SECTION 07 6200 – SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

*Contractor shall provide single source responsibility for all building waterproofing components. One contract shall be responsible for coordination/installation of all components affecting building water / air barrier.

PART 2 PRODUCTS

1. SHEET MATERIALS

1.1. Provide material as appropriate for system and location related to adjacent materials and finishes:

1.1.1. Galvanized steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; minimum 0.02 inch (0.6 MM) thick base metal.

1.1.2. Pre-finished galvanized steel: ASTM A 653/A 653M, with F90/Z275 zinc coating; minimum 0.02 inch (0.6 MM) thick base metal, shop pre-coated with PVDF coating.

1.1.3. Aluminum: ASTM B 209 (ASTM B 209M); 0.032 INCH (0.8 MM) thick; anodized finish of color as selected.

1.1.4. Pre-finished aluminum: ASTM B 209 (ASTM B 209M); 0.032 inch (0.8 MM) thick; plain finish shop pre-coated with modified silicone coating.

1.1.5. Lead: ASTM B 749, 2.5lb/sq ft (0.99MM) thick.

1.1.6. Stainless steel: ASTM A 666 type 304, soft temper, 0.015 inch (0.4MM) thick; smooth NO.4 finish.

1.1.7. Terne coated steel: 0.015 inch (0.4MM) thick copper bearing carbon steel core material with 0.092lb/sq ft (0.45 kg/sq m) terne alloy coating on both sides of core metal.

1.1.8. Cooper: ASTM B370, cold rolled 16oz/sq ft (0.5 MM) thick; natural finish.

1.1.9. Lead coated copper: ASTM B 101, 24 (7320) ounce-weight of bare copper, hoo (cold-rolled) temper.

1.1.10. Terne coated stainless steel: 0.015 inch (0.4 MM) ASTM A 666 type 304 core material with 0.092lb/sq ft (0.45kg/sq m) terne alloy coating on both sides of core metal.

2. ACCESSORIES

2.1. Fasteners: Galvanized steel, with soft neoprene washers.
2.2. Underlayment: ASTM D 226, organic roofing felt, type I ("NO. 15").
2.3. Slip sheet: Rosin sized building paper.

3. FABRICATION

3.1. Form sections true to shape, accurate in size, square, and free from distortion or defects.
3.2. Form pieces in longest possible lengths,
3.3. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

4. GUTTER AND DOWNSPOUT FABRICATION

4.1. Gutters: SMACNA architectural sheet metal manual, rectangular profile.
4.2. Downspouts: Rectangular profile.
4.3. Gutters and downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 5 years in accordance with SMACNA architectural sheet metal manual. Size as indicated on contract drawings.

SECTION 07 9005 – JOINT SEALERS

PART 1 GENERAL

PART 2 PRODUCTS

1. SEALANTS

1.1. Sealants and primers – General: Provide only products having lower volatile organic compound (VOC) content than required by south coast air quality management district rule NO.1168.
1.2. General purpose exterior sealant: Polyurethane; ASTM C 920, grade NS, class 25, uses M, G, and A; single component.
1.3. Exterior expansion joint sealer: ASTM D 2628, hollow neoprene (polychloroprene) compression gasket.
1.4. Exterior metal lap joint sealant: Butyl or polyisobutylene, nondrying, nonskinning, noncuring.
1.5. General purpose interior sealant: Acrylic emulsion latex; ASTM C 834, type OP, grade NF single component, paintable.
1.6. Bathtub/Tile sealant: White silicone; ASTM C 920, uses I, M, and A; single component, mildew resistant.
1.7. Acoustical sealant for concealed locations; Permanently tacky non-hardening butyl sealant.
1.8. Interior floor joint sealant: Polyurethane, self-leveling; ASTM C 920, grade P, class 25, uses T, M, and A; single component.
1.9. Concrete paving joint sealant: Polyurethane, self-leveling; ASTM C 920, class 25, uses T, I, M, and A; single component.
1.10. Silicone sealant: ASTM C 920, grade NS, class 25, uses NT, A, G, M, O; single component, solvent curing, non-sagging, non-staining, fungus resistant, non-bleeding.

