

UC DAVIS MEDICAL CENTER

A/C 9557740 SESP 1742 1P745 CT SCANNER REPLACEMENT

**FACILITIES DESIGN AND CONSTRUCTION
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100% CONSTRUCTION DOCUMENTS

HCAI PROJECT # S24XXX-34-00

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**SECTION 064100
CUSTOM CASEWORK**

PART I - GENERAL

1.01 DESCRIPTION

- A. Work of this Section shall include all materials and installation necessary to provide plastic covered casework, shelves, countertops, and accessories, as shown and detailed on the Drawings and specified herein.

1.02 RELATED WORK

- A. Division 5 – MISCELLANEOUS METAL FABRICATIONS
- B. Division 6 – ROUGH CARPENTRY
- C. Division 9 – RESILIENT FLOORING
- D. Division 15 – MECHANICAL
- E. Division 16 – ELECTRICAL

1.03 REFERENCES

- A. The "North American Architectural Woodwork Standards" (NAAWS) latest edition. Jointly published by Woodwork Institute (WI), and Architectural Woodwork Manufacturer's Association of Canada.

1.04 QUALITY ASSURANCE

- A. All casework under this Section shall be the product of and supplied under the direction one manufacturer to eliminate incompatible items.
- B. The Drawings and Specifications for this Project outline the design intent and the general requirements only and do not include all construction details and specifications for casework. All casework furnished shall be designed, fabricated and installed in accordance with the NAAWS.
- C. Work shall be in accordance with the NAAWS Grade or Grades specified.
- D. The Drawings and Specification indicate requirements which may differ from manufacturer's standard product. Make all modifications necessary to comply with the requirements.
- E. Certified Compliance:
 - 1. Before delivery to the jobsite provide a WI Certified Compliance Certificate indicating the millwork products being supplied and Certifying that these products fully meet the requirements of the NAAWS.
 - 2. Provide WI Certified Compliance Label on each cabinet elevation and countertop.

1.05 SUBMITTAL

- A. Procedures: In accordance with Division 1 Certification:
 - 1. Samples: Submit two (2) samples of the following:
 - a. Two (2) sets of cabinet hardware, including locks/latches, drawers pulls and hinges.
 - b. Two (2) sets of complete range of manufacturer's standard plastic laminate colors and textures.
 - c. Two (2) 6" x 6" sample of cabinet door with PVC edge banding for each type of plastic laminate with color(s) as selected for project.
 - d. Two (2) sets of 4" x 4" solid surface countertop of selected colors.
 - e. All samples will be retained to ensure that materials delivered to job site conform in every respect to accepted samples.
 - f. Samples may be used on the job once conformance to Drawings and Specifications have been confirmed.
- B. Shop Drawings: Submit shop drawings in conformance with requirements of the NAAWS for each item of casework. Include plans, elevations, sections and details as required to illustrate shop fabrication field assembly and installation. Show size and locations of all cutouts. Identify all manufacturer's standard components with catalog numbers, and identify all materials and construction details of custom-fabricated items.
 - 1. WI Certified Compliance Shop Drawing Label is required on first page of the Shop Drawings.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver casework until all painting, finishing and overhead Work is complete in the spaces to receive casework.
- B. Protect finished surfaces from soiling and damage during handling and installation. Keep covered with polyethylene film or other protective covering.
- C. Store casework in a dry location of the building, out of the way of other construction activities.
- D. Handle casework with care so as not to damage surfaces or subject the cases to stress.

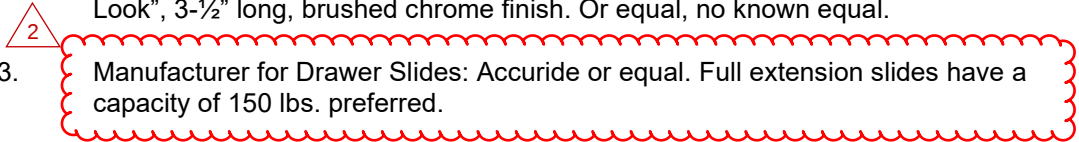
1.07 JOB CONDITIONS

- A. Coordinate with plumbing, mechanical, and electrical Work and University furnished equipment for proper sizing, location, and sequence of construction.
- B. All cutouts and holes for mechanical, plumbing and electrical Work shall be made at the project site.

