



CITY OF MEMPHIS

Request for Quote

#120752

MPD TRAINING ACADEMY CLASSROOM

ADDITION PHASE II

Addendum One (1)

This Addendum will become part of the Contract Documents. In case of difference with previous addenda or communications, this addendum takes precedence. Receipt will be acknowledged by inserting the Addendum number and its date in the RFQ Response.

This Addendum consists of eleven (11) pages.

I. MODIFICATIONS/CLARIFICATIONS TO THE RFQ

1. Insert Specification Section 07 71 00 – Roof Specialties into Record Documents
2. Insert Specification Section 08 71 00 – Door Hardware into Record Documents

**ADDENDUM NO. ONE
MEMPHIS POLICE DEPARTMENT
TRAINING ACADEMY CLASSROOM ADDITION
4517 Academy Drive
Memphis, Tennessee 38127**

RENAISSANCE GROUP
9700 Village Circle, Suite 100
Lakeland, TN 38002

RGI Project No. 21074

March 20, 2023



TO ALL PRIME CONTRACT BIDDERS OF RECORD:

The original Project Manual and Drawings, dated January 31, 2023, prepared by Renaissance Group for work on the project, are hereby amended as noted in this Addendum No. One.

Receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Bid Form.

SPECIFICATION

- Item #1:** Insert Specification Section **07 71 00 – Roof Specialties** into Record Documents.
- Item #2:** Insert Specification Section **08 71 00 – Door Hardware** into Record Documents.

END OF ADDENDUM NO. ONE

**SECTION 07 71 00
ROOF SPECIALTIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured roof specialties, including copings, fascias, and gravel stops.
- B. Roof control and expansion joint covers.

1.02 RELATED REQUIREMENTS

- A. Section 07 72 00 - Roof Accessories: Manufactured curbs, roof hatches, and snow guards.

1.03 REFERENCE STANDARDS

- A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
- B. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
- C. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems 2017.
- D. NRCA (RM) - The NRCA Roofing Manual 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- C. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- D. Samples: Submit two appropriately sized samples of coping and gravel stop.
- E. Manufacturer's Installation Instructions: Indicate special procedures, fasteners, supporting members, and perimeter conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Roof Edge Flashings and Copings:
 - 1. Architectural Products Co; _____: www.archprod.com/#sle.
 - 2. Hickman Edge Systems; Formed Coping Plus: www.hickmanedgesystems.com/#sle.
 - 3. Metal Roofing Systems, Inc; Rapid Lock Coping: www.metalroofingsystems.biz/#sle.
- B. Control and Expansion Joint Covers:
 - 1. Construction Specialties, Inc; Roof Covers: www.c-sgroup.com/#sle.
 - 2. EMSEAL Joint Systems, Ltd; Emseal RoofJoint: www.emseal.com/#sle.
 - 3. MM Systems Corp; ____: www.mmsystemscorp.com/#sle.
- C. Pipe and Penetration Flashings:
 - 1. Elmdor; _____: www.elmdor.com/#sle.
- D. Counterflashings:

2.02 COMPONENTS

- A. Copings: Factory fabricated to sizes required; corners mitered; concealed fasteners.
 - 1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness, and finish as cap; concealed stainless steel fasteners.
 - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.

3. Wall Width: As indicated on drawings.
4. Material: Formed steel sheet, galvanized, 24 gauge, 0.024 inch thick, minimum.
5. Finish: 70 percent polyvinylidene fluoride.
6. Color: As selected by Architect from manufacturer's standard range.
7. Products:
 - a. Metal-Era Inc; _____: www.metalera.com/#sle.
 - b. Hickman Edge Systems; Formed Coping Plus: www.hickmanedgesystems.com/#sle.
- B. Control and Expansion Joint Covers: Composite construction of _____-inch wide flexible EPDM flashing of white color with closed cell urethane foam backing, each edge seamed to aluminum sheet metal flanges, designed for nominal joint width of 1 inch. Include special formed corners, tees, intersections, and wall flashings, each sealed watertight.
- C. Pipe and Penetration Flashing: Base of rounded aluminum, compatible with sheet metal roof systems, and capable of accomodating pipes sized between 3/8 inch and 12 inches.
 1. Caps: EPDM.
 2. Color: As indicated on drawings.
 3. Products:
 - a. Menzies Metal Products; Plumbing Stack Spun Aluminum: www.menzies-metal.com/#sle.
- D. Counterflashings: Factory fabricated and finished sheet metal that overlaps top edges of base flashing by at least 4 inches, and designed to snap into through-wall flashing or reglets with lapped joints.
 1. Material: Formed aluminum sheet, 0.025 inch thick, minimum.
 2. Color: To be selected by Architect from manufacturer's standard range.

