



CLEMONS, RUTHERFORD & ASSOCIATES, INC.

ARCHITECTS ■ PLANNERS ■ INTERIOR DESIGNERS ■ CONSTRUCTION MANAGERS

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ADDENDUM #2

JACKSON COUNTY BOCC

Sheriff's Road and Bridge Facility

PANHANDLE ROAD

MARIANNA, FLORIDA 32446

CRA PROJECT NUMBER 19040.08

May 21, 2021

This Addendum forms a part of the Contract Documents and modifies the original Project Manual and Drawings dated April 9, 2021 (100% Construction Documents) as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification. This addendum consists of one page narrative, three page RFI response, two drawings, and six specifications.

ITEM #2-1

Sheet: A6.0

A. REPLACE: Sheet in its entirety.

ITEM #2-2

Sheet: A7.1

A. REPLACE: Sheet in its entirety.

ITEM #2-3

Specification: 01 21 00 Allowances

A. REPLACE: Specifications in its entirety.

ITEM #2-4

Specification: 07 04 10 Metal Roof Panels

A. REPLACE: Specifications in its entirety.

ITEM #2-5

Specification: 08 36 10 Sectional Overhead Doors

A. REPLACE: Specifications in its entirety.



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ITEM #2-6

Specification: 08 71 00 Finish Hardware

A. REPLACE: Specifications in its entirety.

ITEM #2-7

Specification: 13 34 19 Metal Building Systems

A. REPLACE: Specifications in its entirety.

ITEM #2-8

Specification: Volume 1 Index

A. REPLACE: Specifications in its entirety.

(End of Addendum)



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RFI RESPONSES

JACKSON COUNTY BOCC

Sheriff's Road and Bridge Facility

PANHANDLE ROAD

MARIANNA, FLORIDA 32446

CRA PROJECT NUMBER 19040.08

May 21, 2021

Listed below are the responses to RFIs for the 100% Construction Documents for the **Jackson County BOCC Road & Bridge Facility**.

RFI 1 - Please provide clarification to the correct size for each. Materials are available as both a 12 x 12 and a 12 x 24, but there is a significant up charge cost per sqft. for the 12 x 12 and the 12 x 24 is only available as a Mosaic.

Response: See revised sheet A6.0 in attached addendum.

RFI 2 - SECTION 012100 – ALLOWANCES of the specifications Paragraph 1.9 indicates Testing and Inspecting Allowances. No dollar value is provided for these allowances. Please provide proper allowance amount to be included in the bid proposal.

Response: See revised specification in attached addendum.

RFI-3 - There are no door hardware sets listed for the doors on the Door Schedule on sheet A7.1. A specification section for Door Hardware was not included in the specifications. Please provide a Door Hardware Schedule and Specifications for the door hardware or provide an allowance amount to include in our bid for the door hardware.

Response: Door hardware specification included in attached addendum.

RFI-4 - The drawings indicate a vanity cabinet or top at men's and women's restrooms 106 and 107, but no elevations or section cuts were provided. Please provide the section cuts and elevations at these areas.

Response: See revised sheet A6.0 in attached addendum.

RFI-5 - ROOMS C100, C101 and C102 indicate a floor finish with a floor finish label of LVY. The color legend on this sheet does not define a LVY finish. In addition, there are multiple rooms designated with a color of LVT. The color legend does not define LVT either. Vinyl Wood Flooring is noted as VWF on the color schedule but is not indicated in any of the rooms. Should LVY and LVT be Vinyl Wood Flooring? If not, please define the materials to be used for flooring LVY and LVT.

Response: See revised sheet A6.0 in attached addendum.

RFI-6 - No finishes were listed in the finishes box for Room C103. Please provide the finishes for this room.

Response: See revised sheet A6.0 in attached addendum.



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RFI-7 - Is there a finish schedule for this building? Page A1.1 says to, “see finish schedule for material” in reference to the ceiling. I’d really just like to know if there is a specific ACT you want, or if I can just bid it as a standard commercial grade tile. I don’t see anything called out.

Response: *See specification section 095100 in project manual.*

RFI-8 - Is the 3’0” wide concrete apron shown to be installed around the perimeter of the building on sheet C301 to be included as 6” concrete paving matching the reinforced concrete paving detail shown on sheet C301. Please advise.

Response: *6” paving is only required where concrete slab will be exposed to vehicle traffic.*

RFI-9 - Civil drawings are marked “not for construction” where the engineer of record’s seal is applied to the drawings. Are there “for construction” or revised drawings available or is the set we should be bidding by?

Response: *Civil drawings included in the documents with the note “Not for Construction” are what the contractor is to bid, note to be removed on documents when issued for permitting.*

RFI-10 - A unit masonry specification (042000) is included in the project manual. It appears there is no masonry scope of work in the project. Does this masonry specification apply to anything in the project?

Response: *Disregard specification section 042000.*

RFI-11 - Soils report states the building will have load bearing masonry walls and isolated footings (page 144 of manual 1) but structural drawings show a traditional monolithic perimeter foundation with a 4” & 6” slab. Please clarify if soils report is valid for the foundation/slab as drawn.

Response: *Soils report is valid for the foundation/slab as drawn.*

RFI-12 - Soils report calls for clearing & grubbing of surface soils of proposed building area to at least 5’ beyond perimeter. After this operation, we are instructed to proof roll/compact the soils in this area to densify loose sands. The report recommends hand auger borings to verify effectiveness of vibratory compaction; our question is who pays for the borings & testing associated with this operation? We assume the testing allowance (\$20,000) cost category will absorb this cost, but please advise if our assumption is correct.

Response: *Contractor is responsible for any testing required by the contract documents, see revised specification section 012100 included in attached addendum.*

RFI-13 - Regarding the testing allowance, can you list the possible testing (soils compaction, concrete densities, welding, etc.) categories that will be needed for the project?

Response: *Contractor is responsible for any testing required by the contract documents.*

RFI-14 - We have concerns the proposed supply ductwork will not have sufficient room to be installed as drawn, specifically the area above the Employee Area room 123. This room is called out to have a ceiling height of 13’ a.f.f. and there is a 22” x 14” duct shown to supply this room. At the ridge of the building, we anticipate the height to be +/- 16’-6” and assume a 12” beam and that puts your clearance at +/-15’-6”. If the total height of the ductwork (with 4” of insulation) is 30”, we will be very close to intersecting the beam in this area. Ductwork in this area might need to be flattened to alleviate this possible conflict.



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Response: *Supply duct = 14 height + 4 inch insulation = 18 inches required space. Return = 14 height + 4 inch total insulation = 18 inches required space. This leaves an extra 12" of free space between the beam and the ceiling. Ductwork is designed to not be over the lights in this area. Flattening ductwork should not be required.*

RFI-15 - The project completion date from notice to proceed for this project is 120 days, the current shipping time for a Pre-Engineered Metal Building is up to 12 weeks (84 days) after approved shop drawings which are an additional 3-4 weeks (21-28 days) to complete and then must be approved.

Response: *The time allotted for construction of the work required by the contract documents will be negotiated with the awarded firm.*

RFI-16 - Detail for wall type P1 on A1.1 shows a hard lid above the acoustic ceiling. There are no other details for it. Does just the corridor get a lid above the acoustic ceiling or are there other areas?

Response: *Rated lid is to be installed over the corridors only.*

RFI-17 - Is owner planning on keeping old doors and adding motors to them? The specification is only for the motor and not the door.

Response: *See revised specification in attached addendum.*

RFI-18 - In the spec section 133419 stated to reference specification 076100. This specifications seem to be missing or is this an error?

Response: *See revised specification in attached addendum.*

RFI-19 - The volume 1 of the specifications table of content list specification division 3 – concrete and section 099113 – exterior paint. These specification seem to be missing?

Response: *See revised index in attached addendum.*

RFI-20 - The building suppliers are expressing concerns regarding lead time and cost increase. What is the actual expected date of the award of this project and tentative start date.

Response: *See RFI-15 response.*

RFI-21 - One of the specified building suppliers have stated that their pre-engineer building design comes with its designed roof system. Their system does not include the specified roof material but match specification. Is the pre-engineer system acceptable or is the owner expecting two different system combined?

Response: *Contractor to price the roofing system specified in the contract documents in their base bid. Contractor can include as an alternate separate price for roofing system provided by the metal building manufacturer.*

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Section 014000 "Quality Control Services" for procedures governing the use of allowances for testing and inspecting.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

SECTION 012100 – ALLOWANCES (continued)

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.
- E. **CONTRACTOR TO INCLUDE A CONTINGENCY ALLOWANCE IN THE AMOUNT OF \$20,000.00**

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

SECTION 012100 – ALLOWANCES (continued)

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

END OF SECTION 012100

SECTION 07410 - METAL ROOF PANELS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Standing seam metal roofing system.
- B. Standing seam metal roofing accessories.
- C. Metal roofing accessories.

1.2 RELATED SECTIONS

- A. Section 05400 - Cold-Formed Metal Framing: Structural framing supporting metal roofing
- B. Section 06112 - Framing and Sheathing: Plywood roof deck substrate.
- C. Section 06150 - Wood Decking.
- D. Section 07220 - Roof and Deck Insulation.
- E. Section 07620 - Sheet Metal Flashing and Trim.
- F. Section 07714 - Gutters and Downspouts
- G. Section 07900 - Joint Sealers

1.3 REFERENCES

- A. ASTM A 240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- B. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- C. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- D. ASTM A 875 - Standard Specification for Steel Sheet, Zinc-5 % Aluminum Alloy-Coated by the Hot-Dip Process
- E. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- F. ASTM D 1056 - Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.
- G. ASTM D 2178 - Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.
- H. ASTM D 3575 - Standard Test Methods for Flexible Cellular Materials made from Olefin Polymers.
- I. ASTM E 84 - Standard Test for Surface Burning Characteristics of Building Materials.
- J. ASTM E 283 - Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- K. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

SECTION 07410 - METAL ROOF PANELS

- L. ASTM E 1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
- M. ASTM E 1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
- N. ASTM E 1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
- O. ASTM E 2140 - Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head.
- P. AAMA 501.1 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure.
- Q. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- R. FM 4470 Approval Standard for Class 1 Panel Roofs.
- S. FM 4471 - Class 1 Panel Roof; Factory Mutual Research Corporation.
- T. UL 263 - Fire Tests of Building Constructions and Materials.
- U. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies.
- V. UL 790 - Standard Test Methods for Fire Tests of Roof Coverings.
- W. UL 1897 - Uplift Test for Roof Covering Systems.
- X. ICC-ES AC166 - Test Procedure for Wind Driven Rain Resistance of Metal Roof Coverings.
- Y. SMACNA - Architectural Sheet Metal Manual.
- Z. National Coil Coating Association (NCCA)
- AA. NRCA - The NRCA Roofing and Waterproofing Manual.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Standing Seam Roofing System: **R-Mer Span by The Garland Company OR Approved Equal**
 - 1. Thermal Expansion and Contraction:
 - a. Completed metal roofing and flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.
 - b. Design temperature differential shall be not less than 200 degrees F.
 - c. Interface between panel and clip shall provide for unlimited thermal movement in each direction along the longitudinal direction.
 - d. Location of metal roofing rigid connector shall be at roof ridge unless otherwise approved by the Project Architect. Metal ridge connector may require design as per job conditions by specified manufacturer.
 - 2. Uniform Wind Load Capacity:
 - a. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria.
 - 1) Design Code: ASCE 7, Method 2 for Components and Cladding.
 - 2) Safety Factor: 2 after any load reduction or material stress increase.
 - 3) Category II Building with an Importance Factor of ____.
 - 4) Wind Speed: 120 mph.

SECTION 07410 - METAL ROOF PANELS

- 5) Ultimate Pullout Value: 626 pounds per each of the two fasteners holding the panel anchor to the roof decking or framing system.
- 6) Exposure Category: C.
- 7) Design Roof Height: 17 feet.
- 8) Minimum Building Width: 60 feet.
- 9) Roof Pitch: 1 inches per foot.
- 10) Roof Area Design Uplift Pressure:
 - a) Zone 1 - Field of roof psf.
 - b) Zone 2 - Eaves, ridges, hips, and rakes psf.
 - c) Zone 3 - Corners psf.
- b. ASTM E 1592: Capacity shall be determined using pleated airbag method in accordance with ASTM E 1592, testing of sheet metal roof panels. Allowable safe working loads shall be determined by dividing the ultimate test load by the safety factor specified above.
- c. Underwriters' Laboratories, Inc., (UL), wind uplift resistance classification: Roof assembly shall be classified as Class 1-90, as defined by UL 580
- d. FM 4471: Submit test report for negative wind uplift pressures no less than that specified. Roof system must have approval over the substrate specified.
3. Uniform Positive Load Capacity.
 - a. Installed roof system shall be capable of resisting the following positive uniform roof loads: Roof Live Load of 20 psf;
 - b. Dead Load: Loading of the roof structure, due to tear off of existing, and/or installation of new roofing materials shall not exceed the present loading due to weight of the existing roofing system.
 - c. Installed roof system shall carry positive uniform design loads with a maximum system deflection of L/180 as measured at the rib (web) of the panel.
4. Underwriters' Laboratories, Inc., (UL):
 - a. Underwriters' Laboratories, Inc., (UL) fire resistance P ratings for roof assemblies: If applicable, panel system shall be approved for use in an appropriate Construction Assembly, as defined by UL 263.
 - b. Underwriters' Laboratories, Inc., (UL) Class A fire rating per UL 790.
5. ASTM E 283: Static pressure air infiltration (doors, windows, curtain walls):
 - a. Pressure Leakage Rate
 - 1) 1.57 PSF 0.0007 cfm/sq.ft.
 - 2) 6.24 PSF 0.0002 cfm/sq.ft.
 - 3) 20.0 PSF 0.0036 cfm/sq.ft.
6. ASTM E 331: Static pressure water infiltration (doors, windows, curtain walls):
 - a. Pressure Result:
 - 1) 5 Gal. /Hr. per S.F. and Static No Leakage
 - 2) Pressure of 20.0 Psf. for 15 minutes
7. ASTM E 1680: Static pressure air infiltration (roof panels):
 - a. Pressure Leakage Rate:
 - 1) 1.57 PSF 0.0012 cfm/sq.ft.
 - 2) 6.24 PSF 0.0001 cfm/sq.ft.
 - 3) 20.0 PSF 0.0011 cfm/sq.ft.
8. ASTM E 1646: Static pressure water infiltration (roof panels):
 - a. Pressure Result:
 - 1) 5 Gal. /Hr. per S.F. and Static No Leakage
 - 2) Pressure of 20.0 Psf for 15 minutes
9. Capacities for gauge, span or loading other than those tested may be determined by interpolation of test results within the range of test data. Extrapolations for conditions outside test range are not acceptable.
10. Water penetration (dynamic pressure): No water penetration, other than condensation, when exposed to dynamic rain and 70 mph wind velocities for not less than five minutes duration, when tested in accord with principles of AAMA 501.1.
11. Wind and wind driven rain resistance: No water penetration or panel movement when exposed

