>	REVISIONS: ▲ ADDENDUM # 1
14018 PROJECT NO.	SK-A.7			

DOOR HARDWARE SCHEDULE

DOOR "D-1" = 3'-0" x 6'-6" FLUSH H.M. DOOR IN H.M. FRAME

OPENING TO HAVE:

QTY	DESCRIPTION	FINISH	MFG
1	CONTINUOUS HINGE A110HDC X FULL HEIGHT	628	ABH
1	MORTISE CYLINDER (PRIMUS) [IC] 20-771	626	SCHLAGE
1	CONSTRUCTION CORE 23-030 X ICX	600	SCHLAGE
1	RIM EXIT DEVICE 2101CD X EXIT ONLY	630	PRECISION
1	DOOR CLOSER D-4550 X CS X SRI	689	STANLEY
1	KICK PLATE 16" X 2" LDW .050 B4E X CSK	630	BURNS
1	TEAR DROP SEAL 797B X HEAD & JAMBS	BLK	REESE
1	RAIN DRIP R201A X FULL WIDTH + 4"	628	REESE
1	THRESHOLD S483APR X SRS X FHSL X FULL WIDTH	628	REESE
1	DOOR SWEEP 772A X FULL WIDTH	628	REESE



10
SK-A.6

D-1 HEAD DETAIL

SCALE: 3" = 1'-0"

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SK-A.6

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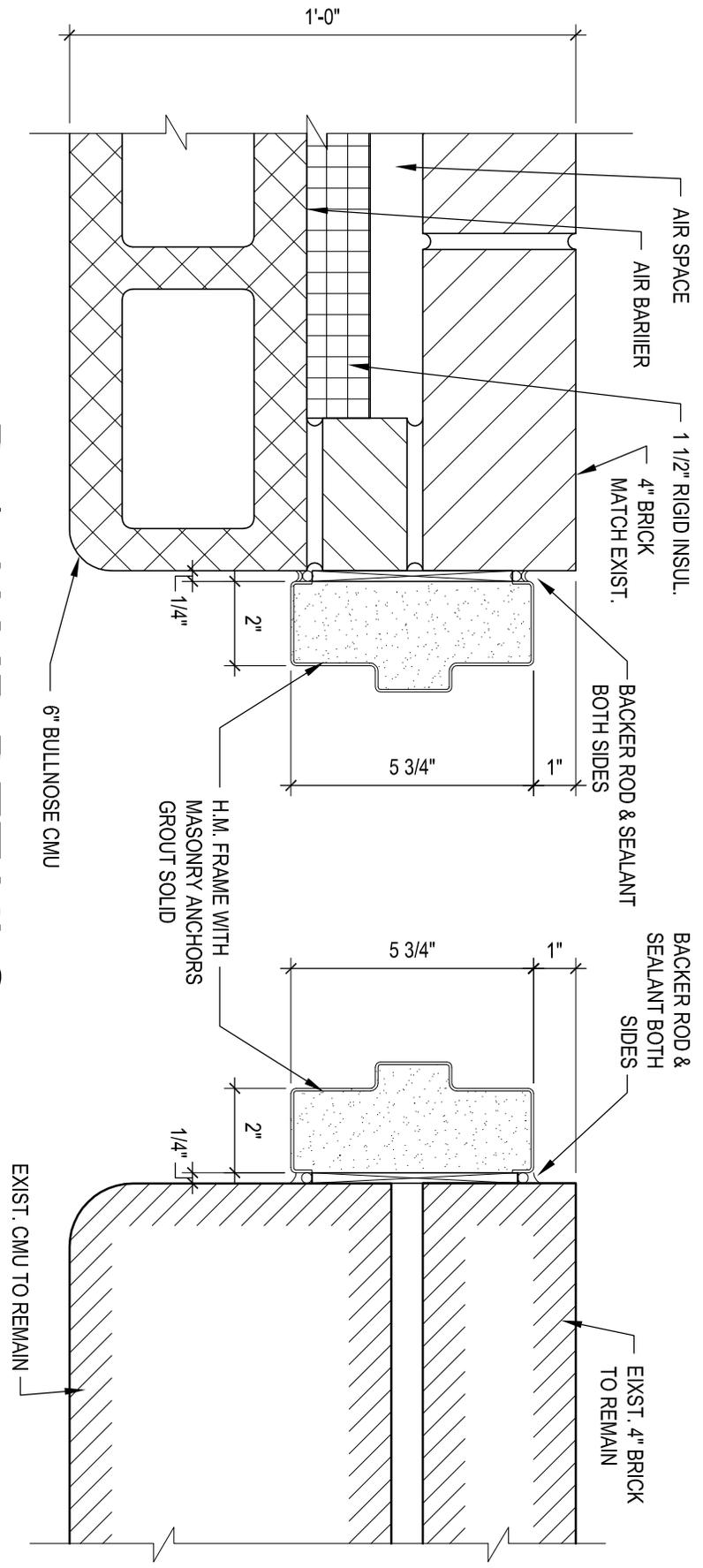
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1
SK-A.5