2.03 FINISHES

- A. Fluoropolymer Coating: High Performance Organic Finish, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system; color as indicated.
- B. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system; color as indicated.

2.04 ACCESSORIES

- A. Sealant for Joints in Linear Components: As recommended by component manufacturer.
- B. Adhesive for Anchoring to Roof Membrane: Compatible with roof membrane and approved by roof membrane manufacturer.
- C. Insulation Board Adhesive: Two-component, low-rise polyurethane foam adhesive used for adhering insulation to low slope roof deck materials.
 1. Products:
 - a. OMG Roofing Products; OlyBond500: www.roofing.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that deck, curbs, roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.

3.02 INSTALLATION

- A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Seal joints within components when required by component manufacturer.
- C. Anchor components securely.
- D. Coordinate installation of components of this section with installation of roofing membrane and base flashings.

END OF SECTION

**SECTION 08 71 00
DOOR HARDWARE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for wood and hollow metal doors.
- B. Hardware for fire-rated doors.
- C. Electrically operated and controlled hardware.
- D. Thresholds.
- E. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealants for setting exterior door thresholds.
- B. Section 08 11 13 - Hollow Metal Doors and Frames.
- C. Section 08 14 16 - Flush Wood Doors.
- D. Section 28 10 00 - Access Control: Electronic access control devices.

1.03 PRICE AND PAYMENT PROCEDURES

- A. Allowances: See Section 01 21 00 - Allowances, for cash allowances affecting this section.

1.04 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. BHMA A156.1 - Standard for Butts and Hinges 2021.
- C. BHMA A156.3 - Exit Devices 2020.
- D. BHMA A156.4 - Door Controls - Closers 2019.
- E. BHMA A156.5 - Cylinders and Input Devices for Locks 2020.
- F. BHMA A156.6 - Standard for Architectural Door Trim 2021.
- G. BHMA A156.7 - Template Hinge Dimensions 2016.
- H. BHMA A156.13 - Mortise Locks & Latches Series 1000 2017.
- I. BHMA A156.16 - Auxiliary Hardware 2018.
- J. BHMA A156.21 - Thresholds 2019.
- K. BHMA A156.22 - Standard for Gasketing 2021.
- L. BHMA A156.31 - Electric Strikes and Frame Mounted Actuators 2019.
- M. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames 2004.
- N. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- O. ITS (DIR) - Directory of Listed Products Current Edition.
- P. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- Q. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.
- R. NFPA 101 - Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- S. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives 2022.
- T. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.
- U. UL (DIR) - Online Certifications Directory Current Edition.
- V. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure utility 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; attendance is required by affected installers and the following:
 - 1. Architect.
 - 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:
 - 1. Owner will schedule meeting at project site prior to Contractor occupancy.
 - 2. Attendance Required:
 - a. Contractor.
 - b. Owner.
 - c. Architect.
 - d. Hardware Installer.
 - 3. 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.
 - 4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
 - 5. 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.
 - 6. Deliver established keying requirements to manufacturers.

1.06 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. 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.
- C. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
 - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
 - 2. List groups and suffixes in proper sequence.
 - 3. Provide complete description for each door listed.
 - 4. Provide manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
- D. Keying Schedule:
 - 1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Supplier's qualification statement.

- H. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- I. Project Record Documents: Record actual locations of concealed equipment, services, and conduit.

1.07 QUALITY ASSURANCE

- A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by 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.

1.08 DELIVERY, STORAGE, AND HANDLING

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

1.09 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion.
 - 1. Closers: Five years, minimum.
 - 2. Exit Devices: Three years, minimum.
 - 3. Locksets and Cylinders: Three years, minimum.
 - 4. Other Hardware: Two years, minimum.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- 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. 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. Applicable provisions of NFPA 101.
 - 4. Fire-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.
 - 5. Hardware on Fire-Rated Doors: Listed and classified by UL (DIR), ITS (DIR), testing firm acceptable to authorities having jurisdiction, or _____ as suitable for application indicated.
 - 6. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.
- D. 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.
 - 1. See Section 28 10 00 for additional access control system requirements.
- E. Lock Function: Provide lock and latch function numbers and descriptions of manufacturer's series. See Door Hardware Schedule.
- F. 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-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 HINGES

- A. Manufacturers:
 - 1. McKinney; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
- B. Hinges: Comply with BHMA A156.1, Grade 1.
 - 1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
 - a. Provide hinge width required to clear surrounding trim.
 - 2. Provide hinges on every swinging door.
 - 3. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
 - 4. Provide ball-bearing hinges at each door with closer.
 - 5. Provide non-removable pins on exterior outswinging doors.
 - 6. Provide following quantity of butt hinges for each door:
 - a. Doors up to 60 inches High: Two hinges.
 - b. Doors From 60 inches High up to 90 inches High: Three hinges.