2. ACCESSORIES

2.1. Joint backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.
2.2. Bond breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

1. INSTALLATION

1.1. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
1.2. Perform installation in accordance with ASTM C 1193.
1.3. Perform acoustical sealant application work in accordance with ASTM C 919.
1.4. Tool joints concave.
1.5. Precompressed foam sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to ¼ inch (3 to 6 MM) below adjoining surface.
1.6. Compression gaskets: Avoid joints except at ends, corners, and intersections; seal all joints with adhesive; install with face 1/8 to ¼ inch (3 to 6 MM) below adjoining surface.

SECTION 08 1113 – HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

PART 2 PRODUCTS

1. DOORS AND FRAMES

1.1. Requirements for all doors and frames:
1.2. Accessibility: Comply with ANSI/ICC A117.1.
1.3. Door texture: Smooth faces.
1.4. Hardware preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
1.5. Galvanizing for units in wet areas: All components hot-dipped zinc-iron alloy-coated (Galvannealed), manufacturer's standard coating thickness.
1.6. Finish: Factory primed, for field finishing.

2. STEEL DOORS

2.1. Exterior doors type:

2.1.1. Grade: ANSI A250.8 level 3, physical performance level A, model 2, seamless.

2.1.2. Core: Polystyrene foam.

2.1.3. Galvanizing: All components hot-dipped zinc-iron alloy-coated (Galvannealed) in accordance with ASTM a 653/A 653M, with manufacturer's standard coating thickness.

2.1.4. Texture: Smooth faces.

2.1.5. Insulating value: U-value of 0.50, when tested in accordance with ASTM C 1363.

2.1.6. Weatherstripping: Separate, see section 08 7100.

2.2. Interior doors, non-fire-rated:

2.2.1. Grade: ANSI A250.8 level 1, physical performance level C, model 1, full flush.

2.2.2. Core: Cardboard honeycomb typical; provide polystyrene insulated core at locations indicated.

2.2.3. Thickness: 1-3/4 inches (44 mm).

2.2.4. Texture: Smooth faces.

2.2.5. Finish: Factory primed, for field finishing.

2.3. Panels: Same construction, performance, and finish as doors.

3. STEEL FRAMES

3.1. General:

3.1.1. Comply with the requirements of grade specified for corresponding door.

3.1.2. Frames for wood doors: Comply with frame requirements specified in ANSI A250.8 for level 1, 18 gage.

3.1.3. Frames for sound-rated wood doors: Comply with frame requirements specified in ANSI A250.8 for level 1, 16 gage.

3.2. Exterior door frames: Face welded, seamless with joints filled.

3.2.1. Galvanizing: All components hot-dipped zinc-iron alloy-coated (Galvannealed) in accordance with ASTM a 653/A 653M, with manufacturer's standard coating thickness.

3.2.2. Finish: Factory primed, for field finishing.

3.3. Interior door frames, non-fire-rated: Face welded, seamless with joints filled.

3.3.1. Terminated stops: Provide at all interior doors; closed end stop terminated 6 inches (150 MM) above floor at 45 degree angle.

3.3.2. Finish: Factory primed, for field finishing.

4. ACCESSORY MATERIALS

4.1. Silencers: Resilient rubber, 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.

5. FINISH MATERIALS

5.1. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.

PART 3 EXECUTION

1. INSTALLATION

1.1. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.
1.2. Coordinate frame anchor placement with wall construction.

SECTION 08 3600 – SECTIONAL DOORS

1.1 SECTION INCLUDES
A. GLAZED ALUMINUM SECTIONAL OVERHEAD DOOR
1. FULL VIEW ALUMINUM DOOR.
2. OPERATING HARDWARE TRACKS AND SUPPORT

1.2 RELATED SECTIONS

B. SECTION 03 3000 – CAST-IN-PLACE CONCRETE: PREPARED OPENING IN CONCRETE. EXECUTION REQUIREMENTS FOR PLACEMENT OF ANCHORS IN CONCRETE WALL CONSTRUCTION.
C. SECTION 04 2000 – UNIT MASONRY ASSEMBLIES: PREPARED OPENING IN MASONRY. EXECUTION REQUIREMENTS FOR PLACEMENT OF ANCHORS IN MASONRY WALL CONSTRUCTION.
D. SECTION 05 500 – METAL FABRICATIONS: STEEL FRAME AND SUPPORTS.
E. SECTION 06 100 – ROUGH WOOD FRAMING AND BLOCKING FOR DOOR OPENING.
F. SECTION 07 905 – JOINT SEALS: PERIMETER SEALANT AND BACKUP MATERIALS.