PART II - PRODUCTS

2.01 MATERIALS

- A. General: All casework shall comply with Custom Grade, as defined by NAAWS, unless otherwise specified or shown on Drawings.
 - 1. Doors shall comply with Premium Grade.
 - 2. Drawers shall comply with Premium Grade.
- B. Lumber: In accordance with the AWS Grade specified for the product being fabricated. Moisture Content: 6% to 12% for boards up to 2 inch (50.8 mm) nominal thickness, and shall not exceed 19% for thicker pieces.
- C. Core: MDF to meet AWS requirements
 - 1. Made with no added Urea Formaldehyde
 - 2. Water resistance core, where require, meeting ANSI A208.2 Grade 155 MR-50.
- D. Veneer Core Plywood: A non-telegraphing hardwood manufactured with exterior glue.
- E. Plastic Laminate: Meeting the requirements of AWS.
 - 1. Type: In conformance with NEMA publication LD3, latest edition, 0.028" thick minimum for all vertical surfaces and 0.04" thick minimum for countertops and other horizontal surfaces.
 - 2. Colors: As indicated in Building Interiors Color and Finish List.
- F. PVC Edge Band:
 - 1. 1 mm thick, colors to match adjacent surface on concealed shelves.
 - 2. 3 mm thick, colors to match adjacent surface on all cabinet doors, drawer fronts and false fronts.
- G. Solid Surface Fabrication: Solid surface is defined as nonporous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.
 - 1. Manufacturer: Corian® surfaces from the DuPont company (basis of design)., Nevamar, Avonite or equal.
 - 2. Solid polymer components:
 - a. Cast, nonporous, filled polymer, not coated, laminated or of composite construction with through body colors meeting ANSI Z124.3 or ANSI Z124.6, having minimum physical and performance properties specified.
 - b. Superficial damage to a depth of 0.010 inch (.25 mm) shall be repairable by sanding and/or polishing.

3. Colors and Patterns: As indicated in Building Interiors Color and Finish List.
4. Joint adhesive:
 - a. Manufacturer's standard one- or two-part adhesive kit to create inconspicuous, nonporous joints.
5. Sealant:
 - a. Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51-compliant, UL-listed silicone sealant in colors matching components.
- H. Stainless Steel: Type 302, No. 4 satin finish.
- I. Plexiglass: ¼" thick, clear.
- J. Hardware: All hardware shall be in accordance with NAAWS except as specified below:
 1. Hinges: Heavy duty 5-Nuckle wrap-around hinges. Design to match specified numbers, self-closing, satin chrome finish.
 - a. Provide 95% opening for cabinet door hinges adjacent to partition. Stanley HT1592, Rockford Process Control or equal.
 - b. Provide 175% opening for all other cabinet doors hinges. Stanley HT1592, Rockford Process Control or equal.
 2. Door and Drawer Pulls: Extruded aluminum pull, EPCO MC-402-3.5, "European Look", 3-½" long, brushed chrome finish. Or equal, no known equal.
 3. Manufacturer for Drawer Slides: Accuride or equal. Full extension slides have a capacity of 150 lbs. preferred.
 4. Manufacturer for Keyed Cabinet Locks: Olympus or equal.
 5. Standard and Shelf Bracket:
 - a. Standard and Shelf Bracket for Cabinets: Steel standards with clip, recessed type for all cabinets, KV 255 or equal.
 - b. Standard and Bracket for Adjustable Shelves: Extra heavy-duty standards and brackets, steel, ⅞" wide x 1¼" high, 2" adjustment. Model No. 87-187 standard with #187LL bracket and #211 shelf rest by Knappe Vogt, or equal, no known equal.
 6. Magnetic Catches: Heavy-duty magnetic catch with aluminum case for double door use as shown on Drawings.
- K. Fasteners: In accordance with Division 5, METAL FABRICATIONS.
- L. Sealant: Silicone sealant in color to match color of surfaces applied.
- M. Grommet: 2-¼" diameter. Plastic, color to match countertop color.

2.02 FABRICATION

A. General:

1. Fabricate casework in accordance with NAAWS grades as specified below, and as shown on Drawings and approved Shop Drawings. Design Drawings and Specifications where more restrictive shall supersede the NAAWS.
 - a. Grade: Custom Grade for all casework in all areas unless otherwise specified.
2. All units shall have easily cleanable flush interiors.
3. Shop-fabricate casework in whole units or in partial units as most practical for handling and transportation. Assemble partial units in place in such manner that each piece of casework becomes a unified whole visually and structurally. Fabricate fillers and scribe strips of same material and finish as cabinet with which they are associated.
4. Fabricate all casework with MDF or lumber core plywood. Use of particle board for casework, shall be rejected.

B. Base, Wall Hung, Full Height and Island Cabinets:

1. All cabinets shall be frameless in accordance with NAAWS, unless otherwise shown.
2. Exposed Exterior and Interior Surfaces: High Pressure Decorative Laminate, unless otherwise shown on Drawings and specified herein.
3. Semi-exposed surfaces: High-pressure laminate cabinet liner for all cabinet surfaces when behind solid doors, except for shelving surfaces as specified.
 - a. Backs of doors and open shelf units will be considered exposed and shall match color of exposed portions.
 - b. 3 mm thick PVC Edge Banding on doors of medium density fiberboard construction (MDF) colors to match adjacent surfaces. Apply plastic laminate finish to both faces.
4. Doors Interface Type: Flush overlay.
5. Adjustable Shelves: Plastic laminate over $\frac{3}{4}$ " MDF if span is less than 32", otherwise 1" MDF. Apply plastic laminate to all surfaces.
6. Provide seismic lip on front edge of all open shelves.
7. End Panel at Kneespace: Plastic laminate over 1" thick plywood core. Apply plastic laminate to all surfaces.