D-1 JAMB DETAILS

SCALE: 3" = 1'-0"

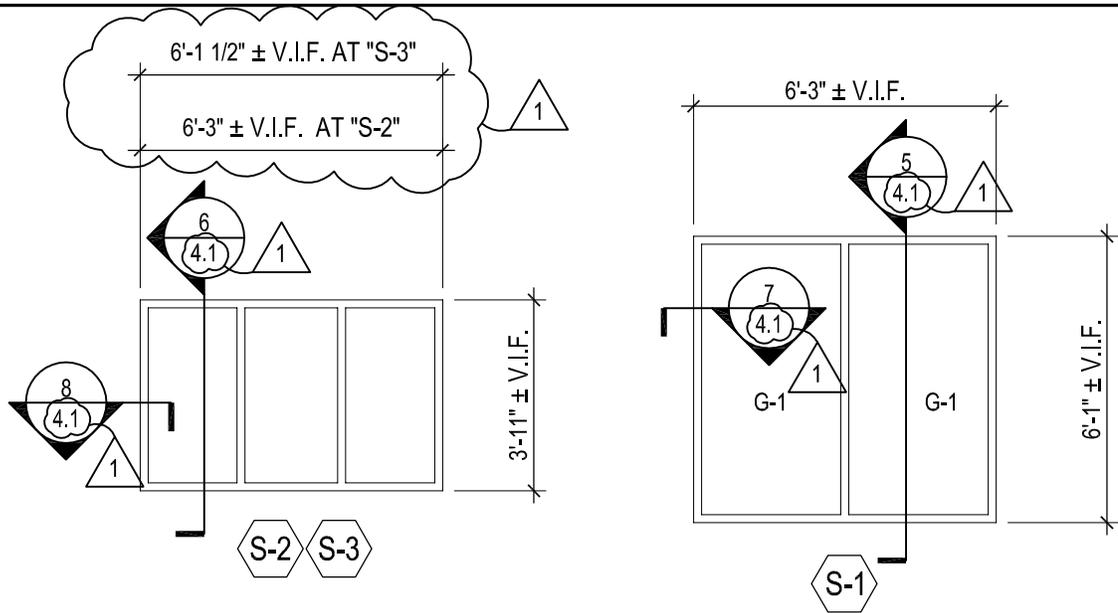
May 14, 2014	A4.1
DATE	SHEET NO.
14018	SK-A.5
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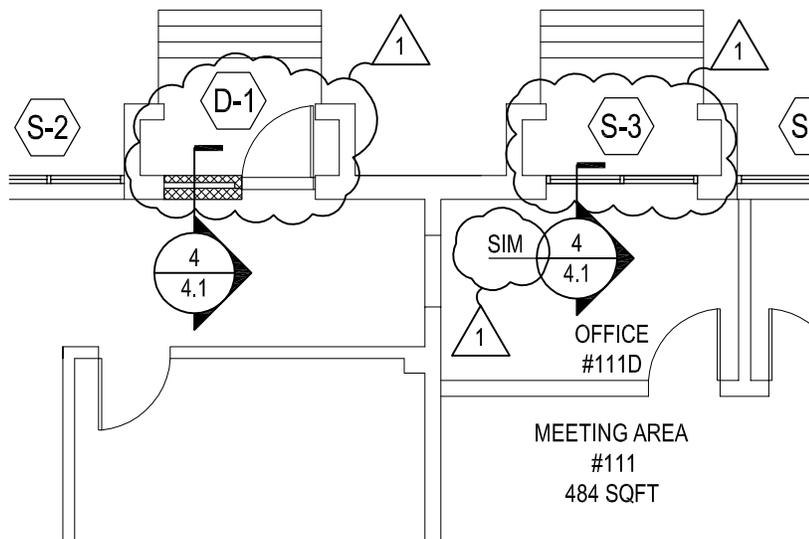