2.03 PIVOTS

- A. Manufacturers:
 - 1. McKinney or Rixson; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. DORMA USA, Inc; LM Series: www.dorma.com/#sle.
 - 3. Ives, an Allegion brand; _____: www.allegion.com/us/#sle.
 - 4. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
- B. Door Weight: Medium; standard openings with up to 650 lbs door weight.

2.04 FLUSH BOLTS

- A. Manufacturers:
 - 1. Adams Rite, an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Ives, an Allegion brand; _____: www.allegion.com/us/#sle.
 - 4. Trimco; _____: www.trimcohardware.com/#sle.
- B. Flush Bolts: Comply with BHMA A156.16, Grade 1.
 - 1. Flush Bolt Throw: 3/4 inch, minimum.
 - 2. Provides extension bolts in leading edge of door, one bolt into floor, one bolt into top of frame.
 - a. Pairs of Swing Doors: At inactive leaves, provide flush bolts of type as required to comply with code.
 - 3. Provide dustproof floor strike for bolt into floor, except at metal thresholds.
 - 4. Manual Flush Bolts: Provide lever extensions for top bolt at over-sized doors.

2.05 EXIT DEVICES

- A. Manufacturers:

1. Corbin Russwin, Sargent, or Yale; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 2. Detex Corporation; Advantex Series _____: www.detex.com/#sle.
 3. DORMA USA, Inc; 8000 Series: www.dorma.com/#sle.
 4. Hager Companies; _____: www.hagerco.com/#sle.
 5. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
- B. Exit Devices: Comply with BHMA A156.3, Grade 1.
1. Lever design to match lockset trim.
 2. Provide cylinder with cylinder dogging or locking trim.
 3. Provide exit devices properly sized for door width and height.
 4. Provide strike as recommended by manufacturer for application indicated.
 5. Provide UL (DIR) listed exit device assemblies for fire-rated doors and panic device assemblies for non-fire-rated doors.

2.06 ELECTRIC STRIKES

- A. Manufacturers:
1. Adams Rite, HES, or Securitron; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
- B. Electric Strikes: Comply with BHMA A156.31, Grade 1.
1. Provide UL (DIR) listed burglary-resistant electric strike; style to suit locks.
 2. Provide non-handed 24 VDC electric strike suitable for door frame material and scheduled lock configuration.
 3. Provide field selectable Fail Safe/Fail Secure modes.
 4. Provide transformer and rectifier as necessary for complete installation.
 5. Connect electric strikes into fire alarm where non-rated doors are scheduled to release with fire or sprinkler alarm condition.

2.07 LOCK CYLINDERS

- A. Manufacturers:
1. Best, dormakaba Group; _____: www.bestaccess.com/#sle.
- B. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
1. Provide standard and conventional type cylinders, Grade 1, with six-pin core in compliance with BHMA A156.5 at locations indicated.
 2. Provide cylinders from same manufacturer as locking device.
 3. Provide cams and/or tailpieces as required for locking devices.
 4. Within specific Door Sections, when provisions for lock cylinder are being referenced to this Section, provide specified lock cylinder and keyed to building keying system, unless otherwise indicated.

2.08 MORTISE LOCKS

- A. Manufacturers:
1. Corbin Russwin, Sargent, or Yale; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 2. Best, dormakaba Group; _____: www.bestaccess.com/#sle.
 3. DORMA USA, Inc; M9000 Series: www.dorma.com/#sle.
 4. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
- B. Mortise Locks: Comply with BHMA A156.13, Grade 1, Security, 1000 Series.
1. Latchbolt Throw: 3/4 inch, minimum.
 2. Deadbolt Throw: 1 inch, minimum.
 3. Backset: 2-3/4 inch unless otherwise indicated.
 4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.
 - a. Finish: To match lock or latch.

2.09 DOOR PULLS AND PUSH PLATES

- A. Manufacturers:
 - 1. Rockwood; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Trimco; _____: www.trimcohardware.com/#sle.
- B. Door Pulls and Push Plates: Comply with BHMA A156.6.
 - 1. Pull Type: Straight, unless otherwise indicated.
 - 2. Push Plate Type: Flat, with square corners, unless otherwise indicated.
 - a. Edges: Beveled, unless otherwise indicated.
 - 3. Material: Aluminum, unless otherwise indicated.