1.3 REFERENCES

A. ASCE 7 AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
B. ANSI / DASMA 102; AMERICAN NATIONAL STANDARD SPECIFICATIONS FOR SECTIONAL OVERHEAD TYPE DOORS.

1.4 SUBMITTALS
A. SUBMIT UNDER PROVISIONS OF SECTION 01300.
B. MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
1. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
2. INSTALLATION METHODS.
3. OPERATION AND MAINTENANCE DATA.
4. SHOP DRAWINGS: INCLUDE OPENING DIMENSIONS AND REQUIRED TOLERANCES, CONNECTION DETAILS, ANCHORAGE SPACING, HARDWARE LOCATIONS, AND INSTALLATION DETAILS.
C. MANUFACTURER'S CERTIFICATES: CERTIFY PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.

1.5 WIND PERFORMANCE REQUIREMENTS
A. DESIGN DOORS TO WITHSTAND POSITIVE AND NEGATIVE WIND LOADS AS CALCULATED IN ACCORDANCE WITH APPLICABLE BUILDING CODE AND DETAILED IN STRUCTURAL DOCUMENTS.

1.6 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE TYPES OF DOORS SPECIFIED IN THIS SECTION, WITH NOT LESS THAN TEN YEARS OF DOCUMENTED EXPERIENCE.
B. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN INSTALLING THE TYPES OF PRODUCTS SPECIFIED IN THIS SECTION, WITH MINIMUM OF FIVE YEARS OF DOCUMENTED EXPERIENCE, AND APPROVED BY THE DOOR MANUFACTURER.

1.7 WARRANTY
A. FINISH LIMITED WARRANTY: 5 YEAR FINISH WARRANTY AGAINST CRACKING, CHECKING AND PEELING

B. PARTS AND HARDWARE LIMITED WARRANTY
a. STANDARD 1 YEAR WARRANTY

PART 2 PRODUCTS

2.1 MANUFACTURERS
A. ACCEPTABLE MANUFACTURER: CLOPAY CORPORATION: 8585 DUKE BOULEVARD, MASON, OH, 45040
CONTACT CLOPAY NATIONAL ACCOUNTS FOR MATERIAL AND INSTALLATION CSI@CLOPAY.COM, 800-526-4301 OPTION 5
B. SUBSTITUTIONS: NOT PERMITTED.
ALUMINUM SECTIONAL OVERHEAD DOORS, MODEL NUMBER 903.
A. DOOR ASSEMBLY: STILE AND RAIL ASSEMBLIES WITH 6063-T5 ALUMINUM.
a. PANEL THICKNESS: 2 1/8 INCHES (54 MM).
B. ALUMINUM FINISH:
a. CLEAR ANODIZED.
C. GLAZING THICKNESS:
a. 1/8 INCH (3 MM) TEMPERED
D. THERMAL VALUES: U-FACTOR N/A
E. AIR INFILTRATION: 0.15 CFM AT 25 MPH.
F. LOCKING:
a. PROVIDE INSIDE SLIDE LOCK.
G. WEATHERSTRIPPING: PROVIDE COMPLETE PERIMETER SEALS.
H. TRACKS:
a. 2 INCHES (50 MM) TRACK DESIGNED FOR 2" DIAMETER ROLLERS. VERTICAL TRACKS MINIMUM 0.061 INCH (1.55 MM) GALVANIZED STEEL. HORIZONTAL TRACKS MINIMUM 0.075 INCH (1.91 MM) GALVANIZED STEEL.
b. PROVIDE TRACK CONFIGURATION TO MAXIMIZE HEADROOM AVAILABLE PER PLANS
I. SPRING COUNTERBALANCE: TORSION SPRING COUNTERBALANCE MECHANISM WITH HIGH STRENGTH GALVANIZED AIRCRAFT CABLE WITH MINIMUM 7 TO 1 SAFETY FACTOR.
J. HIGH CYCLE SPRING: 50,000 CYCLES.

