# PROJECT MANUAL

FOR

# The University of North Florida

# Arena Office Relocation
# Phase I and II

UNF Project No. PR0189

## FOR CONSTRUCTION
May 17, 2021

BY

BHIDE & HALL ARCHITECTS, P. A.
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ORANGE PARK, FLORIDA 32073
B&H PROJECT NO.: 202102

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BHA No.202102

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SECTION 06 10 00

ROUGH CARPENTRY

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 Items of work to be performed shall include, but are not limited to, the following:

1.2.1 Framing lumber, furring, backup lumber and blocking as required for the finish installation of materials and equipment by other trades.

1.2.2 Hardware for securing rough carpentry materials.

1.2.3 Installation of finish carpentry items and other items and materials installed by carpentry trade.

2. MATERIALS:

2.1 Lumber shall be well-seasoned, sound stock, free from sap shakes and/or other defects which may impair the appearance, utility or strength of the materials.

2.2 Blocking, etc., shall be dimension Southern Yellow Pine, No. 2 common, or better. Minimum bending stress (Fb) of 1400 psi.

2.2.1 Moisture content for blocking and other miscellaneous woodwork shall conform to the moisture content provision of the Grading Rules by the Southern Pine Inspection Bureau.

2.2.2 Lumber to be surfaced 4 sides to conform to simplified Practice Recommendation R16.

2.3 Wood blocking: Provide pressure-treated 2 x wood blocking in the following locations:

1. Backing for all cabinets wall-hung and other wall supported accessories or fixtures.

2.4 Fasteners shall be of the type and size best suited for the work. All nails used exterior shall be hot dip galvanized, unless specified otherwise.

3. INSTALLATION:

3.1 Fasten securely all parts of carpentry work in their proper place.

3.2 Sort material to suit its placement so that permitted defects will have the least detrimental effect on the stability and appearance of the work.

3.3 Installation of various carpentry materials and components shall follow standard industry practices of good construction and the instructions of the manufacturer's of the component being installed.

4. STORAGE AND PROTECTION: Stack framing lumber and plywood to insure proper ventilation and drainage. Protect lumber and plywood from elements. All stored material shall be placed on dunnage at nominal 4" above grade. No contact between stored material and ground shall be permitted.

END OF SECTION

SECTION 06 40 00

ARCHITECTURAL WOODWORK

1 GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 SUMMARY: Architectural woodwork includes items of miscellaneous finish carpentry and laminate millwork unless such items are specified under another Section of these Specifications:

1.2.1 Work included in this section includes:

1. Coffee Bar millwork: Room 1050
2. Any additional millwork items.

1.3 Work specified in other sections and not included in this section includes:

1.3.1 Priming and back-priming, except as specified herein.
1.4.1 Sinks and Service Fixtures: Furnished and installed under Mechanical and Electrical Divisions.
1.4.2 Vinyl Base: Furnished and installed under Section 096500.
1.4.3 Blocking in walls, specified in Section 061000.

1.4 Quality Assurance:

1.4.4 Manufacturers shall show evidence of at least five (5) years' experience and installations for similar types of projects.

1.4.5 Quality Standards: The Quality Standards of the Architectural Woodwork Industry (AWI) shall apply and by reference are made a part of this Specification. Any item not given a specific quality grade shall be AWI "Custom".

1.5 Submittals:

1.5.1 Submit shop drawings for shelving and countertops showing layout, elevations, ends, cross-sections, service run spaces, and location of services. Show details and location of anchorages. Include layout of units with relation to surrounding walls, doors, windows and other building components. A cabinet sample shall be submitted upon the Architect's request.

1.6 Product Handling: Deliver completed units only after wet operations in building are completed and building is ready for cabinet installation. Do not store woodwork in a trailer.

1.7 Warranty: All materials and workmanship covered by this section will carry a one (1) year warranty from date of project Substantial Completion.

2 DEFINITIONS AND MATERIALS:

1.8 Listed are definitions and materials commonly used in defining laminate clad wood-work. Refer to FABRICATION section for those items selected for use on this project.

2.1.1 Open Interiors: Any open storage unit without solid doors or drawer fronts and units with glass doors. Material: GP28 HPDL. Color to match exposed face material.

2.1.2 Closed Interiors: Any closed storage unit behind hinged solid door or drawer fronts and sliding solid doors. Material, thermal-fused melamine - color to be selected by architect. (Note: Glued on top coated melamine papers are not acceptable.)

2.1.3 Exposed Surfaces: Any unit door/drawer front when closed and exposed ends Material GP28 high pressure decorative laminate. (Colored melamine is not acceptable).

2.1.4 Semi-Exposed Surfaces: Tops of wall and tall cabinets and exterior bottoms of wall cabinets, unless otherwise designated, shall be thermal-fused melamine - color to be selected by architect.

2.15. Concealed Surfaces: Any surface not normally visible after installation such as cabinet backs to wall and cabinet sides to cabinet sides. Material shall be a balanced backer. These flat surfaces shall be laminated and not left raw or painted.

2.1.6 Balanced construction of all laminated panels is mandatory.

2.1 Cabinet Core Materials

2.2.1 Particleboard – Industrial grade 47 lb. Meeting or exceeding ANSI A208.1-1993, M-3 requirements. Provide thickness as noted in this specification and on the drawings.

2.3 Decorative Laminates/Veneer Where Applicable.

2.3.1 Solid or pattern high pressure decorative laminated GP50 (.050) or post forming horizontal grade. NEMA test LD-3-1985. For countertops.

2.3.2 Solid or pattern color high pressure decorative laminated GP28 (.028). NEMA test LD-3-1985. For cabinet exposed surfaces. Thermal fused melamine is not acceptable.

2.3.3 High pressure cabinet liner CL20 (.020) for balance to GP28. NEMA test LD-3-1985.

2.3.4 Thermal-fused melamine accredited by A.L.A 1988 requirements or NEMA test LD – 3-1991. White, almond or light gray for open and closed interiors, including drawer boxes.

2.3.5 High pressure backer BK20 (.020).

2.3.6 Colors for high pressure laminate will be selected from Wilsonart or Formica's solid or pattern offering. A maximum of 5 colors will be selected.

2.4 Edging Materials.

2.4.1 1mm PVC banding, machine applied with waterproof hot melt adhesive. Interior shelving of cabinets shall have 1mm PVC banding to match shelf color.

2.4.2 3mm PVC banding, machine applied with waterproof hot melt adhesive. Use 3mm for all doors, drawer fronts, end panels, exposed shelves, and intermediate vertical panels on

exposed shelving.

2.4.3 A minimum of 10 colors shall be offered for color selection. A maximum of 4 colors will be selected.

2.5 Cabinet Hardware

2.5.1 Hinges

2.5.1.1 SALICE C2P4P99 HNG 110D INS FS SCRON MDO. Free Swinging, Screw Mounting, Model C2P4P99. Provide Hinge Arm Cover Plate and Cup Cover Plate. Provide for door thickness of ¾"

2.5.1.2 One pair per door to 48 inch height. One and one-half pair over 48 inches in height. Hinge to accommodate 13/16 inch thick laminated door and allow 180 degree swing.

1.5.1.3 Finish to be Nickel Plated

1.5.1.4 Hafele #329.16.520 or equivalent

2.5.2 Door/Drawer pulls

2.5.2.1 Amerock Blackrock Collection: Hafele #133.50.172 or equivalent
2.5.2.2 Finish: Satin Nickel
2.5.2.3 96mm CTC

2.5.3 Drawer Slides

2.5.3.1 Standard Drawers: Ball Bearing Slide, side mounting, full extension, zinc finish. Similar to Haefele Matrix Runner BBA45: Haefele #432.21.55X. *Length of slide to coordinate with drawer.* Minimum 100lb. Dynamic load rating.

2.5.5 Adjustable Shelf: To be built-in mortise mount pilaster shelving (KV 233-ZC). To include adjustable shelf supports (KV 237-ZC-XX).

2.5.6 Locks: N/A

2.6 Fabrication

2.6.1 Fabricate casework to dimensions, profiles and details shown on drawings.

2.6.2 Cabinet Body Construction

2.6.2.1 Joinery shall meet AWI standards for Custom Grade. Tops and bottoms to cabinet ends, cabinet components such as fixed horizontals, rails, verticals, and anchor rails shall be mating - sticking (male/female) and glued under pressure or dowelled in place. Dowel spacing shall not exceed 3.5 inches on center.

2.6.2.2 Unless specifically indicated, core shall be ¾" thick industrial grade 47lb particleboard meeting or exceeding ANSI A208.1-1993, M-3 requirements before lamination. Edging and surface finishes as indicated herein.

2.6.2.3 Unit backs on fixed cabinets shall be 3/8" or ½" thick particleboard (same type as cabinet body construction), laminated both sides with thermally fused melamine, captured four sides and glued. Exposed backs shall be ¾" particleboard with exterior surface GP28 laminate as selected.

2.6.2.4 All fixed base and tall units shall have a separate and continuous pressure treated pine or exterior grade plywood base. Cabinet sides continuous to floor are not allowed.

2.6.2.5 All under counter units, except sink base units, shall be provided with a full sub-top. All sink cabinet bodies shall be exterior grade (pressure treated) plywood core laminated with CL20 cabinet liner.

2.6.2.6 All exposed and semi-exposed edges of the cabinet body shall be factory edged with .05 mm PVC banding, machine applied with waterproof hot melt adhesive.

2.6.2.7 Adjustable shelf core shall be ¾" thick dimensionally stable plywood up to 30" wide. Cabinets over 30" wide shall have a vertical divider.

2.6.2.8 All upper wall cabinets shall provide a clear inside depth of 12" or 15" as indicated.

2.6.3 Drawers

2.6.3.1 Back and sides shall be ½" thick particleboard or fiberboard, laminated with thermal-fused melamine. Sub-front shall be 5/8" particleboard or fiberboard. Sides, back, and sub-front shall be connected by glued lock shoulder or doweled. No-screw-fasteners are allowed in end (narrow dimension) of fiberboard construction. Top edge is banded with 1mm PVC edging in matching color.

2.6.3.2 Drawer bottoms shall be 3/8" thick with the drawer box bottom sides, hardwood edged. All surfaces shall be laminated with thermal-fused melamine. Drawer bottom shall be captured four sides with a continuous bead of glue. Drawers over 24" shall have the bottoms reinforced.

