

ARCHITECHNICS, INC.
510 MAINE STREET
QUINCY, ILLINOIS 62301

PROJECT NO. : 5910C

ADDENDUM NO.: 2

ISSUED: 5/21/2020

Project: RALLS COUNTY HIGH SCHOOL NEW HIGH SCHOOL ADDITIONS
RALLS COUNTY R-II SCHOOL DISTRICT
21622 HIGHWAY 19
CENTER, MO 63436

This addendum becomes a part of the bidding and contract documents and modifies the drawings dated May 8, 2020 and specifications dated May 1, 2020. Acknowledge receipt of this addendum by noting such on the Contractor's Proposal (Bid) Form.

FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION

| ITEM | DESCRIPTION |
|------|-------------|
|------|-------------|

CLARIFICATION

This project has been inspected in accordance with the National Emission Standard for Hazardous Air Pollutants (NESHAP), for Asbestos, 40 CFR Part 61, Subpart M. Testing of window caulk in the glass walls near the library is underway at the time of bidding. If the material is hazardous, then a separate abatement project will occur prior to demolition of the glass walls in question. No other suspicious materials were detected. Any other suspicious material that is uncovered will be tested and a separate abatement project will occur.

SUBSTITUTIONS

1.0 Lighting Fixtures

Type 1 & 1E - Philips Day-Brite FluxPanel LED 2x4 is an approved
Type 2 & 2E - Philips Day-Brite FluxPanel LED 2x2 is an approved
Type 3 - Lightalarms Quick QLX/QLXN is an approved substitution.
Type 4 - Philips Gardco 101L Wall Sconce is an approved substitution.
Type 5 - FC Lighting FCC 400 Series Wall Sconce is an approved
Type 7 - Philips Lightolier Calcaite C6RDL is an approved substitution.

SPECIFICATIONS

| | | | |
|-----|--|---------|--------------------------------|
| 1.0 | Section 07 4213.19 Insulated Metal Panels | Replace | Replace with attached section. |
| 1.0 | Section 07 6200 Sheet Metal Flashing and Trim | Add | Add attached section. |
| 2.0 | Section 08 1113 Hollow Metal Doors and Frames | Add | Add attached section. |
| 3.0 | Section 08 1416 Flush Wood Doors | Add | Add attached section. |
| 4.0 | Section 08 7100 Door Hardware | Replace | Replace with attached section. |

DRAWINGS

| | | | |
|-----|------------|---------|------------------------------|
| 1.0 | Sheet G000 | Replace | Replace with attached sheet. |
|-----|------------|---------|------------------------------|

| | | | |
|------|------------|---------|---|
| 2.0 | Sheet A102 | Replace | Replace with attached sheet. |
| 3.0 | Sheet A200 | Replace | Replace with attached sheet. |
| 4.0 | Sheet A103 | Replace | Replace with attached sheet. |
| 5.0 | Sheet A500 | Replace | Replace with attached sheet. |
| 6.0 | Sheet A501 | Replace | Replace with attached sheet. |
| 7.0 | Sheet A503 | Add | Add attached sheet. |
| 8.0 | Sheet E101 | Replace | Replace with attached sheet. |
| 9.0 | Sheet E102 | Replace | Replace with attached sheet. |
| 10.0 | Sheet E101 | Add | Dimmer switch shall be Lithonia NPODMDX or equal with on/off raise/lower control |
| 11.0 | Sheet E102 | Add | Contractor shall replace existing Notifier 1010 fire alarm panel with new panel compatible with existing devices and add new devices as shown and program for a complete working system. At contractors option all existing devices may be replaced as part of a complete system replacement from any manufacturer. |

Attachments: planholder's list; Spec sections 07 4213.19, 07 6200, 08 1113, 08 1416, 08 7100; sheets G000, A102, A103, A200, A102, A500, A501, A503, E101, E102.

SECTION 07 4213.19
INSULATED METAL WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Foamed-insulation-core metal wall panels.
- B. Related Requirements:
 - 1. Section 07 4293 "Soffit Panels" for metal panels used in horizontal soffit applications.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Shop Drawings:
 - 1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
 - 2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.
- C. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.
 - 1. Include similar Samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below.
 - 1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each product, tests performed by a qualified testing agency.
- C. Sample Warranties: For special warranties.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

1.7 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.8 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.
 - 2. Warranty Period: Two years from date of Substantial Completion.

- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 72:
 - 1. Wind Loads: As indicated on Drawings.
 - 2. Deflection Limits: As indicated on Drawings
- B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 283 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 1.57 lbf/sq. ft. .
- C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 2.86 lbf/sq. ft. .
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F , ambient; 180 deg F , material surfaces .

2.2 FOAMED-INSULATION-CORE METAL WALL PANELS

- A. General: Provide factory-formed and -assembled metal wall panels fabricated from two metal facing sheets and insulation core foamed in place during fabrication, and with joints between panels designed to form weathertight seals. Include accessories required for weathertight installation.
 - 1. Insulation Core: Modified isocyanurate or polyurethane foam using a non-CFC blowing agent, with maximum flame-spread and smoke-developed indexes of 25 and 450, respectively.
 - a. Closed-Cell Content: 90 percent when tested according to ASTM D 6226.
 - b. Density: 2.0 to 2.6 lb/cu. ft. when tested according to ASTM D 1622.

- c. Compressive Strength: Minimum 20 psi when tested according to ASTM D 1621.
 - d. Shear Strength: 26 psi when tested according to ASTM C 273/C 273M.
- B. Concealed-Fastener, Foamed-Insulation-Core Metal Wall Panels : Formed with tongue-and-groove panel edges; designed for sequential installation by interlocking panel edges and mechanically attaching panels to supports using concealed clips or fasteners.
- 1. Manufacturers: Benchmark by Kingspan; a division of Kingspan Insulated Panels, Inc. or equal from one of the following:
 - a. CENTRIA Architectural Systems.
 - b. MBCI.
 - c. Metl-Span.
 - 2. Basis of Design: Designwall 2000 Flat Panel
 - 3. Metallic-Coated Steel Sheet: Facings of zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Nominal Thickness: 22 gauge for exterior side and 24 gauge for interior side.
 - b. Exterior Finish: Two-coat fluoropolymer .
 - 1) Color: As selected by Architect from manufacturer's full range .
 - c. Interior Finish:
 - 1) Color: As selected by Architect from manufacturer's full range .
 - 4. Panel Coverage: 24 inch, 30 inch and 36 inch nominal. Refer to drawings for dimensions.
 - 5. Panel Thickness: 2.5 inches.
 - 6. Thermal-Resistance Value (R-Value): R-20 according to ASTM C 1363.

2.3 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
- 1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
 - 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 - 3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
 - 1. Corners are to receive manufacturer's two piece, arrowhead aluminum extrusion trim. This applies to inside and outside corners. Refer to manufacturer for all other aluminum extrusion trim details.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.
- E. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
 - 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
 - 2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
 - 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.4 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- C. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 3. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
 - 4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.

5. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.5 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. 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 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.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
 2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
 - a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 METAL PANEL INSTALLATION

- A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
1. Shim or otherwise plumb substrates receiving metal panels.
 2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
 3. Install screw fasteners in predrilled holes.
 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 5. Install flashing and trim as metal panel work proceeds.
 6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
 7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
 8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
- B. Fasteners:
1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.
- C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- D. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weathertight performance of metal wall panel assemblies. Provide types of gaskets, fillers, and sealants indicated by metal panel manufacturer; or, if not indicated, provide types recommended by metal wall panel manufacturer.
1. Seal metal wall panel end laps with double beads of tape or sealant, full width of panel. Seal side joints where recommended by metal wall panel manufacturer.
 2. Prepare joints and apply sealants to comply with requirements in Section 07 9200 "Joint Sealants."

3.4 INSULATED METAL WALL PANEL INSTALLATION

- A. General: Apply continuous ribbon of sealant to panel joint on concealed side of insulated metal wall panels as vapor seal; apply sealant to panel joint on exposed side of panels for weather seal.
1. Fasten foamed-insulation-core metal wall panels to supports with fasteners at each lapped joint at location and spacing and with fasteners recommended by manufacturer.
 2. Apply panels and associated items true to line for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
 3. Provide metal-backed washers under heads of exposed fasteners on weather side of insulated metal wall panels.
 4. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.

5. Provide sealant tape at lapped joints of insulated metal wall panels and between panels and protruding equipment, vents, and accessories.
 6. Apply a continuous ribbon of sealant tape to panel side laps and elsewhere as needed to make panels weathertight.
 7. Apply snap-on battens to exposed-fastener, insulated-core metal wall panel seams to conceal fasteners.
- B. Foamed-Insulation-Core Metal Wall Panels: Fasten metal wall panels to supports with concealed clips at each joint at location and spacing and with fasteners recommended by manufacturer. Fully engage tongue and groove of adjacent panels.
1. Install clips to supports with self-tapping fasteners.
 2. Curved panels are to be field cut by the sub-contractor installer.
- C. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.
- D. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight.
1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to achieve waterproof performance.
 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.5 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 07 4213.19

SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formed roof-drainage sheet metal fabrications.
- B. Related Requirements:
 - 1. Section 06 1000 "Rough Carpentry" for wood nailers, curbs, and blocking.

1.2 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.3 ACTION SUBMITTALS

- A. Product Data: For each of the following
 - 1. Underlayment materials.
 - 2. Elastomeric sealant.
 - 3. Butyl sealant.
 - 4. Epoxy seam sealer.
- B. Samples for Initial Selection: For each type of sheet metal and accessory indicated with factory-applied finishes.
- C. Samples for Verification: For each type of exposed finish.
 - 1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
 - 2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches long and in required profile. Include fasteners and other exposed accessories.
 - 3. Unit-Type Accessories and Miscellaneous Materials: Full-size Sample.
 - 4. Anodized Aluminum Samples: Samples to show full range to be expected for each color required.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B209 , alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.
1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 2. Color: As selected by Architect from manufacturer's full range .
 3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil .

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Elastomeric Sealant: ASTM C920, elastomeric polysulfide or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

2.4 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
 2. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams:
 - 1. Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 2. Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use.
- H. Do not use graphite pencils to mark metal surfaces.

2.5 ROOF-DRAINAGE SHEET METAL FABRICATIONS

- A. Hanging Gutters:
 - 1. Fabricate to cross section required, complete with end pieces, outlet tubes, and other accessories as required.
 - 2. Furnish flat-stock gutter brackets and gutter spacers and straps fabricated from same metal as gutters, of size recommended by cited sheet metal standard, but with thickness not less than twice the gutter thickness .
 - 3. Gutter Profile: Style A in accordance with cited sheet metal standard.
- B. Downspouts: Fabricate rectangular downspouts to dimensions indicated on Drawings, complete with mitered elbows. Furnish with metal hangers from same material as downspouts and anchors .
 - 1. Fabricate from the following materials:
 - a. Aluminum: 0.024 inch thick.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof Edge Flashing (Gravel Stop) and Fascia Cap: Fabricate in minimum 96-inch- long, but not exceeding 12-foot- long sections. Furnish with 6-inch- wide, joint cover plates.
 - 1. Fabricate from the following materials:
 - a. Aluminum: 0.050 inch thick.
- B. Copings: Fabricate in minimum 96-inch- long, but not exceeding 12-foot- long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal solder or weld watertight.
 - 1. Fabricate from the following materials:
 - a. Aluminum: 0.050 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 - 1. Install fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of sealant.
 - 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
 - 5. Install continuous cleats with fasteners spaced not more than 12 inches o.c.
 - 6. Space individual cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
 - 7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
 - 8. Do not field cut sheet metal flashing and trim by torch.
 - 9. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
 - 1. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
 - 1. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
 - 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
 - 3. Use lapped expansion joints only where indicated on Drawings.

- D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws .
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
 - 1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F , set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F .
 - 2. Prepare joints and apply sealants to comply with requirements in Section 07 9200 "Joint Sealants."

3.3 INSTALLATION OF ROOF-DRAINAGE SYSTEM

- A. Install sheet metal roof-drainage items to produce complete roof-drainage system in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.
- B. Downspouts:
 - 1. Join sections with 1-1/2-inch telescoping joints.
 - 2. Provide hangers with fasteners designed to hold downspouts securely to walls.
 - 3. Locate hangers at top and bottom and at approximately 60 inches o.c.
 - 4. Provide elbows at base of downspout to direct water away from building.
 - 5. Connect downspouts to underground drainage system.
- C. Expansion-Joint Covers: Install expansion-joint covers at locations and of configuration indicated on Drawings. Lap joints minimum of 4 inches in direction of water flow.

3.4 INSTALLATION OF ROOF FLASHINGS

- A. Install sheet metal flashing and trim to comply with performance requirements , sheet metal manufacturer's written installation instructions, and cited sheet metal standard.
 - 1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
 - 2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing:
 - 1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
 - 2. Anchor to resist uplift and outward forces in accordance with recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch centers.

3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.

C. Copings:

1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
2. Anchor to resist uplift and outward forces in accordance with recommendations in cited sheet metal standard unless otherwise indicated.
 - a. Interlock exterior bottom edge of coping with continuous cleat anchored to substrate at 24-inch centers.
 - b. Anchor interior leg of coping with washers and screw fasteners through slotted holes at 24-inch centers.
3. Anchor to resist uplift and outward forces in accordance with recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for specified FM Approvals' listing for required windstorm classification.

- D. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless steel draw band and tighten.

- E. Counterflashing: Coordinate installation of counterflashing with installation of base flashing.

1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
2. Extend counterflashing 4 inches over base flashing.
3. Lap counterflashing joints minimum of 4 inches .
4. Secure in waterproof manner by means of snap-in installation and sealant or lead wedges and sealant anchor and washer spaced at 12 inches o.c. along perimeter and 6 inches o.c. at corners areas unless otherwise indicated.

- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with butyl sealant and clamp flashing to pipes that penetrate roof.

3.5 INSTALLATION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.
- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

SECTION 08 1113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Interior standard steel doors and frames.
 - 2. Exterior standard steel doors and frames.
- B. Related Requirements:
 - 1. Section 08 7100 "Door Hardware" for door hardware for hollow-metal doors.

1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.3 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, and finishes.
- B. Shop Drawings: Include the following:
 - 1. Elevations of each door type.
 - 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of anchorages, joints, field splices, and connections.
 - 6. Details of accessories.
 - 7. Details of moldings, removable stops, and glazing.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
 - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch- high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Mesker Door Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated on Drawings, based on testing at positive pressure according to NFPA 252 or UL 10C.
 - 1. Smoke- and Draft-Control Door Assemblies: Listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
 - 2. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
- B. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than 0.50 deg Btu/F x h x sq. ft. when tested according to ASTM C 518.

2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B. .
 - 1. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.

- b. Thickness: 1-3/4 inches .
 - c. Face: Uncoated steel sheet, minimum thickness of 0.042 inch .
 - d. Edge Construction: Model 1, Full Flush .
 - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
 - f. Fire-Rated Core: Manufacturer's standard laminated mineral board core for fire-rated and temperature-rise-rated doors.
- 2. Frames:
 - a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch .
 - b. Frames: Fabricated from same thickness material as adjacent door frame.
 - c. Construction: Knocked down Slip-on drywall or Face welded .
 - 3. Exposed Finish: Prime .

2.4 EXTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B. .
 - 1. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches .
 - c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch , with minimum A40 coating.
 - d. Edge Construction: Model 1, Full Flush .
 - e. Edge Bevel: Provide manufacturer's standard beveled or square edges.
 - f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
 - g. Bottom Edges: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
 - h. Core: Manufacturer's standard .
 - 2. Frames:
 - a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch , with minimum A40 coating.
 - b. Construction: Face welded .
 - 3. Exposed Finish: Prime .

2.5 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
 - 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet .
 - 3. Postinstalled Expansion Anchor: Minimum 3/8-inch- diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

- B. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.6 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.
- F. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- G. Glazing: Comply with requirements in Section 08 8000 "Glazing."

2.7 FABRICATION

- A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.
- B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
 - 1. Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by welding, or by rigid mechanical anchors.
 - 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
- C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
 - 1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
 - 2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

- D. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with mitered hairline joints.
1. Provide stops and moldings flush with face of door, and with beveled stops unless otherwise indicated.
 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
 4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
 5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

2.8 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
- B. Factory Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, complying with SDI A250.3.
1. Color and Gloss: As selected by Architect from manufacturer's full range .

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

- A. General: Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.
- B. Hollow-Metal Frames: Comply with SDI A250.11 .
1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

- a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
 - b. Install frames with removable stops located on secure side of opening.
 2. Fire-Rated Openings: Install frames according to NFPA 80.
 3. Floor Anchors: Secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 4. Solidly pack mineral-fiber insulation inside frames.
 5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
 6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
 7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch , measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch , measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch , measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch , measured at jambs at floor.
- C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
1. Non-Fire-Rated Steel Doors: Comply with SDI A250.8 .
 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
 3. Smoke-Control Doors: Install doors according to NFPA 105.
- D. Glazing: Comply with installation requirements in Section 08 8000 "Glazing" and with hollow-metal manufacturer's written instructions.