2.2 DOOR OPERATION
Q. MANUAL

PART 3 EXECUTION

3.1 EXAMINATION
A. EXAMINE WALL AND OVERHEAD AREAS, INCLUDING OPENING FRAMING AND BLOCKING, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, CLEARANCES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK IN THIS SECTION.
B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
C. IF SUBSTRATE PREPARATION IS THE RESPONSIBILITY OF ANOTHER ENTITY, NOTIFY ARCHITECT OF UNSATISFACTORY PREPARATION BEFORE PROCEEDING.

3.2 PREPARATION
A. PREPARE SURFACES USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULT FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS.

3.3 INSTALLATION
A. INSTALL OVERHEAD DOORS AND TRACK IN ACCORDANCE WITH APPROVED SHOP DRAWINGS AND THE MANUFACTURER'S PRINTED INSTRUCTIONS.

3.4 PROTECTION
A. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.
B. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

SECTION 08 4313 – ALUMINUM FRAMED STOREFRONTS

PART 1 GENERAL

PART 2 PRODUCTS

1. STOREFRONT

1.1. Aluminum-framed storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashing, anchorage and attachment devices.

1.1.1. Unitized, shop assembly.

1.1.2. Glazing rabbet: For 1 inch (25 MM) insulating glazing at exterior applications, ¼" glazing at interior locations.

1.1.3. Glazing position: Centered (interior storefront), offset front (exterior locations).

1.1.4. Vertical mullion dimensions: As indicated on drawings.

1.1.5. Overall u-value including glazing: 0.40 maximum.

1.1.6. Finish: Clear anodized

1.1.7. Basis of design: Exterior storefront: YKK AP America Inc; yes 45TU center set thermally broken system.

2. COMPONENTS

2.1. Doors: Glazed aluminum, medium stile entrance doors.

2.1.1. Thickness: 1-3/4 inches (43 MM).

2.1.2. Top rail: 4 ½ inches (115 MM) wide.

2.1.3. Vertical stiles: 4 inches (100 MM) wide.

2.1.4. Bottom rail: 10 inches (200 MM) wide.

2.1.5. Finish: Same as storefront.

2.1.6. Basis of design: YKK AP America Inc; megatherm 35XT medium stile.

3. FABRICATION

3.1. Fabricate components with minimum clearances and shim spacing around perimeter of assembly yet enabling installation and dynamic movement of perimeter seal.
3.2. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
3.3. Reinforce framing members for imposed loads.
3.4. Finishing: Apply factory finish to all surfaces that will be exposed in completed assemblies.

PART 3 EXECUTION

1. INSTALLATION

1.1. Install wall system in accordance with manufacturer's instructions.
1.2. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
1.3. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
1.4. Structural adhesive glazing: Install glazing adhesive and weatherseal sealant in accordance with adhesive manufacturer's instructions.

SECTION 08 7100 – DOOR HARDWARE

PART 1 GENERAL

1. SECTION INCLUDES

1.1. Work under this section includes furnishing and the installation of finish and security hardware specified herein and noted on drawings for a complete and operational system, items include, but are not limited to:

1.1.1. Hinges/continuous hinges

1.1.2. Locksets and cylinders

1.1.3. Closers/ADA operators

1.1.4. Kick, mop and protection plates

1.1.5. Stops, wall bumpers, overhead controls

1.1.6. Thresholds, gasketing and door bottoms

1.1.7. Miscellaneous trim and accessories

2. REFERNCES

2.1. The following references are used in this section.

2.1.1. NFPA 80– standard for fire doors, 2007.

2.1.2. Installation guide for doors and hardware, DHI, 1984.

2.1.3. ANSI / BHMA A156.18, materials and finishes, 2006.

3. GENERAL REQUIREMENTS

3.1. Provide items, articles, materials, operations and methods listed, mentioned or scheduled herein or on drawings, in quantities as required to complete project. Provide hardware that functions properly. Prior to furnishing hardware, advise architect of items that will not operate properly, are improper for conditions, or will not remain permanently anchored.