FIN. 1st FLOOR
0'-0"

2
SK-A.4

Storefront Types

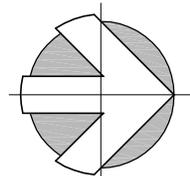
SCALE: 1/4" = 1'-0"



1
SK-A.4

Part. 1st Floor Plan

SCALE: 1/8" = 1'-0"



project north

May 14, 2014

A4.1

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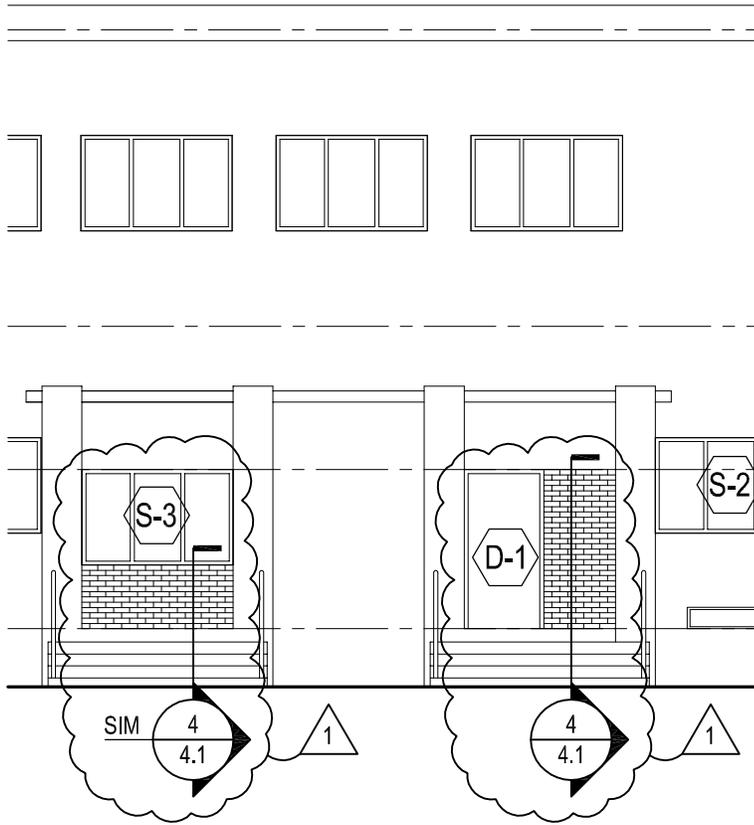
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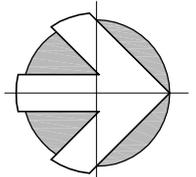
DATE SHEET NO.
14018 SK-A.4
PROJECT NO.



1
SK-A.3

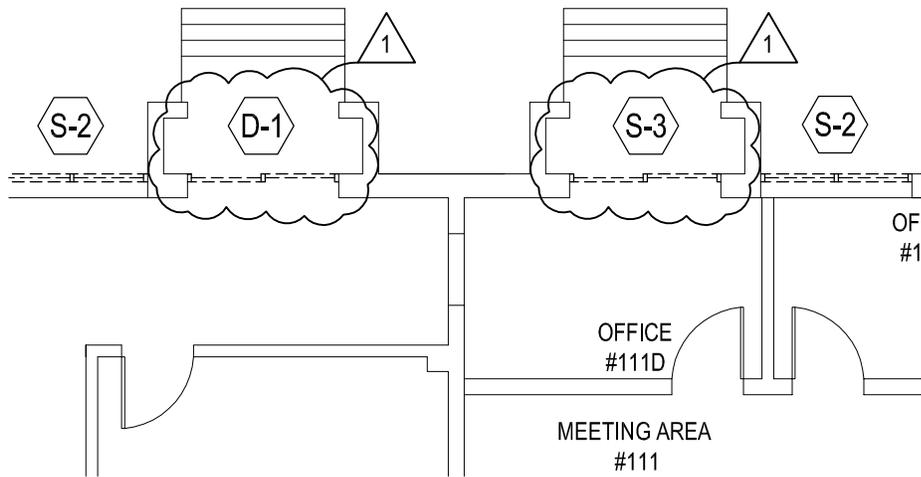
Part. Rear Elevation

SCALE: 1/8" = 1'-0"