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- to 110 mph wind velocities when tested in accordance with TAS 100.
12. Installed roof system assembly shall show that it can resist the calculated roof pressure in accordance with the test results of TAS 125.
 13. Water penetration in low slope applications: No water penetration or panel movement when subject to 6 inch head of water for 6 hours when tested in accordance with the ASTM E 2140 and when subject to 6 inch head of water for 7 days when tested in accordance with the TAS 114 appendix G.
 14. Submit third party validation of environmental claims, prepared UL Environment, for all metal roof panels containing recycled content and/or bio based content.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit product data, test reports, and certifications in accordance with quality assurance and performance requirements specified herein.
- C. Design Loads: Submit manufacturer's minimum design load calculations according to ASCE 7, Method 2 for Components and Cladding. In no case shall the design loads be taken to be less than those specified herein.
- D. Dead Load Evaluation: Provide documentation from a licensed structural engineer of a structural evaluation of the roof structure and it's suitability for the new imposed roofing loads.
- E. Shop Drawings: Prepared specifically for this project; showing dimensions of metal roofing and accessories, fastening details and connections and interface with other products.
- F. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
 2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.
- G. Selection Samples: For each finish product specified, two complete sets of samples representing manufacturer's full range of available colors and textures.
- H. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and textures.
- I. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- J. Closeout Submittals:
 1. Provide manufacturer's maintenance instructions that include recommendations for periodic checking and maintenance of installed roof system.
 2. Provide executed copy of manufacturer's warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have in place a documented, standardized quality control program such as ISO-9001 approval.
 1. Manufacturer must provide a representative that holds a full-time position to visit the project a minimum of 3 time per week during installation
 2. Manufacturer must document the visit and provide a report to the architect each week including progress made and materials are being install according to the specified details
- B. Installer Qualifications: Certified and approved installer of the sheet metal roofing manufacturer.
 1. Installer must be approved by the manufacturer and be in good standing with the manufacturer and provide a letter from the manufacturer validating their standing

SECTION 07410 - METAL ROOF PANELS

2. Installer must have an EMR rating of 1.0 or less
 - C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 1. Finish areas designated by Architect.
 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 3. Refinish mock-up area as required to produce acceptable work.
- 1.7 PRE-INSTALLATION CONFERENCE
- A. Convene a pre-roofing conference approximately two weeks before scheduled commencement of roofing system installation and associated work.
 - B. Require attendance of installers of deck or substrate construction to receive roofing, installers of rooftop units and other work in and around roofing which must precede or follow roofing work including mechanical work, Architect, Owner, roofing system manufacturer's representative.
 - C. Objectives include:
 1. Review foreseeable methods and procedures related to roofing work, including set up and mobilization areas for stored material and work area.
 2. Tour representative areas of roofing substrates, inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work.
 3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
 4. Review roofing system requirements, Drawings, Specifications and other Contract Documents.
 5. Review and finalize schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
 6. Review required inspection, testing, certifying procedures.
 7. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.
 8. Record conference including decisions and agreements reached. Furnish a copy of records to each party attending.
- 1.8 DELIVERY, STORAGE, AND HANDLING
- A. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
 - B. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
 1. Store materials above ground, on skids.
 2. Protect material with waterproof covering and allow sufficient ventilation to prevent condensation buildup or moisture entrapment on the materials.
- 1.9 PROJECT CONDITIONS
- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- 1.10 WARRANTY
- A. Warranty:
 1. 30 year, no dollar limit, warranty.
 2. Provide installers 2 year warranty covering roofing system installation and water-tightness.

SECTION 07410 - METAL ROOF PANELS

PART 2 PRODUCTS

2.1 MANUFACTURERS


A. Acceptable Manufacturer:

The Garland Company, Inc.
3800 E. 91st St. Cleveland, OH 44105
Tel: 216-641-7500
Fax: 216-641-0633
www.garlandco.com

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 STANDING SEAM METAL ROOFING

A. R-Mer Span:

1. Width of Standing T-Seam Panel: 1 inch T-seam.
 - a. 16 inches.
2. Standing Seam: 2-3/8 inch tall mechanically seamed with factory installed hot melt sealant in-seam cap. Panel/Cap is configured with a total of 4 layers of metal surrounding anchor clip.
3. Panel Profile: Provided with minimum 1-1/2 inches wide elevated mesa's every 2 inches on center continuous throughout panel.
 - a. Slope: Open Purlins or Solid Substrate down to 1/4:12.
4. Panel material:
 - a. Galvanized steel 22 gauge, G90, smooth as per ASTM A 653. 
5. Flashing and flat stock material: Fabricate in profiles indicated on Drawings of same material, thickness, and finish as roof system, unless indicated otherwise.
6. Coated Finish:
 - a. Exposed surfaces for coated panels:
 - b. Unexposed surfaces for coated panels shall be baked-on polyester coating with .20 to .30 dry film thickness (TDF).
7. Accessory Components:
 - a. Anchor Clips:
 - 1) Concealed Standard Anchor Clips: Clips 16 gauge galvanized steel, 1 piece clip with projecting legs for additional panel alignment and provision for unlimited thermal movement in each direction along the longitudinal dimension.
 - b. Concealed I-SPAN Anchors: I-SPAN Anchors are extruded aluminum, alloy 6005-T5, with projecting legs for additional panel alignment and provision for unlimited thermal movement in each direction along the longitudinal dimension. Provide anchors of continuous lengths with a 0.062 inch minimum thickness.
 - c. Fasteners:
 - 1) Concealed fasteners: Corrosion resistant steel fasteners (zinc plated, stainless steel or equal) designed to meet structural loading requirements.
 - 2) Exposed fasteners: Series 410 stainless steel fasteners or 1/8 inch diameter stainless steel waterproof rivets. All exposed fasteners shall be factory painted to match the color of the standing seam panels.
 - d. Closures: Factory precut closed cell foam meeting ASTM D 1056 or ASTM D 3575, enclosed in metal channel matching panels when used at hip, ridge, rake, and jamb.
 - e. Provide all miscellaneous accessories for complete installation.

2.3 STANDING SEAM METAL ROOFING ACCESSORIES

A. Underlayment:

1. 40 mil minimum high temp self adhesive membrane, installed in accordance with manufacturer's recommendations.

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- B. Insulation:
 - 1. Type: _____
 - a. Minimum Thickness: _____
 - b. R-value: _____
- C. Bearing Plates:
 - 1. Galvanized steel bearing plates 3 inches by 5 inches by 16 gauge, minimum.
 - 2. Pre-punch with a hole pattern matching that of the panel anchor clips. Slotted holes are acceptable.
- D. Sealant:
 - 1. Concealed Applications: Non-Curing Butyl Sealant - Schnee-Morehead, Inc. SM5430 Acryl-R, or equal.
 - 2. Exposed Applications: UV Resistant Tripolymer Sealant - Geocel Corporation, 2300 Tripolymer Sealant, or equal.

2.4 FLAT METAL ROOFING ACCESSORIES

- A. Sealant:
 - 1. Job Installed In-Seam Sealant: Modified polyisobutylene tape, 3/32 inch thick by 2 inches wide, minimum for R-Mer Lite II and 1/8 inch thick by 1-1/2 inches wide, minimum for R-Mer Lite.
 - a. Pre-formed, non-hardening polyisobutylene rubber based elastic compound designed for use where space tolerance is limited.
 - b. Elongation: 25 percent Maximum
 - c. Recovery: 2 percent Maximum
 - d. Solids: 100 percent Maximum
 - e. Odor: None
 - f. Cure Time: Non-Curing
 - g. Flow: Slight
 - h. Color: Gray
 - i. Adhesion (Metal): Peel: 151 lbs./lin. in. j. Shear: 55 lbs./in.
 - j. Seamability: 100 percent cohesion of mating surfaces
 - k. Cold Temperature: Passes minus 30 degrees F. Flex over 1 inch Mandrel.
 - l. Softening Point: 200 degrees F.
 - 2. Factory Applied Sealant: Hot melt, 100 percent solids thermoplastic material.
 - 3. One component urethane meeting 360 percent elongation, ASTM D 412 and Tear Resistance of 140 lbs./in. ASTM D 1004.
 - 4. One component acrylic terpolymer meeting FS TT-S-00230.
- B. Framing System Fasteners:
 - 1. Wood Deck: Fluorocarbon coated #14 fastener or wood deck auger type fastener, or peel rivet or equivalent.
- C. Seam Screws: Sheet Metal Fastener size #10 or #12 by 3/4 inch or 1 inch by roof system manufacturer.
- D. Wood Nailers, Curbs and Sleepers: California Redwood, #2 grade. No treated wood utilizing salt-base preservatives shall be allowed. Material safety Data Sheets must be provided for verification of preserving agents prior to the installation of any pressure treated wood.
- E. Miscellaneous Fasteners:
 - 1. TEK #1 or #4 screws
 - 2. Expanding fasteners 1/4 inch minimum.
- F. Prefabricated Stack Flashings: Flexible pre-fabricated round stack flashings with integrated pressure ring shall be used for all round pipe flashings by roof system manufacturer.

SECTION 07410 - METAL ROOF PANELS

- G. Temporary Night Sealant: Self-contained, two-component urethane foam.
- H. Unitized Vents: Spun-aluminum, one-way moisture vapor relief vents by roof system manufacturer.

2.5 METAL ROOFING ACCESSORIES

- A. R-Mer Soffit: Reduces negative uplift pressures
 - 1. Profile:
 - a. Vented.
 - 2. Material and Thickness:
 - a. 0.32 inch aluminum
 - 3. Width of Panel: 12 inches.
 - 4. Length of Panel: Up to 12 feet.
- B. R-Mer SS Sheet Stock: High gloss, factory painted aluminum
 - 1. Material and Thickness:
 - a. 24 gauge steel
 - 2. Color.

2.6 COLOR OPTIONS

- A. Standard collection:
 - 1. Emerald Green

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive metal roofing. Notify the Architect in writing of any defective conditions encountered. Starting of work shall constitute acceptance of such conditions.
- B. Structural Deck Substrate:
 - 1. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, and properly sloped.
 - 2. Verify deck is dry and joints are solidly supported and fastened.
 - 3. Verify wood nailers are installed and correctly located. Do not use pressure-treated wood containing salt-based preservatives or materials corrosive to steel.
- C. Structural Framing Substrate:
 - 1. Verify primary and secondary framing members are installed and fastened, properly aligned and sloped.
 - 2. Verify damaged shop coatings are repaired with touch up paint.
- D. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, reglets are in place, and nailing strips located.
- E. Correct defective conditions before beginning work.

3.2 INSTALLATION

- A. Install in conformance with the NRCA Roofing and Waterproofing Manual and Manufacturers installation requirements.
- B. Form panel shape as indicated on Drawings, accurate in size, square, and free from distortion or defects.
- C. Install underlayment and eave protection sheet underlayment as recommended by the Manufacturer.

SECTION 07410 - METAL ROOF PANELS

- D. Coordinate with installation of rigid board insulation as specified in Section 07200.
- E. Install all panels continuous from ridge to eave. Transverse seams are not permitted.
- F. Panel lengths that exceed maximum shipping lengths shall be field rolled on equipment owned by the panel manufacturer. Seam sealant must be factory applied.
- G. Exposed fasteners, screws and/or roof mastic are unacceptable and will be rejected. System configuration only allows for exposed fasteners at panel overlap, if required, and at trim details in accordance with the Manufacturer's requirements.
- H. Where not otherwise indicated conform to SMACNA details including flashings and trim.
- I. Install sealants where indicated to clean dry surfaces only without skips or voids..
- J. Install metal edge treatment in accordance with the manufacturer's instructions and the approved shop drawings.
- K. Install metal roofing accessories in accordance with the manufacturer's instructions and the approved shop drawings.

3.3 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.4 SCHEDULES

- A. :
- B. :

END OF SECTION

SECTION 08 36 00 - SECTIONAL OVERHEAD DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Insulated Sectional Overhead Doors.
- B. Electric Operators and Controls.
- C. Operating Hardware, tracks, and support.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Prepared opening in concrete. Execution requirements for placement of anchors in concrete wall construction.
- B. Section 04810 - Unit Masonry Assemblies: Prepared opening in masonry. Execution requirements for placement of anchors in masonry wall construction.
- C. Section 05500 - Metal Fabrications: Steel frame and supports.
- D. Section 06114 - Wood Blocking and Curbing: Rough wood framing and blocking for door opening.
- E. Section 07900 - Joint Sealers: Perimeter sealant and backup materials.
- F. Section 08710 - Door Hardware: Cylinder locks.
- G. Section 09900 - Paints and Coatings: Field painting.
- H. Section 11150 - Parking Control Equipment: Remote door control.
- I. Section 16130 - Raceway and Boxes: Empty conduit from control station to door operator.
- J. Section 16150 - Wiring Connections: Electrical service to door operator.

1.3 REFERENCES

- A. [ANSI/DASMA 102](#) - American National Standard Specifications for Sectional Overhead Type Doors.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
 - 1. See structural drawings.
- B. Wiring Connections: Requirements for electrical characteristics.
 - 1. 115 volts, single phase, 60 Hz.
 - 2. 230 volts, single phase, 60 Hz.
 - 3. 230 volts, three phase, 60 Hz.
 - 4. 460 volts, three phase, 60 Hz.
- C. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.

- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Operation and Maintenance Data.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weathertight location.

1.8 PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.9 WARRANTY

- A. Warranty: Manufacturer's limited door and operators System warranty for 10 year against delamination of polyurethane foam from steel face and all other components for 3 years or 20,000 cycles, whichever comes first.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: sales@overheaddoor.com.
- B. Substitutions: Allowed upon approval of Architect
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 INSULATED SECTIONAL OVERHEAD DOORS

- A. Insulated Steel Sectional Overhead Doors: 592 Series Thermacore Insulated Steel Doors by Overhead Door Corporation. Units shall have the following characteristics:
 - 1. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and weather-tight ship-lap design meeting joints.
 - a. Panel Thickness: 2 inches (51 mm).