3.3 CLEANING AND TOUCHUP

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- C. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.
- D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 08 1113

SECTION 08 1416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Five-ply flush wood veneer-faced doors for transparent finish.
2. Factory finishing flush wood doors.
3. Factory fitting flush wood doors to frames and factory machining for hardware.

B. Related Requirements:

1. Section 08 8000 "Glazing" for glass view panels in flush wood doors.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product, including the following:

1. Door core materials and construction.
2. Door edge construction
3. Door face type and characteristics.
4. Door trim for openings.
5. Factory-machining criteria.
6. Factory- finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each type of door; construction details not covered in Product Data; and the following:

1. Door schedule indicating door location, type, size, fire protection rating, and swing.
2. Door elevations, dimension and locations of hardware, lite and louver cutouts, and glazing thicknesses.
3. Details of frame for each frame type, including dimensions and profile.
4. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
5. Dimensions and locations of blocking for hardware attachment.
6. Dimensions and locations of mortises and holes for hardware.
7. Clearances and undercuts.
8. Requirements for veneer matching.
9. Doors to be factory finished and application requirements.
10. Apply WI Certified Compliance Program label to Shop Drawings.

C. Samples for Initial Selection: For factory-finished doors .

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in plastic bags or cardboard cartons .

- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.4 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, and HVAC system is operating and maintaining temperature and relative humidity at levels designed for building occupants for the remainder of construction period.

PART 2 - PRODUCTS

2.1 FLUSH WOOD DOORS, GENERAL

- A. Quality Standard: In addition to requirements specified, comply with AWI/AWMAC/WI's "Architectural Woodwork Standards."
1. Provide certificates from WI certification program indicating that doors comply with requirements of grades specified.

2.2 SOLID-CORE FIVE-PLY FLUSH WOOD VENEER-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Doors :

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. VT Industries Inc.
2. Performance Grade: ANSI/WDMA I.S. 1A Heavy Duty .
3. Performance Grade:
 - a. ANSI/WDMA I.S. 1A Heavy Duty unless otherwise indicated on Drawings.
4. ANSI/WDMA I.S. 1A Grade: Premium .
5. Faces: Single-ply wood veneer not less than 1/50 inch thick.
 - a. Species: White Birch, stain TBD
 - b. Cut: Plain sliced (flat sliced) .
 - c. Match between Veneer Leaves: Book match.
 - d. Assembly of Veneer Leaves on Door Faces: Center-balance match.
 - e. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
 - f. Room Match: Provide door faces of compatible color and grain within each separate room or area of building.
 - g. Transom Match: Continuous match .
 - h. Blueprint Match: Where indicated, provide doors with faces produced from same flitches as adjacent wood paneling and arranged to provide blueprint match with wood paneling. Comply with requirements in Section 06 4216 "Flush Wood Paneling."
6. Exposed Vertical Edges: Same species as faces - Architectural Woodwork Standards edge Type A .
 - a. Fire-Rated Single Doors: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed vertical edges.

- b. Fire-Rated Pairs of Doors: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.
 - c. Fire-Rated Pairs of Doors: Provide formed-steel edges and astragals with intumescent seals.
 - 1) Finish steel edges and astragals with baked enamel same color as doors.
 - 2) Finish steel edges and astragals to match door hardware (locksets or exit devices).
 - d. Mineral-Core Doors: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.
 - 1) Screw-Holding Capability: 475 lbf in accordance with WDMA T.M. 10.
7. Core for Non-Fire-Rated Doors:
- a. ANSI A208.1, Grade LD-1 particleboard.
 - 1) Blocking: Provide wood blocking in particleboard-core doors as follows:
 - a) 5-inch top-rail blocking, in doors indicated to have closers.
 - b) 5-inch bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.
 - c) 5-inch midrail blocking, in doors indicated to have exit devices.
8. Core for Fire-Rated Doors: As required to achieve fire-protection rating indicated on Drawings.
- a. Blocking for Mineral-Core Doors: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated on Drawings as follows:
 - 1) 5-inch top-rail blocking.
 - 2) 5-inch bottom-rail blocking, in doors indicated to have protection plates.
 - 3) 5-inch midrail blocking, in doors indicated to have armor plates.
9. Construction: Five plies, hot-pressed bonded (vertical and horizontal edging is bonded to core), with entire unit abrasive planed before veneering.

2.3 LIGHT FRAMES AND LOUVERS

- A. Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads unless otherwise indicated.
- 1. Wood Species: Same species as door faces .
 - 2. Profile: Flush rectangular beads .
 - 3. At wood-core doors with 20-minute fire-protection ratings, provide wood beads and metal glazing clips approved for such use.

2.4 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated.
- 1. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
 - 2. Comply with NFPA 80 requirements for fire-rated doors.
- B. Factory machine doors for hardware that is not surface applied.
- 1. Locate hardware to comply with DHI-WDHS-3.

2. Comply with final hardware schedules, door frame Shop Drawings, ANSI/BHMA-156.115-W, and hardware templates.
3. Coordinate with hardware mortises in metal frames, to verify dimensions and alignment before factory machining.
4. For doors scheduled to receive electrified locksets, provide factory-installed raceway and wiring to accommodate specified hardware.
5. Metal Astragals: Factory machine astragals and formed-steel edges for hardware for pairs of fire-rated doors.

C. Transom and Side Panels:

1. Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors.
2. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.
3. Fabricate door and transom panels with full-width, solid-lumber, rabbeted, meeting rails.
4. Provide factory-installed spring bolts for concealed attachment into jambs of metal door frames.

D. Openings: Factory cut and trim openings through doors.

1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Section 08 8000 "Glazing."

2.5 FACTORY FINISHING

A. Comply with referenced quality standard for factory finishing.

1. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
2. Finish faces, all four edges, edges of cutouts, and mortises.
3. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.

B. Factory finish doors.

C. Factory finish doors that are indicated on Drawings to receive transparent finish.

D. Factory finish doors where indicated in schedules or on Drawings as factory finished.

E. Transparent Finish:

1. ANSI/WDMA I.S. 1A Grade: Premium .
2. Finish: ANSI/WDMA I.S. 1A TR-8 UV Cured Acrylated Polyester/Urethane
3. Staining: As selected by Architect from manufacturer's full range .
4. Effect: Filled finish .
5. Sheen: Satin .

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames, with Installer present, before hanging doors.
 - 1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Section 08 7100 "Door Hardware."
- B. Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
- C. Install frames level, plumb, true, and straight.
 - 1. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
 - 2. Anchor frames to anchors or blocking built in or directly attached to substrates.
 - a. Secure with countersunk, concealed fasteners and blind nailing.
 - b. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
 - 1) For factory-finished items, use filler matching finish of items being installed.
 - 3. Install fire-rated doors and frames in accordance with NFPA 80.
 - 4. Install smoke- and draft-control doors in accordance with NFPA 105.
- D. Job-Fitted Doors:
 - 1. Align and fit doors in frames with uniform clearances and bevels as indicated below.
 - a. Do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors.
 - 2. Machine doors for hardware.
 - 3. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
 - 4. Clearances:
 - a. Provide 1/8 inch at heads, jambs, and between pairs of doors.
 - b. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated on Drawings.
 - c. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
 - d. Comply with NFPA 80 for fire-rated doors.
 - 5. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
 - 6. Bevel fire-rated doors 1/8 inch in 2 inches at lock edge; trim stiles and rails only to extent permitted by labeling agency.
- E. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- F. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08 1416

SECTION 08 71 00 DOOR HARDWARE

GENERAL

1.01 SUMMARY

Section includes:

1. Mechanical and electrified door hardware for:
 - a. Swinging doors.
2. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

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

Related Sections:

1. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
2. Division 08 sections for Doors and Frames.
3. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.

1.02 REFERENCES

UL - Underwriters Laboratories

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

DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Key Systems and Nomenclature

ANSI - American National Standards Institute

1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties.
 2. ANSI/DHI A115.IG – Installation Guide for Doors and Hardware
- C. ICC – International Code Council, Inc
1. ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.
 2. ICC IBC – International Building Code
- D. NFPA – National Fire Protection Agency
1. NFPA 101 - Life Safety Code
 2. NFPA 80 - Fire Doors and Windows
- E. Builders Hardware Manufacturing Association (BHMA)

1.03 SUBMITTALS

General:

1. Submit in accordance with Conditions of Contract and Division 01 requirements.
2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, “EXAMINATION” article, herein.

Action Submittals:

1. Product Data: Technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
 - a. Wiring Diagrams: For power, signal, and control wiring and including:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated, and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:

- a. Door Index; include door number, heading number, and Architects hardware set number.
- b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
- c. Quantity, type, style, function, size, and finish of each hardware item.
- d. Name and manufacturer of each item.
- e. Fastenings and other pertinent information.
- f. Location of each hardware set cross-referenced to indications on Drawings.
- g. Explanation of all abbreviations, symbols, and codes contained in schedule.
- h. Mounting locations for hardware.
- i. Door and frame sizes and materials.
- j. Name and phone number for local manufacturer's representative for each product.
- k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components).
Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.

- 1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

5. Key Schedule:

- a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
- b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
- c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
- d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
- e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
 - 1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
- f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.

Informational Submittals:

- 1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
- 2. Product data for electrified door hardware:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
- 3. Warranty: Special warranty specified in this Section.

Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
 - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Factory order acknowledgement numbers (for warranty and service)
 - d. Name, address, and phone number of local representative for each manufacturer.
 - e. Parts list for each product.
 - f. Final approved hardware schedule, edited to reflect conditions as-installed.
 - g. Final keying schedule
 - h. Copies of floor plans with keying nomenclature
 - i. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
 - j. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.04 QUALITY ASSURANCE

Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
4. Coordination Responsibility: Assist in coordinating installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.
 - a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.

Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC).
2. Can provide installation and technical data to Architect and other related subcontractors.
3. Can inspect and verify components are in working order upon completion of installation.
4. Capable of producing wiring diagrams.
5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.

Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing

Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in "REFERENCES" article, herein.

Keying Conference

1. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - b. Preliminary key system schematic diagram.
 - c. Requirements for key control system.
 - d. Requirements for access control.
 - e. Address for delivery of keys.

Pre-installation Conference

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Inspect and discuss preparatory work performed by other trades.
3. Inspect and discuss electrical roughing-in for electrified door hardware.
4. Review sequence of operation for each type of electrified door hardware.
5. Review required testing, inspecting, and certifying procedures.

Coordination Conferences:

1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.

Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

1. Deliver each article of hardware in manufacturer's original packaging.

Project Conditions:

1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
2. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

Protection and Damage:

1. Promptly replace products damaged during shipping.
2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

Deliver keys to Owner by registered mail or overnight package service.

1.06 COORDINATION

Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

1.07 WARRANTY

Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.
 - a. Closers:
 - 1) Mechanical: 10 years
 - b. Exit Devices:
 - 1) Mechanical: 3 years.
 - 2) Electrified: 1 year.
 - c. Locksets:
 - 1) Mechanical: 10 years
 - d. Continuous Hinges: Lifetime warranty.
 - e. Key Blanks: Lifetime
2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.08 MAINTENANCE

Maintenance Tools: Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PRODUCTS

1.09 MANUFACTURERS

The Owner requires use of certain products for their unique characteristics and project suitability to insure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.

Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.

Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

1.10 MATERIALS

Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Install hardware with fasteners provided by hardware manufacturer.

Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

Cable and Connectors: Hardwired Electronic Access Control Lockset and Exit Device Trim:

1. Data: 24AWG, 4 conductor shielded, Belden 9843, 9841 or comparable.
2. DC Power: 18 AWG, 2 conductor, Belden 8760 or comparable.
3. Provide type of data and DC power cabling required by access control device manufacturer for this installation.
4. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with sufficient number and wire gauge with standardized Molex plug connectors to accommodate electric function of specified hardware. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

1.11 HINGES

Manufacturers and Products:

1. Scheduled Manufacturer and Product: Ives 5BB series.
2. Acceptable Manufacturers and Products: Hager BB series, McKinney TA/T4A series, Stanley FBB Series.

Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - a. Exterior: Standard or heavy weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
 - b. Interior: Standard or heavy weight, steel, 4-1/2 inches (114 mm) high
3. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
4. 2 inches or thicker doors:
 - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
5. Provide minimum three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
6. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
7. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
 - e. Interior Non-lockable Doors: Non-rising pins
8. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.
9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with sufficient number and wire gauge to accommodate electric function of specified hardware.

Locate electric hinge at second hinge from bottom or nearest to electrified locking component.

10. Provide mortar guard for each electrified hinge specified.

1.12 CONTINUOUS HINGES

Aluminum Geared

1. Manufacturers:

- a. Scheduled Manufacturer: Ives.
- b. Acceptable Manufacturers: Select, Stanley.

2. Requirements:

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

1.13 CYLINDRICAL LOCKS – GRADE 1

Manufacturers and Products:

1. Scheduled Manufacturer and Product: Falcon T series.
2. Acceptable Manufacturers and Products: Yale 5400LN series, Arrow Q series, Dorma CL800 series, Corbin-Russwin CL3300 series, Sargent 10-Line.

Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3 hour fire doors.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Provide electrified options as scheduled in the hardware sets.
8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

1.14 EXIT DEVICES

Manufacturers and Products:

1. Scheduled Manufacturer and Product: Falcon 24/25 series.
2. Acceptable Manufacturers and Products: Sargent 19-43-GL-80 series, Precision Apex series.

Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide flush end caps for exit devices.
7. Provide exit devices with manufacturer's approved strikes.
8. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
9. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
10. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
11. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
12. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
13. Provide electrified options as scheduled.
14. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

1.15 ELECTRIC STRIKES – BY OTHERS – SEE ALLOWANCES

Requirements:

1. Provide knockouts in frames for electric strikes designed for use with type of locks shown at each opening.
2. Provide wiring pathway with pull strings for transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

1.16 POWER SUPPLIES– BY OTHERS – SEE ALLOWANCES

Requirements:

1. Provide wiring pathway with pull strings for transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

1.17 CYLINDERS

Manufacturers:

1. Scheduled Manufacturer: Yale

Requirements:

1. Provide cylinders to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide the following keyway: Yale Y1

1.18 KEYING

Provide cylinders/cores keyed into Owner's existing keying system (Yale Y1).

Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

Requirements:

1. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - a. Master Keying system as directed by the Owner.
2. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
3. Provide keys with the following features:
 - a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
4. Identification:
 - a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication "Keying Systems and Nomenclature" for identification. Do not provide blind code marks with actual key cuts.
 - b. Identification stamping provisions must be approved by the Architect and Owner.
 - c. Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - d. Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
 - e. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
5. Quantity: Furnish in the following quantities.
 - a. Change (Day) Keys: 3 per cylinder/core.
 - b. Master Keys: 6.

1.19 DOOR CLOSERS

Manufacturers and Products:

1. Scheduled Manufacturer and Product: Falcon SC70A series.
2. Acceptable Manufacturers and Products: LCN 4050 series, Norton 7500 series, Sargent 351 series, Yale 4400 series.

Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with aluminum cylinder.
3. Closer Body: 1-1/2 inch (38 mm) diameter with 5/8 inch (16 mm) diameter heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

1.20 PROTECTION PLATES

Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Burns, Rockwood.

Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:
 - a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

1.21 DOOR STOPS AND HOLDERS

Manufacturers:

1. Scheduled Manufacturer: Ives.

2. Acceptable Manufacturers: Burns, Rockwood.

Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

1.22 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

Manufacturers:

1. Scheduled Manufacturer: Zero International.
2. Acceptable Manufacturers: National Guard, Reese.

Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Size of thresholds:
 - a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
 - b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width
4. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

1.23 SILENCERS

Manufacturers:

1. Scheduled Manufacturer: Ives.
2. Acceptable Manufacturers: Burns, Rockwood.

Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

1.24 DOOR POSITION SWITCHES– BY OTHERS – SEE ALLOWANCES

Requirements:

1. Provide wiring pathway with pull strings for transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

1.25 EXECUTION

1.26 EXAMINATION

Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

Proceed with installation only after unsatisfactory conditions have been corrected.

1.27 INSTALLATION

Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

Wiring: Coordinate with Division 26, ELECTRICAL sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.

4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Testing and labeling wires with Architect's opening number.

Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

Closer/holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

1.28 FIELD QUALITY CONTROL

Engage qualified manufacturer trained representative to perform inspections and to prepare inspection reports.

1. Representative 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.

1.29 ADJUSTING

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. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, Installer's Architectural Hardware Consultant must examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

1.30 CLEANING AND PROTECTION

Clean adjacent surfaces soiled by door hardware installation.

Clean operating items as necessary to restore proper function and finish.

Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

1.31 DOOR HARDWARE SCHEDULE

Hardware items are referenced in the following hardware. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

Hardware Sets:

- 1) The hardware sets listed below represent design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process.