4. SUBMITTALS

4.1. Hardware schedule: Submit as illustrated by the sequence of format for the hardware schedule as published by the door and hardware institute. Schedule which do not comply will be returned for correction before checking.
4.2. Installation instructions: Provide manufacturer's written installation and adjustment instructions for finish hardware. Send installation instructions to site with hardware.
4.3. Templates: Submit templates and "Reviewed hardware schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

5. QUALITY ASSURANCE

5.1. Manufacturer: Obtain each type of hardware (IE. Latch and locksets, hinges, closers) from single manufacturer, although several may be indicated as offering products complying with requirements.

6. DELIVERY, STORAGE AND HANDLING

6.1. Packaging of door hardware is the responsibility of the supplier. As material is received by the hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set numbers to match the set numbers of the approved hardware schedule. Two or more identical sets may be packed in the same container.
6.2. The general contractor shall provide a secure lock-up for the door hardware and security equipment delivered to the project, but not yet installed. Control handling and installation of the hardware items that are not immediately replaceable, so that completion of the work will not be delayed by hardware losses, both before and after installation.

7. WARRANTY

7.1. All materials must be warranted against defects in workmanship and materials for a period of one (1) year from date of acceptance of this project, unless otherwise noted. Any evidence of misuse or abuse voids all warranties. These warranties shall be each manufacturers' standard written warranty.
7.2. Special warranties:

7.2.1. Door closers: Thirty (30) year period.

7.2.2. Saddle thresholds, bumper thresholds, door sweeps, self-adhesive gasketing, perimeter seals, astragal seals, self-adhesive astragal gasketing, mullion seals, interlocking seals, and drip strips: Five (5) year period.

7.3. Any manufacturer whose standard written warranty does not equal or exceed the requirements listed above must provide a letter stating that they will extend their warranty to comply with the requirements of this specification.

8. MAINTENANCE

8.1. Maintenance tools and instructions: General contractor shall furnish a complete set of specialized tools and maintenance instructions as needed for the owner's continued adjustment, maintenance, removal and replacement of door hardware.

PART 2 PRODUCTS

1. DOOR HARDWARE – GENERAL

1.1. Reference door schedule for locking and additional specific hardware requirements
1.2. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
1.3. Provide products that comply with the following:

1.3.1. Applicable provisions of federal, state, and local codes.

1.4. Finishes: All door hardware the same finish unless otherwise indicated.

1.4.1. Primary finish: Satin chrome plated over nickel on brass or bronze, 626 (APPROX US26D).

1.4.2. Secondary finish: Satin chrome plated over nickel on brass or bronze, 626 (APPROX US26D).

2. BUTTS AND HINGES

2.1. Application:

2.1.1. Provide NRP (Non-removable pins) at out-swinging lockable doors.

2.2. Quantity:

2.2.1. Two hinges per leaf for openings through 60 inches high.

2.2.2. One additional hinge per leaf for each additional 30 inches in height or fraction thereof.

3. LOCKSETS – CYLINDRICAL – GRADE 2

3.1. Provide lock functions specified in hardware groups, with following provisions:

3.1.1. Cylinders: Refer to "Keying" article, herein.

3.1.2. Locks shall meet UL a label; to have a minimum listing for single doors 4'x8'.

3.1.3. Levers shall be Bi-Directional.

3.1.4. Levers shall be solid. Manufacturers utilizing lever fillers are not acceptable.

3.1.5. Furnish "Knurled" or "Tactile" outside levers as indicated in the door hardware sets. "Abrasive" outside levers shall not be acceptable.

3.1.6. Lockset adjustment plate shall be threaded for door thickness adjustment for doors 1 5/8" to 2 1/8" thickness. The adjustment plate shall have visual chassis marking for doors 1 ¾" thick.

3.1.7. Locks shall have field reversible handing.

3.1.8. Latchbolt to be steel with minimum ½" throw latch.

3.1.9. Strikes shall have curved lip of sufficient length to clear trim.

4. KEYING

4.1. Master key or grand master key cylinders and key in groups, unless otherwise specified.
4.2. Provide 6 master keys for each master key set.
4.3. Submit proposed keying schedule to architect. If requested, meet with owner and architect to review schedule.

5. DOOR TRIM

5.1. Kick plates and armor plates: minimum of 0.050 inch thick, beveled 4 edges.

5.1.1. At single doors provide width two inches less than door width on stop side and one inch less than door width on pull side.