2.6.4 Door/Drawer Fronts

2.6.4.1 Core for all doors and applied drawer fronts shall be ¾" thick particleboard. All edges shall be finished with 3mm PVC. Colors to be selected by the Architect.

2.6.4.2 Exterior faces shall be laminated with high pressure decorative laminated GP28, color as selected, balanced with cabinet liner CL20 to match basic cabinet interior body color.

2.7 Countertops. **Dupont Corian** - color to be selected from manufacturer's FULL LINE and COLOR RANGE: Color to be selected from one of the following: Natural Gray, Ash Aggregate, Carbon Aggregate, or Carbon Concrete

2.7.2 Non-porous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum tri-hydrate filler and pigment; not coated, laminated or of composite construction; meeting following criteria: Flammability: Class 1 and A when tested to UL 723.

All countertops shall be self-edged with a 1-1/2" thick front edge. Exposed corners shall have a 1/2" radius. Back and side splashes shall be ¾" butt type and fastened to the deck with a one component silicone ASTM C920.

Ensure surface has a uniform finish with a variation in component size of no more than +/- 1/8". Contractor shall field verify all conditions prior to fabrication and commencing work.

3. EXECUTION

3.1 Inspection: The installer must examine the job site and the conditions under which the work in this section is to be performed and notify the contractor in writing of unsatisfactory conditions. Do not proceed with work under this section until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.2 Preparation: Condition casework to average prevailing humidity conditions in installation areas prior to installing.

3.3 Installations

3.3.1 Install casework with factory trained supervision authorized by manufacturer. Erect casework, plumb, level, true, and straight. Cut out for all sink or electrical openings in tops and splashes.

3.3.2 Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind.

3.4 Cleaning and Protection

3.4.1 Clean plastic surfaces, repair minor damage per plastic laminate manufacturer's recommendations. Replace other damaged parts or units.

3.4.2 Advise contractor of instructions for protection of casework and tops from damage by other trades until acceptance of the work by the Owner.

END OF SECTION

SECTION 07 92 00

SEALANTS AND CAULKING

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 Summary: It is the intent of this section to provide for the furnishing and installing of sealants and caulking as described herein as is necessary to provide a complete, water-tight building for a complete, finished appearance.

1.3 Related Work Specified Elsewhere:

1.3.1 Section 09 90 00 Painting

1.4 Submittals:

1.4.1 Samples:

1.4.1.1 Submit one cartridge of each type and color sealant to be used.

1.4.1.2 Submit three (3) pieces of backing material, minimum 6" long, of each size required.

1.4.2 Product Data:

1.4.2.1 Submit three (3) copies of product manufacturer's specifications, recommendations, and installation instructions for sealant, backing, and associated materials.

1.4.2.2 Submit two (2) copies of manufacturer's color chart for sealant selection.

1.4.3 Provide minimum three (3) copies of manufacturer's specification data sheets for each product specified.

1.5 Product Handling:

1.5.1 Deliver materials in original, tightly sealed containers or unopened packages with manufacturer's name, label, product identification and lot numbers, where appropriate, intact.

1.5.2 Store materials out of weather as recommended by manufacturer.

1.5.3 Protect materials from damage before, during, and after installation.

1.6 Job Conditions:

1.6.1 Environmental requirements:

1.6.1.1 Apply only when temperatures shall be a minimum of 50° F. and when rain is not forecast for 24 hours.

1.6.1.2 Observe manufacturer's recommendations for safe handling and ventilation.

1.6.2 Protection:

1.6.2.1 Adjacent Surfaces: Protect work of other trades from damage by sealant with masking tape or other means necessary.

1.6.2.2 Damaged Work: Clean, repair, or replace damaged work, to include, but not limited to, work of other trades, at no additional cost.

1.7 Warranty:

1.7.1 Provide manufacturer's written warranty of five- (5) year period against material failure.

1.7.2 Provide a warranty for workmanship against leakage for two- (2) year period.

2. PRODUCTS:

2.1 Sealants:

2.1.1 Exposed locations on the building interior with no joint movement: Caulking – Acrylic Latex Caulk. Caulking shall be applied as part of preparation for interior painting to provide a smooth joint at dissimilar materials or at the intersection of surfaces.

2.2 Backer Rod:

2.2.1 Material: Open cell compressible, resilient, non-waxing, polyurethane foam compatible with sealant.

2.2.2 Size and Shape: Variable to control depth of sealant and provide 20% to 50% compression upon insertion.

2.3 Primer: Non-staining type approved by sealant manufacturer.

2.4 Bond Breaker: Pressure sensitive adhesive polyethylene tape approved by sealant manufacturer.

2.5 Masking Tape: Pressure sensitive adhesive paper tape.

2.6 Joint Cleaner: Xylol.

3. EXECUTION:

3.1 Inspection:

3.1.1 Examine surfaces to be caulked to assure that they are sound, smooth, clean, dry, and free of visible contamination, suitable and ready for sealant application.

3.1.2 Assure that surfaces requiring curing have been properly cured and ready for

sealant application.

3.1.3 Do not start work until surface conditions to be caulked are satisfactory and defects have been corrected.

3.2 Preparation:

3.2.1 Cleaning: Clean joint surfaces, using joint cleaner as necessary, to be free of dust, dirt, oil, grease, rust, lacquers, moisture, or other contaminants and matter which may adversely affect proper adhesion of sealant.

3.2.2 Masking: Mask area adjacent to joints.

3.2.3 Primer: After cleaning joints, apply primer, if recommended by sealant manufacturer, to dry surfaces.

3.2.4 Joint Backer: Where joint depth exceeds required depth of sealant, install joint backing to provide backing and uniform depth of sealant.

3.2.5 Bond Breaker: Where joint backing is not required or cannot be installed, install bond breaker tape smoothly at back of joint.

3.3 Installation / Application:

3.3.1 Sealant Application:

3.3.1.1 Apply sealant in accordance with manufacture's application instructions.

3.3.1.2 Use hand-guns or air-pressure equipment, with proper nozzle size, with sufficient pressure to drive and force sealant into and completely fill joints.

3.3.2 Tooling:

3.3.2.1 Tool joints to form smooth, uniform beads with slightly concave surfaces.

3.3.2.2 Finish joints to be straight, uniform, smooth, and neatly finished.

3.4 Cleaning:

3.4.1 Clean off excess compound or smears with cleaning agent recommended by sealant manufacturer.

3.4.2 Take care not to damage adjacent work with cleaning agent, to include but not limited to, defacing or marring finished surfaces.

3.4.3 Protect finished sealant work as required to prevent damage until acceptance of work.

3.5 Schedule:

3.5.1 Where different materials meet, adjoin, or abut.

3.5.2 Where sealant is required to prevent moisture intrusion into building.

END OF SECTION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 Doors and frames shall be products of one manufacturer regularly engaged in manufacturing steel doors and frames of types specified.

1.3 Labeled Assemblies: Provide UL labeled door and frame assemblies with the time ratings scheduled.

1.4 Related Work:

1.4.1 Finish Hardware, Section 08 71 00.

1.4.2 Glass and Glazing, Section 08 81 00.

1.4.3 Painting, Section 09 90 00.

1.5 Submittals:

1.5.1 Submit shop drawings covering door, frame, and complete anchorage details for doors and frames.

2. MATERIALS:

2.1 A minimum gauge of materials for doors, frames, and anchorage is specified herein. Provide a heavier gauge, if necessary, to meet the wind load and missile impact criteria.

2.2 FRAMES: Interior door frames and window frames shall be minimum 16 gauge steel (exception being frames over 3'-6", they shall be 14 gauge steel). All frames shall be hot dipped galvanized A60 sheet steel continuously welded with mitered corners. Minimum hinge reinforcement at both doors and frames shall be 7 gauge steel (at all locations). Exterior door frames shall be a minimum of 14 GA A60 galvanized steel sheet, continuous welded, seamless and ground smooth.

2.2.1 Door frames in CMU masonry walls are to be "inset" style.
2.2.2 Fire resistance: Shall be labeled per door schedule. All Fire rated doors require metal applied embossed labels indicating rating designation.
2.2.3 Electrified Openings: Doors and frames shall be factory pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug-in connectors to accommodate up to twelve wires.

2.3 Hardware Preparation: Mortise, reinforce, drill and tap as necessary for installation of finish hardware.

2.4 Closer Reinforcements: All doors shall be reinforced to receive door closers. 12 GA continuous sleeve closer reinforcement suitable for face mount or soffit mount door closer arms.

2.6 Silencers: Conical rubber insert 3 per jamb.

2.6 Metal Doors: Shall be 16 gauge

2.6.1 Flush Panel, Polystyrene Core
2.6.2 Interior Doors: 16 GA A60 Galvanized Steel Sheet, Cold-Rolled steel sheet, continuously welded.
2.6.3 Exterior Doors: 16 GA G90 Galvanized Steel Sheet, Cold-rolled steel sheet, continuously welded.
2.6.4 Door Edges:
2.6.4.1 Exterior: Seamlessly, continuous welded top and vertical edges, fill and grind smooth. Bottom edge, tack weld, fill and grind smooth.
2.6.4.2 Interior: Seamless welded vertical edges, fill and grind smooth. Horizontal edges, tack weld, fill and grind smooth.
2.6.5 Finish (Doors and Frames): Exterior and Interior Factory Baked primer ready for paint.
2.6.6 Provide 7 gauge hinge reinforcing, 16 gauge lock reinforcing, and 12 gauge closer reinforcing. All doors Physical Performance level

2.6.7 Shall be Level A (extra heavy duty) and shall be Model 2 (seamless). Exterior doors shall be G90 galvanized and interior doors A60 galvanized.

2.6.8 The latch edge of the door shall be beveled 7/64 inch. All labeled/rated doors shall bear an embossed metal label. Mylar or similar labels are not acceptable. Close top and bottom edges of doors flush as an integral part of door construction or by addition of .053 thick, metallic-coated steel channels with channel webs placed even with top and bottom edges.

2.7 Frames for vision panels in doors shall be 16- gauge steel; clamp-on type; suitable for use in rated assemblies. Paint screws to match frame. All screws shall be firmly in place.