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- b. Exterior Surface: Ribbed, textured.
 - c. Exterior Steel: .015 inch (.38 mm), hot-dipped galvanized.
 - d. End Stiles: 16 gauge with thermal break.
 - e. Spring Counterbalance: Sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of diecast aluminum with high strength galvanized aircraft cable. Sized with a minimum 7 to 1 safety factor.
 - 1) Standard cycle spring: 10,000 cycles.
 - 2) High cycle spring: 25,000 cycles.
 - 3) High cycle spring: 50,000 cycles.
 - 4) High cycle spring: 75,000 cycles.
 - 5) High cycle spring: 100,000 cycles.
 - f. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
 - g. Thermal Values: R-value of 17.50; U-value of 0.057.
 - h. Air Infiltration: 0.08 cfm at 15 mph; 0.08 cfm at 25 mph.
2. Finish and Color:
- a. Two coat baked-on polyester:
 - 1) Interior color, white.
 - 2) Exterior color, white.
 - 3) Exterior color, brown.
 - 4) Exterior color, tan.
 - 5) Exterior color, gray.
 - b. Baked-on Kynar polyvinylidene fluoruoride high performance coating:
 - 1) Exterior color, white.
 - 2) Exterior color, brown.
 - 3) Exterior color, beige.
3. Windload Design: Provide to meet the Design/Performance requirements specified.
4. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
5. Lock:
- a. Interior mounted slide lock.
 - b. Interior mounted slide lock with interlock switch for automatic operator.
 - c. Keyed lock.
 - d. Keyed lock with interlock switch for automatic operator.
 - e. Locking mechanism designed to maintain security for exterior while permitting break out when impacted from the inside.
6. Weatherstripping:
- a. EPDM bulb-type strip at bottom section.
 - b. Flexible Jamb seals.
 - c. Flexible Header seal.
7. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
- a. Size:
 - 1) 2 inch (51 mm).
 - 2) 3 inch (76 mm).
 - b. Type:
 - 1) Standard lift.
 - 2) Vertical lift.
 - 3) High lift.
 - 4) Low headroom.
 - 5) Follow roof slope.
8. Manual Operation: Pull rope.
9. Manual Operation: Chain hoist.
10. Electric Motor Operation: Provide UL listed electric operator, size and type as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second. Operator shall meet UL325/2010 requirements for continuous monitoring of safety devices.

- a. Entrapment Protection: Required for momentary contact, includes radio control operation.
 - 1) Pneumatic sensing edge up to 18 feet (5.5 m) wide. Constant contact only complying with UL 325/2010.
 - 2) Electric sensing edge monitored to meet UL 325/2010.
 - 3) Photoelectric sensors monitored to meet UL 325/2010.
- b. Operator Controls:
 - 1) Push-button operated control stations with open, close, and stop buttons.
 - 2) Key operated control stations with open, close, and stop buttons.
 - 3) Push-button and key operated control stations with open, close, and stop buttons.
 - 4) Flush mounting.
 - 5) Surface mounting.
 - 6) Interior location.
 - 7) Exterior location.
 - 8) Both interior and exterior location.
- c. Special Operation:
 - 1) Pull switch.
 - 2) Vehicle detector operation.
 - 3) Radio control operation.
 - 4) Card reader control.
 - 5) Photocell operation.
 - 6) Door timer operation.
 - 7) Commercial light package.
 - 8) Explosion and dust ignition proof control wiring.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until openings have been properly prepared.
- B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- C. Verify electric power is available and of correct characteristics.
- D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.
- C. Anchor assembly to wall construction and building framing without distortion or stress.
- D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.

- E. Fit and align door assembly including hardware.
- F. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

3.4 CLEANING AND ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weatherstripping.
- B. Clean doors, frames and glass.
- C. Remove temporary labels and visible markings.

3.5 PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION

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SECTION 087100 - FINISH HARDWARE

PART 1 - GENERAL

1.1 SUMMARY:

- A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.
 - 1. Door hardware for steel (hollow metal) doors.
 - 2. Door hardware for aluminum doors.
 - 3. Door hardware for wood doors.
 - 4. Door hardware for other doors indicated.
 - 5. Keyed cylinders as indicated.

- B. Related Sections:
 - 1. Division 6: Rough Carpentry.
 - 2. Division 8: Aluminum Doors and Frames
 - 3. Division 8: Hollow Metal Doors and Frames.
 - 4. Division 8: Wood Doors.
 - 5. Division 26 Electrical
 - 6. Division 28: Electronic Security

- C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
 - 1. Builders Hardware Manufacturing Association (BHMA)
 - 2. NFPA 101 Life Safety Code
 - 3. NFPA 80 - Standard for Fire Doors and Other Opening Protectives
 - 4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
 - 5. UL10C – Positive Pressure Fire Test of Door Assemblies
 - 6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities 2009
 - 7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
 - 8. Florida Building Code, 2014, 5th Edition
 - 9. Miami-Dade requirements for Hurricane (NOA) for exterior openings.

- D. Intent of Hardware Groups
 - 1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
 - 2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

- E. Allowances
 - 1. Refer to Division 1 for allowance amount and procedures.

- F. Alternates
 - 1. Refer to Division 1 for Alternates and procedures.

SECTION 087100 - FINISH HARDWARE (continued)

1.2 SUBSTITUTIONS:

- A. Comply with Division 1.

1.3 SUBMITTALS:

- A. Comply with Division 1.
- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.
- C. Product Data: Manufacturer's specifications and technical data including the following:
 - 1. Detailed specification of construction and fabrication.
 - 2. Manufacturer's installation instructions.
 - 3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
 - 4. Submit 6 copies of catalog cuts with hardware schedule.
 - 5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2
- D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.
 - 1. List groups and suffixes in proper sequence.
 - 2. Completely describe door and list architectural door number.
 - 3. Manufacturer, product name, and catalog number.
 - 4. Function, type, and style.
 - 5. Size and finish of each item.
 - 6. Mounting heights.
 - 7. Explanation of abbreviations and symbols used within schedule.
 - 8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.
- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.
 - 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.
- F. Samples: (If requested by the Architect)
 - 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
 - 2. 3 samples of metal finishes
- G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.
 - 1. Operating and maintenance manuals: Submit 3 sets containing the following.
 - a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.

SECTION 087100 - FINISH HARDWARE (continued)

- b. Catalog pages for each product.
 - c. Name, address, and phone number of local representative for each manufacturer.
 - d. Parts list for each product.
 2. Copy of final hardware schedule, edited to reflect, "As installed".
 3. Copy of final keying schedule
 4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
 5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- 1.4 QUALITY ASSURANCE
 - A. Comply with Division 1.
 1. Exterior Openings Severe Windstorm Components testing: Listed and labeled by a testing and inspecting agency acceptable to authority having jurisdiction, based on testing according to ANSI A250.13. Further compliance with Florida Building Codes for Hurricane (NOA) for Exterior Openings.
 2. Statement of qualification for distributor and installers.
 3. Statement of compliance with regulatory requirements and single source responsibility.
 4. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
 - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
 - b. Hardware Schedule shall be prepared and signed by an AHC.
 5. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
 6. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
 - a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
 - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
 7. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.
 - B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Packing and Shipping: Comply with Division 1.
 1. Deliver products in original unopened packaging with legible manufacturer's identification.
 2. Package hardware to prevent damage during transit and storage.
 3. Mark hardware to correspond with "reviewed hardware schedule".

SECTION 087100 - FINISH HARDWARE (continued)

- 4. Deliver hardware to door and frame manufacturer upon request.
 - B. Storage and Protection: Comply with manufacturer's recommendations.
- 1.6 PROJECT CONDITIONS:
- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
 - B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.
- 1.7 WARRANTY:
- A. Refer to Conditions of the Contract
 - B. Manufacturer's Warranty:
 - 1. Closers: Ten years
 - 2. Exit Devices: Three Years
 - 3. Locksets & Cylinders: Three years
 - 4. All other Hardware: Two years.
- 1.8 OWNER'S INSTRUCTION:
- A. Instruct Owner's personnel in operation and maintenance of hardware units.
- 1.9 MAINTENANCE:
- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
 - 1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
 - 2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
 - 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.
 - B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

SECTION 087100 - FINISH HARDWARE (continued)

<u>Item:</u>	<u>Manufacturer:</u>	<u>Approved:</u>
Hinges	Hager Companies	McKinney
Locksets	Corbin Russwin	
Cylinders	Corbin Russwin	
Exit Devices	Sargent Manuf. - 80 Series	
Closers	Corbin Russwin - DC6000 Series	
Protection Plates	Trimco	Burns, Rockwood
Overhead Stops	ABH	Rixson, Glynn Johnson
Door Stops	Trimco	Burns, Rockwood
Flush Bolts	Trimco	ABH, Burns
Coordinator & Brackets	Trimco	ABH, Burns
Threshold & Gasketing	National Guard	Reese, K.N. Crowder

2.2 MATERIALS:

A. Hinges:

1. Template screw hole locations
2. Minimum of 2 permanently lubricated non-detachable bearings
3. Equip with easily seated, non-rising pins
4. Sufficient size to allow 180-degree swing of door
5. Furnish hinges with five knuckles concealed bearings
6. Provide hinge type as listed in schedule.
7. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
8. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
9. UL10C listed for Fire rated doors.

B. Electrified Functions for Hinges: Comply with the following:

1. Power Transfer: Concealed PTFE-jacketed wires, secured at each leaf and continuous through hinge knuckle. Provide wire quantity and sizes required for electric hardware be served.

C. Cylindrical Type Locks and Latchsets:

1. Tested and approved by BHMA for ANSI A156.2, Series 4000, Operational Grade 1, Extra-Heavy Duty, and be UL10C listed.
2. Provide 9001-Quality Management and 14001-Environmental Management.
3. Fit modified ANSI A115.2 door preparation.
4. Locksets and cores to be of the same manufacturer to maintain complete lockset warranty
5. Locksets to have anti-rotational studs that are thru-bolted
6. Keyed lever shall not have exposed "keeper" hole
7. Each lever to have independent spring mechanism controlling it
8. 2-3/4 inch (70 mm) backset
9. 9/16 inch (14 mm) throw latchbolt
10. Provide sufficient curved strike lip to protect door trim
11. Outside lever sleeve to be seamless, of one-piece construction made of a hardened steel alloy
12. Keyed lever to be removable only after core is removed, by authorized control key
13. Provide locksets with 7-pin removable and interchangeable core cylinders
14. Hub, side plate, shrouded rose, locking pin to be a one-piece casting with a shrouded locking lug.
15. Locksets outside locked lever must withstand minimum 1400 inch pounds of torque. In excess of that, a replaceable part will shear. Key from outside and inside lever will still operate lockset.

SECTION 087100 - FINISH HARDWARE (continued)

16. Core face must be the same finish as the lockset.
17. Functions and design as indicated in the hardware groups.

D. Exit Devices:

1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.
2. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
3. Exit devices chassis to be investment cast steel, zinc dichromate.
4. Exit devices to have stainless steel deadlocking 3/4" through latch bolt.
5. Exit devices to be equipped with sound dampening on touchbar.
6. Non-fire rated exit devices to have 1/4" minimum turn hex key dogging.
7. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
8. Touchbar assembly on wide style exit devices to have a 1/4" clearance to allow for vision frames.
9. All exposed exit device components to be of architectural metals and "true" architectural finishes.
10. Provide strikes as required by application.
11. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
12. The strike is to be black powder coated finish.
13. Exit devices to have field reversible handing.
14. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latchsets.
15. Provide 9001-Quality Management and 14001-Environmental Management.
16. Vertical Latch Assemblies to have gravity operation, no springs.

E. Cylinders:

1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
3. Coordinate and provide as required for related sections.

F. Door Closers shall:

1. Tested and approved by BHMA for ANSI 156.4, Grade 1
2. UL10C certified
3. Provide 9001-Quality Management and 14001-Environmental Management.
4. Closer shall have extra-duty arms and knuckles
5. Conform to ANSI 117.1
6. Maximum 2 7/16 inch case projection with non-ferrous cover
7. Separate adjusting valves for closing and latching speed, and backcheck
8. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
9. Full rack and pinion type closer with 1 1/2" minimum bore
10. Mount closers on non-public side of door, unless otherwise noted in specification
11. Closers shall be non-handed, non-sized and multi-sized.

G. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.

SECTION 087100 - FINISH HARDWARE (continued)

1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
 2. Provide fastener suitable for wall construction.
 3. Coordinate reinforcement of walls where wall stop is specified.
 4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered
- H. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.
1. Concealed overhead stops shall be heavy duty bronze or stainless steel.
 2. Surface overhead stops shall be heavy duty bronze or stainless steel.
- I. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- J. Mop plates: Provide with four beveled edges ANSI J103, 4 inches high by width less 1 inch on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- K. Door Bolts: Flush bolts for wood or metal doors.
1. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 25 for hollow metal label doors.
 2. Provide a set of Automatic bolts, Certified ANSI/BHMA 156.3 Type 27 at wood label doors.
 3. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings where allowed local authority.
 4. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.
- L. Coordinator and Brackets: Provide a surface mounted coordinator when automatic bolts are used in the hardware set.
1. Coordinator, Certified ANSI/BHMA A1156.3 Type 21A for full width of the opening.
 2. Provide mounting brackets for soffit applied hardware.
 3. Provide hardware preparation (cutouts) for latches as necessary.
- M. Door Position Switch: Provide door position switch for door status monitoring as indicated in hardware sets.
1. At all fired rated doors the door and frames, position switch preparation will be provided by the door and frame manufacturer or by an authorized label service agent.
- N. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
- O. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.
1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
 2. UL10C Positive Pressure rated seal set when required.
- P. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.

SECTION 087100 - FINISH HARDWARE (continued)

1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
2. UL10C Positive Pressure rated seal set when required.

- Q. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½” for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.
- R. Provide one wall mounted Telkee, Lund or MMF series key cabinet complete with hooks, index and tags to accommodate 50% expansion. Coordinate mounting location with architect.
- S. Silencers: Furnish silencers on all interior frames; 3 for single doors, 2 for pairs. Omit where any type of seals occur.

2.3 FINISH:

- A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products
- B. Powder coat door closers to match other hardware, unless otherwise noted.
- C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING:

- A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.
- B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7-pin.
- C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped: "Do Not Duplicate"
- D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.
- E. Furnish keys in the following quantities:
1. 1 each Grand Masterkeys
 2. 4 each Masterkeys
 3. 2 each Change keys each keyed core
 4. 15 each Construction masterkeys
 5. 1 each Control keys
- F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.

SECTION 087100 - FINISH HARDWARE (continued)

- G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
 - 1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
 - 1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
 - 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
 - 3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
 - 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
 - 1. Check and adjust closers to ensure proper operation.