END OF SECTION

Hardware Group No. 01

For use on Door #(s):

100, 107

Provide each PR door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|-----|-------------------------------|--------------------|---------|-----|
| 2 | EA | CONT. HINGE | 112XY | US28 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4023 | SP28 | FAL |
| 2 | EA | PANIC HARDWARE | CD-25-R-EO | 626 | FAL |
| 3 | EA | MORTISE CYLINDER | AS REQUIRED | 626 | UNK |
| 2 | EA | 90 DEG OFFSET PULL | 8190EZHD 12" O | 630-316 | IVE |
| 2 | EA | SURFACE CLOSER | SC71 SS | 689 | FAL |
| 2 | EA | CLOSER BRACKETS, SPACERS, ETC | AS REQUIRED | 626 | FAL |
| 1 | EA | RAIN DRIP | 142AA | AA | ZER |
| 1 | EA | MULLION SEAL | 8780NBK PSA | BK | ZER |
| | SET | WEATHER STRIPPING | BY DOOR/FRAME MFR. | | UNK |
| 2 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 655A-223 | A | ZER |
| 2 | EA | DOOR CONTACT | 7764 | 628 | SCE |

OPERATIONAL DESCRIPTION

BOTH LEAVES

RIM EXIT DEVICE. FREE EGRESS AT ALL TIMES BY PRESSING PUSHBAR. ENTRY BY PULL WHEN DEVICE DOGGED DOWN. DOGGING BY KEYED CYLINDER LOCKS DOWN THE PUSHBAR SO THE LATCHBOLT REMAINS RETRACTED AND DOOR FUNCTIONS AS A PUSH/PULL. SELF-CLOSING. SPRING LOADED STOP. PUSH SIDE MOUNTED.

ACCESS CONTROL: SURFACE MOUNTED ELECTRIFIED LATCH, FOB/CARD READER AND OTHER ACCESS CONTROL COMPONENTS PROVIDED AND INSTALLED BY ACCESS CONTROL VENDOR AS PART OF ALLOWANCE #2.

KEYED REMOVABLE MULLION

DOOR POSITION SWITCH(S) MONITOR WHETHER THE DOOR IS OPEN OR CLOSED.

Hardware Group No. 02

For use on Door #(s):

101, 107A

Provide each PR door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|-----|----------------------------------|--------------------|---------|-----|
| 2 | EA | CONT. HINGE | 112XY | US28 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4023 | SP28 | FAL |
| 2 | EA | PANIC HARDWARE | CD-25-R-EO | 626 | FAL |
| 3 | EA | MORTISE CYLINDER | AS REQUIRED | 626 | UNK |
| 2 | EA | 90 DEG OFFSET PULL | 8190EZHD 12" O | 630-316 | IVE |
| 2 | EA | SURFACE CLOSER | SC71 SS | 689 | FAL |
| 2 | EA | CLOSER BRACKETS, SPACERS, ETC | AS REQUIRED | 626 | FAL |
| | SET | WEATHER STRIPPING | BY DOOR/FRAME MFR. | | UNK |

OPERATIONAL DESCRIPTION**BOTH LEAVES**

RIM EXIT DEVICE. FREE EGRESS AT ALL TIMES BY PRESSING PUSHBAR. ENTRY BY PULL WHEN DEVICE DOGGED DOWN. DOGGING BY KEYED CYLINDER LOCKS DOWN THE PUSHBAR SO THE LATCHBOLT REMAINS RETRACTED AND DOOR FUNCTIONS AS A PUSH/PULL. SELF-CLOSING. SPRING LOADED STOP INCLUDED. PUSH SIDE MOUNTED.

ACCESS CONTROL: SURFACE MOUNTED ELECTRIFIED LATCH, FOB/CARD READER AND OTHER ACCESS CONTROL COMPONENTS PROVIDED AND INSTALLED BY ACCESS CONTROL VENDOR AS PART OF ALLOWANCE #2.

KEYED REMOVABLE MULLION

Hardware Group No. 03a

For use on Door #(s):

102

Provide each SGL door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|-----|----------------------------------|---------------------------------------|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | US28 | IVE |
| 1 | EA | STOREROOM LOCK | T581L6 DAN | 626 | FAL |
| 1 | EA | CYLINDER - KEY IN LEVER | AS REQUIRED | 626 | UNK |
| 1 | EA | ELECTRIC STRIKE | 6211AL FSE CON 12/16/24/28 VAC/VDC | 630 | VON |
| 1 | EA | SURFACE CLOSER | SC71A REG OR PA AS REQ | 689 | FAL |
| 1 | EA | CLOSER BRACKETS, SPACERS, ETC | AS REQUIRED | 626 | FAL |
| 1 | EA | WALL STOP | WS406/407CVX | 630 | IVE |
| | SET | WEATHER STRIPPING | BY DOOR/FRAME MFR. | | UNK |
| 1 | EA | WIRE HARNESS | CON-6W | | SCH |
| 1 | EA | DESK MOUNT BUTTON | 660-PB | 628 | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-8P | LGR | SCE |

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

PUSH REMOTE PUSH BUTTON TO MOMENTARILY RELEASE ELEC STRIKE ALLOWING VISITOR TO ENTER.

SELF-CLOSING. PULL SIDE MOUNTED.

ACCESS CONTROL: SURFACE MOUNTED ELECTRIFIED LATCH, FOB/CARD READER AND OTHER ACCESS CONTROL COMPONENTS PROVIDED AND INSTALLED BY ACCESS CONTROL VENDOR AS PART OF ALLOWANCE #2.

Hardware Group No. 03b

For use on Door #(s):

102A, 102B

Provide each SGL door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|-----|----------------------------------|------------------------|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | US28 | IVE |
| 1 | EA | CLASSROOM LOCK | T561L6 DAN | 626 | FAL |
| 1 | EA | CYLINDER - KEY IN LEVER | AS REQUIRED | 626 | UNK |
| 1 | EA | MAGNETIC LOCK | M490P | 628 | SCE |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | SC71A REG OR PA AS REQ | 689 | FAL |
| 1 | EA | CLOSER BRACKETS, SPACERS, ETC | AS REQUIRED | 626 | FAL |
| | SET | WEATHER STRIPPING | BY DOOR/FRAME MFR. | | UNK |
| 1 | EA | DESK MOUNT BUTTON | 660-T4 | 628 | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-8P | LGR | SCE |

OPERATIONAL DESCRIPTION

CLASSROOM LOCK - OUTSIDE LEVER LOCKED AND UNLOCKED BY KEY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

SELF-CLOSING.

CONCEALED OVERHEAD STOP

MAG LOCK OFF AND DOOR UNLOCKED DURING NORMAL SCHOOL HOURS.

MAG LOCK(S) ACTIVATED BY REMOTE PUSH BUTTON TO 'LOCK" DOOR DURING INTRUDER EVENT STOPPING INTRUDER FROM ENTERING THE SCHOOL.

DOOR TO BE LOCKED DURING NON-SCHOOL HOURS.

ACCESS CONTROL: SURFACE MOUNTED ELECTRIFIED LATCH, FOB/CARD READER AND OTHER ACCESS CONTROL COMPONENTS PROVIDED AND INSTALLED BY ACCESS CONTROL VENDOR AS PART OF ALLOWANCE #2.

Hardware Group No. 04

For use on Door #(s):

103

Provide each SGL door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|----------------------------|----------------|--------|-----|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | 652 | IVE |
| 1 | EA | STOREROOM LOCK | T581L6 DAN | 626 | FAL |
| 1 | EA | CYLINDER - KEY IN LEVER | AS REQUIRED | 626 | UNK |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 3 | EA | SILENCER | SR64 | GRY | IVE |

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

CONCEALED OVERHEAD STOP.

Hardware Group No. 05

For use on Door #(s):

105, 105A, 106,
106A

Provide each SGL door(s) with the following:

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|----------------------------|----------------|--------|-----|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | 652 | IVE |
| 1 | EA | CLASSROOM LOCK | T561L6 DAN | 626 | FAL |
| 1 | EA | CYLINDER - KEY IN LEVER | AS REQUIRED | 626 | UNK |
| 1 | EA | WALL STOP | WS406/407CCV | 630 | IVE |
| 3 | EA | SILENCER | SR64 | GRY | IVE |

OPERATIONAL DESCRIPTION

CLASSROOM LOCK - OUTSIDE LEVER LOCKED AND UNLOCKED BY KEY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

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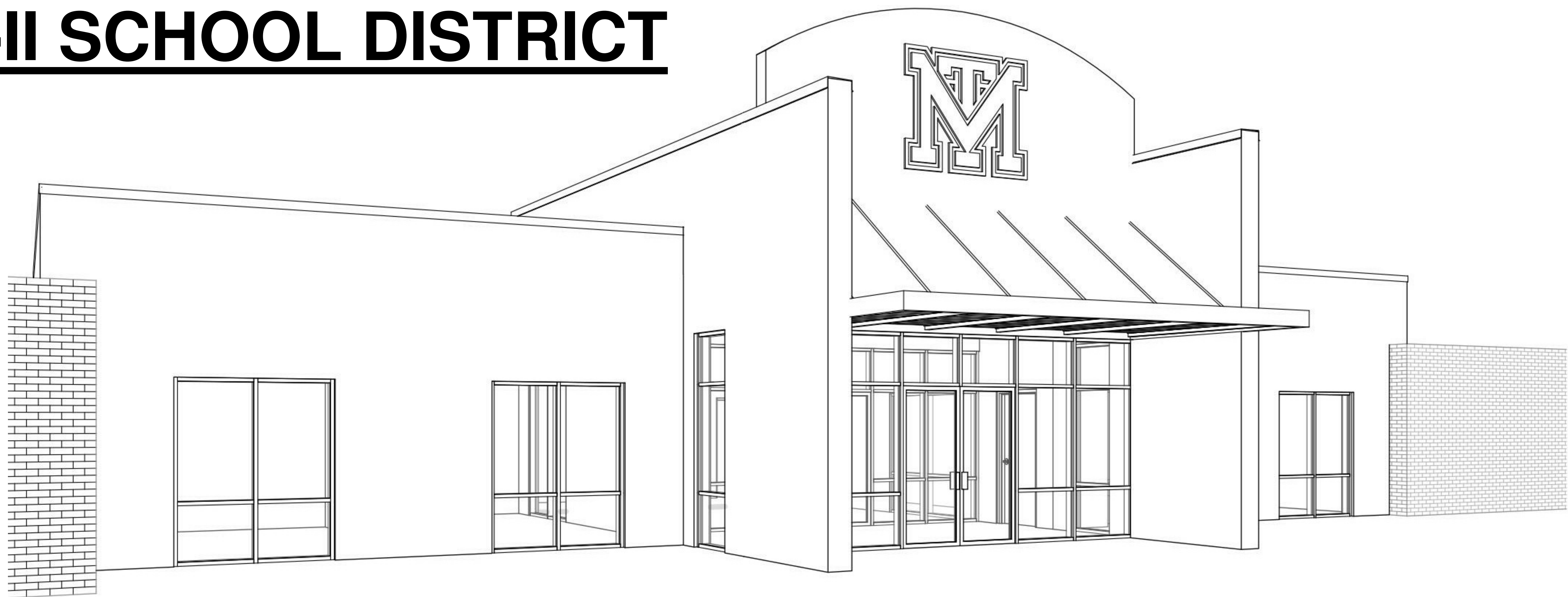
NEW HIGH SCHOOL ADDITIONS

RALLS COUNTY R-II SCHOOL DISTRICT

HIGHWAY 19, CENTER, MISSOURI 63436

ISSUED FOR BIDDING

5/8/2020



ARCHITECT OF RECORD:

ARCHITECHNICS
architects • engineers • interior designers

CONTACT PERSON: JACQUES REYNOLDS
PROJECT NO. 5910C
STATE OF MISSOURI
ENGINEERING DESIGN FIRM 2014009673
ARCHITECTURAL DESIGN FIRM 000423

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HIGHWAY 19
CENTER, MO 63436
PHONE: (573) 267-3397

GENERAL NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS.
2. ANY DISCREPANCIES BETWEEN STATED AND EXISTING CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT.
3. DISCREPANCIES OR CONFLICTS BETWEEN SPECIFICATIONS AND DRAWINGS SHALL BE MADE KNOWN TO THE ARCHITECT FOR CLARIFICATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THOSE AREAS TO REMAIN UNDISTURBED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS, AS PER THE WRITTEN SPECIFICATIONS, TO MAINTAIN SAFETY AT THE CONSTRUCTION SITE, AND HE IS SOLELY RESPONSIBLE FOR SAFETY MEASURES. THE CONTRACTOR IS ALSO SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND TECHNIQUES REGARDING EXECUTION OF THE WORK.
6. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL AND STATE CODES AND RECEIVE LOCAL AND STATE APPROVAL WHERE NECESSARY PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS AND PAY ALL LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE BUILDING LAWS, ORDINANCES, OR REGULATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
9. THE CONTRACTOR MUST UNDERSTAND THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SAME IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY.
10. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY TEMPORARY MEASURES FOR THE PROTECTION OF THE WORK, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.

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G000 TITLE SHEET

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D100 DEMOLITION PLAN

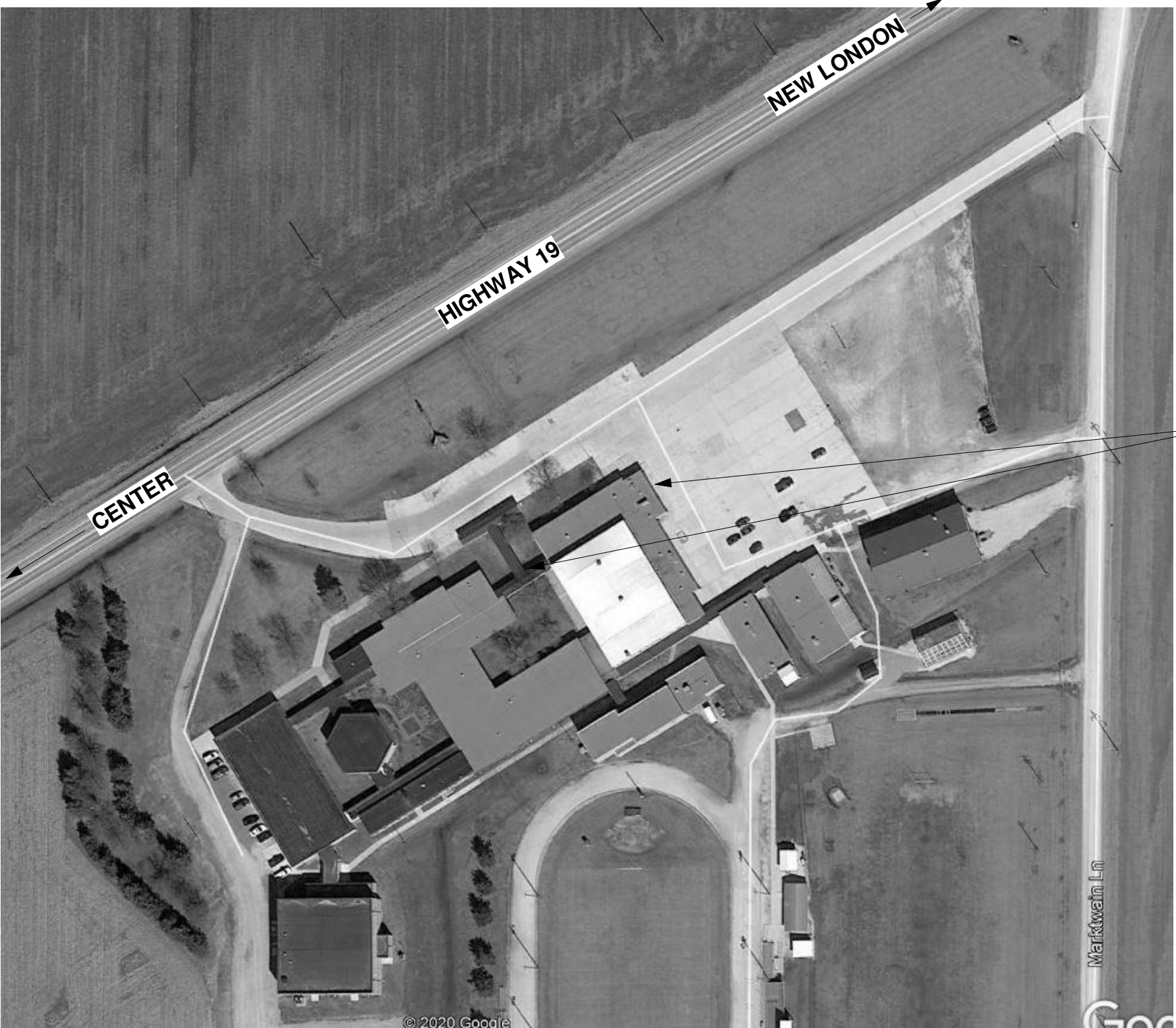
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ELECTRICAL
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AREA OF WORK

AERIAL PHOTO

AREA OF WORK
(APPROX. 2850 SF)

BUILDING ADDITION KEY

- 1959 ORIGINAL
- 1969 ADDITION
- 1996 ADDITION
- 2003 ADDITION
- 2009 ADDITION
- 2020 NEW ADDITION

1 STATE OF MISSOURI
SCALE: 1/2" = 1'-0"

2 CAMPUS PLAN
SCALE: 1" = 40'-0"

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RALLS COUNTY R-II SCHOOL DISTRICT
NEW HIGH SCHOOL ADDITIONS
HIGHWAY 19, CENTER, MISSOURI 63436

ISSUED FOR BIDDING

NOT FOR CONSTRUCTION

ISSUE DATE: 5/8/20

REVISIONS

| NO. | Date | Description |
|-----|---------|-------------|
| 1 | 5/21/20 | ADD #2 |
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PROJECT NUMBER: 5910C

TITLE SHEET

DWG. NO.