5.1.2. Height of 10 inches, unless otherwise indicated.

5.1.3. Provide plates with countersunk screw holes.

6. DOOR CLOSERS – ALUMINUM

6.1. Medium bore exposed closers:

6.1.1. Provide door closers conforming to ANSI/BHMA A156.4 grade 1 requirements by BHMA certified independent testing laboratory.

6.1.2. Provide door closers with fully hydraulic, full rack and pinion action with cast aluminum cylinder.

6.1.3. Closer body: 1-1/4 inch (32 MM) diameter, with 5/8 inch (16 MM) diameter heat-treated pinion journal and full complement bearings.

6.1.4. Hydraulic fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to –30 degrees F.

6.1.5. Spring power; Continuously adjustable over full range of closer sizes and providing reduced opening for as required by accessibility codes and standards.

6.1.6. Hydraulic regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed general speed, and back check.

6.1.7. Pressure relief valve (PRV) technology: Not permitted.

6.1.8. Provide stick on and special templates, drop plates, mounting brackets, or adapters for ARMS as required for details, overhead stops, and other door hardware items interfering with closer mounting.

7. OVERHEAD STOPS

7.1. Provide overhead stops for interior doors equipped with regular ARM surface type closer for doors that open against equipment, casework, sidelights, other objects that would make wall stops inappropriate.
7.2. Provide sex bolt attachments for mineral core door application.

8. WALL STOPS AND HOLDERS

8.1. Provide wall stop for each door leaf unless otherwise specified, or where conditions require the use of an overhead.
8.2. Floor or base stops shall be used only where definitely specified or absolutely unavoidable.

9. THRESHOLDS

9.1. Where thresholds are specified in hardware groups, provide 8655A thresholds on out swinging doors unless detailed otherwise.
9.2. Refer to drawings for special details. Provide accessories, shims and fasteners.
9.3. Where thresholds occur at openings with one or more mullions, they shall be cut for the mullions and extended continuously for the entire opening.

10. WEATHERSTRIPPING

10.1. Provide gaskets for 20-minute doors and doors designated for smoke and draft control.
10.2. Where sweeps are specified in hardware groups, provide 39A unless detailed otherwise.
10.3. Where rain drips are specified in hardware groups, provide 142A x full frame width, unless detailed otherwise.

11. GASKETING

11.1. Provide gaskets for 20-minute doors and doors designated for smoke and draft control.
11.2. Where frame applied intumescent seals are required by the manufacturer, provide gaskets that comply with UBC 7-2 1997 and UL 10C positive pressure tests.

12. SILENCERS

12.1. Provide grey rubber silencers featuring pneumatic design that, once installed, forms an air pocket to absorb shock and reduce noise at door closing.
12.2. Provide three (3) silencers per hollow metal strike jamb; two (2) per hollow metal double door head. Omit at doors scheduled to receive perimeter weatherstripping or smoke gasket.
12.3. Silencers shall meet ANSI/BHMA A156.16, L03011

13. KEY CABINET

13.1. Provide cabinet with one hook for each lock or cylinder plus at least 50 percent extra hooks.
13.2. Provide each hook with one non-removable security key tag and one snap-on link duplicate key tag.
13.3. Provide tools, instruction sheets and accessories required to complete installation.
13.4. Owner will place keys in key cabinet and complete index cards furnished with key system.

14. FASTENERS

14.1. Including, but not limited to, wood or machine screws, bolts, bolts, nuts, anchors, etc. of proper type, material, and finish required for installation of hardware.
14.2. Use phillips head for exposed screws. Do not use aluminum screws to attach hardware.
14.3. Provide self-tapping (TEC) screws for attachment of sweeps and stop-applied weatherstipping only.

15. TYPICAL FINISHES AND MATERIALS

15.1. Finishes as indicated on contract drawings.

PART 3 EXECUTION

1. EXAMINATION

1.1. Examine doors, frames, and related items for conditions that would prevent the proper application of finish hardware. Do not proceed until defects are corrected.