SECTION 087100 - FINISH HARDWARE (continued)

2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
 - a. Verify levers are free from binding.
 - b. Ensure latchbolts and dead bolts are engaged into strike and hardware is functioning.
3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

Manufacturer List

<u>Code</u>	<u>Name</u>
AB	ABH Manufacturing Inc.
BE	Best Access Systems
BY	By Others
DM	Dorma Door Controls
HS	HES
NA	National Guard
PR	Precision
RC	RCI
SD	Stanley Door Closers
ST	Stanley
TR	Trimco
MK	McKinney
RO	Rockwood
RU	Corbin Russwin
SA	Sargent
HA	Hager Companies

Finish List

<u>Code</u>	<u>Description</u>
AL	Aluminum
626	Satin Chromium Plated
630	Satin Stainless Steel
689	Aluminum Painted
GRAY	Gray
GREY	Grey
BLACK	Black
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull

Option List

<u>Code</u>	<u>Description</u>
FL	Fire Exit Hardware
HC	Hurricane Code Device

SECTION 087100 - FINISH HARDWARE (continued)

S3	ANSI Strike Package
B4E	BEVELED 4 EDGES - KICK PLATES
CSK	COUNTER SINKING OF KICK / MOP PLATES
NRP	NON REMOVEABLE PIN STD/HVY HINGE
RQE	REQUEST TO EXIT

Hardware Sets

SET #1

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Office Lock	CL3351	626	RU
1 Door Closer	DC6210 A3 M54	689	RU
1 Gasketing	5050 B @ Head and Jambs	NA	
1 Stop	1270WV or 1211 as Req.	626	TR

SET #2

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Office Lock	CL3357	626	RU
1 Gasketing	5050 B @ Head and Jambs	NA	
1 Stop	1270WV or 1211 as Req.	626	TR

SET #3

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Classroom Lock	CL3355	626	RU
1 Door Closer	DC6210 A3 M54	689	RU
1 Gasketing	5050 B @ Head and Jambs	NA	
1 Stop	1270WV or 1211 as Req.	626	TR

SET #4

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Passage Set	CL3310	626	RU
1 Door Closer	DC6210 A3 M54	689	RU
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Mop Plate	KM050 4" x 1" LDW B4E CSK	630	TR
1 Wall Bumper	1270WV	630	TR
1 Gasketing	5050 B @ Head and Jambs		NA
1 Threshold	AS DETAILED		BY

SET #5

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Office Lock	CL3351	626	RU
1 Door Closer	DC6210 A3 M54	689	RU
1 Stop	1270WV or 1211 as Req.	626	TR

SET #6

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Exit Device	HC43 8813 ETL LC	US32D	SA
1 Rim Cylinder	1000 or 3000 Series as Required	626	RU

SECTION 087100 - FINISH HARDWARE (continued)

1 Door Closer	DC6210 A3 M54	689	RU
1 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Gasketing	127 NA @ Head and Jambs		NA
1 Door Sweep	200 NA		NA
1 Saddle Threshold	425	AL	NA

SET #7

6 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
2 Exit Device	HC43 8813 ETL LC	US32D	SA
1 Rim Cylinder	1000 or 3000 Series as Required	626	RU
2 Door Closer	DC6210 A3 M54	689	RU
2 Kick Plate	KO050 10" x 2" LDW B4E CSK	630	TR
1 Gasketing	127 NA @ Head and Jambs		NA
2 Door Sweep	200 NA		NA
1 Saddle Threshold	425	AL	NA

SET #8

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Rim Cylinder	CL3357	626	RU
1 Gasketing	127 NA @ Head and Jambs		NA
1 Door Sweep	200 NA		NA

SET #9

3 Hinges	1191 4 1/2 X 4 1/2	US26D	HA
1 Office Lock	CL3357	626	RU
1 Stop	1270WV or 1211 as Req.	626	TR

END OF SECTION 087100

SECTION 133419 – METAL BUILDING SYSTEMS

PART 1 - GENERAL

DESCRIPTION OF WORK:

Extent of pre-engineered building work is shown on drawings.

Building Type: The pre-engineered building as shown on drawings.

Manufacturer's standard components may be used, providing components, accessories, and complete structure conform to architectural design appearance shown and to specified requirements.

Concrete floor and foundations and installation of anchor bolts are specified in Division-3.

QUALITY ASSURANCE:

Design Criteria:

Structural Framing: Design primary and secondary structural members and exterior covering materials for applicable loads and combinations of loads in accordance with the Metal Building Manufacturer's Association's (MBMA) "Design Practices Manual".

Structural Steel: For the design of structural steel members, comply with the requirements of the American Institute of Steel Construction's (AISC) "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings" for design requirements and allowable stresses.

Light Gage Steel: For the design of light gage steel members, comply with the requirements of the American Iron and Steel Institute's (AISI) "Specification for the Design of Cold Formed Steel Structural Members" and "Design of Light Gage Steel Diaphragms" for design requirements and allowable stresses.

For welded connections, comply with the American Welding Society's (AWS) "Standard Code for Arc and Gas Welding in Building Construction" for welding procedures.

Design Loads:

Pre-Engineered Metal Buildings shall be designed for wind loads per ASCE 7-93.

Design loads shall be as shown in accordance with applicable codes.

Basic design loads include, in addition to dead load, live load and wind load.

Design Wind Speed: See sheet Structural for wind speed design information.

Collateral loads include additional dead loads over and above the weight of the metal building system such as sprinkler systems and mechanical systems.

Design of structural elements shall take into consideration direct loads imposed by suspended piping, conduits or other equipment. Structural Engineer for pre-engineered building shall verify all equipment loads and locations with Mechanical Engineer of record for this project.

Design each member to withstand stresses resulting from combinations of loads that produce the maximum allowable stresses in that member as prescribed in MBMA's "Design Practices Manual".

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Manufacturer's Qualifications: Provide pre-engineered metal buildings as produced by manufacturer with not less than 5 years successful experience in the fabrication of pre-engineered metal buildings of the type and quality required.

SUBMITTALS:

Shop Drawings: Submit complete erection drawings showing design loadings anchor bolts settings, sidewall, endwall, and roof framing, transverse cross sections, covering and trim details, and accessory installation details to clearly indicate proper assembly of building components. Drawings shall be signed and sealed by a Florida Registered Engineer, and shall include a statement of structural design loadings.

Shop drawings from original building are available upon request after bid.

Product Data: Submit manufacturer's product information, specifications, and installation instructions for building components and accessories.

Certification: Submit written certification prepared and signed by a Professional Engineer, registered to practice in Florida, verifying that building design meets indicated loading requirements and codes of authorities having jurisdiction.

Maintenance Stock: Furnish at least 5% excess over required amount of nuts, bolts, screws, washers, and other required fasteners for each building. Pack in cartons and store on site where directed.

DELIVERY, STORAGE, AND HANDLING:

Deliver and store prefabricated components, sheets, panels, and other manufactured items so they will not be damaged or deformed.

Stack materials on platforms or pallets, covered with tarpaulins or other suitable weathertight ventilated covering. Store metal sheets or panels so that water accumulations will drain freely. Do not store sheets or panels in contact with other materials which might cause staining.

PART 2 - PRODUCTS

2.01- ACCEPTABLE MANUFACTURERS:

Available Manufacturers: Subject to compliance with specified requirements, manufacturers offering pre-engineered building systems which may be incorporated in the work include, but are not limited to the following:

AMCA Buildings Division
American Buildings Co.
American Steel Building Co., Inc.
Butler Manufacturing Co.
Southern Structures, Inc.
Or Approved Equal

2.02- MATERIALS (GENERAL):

1) Metals:

Hot-Rolled Structural Shapes: Comply with the requirements of ASTM A36 or A529.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Tubing or Pipe: Comply with the requirements of ASTM A500, Grade B, A501, or A53.

Members Fabricated from Plate or Bar Stock: Provide 42,000 psi minimum yield strength. Comply with the requirements of ASTM A529, A570, or A572.

Members Fabricated by Cold Forming: Comply with the requirements of ASTM A607, Grade 50.

Galvanized Steel Sheet: Comply with the requirements of ASTM A446 with G90 coating. "Class" to suit building manufacturer's standards.

2.03- Paints:

Shop Primer for Ferrous Metal: Provide manufacturer's standard fast-curing lead free, abrasion resistant, rust-inhibitive primer selected for compatibility with substrates, with types of alkyd-type finish paint systems indicated and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure. Comply with performance requirements only of FS TT-P-86, Type I, II, and III. Change color of second coat to distinguish it from first.

Shop Primer for Galvanized Members: Provide manufacturer's standard zinc dust-zinc oxide primer selected for compatibility with substrate. Comply with performance requirements of FS TT-P-641.

Shop-Primed Metal Surfaces: Provide manufacturer's standard flat, lusterless alkyd enamel. Comply with the performance requirements of FS TT-E-527.

2.04- FABRICATION (GENERAL):

Design prefabricated components and necessary field connections required for erection to permit easy assembly and disassembly. Fabricated components in such a manner that once assembled, they may be disassembled, repackaged and reassembled with minimum amount of labor.

Clearly and legibly mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams and instruction manuals.

2.05- STRUCTURAL FRAMING COMPONENTS:

Rigid Frames: Fabricate rigid frames from hot-rolled structural steel. Provide built-up "I-beam" shape or open web type rigid frames consisting of either tapered or parallel flange beams. All outside and interior structural columns must be wide flange steel not to exceed W12 straight or equal to United Structures of America, Inc. Coordinate with drawings. Provide frames factory welded and shop painted. Furnish frames complete with attachment plates, bearing plates and splice members. Factory drill frames for bolted field assembly.

Provide length of span and spacing of frames as indicated. Slight variations in length of span and frame spacing may be acceptable if necessary to meet manufacturer's standard, subject to Architect's approval.

Provide rigid frames at endwalls where indicated.

End Wall Columns: Provide factory welded, shop painted endwall columns of built-up "I" shape channels or cold-formed sections. Fabricate endwall columns of not less than 14 ga. material.

Bracing:

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Diagonal Bracing: Diagonal bracing in the roof shall be used to remove longitudinal loads (wind, crane, etc.) from the structure. This bracing will be furnished to length and equipped with bevel washers and nuts at each end. Provide adjustable bracing using not less than ½" diameter threaded steel rods; comply with the requirements of ASTM A36 or A572, Grade D.

Flange Braces: The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the flange compressive stress is within allowable limits for any combination of loadings.

Special Bracing: Where diagonal bracing is not permitted in the sidewall, rigid frame type portals must be placed between the frames as required. Refer to Architectural drawings for details/dimensions required to locate portal frames. Wind bracing in the roof and/or walls need not be furnished where it can be shown that the diaphragm strength of the roof and/or wall covering is adequate to resist the applied wind forces.

Secondary Framing:

Provide not less than 16 ga. shop painted rolled formed sections for the following secondary framing members:

- Purlins
- Eave struts
- Endwall beams
- Flange bracing
- Sag bracing

Provide not less than 14 ga. cold-formed galvanized steel sections for the following secondary framing members.

- Base channels
- Sill angles
- Endwall structural members (except columns and beams)
- Purlin spacers

Bolts: Comply with the requirements of ASTM A307 or A325 as necessary for design loads and connection details. Provide shop painted bolts, except when units are in direct contact with panels, provide zinc-plated or cadmium-plated bolts.

Fabrication: Shop fabricate structural framing components to the indicated size and section complete with base plates, bearing plates and other plates required for erection, welded in place. Provide all required holes for anchoring or for connections either shop drilled or punched to template dimensions.

Shop Connections: Provide power riveted, bolted or welded shop connections.

Field Connections: Provide bolted field connections.

Shop Painting: Clean surfaces to be primed of loose mill scale, rust, dirt, oil, grease, and other matter precluding paint bond. Follow procedures of SSPC-SP3 for power tool cleaning, SSPC-SP7 for brush-off blast cleaning, and SSPC-SP1 for solvent cleaning.

Prime structural steel primary and secondary framing members with the manufacturer's standard rust-inhibitive primer.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Prime galvanized members, after phosphoric acid pretreatment with manufacturer's standard zinc dust-zinc oxide primer.

2.06- ROOF AND SIDING:

A) General: Provide roofing and siding sheets formed to the general profile or configuration as indicated. Provide the following sheet metal accessories factory formed of the same material and finish as the roofing and siding.

- Louvers
- Flashings
- Closers
- Fillers
- Metal expansion joints
- Ridge covers
- Fascias
- Gutters and Downspouts

B) Basis of Design Manufacturer: **MBCI Metal Roof and Wall Systems, Division of NCI Group, Inc, OR APPROVED EQUAL**

1) PERFORMANCE REQUIREMENTS

- a. **General:** Provide metal wall panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
- b. **Thermal Movements:** Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.
- c. **Structural Performance:** Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated:
 - i. **Wind Loads:** Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
 - ii. **Deflection Limits:** Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/240 of the span with no evidence of failure.
- d. **Air Infiltration:** ASTM E 1680: Maximum 0.006 cfm/sq. ft. (0.030 L/s per sq. m) at 6.24 lbf/sq. ft. (300 Pa) static-air-pressure difference.
- e. **Water Penetration:** ASTM E 1646: No uncontrolled water penetration at a static pressure of 20 lbf/sq. ft. (958 Pa).

2) METAL PANEL MATERIALS


- a. **Sheet:** ASTM A 792/A 792M, structural quality, Grade 50, Coating Class AZ50 (Grade 340, Coating Class AZM150), prepainted by the coil-coating process per ASTM A 755/A 755M.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

3) METAL WALL PANELS.

- a. **Large Tapered-Rib-Profile, Exposed Fastener Metal Panels:** Structural metal panel consisting of formed metal sheet with trapezoidal major ribs with intermediate stiffening ribs symmetrically placed between major ribs, installed by lapping edges of adjacent panels.
 - i. Basis of Design: **MBCI, PBR Panel**, www.mbc.com/pbr.html.
 - ii. Coverage Width: 36 inches (914 mm).
 - iii. Major Rib Spacing: 12 inches (305 mm) on center.
 - iv. Rib Height: 1-1/4 inch (31.8 mm).
 - v. Nominal Coated Thickness: 26 gauge
 - vi. Panel Surface: Smooth
 - vii. Color: Color to be selected by Architect and Owner from manufacturer's standard color chips

4) METAL ROOF PANELS.

- a. **See Metal Roofing Specification, section number 07 41 00.** 

5) METAL PANEL ACCESSORIES

- a. General: Provide complete metal panel assembly incorporating base, corner, and opening trims and miscellaneous flashings, in manufacturer's standard profiles. Provide required fasteners, closure strips, support plates, and sealants as indicated in manufacturer's written instructions.
- b. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet. Color: Navy Blue, Architect/Owner to approve final color selection from manufacturer's color chip
- c. Panel Fasteners: Self-tapping screws and other acceptable fasteners recommended by metal panel manufacturer.
 - i. Exposed Fasteners: Long life fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.
- d. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
 - i. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.
- e. **Steel Sheet Miscellaneous Framing Components:** ASTM C 645, with ASTM A 653/A 653M, G60 (Z180) hot-dip galvanized zinc coating.