G000

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ISSUED FOR BIDDING

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ISSUE DATE: 5/8/20

REVISIONS

NO. Date Description

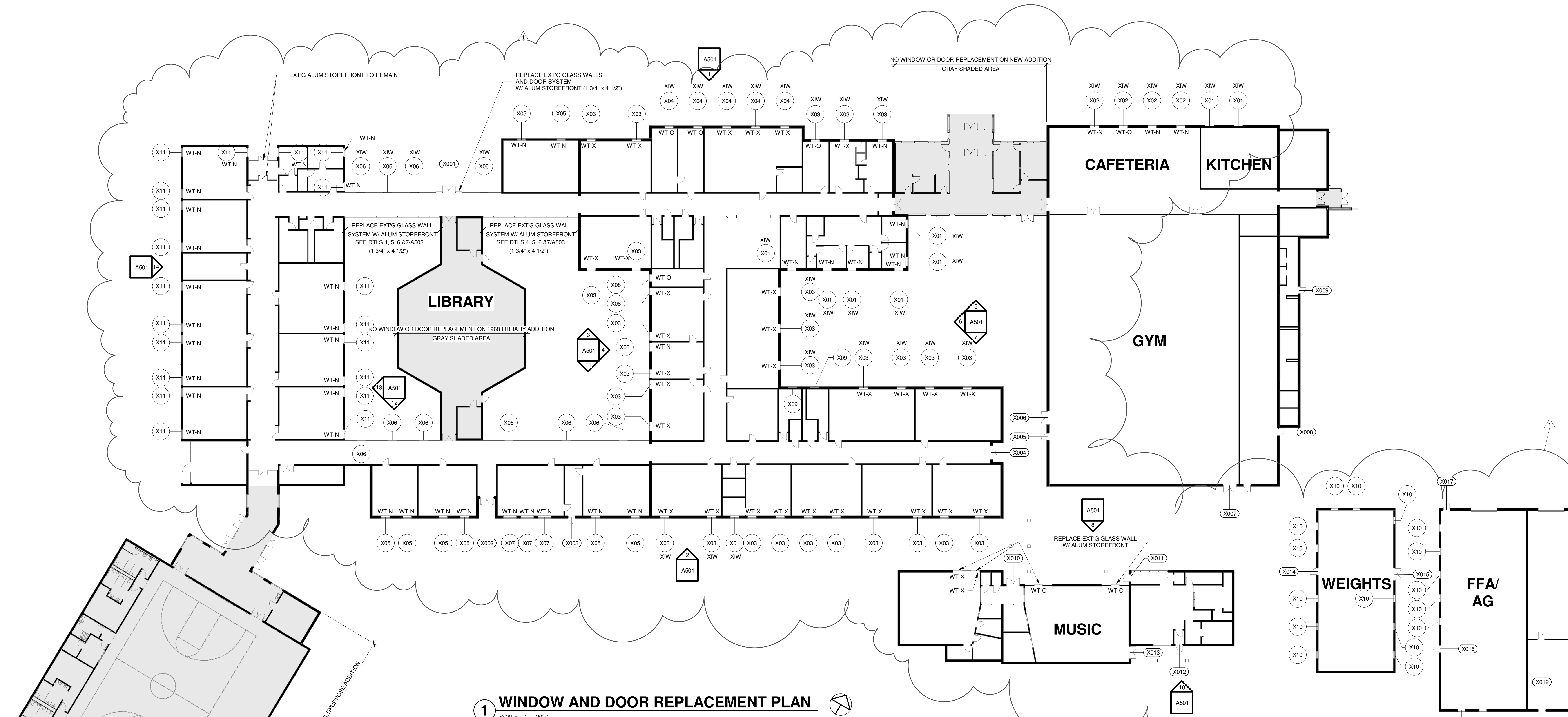
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PROJECT NUMBER: 5910C

WINDOW AND DOOR REPLACEMENT PLAN

DWG. NO.

A103



| DOOR SCHEDULE - REPLACEMENT | | | | | | | | | | |
|-----------------------------|---------|---------|-----------|---------|--------|---------|--------|---------------|-----------------|--|
| MARK | SIZE | | | DOOR | | FRAME | | | | HARDWARE COMMENTS |
| | WIDTH | HEIGHT | THICKNESS | TYPE | FINISH | TYPE | FINISH | HEAD | JAMB | |
| X001 | 6' - 0" | 7' - 0" | 1 3/4" | 1A/A500 | PREFIN | 2A/A500 | PREFIN | 9/A502 SIM | 10, 11/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X002 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 13/A502 SIM | 14/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X003 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X004 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X005 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X006 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X007 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X008 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X009 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 13/A502 SIM | 14/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X010 | 6' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 1, 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X011 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 1, 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X012 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 1, 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X013 | 5' - 6" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 1, 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X014 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X015 | 5' - 6" | 7' - 0" | 1 3/4" | 1E/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X016 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X017 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X018 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| X019 | 3' - 0" | 7' - 0" | 1 3/4" | 1B/A500 | PAINT | 2C/A500 | PAINT | 5/A502 SIM | 2/A502 SIM | 1 ACCESS CONTROL BY OWNER - SEE ALLOWANCES |

NOTE: HARDWARE SET 1A IS THE SAME AS HARDWARE SET 1, MODIFIED FOR SINGLE LEAF OPENING.

NOTE: GC VERIFY HEAD DIMENSION OF EXISTING EXTERIOR DOORS TO BE REPLACED AND MATCH

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OWNER PHONE NUMBER

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**ISSUED FOR
BIDDING**

**NOT FOR
CONSTRUCTION**

ISSUE DATE: 5/8/20

REVISIONS

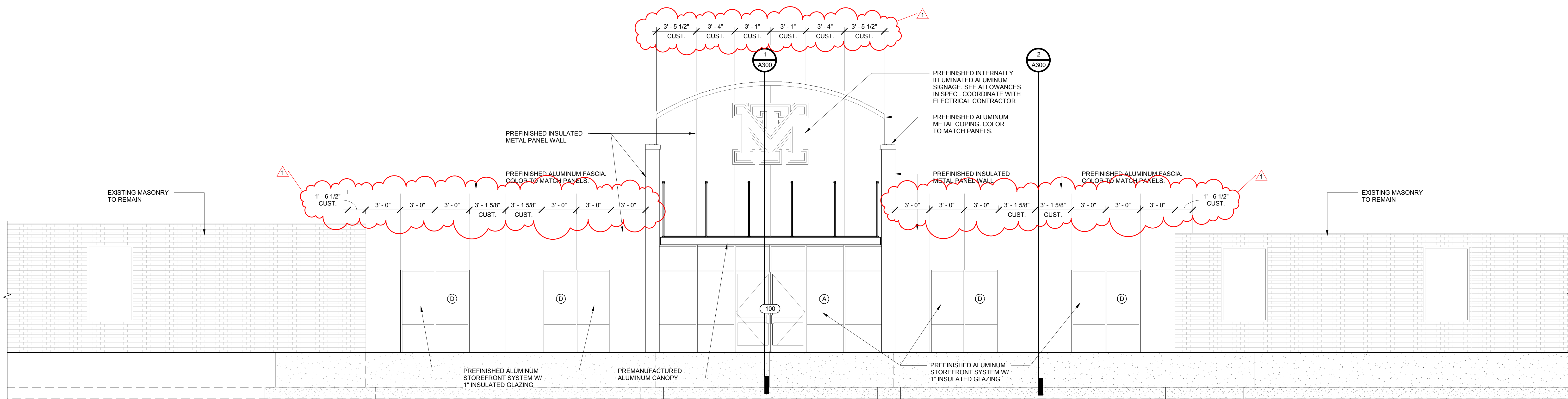
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PROJECT NUMBER: 5910C

**EXTERIOR
ELEVATIONS**

DWG. NO.

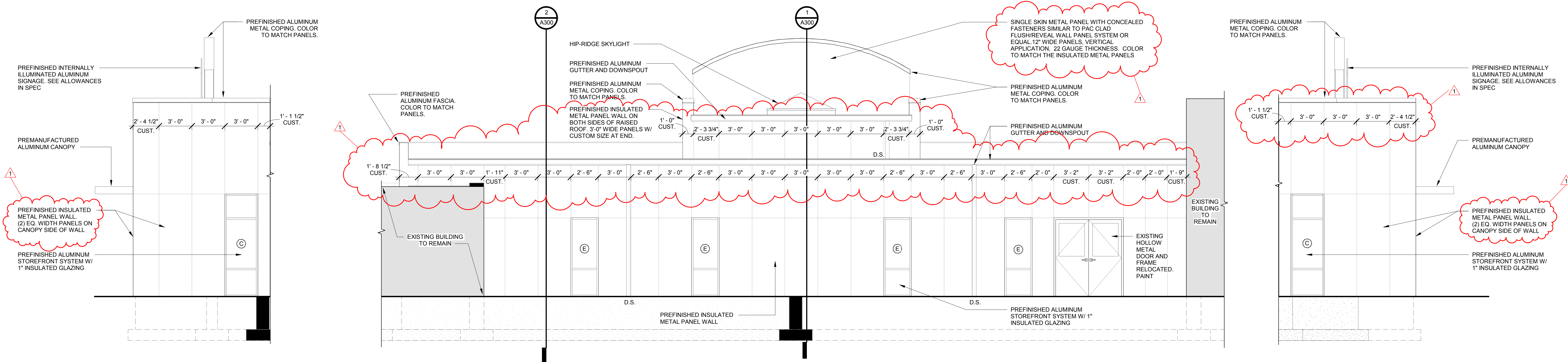
A200



1 MAIN ENTRY NORTH ELEVATION

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

ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



2 MAIN ENTRY SOUTH ELEVATION

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

ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

3 MAIN ENTRY WEST PARTIAL ELEVATION

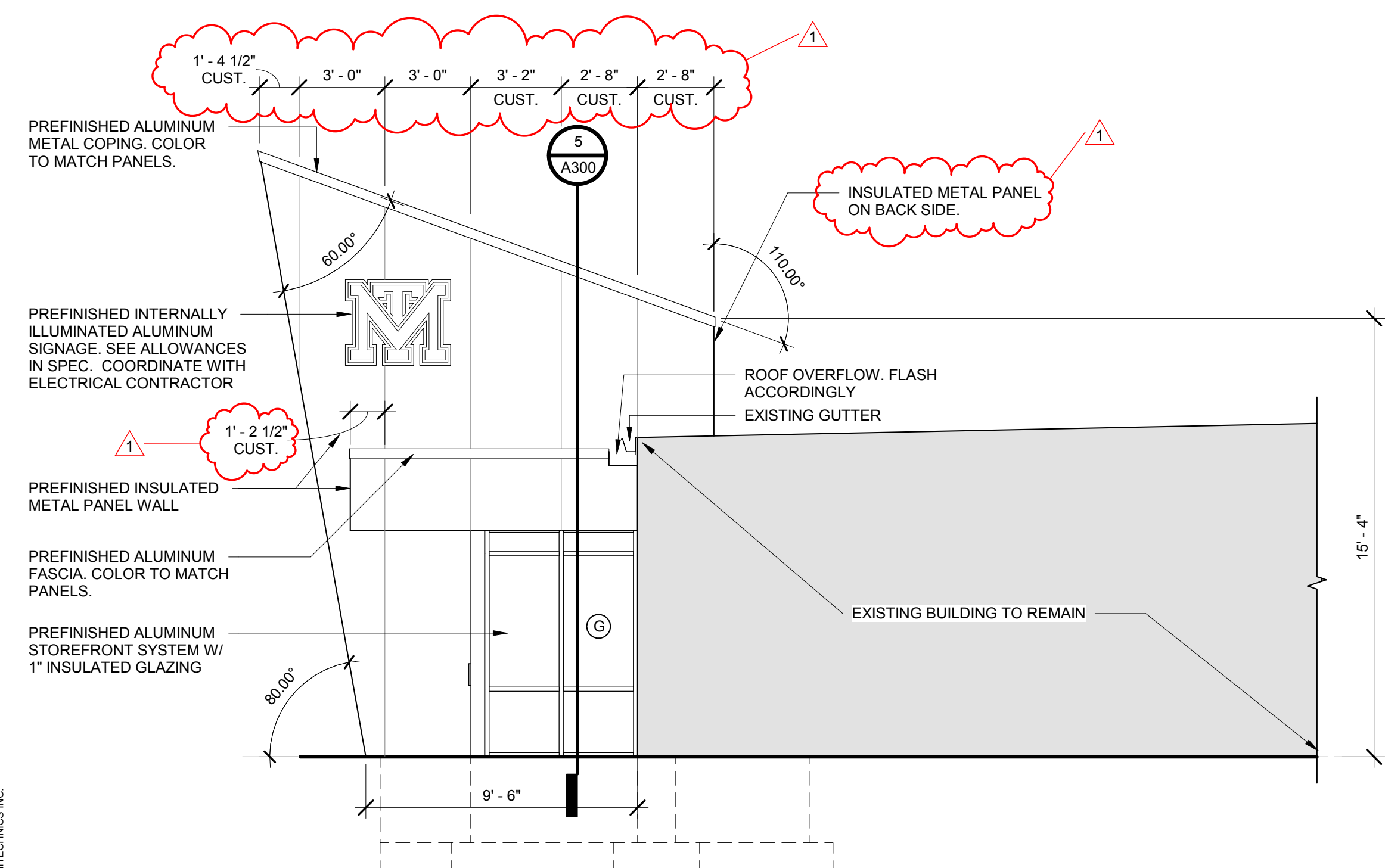
SCALE: 1/4" = 1'-0"

ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

4 MAIN ENTRY EAST PARTIAL ELEVATION

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

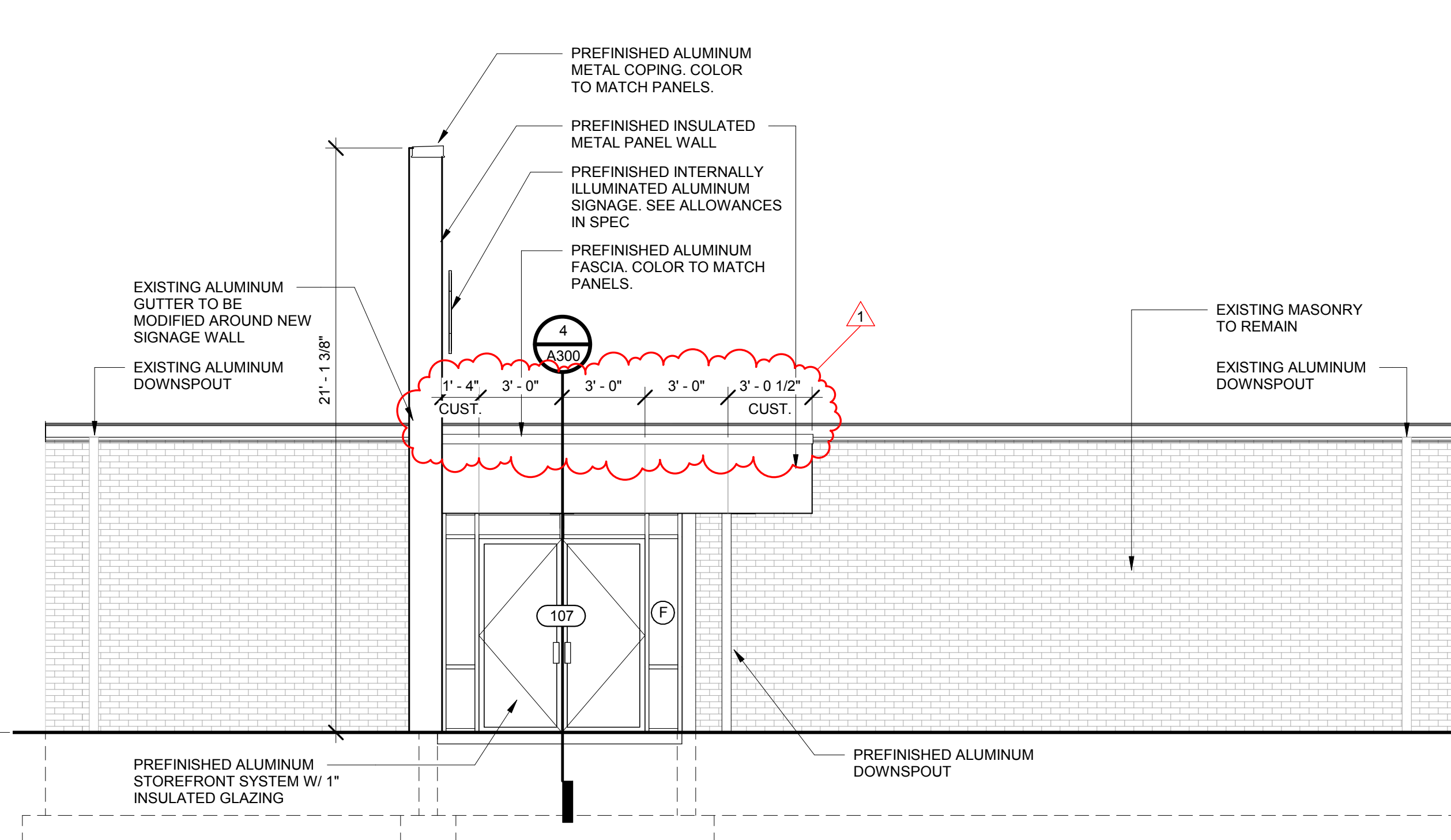
ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