project north

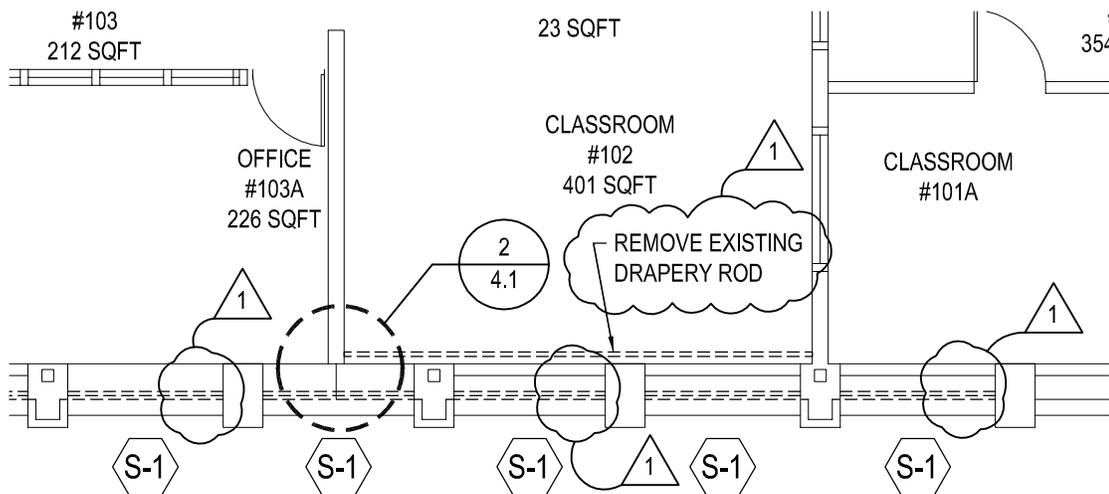
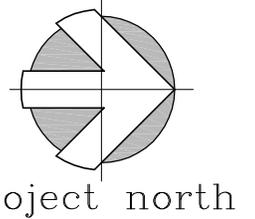
<p>May 14, 2014 A3.1 DATE SHEET NO. 14018 SK-A.3 PROJECT NO.</p>	<p>PROJECT: DELAWARE STATE UNIVERSITY WINDOW REPLACEMENT JOHN R. PRICE BUILDING 1200 NORTH DUPONT HIGHWAY DOVER, DE 19901</p>	<p>STUDIO JAED ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS CORPORATE HEADQUARTERS 2300 WINDLEHILL ROAD, STE. 110 DOVER, DE 19901 PH: (302) 838-1402 F: (302) 838-1423 Website: www.studiojaed.com E-Mail: info@studiojaed.com</p>	<p>REVISIONS: △ ADDENDUM # 1</p>
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2
SK-A.2

Part. 1st Floor Demo. Plan

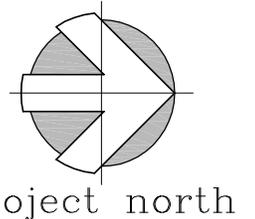
SCALE: 1/8" = 1'-0"



1
SK-A.2

Part. 1st Floor Demo. Plan

SCALE: 1/8" = 1'-0"



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NOTE:

THE DEMOLITION OF THE EXISTING WINDOWS IS BEING DONE BY OTHERS. DURING THE WINDOW DEMOLITION, THE TEMPORARY PROTECTION AT THE EXISTING WINDOW OPENINGS, IS TO BE PROVIDED UNDER THIS CONTRACT. THE G.C. IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF TEMPORARY PROTECTION OF THE EXISTING OPENINGS WITH THE WINDOW DEMOLITION CONTRACTOR.