6) FABRICATION

- a. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

- b. Panel Lengths: Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- c. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate and finish.

7) FINISHES

- a. Finishes, General: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
- b. **Modified Silicone-Polyester Two-Coat System:** 0.20 – 0.25 mil primer with 0.7 – 0.8 mil color coat[, meeting solar reflectance index requirements].
 - i. Basis of Design: **MBCI, Signature 200.**

8) EXAMINATION

- a. Examine metal panel system substrate and supports with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panel installation.
 - i. Inspect metal panel support substrate to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable supports at recommended spacing to match installation requirements of metal panels.
 - ii. Panel Support Tolerances: Confirm that panel supports are within tolerances acceptable to metal panel system manufacturer but not greater than the following:
 - 1. 1/4 inch (6 mm) in 20 foot (6.1 m) in any direction.
- b. Correct out-of-tolerance work and other deficient conditions prior to proceeding with metal panel system installation.

9) PREPARATION

- a. **Miscellaneous Supports:** Install sub framing, girts, furring, and other miscellaneous panel support members according to ASTM C 754 and manufacturer's written instructions.
- b. Flashings: Install flashings to cover exposed underlayment per Section 07 62 00 "Sheet Metal Flashing and Trim."

10) METAL PANEL INSTALLATION

- a. Exposed Fastener Metal Wall Panels: Install weathertight metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal panels in orientation, sizes, and locations indicated, free of waves, warps, buckles, fastening stresses, and distortions. Anchor panels and other components securely in place. Provide for thermal and structural movement.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

- b. Panel Sealants: Install manufacturer's recommended tape sealant at panel sidelaps and endlaps.
- c. Panel Fastening: Attach panels to supports using screws, fasteners, and sealants recommended by manufacturer and indicated on approved shop drawings.
 - i. Fasten metal panels to supports at each location indicated on approved shop drawings, with spacing and fasteners recommended by manufacturer.
 - ii. Provide weatherproof jacks for pipe and conduit penetrating metal panels of types recommended by manufacturer.
 - iii. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by manufacturer.

11) ACCESSORY INSTALLATION

- a. General: Install metal panel trim, flashing, and accessories using recommended fasteners and joint sealers, with positive anchorage to building, and with weather tight mounting. Coordinate installation with flashings and other components.
 - i. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
 - ii. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
 - iii. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.
- b. Joint Sealers: Install joint sealers where indicated and where required for weathertight performance of metal panel assemblies, in accordance with manufacturer's written instructions.
Prepare joints and apply sealants per requirements of Division 07 Section "Joint Sealants."

PART 3 - EXECUTION

ERECTION:

Framing: Erect structural framing true to line, level and plumb, rigid and secure. Level base plates to a true even plane with full bearing to supporting structures set with double-nutted anchor bolts. Use a non-shrinking grout to obtain uniform bearing and to maintain a level base line elevation. Moist cure grout for not less than 7 days after placement.

Purlins and Girts: Provide rake or gable purlins with tight fitting closure channels and fascias. Locate and space wall girts to suit door and window arrangements and heights. Secure purlins and girts to structural framing and hold rigidly to a straight line by sag rods.

Bracing: Provide diagonal rod or angle bracing in both roof and sidewalls as indicated.

Moment resisting frames may be used in lieu of sidewall rod bracing, to suit manufacturer's standards.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Where diaphragm strength of roof or wall covering is adequate to resist wind forces, rod or other forms of bracing will not be required.

Framed Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical or electrical work. Securely attach to building structural frame.

Building Anchorage: The building anchor bolts shall be designed to resist the maximum column reactions resulting from the specified combination of loadings. These designs and sizes shall be specified by the Building Manufacturer. Tie rods or hairpins shall be specified if required. Anchor bolts and anchorages will be supplied by the contractor and NOT the Building Manufacturer.

ROOFING AND SIDING:

General: Comply with Specification Section 07410 - Preformed Wall and Roof Panels.

Sheet Metal Accessories: Install gutters, downspouts, ventilators, louvers and other sheet metal accessories in accordance with manufacturer's recommendations for positive anchorage to building and weathertight mounting. Adjust operating mechanism for precise operation.

FIELD PAINTING:

Apply finish coating to factory-primed items as follows. Finish colors as indicated or, if not indicated, as selected by Architect from manufacturer's standards.

Cleaning and Touch-Up: Prior to application of finish coats, clean component surfaces of matter which could preclude paint bond.

Touch-up abrasions, marks, skips or other defects to shop-primed surfaces with same type material as shop primer.

Protection: Protect work of other trades. Correct painting related damages by cleaning, repairing or replacing, and refinishing, as directed by Architect.

Coordination: Provide finish coats which are compatible with prime paints used. Provide barrier coats over incompatible primers where required. Notify Architect in writing of anticipated problems using specified coatings with substrates primed by others.

Surface Preparation: Perform preparation and cleaning procedures in strict accordance with coating manufacturer's instructions for each substrate condition.

Shop Primed Metal Surfaces: 2 coats lusterless alkyd enamel (FS TT-E-527).

Dissimilar Materials: Where aluminum surfaces come in contact with ferrous metal or other incompatible materials, keep aluminum surfaces from direct contact by applications to the other material as follows:

One coat in zinc chromate primer, FS TT-P-645, followed by two coats of aluminum, paint, SSPC- Paint 101.

In lieu of 2 coats of aluminum paint, apply one coat of high -build bituminous paint, SSPC-Paint 12, applied to a thickness of 1/16" over zinc chromate primer.

SECTION 133419 – METAL BUILDING SYSTEMS (continued):

Backpaint the aluminum surface where it is impractical to paint the other surface.

END OF SECTION **133419**

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- ### Finish Notes
- 1) All floor finishes shall be Class 1.
 - 2) All ceiling and wall finishes shall be Class A.
 - 3) See reflected ceiling plan for ceiling finishes and heights.
 - 4) Provide a metal transition strip between Carpet and Resilient Tile or Vinyl Wood Flooring equal to Flexco #167.
 - 5) Provide a metal transition strip between Porcelain Tile and Resilient Tile or Vinyl Wood Flooring equal to Schluter RENO-U in anodized aluminum.
 - 6) Provide a metal transition strip between Porcelain Tile and Carpet equal to Schluter RENO-TK in anodized aluminum.
 - 7) Provide a 72" high wainscot of Porcelain Tile on all restroom walls. See wall tile pattern.

- ### Millwork Notes
- 1.) Contractor shall field verify all dimensions prior to casework and millwork fabrication.
 - 2.) Shop drawings shall include fully dimensioned and detailed elevations for architect / owner's review.
 - 3.) Contractor to coordinate locations of grommets with owner in the field.
 - 4.) Provide plastic laminate on all exposed and semi-exposed surfaces.
 - 5.) See Millwork Legend for size, height and width designation.
 - 6.) Refer to interior elevation key for designations.
 - 7.) Contractor to coordinate all appliance and equipment sizes with owner prior to fabrication of millwork.
 - 8.) See casework schedule in section 124000 for materials and finish selections.

Model # — Model Number (see specification section 124000)
 B11 — Casework Type (see typical casework elevations)
 243521 — Casework Size (Width x Height x Depth)

W - Wall Cabinet, No Valance
 WV - Wall Cabinet, with Task Light Valance
 B - Base Cabinet
 S - Shelving
 T - Tall Cabinet
 F - Filler Panel

COLOR LEGEND

CARPET - CPT
 MFR: TANDUS
 PATTERN: TOP SHELF
 COLOR: MAKO

PAINT - P
 MFR: SHERWIN WILLIAMS

COLOR-1: DORIAN GRAY, 7017 (WALLS - TYPICAL)
 COLOR-2: REPOSE GRAY, 7015 (WALLS - RESTROOMS, ELEC. & MECHANICAL ROOMS)
 COLOR-3: GRIZZLE GRAY, 7068 (HOLLOW METAL WINDOW & DOOR FRAMES)

COLOR-4: RUSTIC RED, 7595 (ACCENT PAINT)
 COLOR-5: SANTORINI BLUE, 7607 (ACCENT PAINT)
 COLOR-6: MEDITERRANEAN, 7617 (ACCENT PAINT)
 COLOR-7: ELDER WHITE, 7014 (GWB CEILINGS)

PLASTIC LAMINATE
 MFR: WILSONART
 COLOR: SHAKER CHERRY, 7935-38 (CABINETS)
 PVC EDGE BANDING:
 CHARTER INDUSTRIES - SHAKER CHERRY

PORCELAIN TILE - PT
 MFR: TRINITY TILE
 STYLE: ARGONITE
 COLOR 1: BLUE, MATTE (FLOOR TILE IN RESTROOMS - 12" X 12")
 COLOR 2: GREY, MATTE (WALL TILE - 12" X 12")
 COLOR 3: GREEN, MATTE (ACCENT WALL TILE - 12" X 24")

GROUT: MAPEI
 TBD (WALLS)
 CHARCOAL, 47 (FLOORS)