5 GYM ENTRY NORTH ELEVATION

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

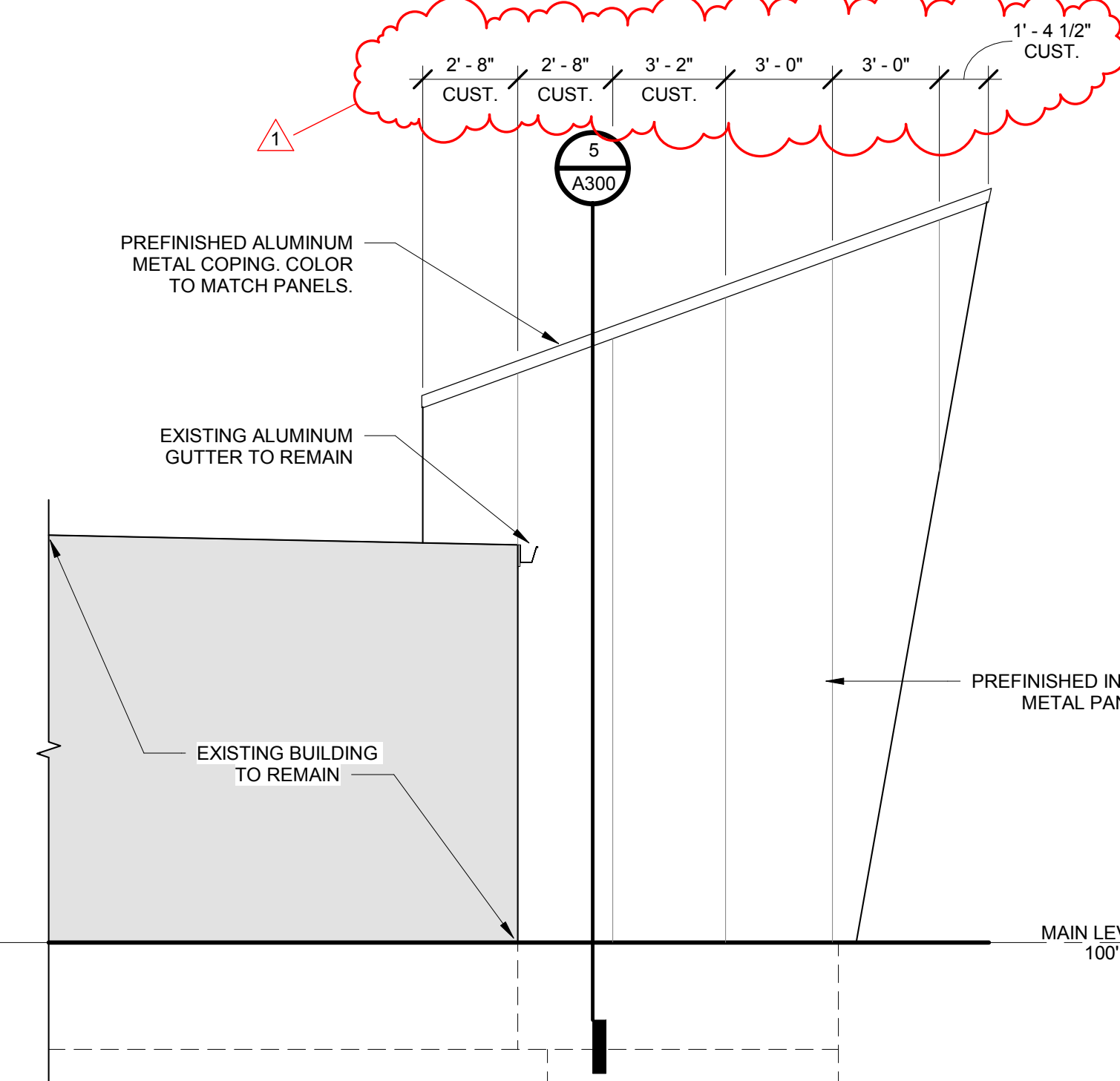
ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



6 GYM ENTRY EAST ELEVATION

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

ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

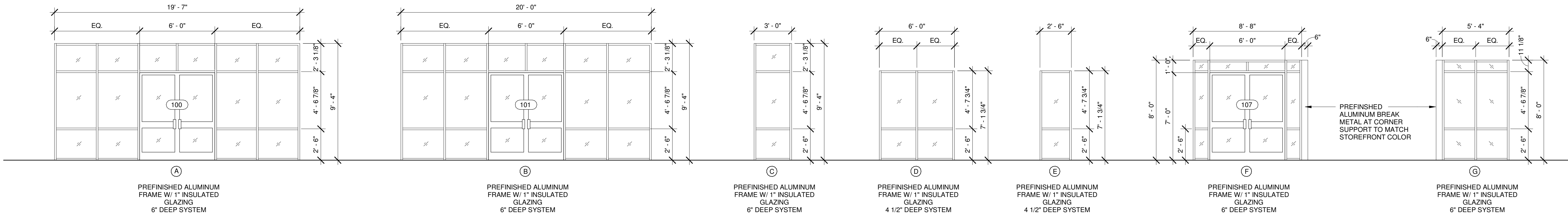
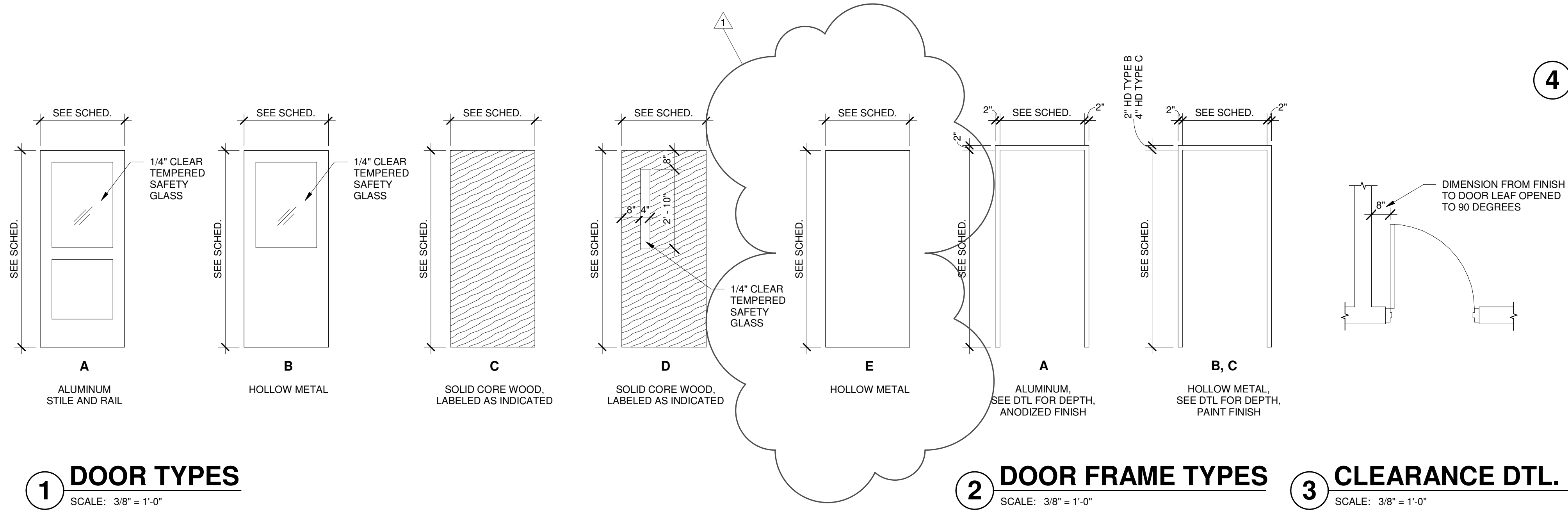


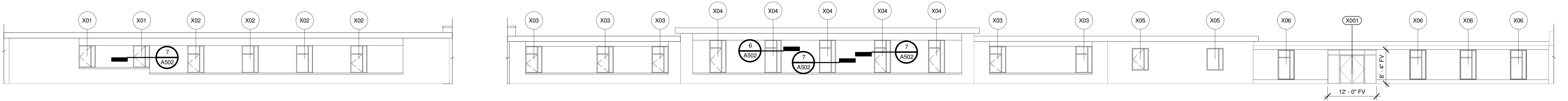
7 GYM ENTRY SOUTH ELEVATION

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

ALL GLAZING IN EXTERIOR DOORS AND EXTERIOR WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

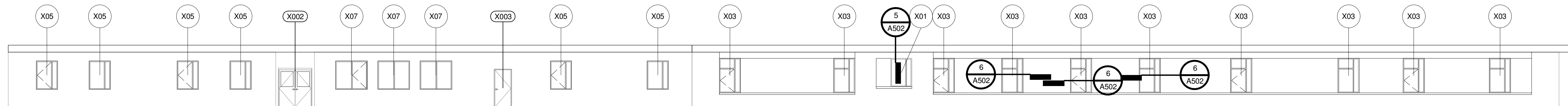
| DOOR SCHEDULE - ADDITION | | | | | | | | | | | |
|--------------------------|---------|---------|-----------|---------|----------|---------|----------|--------|--------|----------|--|
| MARK | SIZE | | | DOOR | | FRAME | | | | HARDWARE | COMMENTS |
| | WIDTH | HEIGHT | THICKNESS | TYPE | FINISH | TYPE | FINISH | HEAD | JAMB | | |
| 100 | 6' - 0" | 7' - 0" | 1 3/4" | 1A/A500 | ANODIZED | 2A/A500 | SEE DTLS | MANUF. | MANUF. | 1 | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 101 | 6' - 0" | 7' - 0" | 1 3/4" | 1A/A500 | ANODIZED | 2A/A500 | SEE DTLS | MANUF. | MANUF. | 2 | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 102 | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 3a | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 102A | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 3b | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 102B | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 3b | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 103 | 3' - 0" | 7' - 0" | 1 3/4" | 1C/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 4 | |
| 104 | 6' - 0" | 7' - 0" | 1 3/4" | EXTG | PAINT | EXTG | PAINT | 6/A500 | 7/A500 | EXTG | EXISTING DOOR RELOCATED, ACCESS CONTROL BY OWNER, SEE ALLOWANCES |
| 105 | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 5 | |
| 105A | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 5 | |
| 106 | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 5 | |
| 106A | 3' - 0" | 7' - 0" | 1 3/4" | 1D/A500 | STAIN | 2B/A500 | PAINT | 4/A500 | 5/A500 | 5 | |
| 107 | 6' - 0" | 7' - 0" | 1 3/4" | 1A/A500 | ANODIZED | 2A/A500 | SEE DTLS | MANUF. | MANUF. | 1 | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |
| 107A | 6' - 0" | 7' - 0" | 1 3/4" | 1A/A500 | ANODIZED | 2A/A500 | SEE DTLS | 8/A500 | 9/A500 | 2 | ACCESS CONTROL BY OWNER - SEE ALLOWANCES |





1 NORTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

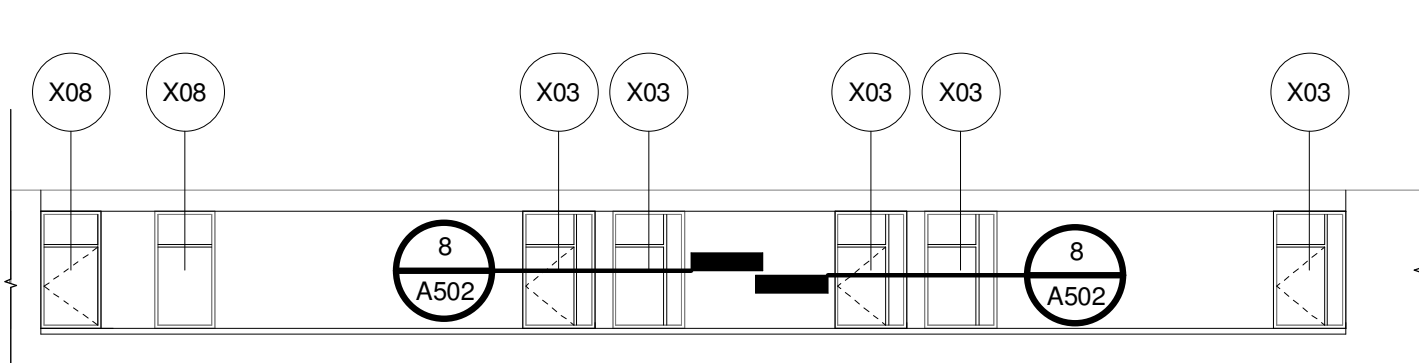


2 SOUTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

3 LIBRARY COURT SOUTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



4 LIBRARY COURT WEST ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

5 ADMIN COURT SOUTH ELEVATION

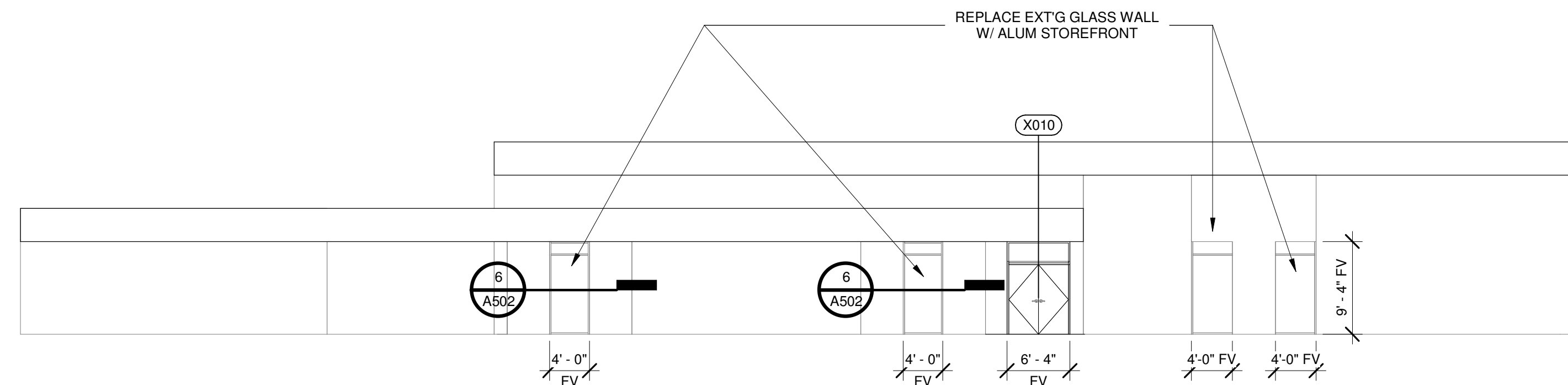
SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

6 ADMIN COURT WEST ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

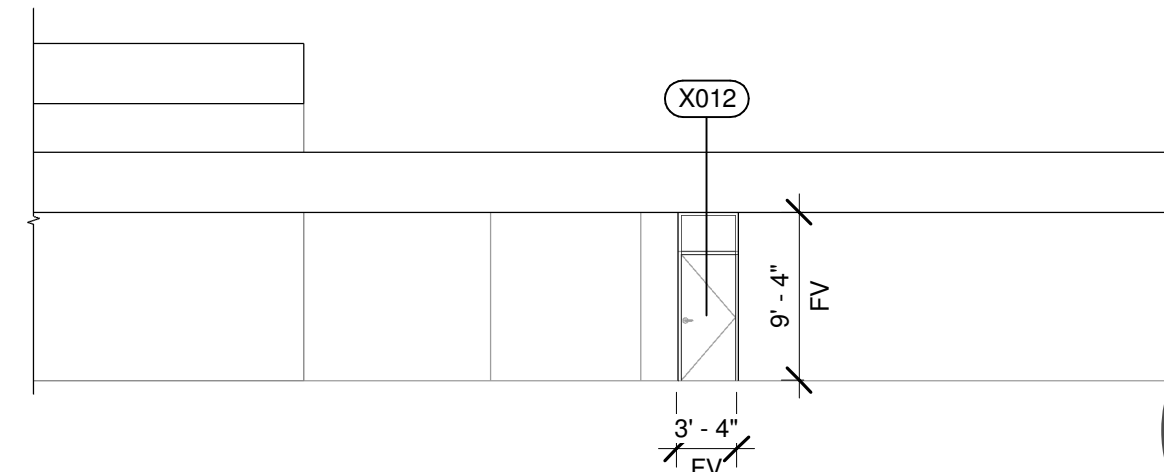
7 ADMIN COURT NORTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