2.8 Frames for fixed interior windows shall be of similar construction as door frames.

3. SHOP FINISH:

3.1 After assembly, clean steel thoroughly of rust, oil and grease, apply one coat of lead free primer paint; baked on 20 minutes at 325 degrees F to dry film thickness of 3 mils.

4. INSTALLATION:

4.1 Frames shall be erected plumb; properly braced, be rigid and in true alignment. Secure door frames to floor construction with two (2) fastenings at each jamb.

4.2 Hang doors so-as-to swing easily and freely on their hinges and close accurately against silencers on frame without binding. Doors shall remain stationary in any position without independent motion. Clearance at bottom max. ¾ inch above concrete where carpet will be installed; ½ inch" elsewhere; jambs and head, 1/8 inch; meeting style in pair of doors, 1/8 inch total maximum

4.3 Silencers: furnish and install three (3) silencers per jamb in predrilled holes within door stop. Installation of silencers shall not occur until frames are completely painted and dry.

END OF SECTION

SECTION 08 14 00

WOOD DOORS

1. GENERAL:

1.1 Related Documents: The requirements of Divisions 0 and 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms described in Section 01042, Direct Purchasing Procedures, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 Related Work:
1.2.1 Section 08100, Hollow Metal Doors and Frames
1.2.2 Section 09900, Painting
1.2.3 Section 08710, Finish Hardware

1.3 Handling: Keep doors in protected condition and store flat until ready for installation. Identify each as per respective openings using Architect's door numbers.

1.4 Contractor shall repair or replace doors damaged by construction. Trade responsible for damage shall compensate contractor for repair work or replacement in amount equal to cost of repair work or replacement.

1.5 Labels: Provide UL labeled doors with the time ratings as scheduled. Labels shall be embossed metal. Self-adhering Mylar labels will not be accepted.

1.6 Submittals:
1.6.1 Manufacturer's data for wood doors.
1.6.2 Manufacturer's lifetime guarantee for doors specified.
1.6.3 Shop drawings indicating door sizes, UL labels, and cutouts. Use door numbers as indicated on the Door Schedule. Indicate undercuts and louvers.

2. MATERIALS:

2.1 Construction:

2.1.1 Unless otherwise specified, all doors shall be WDMA I.S.1-A Performance Grade: Type 1: Extra Heavy Duty

2.1.2 Construction: Five Plies minimum – Hot Pressed. Crossbands: 1/16" thick hardwood. Crossbands and faces shall be laminated to the core with water-resistant glue by the hot press process

2.1.3 Core: Structured Composite Lumber Core (SCLC) Doors to be used at non-rated and 20-,om rated openings only.

Fire Rated Door Cores: Mineral-Core Doors to be used at 45, 60 and 90 minute rated openings. Mineral Core doors shall have sufficient blocking for all surface mounted hardware eliminating the need for through bolting.

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2.1.3 Stile, Rail: Stiles and rails shall measure at 1 3/8” prior to factory trimming, glued to core. Stiles shall be hardwoods of same species as face veneers.

2.1.4 Face Veneer: Premium grade birch (Rotary Cut) per AWI Section 200-S-2 or NWWDA I.S.I.-AG-11. Minimum thickness shall be .020".Factory finish door faces and vertical edges to match the vener, stain, cut, color and sheen selected by the architect (provide manufacturer samples for final selection). UV cured system with performance properties equivalent to TR-6 or OP-6 Catalyzed Polyurethane. Individually protect doors from damage with factory poly-wrap.

2.1.4 Prefitting Machining: Lock and hinge stile beveled 1/8" in 2" with a prefit door clearance of 1/8" at top and sides and 1/2" maximum at the bottom unless otherwise noted. (Under no circumstances shall labeled doors be undercut greater than 3/4" above structural floor, measured after the door is hung.)

2.1.5 Fit flush wood doors to frames and factory machine doors for hardware.

2.1.6 Door Cutouts: Factory cut locations, not to exceed 40% of door face or 50% of door height. Must be at least 6" from door edge, including hardware preps.

2.2 Manufacturers:
Mohawk - Masonite (ASPIRO)
Marshfield – Algoma

2.3 Label: Provide labels as scheduled. Labels shall be embossed or engraved metal plates clearly indicating time rating specified. Protect labels during shipping and construction.

2.4 Warranty: Provide full warranty for the life of the original installation, subject to industry regulations for storage, hanging, finishing, and maintenance.

3. COORDINATION OF RESPONSIBILITIES:

3.1 Contractor shall furnish the following information to the door manufacturer: Approved metal door frames schedule and shop details; approved hardware schedule and list of templates required; Architect's floor plan and door schedule.

3.2 Door frames improperly set shall be corrected by the Contractor to receive factory fit doors.

3.3 Door manufacturer will be responsible for properly coordinating information received by him so that doors are properly fitted, machined and ready to hang.

3.4. Store doors in a well-ventilated building, cover to keep clean, but allow circulation. Relative humidity must be between 30% and 60%.

3.5 Install wood doors in accordance with manufacturer's instructions.

3.6 Job fit doors: Seal cut surfaces immediately after fitting and machining.

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

Section includes:

1. Mechanical door hardware for:

   a. Swinging doors.

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

2. Cabinets (casework), including locks in cabinets

Related Sections:

3. Division 01 Section “Alternates” for alternates affecting this section.
4. Division 07 Section “Joint Sealants” for sealant requirements applicable to threshold installation specified in this section.
5. Division 09 sections for touchup finishing or refinishing of existing openings modified by this section.

1.3 REFERENCES

UL - Underwriters Laboratories

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

DHI - Door and Hardware Institute

5. Sequence and Format for the Hardware Schedule
6. Recommended Locations for Builders Hardware
7. Key Systems and Nomenclature

ANSI - American National Standards Institute

8. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.4 SUBMITTALS

General:

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

Action Submittals:

4. Product Data: Product data including manufacturers’ technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.

5. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.

    a. Samples will be returned to supplier in like-new condition. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

6. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:

    a. Door Index; include door number, heading number, and Architects hardware set number.
    b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
    c. Type, style, function, size, and finish of each hardware item.
    d. Name and manufacturer of each item.
    e. Fastenings and other pertinent information.
    f. Location of each hardware set cross-referenced to indications on Drawings.
    g. Explanation of all abbreviations, symbols, and codes contained in schedule.
    h. Mounting locations for hardware.
    i. Door and frame sizes and materials.
    j. Name and phone number for local manufacturer's representative for each product.
    k. Operational Description of openings
    l. Operational description should include how door will operate on egress, ingress, and fire and smoke alarm connection.
        1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

7. Key Schedule:

    a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
    b. Use ANSI/BHMA A156.28 “Recommended Practices for Keying Systems” as guideline for nomenclature, definitions, and approach for selecting optimal keying system.

c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
   1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

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

Informational Submittals:

9. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
10. Certificates of Compliance:

a. Certificates of compliance for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.

Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by qualified testing agency, for door hardware on doors located in accessible routes.

11. Warranty: Special warranty specified in this Section.

Closeout Submittals:

12. Operations and Maintenance Data : Provide in accordance with Division 01 and include:

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

## 1.5 QUALITY ASSURANCE

Product Substitutions: Comply with product requirements stated in Division 01 and as specified herein.

1. Where specific manufacturer's product is named and accompanied by "No Substitute," including make or model number or other designation, provide product specified. (Note: Certain products have been selected for their unique characteristics and particular project suitability.)

    a. Where no additional products or manufacturers are listed in product category, requirements for "No Substitute" govern product selection.

2. Where products indicate "acceptable manufacturers" or "acceptable manufacturers and products", provide product from specified manufacturers, subject to compliance with specified requirements and "Single Source Responsibility" requirements stated herein.

    Provide hardware that meets the hurricane and windload test requirements in accordance with the Florida Building code and are in compliance with the local authority having jurisdiction. All openings required to meet either the impact test or windload test as indicated by the architect shall be tested as systems with the finish hardware, hollow metal doors and frames and installed in accordance with the applicable tests. These requirements take precedence over other requirements for such hardware. Provide only hardware that has been tested and listed by local authority for the types and sizes of doors required, and complies with the requirements of the door and door frame.

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

3. Warehousing Facilities: In Project's vicinity.
4. Scheduling Responsibility: Preparation of door hardware and keying schedules.

    Installer Qualifications: Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.

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

5. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
6. Can provide installation and technical data to Architect and other related subcontractors.
7. Can inspect and verify components are in working order upon completion of installation.
8. Capable of producing wiring diagrams if required per project.

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

    Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and

according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

9. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release latch. Locks do not require use of key, tool, or special knowledge for operation.

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

10. Provide operating devices that do not require tight grasping, pinching, or twisting of wrist and that operate with force of not more than 5 lbf (22.2 N).
11. Maximum opening-force requirements:

    a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
    b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
    c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

12. Bevel raised thresholds with slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
13. Adjust door closer sweep periods so that, from open position of 70 degrees, door will take at least 3 seconds to move to 3 inches (75 mm) from latch, measured to leading edge of door.

Keying Conference: Conduct conference at Project site to comply with requirements in Division 01.

14. Attendees: Owner, Contractor, Architect, Installer, and Supplier’s Architectural Hardware Consultant.
15. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

    a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
    b. Preliminary key system schematic diagram.
    c. Requirements for key control system.
    d. Requirements for access control.
    e. Address for delivery of keys.

Pre-installation Conference: Conduct conference at Project site.

16. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
17. Inspect and discuss preparatory work performed by other trades.
18. Review required testing, inspecting, and certifying procedures.

Coordination Conferences:

19. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.

    a. Attendees: Door hardware supplier, door hardware installer, Contractor.
    b. After meeting, provide letter of compliance to Architect, indicating when meeting was held and who was in attendance.
    c. After meeting, provide letter of compliance to Architect, indicating when coordination conference was held and who was in attendance.

## 1.6 DELIVERY, STORAGE, AND HANDLING

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

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

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

Project Conditions:

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

Protection and Damage:

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

Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

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

## 1.7 COORDINATION

Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.

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

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

Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

Direct shipments not permitted, unless approved by Contractor.

1.8 WARRANTY

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

1. Warranty Period: Years from date of Substantial Completion, for durations indicated.
   a. Closers:
      1) Mechanical: 10 years.
   b. Exit Devices:
      1) Mechanical: 3 years.
   c. Locksets:
      1) Mechanical: 3 years.
2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.9 MAINTENANCE

Maintenance Tools:

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

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

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

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

Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.