DEMOLITION NOTES

- S-1** PRIOR TO REMOVAL OF EXISTING WINDOW UNIT BY OTHERS, REMOVE PORTION OF EXISTING ACOUSTICAL CEILING AND GRID AS REQUIRED TO REMOVE WINDOW UNIT AND PROVIDE TEMPORARY SUSPENSION OF THE CEILING. AFTER WINDOW DEMOLITION BY OTHERS, REMOVE EXISTING WOOD BLOCKING, FASTENERS AND SEALANT AT MASONRY OPENING. REMOVE EXISTING WINDOW BLINDS AND SALVAGE FOR RE-INSTALLATION.
- S-2** PRIOR TO REMOVAL OF EXISTING WINDOW UNIT BY OTHERS, REMOVE PORTION OF EXISTING ACOUSTICAL CEILING AND GRID AS REQUIRED TO REMOVE WINDOW UNIT AND PROVIDE TEMPORARY SUSPENSION OF THE CEILING. AFTER WINDOW DEMOLITION BY OTHERS, REMOVE EXISTING WOOD BLOCKING, FASTENERS AND SEALANT AT MASONRY OPENING. REMOVE EXISTING WINDOW BLINDS AND SALVAGE FOR RE-INSTALLATION. REMOVE EXISTING EXTRUDED ALUMINUM WINDOW SILL
- D-1 S-3** REMOVE EXISTING ALUMINUM SLIDING DOOR INCLUDING FRAME, GLAZING, WOOD BLOCKING, FASTENERS AND SEALANT.

May 14, 2014

A3.1

DATE

SHEET NO.

14018

SK-A.1

PROJECT NO.

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SECTION 08 71 00
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for hollow steel doors.
- B. Thresholds.

1.02 RELATED REQUIREMENTS

- A. Section 08 11 13 - Hollow Metal Doors and Frames.

1.03 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council.
- B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- C. BHMA A156.1 - American National Standard for Butts and Hinges; Builders Hardware Manufacturers Association, Inc. (ANSI/BHMA A156.1).
- D. BHMA A156.2 - American National Standard for Bored and Preassembled Locks & Latches; Builders Hardware Manufacturers Association (ANSI/BHMA A156.2).
- E. BHMA A156.3 - American National Standard for Exit Devices; Builders Hardware Manufacturers Association (ANSI/BHMA A156.3).
- F. BHMA A156.4 - American National Standard for Door Controls - Closers; Builders Hardware Manufacturers Association, Inc. (ANSI/BHMA A156.4).
- G. BHMA A156.5 - American National Standard for Auxiliary Locks & Associated Products; Builders Hardware Manufacturers Association (ANSI/BHMA A156.5).
- H. BHMA A156.6 - American National Standard for Architectural Door Trim; Builders Hardware Manufacturers Association (ANSI/BHMA A156.6).
- I. BHMA A156.7 - American National Standard for Template Hinge Dimensions; Builders Hardware Manufacturers Association (ANSI/BHMA A156.7).
- J. BHMA A156.8 - American National Standard for Door Controls - Overhead Stops and Holders; Builders Hardware Manufacturers Association, Inc. (ANSI/BHMA A156.8).
- K. BHMA A156.13 - American National Standard for Mortise Locks & Latches; Builders Hardware Manufacturers Association (ANSI/BHMA A156.13).
- L. BHMA A156.16 - American National Standard for Auxiliary Hardware; Builders Hardware Manufacturers Association (ANSI/BHMA A156.16).
- M. BHMA A156.18 - American National Standard for Materials and Finishes; Builders Hardware Manufacturers Association, Inc. (ANSI/BHMA A156.18).
- N. BHMA A156.20 - American National Standard for Strap and Tee Hinges and Hasps; Builders Hardware Manufacturers Association (ANSI/BHMA A156.20).
- O. BHMA A156.21 - American National Standard for Thresholds; Builders Hardware Manufacturers Association (ANSI/BHMA A156.21).
- P. BHMA A156.22 - American National Standard for Door Gasketing and Edge Seal Systems, Builders Hardware Manufacturers Association (ANSI/BHMA A156.22).
- Q. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames.
- R. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames.

- S. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; (ADAAG - Americans with Disabilities Act, Accessibility Guidelines).
- T. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute.
- U. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute.
- V. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc..

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.
- B. Convey Owner's keying requirements to manufacturers.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Include installation details, material descriptions, dimensions of individual components, profiles, and finishes.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of door hardware indicated.
 - 1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the work, within limitations of keying requirements.
- D. Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.
 - a. Organized door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in Schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.
 - 1) Sequence of Operations: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
 - 4. Submit initial draft of Door Hardware Schedule along with essential Product Data to facilitate the fabrication of other work that is critical in the Project construction schedule.