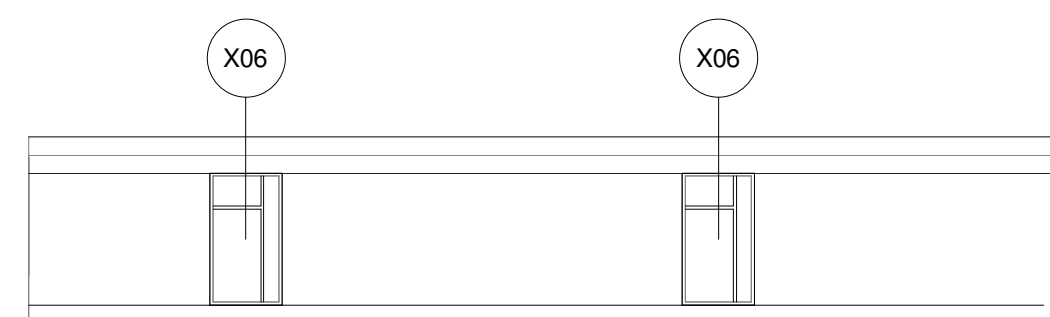
8 MUSIC BUILDING NORTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



10 MUSIC BUILDING SOUTH ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



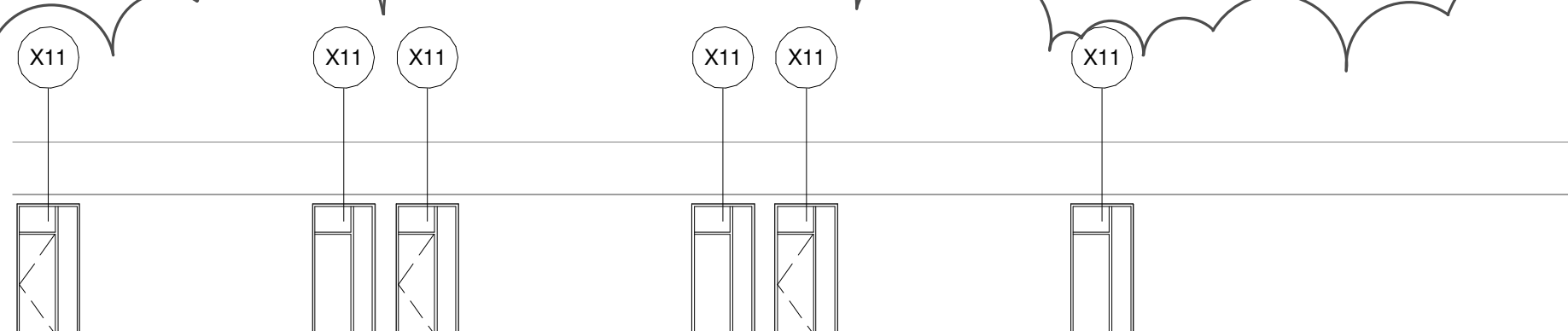
11 LIBRARY COURT NORTH ELEVATION - EAST PORTION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



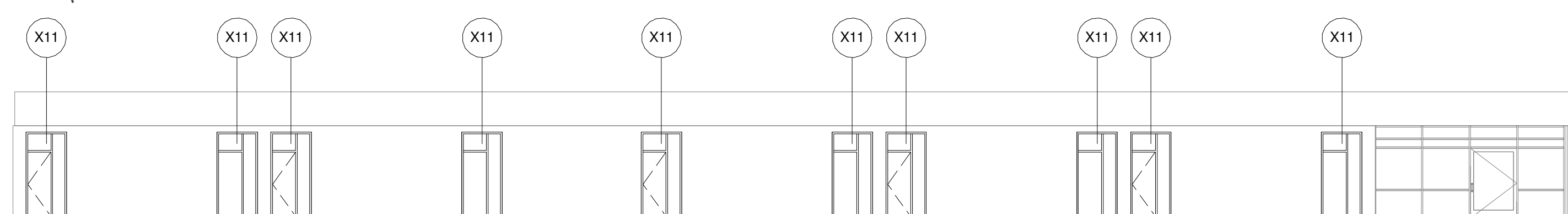
12 LIBRARY COURT NORTH ELEVATION - WEST PORTION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



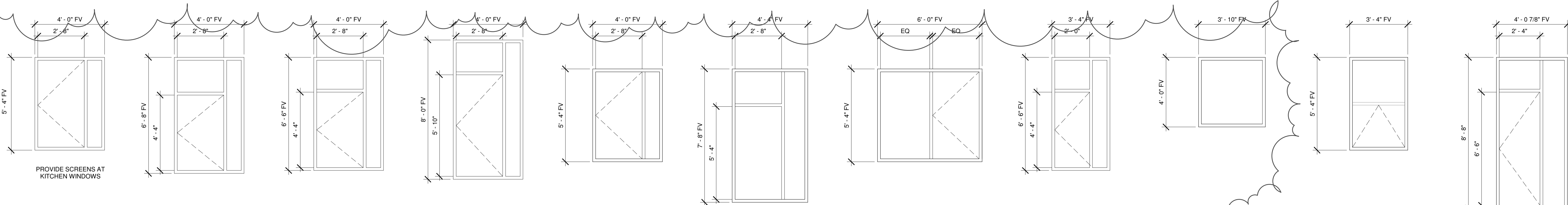
13 LIBRARY COURT EAST ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



14 JUNIOR HIGH WEST ELEVATION

SCALE: 3/32" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.



9 WINDOW TYPES

SCALE: 3/8" = 1'-0"
ALL WINDOWS TO RECEIVE SECURITY FILM EQ. TO 3M ULTRA NIGHT VISION S25 OR EQUAL.

OWNER CONTACT
OWNER PHONE NUMBER

ARCHITECT:
ARCHITECTONICS
510 MAINE, 10TH FLOOR
QUINCY, ILLINOIS 62301
217.222.0554
JACQUES REYNOLDS, A.I.A.

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BRIAN SPENDER, S.E.

MECHANICAL ENGINEER:
ARCHITECTONICS
510 MAINE, 10TH FLOOR
QUINCY, ILLINOIS 62301
217.222.0554
TODD MOORE, P.E.

ISSUED FOR
BIDDING

NOT FOR
CONSTRUCTION

ISSUE DATE: 5/8/20

REVISIONS

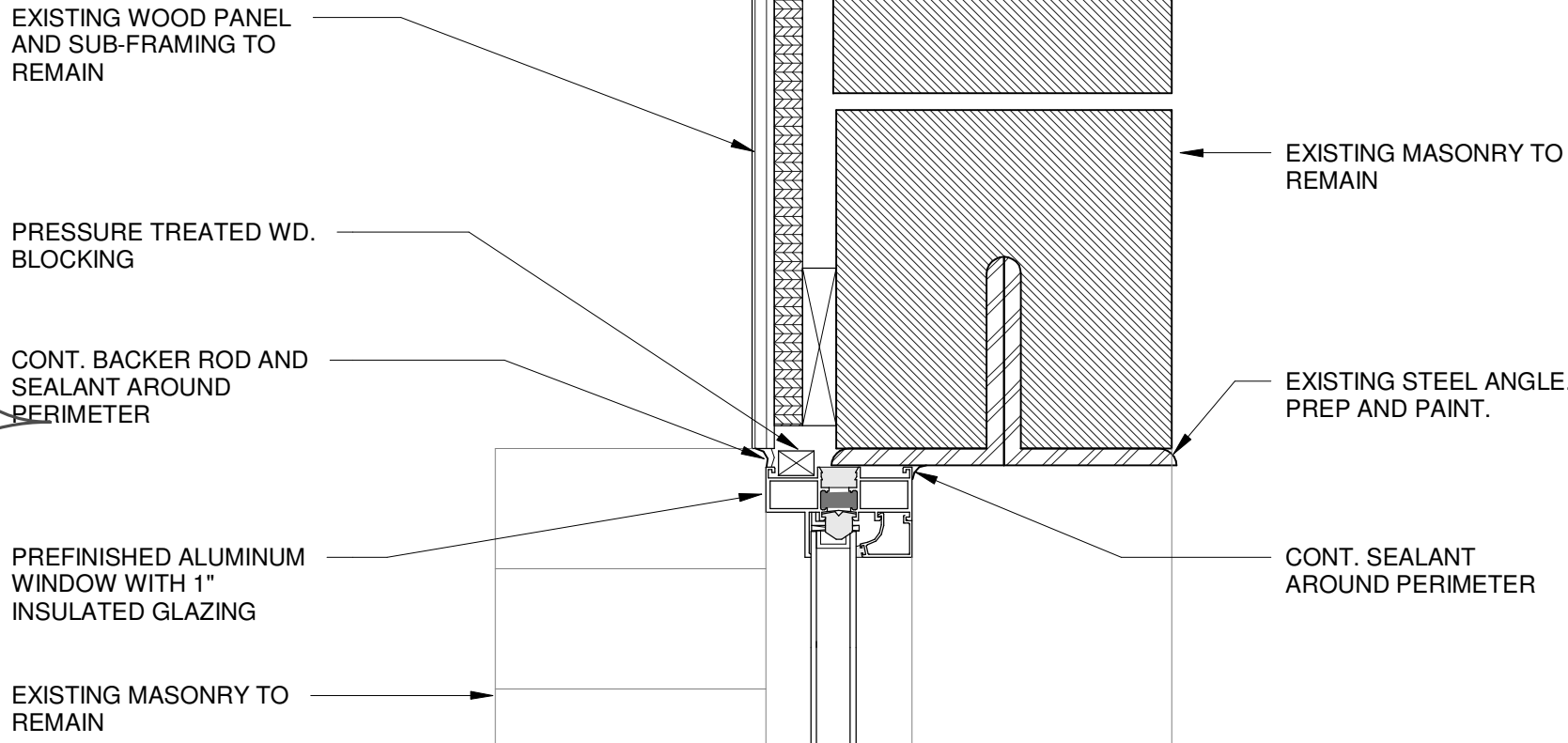
| NO. | Date | Description |
|-----|---------|-------------|
| 1 | 5/21/20 | ADD. #2 |
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| | | |
| | | |

PROJECT NUMBER: 5910C

**WINDOW AND
DOOR
REPLACEMENT
ELEVATIONS**

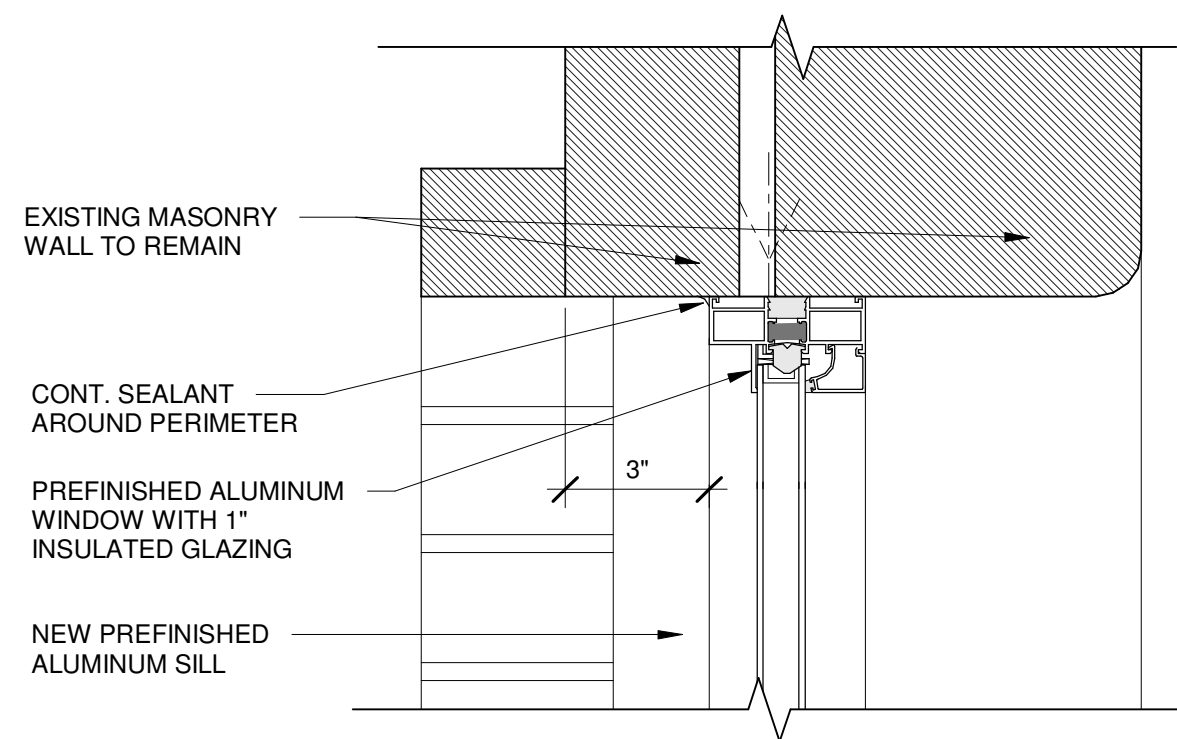
DWG. NO.

A501



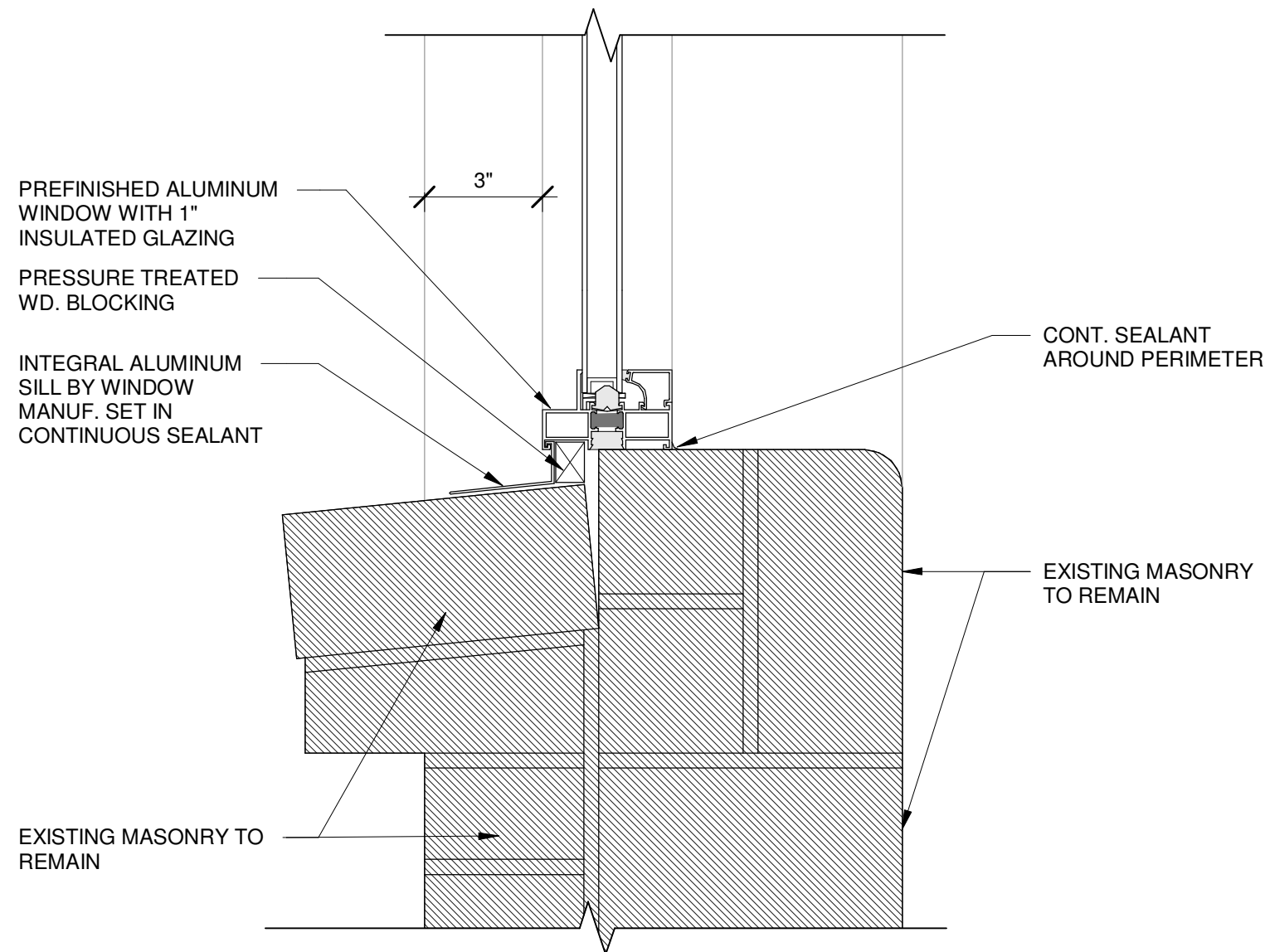
1 WINDOW HEAD DETAIL

SCALE: 3" = 1'-0"