2. INSTALLATION

2.1. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with governing regulations and, except as otherwise indicated, by the architect.
2.2. "Recommended locations for builders' hardware for standard steel doors and frames" by the door and hardware institute.
2.3. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the division 09 sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
2.4. Sets units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
2.5. Where scheduled, door pulls shall be through bolted with bolt heads concealed behind push plates.
2.6. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
2.7. Set thresholds, for exterior and interior doors, in a full bed of BUTYL-rubber or polyisobutylene mastic sealant complying with requirements specified in division 07 – joint sealers.
2.8. Weatherstripping and seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

3. FIELD QUALITY CONTROL

3.1. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

4. ADJUSTING AND CLEANING

4.1. At final completion, hardware shall be left clean and free from disfigurement. Make final adjustment to door closers and other items of hardware. Where hardware is found defective repair or replace or otherwise correct as directed.
4.2. Adjust door closers to meet opening force requirements of uniform federal accessibility standards.
4.3. Final adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of space or area, return to work during week prior to acceptance or occupancy, and make final check and adjustment and finish of hardware and doors.
4.4. Instruct owner's personnel in proper adjustment and maintenance of door hardware and hardware finishes.
4.5. Clean adjacent surfaces soiled by hardware installation.

5. PROTECTION

5.1. Provide for proper protection of items of hardware until owner accepts project as complete.

SECTION 08 8000 – GLAZING

PART 1 GENERAL

PART 2 PRODUCTS

1. DESIGN FOR EXTERIOR TINTED GLAZING:

1.1. Guardian sunguard industries or equal, SN68 low e coating on gray

1.1.1. U VAULE: .29

1.1.2. SHGC: .25

1.1.3. VLT: 34%

2. BASIS OF DESIGN FOR INTERIOR GLAZING; VARIOUS

2.1. Refer to contract drawings and glass schedule for additional glazing types and designations required for interior and other uses.

3. GLASS MATERIALS

3.1. Float glass: All glazing is to be float glass unless otherwise indicated.

3.1.1. Annealed type: ASTM C 1036, type I, transparent flat, class 1 clear, quality Q3 (glazing select).

3.1.2. Heat-strengthened and fully tempered types: ASTM C 1048.

3.1.3. Tinted types: Color and performance characteristics as indicated.

3.1.4. Thicknesses: As indicated; for exterior glazing comply with specified requirements for wind load design regardless of specified thickness.

4. SEALED INSULATIN GLASS UNITS

4.1. Sealed insulating glass units: Types as indicated.

4.1.1. Locations: Exterior, except as otherwise indicated.

4.1.2. Durability: Certified by an independent testing agency to comply with ASTM E 2190.

4.1.3. Edge spacers: Aluminum, bent and soldered corners.

4.1.4. Edge seal: Glass to elastomer with supplementary silicone sealant.

5. GLAZING COMPOUNDS

5.1. Glazing putty: Polymer modified latex recommended by manufacturer for outdoor use, knife grade consistency, grey color.
5.2. Acrylic sealant: Single component, solvent curing, non-bleeding; ASTM C 920, type S, grade NS, class 12-1/2, uses M and A; cured shore A hardness of 15 to 25; color to match adjacent systems.
5.3. Silicone sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, type S, grade NS, class 25, uses M,A, and G; cured shore a hardness of 15 to 25; color to match adjacent systems.

PART 3 EXECUTION

1. INSTALLATION – EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)

j. Place setting blocks at ¼ points with edge block no more than 6 inches (150 MM) from corners.

k. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

l. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

SECTION 09 2116 – GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1. SECTION INCLUDES

1.1. Performance criteria for gypsum board assemblies.
1.2. Acoustical insulation.
1.3. Gypsum wallboard.
1.4. Joint treatment and accessories.
1.5. Ceiling board.

2. SUBMITTALS

2.1. See section 01 3000 – administrative requirements, for submittal procedures.
2.2. Product data: provide data on gypsum board, accessories, and joint finishing system.

PART 2 PRODUCTS

1. Gypsum board assemblies

1.1. Provide completed assemblies complying with astm c840 and ga-216.

2. Board materials

2.1. General

2.1.1. Gypsum wallboard (for non-wet areas only): paper-faced gypsum panels as defined in astm c1396/c1395m; sizes to minimize joints in place; ends square cut.