C. Countertops and Back Splashes:

1. Solid Surface Fabrication Countertops and Back Splashes: This material to be used around sinks or whenever there is a source of water. Countertops and back splashes shall be formed in one piece. Minimum thickness $\frac{3}{4}$ " with bonded lip, or $\frac{1}{2}$ " if supported per DuPont standards. Provide $\frac{1}{4}$ " coved radius at countertop to backsplash. Countertops that are cast flat shall have a uniform low-sheen surface and be resistant to scratches and abrasion. Profile as shown.
 - a. Provide sink cutouts as indicated in Drawings and as recommended by sink manufacturer.
 - b. Provide Solid Surface Fabrication countertops and backsplashes as indicated in Drawings.
2. All countertops shall have 1" overhang on front and $\frac{1}{2}$ " overhang on exposed sides unless otherwise shown.
3. Ends of splashes shall be closed, and the spaces between partitions and splashes at junctions shall be sealed with sealant.
4. Provide plastic grommet for all utility cut out at countertops and as shown.

D. Adjustable Shelves: Plastic laminate finish over $\frac{3}{4}$ " thick MDF. Apply plastic laminate to all surfaces. Notch bottom of shelf for brackets

1. Provide seismic lip for all adjustable shelves.
2. Standards and Brackets: Install standards at 32" on center maximum. Length of brackets as required for shelf width. Standards to be attached to studs or backing with #8 flat head tapping screws, utilizing all mounting holes.

E. Keying: Provide two keyway cores for each lock. All locks shall be keyed by the UCDCM Key Shop.

PART III - EXECUTION

3.01 EXAMINATION

- A. Accurately fit all casework and components.
- B. Verify that surfaces and spaces to receive casework are satisfactory for installation. If unsatisfactory conditions exist, do not commence installation until such conditions have been corrected.
- C. Prior to installation of casework, examine shop-fabricated work for completion, and complete work as required, including back priming and removal of packing.

3.02 INSTALLATION

- A. Install casework under the direct supervision of the casework manufacturer.
- B. Install casework straight, plumb level and true with no distortions. Shim as required using concealed shims. Where casework abuts other finished work, scribe and apply filler strips for accurate fit with all fasteners concealed where practicable.

- C. Secure base cabinet to floor at toe space with fasteners spaced 24" on center, unless otherwise shown on Drawings, and bolt contiguous cabinets together. Secure individual cabinets with not less than two fasteners into floor where they do not adjoin other cabinet.
 - 1. Where required, assemble units into one integral unit with joint flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of $\frac{1}{16}$ ".
 - 2. Base cabinets shall be installed so that any one cabinet within a row can be removed or installed without disturbing adjoining cabinets.
 - 3. Provide holes and cutouts for mechanical, plumbing and electrical work as necessary to coordinate with other work. Provide stainless steel escutcheons for all utilities through cabinets.
- D. Secure all wall hung cabinets to backing plates as shown and scheduled. Anchor, adjust, and align wall hung cabinets as specified for base cabinets.
- E. Provide fillers and scribe strips so that cabinet fronts, and sides present a finished and unbroken surface to adjacent cabinet units or partitions. Cut scribe strips so that no gap greater than $\frac{1}{16}$ " exists where casework is fitted against flat or irregular surfaces.
- F. At open shelves, install steel standards at three foot on center maximum.
- G. Install Solid Surface Fabrication countertops and backsplashes plumb and level, scribed to adjacent finishes, in accordance with approved shop drawings and manufacturer's instructions.
 - 1. Form inconspicuous joints in finished work.
 - 2. Coved backsplashes and applied side splashes:
 - a. Install applied sidesplashes using manufacturer's standard color-matched silicone sealant.
 - b. Adhere applied sidesplashes to countertops using manufacturer's standard color-matched silicone sealant.
 - 3. Coved backsplashes and sidesplashes:
 - a. Provide coved backsplashes and sidesplashes at all walls and adjacent millwork.

3.03 CLEANING AND PROTECTION

- A. Following completion of installation, clean surfaces of casework, and clean and polish hardware, in conformance with manufacturer's recommendations.

END OF SECTION 064100



SECTION 081423
IMPACT RESISTANT INTERIOR DOORS

PART I - GENERAL

1.01 DESCRIPTION

- A. Scope: Work under this Section shall include all materials and installation necessary to provide Impact Resistant Interior Doors with factory finishing as shown and detailed on the Drawings and shown herein.

1.02 RELATED SECTIONS

- A. Division 13, Section 130900 – RADIATION PROTECTION

1.03 REFERENCES

- A. ASTM G-21 and ASTM G-22 (Bacterial and Fungal resistance): Provide doors that do not support fungal and bacterial growth when tested in accordance with applicable provisions of ASTM G-21 and ASTM G-22.
- B. ASTM D-543 (Chemical and Stain Resistance): Provide doors that show chemical and stain resistance when tested in accordance with ASTM D-543.
- C. ASTM E152 – Methods of Fire Tests and Door Assemblies
- D. NFPA 252 Standard methods of fire tests of door assemblies
- E. UL-10C Positive Pressure fire tests of door assemblies
- F. NFPA 80 Fire Doors and Windows
- G. NFPA 101 Life Safety Code
- H. CARB Emission Standards Section 93120.2 (a), California Air Resources Board
- I. WDMA Industry Quality Test Standards I.S.1A-04:
 - 1. WDMA TM-6 Test method for determining the durability of adhesives used in doors under accelerated aging conditions
 - 2. WDMA TM-7 Test method to determine the physical endurance of wood doors & associated hardware connections under accelerated operating conditions, Window and Door Manufacturers Association
 - 3. WDMA TM-8 Test methods to determine hinge loading resistance of wood door stiles, Window and Door Manufacturers Association
 - 4. WDMA TM-10 - Test method to determine the screw holding capacity of wood door stiles, Window and Door Manufacturers Association
- J. ANSI/BHMA A156.115-W-2006 American National Standard for Hardware Preparation in Wood Doors with Wood or Steel Frames

K. FSC – Forestry Stewardship Council

1.04 QUALITY ASSURANCE

- A. Source Limitations: Obtain impact resistant Acrovyn Door Systems doors through one source from a single manufacturer.
- B. Quality Standard: Comply with WDMA Industry Standard (I.S. 1A-04 “Architectural Wood Flush Doors”).
 - 1. Doors shall meet performance attributes for the following performance duty level: Extra Heavy Duty (Standard Duty for FC5-NR)
 - 2. Tolerances for warp, telegraphing, squareness and pre-fitting dimensions as per the latest edition of WDMA I.S.1A-04.
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-ratings indicated, based on testing according to UBC Standard 7-2, UL-10C Positive Pressure and NFPA 252.
- D. Doors or trial doors of the type specified herein should be installed in an existing facility for over 6 months to verify quality and durability performance of product.

1.05 SUBMITTALS

- A. Submit in accordance with Section 013000
- B. Product Data: For each type of door, submit manufacturer’s data sheets including details of core and edge construction.
- C. Shop Drawings: Submit complete schedule indicating location, size, hardware sets, swing of each door; elevation of each type of door and construction details not covered in product data and other pertinent information. Indicate dimensions and locations of mortises and holes for hardware, fire ratings, and location of cutouts for glass.
- D. Samples for verification of edge wrapping and edge replaceability. Banded edges will not be approved.
- E. Certification: Submit certification that doors and frames comply with UL10c, Positive Pressure Fire Door Test Method.
- F. Manufacturer’s limited lifetime warranty.

1.06 DELIVERY STORAGE AND HANDLING

- A. Transport, store, protect and handle products under guidelines of WDMA and manufacturer’s care and handling instructions.
- B. Package doors individually using foam interleaf and stack on pallet, not exceeding 15 doors per pallet.
- C. Mark each door with opening number used on shop drawings.
- D. Accept doors on site in manufacturer’s standard packaging. Inspect for damage.

- E. Do not store doors in damp or wet areas. HVAC systems should be operating and balanced prior to arrival of doors. Acceptable humidity shall be no less than 25% or greater than 55%.
- F. Do not subject doors to extreme conditions or changes in heat, dryness, or humidity in accordance with the latest edition of WDMA I.S.1A-04.
- G. Protect doors from exposure to natural and artificial light after delivery.
- H. Doors should be lifted and carried when being moved, not dragged across one another.

1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that are deemed defective in materials or workmanship. Conditions are subject to the terms set forth in the manufacturer's warranty.
- B. Solid-Core Interior Doors: provide manufacturer's limited lifetime written warranty guarantee against warp, delamination and defects in materials and workmanship.

1.08 SCHEDULING

- A. Coordinate fabrication, delivery, and installation with the general contractor and other applicable trades.

PART II - PRODUCTS

2.01 MANUFACTURER

- A. Basis of Design - Construction Specialties, Inc., 3 Werner Way, Lebanon, NJ 08833 USA 800-233-8493. email: cet@c-sgroup.com
 - 1. Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. and are specified to match that provided in previous phase of work. No substitutions.

2.02 MATERIALS

- A. Door Construction
 - 1. Non-Fire Rated Doors and 20-minute interior FLUSH doors conforming to WDMA I.S.1A-04 and the following:
 - a. Thickness: 1 3/4" +/-1/16", (44.45mm +/- 1.58mm)
 - b. Core: Solid. Interior stiles and rails bonded. Tops and bottoms factory sealed with an approved sealer to prevent moisture intrusion.
 - 1) Agrifiber Particleboard grade, rapidly renewable and no added urea formaldehyde content, CARB Phase I compliant.
 - c. Crossbanding: FSC certified
 - d. Replaceable engineered PVC- free Acrovyn door stiles: Shall be field replaceable if ever damaged by impact.

- e. Profile of stiles shall be a minimum thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - f. Replaceable engineered PVC - free Acrovyn door edge covers: Shall be field replaceable if ever damaged by impact. Shall be exclusive of fasteners to improve appearance.
 - g. Profile of edge covers shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - h. WDMA I.S.1A-04 Performance Duty Level: Extra Heavy Duty
 - i. Durability Performance: Cycle Slam WDMA TM-7, 1990 Extra Heavy Duty- 2,000,000 cycles to insure durability of entire door construction
2. 45 and 60-minute interior FLUSH fire rated doors conforming to WDMA I.A. 1-A and the following:
- a. Thickness: $1\frac{3}{4}$ " $\pm$ $\frac{1}{16}$ ", (44.45mm $\pm$ 1.58mm)
 - b. Cores: Solid. Interior stiles and rails bonded, fire rated composite core, no added urea formaldehyde content. Tops and bottoms factory sealed with an approved sealer to prevent moisture intrusion.
 - c. Crossbanding: FSC certified
 - d. Replaceable engineered PVC - free Acrovyn door stiles: Shall be field replaceable if ever damaged by impact.
 - e. Profile of stiles shall be a minimum thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - f. Replaceable engineered PVC - free Acrovyn door edge covers: Shall be field replaceable if ever damaged by impact. Shall be exclusive of fasteners to improve appearance.
 - g. Profile of edges shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - h. WDMA I.S.1A-04 Performance Duty Level: Extra Heavy Duty.
 - i. Durability Performance: Cycle Slam WDMA TM-7, 1990 – 1,000,000 cycles to insure durability of entire door construction.
3. 90-minute interior FLUSH fire rated doors conforming to WDMA I.S.1A-04 and the following:
- a. Thickness: $1\frac{3}{4}$ " $\pm$ $\frac{1}{16}$ ", (44.45mm $\pm$ 1.58mm)
 - b. Core: Solid. Interior stiles and rails bonded, fire rated composite core, no added urea formaldehyde content. Tops and bottoms factory sealed with an approved sealer to prevent moisture intrusion.
 - c. Crossbanding: FSC certified

- d. Replaceable engineered PVC- free Acrovyn door edge covers: Shall be field replaceable if ever damaged by impact. Shall be exclusive of fasteners to improve appearance.
 - e. Profile of edges shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - f. WDMA I.S.1A-04 Performance Duty Level: Extra Heavy Duty
 - g. Durability Performance: Cycle Slam WDMA TM-7, 1990 – 1,000,000 cycles to insure durability of entire door construction.
4. Non-Rated and 20-minute interior flush LEAD-LINED doors conforming to WDMA I.S.1A-04 and the following:
- a. Thickness: 1 $\frac{3}{4}$ " $\pm$ 1/16", (44.45mm $\pm$ 1.58mm)
 - b. Core: Solid. Interior stiles and rails bonded. Tops and bottoms factory sealed with an approved sealer to prevent moisture intrusion.
 - c. Particleboard grade, no added urea formaldehyde content, ANSI A201.1.2009, CARB Phase I compliant [or]
 - d. FSC Certified Particleboard grade, no added urea formaldehyde content, ANSI A208.1.2009, CARB Phase I compliant [or]
 - e. Structural Composite Lumber, no added urea formaldehyde content
 - f. Crossbanding: FSC certified
 - g. Lead lining sheet on each face side for balanced construction: _____ thickness. [Specify either 1/16" [or] 1/8" (1.58mm or 3.175mm) TOTAL lead thickness].
 - h. Replaceable engineered PVC - free Acrovyn door edge covers: Shall be field replaceable if ever damaged by impact. Shall be exclusive of fasteners to improve appearance.
 - i. Profile of edges shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - j. WDMA I.S.1A-04 Performance Duty Level: Extra Heavy Duty
 - k. Durability Performance: Cycle Slam WDMA TM-7, 1990 Extra Heavy Duty- 2,000,000 cycles to insure durability of entire door construction
5. 45 and 60-minute interior LEAD-LINED fire rated doors conforming to WDMA I.A. 1-A and the following:
- a. Thickness: 1 $\frac{3}{4}$ " $\pm$ 1/16", (44.45mm $\pm$ 1.58mm)
 - b. Cores: Solid. Interior stiles and rails bonded. Fire rated composite core, no added urea formaldehyde content. Tops and bottoms factory sealed with an approved sealer to prevent moisture intrusion.

- c. Crossbanding: FSC certified
 - d. Lead lining sheet on each face side for balanced construction: combined thickness to equal that specified per drawings.
 - e. Replaceable d engineered PVC - free Acrovyn or edge covers: Shall be field replaceable if ever damaged by impact. Shall be exclusive of fasteners to improve appearance.
 - f. Profile of edges shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
 - g. WDMA I.S.1A-04 Performance Duty Level: Extra Heavy Duty
 - h. Durability Performance: Cycle Slam WDMA TM-7, 1990 – 1,000,000 cycles to insure durability of entire door construction
- B. Door Faces:
- 1. Finish
 - a. Acrovyn® Woodgrains or solid color impact resistant, PVC-free Acrovyn. Finish to be as indicated in drawings.
 - 2. Engineered PVC-free rigid sheet to be Acrovyn by Design: High-definition graphic file digitally printed on reverse side of clear sheet and sealed with protective backer. Either to be customer provided artwork with copyright clearance file, or one of Acrovyn by Design Pattern Collections. Specify color-matched caulk, clear caulk, Acrovyn trims or aluminum trims as needed for joints/transitions. Specific files used on the project are noted below. See floor plans and finish schedule for coordinating locations.
 - 3. Face material base color must be integral throughout to eliminate discoloration caused by scratching.
 - 4. Face Veneer Wear Index - Abrasion Resistance Testing - ASTM D4060-90: 28,000 cycles to prove out resistant to scuffing and scratching.
 - 5. Face Veneer Impact Resistance - ASTM D-4226: 86 in/lb. (99.08kg/cm³) to confirm impact resistance of face finish.
- C. Door stiles to meet or exceed the following performance testing to ensure hardware fastener holding strength:
- 1. WDMA TM-8 "Hinge Loading Resistance" Extra Heavy Duty
 - 2. WDMA TM-10 Screw Holding Capacity" Extra Heavy Duty
- D. Door Edges:
- 1. Finish
 - a. 20 gauge (.81mm) Stainless Steel, No. 4 finish.
 - 2. Edges are to fully wrap the door vertical stiles to eliminate banded edges thus

improving durability and impact resistance.

3. Door edges shall be exclusive of fasteners to improve appearance.
4. Profile of edges shall be a minimum height/thickness of $\frac{3}{4}$ " for maximum durability and ease of replacement.
5. Edges must be flush with face of door thus eliminating raised edges that could be torn off.
6. Edges to include $\frac{1}{4}$ " (6.35mm) radius edges to improve impact deflection. Square or banded edges should not be permitted.
7. Edges are to be extruded (not formed) to ensure correct appearance and proper door fit.
8. Edges to be provided as part of the construction of the door from single source manufacturer.

E. Adhesives

1. Crossbanding to core adhesives shall be Type II, urea formaldehyde free I to improve structural integrity of door.
2. Door faces are to be applied to the crossbanded core using Type I, urea formaldehyde free adhesives to eliminate delamination.

2.03 FABRICATION, GENERAL

- A. Doors shall be pre fit and beveled at the factory to fit the openings to reduce handling an onsite labor costs. Pre fit tolerances shall be in accordance with the requirements of WDMA I.S.1A-04, latest edition.
- B. For fire rated doors comply with clearance requirements of referenced quality standard for fitting in accordance with requirements listed in NFPA 80.
- C. Coordinate measurements of hardware mortises in metal frames. Contractor or door distributor to verify dimensions and alignment before factory machining.
- D. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame shop drawings, and hardware templates.
- E. Light openings must be cut by the manufacturer or by a certified machining distributor.
- F. Top and bottom rails shall be factory sealed with an approved wood sealer to eliminate moisture from entering core thus eliminating warp.
- G. Blocking: provide blocking approved for use in doors of fire ratings indicated as needed to eliminate through-bolting for surface applied hardware.

PART III - EXECUTION

3.01 EXAMINATION

- A. Inspect all doors prior to hanging. Repair noticeable marks or defects that may have occurred from improper storage or handling. Field repairs and touchups are the responsibility of the installing contractor upon completion of the initial installation. Field touchup shall include repair of job inflicted mars and final cleaning of finished doors.
- B. Examine door frames and verify that they comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
- C. Adjust frames to plumb condition before door installation. Tolerances for warp, squareness and pre-fitting dimensions shall be as per latest edition of WDMA I.S.1A-04.
- D. Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Handle doors in accordance with recommendations of WDMA I.S.1A-04 "Care and Installation at Job Site."
- B. Condition doors to average temperature and humidity in area of installation for not less than 48 hours prior to installation.
- C. Install doors to comply with manufacturer's written instructions, referenced quality standard and as indicated.
- D. Install fire rated doors in corresponding fire-rated frames according to NFPA-80 requirements.
- E. Factory fitted doors: Align in frames for uniform clearance at each edge.
- F. Set doors plumb, level, square and true.
- G. In the field trimming:
 - 1. Trim door height by cutting door bottom edges to a maximum of $\frac{3}{4}$ " (19.05mm) per NFPA 80.
 - 2. Trimming of fire rated doors in width can only be done by the manufacturer or a certified machining distributor under special guidance of the manufacturer.
- H. Drill pilot holes for screws and bolts using templates provided by hardware manufacturer.
- I. Exercise caution when drilling pilot holes and installing hinges so that pilot holes are not over drilled, and screws are not over torqued. Follow manufacturer's installation instructions.
- J. Reseal exposed tops and bottom rails of any doors that required site alteration with an approved wood sealer.

- K. Hardware installation: See Division 8 Section "Door Hardware".
- L. Clean prefinished doors with a rag in concert with water or household cleaners such as Simple Green, Formula 409□, or equivalent. Following use of the cleaner, the cleaned surface should be "rinse wiped" with clean water and wiped dry to remove any remaining residue.

3.03 ADJUSTMENT

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

3.04 CLEANING

- A. General: Upon completion, thoroughly clean exposed surfaces per manufacturer's instructions.

END OF SECTION 081423

**SECTION 095100
ACOUSTICAL TILE CEILINGS**

PART I - GENERAL

1.01 DESCRIPTION

- A. Scope: Work under this Section includes all materials and installation necessary to provide Acoustical Ceilings, as shown and detailed on the drawing and specified herein.
- B. Related Work Specified Elsewhere:
 - 1. Division 23 – MECHANICAL WORK: Air grilles and Diffusers.
 - 2. Division 26 – ELECTRICAL WORK: Light Fixtures.

1.02 QUALITY ASSURANCE

- A. References:
 - 1. General: Provide completely designed system complying with Section 808 of CBC and specified herein.
 - 2. Ceilings and Interior Systems Contractors Association (CISCA): Acoustical Ceilings, Use and Practice.
 - 3. Underwriters Laboratory (UL): Fire Resistance Directory and Building Material Directory.
 - 4. AC 368: Acceptable Criteria for Suspended Ceiling Framing Systems
 - 5. 2019 California Building Code
- B. Qualifications: Installer specializing in the work of this Section with minimum three (3) years documented experience.

1.03 SUBMITTALS

- A. General: Refer to Division 1, Section 013300 – Shop Drawings, Product Data and Samples.
- B. Shop Drawings: Submit shop drawings showing suspension system details and reflected ceiling plans indicating location of light fixtures, mechanical air supply and return outlets and other items affecting ceiling construction. Identify locations of types of suspension systems and types of panels or tile including access panels, where required.
- C. Samples:
 - 1. Acoustical Board: Submit manufacturer's standard color range.
 - 2. Suspension System: Submit manufacturer's standard color range.
- D. Product Data: Manufacturer's specification, data, and installation instructions.

- E. Certificates: Manufacturer's certified test reports for each specified NRC and STC requirement.

1.04 PRODUCT HANDLING

- A. General: Refer to Division 1, Section 013100 – Coordination.

1.05 SITE CONDITIONS

- A. Environmental Requirements: Maintain temperature approximating operational conditions, before, during and after installation; humidity not more than 70%.

1.06 MAINTENANCE

- A. General: Refer to Division 1, Section 017700 – Closeout Procedures.
- B. Extra Stock: Deliver one (1) percent or a minimum of one full container of each kind and type of acoustical material installed.
- C. Guarantee: On form provided at end of Section 017800 – CLOSEOUT SUBMITTALS, provide one (1) year written guarantee commencing from date of final acceptance by University's Representative.

PART II - PRODUCTS

2.01 MATERIALS

- A. Acoustical Panels:

1. Manufacturer: Specified products are manufactured by Armstrong World Industries, Inc., or a comparable product by one of the following manufacturers.
 - a. Rockfon
 - b. USG Interiors, Inc..
 - c. Or equal
2.  Non-Fire Rated: "Cirrus Tegular," Model No. 584, 24"x24"x3/4" Tegular or Model No. 535, 24"x48"x3/4"; angled tegular edge, fine texture, paint finish, in color selected by University's Representative from white to off-white; minimum NRC Range .70; ASTM E1264 Type XII, Fire Class A; ASTM E83 Flame spread rating of 25.
3. Fire Rated: "Boldface Fire Guard"; Angular Tegular edges, minimum NRC Range .55 - .65, Class I; ASTM E1264 flame spread rating of 25.
4. Patient Treatment Areas: "Optima" Health Zone, Model No. 3115PB, 24"x48"x1" or, Model No. 3114PB, 24"x24"x1", Square Lay-in tiles; minimum NRC Range .95; Fire Class A ASTM E1264; Flame spread rating of 25 complying with ASTM E83.
5. Toilet and Utility Rooms: "Random Fissured" Model No. 2909, Unperforated Square Lay-in; minimum NRC Range .55; Fire Class A ASTM E1264; Flame spread rating of 25 complying with ASTM E83.

B. Ceiling Suspension System:

1. Manufacturer: Specified products are manufactured by Armstrong World Industries, ., or a comparable product by one of the following manufacturers.
2. Non-fire Rated and Fire Rated: PRELUDE XL High Recycled Content (HRC) 15/16" series: Exposed heavy-duty system of steel components with aluminum caps complying with ICC ESR-1308; or equal system provided by one following manufacturers.
 - a. ROCKFON
 - b. USG Interiors, Inc.
3. Standard Sections: Heavy-duty (16 lb/ft) main and cross runner members, assembly devices, wall moldings; other accessories as required; factory-painted in color selected by University's Representative.
4. Hanger Wires: 12 gage when spaced at 4 ft. or 10 gage when spaced at 5 ft., galvanized, soft-annealed mild steel wire of gage certified by load test data as capable of carrying five (5) times design load.
5. Wall Molding: Molding shall have a horizontal flange of at least 2", unless otherwise required. The 2" wall angle is required at the attached and unattached perimeters.
 - a. A 15/16" deep wall molding may be used in lieu of 2" wall angle when 2" Beam-End Retaining Clip (BERC2) is installed complying with ICC-ESR-1308 or other approved proprietary clip compatible with system provided.
6. Compression Struts:
 - a. "Donn Compression Post" manufactured by the USG Interiors, Inc.
 - b. Armstrong World Industries or equal

- C. Acoustical Sealant: As recommended by acoustical material manufacturer, for application shown.

PART III - EXECUTION

3.01 PREPARATION

- A. General: Refer to Division 1, Section 013100 – Coordination.
- B. Examination: Examine conditions of work in place before beginning work; report defects.
- C. Surface Preparation: Comply with ASTM C636 Article 3, Interference of Ceiling Related Components; coordinate requirements with other trades. Verify that required work has been installed above ceiling and that perimeter wall work, where ceiling abuts, is completed and dry.

3.02 INSTALLATION

- A. General: Suspended acoustical ceilings shall be installed in accordance with the provisions of ASTM C 635 (materials) and ASTM C 636 (installation); and in conformance with referenced standards, manufacturer's written directions, as shown, and as specified.
- B. Ceiling Suspension System:
 - 1. General: Comply with 2022 CBC section 1617A.1.21 and DSA IR 25-2-13 and suspension system manufacturer's instructions, non-cumulatively; main runners at 4'-0" on center, with support wires at 4'-0" on center, maximum; exposed members parallel with one another, in grid layout as shown.
 - 2. Splices and Intersections: Install with interlocking device that draws members tightly together and prevents torsional deflection.
 - 3. Compression Struts: Install as shown.
 - 4. Perimeter Molding and Grid: Install intersections so fastenings are concealed, as shown.
 - 5. Tolerances: Erect ceiling system level within $\frac{1}{8}$ " in 12'-0" in any direction.
 - 6. The ceiling grid must be attached to the molding at two adjacent walls.
 - 7. Unattached ends of the grid system must have $\frac{3}{4}$ " clearance from the wall, and must rest upon and be free to slide on the molding.
 - 8. Hanger wires must be plumb within 1 in 6 unless counter sloping wires are provided.
 - 9. Hanging and seismic bracing wires must be 6" minimum clear from unbraced conduits, pipes, ducts, etc., and 1" minimum from braced conduits, pipes, ducts, etc.
- C. Acoustical Panels: Install in ceiling suspension system, as shown.
- D. Acoustical Tile:
 - 1. Tile: Install smooth, level or plumb, as shown; with exposed tile joints true and straight, and junctures neat, tight and properly trimmed. Unevenness, edge or corner offsets, cupping, scratches, broken tile or other imperfections, not acceptable.
 - 2. Adhesive: Place 1- $\frac{1}{4}$ " diameter, minimum, spots of adhesive at corners. Press and slide tile into place with face surface aligned and level.
- E. Gypsum Board Inserts: Provided under Division 9, Section 092500 – Gypsum Board and painted under Section 099000 – Painting. Install each panel on perimeter bead of acoustical sealant and attach hold-down clips.
- F. Light Fixtures:
 - 1. All fixtures must be positively attached to the suspension system. The attachment device must be able to withstand 100% of the weight of the fixture acting in any direction.

2. Fixtures weighing 56 lbs. or less must have two 12-gage wires attached at diagonal corners. These wires may be slack.
3. Fixtures weighing more than 56 lbs. must be independently supported from the building structure.

G. Mechanical Services:

1. Mechanical services less than 20 lbs. must be positively attached to the suspension system main beams or cross tees.
2. Terminals or services weighing 20 lbs. to 56 lbs. must have two 12-gage wires connecting them to the ceiling system hangers or to the structure above.
3. Terminals or services weighing more than 56 lbs. must be independently supported.

H. Penetrations:

1. Ceilings without a grid brace must have 2" oversize trim rings to allow 1" horizontal movement in all horizontal directions at sprinkler heads and other penetrations.

3.03 ADJUSTMENT

- A. General: Adjust sags or twists which develop in ceiling systems; replace improperly installed or damaged suspension system components and acoustical panels, as directed by University's Representative.

B. Tolerances:

1. Maximum Variation from Flat and Level Surface: $\frac{1}{8}$ " in 10'-0".
2. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.04 CLEANING

- A. General: Upon completion, thoroughly clean exposed surfaces per manufacturer's instructions.

END OF SECTION 095100