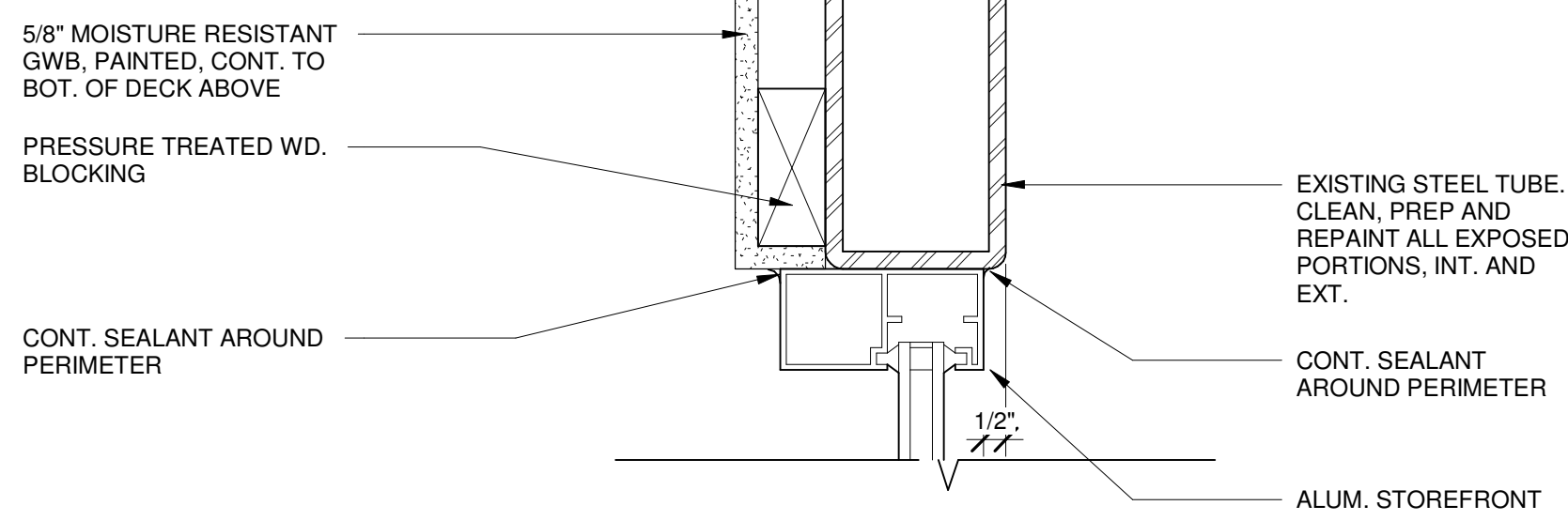
2 WINDOW JAMB DETAIL

SCALE: 3" = 1'-0"



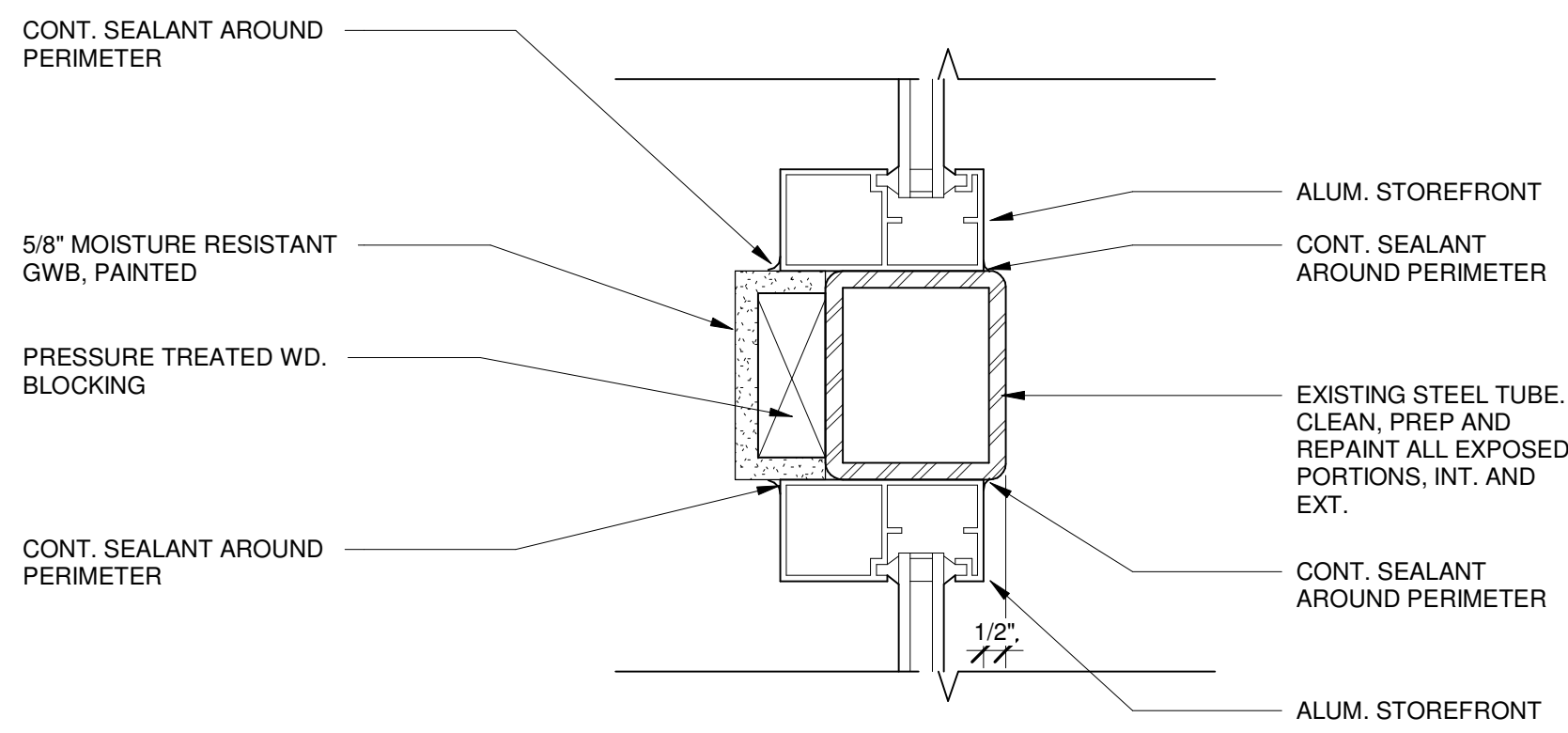
3 WINDOW SILL DETAIL

SCALE: 3" = 1'-0"



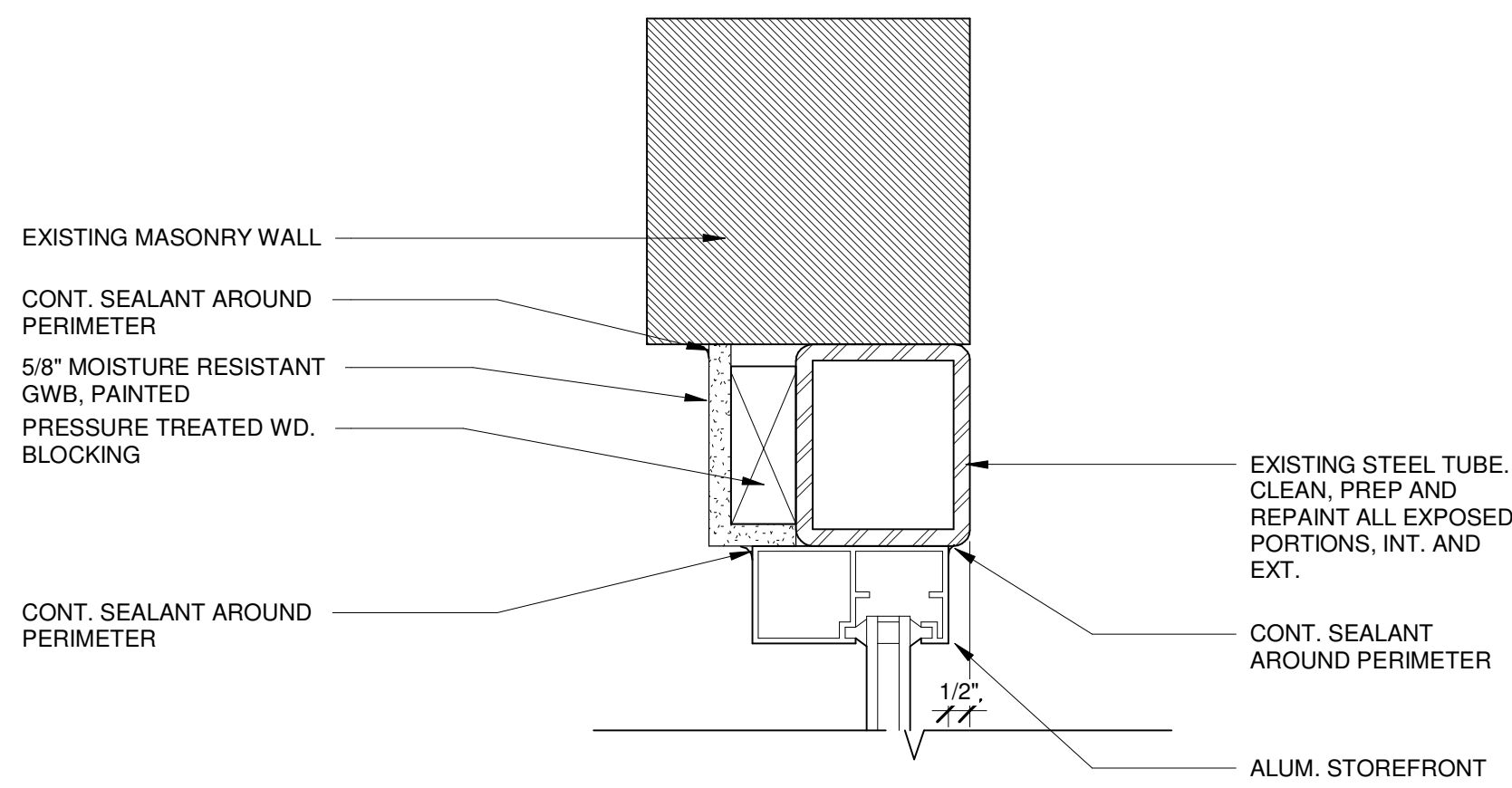
4 STOREFRONT HEAD DETAIL

SCALE: 3" = 1'-0"



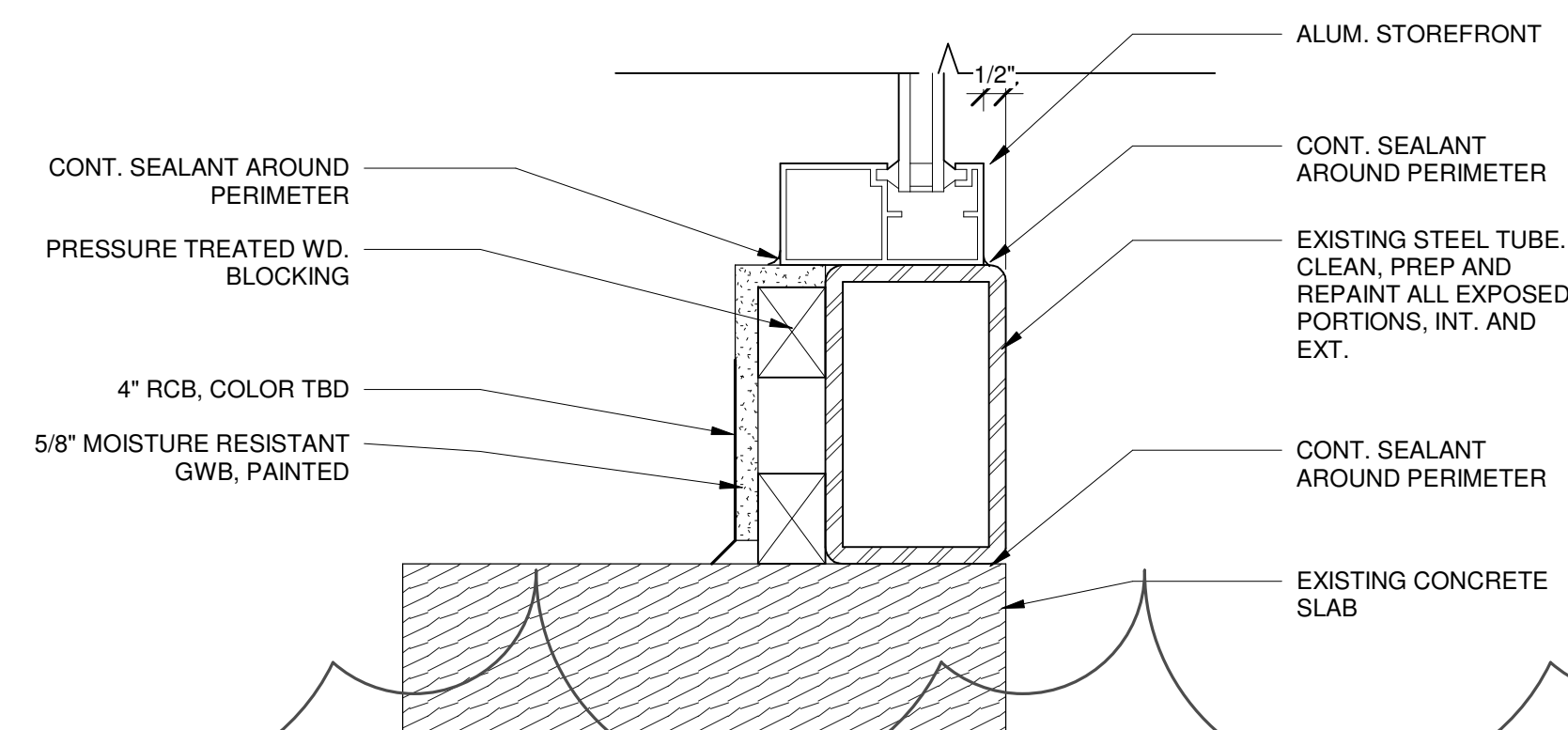
5 STOREFRONT JAMB DETAIL

SCALE: 3" = 1'-0"



6 STOREFRONT JAMB DETAIL

SCALE: 3" = 1'-0"



7 STOREFRONT SILL DETAIL

SCALE: 3" = 1'-0"

OWNER CONTACT
OWNER PHONE NUMBER

ARCHITECT:
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QUINCY, ILLINOIS 62301
217.222.0554
TODD MOORE, P.E.