2.1.2. Application: exposed surfaces at lobby

2.1.3. Thickness

2.1.3.1. Vertical surfaces: 5/8 inch (16 mm).

2.1.3.2. Ceilings: ½ inch (13 mm).

2.2. Gypsum wallboard for wet areas: water-resistant gypsum backing board as defined in astm c1396/c1396m; sizes to minimum joints in place

2.3. Application: exposed surfaces at service bay, restrooms, and waste oil storage room.
2.4. Mold resistance: score of 10, when tested in accordance with astm d3273.
2.5. Edges: square
2.6. Exterior sheathing board: as specified in section 06 1000.
2.7. Ceiling board: special sag-resistant gypsum ceiling board as defined in astm d1396/c1396m; sizes to minimize joints in place; ends square cut.
2.8. Application: ceilings, unless otherwise indicated.
2.9. Thickness: ½ inch (13 mm).
2.10. Edges: tapered.

3. Accessories

3.1. Acoustical insulation: as specified in section 07 2100.
3.2. Acoustical sealant: non-hardening, non-skinning, for use in conjunction with gypsum board.
3.3. Finishing accessories: astm c1047, galvanized steel or rolled zinc, unless otherwise indicated.

3.3.1. Types: as detailed or required for finished appearance.

3.3.2. Special shapes: in addition to conventional cornerbead and control joints, provide u-bead at exposed panel edges.

3.3.3. Joint materials: astm c475 and as recommended by gypsum board manufacturer for project conditions.

3.3.4. Screw for attachment to wood members: astm c 514.

3.3.5. Adhesive for attachment to wood: astm c557.

PART 3 Execution

1. Examination

1.1. Verify that project conditions are appropriate for work of this section to commence.

2. Acoustic accessories installation

2.1. Acoustic insulation: place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions...
2.2. Acoustical sealant: install in accordance with manufacturer's instructions.

3. Board installation

3.1. Comply with astm c 840, ga-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
3.2. Single-layer non-rated: install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
3.3. Installation on wood framing: use screws for attachment of all gypsum board except face layer of non-rated double layer assemblies, which may be installed by means of adhesive lamination.

4. Installation of trim and accessories

4.1. Control joints: place control joints consistent with lines of building spaces and as indicated
4.2. Corner beads: install at external corners, using longest practical lengths.
4.3. Edge trim: install at locations where board abuts dissimilar materials and as indicated.

5. Joint treatment

5.1. Finish gypsum board in accordance with levels defined in astm c840, as follows:

5.1.1. Level 4: walls and ceilings to receive paint and finish or wall coverings, unless otherwise indicated.

5.1.2. Level 5: walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.

5.1.3. Level 2: in utility areas, behind cabinetry, and on backing board to receive tile finish.

5.1.4. Level 1: fire rated wall areas above finished ceilings, whether or not in accessible in the completed construction.

5.1.5. Level 0: temporary partitions and surfaces indicated to be finished in later stage of project.

5.2. Tape, fill, and sand exposed joints, edges, and corners o produce smooth surface ready to receive finishes.

5.2.1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm)

5.3. Where level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and taol mark-free finish.

SECTION 09 5100 – ACOUSTICAL CEILINGS

PART 1 GENERAL

1. Quality assurance

1.1. Field conditions

1.2. Maintain uniform temperature of minimum 60 degrees f (16 degrees c), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

1. Acoustical units

1.1. acoustical units – general: astm e1264, class a

1.1.1. acoustical tile: provide 24" x 24" tegular edge tile

2. Suspension system

2.1. 15/16" standard white color
2.2. Support channels and hangars: galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
2.3. Perimeter molding: same material and finish as grid

PART 3 EXECUTION

1. Installation – Suspension System

1.1 Install suspension system in accordance with astm c636//c636m, astm e580/e580m, and manufacturer's instructions and as supplemented in this section

1.2 Lay out system to a balanced grid design with edge units no less than 50 percent of acoustical unit size.
1.3 Install light fixture boxes constructed of gypsum board above light fixtures in accordance with fire rated assembly requirements and light fixture ventilation requirements.

2 Installation – Acoustical Units

2.1 Install acoustical units in accordance with manufacturer's instructions.

2.2 Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
2.3 Lay directional patterned units with pattern parallel to longest room axis.

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STRICKLAND BROTHERS
TBD NEW SALEM HWY
MURFREESBORO, TN

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