2.10 CLOSERS

- A. Manufacturers; Surface Mounted:
 - 1. Corbin Russwin, Norton, Rixson, Sargent, or Yale; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. DORMA USA, Inc; 7400 Series, 8600 Series, 8900 Series, and TS93: www.dorma.com/#sle.
 - 3. Hager Companies; _____: www.hagerco.com/#sle.
 - 4. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
- B. Manufacturers; Concealed - Overhead:
 - 1. DORMA USA, Inc; RTS88: www.dorma.com/#sle.
- C. Closers: Comply with BHMA A156.4, Grade 1.
 - 1. Type: Surface mounted to door.
 - 2. Provide door closer on each exterior door.
 - 3. Provide door closer on each fire-rated and smoke-rated door.
 - a. Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
 - 4. At outswinging exterior doors, mount closer on interior side of door.

2.11 PROTECTION PLATES

- A. Manufacturers:
 - 1. Rockwood; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Ives, an Allegion brand; _____: www.allegion.com/us/#sle.
 - 4. Trimco; _____: www.trimcohardware.com/#sle.
- B. Protection Plates: Comply with BHMA A156.6.
- C. Metal Properties: Aluminum.
 - 1. Metal, Extra Heavy Duty - Diamond Plate: Thickness 1/8 inch, minimum, with raised diamond plate surface.
- D. Edges: Beveled, on four sides unless otherwise indicated.
- E. Fasteners: Countersunk screw fasteners.
- F. Provide clear anti-microbial coating that is silver ion-based.
- G. Drip Guard: Provide at head of exterior doors unless covered by roof or canopy.

2.12 FLOOR STOPS

- A. Manufacturers:
 - 1. Rockwood; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Trimco; _____: www.trimcohardware.com/#sle.
- B. Floor Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
 - 1. Type: Manual hold-open, with pencil floor stop.
 - 2. Material: Aluminum housing with rubber insert.

2.13 WALL STOPS

- A. Manufacturers:
 - 1. Rockwood; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. Trimco; _____: www.trimcohardware.com/#sle.
- B. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
 - 1. Type: Bumper, concave, wall stop.
 - 2. Material: Aluminum housing with rubber insert.

2.14 THRESHOLDS

- A. Manufacturers:
 - 1. Pemko; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. National Guard Products, Inc; _____: www.ngpinc.com/#sle.
- B. Thresholds: Comply with BHMA A156.21.
 - 1. Provide threshold at interior doors for transition between two different floor types, and over building expansion joints, unless otherwise indicated.
 - 2. Provide threshold at each exterior door, unless otherwise indicated.
 - 3. Type: Flat surface.
 - 4. Material: Aluminum.
 - 5. Threshold Surface: Fluted horizontal grooves across full width.
 - 6. Field cut threshold to profile of frame and width of door sill for tight fit.
 - 7. Provide non-corroding fasteners at exterior locations.

2.15 WEATHERSTRIPPING AND GASKETING

- A. Manufacturers:
 - 1. Pemko; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Hager Companies; _____: www.hagerco.com/#sle.
 - 3. National Guard Products, Inc; _____: www.ngpinc.com/#sle.
- B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
 - 1. Head and Jamb Type: Adjustable.
 - 2. Door Sweep Type: Encased in retainer.
 - 3. Material: Aluminum, with brush weatherstripping.
 - 4. Provide gasketing for smoke and draft control doors (Indicated as "S" on Drawings) that complies with local codes, requirements of assemblies tested in accordance with UL 1784.
 - 5. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
 - 6. Provide door bottom sweep on each exterior door, unless otherwise indicated.
 - 7. Provide sound-rated gasketing and automatic door bottom on doors indicated as "Sound-Rated", "Acoustical", or with "Sound Transmission Class (STC) rating"; fabricate as continuous gasketing, do not cut or notch gasketing material.

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. 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 on fire-rated doors and frames in accordance with applicable codes and NFPA 80.

- C. Install hardware for smoke and draft control doors in accordance with NFPA 105.
- D. Use templates provided by hardware item manufacturer.
- E. 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. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
 - 2. Mounting heights in compliance with ADA Standards:
 - a. Locksets: 40-5/16 inch.
 - b. Push Plates/Pull Bars: 42 inch.
 - c. Deadlocks (Deadbolts): 48 inch.
 - d. Exit Devices: 40-5/16 inch.
 - e. Door Viewer: 43 inch; standard height 60 inch.
- F. 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.

3.03 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under provisions of Section 01 40 00 - Quality Requirements.

3.04 ADJUSTING

- A. Adjust work under provisions of Section 01 70 00 - Execution and Closeout Requirements.
- 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.
- 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 70 00 - Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

END OF SECTION