RESILIENT BASE - RB
 MFR: FLEXCO
 COLOR: UMBER, 078

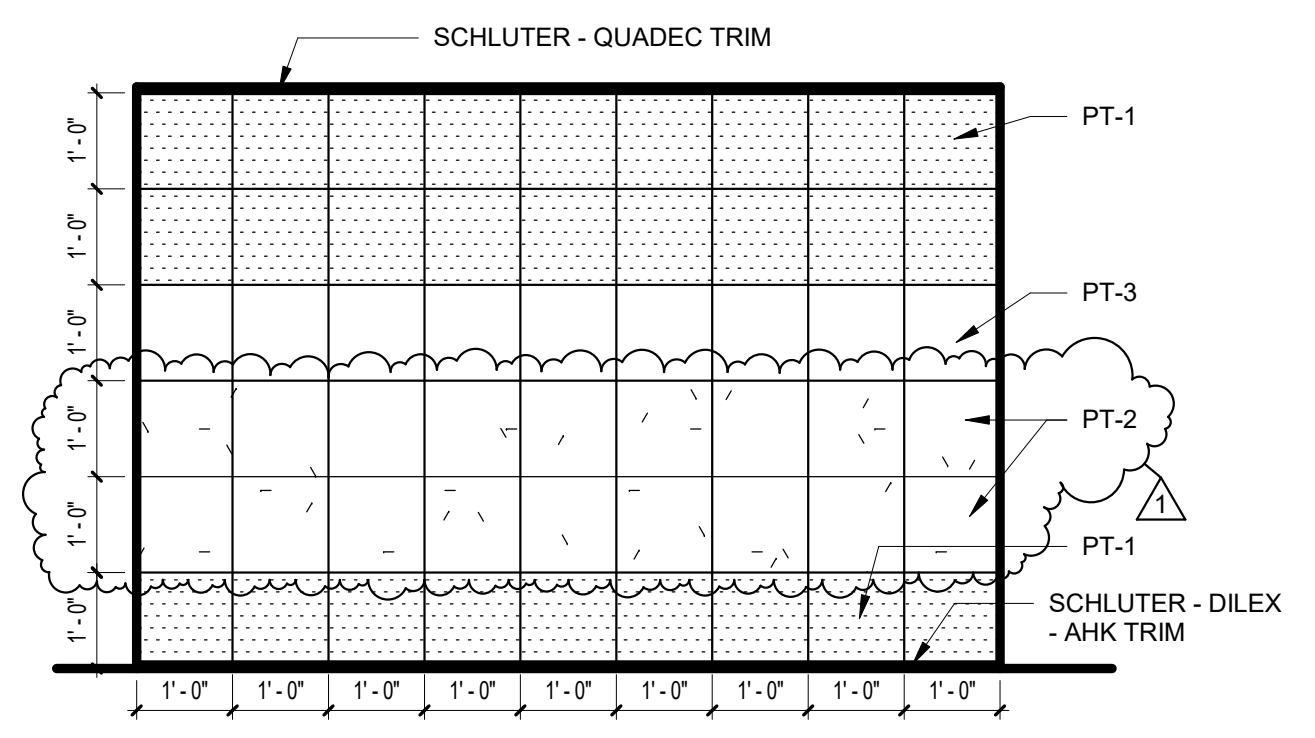
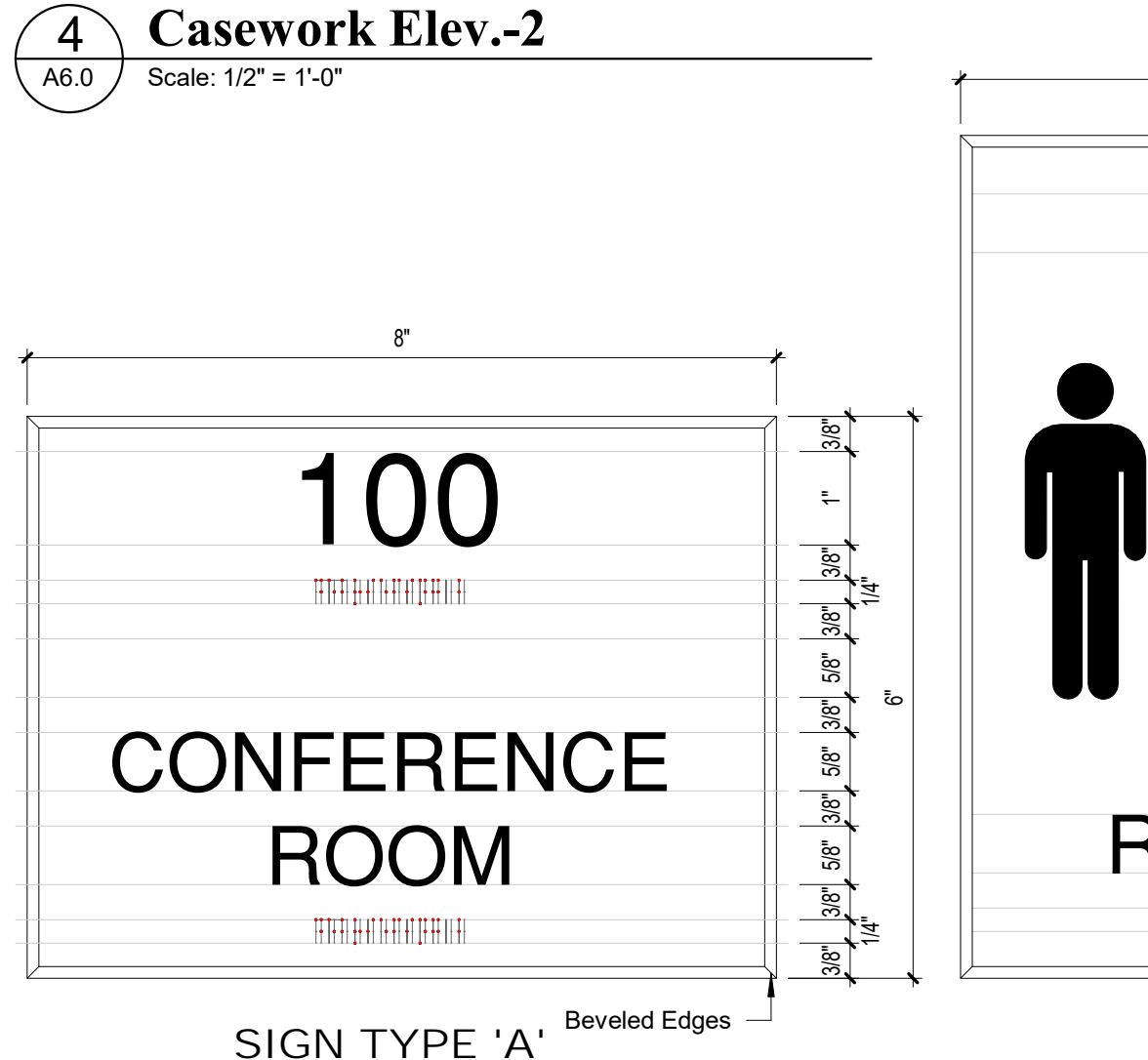
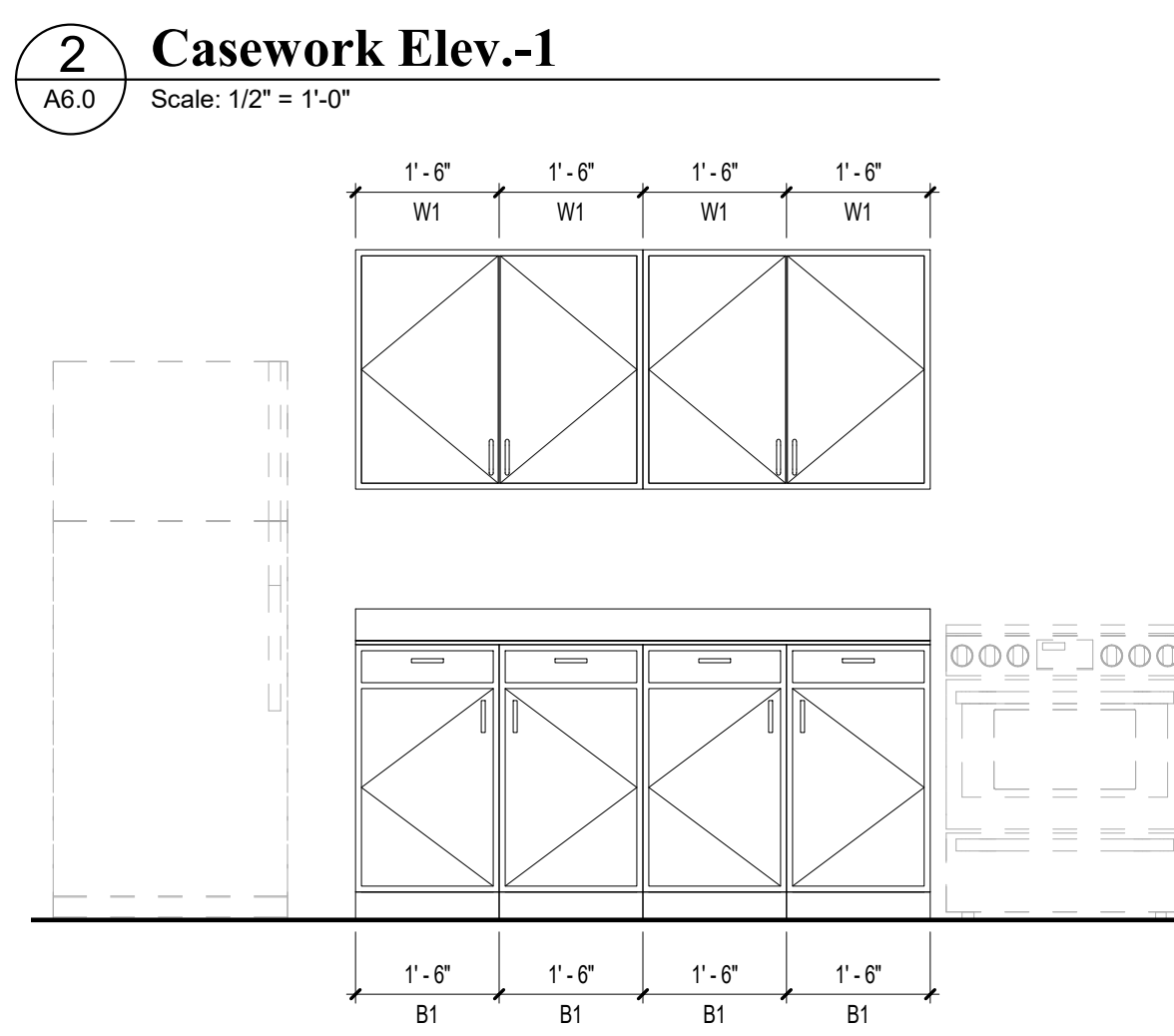
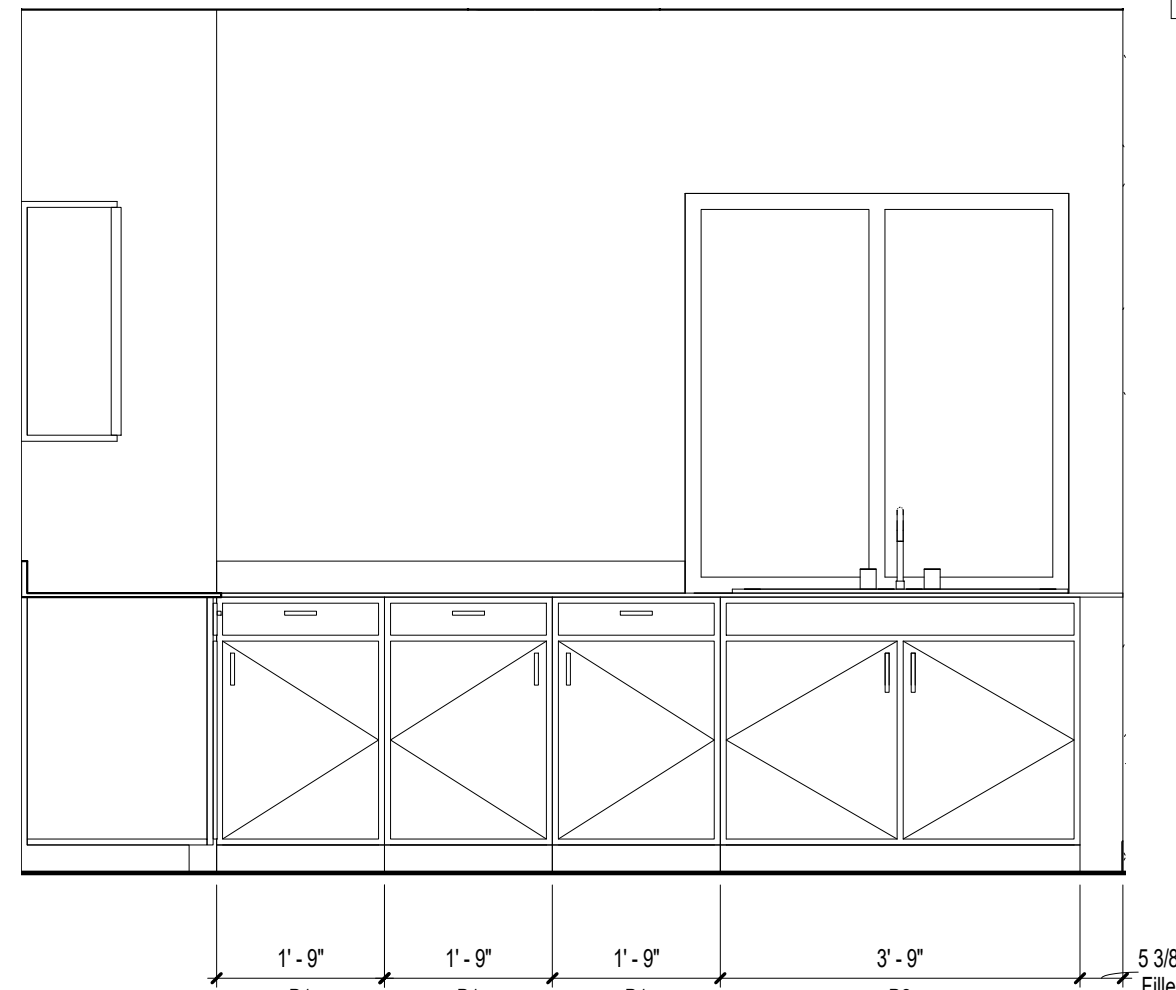
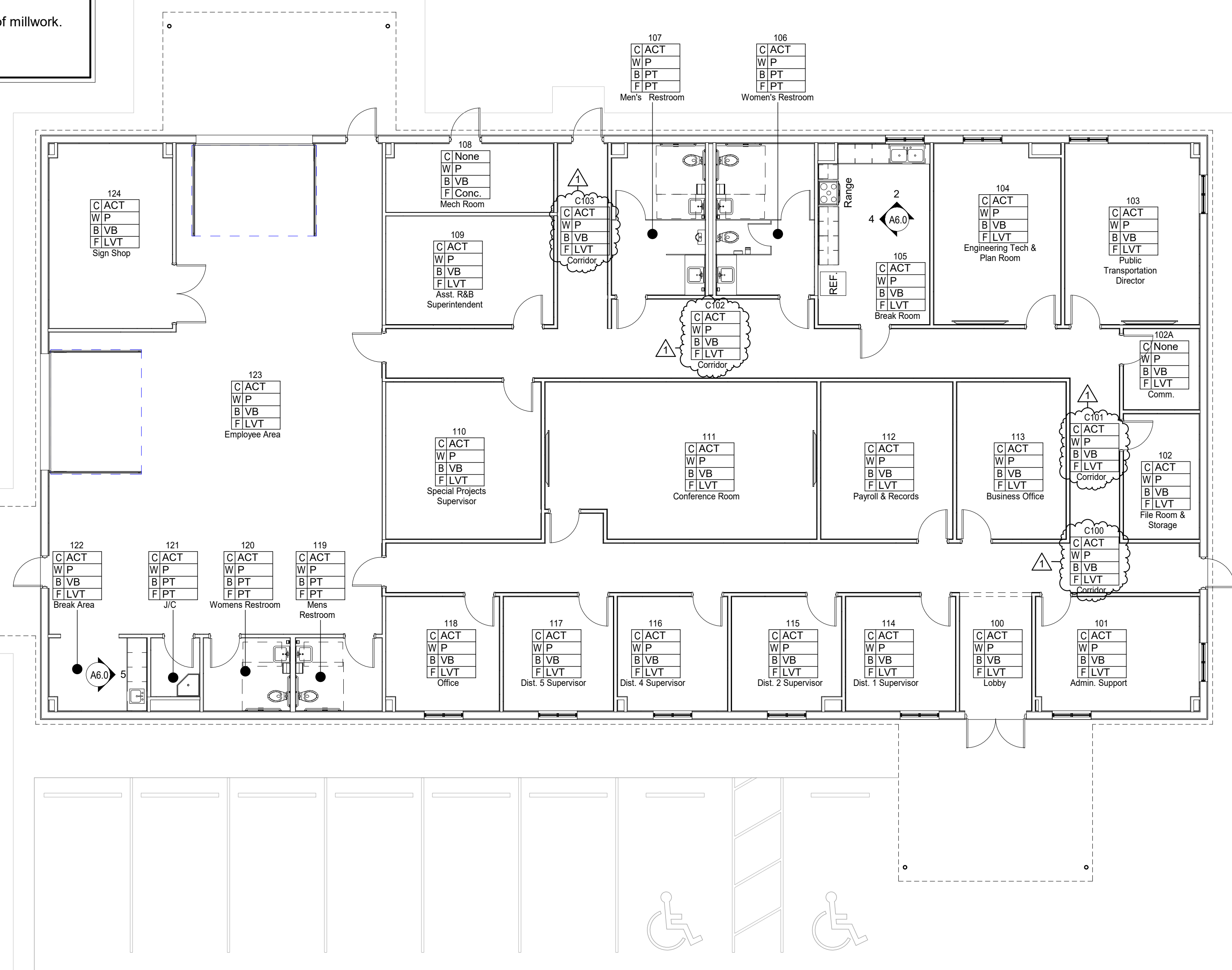
SOLID SURFACE
 MFR: LG HIMACS
 COLOR: COSMOS (COUNTERTOPS & WINDOW SILLS)

TRANSITION STRIPS
 MFR: FLEXCO
 COLOR: UMBER, 078

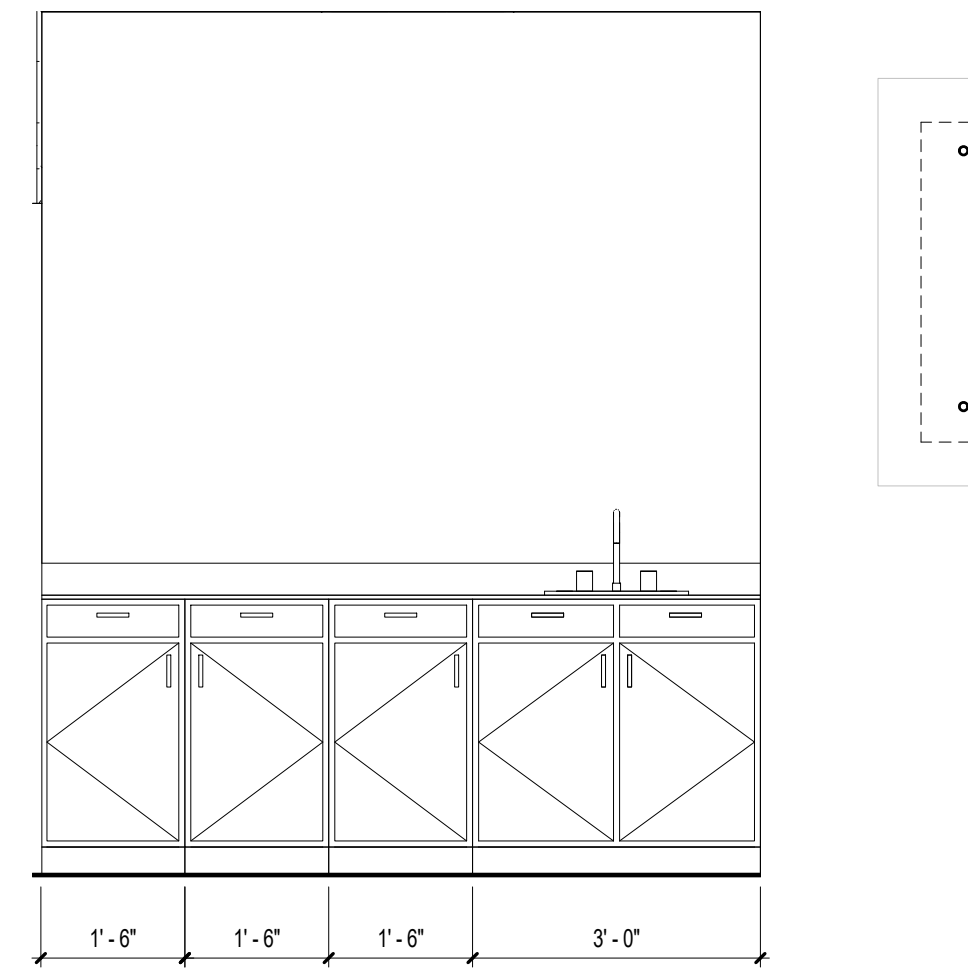
LUXURY VINYL TILE - LVT
 MFR: CENTIVA
 STYLE: EVENT
 SERIES: WOOD
 COLOR: HARVEST OAK, EHP 3352