ISSUED FOR
BIDDING

NOT FOR
CONSTRUCTION

ISSUE DATE: 5/8/20

REVISIONS

| NO. | Date | Description |
|-----|---------|-------------|
| 1 | 5/21/20 | ADD #2 |

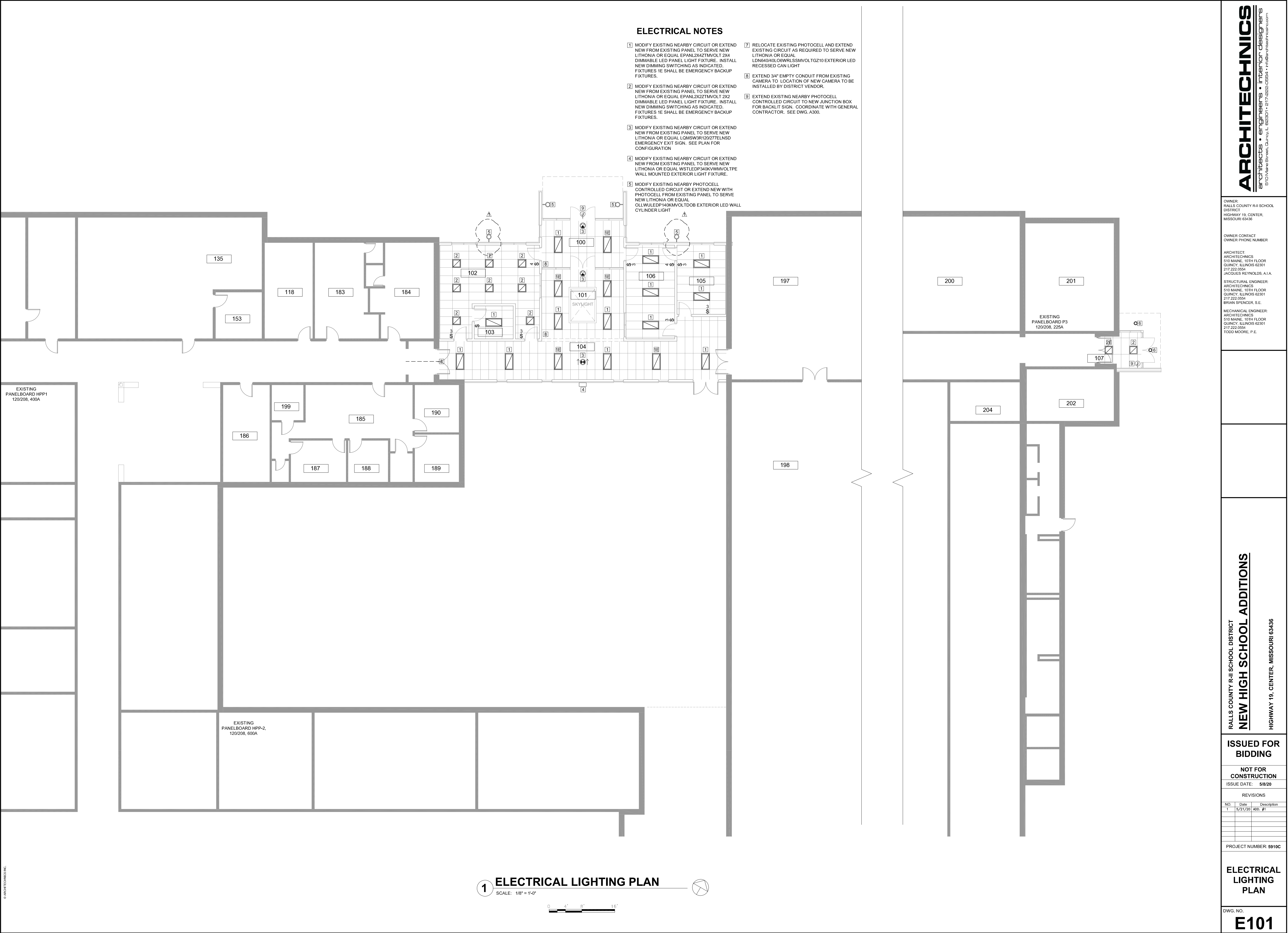
| | | |
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PROJECT NUMBER: 5910C

**WINDOW AND
DOOR
REPLACEMENT
DETAILS**

DWG. NO.

A503



© ARCHITECTONICS INC.

1 ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

- ELECTRICAL NOTES**
- 1. MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW LITHONIA OR EQUAL EPANL2X42TMVOLT 2X4 DIMMABLE LED PANEL LIGHT FIXTURE. INSTALL NEW DIMMING SWITCHING AS INDICATED. FIXTURES 1E SHALL BE EMERGENCY BACKUP FIXTURES.
 - 2. MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW LITHONIA OR EQUAL EPANL2X22TMVOLT 2X2 DIMMABLE LED PANEL LIGHT FIXTURE. INSTALL NEW DIMMING SWITCHING AS INDICATED. FIXTURES 1E SHALL BE EMERGENCY BACKUP FIXTURES.
 - 3. MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW LITHONIA OR EQUAL LONSWR12027TELESD EMERGENCY EXIT SIGN. SEE PLAN FOR CONFIGURATION
 - 4. MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW LITHONIA OR EQUAL WISTLEDP340KVMVOLT PE WALL MOUNTED EXTERIOR LIGHT FIXTURE.
 - 5. MODIFY EXISTING NEARBY PHOTOCELL CONTROLLED CIRCUIT OR EXTEND NEW WITH PHOTOCELL FROM EXISTING PANEL TO SERVE NEW LITHONIA OR EQUAL OLLWLEDP160KVMVOLT D08 EXTERIOR LED WALL CYLINDER LIGHT
 - 7. RELOCATE EXISTING PHOTOCELL AND EXTEND EXISTING CIRCUIT AS REQUIRED TO SERVE NEW LITHONIA OR EQUAL LDN640/40LOBWRLSSMVOLTG210 EXTERIOR LED RECESSED CAN LIGHT
 - 8. EXTEND 3/4" EMPTY CONDUIT FROM EXISTING CAMERA TO LOCATION OF NEW CAMERA TO BE INSTALLED BY DISTRICT VENDOR.
 - 9. EXTEND EXISTING NEARBY PHOTOCELL CONTROLLED CIRCUIT TO NEW JUNCTION BOX FOR BACKLIT SIGN. COORDINATE WITH GENERAL CONTRACTOR. SEE DWG. A300.

ARCHITECTONICS
architects • engineers • interior designers
510 Maine Street, Quincy, IL 62301 • 217.222.0554 • info@architectonics.com

OWNER:
RALLS COUNTY R-II SCHOOL DISTRICT
HIGHWAY 19, CENTER, MISSOURI 63436

OWNER CONTACT
OWNER PHONE NUMBER

ARCHITECT:
ARCHITECTONICS
510 MAINE, 10TH FLOOR
QUINCY, ILLINOIS 62301
217.222.0554
JACQUES REYNOLDS, AIA

STRUCTURAL ENGINEER:
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BRIAN SPENCER, S.E.

MECHANICAL ENGINEER:
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510 MAINE, 10TH FLOOR
QUINCY, ILLINOIS 62301
217.222.0554
TODD MOORE, P.E.

RALLS COUNTY R-II SCHOOL DISTRICT
NEW HIGH SCHOOL ADDITIONS
HIGHWAY 19, CENTER, MISSOURI 63436

ISSUED FOR BIDDING

NOT FOR CONSTRUCTION
ISSUE DATE: 5/8/20

| REVISIONS | | |
|-----------|---------|-------------|
| NO. | Date | Description |
| 1 | 5/21/20 | ADD #1 |
| | | |
| | | |
| | | |
| | | |
| | | |

PROJECT NUMBER: 5910C

ELECTRICAL LIGHTING PLAN

DWG. NO.
E101

ALL CABLING SHALL BE PLENUM RATED

ELECTRICAL NOTES

- 1 MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW DUPLEX RECEPTACLE.
- 2 EXTEND NEW CAT6 CABLING FROM EXISTING DATA RACK TO SERVE NEW DATA PORT.
- 3 MODIFY EXISTING NEARBY CIRCUIT OR EXTEND NEW FROM EXISTING PANEL TO SERVE NEW EXTERIOR DUPLEX RECEPTACLE WITH COVER.
- 4 MODIFY EXISTING NEARBY FIRE ALARM CIRCUIT AND EXTEND NEW CABLING TO SERVE NEW MAGNETIC DOOR HOLD OPEN WITH MIN 12" ARM (VERIFY LENGTH AND COMPATIBILITY WITH EXISTING DOOR)
- 5 MODIFY EXISTING NEARBY FIRE ALARM CIRCUIT AND EXTEND NEW CABLING TO SERVE NEW PULL STATION
- 6 MODIFY EXISTING NEARBY FIRE ALARM CIRCUIT AND EXTEND NEW CABLING TO SERVE NEW HORN STROBE
- 7 MODIFY EXISTING NEARBY FIRE ALARM CIRCUIT AND EXTEND NEW CABLING TO SERVE NEW STROBE

- 8 INSTALL RA SMOKE DETECTOR EXTEND NEARBY FIRE ALARM CIRCUIT TO SERVE UNIT. COORDINATE WITH MECHANICAL CONTRACTOR
- 9 RELOCATE EXISTING WALL HEATER (SEE ED101) TO THIS LOCATION. EXTEND NEW CIRCUIT AS REQUIRED FROM KITCHEN PANEL.
- 10 INSTALL PULL BOX ON EACH SIDE OF IT CLOSET WALL AND EXTEND (4) 2" EMPTY CONDUITS. (1) CONDUIT FOR RELOCATION OF DATA CABLING BY ELECTRICAL CONTRACTOR UNDER THIS CONTRACT. (1) CONDUIT FOR RELOCATION OF CAMERA CABLING BY DISTRICT'S VENDOR AS PART OF ALLOWANCE NO. 3 (SEE SPECS 01 2100). (1) CONDUIT FOR RELOCATION OF DOOR ACCESS CONTROL COMPONENTS BY DISTRICT'S VENDOR AS PART OF ALLOWANCE NO. 2. (1) CONDUIT FOR RELOCATION OF EXISTING HVAC CONTROL WIRING BY MECHANICAL CONTRACTOR.
- 11 REMOVE EXISTING DATA CABLING AND INSTALL NEW CAT 6 CABLING FROM HUB IN IT CLOSET THROUGH NEW 2" CONDUIT AND OVER EXPOSED TO SERVE EXISTING DATA PORT OR WIRELESS ACCESS POINT. INSTALL NEW EXTREME NETWORKS X440-G2-24P-10GE4 SWITCH. VERIFY LOCATION WITH OWNER.

- 12 INSTALL NEW 45A, 3 POLE BREAKER IN EXISTING NEARBY PANEL (SEE DWG. E101) AND EXTEND (3) #8, #10G, 1" C CIRCUIT TO DISCONNECT PROVIDED WITH UNIT. EXTEND NEARBY 120V POWER CIRCUIT TO FEED GFCI PROVIDED WITH UNIT.
- 13 INSTALL PULL BOX ON EACH SIDE OF IT CLOSET WALL AND EXTEND (2) 1" EMPTY CONDUITS FOR SECURITY AND SURVEILLANCE SYSTEM.

EXISTING FIRE ALARM PANEL IS METASYS/JOHNSON CONTROLS IFC 1010. CONTACT DARREN PAIT FOR COMMISSIONING OF SYSTEM. 314-706-8207 DARREN.E.PAIT@JCI.COM

WARNING!
UNDERGROUND UTILITIES
VERIFY LOCATION

WARNING!
UNDERGROUND UTILITIES
VERIFY LOCATION

WARNING!
UNDERGROUND UTILITIES
VERIFY LOCATION

SEE DWG. E101 FOR EXISTING
PANELBOARD LOCATIONS

SEE DWG. E101 FOR EXISTING
PANELBOARD LOCATIONS

WARNING!
UNDERGROUND UTILITIES
VERIFY LOCATION

WARNING!
UNDERGROUND UTILITIES
VERIFY LOCATION

EXISTING FIRE ALARM CIRCUITS CROSS
BETWEEN BUILDINGS UNDER COVERED
WALKWAY NEAR THIS LOCATION. NO
RELOCATION OF CIRCUITS SHOULD BE
REQUIRED TO MAINTAIN A FUNCTIONING
SYSTEM DURING CONSTRUCTION.

1 ELECTRICAL POWER PLAN

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

0' 4' 8' 12'

RECORD OF PLANS AND SPECIFICATIONS

PAGE NO. One

NAME OF PROJECT

Ralls Co RII Additions

PROJECT NO. 5910C DATE BIDS DUE Thursday, May 28, 2020 DEPOSIT \$50.00

TIME AND PLACE OF LETTING

2:00 PM Ralls Co R-II

21622 Highway 19, Center, MO 63436

*** Indicates Potential Bidding Contractor

| CONTRACTOR NAME ADDRESS/PHONE/EMAIL | COPY NO. | DATE RECEIVED | DATE RETURNED | DEPOSIT RECEIVED | DEPOSIT RETURNED |
|--|-------------|------------------|------------------|---------------------|---------------------|
| Architect | #1 | | | | |
| Owner | #2 | | | | |
| Tri-County Electrical Contractors 27469 Florida Rd. Center, MO 63436 573 565-3469 Fax: 574-565-0037 pbarnes@tricountyelectrical.com | D | 5/12/2020 | | | |
| Alarm Systems, Inc 510 Maine Street Quincy, IL 62301 217-222-2280 paul@alarmsystemsinc.com | D | 5/12/2020 | | | |
| Peters HVAC 4560 Paris Gravel Road Hannibal, MO 63401 573-221-0093 Fax 573-221-4631 bhammock@petershvac.net | D | 5/12/2020 | | | |
| RJI Sales 221 Chesterfield Industrial Blvd Chesterfield, MO 63005 636-532-1050 Fax: 636-532-5464 norman.rhea@rji-sales.com | D | 5/12/2020 | | | |
| Jansen Electric 4421 N. 60th Street Quincy, IL 62305 217-223-4016 Fax 217-223-8046 jansen@adams.net | #3 | 5/13/2020 | | | |
| Breckenkamp Painting 3820 Stonegate Rd. Quincy, IL 62305 217-242-8610 Fax: 217-223-6293 michaelbreckenkamp@yahoo.com | D | 5/13/2020 | | | |
| *** Bleigh Construction PO Box 957 Hannibal, MO 63401 573-221-2247 Fax 573-221-4331 lvannatta@bleigh.com | D | 5/13/2020 | | | |
| Moore's Floors 2516 W. Schneidman DR Quincy, IL 62305 217 223-9924 Fax: 217 223-9880 m.moore@moorefloors.us | D | 5/13/2020 | | | |

RECORD OF PLANS AND SPECIFICATIONS

PAGE NO. Two

NAME OF PROJECT

Ralls Co RII Additions

| PROJECT NO. | 5910C | DATE BIDS DUE | 5/28/20 2:00 PM | DEPOSIT: | \$50.00 |
|--|-------------|------------------|------------------|---------------------|---------------------|
| CONTRACTOR NAME ADDRESS/PHONE/EMAIL | COPY NO. | DATE RECEIVED | DATE RETURNED | DEPOSIT RECEIVED | DEPOSIT RETURNED |
| *** Trotter General Contracting, Inc 306 E. South Street Industry, IL 61440 309-836-5040 Fax: 309-836-3756 troyleander@icloud.com | D | 5/13/2020 | | | |
| Perkins Electric 819 N Business Hwy 61 Bowling Green, MO 63334 573-324-5366 Fax: 573-324-5355 perkinselec@sbcglobal.net | D | 5/13/2020 | | | |
| Construct Connect 3825 Edwards Road, STE. 800 Cincinnati, OH 45209 800-364-2059 Jessica.Shipp@constructconnect.co | D | 5/13/2020 | | | |
| A K Electric 111 North 10th St Quincy, IL 62301 217-641-0859 ak@akelect.com | D | 5/13/2020 | | | |
| A.H. Kemner & Sons P.O.Box 16 Quincy, IL 62301 217 222-1559 Fax: 217 222-0131 paul@kemnerpainting.com | D | 5/13/2020 | | | |
| *** Schwada Builders, Inc. PO Box 487 Shelbina, MO 63468 573-588-4079 Fax: 573-588-7605 bschwada@yahoo.com | D | 5/14/2020 | | | |
| *** Freise Construction 17 Reckamp Road Old Monroe, MO 63369 636-661-5176 Bids@FreiseConstruction.com | D | 5/14/2020 | | | |
| Perkins Electric 819 N Business Hwy 61 Bowling Green, MO 63334 573-324-5366 Fax: 573-324-5355 perkinselec@sbcglobal.net | D | 5/14/2020 | | | |
| Marold Electric Co. 129 S 10th Quincy, IL 62301 217-222-6267 Fax: 217-222-6289 maroldelectric@comcast.net | D | 5/14/2020 | | | |
| Dodge Data & Analytics 4300 Beltway Place, STE #180 Arlington, Texas 888-667-8198 brandi.flanagan@construction.com | D | 5/15/2020 | | | |

RECORD OF PLANS AND SPECIFICATIONS

PAGE NO. Two

NAME OF PROJECT

Ralls Co RII Additions

| | | | | | |
|---|----------|---------------|-----------------|------------------|------------------|
| PROJECT NO. | 5910C | DATE BIDS DUE | 5/28/20 2:00 PM | DEPOSIT: | \$50.00 |
| CONTRACTOR NAME | COPY NO. | DATE RECEIVED | DATE RETURNED | DEPOSIT RECEIVED | DEPOSIT RETURNED |
| ADDRESS/PHONE/EMAIL | | | | | |
| Dodge Data & Analytics 4300 Beltway Place, STE #180 Arlington, Texas 888-667-8198 brandi.flanagan@construction.com | D | 5/14/2020 | | | |
| Thermal Mechanics Inc. 715 Goddard Ave. Chesterfield, MO 63005 636-532-1110 Fax: 636-532-7318 MaryBeth.Mueller@tmi-stl.com | D | 5/15/2020 | | | |
| *** J Reiff Construction 347 S Ridge St Memphis, MO 63555 660-342-0552 jonathan@jreiffconstruction.com | D | 5/15/2020 | | | |
| Watkins Roofing, Inc. 4401 Interstate 70 Dr SE Columbia, MO 65201 573-449-2951 charlottewashburn@socket.net | D | 5/18/2020 | | | |
| Custom Glass & Glazing 420 S 7th St Quincy, IL 62301 217-223-4527 Fax: 217-221-0694 customgg@sbcglobal.net | #4 | 5/21/2020 | | | |
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