Submit the final Door Hardware Schedule at the earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

- E. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.
- F. Product Certificates: Signed by manufacturers of electrified door hardware certifying that products furnished comply with requirements.
 - 1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.
- G. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
 - 1. Include lists of completed projects with project names and addresses of architects and owners, and other information specified.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, indicating current products comply with requirements.
- I. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.
- J. Warranties: Special warranties specified in this Section.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
 - 1. Scheduling Responsibility: Preparation of door hardware and keying schedules.
- C. Architectural Hardware Consultant Qualifications: A person who is currently certified by the Door and Hardware Institute as an Architectural Hardware Consultant and 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.
- D. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
- E. Regulatory Requirements: Comply with provisions of the following:
 - 1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1, FED-STD-795, "Uniform Federal Accessibility Standards," as follows:
 - a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
 - b. Door Closers: Comply with the following maximum opening-force requirements indicated:
 - 1) Interior Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - 2) NFPA 101: Comply with the following for means of egress doors:

- (a) Latches, Locks, and Exit Devices: Not more than 15 lbf (67 N) to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
 - (b) Door Closers: Not more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
- F. Keying Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings." Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
 - 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. Address for delivery of keys.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item with Door Number related to the final Approved Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver keys to manufacturer of key control system, or Owner as Directed.
- D. Deliver keys to Owner by registered mail or overnight package service.

1.08 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.09 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of operators and door hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
- C. Warranty Period for Locksets: Three, (3) years from date of Substantial Completion, unless otherwise indicated.
- D. Warranty Period for Manual Closers: Ten, (10) years from date of Substantial Completion, unless otherwise indicated.
- E. Warranty Period for Exit Devices: Three, (3) years from date of Substantial Completion, unless otherwise indicated.

1.10 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies as used in the manufacture and installation of original products.
- C. Engage a factory authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

PART 2 - PRODUCTS

2.01 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in this Section, door hardware sets indicated in door and frame schedule, and the Door Hardware Schedule at the end of Part 3.
 - 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturer's products. Retain subparagraph below for electrified door hardware.
 - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Schedule at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
 - 2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

2.02 HINGES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Butt Hinges:
 - a. Stanley Commercial Hardware
- B. Standards: Comply with the following:
 - 1. Hinges ANSI/BHMA Standard A156.1 Grade 1
- C. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- D. Concealed bearings are made from engineered polymer material with PTFE and Aramid fiber; bearing is maintenance free, no oil, no grease.
- E. Butt hinges equipped with easily seated, non-rising pin. Hole in bottom of pin enables quick pin removal for ease of installation.
- F. Hinge Weight: Unless otherwise indicated, provide the following:
 - 1. Supports weights up to 600lbs.
- G. Hinge Base Metal: Unless otherwise indicated, provide the following:
 - 1. Exterior Continuous Hinges: Stainless steel, with stainless-steel pin,
 - 2. Interior Continuous Hinges: Stainless steel, with stainless-steel pin.
 - 3. Continuous Hinges for Fire-Rated Assemblies: Stainless steel, with stainless-steel pin.

4. Exterior Butt Hinges: Stainless Steel or Brass or Bronze
 5. Interior Butt Hinges: Steel or Brass or Bronze
- H. Hinge Options: Comply with the following where indicated in the Door Hardware Schedule or on Drawings:
1. Hospital Tips: Slope ends of hinge barrel.
 2. Maximum Security Pin: Fix pin in hinge barrel after it is inserted.
- I. Fasteners: Comply with the following:
1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
 2. Wood Screws: For wood doors and frames.
 3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
 4. Screws: Phillips flat-head screws; machine screws drilled and tapped holes for metal doors, wood screws for wood doors and frames. Finish screw heads to match surface of hinges.

2.03 LOCKS AND LATCHES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Mechanical Locks and Latches:
 - a. Best Lock Corporation
- B. Standards: Comply with the following:
1. Bored Locks and Latches: BHMA A156.2.
- C. Bored Locks: ANSI A156.2, BHMA Series 4000, Grade 1, and is UL Listed.
- D. Lock Trim: Comply with the following:
1. Lever: Cylindrical Locks & Latches, Zinc material with a minimum wall thickness of .060
- E. Lock Functions: Function numbers and descriptions indicated in the Door Hardware Schedule comply with the following:
1. Bored Locks: BHMA A156.2.
- F. Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:
1. Bored Locks: Minimum 9/16-inch latch bolt throw.
- G. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.
- H. Cylindrical Locks & Latches to have solid shank with no opening for access to keyed lever keeper.