WOOD DOORS
 MFR: MARSHFIELD
 SPECIES: NATURAL ROTARY BIRCH
 COLOR: ESPRESSO, 42-95

Casework Legend

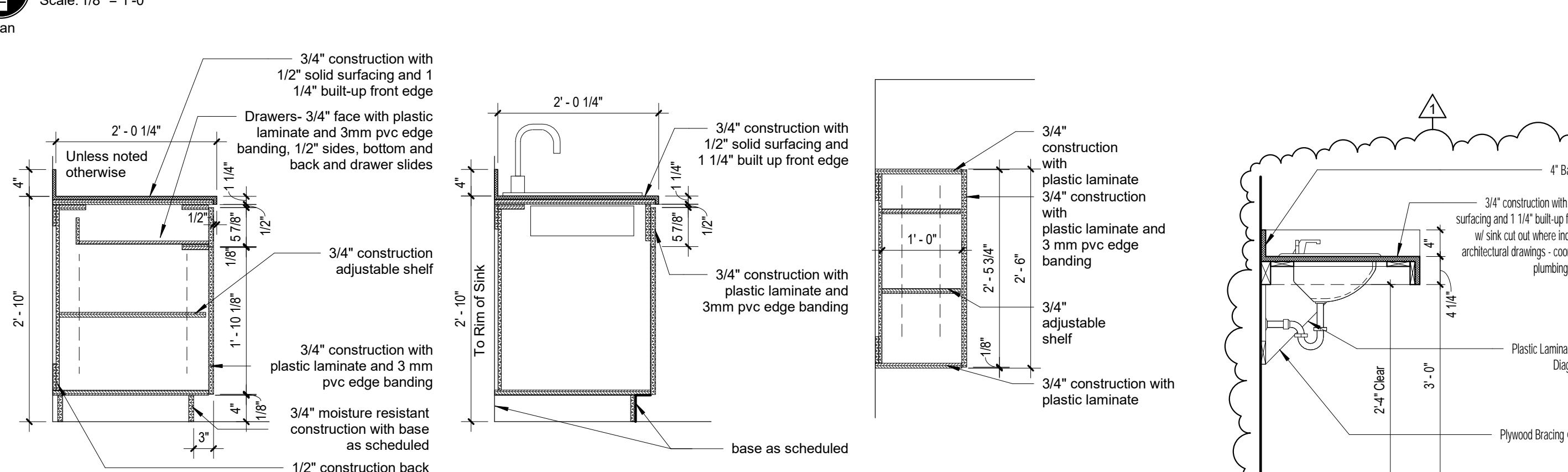


3 Wall Tile Pattern
 Scale: 1/2" = 1'-0"



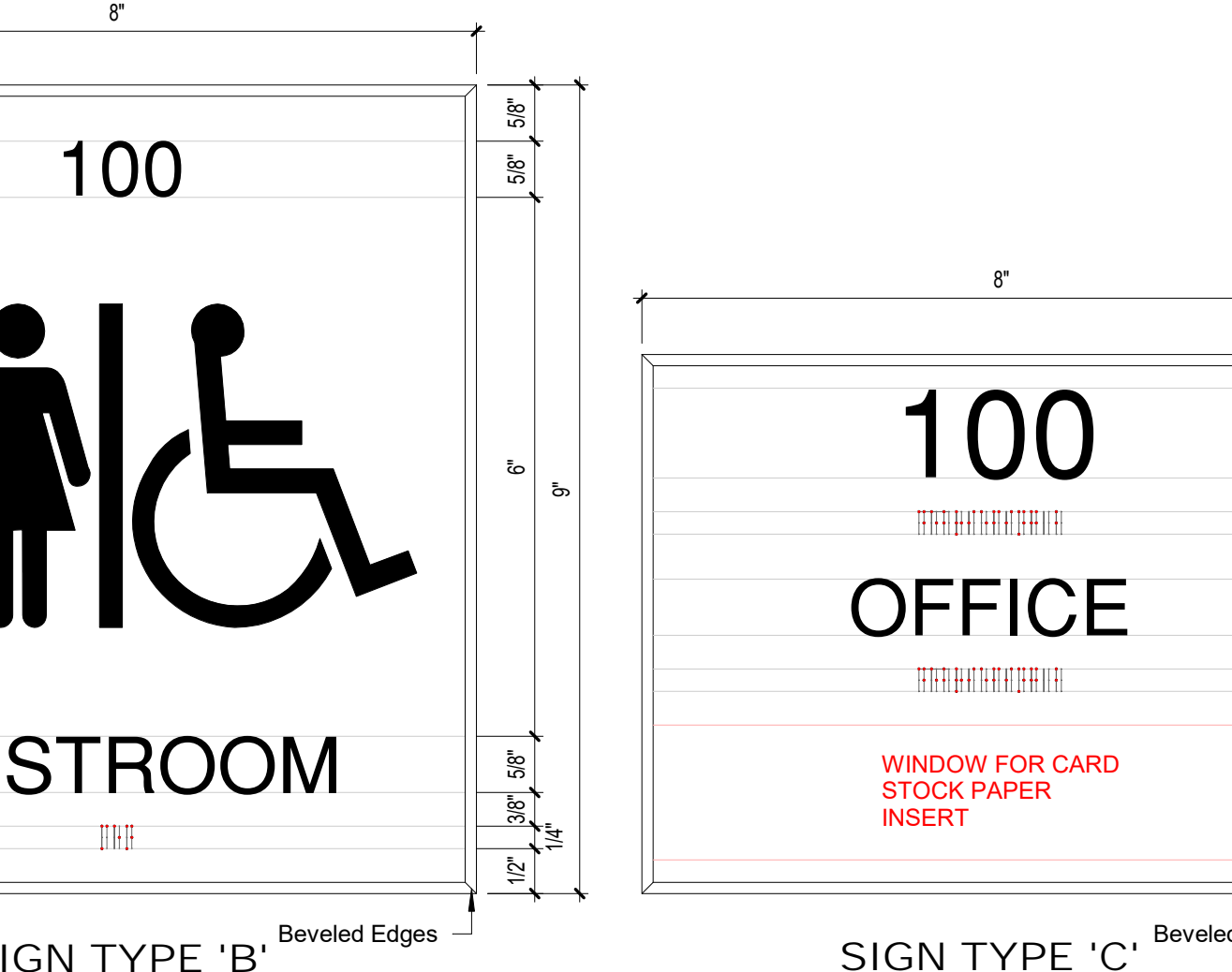
5 Casework Elev.-3
 Scale: 1/2" = 1'-0"

Finish Plan- First Floor



7 B1 Base Cabinet Detail Scale: 3/4" = 1'-0"
 8 B2 Base Cabinet w/ Sink Scale: 3/4" = 1'-0"
 9 W1 Wall Cabinet Detail Scale: 3/4" = 1'-0"
 10 Vanity Section Scale: 3/4" = 1'-0"

6 Room Signage Scale: 6" = 1'-0"



Jackson County BOCC

Jackson Co. Road & Bridge Facility

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Gregory Westmoreland Kelley
 AR0016706

Submittal

Phase	Date	Drw	Chk
100% Construction Doc.	4/9/21	Tech	Check
Schematic Doc.	2/16/21	BY	GK

Revision

#	Description	Date
1	Addendum 2-RFI Responses	5/21/21

CRA Project # 19040.08

Phase: 100% Construction Doc.

SHEET TITLE
Finish Plan and Details

A6.0 of

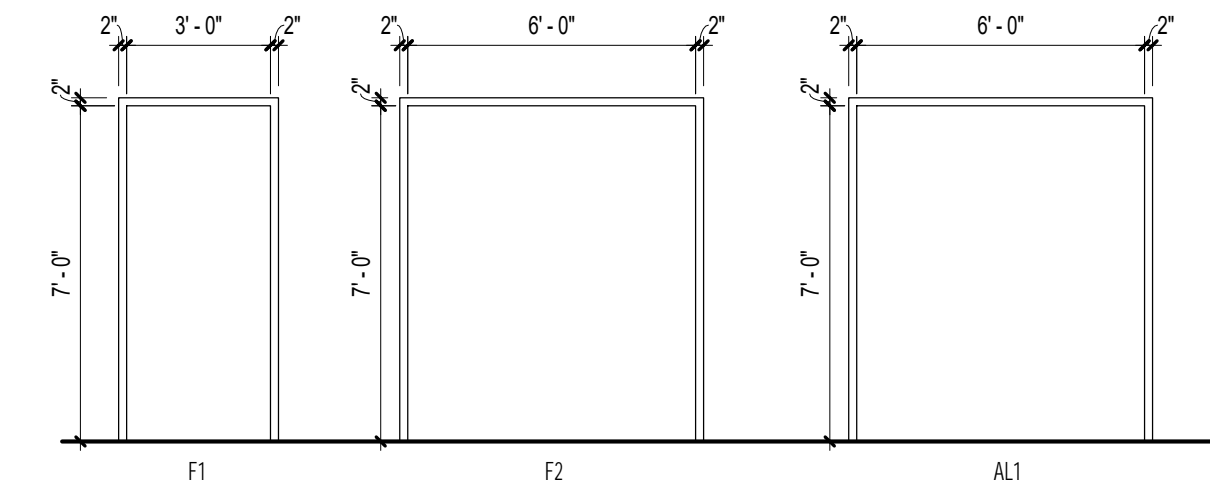
Door Number	Room Name	Room Number	Door Size			Door Type/Frame Type	Door Material	Frame Material	Glazing	Thres.	Label	Hardware No.	Detail	Control Type	Notes/Remarks
			Width	Height	Thickness										
100	Lobby	100	72"	84"	1 3/4"	AL-1/AL-1	Alum.	Alum.				7	4/A7.1		
101	Admin. Support	101	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
102	File Room & Storage	102	36"	84"	1 3/4"	D2/F1	WD.	HM	Yes		C	2	5/A7.1		
102A	Comm.	102A	36"	84"	1 3/4"	D2/F1	WD.	HM	Yes		C	2	5/A7.1		
103	Public Transportation Director	103	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
104	Engineering, Tech & Plan Room	104	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
105	Break Room	105	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	5	5/A7.1		180 Deg Swing
106	Women's Restroom	106	36"	84"	1 3/4"	D2/F1	WD.	HM			C	4	5/A7.1		
107	Men's Restroom	107	36"	84"	1 3/4"	D2/F1	WD.	HM			C	4	5/A7.1		
108	Mech Room	108	36"	84"	1 3/4"	D2/F1	HM	HM			C	8	2/A7.1		
109	Asst. R&B Superintendent	109	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
110	Corridor	C102	36"	84"	1 3/4"	D1/F1	HM	HM			C	1	5/A7.1		
111	Corridor	C100	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	3	5/A7.1		
112	Payroll & Records	112	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
113	Business Office	113	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
114	Dist. 1 Supervisor	114	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
115	Dist. 2 Supervisor	115	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
116	Dist. 4 Supervisor	116	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
117	Dist. 5 Supervisor	117	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
118	Office	118	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	1	5/A7.1		
119	Mens Restroom	119	36"	84"	1 3/4"	D2/F1	WD.	HM			C	4	5/A7.1		
120	Womens Restroom	120	36"	84"	1 3/4"	D2/F1	WD.	HM			C	4	5/A7.1		
121	J/C	121	36"	84"	1 3/4"	D2/F1	WD.	HM			C	9	5/A7.1		
123	Employee Area	123	36"	84"	1 3/4"	D2/F1	HM	HM			C	6	2/A7.1		
123A	Employee Area	123	120"	144"	0"	as Specified	MTL	HM			Per Manuf.				
123B	Employee Area	123	120"	144"	0"	as Specified	MTL	HM			Per Manuf.				
123C	Employee Area	123	36"	84"	1 3/4"	D2/F1	HM	HM			C	6	2/A7.1		
124	Sign Shop	124	72"	84"	1 3/4"	D2/F2	WD.	HM			C	9	5/A7.1		
C100	Employee Area	123	36"	84"	1 3/4"	D1/F1	WD.	HM	Yes		C	5	5/A7.1		
C101	Corridor	C100	36"	84"	1 3/4"	D2/F1	HM	HM			C	5	2/A7.1		
C102	Corridor	C102	36"	84"	1 3/4"	D1/F1	HM	HM	Yes		C	5	5/A7.1		
C103	Corridor	C103	36"	84"	1 3/4"	D2/F1	HM	HM			C	6	2/A7.1		