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

## 2.2 MATERIALS

Fasteners

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

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

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

## 2.3 HINGES

Manufacturers and Products:

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

Requirements:

3. Provide five-knuckle Stainless Steel ball bearing hinges conforming to ANSI/BHMA A156.1.
4. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:

   a. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

5. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
6. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
7. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

   a. Non-Ferrous Hinges: Stainless steel pins

b. Out-Swinging Exterior Doors: Non-removable pins
c. Interior Non-lockable Doors: Non-rising pins

8. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.
9. Doors 36 inches (914 mm) wide or less furnish hinges 4-1/2 inches (114 mm) high; doors greater than 36 inches (914 mm) wide furnish hinges 5 inches (127 mm) high, heavy weight or standard weight as specified.
10. Provide spring hinges where specified. Provide two spring hinges and one bearing hinge per door leaf for doors 90 inches (2286 mm) or less in height. Provide one additional bearing hinge for each 30 inches (762 mm) of additional door height.

## 2.4 CYLINDRICAL LOCKSETS

Manufacturers and Products:

1. Scheduled Manufacturer and Product: Sargent Manufacturing Company cylinders
2. Acceptable Manufacturers and Products: No substitute

Requirements:

3. Provide standard Sargent interchangeable core (I/C) cylinders for interior doors. Requires Architect and physical Facilities approval. Cylinders shall be an integral part of the locks as manufactured by specified lock supplier. Substitution of Fforeign made cylinders or components will not be allowed and also will cause rejection of supplier.
4. Furnish cylinders with contrustion master keying for use during the construction period. These temporary, construction cylinders are only to be removed and replaced with the facilities permanent cylinders after all Wi-Fi access control hardware programming has been completed and tested for correct operation.
   Furnish all cylinders and keys as required by UNF's Physical Facilities Department.
   Refer to "KEYING" article, herein.
5. Mechanical Locksets: Provide Sargent Series 8200 x LNJ trim design, no substitutions. Confirm use of Mortise Locks (BHMA A156.13) with UNF Facilities.

   a. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim. If strike is to be placed in existing frame, provide a matching strike as required.
   b. Lever Trim: Standard 26D finish.

6. Wi-Fi Locksets: Sargent Series 8200 IN-120 X LNJ trim design, NO SUBSTITUTIONS. Provide Mortise Lockset. (BHMA A156.13 Series 1000, Grade 1 standard and ANSI A117.1 accessibility guidelines.

   a. Lever: Standard 26D Finish
   b. Tactile Warning (Knurling): ONLY where required by authority having jurisdiction. Provide on levers for exterior side of doors on service rooms and those considered to be hazardous.

2.5 EXIT DEVICES - N/A

2.6 KEYING

Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Field Keying will not be permitted and will be considered a just cause for rejection of supplier.

Patented high security keys shall be able to operate both the appropriate conventional and high security cylinders within the same master key system while the keys for conventional cylinders will not open the high security cylinders.

Cylinders shall be keyed to an existing great grand master key syste, All keying will be supplied directly to Physical Facilities.

Key bitting list to be supplied to Physical Facilities.

Keys: Nickel Silver

Quantity: Shall be confirmed by Physical Facilities)

Cylinder Change Keys: 4 each per cylinder

Master Keys: 10 each section

Grand Master Keys: 20 each

Emergency Keys: 2 each

Permanent Control Keys: 2 each

Construction Master Keys: 10 each

Construction Control Keys: 2 each

Key Blanks: 4 each per set/

Provide blank keying schedule to be completed by Physical Facilities.

Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

Provide cylinders/cores keyed into Owner's existing factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

Send permanent keys and cores directly from the manufacturer to the owner by registered

2.7 DOOR STOPS AND HOLDERS

Manufacturers:

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

Provide door stops at each door leaf:

3. Provide wall stops wherever possible. Concave type where cylindrical type locks are used.
4. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
5. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

## 2.8 THRESHOLDS, SEALS AND GASKETING

Manufacturers:

1. Scheduled Manufacturer: Zero International
2. Acceptable Manufacturers: Pemko

Requirements:

3. Provide thresholds, weather-stripping (including seals) and gasketing systems (including smoke) as specified and per architectural details. Match finish of other items.
4. Size of thresholds:

    a. Saddle Thresholds: 1/4 inch (13 mm) high by jamb width by door width
    b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width

5. Provide seals only of type where resilient or flexible seal strip is easily replaceable and readily available.

## 2.9 SILENCERS

Manufacturers:

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

Requirements:

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

## 2.10 FINISHES

Finish: BHMA 626/652 (US26D); except:

1. Overhead Stops and Holders: BHMA 630 (US32D)
2. Wall Stops: BHMA 630 (US32D)

PART 3 - EXECUTION

3.1 EXAMINATION

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

Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

Where on-site modification of doors and frames is required:

1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
2. Field modify and prepare existing door and frame for new hardware being installed.
3. When modifications are exposed to view, use concealed fasteners, when possible.
4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:

    a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
    b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
    c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.3 INSTALLATION

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

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

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

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

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

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

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

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

Lock Cylinders: Install construction cores to secure building and areas during construction period.

4. Replace construction cores with permanent cores as indicated in cylinder section.

Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

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

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

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

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

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

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

## 3.4 FIELD QUALITY CONTROL

Architectural Hardware Consultant: Engage qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

## 3.5 ADJUSTING

Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

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

## 3.6 CLEANING AND PROTECTION

Clean adjacent surfaces soiled by door hardware installation.

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

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

## 3.7 DEMONSTRATION

Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

## 3.8 DOOR HARDWARE SCHEDULE

Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

Hardware Group No. 1 (Offices / Conference Room – Suite 1050/1051)

Provide each SGL door(s) with the following:

| Qty | | Description | Catalog Number | Finish | Mfr |
|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | 652 | IVE |
| 1 | EA | CLASSROOM | 8200 IN-120 X LNJ (MORTISE) | 26D | SRG |
| 2 | EA | CYLINDER | BHMA A156.13 SERIES 1000 | 26D | SCH |
| 1 | EA | WALL STOP | WS406CCV | 630 | IVE |
| 3 | EA | SILENCERS | SR64 | GRY | IVE |

SECTION 08 81 00

GLASS AND GLAZING

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 All glass shall be shipped to the job site properly labeled. Labels shall remain on the glass until final project cleaning.

1.5 Submittals:
1.5.1 Manufacturer's data and information
1.5.2 12" x 12" sample of each glass type with performance characteristics.

2. MATERIALS:

2.1 Unless otherwise specified all glass shall be manufactured by Pittsburgh Plate Glass Company or LOF.

2.2 Glazing Types:

2.2.1 Type A: Tempered float glass, ¼" thickness, clear.

2.2.2 Type B: As Required 'Firelite Plus' rated glass to meet minimum requirements in door assembly, 1/4" thick premium grade, as manufactured by Technical Glass Products (800) 426-0279.

2.3 Glazing compound shall be similar to Pittsburgh or Flexiseal Elastic glazing compound.

2.3.1 Glazing compound for glass set in fire-rated assemblies shall be as required by glazing manufacturer to maintain integrity of the fire-rated assembly.

2.4 Laminated glass products to be fabricated in autoclave with heat, plus pressure, free of foreign substances and air pockets.

3. WORKMANSHIP AND INSTALLATION:

3.1 Glazing shall be performed by skilled workmen in accordance with best trade practices and without springing and forcing. All instructions of the glass and glazing material manufacturers shall be strictly followed.

3.2 Glass shall be set as shown on drawings and details for the various locations carefully entered laterally and vertically so-as-to provide uniform clearance.

3.3 Replace all glass damaged or broken through date of Final Completion.

3.4 Glass locations shall be as follows unless shown or scheduled otherwise:

3.4.1 Type A: All interior glazing including non-rated doors except where glazing Types “B” is indicated.

3.4.2 Type B: Vision panels in rated doors and interior glazing in rated walls.

END OF SECTION

SECTION 09 22 16

METAL STUDS (NON-STRUCTURAL)

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 All materials and products specified in this section are manufactured by Clarkwestern Dietrich Building Systems. Equivalent products from other manufacturers are acceptable.

2. MATERIALS:

2.1 Metal Studs (complete stud/framing systems including matching top and bottom tracks).

2.1.1 Metal Stud Framing

| | Size | Designation and Gauge (minimum metal thickness) |
|---|---|---|
| a. | 3 5/8 inch studs: | 3625162-33, 20 gauge (.030) |
| b. | 1 5/8 inch studs: | 158S162-33, 20 gauge (.030) |
| c. | 2 ½ inch studs: | 250S162-33, 20 gauge (.030) |
| d. | 6 inch studs | 600S162-33, 20 gauge (.030) |

2.1.2 Slotted metal top track to permit vertical structural deflection:
3-5/8 inch studs 0.346 inch (20 gauge)
6 inch studs 0.346 inch (20 gauge)
Minimum allowable deflection: 1 inch vertical movement
Provide slotted top track when stud abuts structural members.

2.2 Fasteners: Self-tapping, Type S, Bugle Head, 1-1/8 inch minimum length. (Where gypsum board is required to be laminated to gypsum board provide Type G screws, Bugle Head, 1-1/2 inch length minimum.)

2.3 Metal Furring Strips: Galvanized, standard gauge hat channels, or similar shape suitable to support wall finish scheduled. Effective depth of 1 inch. Products of United States Gypsum are approved.

2.4 EQ" (Equivalent Gauge Thickness) Steel Studs and Runners: Members that can show certified third party testing with gypsum board in accordance with ICC ES AC86 (Reapproved August 2015) need not meet the minimum thickness limitation or minimum section properties set forth in ASTM C 645. The submission of an evaluation report is acceptable to show conformance to this requirement. *Please note that Equivalent Gauge Thickness Steel Studs and Runners are NOT acceptable in the tested assemblies indicated in the drawings unless the contractor can provide an acceptable alternative tested assembly that allows for the EQ studs and runners.

2.4 Submittals: submit manufacturer’s product data including fasteners.

3. ERECTION:

3.1 Bottom track and all studs shown to install against concrete masonry shall be set in two (2) continuous beads of sealant prior to securing in place. Sealant shall be as specified in Section 07920, "Sealants and Caulking."