2.04 CYLINDERS AND KEYING

- A. The permanent cylinders will be Schlage, Primus level 9 provided BY THE OWNER and installed by the GC. All costs to install cores after construction if required are part of this bid package. All costs for on site owner training (minimum 8-hours) if required by owner is included in this bid package.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Cylinders:
 - a. Schlage, Primus, School District Standard, PROVIDED BY OWNER.
- C. Construction Keying by the GC: Comply with the following:
1. Construction Cores: Provide Brass construction cores in all locksets and cylinders that are replaceable by permanent cores.
 - a. Replace Brass construction cores with permanent cores, as indicated in keying schedule

2.05 STRIKES

- A. Standards: Comply with the following:
 - 1. Strikes for Bored Locks and Latches: BHMA A156.2.
 - 2. Strikes for Auxiliary Deadlocks: BHMA A156.5.
 - 3. Dustproof Strikes: BHMA A156.16.
- B. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latch bolts, as recommended by manufacturer.
 - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- C. Dustproof Strikes: BHMA Grade 1

2.06 OPERATING TRIM

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Burns Manufacturing Company, Inc.
 - 2. Stanley Commercial Hardware
 - 3. Delete paragraph below if manufacturers' products are named in Door Hardware Schedule to specify operating trim.
- B. Standard: Comply with BHMA A156.6.
- C. Materials: Fabricate from aluminum, brass, bronze, stainless steel, unless otherwise indicated.

2.07 CLOSERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Surface-Mounted Closers:
 - a. Stanley Commercial Hardware,
- B. Standards: Comply with the following:
 - 1. Closers: BHMA A156.4.
- C. Surface Closers: BHMA Grade 1
- D. Certified Products: Provide door closers listed in BHMA's "Directory of Certified Door Closers."
- E. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.08 PROTECTIVE TRIM UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Metal Protective Trim Units:
 - a. Burns Manufacturing Company, Inc.
 - b. Triangle Brass Manufacturing Company, Inc.
- B. Standard: Comply with BHMA A156.6.
- C. Materials: Fabricate protection plates from the following:
 - 1. Stainless Steel: 0.050 inch (1.3 mm) thick; beveled 4 sides.

- D. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine or self-tapping screws.
- E. Furnish protection plates sized 2" less than door width on push side and 1" less than door width on pull side, by height specified in Door Hardware Schedule.

2.09 STOPS AND HOLDERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Architectural Builders Hardware Mfg., Inc.
 - 2. Triangle Brass Manufacturing Company, Inc.
- B. Standards: Comply with the following:
 - 1. Stops and Bumpers: BHMA A156.16.
 - 2. Mechanical Door Holders: BHMA A156.16.
 - 3. Electromagnetic Door Holders: BHMA A156.15.
 - 4. Combination Overhead Holders and Stops: BHMA A156.8.
 - 5. Door Silencers: BHMA A156.16.
- C. Stops and Bumpers: BHMA Grade 1
- D. Mechanical Door Holders: BHMA Grade 1
- E. Combination Overhead Stops and Holders: BHMA Grade 1

2.10 DOOR GASKETING

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Door Gasketing:
 - a. K. N. Crowder Manufacturing Co., Inc.
 - b. National Guard Products, Inc.
 - 2. Door Bottoms:
 - a. K. N. Crowder Manufacturing Co., Inc.
 - b. National Guard Products
- B. Standard: Comply with BHMA A156.22.
- C. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
 - 1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 - 2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
 - 3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.
- D. Air Leakage: Not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.
- E. Smoke-Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors.
- F. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated, based on testing according to ASTM E 1408.
- G. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- H. Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