Door Schedule Legend

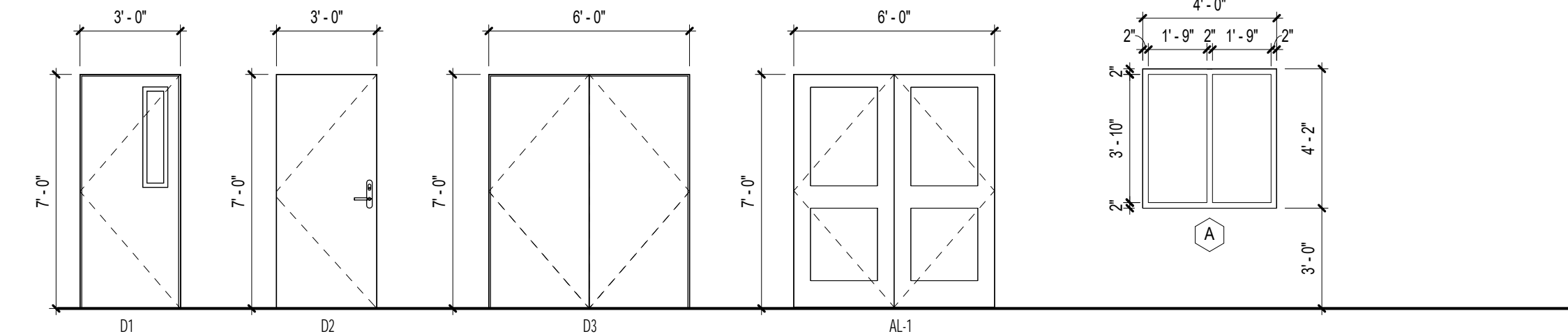
- Alum. - Aluminum
 - Anod. - Anodized
 - AP - Access Panel
 - CO - Cased Opening
 - HM - Hollow Metal
 - PT - Paint
 - PR - Pair of Doors
 - SC - Solid Core
 - ST - Stain
 - WD - Wood
- 20 C - 20 Min Certified Door & Frame Assembly
 - 20 M - 20 Min Fire Rated Door & Frame Assembly
 - B Label - 1-1/2" Hour Fire Rated Door & Frame Assembly
 - C-Label - 45 Min. Fire Rated Door & Frame Assembly

Door Schedule Notes

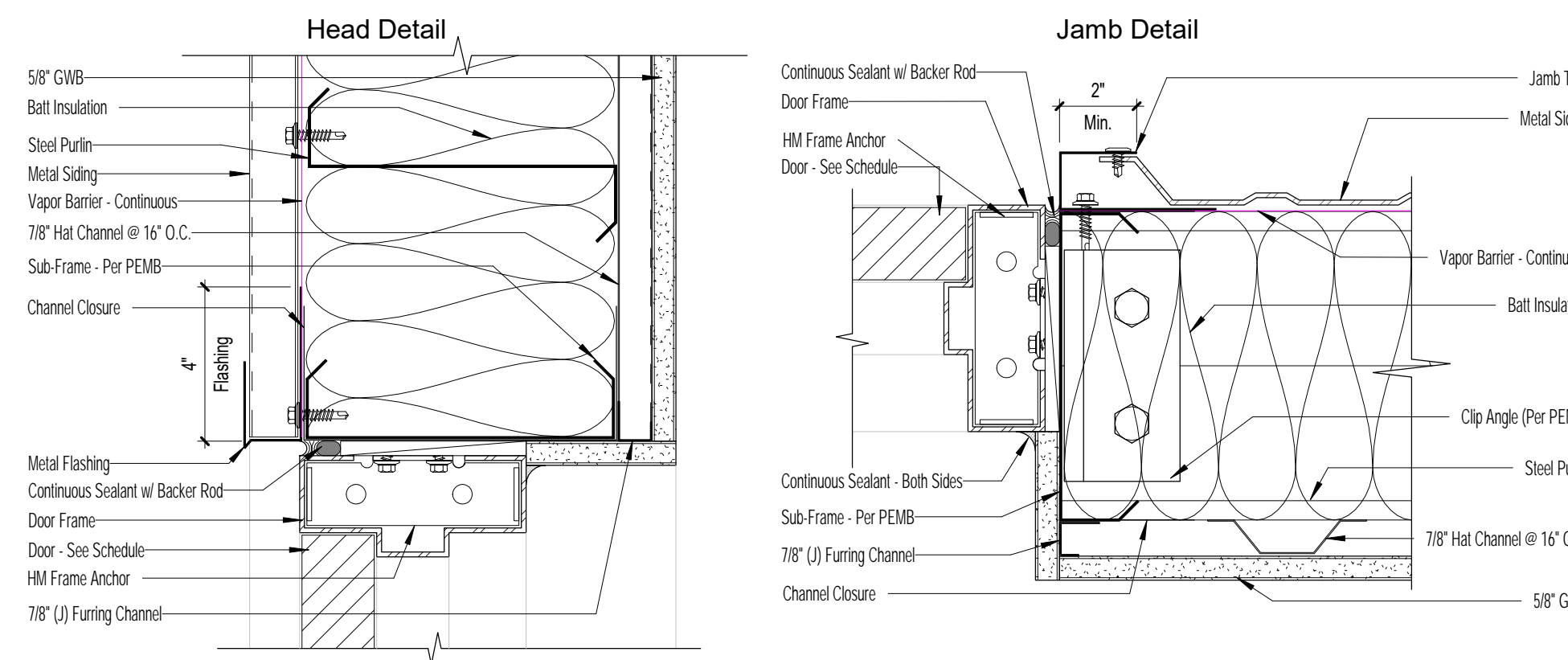
- See HVAC Floor Plans for Undercut Doors. Maximum Undercut to be 3/4"
- All Doors are to be 1-3/4" Thick Unless Noted Otherwise.
- All Stair Doors Shall be Temperature-Rise Label Doors.
- All Door Thresholds Shall Meet ADA Height Requirement 1/2" Maximum
- All Doors With Widths Noted as 72" Are Pairs of 36" Doors.



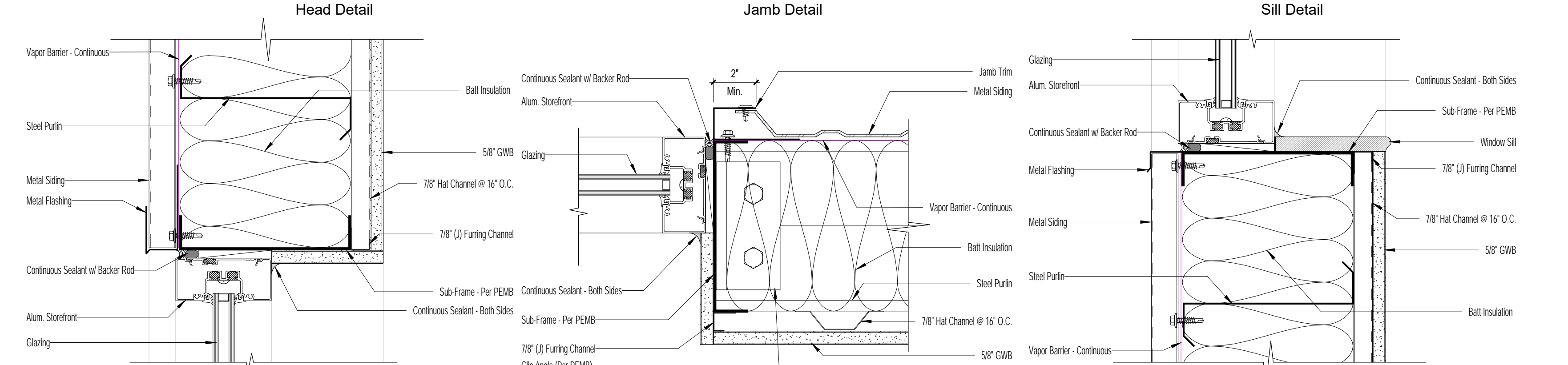
Frame Type



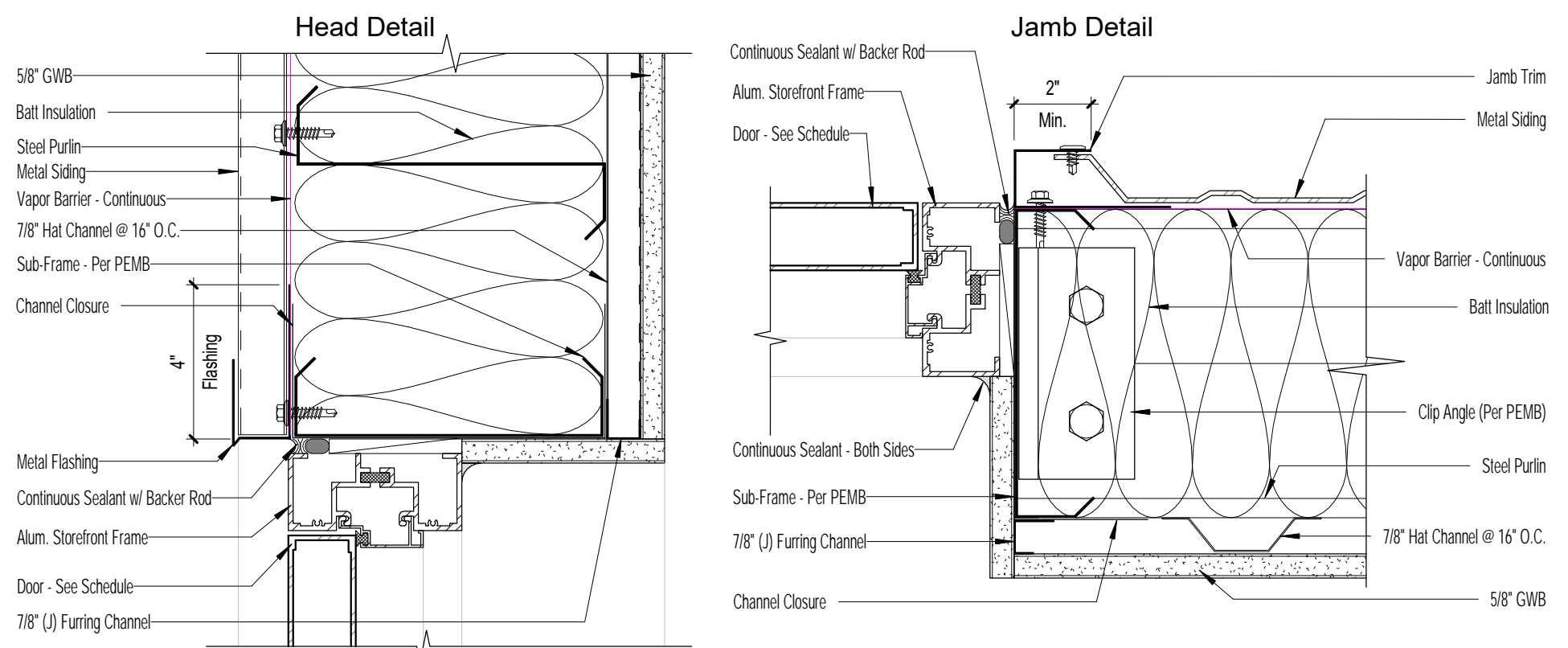
Door & Window Types



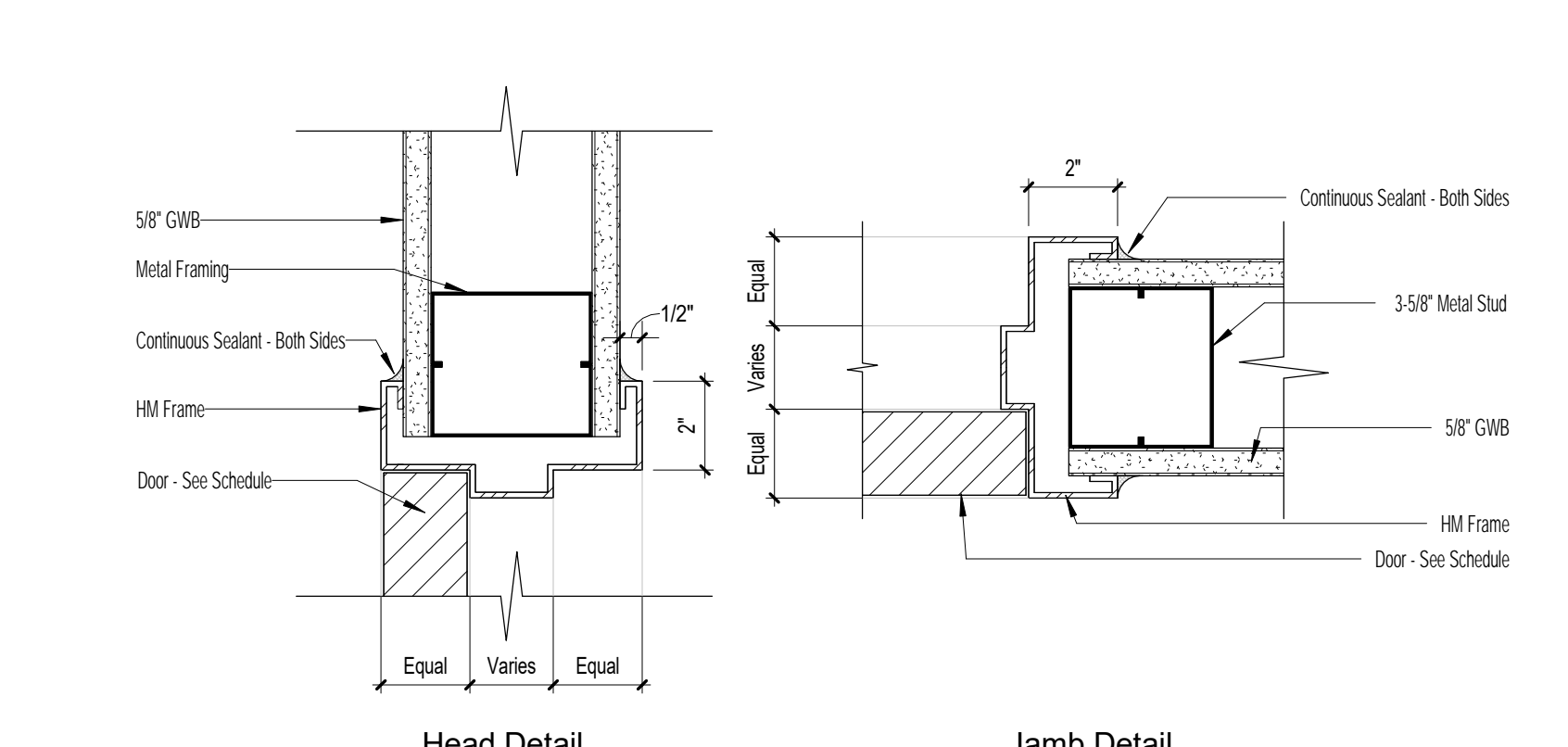
2 Exterior HM Door Details
Scale: 3" = 1'-0"



3 Exterior Window Detail
Scale: 3" = 1'-0"



4 Storefront Door Detail
Scale: 3" = 1'-0"



5 Interior Door Detail
Scale: 3" = 1'-0"

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Submittal

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100% Construction Doc.	4/9/21	Tech	M.E.
Schematic Doc.	2/16/21	BY	GK

Revision

#	Description	Date
1	Addendum 2-RFI Responses	5/21/21

CRA Project # 19040.08

Phase: **100% Construction Doc.**

SHEET TITLE
Door & Window Elevations & Details

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