3.2 Fasten top and bottom track to structural elements and as shown with suitable fasteners. Fasteners shall be located 2" from each end and spaced 24" on center unless indicated otherwise on the drawings.

3.3 Provide metal stud framing within ¼ inch on all sides of ductwork where it penetrates any partition. Provide metal stud each side of structural member for securing gypsum board where partition runs perpendicular to structural orientation.

3.4 Position studs vertically, engaging top and bottom track. Stud spacing shall be 16" on center unless indicated otherwise.

3.4.1 Secure stud plumb with two (2) screws to top track and two (2) screws to bottom track.

3.4.2 Provide diagonal bracing above the ceiling as recommended by the manufacturer, but not less than 4' – 0" o.c. Bracing penetrating gypsum board shall be sealed with joint compound.

3.5 All joints or splices in top and/or bottom track shall be lapped 8" minimum.

3.6 No joints or splices shall be permitted in full length of stud.

3.7 Installation, bridging, etc., not specifically indicated to the contrary shall be in accordance with manufacturer's suggested and recommended details.

3.8 Provide double studs boxed and rigidly anchored at all discontinuous ends of partitions, and at all door jambs.

3.8.1 To prevent flexing and breaking of the wall along the door frames, a nest of metal studs shall be provided around each door installation to accommodate the weight of the door and the shock caused by the closing of the door at drywall installation.

3.9 For installation where metal studs or furring comes into direct contact with masonry or concrete walls (interior or exterior) or structure, contractor shall provide butyl tape for entire face of metal stud to separate dissimilar materials.

END OF SECTION

SECTION 09 29 00

GYPSUM BOARD

1. GENERAL:

1.1. Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1. DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, apart from the payments for the materials as purchased.

1.2. Description of Work: The extent of the gypsum board work is shown on the drawings and in schedules. The types of work required include the following:

1.2.1. Gypsum drywall partitions and ceilings including ceiling soffits.

1.2.2. Drywall finishing (joint tape-and-compound treatment).

1.2.3. Closure of walls above ceilings/soffits and atop CMU partitions.

1.3. Quality Assurance:

1.3.1. Fire-Resistance Rating: Where work is indicated for fire-resistance ratings, including those required to comply with governing regulations, provide materials and installations identical with applicable assemblies which have been tested and listed by recognized authorities, including F.M., U.L., N.F.P.A., and A.S.T.M.

1.3.2. Industry Standard: Comply with applicable requirements of ASTM C476 and "Application and Finishing of Gypsum Board" by the Gypsum Association except where more detailed or more stringent requirements are indicated, including the recommendations of the manufacturer.

1.3.3. Allowable tolerances: 1/16" offsets between planes of board faces, and 1/8" in 8'-0" for plumb, level, warp and bow. Where substrates have been installed by other trades, tolerances may vary to those for that trade.

1.3.4. Manufacturer: Obtain gypsum boards, trim accessories, adhesives, and joint treatment products from a single manufacturer, or from manufacturers recommended by the prime manufacturer of gypsum boards. Gypsum board shall be of domestic manufacture. Provide certification from manufacturer stating city and state of where gypsum board was manufactured.

1.4. Submittals: Submit manufacturer's product specifications and installation instructions for each gypsum drywall component, including other data as may be required to show compliance with these Specifications.

1.4.1. Signed/sealed shop drawings and calculations for engineered ceilings and soffits. (See 2.5.2)

1.5. Product Handling: Deliver gypsum drywall materials in sealed, containers and bundles, fully identified by manufacturer's same brand, type and grade; store in a dry, well-ventilated space, protected from the weather, under cover and off the ground.

1.6. Job Conditions: Maintain ambient temperatures at not less than 55 degrees F., for the period of 24 hours before drywall finishing, during installation, and until compounds are dry.

2. PRODUCTS:

2.1. Gypsum Board Products:

2.1.1. Standard Gypsum board panels with tapered edges, 4' wide x maximum length available (8' minimum). Material shall be 5/8" Type "X" throughout.

2.2. Trim Accessories: General manufacturer's standard galvanized steel beaded units with flanges for concealment in joint compound, including corner beads, edge trim and control joints.

2.3. Joint Treatment Materials:

2.3.1. General: ASTM C475; type recommended by the manufacturer for the application indicated, except as otherwise indicated.

2.3.2. Joint Tape: Perforated type.

2.3.3. Joint Compound Ready-mixed vinyl-tape for interior use. Commercial quality general purpose grade specifically formulated for bedding tapes, filling depressions, and topping and sanding. Comply with ASTM C475.

2.4. Steel Framing for Gypsum Board:

2.4.1. Metal Studs – refer to Section 09 22 16.

2.4.2. Wall furring channels: 7/8" depth, ASTM C645 hat-shaped, hot dip galvanized coated. Provide furring of greater depth as necessary for wall utilities.

2.5. Suspended or Furred Ceilings:

2.5.1. Suspend gypsum board ceilings using Don Product series 10,000 Rigid 'X' drywall suspension system or equivalent. Contractor's Option: Provide suspension system of 16 gauge, 1 ½" deep carrying channels with 7/8", 0.0179" thick furring channels. Components shall be galvanized.

2.6. Miscellaneous Materials:

2.6.1. General: Provide auxiliary materials for gypsum drywall work of the type and grade recommended by the manufacturer of the gypsum board.

2.6.2. Gypsum Board Fasteners: ASTM C646, Type S Bugle head screws for steel and ASTM C894, Type W Bugle head and ASTM C514 nails for wood. Provide galvanized fasteners for application of Cement Board.

3. EXECUTION:

3.1. Installation - Gypsum Boards:

3.1.1. General Standards: In addition to compliance with GA-216, comply with manufacturer's instructions and requirements, specifically Product Bulletin SA-927 and SA-923.

3.1.2. Install ceiling boards by screws (prior to adjacent wall boards) in the direction and manner which will minimize the number of end-butt joints, and which will avoid end joints in the central area of each ceiling. Stagger end joints in ceilings at least 4'-0", maximum. All joints shall have solid backing.

3.1.3. Install wall/partition boards by screws in metal support. At high walls install boards horizontally with end joints staggered over studs. Cut boards as required around joists, beams, decking, etc., as required to provide the least practical voids.

3.1.4. Cover both faces of steel studs with gypsum board in concealed spaces (above ceilings, etc.), except in chase walls which are properly braced internally or smoke walls specifically indicated to receive gypsum board on only face above ceilings.

3.1.5. Isolate perimeter of drywall partitions at masonry abutments. Provide 1/8" space and trim edge with continuous casing bead drywall molding. Seal joints with acoustical sealant.

3.1.6. Floating construction: Where feasible, including where recommended by manufacturer, install gypsum board with "floating" internal corner construction unless control or expansion joints are indicated. “Provide metal stud backing at all interior corners, both directions.”

3.1.7. For Partitions higher than 16’-0” provide additional continuous lateral brace at every 10’-0” interval. Lateral bracing to be made up of 1 ½” x 16 gauge cold rolled channel, attached to studs by means of 2” x 2” x 16 gauge clip angle. Provide knee bracing from partition to the roof structure (not deck) at 15’-0” level.

3.2. Installation of Drywall Trim Accessories:

3.2.1. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, fasten flanges in accordance with manufacturer's instructions and recommendations.

3.2.2. Exposed Work:

3.2.2.1. Install metal corner beads at all external corners of drywall work. Corner beads shall be crimped and screw applied, not just crimped.

3.2.2.2. Install metal edge trim or drywall moldings whenever edges of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound except where semi-flashing type is indicated. Install L-Type trim where work is tightly abutted to other work, and install special kerf-type where other work is kerfed to receive long leg of L-type trim.

3.2.2.3. Install J-Type trim where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints). Install W-Type moldings where masonry abuts drywall work.

3.2.2.4. Install metal control joint (beaded-type) where indicated or required for crack control.

3.3. Drywall Finishing:

3.3.1. General: Provide Level 4 – drywall finish to all exposed painted drywall surfaces: apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fastener heads, surface defects and elsewhere as required to prepare work for decoration. Pre-fill deep joints and rounded or beveled edges, using type to compound specified.

3.3.1.1. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated.

3.3.1.2. Apply joint compound in three (3) coats (not including prefill) and sand between last two coats and after last coat.

3.3.2. Partial Finishing: Omit third coat and sanding on concealed drywall work.

3.3.3. Refer to the other Sections for decorative finishes to be applied to drywall work.

3.4. Protection of Work: Protect gypsum drywall and maintain conditions necessary to ensure the work will be without damage or deterioration at the time of acceptance.

END OF SECTION

SECTION 09 51 00

ACOUSTICAL CEILINGS

1. GENERAL:

1.1. Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1. DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, apart from the payments for the materials as purchased.

1.2. Coordinate the work with all other trades.

1.3. Related Work:

| | |
|---|---|
| Division 23 | HVAC - Mechanical |
| Division 26 | Electrical |

1.4. Submittals: Manufacturer's data for acoustical panels and suspension system; sample of ceiling for approval of pattern and color.

1.5. Materials shall be Class A per NFPA 255 with a Flame Spread of 0-25 and Smoke Developed 0-450.

2. PRODUCTS

2.1. Suspended Acoustical Ceiling:

2.1.1. Typical Panels: 24" x 24" x 5/8", unless otherwise noted.
Refer to the drawings for specific types and locations of ceiling and accessories.

2.1.2. Ceiling Tile Types:
2.1.2.1. Type A: Armstrong Item No. 2824, ‘CALLA” Square tegular, lay-in with 'Humiguard – Plus and Bio Block antimicrobial treatment. Acceptable Product Alternates: USG ‘MARS – High NRC Panels’;
2.1.2.2. Color: White

2.1.3. Exposed Suspension System: Intermediate duty steel in standard white finish, 15/16". Framing shall comply with ASTM C635.

2.1.4. Suspension System (Grid) Types and Locations:
2.1.4.1. Ceilings: Prelude XL by Armstrong
Acceptable Product: USG DX grid.
2.1.4.2 Color: White

3. METHODS

3.1. Ceiling suspension system: Install ceiling units using "Direct hung suspension system" as described and defined by Acoustical Materials Association publication, "Specifications for Acoustical Tile and Lay-in Panel Ceiling Suspension System", except as specified herein.

3.1.1. Where direct hung suspension is used, hangers, runners, cross tees, etc., shall be spaced as recommended by manufacturer to prevent deflection in excess 1/360 of span of cross tee or runner, except that the maximum spacing of hangers shall be four feet on center. Provide extra hangers and bracing as required at or near items of mechanical, electrical, and miscellaneous equipment supported by ceiling suspension system. In addition, provide 2 hanger wires connected directly to lay-in type lighting fixtures at diagonal corners.

3.2. Lay out ceilings as shown on the Reflected Ceiling Plan of the drawings.

4. COORDINATION: The acoustical subcontractor shall coordinate the acoustical work with the electrical and mechanical work. All electrical and mechanical items shall be supported by the grid system.

5. LOCATION: As scheduled on Finish Schedule and as indicated in the Drawings.

6. EXTRA STOCK:

6.1. Acoustical Ceiling Units: Furnish quantity of full-size units equal to 2% or 2 full boxes of ceiling tiles (*whichever is greater*) of the amount installed for each type of ceiling tile. Extra stock must be delivered to the appropriate UNF Facilities personnel or placed in location as requested by UNF project manager.

END OF SECTION

SECTION 09 65 00
RUBBER BASE

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, apart from the payments for the materials as purchased.

1.2 Submit manufacturer's data and standard chain of samples for material approval and color selection.

1.3 Owner's Maintenance Program: At completion of this phase of the work, deliver one (1) unopened box of base for the Owner's future use.

2. MATERIALS:

2.1 1/8" gauge extruded vinyl cove base in 96-120 foot rolls by 4" height.

2.2 Flame Spread: Class A, Class 1 CRF

2.2 Corners: Use outside and inside corners fabricated from same material as cove base. No preformed or molded corners are required. Score backside of base at outside and inside corners. Color, height, and profile shall be identical to cove base. Job fabricated corners are not acceptable.

2.3 Colors: As selected by Architect from Manufacturer’s standard line of available colors.

2.4 Profile: No Toe Base

2.4 Adhesives: As per manufacturer's recommendations. (Similar to Excelsior WB-600, Wall Base Adhesive).

2.5 Design Basis: Roppe, 700 Series TP Rubber Wall Base, 5 Year Warranty
Approved Manufacturers: Roppe, Armstrong, Johnsonite, Burke-Mercer

3. INSTALLATION:

3.1 Adhesive shall be maintained at the proper temperature for use for not less than 24 hours immediately prior to installation of base and corners.

3.2 All joints shall be vertical and tight. Where field cutting is necessary a sharp razor knife shall be used. Joints shall not be readily visible to the Architect in the finished work.

3.3 Base and corners shall sit tightly to the finish flooring and to the wall surfaces. Gaps below the base cover shall be sealed with a sealant of a color matching the base. No gaps shall occur between the corner and the wall or between the base and the wall.

END OF SECTION

SECTION 09 68 13
CARPET TILE

1. GENERAL

1.1 SECTION INCLUDES

A. Carpet tile.

1.2 RELATED SECTIONS

A. Section 03 30 00 - Cast-in-Place Concrete.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

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. Verification Samples: For each finish product specified, two samples, representing actual product and finish.

D. Extra Stock: Submit extra stock equal to 2% of total installed (per color) or 3 full boxes, whichever is greater.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Performance: Fire performance meeting requirements of building code and local authorities.

1.5 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 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 recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

2. PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Shaw Contract.

B. Substitutions: Not permitted.

2.2 MATERIALS

A. Carpet Tile:
   1. Style: **Luminosity**
   2. Style No.: **59362**
   3. Color Name: **TBD (AS SELECTED FROM FULL COLOR LINE)**
   4. Color No.:**TBD (AS SELECTED FROM FULL COLOR LINE)**
   5. Size: 24” x 24”
   6. Backing: **EcoWorx Tile**
   7. Protective Treatment: **ssp® Shaw Soil Protection**
   8. Primary Backing: Synthetic
   9. Installation Method: **Quarter Turn**
   10. Auxiliary Materials: Edge guards, Adhesives, cements and fasteners, Leveling compound.

A. Rubber Base: See Section 09 65 00

11. EXECUTION

11.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

11.2 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.

Prepare slab to ensure clean, level concrete substrate, capable of meeting manufacturer’s minimum standards for acceptable flooring substrate. Contractor shall provide leveling compound as required to ensure slab meets minimum standards. This includes treatment of small and large areas, chips, cracks, etc.

11.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction. Test for proper operation and adjust until satisfactory results are obtained.

B. Comply with recommendations of Carpet and Rug Institute 'Specifier's Handbook'.

11.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 80 00
ACOUSTICAL TREATMENT

# PART 1 GENERAL

## 1.1 SECTION INCLUDES

A. Acoustical wall panels.

## 1.2 RELATED SECTIONS

A. Section 09 29 00 - Gypsum Board Assemblies.

B. Section 09 51 00 - Acoustic Ceilings

C. Section 09 90 00 - Painting and Coatings.

## 1.3 REFERENCES

A. ASTM C 423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2000.

B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2000a.

## 1.4 PERFORMANCE REQUIREMENTS

A. Acoustical Absorption: Perform testing in accordance with ASTM C 423, Type A mounting method unless otherwise specified.

B. Flame Spread Rating: Provide all components with Class A flame spread rating when tested in accordance with ASTM E 84, unless otherwise specified.

## 1.5 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

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.
   4. Independent testing agency test reports.

C. Selection Samples: For each product specified, two complete sets of color samples representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

## 1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 10 years of experience in producing acoustical products of the types specified herein.

B. Installer Qualifications: Acceptable to the manufacturer of the acoustical products being installed.

C. Mock-Up: Provide a mock-up for evaluation of installed appearance.
   1. Install acoustical products in areas designated by Architect.
   2. Do not proceed with remaining work until Architect approves workmanship and appearance.
   3. Approved mock-up will be retained by Owner for comparison to installation.

D. Dimensional Tolerance of Finished Units: Plus or minus 1/16” for the following:.
   1. Thickness
   2. Edge Straightness
   3. Overall length and width
   4. Squareness from Corner to Corner
   5. Chords, and Radii and Diameters

## 1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect acoustical products from moisture during shipment, storage, and handling.

B. Store products in manufacturer's unopened packaging until ready for installation.
   1. Store materials flat, in dry, well-ventilated space.
   2. Do not stand panels on end.
   3. Protect edges from damage.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

## 1.8 PROJECT CONDITIONS

A. Do not begin installation of acoustical products until building has been enclosed and environmental conditions approximate those that will prevail when building is occupied.

B. Environmental Requirements: Do not install panels until wet work, such as concrete and plastering, is complete; the building is enclosed; and the temperature and relative humidity are stabilized at 60 – 80 degrees F (16 – 27 degrees C) and 40% to 50%, respectively.

## 1.9 EXTRA MATERIALS

A. See Section 01600 - Product Requirements, for additional provisions.

B. Provide 5 percent, but not less than 1 of each type of acoustical unit actually installed, for Owner's use in maintenance.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

A. Acceptable Manufacturer: G&S Acoustics; 3555 Scarlet Oak Blvd., St. Louis, MO 63122. ASD. Tel: (636) 225-8800 or (800) 737-0307. Fax: (636) 225-2966. Email: inquiry@gsacosutics.com. www.gsacoustics.com.

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

C. Provide all acoustical products specified herein by a single manufacturer.

### 2.2 ACOUSTICAL WALL PANELS

A. Wrapped Fiberglass Panels: Acousti-Panels (AP); fiberglass core of 6 to 7 pcf (96 to 112 kg/cu m) and acoustical, compatible scrim with chemically hardened edges, seamless finish material wrapped and bonded to back side of panels. All images to be square and plumb on each panel as shown on drawings.

1. Thickness: 1 inch (25.4 mm); NRC 0.90.
2. Thickness: 2 inch (51 mm); NRC 1.05.
3. Size: As indicated on drawings
4. Finish Material: 100% polyester fabric:
   Design Basis: Gravity fabric: 4106-804 Carbon
5. Match: Image pattern across all panels as shown on drawings.
6. Edges: Square.
7. Corners: Square.
8. Mounting: Two-part Z-clip.

### 2.3 ACCESSORIES

A. Two-Part Z-Clips: Manufacturer's standard mounting bar and matching clips for mounting on rear of acoustical panels.

## PART 3 EXECUTION

### 3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate 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 acoustical units in accordance with manufacturer's instructions.

B. Two-Part Clips: Fasten bars to wall at 48 inches (1220 mm) on center in both directions. Impale matching mechanical clips into back of panels in matching pattern and drop panel into position so clips fully engage into wall-mounted bars.

## 3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 90 00

PAINTING

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, apart from the payments for the materials as purchased.

1.2 The following specifications cover the complete painting and finishing of all surfaces, interior and exterior, as shown on the drawings and described in the specifications except as otherwise specified.

1.3 Work not included:

1.3.1 Copper, bronze, chromium plate, nickel, stainless steel, anodized aluminum, lead, and bright metals normally not intended to be painted.

1.3.2 Factory applied finishes.

1.3.3 Shop painting of structural and miscellaneous iron and steel.

1.3.5 Concealed ducts, pipes and conduit.

1.4 The painting contractor shall supply all labor, materials, tools, ladders, scaffolding and equipment necessary for the completion of the work according to the drawings and specifications.

1.5 The painting contractor is responsible for inspecting the work of others prior to the application of any paint or finishing material. If any surface to be finished cannot be put in proper condition for finishing by customary cleaning, sanding and puttying operations, the painting contractor will immediately notify the general contractor or the Architect in writing, and shall not proceed with this work until conditions have been corrected and are acceptable.

1.6 Before proceeding with any painting, the painting contractor shall prepare and finish a sample room complete or in part, as directed by the Architect. Finish all areas or items in accordance with the specification and in colors selected by the Architect. These areas or items will be inspected by the Architect. When approved, they shall serve as a standard for workmanship, appearance, and materials approved for similar areas or items throughout this project.

1.7 Submittals: Manufacturer's data on painting products item by item and warranties.

1.7.1 Colors:

1. The Architect will furnish to the Contractor a set of selected colors and a

schedule showing where the various colors indicated on the plans shall be used. The contractor shall then prepare duplicate 8-1/2" x 11" samples of finishes on hardboard or other suitable materials to simulate job surfaces. No more than 4 colors will be used.

2. Final work shall match approved color samples, except if the Architect so directs between coats, the succeeding coat or coats may be slightly lightened or darkened.

2. STORAGE: Store all materials used on the job in a single place designated by Architect. Keep storage place neat and clean. All damaged areas shall be corrected by cleaning, repairing, or replacing. All soiled or used rags, waste and trash must be removed from the building every night, and every precaution taken to avoid the danger of fire.

3. EXTRA MATERIAL: Upon substantial completion, the Contractor shall deliver to the Owner an extra stock consisting of one gallon of each color used in painting. Such stock shall be new, tightly sealed in clearly labeled containers.

4. MATERIALS:

4.1 All paints, varnishes, enamels, lacquers, stains, paste fillers, and similar materials must be delivered in the original containers, with the seals unbroken and labels intact and shall be used from the original containers.

4.2 Use only first line products of approved manufacturers.

4.3 Use materials only in accordance with the manufacturer's directions.

4.4 The Architect will select colors and determine the number of colors to be used on the job. Refer to paragraph 1.7.1.

4.5 Fungicidal agent shall be incorporated into the paint by the manufacturer.

4.6 Colors: Color of the final coat shall match the color selections furnished by the Architect. Preceding coats shall vary slightly in shade of color. Upon request, finish one room completely, space or item of each color scheme prior to proceeding with the painting. Approved color schemes shall serve as a standard for the similar work throughout the project.

5. WORKMANSHIP:

5.1 Employ skilled mechanics to insure the very best workmanship. Quality workmanship is required. Materials to be applied by craftsman experienced in the use of the specific product involved.

5.2 Where interior or exterior wood and metal are primed in the mill or shop as a part of the painting contract, use materials specified in every case for such surfaces and use in accordance with manufacturer's directions for the first or priming coat.

5.3 When surface temperature is below 50 degrees F., do not apply paints, varnishes, and special coatings, unless otherwise specified. Do not prime exteriors during frosty or rainy weather. Avoid painting surfaces while they are exposed to direct sunlight.

5.4 Clean floors and adjacent surfaces as well as all surfaces to be painted, before painting. Painting environment shall be relatively dust free.

5.5 Touch up knots, pitch streaks and sappy spots with recommended sealer before priming.

5.6 Putty nail holes, cracks and other defects after the first coat, with putty color to match the finish. Bring putty flush with the adjoining surface.

5.7 Wash metal surfaces with mineral spirits to remove dirt, oil and grease, before applying materials. Remove rust and scale by wire brushing or sanding clean before painting. Clean and touch up shop coats of paint that have become badly weathered, worn or marred with the primer specified.

5.8 Clean galvanized metal thoroughly and apply recommended primer.

5.9 Back-prime interior and exterior trim before installation with primer specified.

5.10 Apply all materials under adequate illumination, spread evenly and flow on smoothly without runs or sags.

5.11 All coats must be thoroughly dry before applying succeeding coats.

5.12 Sand smooth all woodwork to be finished with enamel or varnish. Clean surface before proceeding with the application of the first coat.

5.13 After doors are fitted, finish tops, bottoms and edges same as face and back. Finish tops and bottoms in a yellow or brown-pigmented sealer.

5.14 Secure color schedules before applying paint or finish. Tint primer and undercoat to the approximate shade of the finish coat.

5.15 Masonry surfaces shall be dry and clean from all dust, dirt, oil and efflorescence before painting. When recommended, etch concrete that is dense and smooth or that has had a hardener applied before painting. Fill masonry before painting.

5.16 Do not paint drywall containing more than 15% moisture. Touch up suction spots or "hot spots" as recommended after application of the first coat and before applying the second coat.

5.17 Repair scratches, cracks and abrasions in drywall surfaces and openings adjoining trim with a spackling compound, flush with adjoining surface, and when dry, sand smooth and seal before applying prime coat.

5.18 Cover surfaces to be stained with a uniform coat and wipe off if required.

5.19 Between coats, sand enamel or varnish finish, applied to wood or metal, with fine sandpaper and clean to produce an even, smooth finish.

5.20 Finish closets the same as adjoining rooms, unless otherwise specified. Finish all other surfaces the same as nearest or adjoining surfaces unless specified or directed otherwise by the Architect.

5.21 Protect work, adjacent work, and materials at all times, by suitable covering. Upon completion of the work, remove all paint and varnish spots from the floors, glass and other surfaces. Remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and leave work in clean, orderly and acceptable condition.

6. PAINTING SCHEDULE: (Design basis products by ICI Paints)

6.1 Painting Schedule – Interior:

6.1.1 Ferrous Metal (Doors, Trim, Steel, Iron, etc.):
1 coat ICI #4160 Series Tank & Structural Primer
2 coats ICI #1516 Series Aklyd Semi-Gloss Enamel

6.2.3 Concrete & Concrete Masonry Units:

| | |
|---|---|
| Block Filler: | Masonry Block: 1 coat ICI Devoe Coatings #4015 Series Tru-Glaze-WB High Performance Waterborne Epoxy block filler. *One coat or more as required to prepare the substrate to receive finish coats: (Primer coat shall completely fill all voids in the wall.).* |
| Primer 1: | 1 coat (waterbase) latex primer<br>ICI Prep & Prime Hi-Hide |
| Finish: | 2 coats latex enamel – semigloss<br>Devflex Waterborne Acrylic enamel #4206 |

6.2.4 Gypsum Board: (Walls & Ceilings)
1 coat ICI #4030 Waterborne Epoxy
2 coats ICI #4212 Devflex Waterborne Acrylic Enamel – eggshell

6.2.5 Finish all walls behind wall mounted equipment, such as chalkboards and tack boards, etc. prior to the mounting of such equipment.

6.3 Labeling of Fire-Rated Walls:

6.3.1 Frequency: Provide message at 20 feet nominally on center on each side of wall located at nominally 6” above ceiling line. Where no ceiling is scheduled, locate at nominally 12” below roof deck. As a minimum provide two messages, one on each side of the rated partition, for each wall segment.

6.3.2 Letters to be 2” high x ¼”-stroke and be red in color. Follow the same instruction for each rated wall type. 20 foot interval for all labeling. Rated firewalls shall be stenciled with message as applicable:

“X-HOUR FIREWALL
PROTECT ALL OPENINGS”

“X-HOUR FIRE / SMOKE BARRIER
PROTECT ALL OPENINGS”

7. APPROVED MANUFACTURER:

7.1 All painting products shall be first line products from a single manufacturer. Products from recognized major manufacturers shall be submitted to the Architect for approval. Approved manufacturers are: ICI, Benjamin Moore, PPG, Pratt & Lambert, Sherwin Williams

7.2 Colors will be selected by architect.

END OF SECTION

SECTION 10 14 00

INTERIOR SIGNAGE

1. GENERAL:

1.1 Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1 DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased.

1.2 Quality Assurance: For each sign, form a graphic image process. Furnish products of a single manufacturer.

1.3 Submittals:

1.3.1 Shop Drawings: Submit shop drawings for fabrication and erection of specialty signs. Include plans, elevations, and large scale details of signs wording and lettering layout. Show anchorages and accessory items. Furnish location template drawings for items supported or anchored to permanent construction.

1.3.2 Production Data: Submit manufacturer's technical data and installation instructions for each type of sign required.

1.3.3 Samples: Submit samples of each sign form and material showing finishes, colors, surface textures, and qualities of manufacturer and design of each sign component including graphics.

2. PRODUCTS:

2.1 Sign Types- A room number sign with Braille and a room name sign with Braille is required at **each** door. Helvetica medium letters, 72 point. Height of sign: approximately 3"; length as required. Room numbers are the same as indicated on the drawings. Thoroughly count all doors that correspond to each room, as some rooms have more than one door. Signs shall be black background with white letters. All signage shall have Braille.

2.1.1 Provide signs reading, "CAUTION HAZARDOUS AREA" at the following spaces:

Electrical Rooms
Mechanical Rooms
*(Hazardous area signs shall be red background with white letters).*

2.1.2. Provide evacuation signs as indicated in the drawings (Life Safety Plans).

2.2 Construction:

2.2.1 Basis of Design: Multi-Graphics, Inc. 2965 Landfill Road, Pelham, GA 31779, (229) 294-4601multigraphicsinc.com.

2.2.1.1. Products by other manufacturers are acceptable providing their products equal or exceed the quality specified including type, size, finish, letter style, and arrangement.

2.2.2 Room signs shall be manufactured of 1/8" thick clear matte acrylic face plate, background color as required, with characters machine-cut from 1/32" thick Applique by Rowmark or other similar material. Provide 1/8" thick acrylic back plate.

2.2.2.1. Helvetica medium numbers and upper case letters of sizes as shown in drawings. International symbols to be raised similarly. Applique shall be eggshell finish of manufacturer's standard colors. Grade II Braille shall be raster type, no taped Braille allowed.

2.2.2.2. Provide 3/8" radius corners.

2.2.3. Fasteners: Use screw fasteners that are non-corrosive to both the sign material and the mounting surface.

3. EXECUTION:

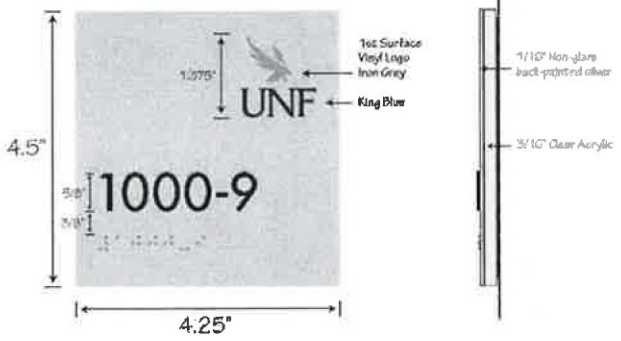
3.1 Installation: Locate sign units and accessories as directed by Owner using mounting method and type described and compliance with the manufacturers' instructions. Install sign units level, plumb and at the height directed with sign surfaces free from distortion or other defects in appearance.

3.2 Cleaning and Protection: At completion of the installation, clean soiled sign surfaces in accordance with the manufacturer's instructions. Protect units for damage until acceptance by the Owner.

4. SIGN TYPES:

4.1 TYPE 'A': ROOM NUMBER SIGN (TYPICAL FOR MECHANICLA, ELECTRICAL ROOMS)
4.2 TYPE 'B': ROOM NAME SIGN (TYPICAL FOR IT, STORAGE, CLASSROOMS, ETC).
4.3 TYPE 'C': ROOM NAME SIGN (TYPICAL FOR OFFICES)
4.4 TYPE 'D': ROOM NAME SIGN (TYPICAL FOR CONFERENCE ROOMS)

## SIGN TYPE A

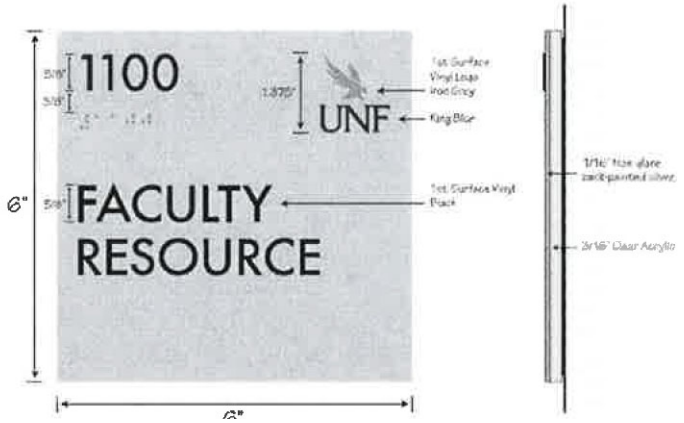



**Sign Type: A**

*Mechanical, Electrical, etc.*

Sign Specifications
Letter Style: Futura Medium
Graphic Colors: Labeled
Background Color: MPS 41325P
Brushed Aluminum
Construction: 1/16" Non glare face with braille and tactile room numbers.
Back-painted face mounted to 3/16" acrylic.
Total sign thickness 1/4"
Mounting: Installed with VHB Tape

## SIGN TYPE B

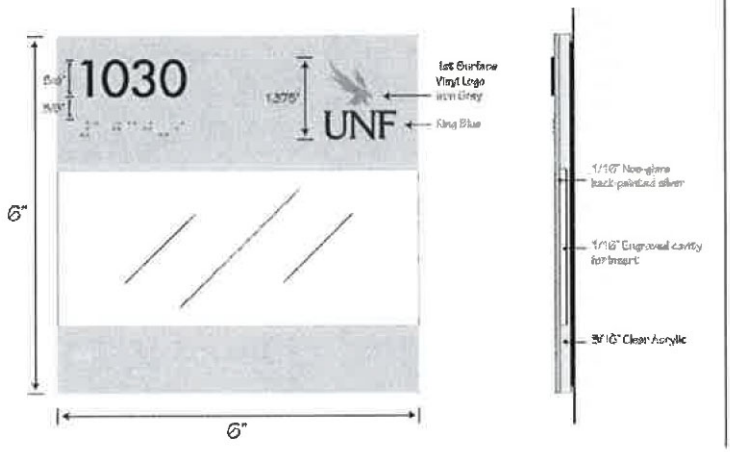



**Sign Type: B**

*IT, Storage, Break Room, Classroom, Lab*

Sign Specifications
Letter Style: Futura Medium
Graphic Colors: Labeled
Background Color: MPS 41325P
Brushed Aluminum
Construction: 1/16" Non glare face with braille and tactile room numbers.
Back-painted face mounted to 3/16" acrylic.
Total sign thickness 1/4"
Mounting: Installed with VHB Tape

## SIGN TYPE C

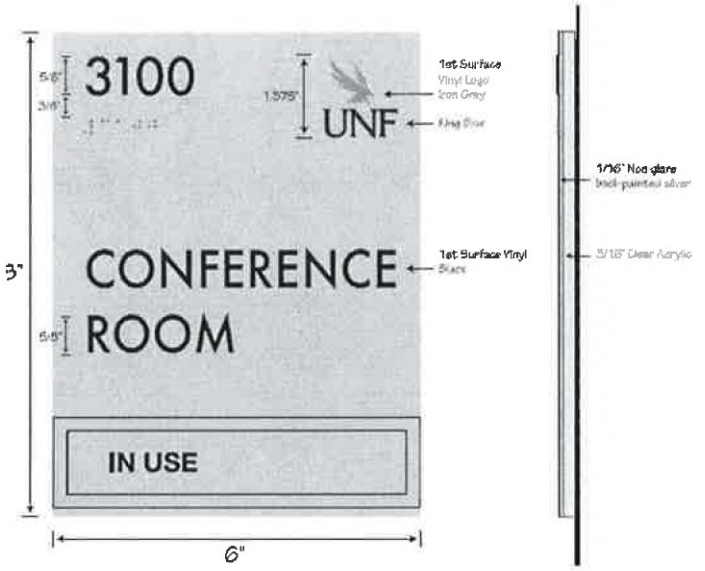



**Sign Type: C**

*Offices*

Sign Specifications
Letter Style: Futura Medium
Graphic Colors: Labeled
Background Color: MPS 4132SP
Brushed Aluminum
Construction: 1/16" Non glare face with braille and tactile room numbers.
Back-painted face mounted to 3/16" acrylic.
Total sign thickness 1/4"
Mounting: Installed with VHB Tape

## SIGN TYPE E




**Sign Type: E**

*Conference Rooms*

Sign Specifications
Letter Style: Futura Medium
Graphic Colors: Labeled
Background Color: MPS 4132SP
Brushed Aluminum
Mounting: Installed with VHB Tape

# SIGNAGE SCHEDULE

| NO. | ROOM NAME | SIGNAGE COPY | SIGNAGE TYPE | | | | REMARKS |
|---|---|---|---|---|---|---|---|
| | | | TYPE A | TYPE B | TYPE C | TYPE E | |
| 1050 | WOMENS BASKETBALL | WOMENS BASKETBALL | | X | | | |
| 1050-A | OFFICE | OFFICE | | | X | | |
| 1050-B | OFFICE | OFFICE | | | X | | |
| 1050-C | OFFICE | OFFICE | | | X | | |
| 1050-D | OFFICE | OFFICE | | | X | | |
| 1050-E | OFFICE | OFFICE | | | X | | |
| 1051 | OFFICE | OFFICE | | | X | | |
| 1062 | ATHLETIC OFFICES | ATHLETIC OFFICES | | X | | | |
| 1063 | STORAGE | STORAGE | | X | | | |
| 1064 | STORAGE | STORAGE | | X | | | |
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SECTION 10 44 16

FIRE EXTINGUISHERS & CABINETS

1. GENERAL:

1.1. Related Documents: The requirements of Division 1 are hereby made a part of this section as if fully repeated herein.

1.1.1. DIRECT PURCHASING: This Section is subject to the terms and procedures of Direct Purchasing, whereby the Owner reserves the right to recover the sales tax on materials by purchasing directly the materials required for this Section. Issuance of Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, apart from the payments for the materials as purchased.

1.1.2. Fire extinguisher signage. Provide fire extinguisher signage as required by Authority Having Jurisdiction (AHJ).

1.2. Furnish and install where indicated on the drawings.

1.3. Submittals:

1.3.1. Manufacturer's data
1.3.2. Shop drawings showing complete fabrication and installation details.
1.3.3. Fire Extinguisher Schedule of each fire extinguisher: identify fire extinguisher type, location, mounting type, finishes, and whether installation is in a fire-rated wall.

2. PRODUCTS:

2.1. Fire extinguishers, cabinets, and brackets shall be products manufactured by J.L. Industries, 4450 W. 78th St. Circle Bloomington, Minnesota 55435. (1-612-835-6850)

2.1.1. Acceptable alternative manufacturers: Larsen; Potter-Roemer.

2.2. Identify all fire extinguishers with permanent marking (non-removable label, and silk-screen process) as follow:

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**THE UNIVERSITY OF NORTH FLORIDA**
**- UNLAWFUL FOR PERSONAL USE -**

2.3. Extinguisher Cabinet (GCF/GCI) (FEC):

2.3.1. All cabinets to be the same style and size. Basis of Design shall be RC Series.

2.3.2. Provide continuous hinges on cabinet door, 180 degree opening.
2.3.3. Semi-recessed, maximum 4” extended from face of wall.
2.3.4. Aluminum trim and door, satin clear anodized finish.
2.3.5. Full glazed door, clear acrylic, do not use bubble type glazing.
2.3.6. Provide vertical red lettering “FIRE EXTINGUISHER” silk-screened onto acrylic glazing, mounted inside face of glazing.
2.3.7. Door hardware: lever handle with cam action or friction fit pull.

2.4. Fire Extinguisher Wall Brackets:

2.4.1. Provide brackets for extinguishers not located in cabinets.
2.4.2. Brackets shall be per manufacturer's standard bracket for supplied fire extinguisher, weight and size. Wall brackets shall be painted red.
2.4.3. Provide signage as required by the AHJ.

2.5. Fire Extinguishers (GCF/GCI): Install on wall bracket or in cabinets as indicated. See Life Safety Plans.

2.5.1. Where indicated in mechanical spaces: CO2 type, nominal 10 lbs.: Sentinel 10, UL rating 10BC (Class B, C fires).
2.5.2. Where indicated in electrical telecom rooms: minimum 20 BC, dry chemical type, Galaxy 5-1/2.
2.5.3. Where indicated in storage rooms and unless noted otherwise, (fire extinguisher to be installed in cabinet in Corridors): Type ABC - Cosmic 10E', UL rating 4A-80BC, nominal 10 lbs. capacity.

3. INSTALLATION:

3.1. Provide necessary rough opening at semi-recessed locations. Provide metal-stud framing on all sides of recessed cabinet in gypsum board walls.
3.1.1. Locate cabinet at 3'-4" above finished floor to bottom of cabinet.

3.2. Set wall brackets at 58 inches above finished floor (Unless Noted Otherwise).

3.3. Provide inspection tagging and full charging of all extinguishers.

3.4. Locations: As indicated on the drawings.

3.4.1. Extinguisher type "FEB" are required in all equipment rooms, in all storage rooms, and in data/IT equipment rooms regardless of whether shown on the drawings or not.

END OF SECTION