2.11 FABRICATION

- A. Manufacturer's Nameplate: Do not provide manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise approved by Architect.
 - 1. Manufacturer's identification will be permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.
- C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
 - 1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 - 2. Steel Machine or Wood Screws: For the following fire-rated applications:
 - a. Mortise hinges to doors.
 - b. Strike plates to frames.
 - c. Closers to doors and frames.
 - 3. Steel Through Bolts: For the following fire-rated applications, unless door blocking is provided:
 - a. Surface hinges to doors.
 - b. Closers to doors and frames.
 - c. Surface-mounted exit devices.
 - 4. Spacers or Sex Bolts: For through bolting of hollow metal doors.
 - 5. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.12 FINISHES

- A. Standard: Comply with BHMA A156.18.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. BHMA Designations: Comply with base material and finish requirements indicated by the following:
- E. Retain one or more finish designations below; coordinate with those indicated in Door Hardware Schedule. See the Evaluations in Division 8 Section "Door Hardware" for details of materials and finishes. Note that oil-rubbed finishes (BHMA 613, BHMA 722) are unstable and are difficult to match.
 - 1. BHMA 600: Primed for painting, over steel base metal.
 - 2. BHMA 626: Satin chromium plated over nickel, over brass or bronze base metal.
 - 3. BHMA 628: Satin aluminum, clear anodized, over aluminum base metal.

4. BHMA 630: Satin stainless steel, over stainless steel base metal.
5. BHMA 652: Satin chromium plated over nickel, over steel base metal.
6. BHMA 689: Aluminum painted, over any base metal.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Wood Doors: Comply with DHI A115-W series.

3.03 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Key Control System: Place keys on markers and hooks in key control system cabinet, as determined by final keying schedule. Supply key cabinet with 25% expansion. Factory install keys in cabinet or in field with owner's representative. Key cabinet to be supplied with a "Complete System" equal to the Telkee System.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.04 FIELD QUALITY CONTROL

- A. Independent Architectural Hardware Consultant: Owner or Architect will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
 1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.05 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 is allowed to 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 so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.
- B. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:
1. Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.
 2. Consult with and instruct Owner's personnel on recommended maintenance procedures.
 3. Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

3.06 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary 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.

3.07 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

END OF SECTION

SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated steel door frames.
- B. Non-fire-rated steel doors.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 09 90 00 - Painting and Coating: Field painting.

1.03 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council.
- B. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
- C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- E. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames.
- F. DHI A115 Series - Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute (ANSI/DHI A115 Series).
- G. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers.
- H. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.
- D. Samples: Submit two samples of metal, 2 x 2 inches in size showing factory finishes, colors, and surface texture.
- E. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- F. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.
- B. Maintain at the project site a copy of all reference standards dealing with installation.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with NAAMM HMMA 840.

- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Steel Door Frames:
1. Assa Abloy Ceco, Curries, or Fleming: www.assaabloydss.com.
 2. Ceco Door Products: www.cecodoor.com.
 3. Steelcraft: www.steelcraft.com.
 4. Phillip Manufacturing Company
 5. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 DOORS AND FRAMES

- A. Requirements for All Door Frames:
1. Accessibility: Comply with ANSI/ICC A117.1.
 2. Finish: Factory primed, for field finishing.

2.03 STEEL DOORS

- A. Exterior Doors :
1. Grade: ANSI A250.8 Level 3, physical performance Level A, Model 1, full flush.
 2. Core: Polyurethane.
 3. Top Closures for Outswinging Doors: Flush with top of faces and edges.
 4. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A60/ZF180 coating.
 5. Texture: Smooth faces.
 6. Weatherstripping: Separate, see Section 08 71 00.
 7. Finish: Factory primed, for field finishing.

2.04 STEEL FRAMES

- A. General:
1. Comply with the requirements of grade specified for corresponding door.
 - a. ANSI A250.8 Level 3 Doors: 14 gage frames.
 2. Finish: Factory primed, for field finishing.
- B. Exterior Door Frames: Fully welded.
1. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A60/ZF180 coating.
 2. Finish: Factory primed, for field finishing.
 3. Weatherstripping: Integral, recessed into door edge or frame.

2.05 ACCESSORY MATERIALS

- A. Silencers: Resilient rubber or vinyl, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.
- B. Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

2.06 FINISH MATERIALS

- A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard, baked on.
- B. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation. 8 mil D.F.T.

3.03 INSTALLATION

- A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.
- B. Coordinate frame anchor placement with wall construction.
- C. Coordinate installation of hardware.
- D. Touch up damaged factory finishes.

3.04 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

3.05 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION