

SECTION 06001
CARPENTRY

PART I - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall furnish all labor, materials, tools, equipment and perform all work and services necessary for or incidental to the furnishing and installation, complete, of all rough carpentry as shown on drawings and as specified in accordance with provisions of the Contract Documents, and completely coordinated with that of all other trades.
- B. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.
- C. Rough carpentry, Structural Framing, and Finish Carpentry.
- D. Roof Curbs.
- E. Blocking at Roof Openings.
- F. Wood Treatment

1.02 QUALITY ASSURANCE

- A. Rough Carpentry Lumber: Visible grade stamp, of agency certified by National Forest Products Association (NFPA).
- B. When applicable, fabricate cabinetwork and site made finish carpentry items in accordance with recommendations of Quality Standards of Architectural Woodwork Institute (AWI).
- C. AWP - American Wood Preservers Association Book of Standards
- D. Factory-mark each piece of lumber and plywood to identify type, grade, moisture content, agency providing inspection service, producing mill and other qualities specified. Marking may be omitted if certificate of inspection is provided for each shipment.
- E. Do not use wood treatment materials or processes which will, in any way, bleed through or otherwise adversely affect applied finish materials.
- F. Do not use wood treatment materials or processes which will react with or adversely affect roofing materials.
- G. Requirements of Regulatory Agencies: Fire Hazard Classification: Underwriters' Laboratories, Inc. (UL) for fire-treated lumber and plywood.

1.03 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01300.
- B. Indicate dimensioned plans and elevations, large scale details, attachment devices, materials, and other components.
- C. Submit samples under provisions of Section 01300 of standard colors and patterns of plastic laminate for Architect/Engineers selection.
- D. Wood Treatment Data and Fire- Retardant Treatment Data: For information only, submit 2 copies of chemical treatment manufacturer's instructions for proper use of each type of treated material. Indicate by transmittal form that copy of each instruction has been distributed to the Installer.
- E. Dip treatment: For each type specified, include certification by treating plant stating chemical solutions used, submersion period and conformance with specified standards.
- F. Pressure Treatment: For each type specified, include certification by treating plant stating chemicals and process used, net amount of salts retained and conformance with applicable standards.
- G. For water-borne preservatives, include statement that moisture content of treated materials was reduced to a maximum of 15% prior to shipment to project site.
- H. Fire-Retardant Treatment: Include certification by treating plant that treatment materials comply with governing ordinances and that treatment will not bleed through finished surfaces.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver shop fabricated carpentry items until site conditions are adequate to receive the work. Protect items from weather while in transit.
- B. Store indoors, in ventilated areas with a constant, minimum temperature of 60 degrees F, maximum relative humidity of 25 to 55 percent.

PART 2 - PRODUCTS

2.01 ROUGH CARPENTRY MATERIALS

- A. Lumber: PS 20; graded in accordance with established Grading rules; maximum moisture content of 15 percent:
- B. Nails, Spikes and Staples: Galvanized for exterior locations, high humidity locations and treated wood; plain finish for other interior locations; size and type to suit application.
- C. Bolts, Nuts, Washers, Lags, Pins and Screws: Medium carbon steel; sized to suit application galvanized for exterior locations, high humidity locations and treated wood; plain finish for other interior locations.
- D. Fasteners: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or power activated type for anchorage to steel.

- E. Framing, blocking, nailers, furring, grounds, stripping and similar members for use as indicated on Drawings.
 - 1. AWPB LP-2 termite and preservative treatment.
- F. Pressure treated wood shall be provided where shown or specified. Kiln dry to 15% moisture content after treating.
- G. Framing, blocking, nailers, furring, grounds, cants, stripping, and similar members:
 - 1. SPIB No. 2 - F. 1400 E. 1,600,000
 - 2. WWPA No. 3 - Equivalent to above
- H. Plywood: Comply with requirements of PS I-66, exterior type, A Grade on exposed faces, and C Grade on concealed faces. Where shown, provide exterior type plywood with medium density overlay exposed faces. **Roof sheathing shall be 5/8 inch exterior Grade Plywood.**
- I. Anchorage and Fastening Materials; Provide items which are non-corrosive when used with pressure treated wood. Select proper type, size, materials and finish for each application. Comply with the following:
 - 1. Nails and Staples: Fed. Spec. FF-N-105
 - 2. Wood Screws: Fed Spec. FF-S-111
 - 3. Lag Screws and Bolts: Fed. Spec. FF-B-561
 - 4. Bolts and Studs: Fed. Spec. FF-B-575
 - 5. Nuts: Fed. Spec. FF-N-836
 - 6. Washers Fed. Spec. FF-W-92
 - 7. Expansion Shields, Expansion Nails and Drive Screw Devices: Fed. Spec. FF-S-325
 - 8. Toggle Bolts: Fed. Spec. FF-B-5589
 - 9. Bar or Strap Anchors: ASTM A107 carbon steel bars.
 - 10. **NOTE: All fasteners used for pressure treated nailers at roof shall be stainless steel.**

2.02 FINISH CARPENTRY

- A. Hardwood Lumber: Graded in accordance with AWI; maximum moisture content of six percent; of the following species and grades.
LOCATION: Only as indicated on Drawings

<u>Item</u>	<u>Species</u>	<u>Grade</u>
Wood Trim Interior, Millwork,	Red Oak Plain Sawn	Premium
- B. Plywood concealed from view in cabinet construction shall be B-B grade fir or pine. Plywood shall be laminated wood core veneer.
- C. Hardwood Plywood: PS 51- graded in accordance with AWI; wood core material of veneer; lumber; type of bond recommended for application; of the following species, grades and face veneer cuts (specified).
- D. Plastic Laminate: General purpose type; minimum 1/16" thick; installed on 3/4" exterior grade plywood with all edges self-edge. The use of metal trim with plastic laminate installation is prohibited. Color shall be selected by Architect or to match existing.

2.03 WOOD TREATMENT

- A. Preservative Treatment; Where lumber or plywood is specified herein to be treated, comply with applicable requirements of AWPB Standards C2 (Lumber) and C9 (Plywood) and of AWPB Standards listed below. Mark each treated item with the AWPB Quality Mark Requirements.
- B. Pressure-treat above ground items with water-borne preservatives complying with AWPB LP-2. After treatment, kiln-dry to a maximum moisture content of 15%. Treat indicated items and the following:

Wood nailers, curbs, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers and waterproofing.

Wood sills, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.

Complete fabrication of treated items prior to treatment, where possible. If cut after treatment, coat cut surfaces with heavy brush coat of same chemical used for treatment.

2.04 FABRICATION

- A. Fabricate finish carpentry items in accordance with recommendations of AWI. Shop fabricate where possible.
- B. Fit shelves, doors and exposed edges with 3/8" thick matching hardwood edging. Use full length pieces only.
- C. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Corners and joints to be hairline.
- D. Cap exposed plastic laminate edges with materials of same finish and pattern.
- E. Shop assemble cabinetwork and finish carpentry items for delivery to site in sizes easily handled and to ensure passage through building openings.

2.05 PREPARATION OF FINISH CARPENTRY ITEMS AND CABINETWORK FOR FINISHING

- A. Sand work smooth and set exposed nails and screws. Apply wood filler in exposed nail and screw indentations and leave ready to receive site applied finishes. On items to receive transparent finishes, use wood filler which matches surrounding surfaces and of types recommended for applied finishes.
- B. Preservative treat surfaces in contact with cementitious materials.
- C. Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes, and other fixtures and fittings. Verify locations of cutouts from site dimensions. Prime paint, seal contact surfaces of cutouts.
- D. Refer to Division 9 Sections for final finishing of installed cabinetwork.

PART 3 - EXECUTION

3.01 INSTALLATION OF FINISH CARPENTRY ITEMS AND CABINET WORK

- A. Set and secure finish carpentry items in place rigid, plumb, and square.
- B. Use purpose designed fixture attachments for mounted components.
- C. Countersink nail heads on exposed carpentry work and fill holes.

3.02 INSTALLATION OF ROUGH CARPENTRY AND FRAMING ITEMS

- A. Use only sound, thoroughly seasoned, well-manufactured materials of the longest practical lengths and sizes to minimize jointing. use materials free from warp which cannot be easily corrected by anchoring and attachment. Sort out and discard warped material, and materials with other defects which would impair the quality of work.
- B. Securely attach carpentry work to substrates by anchoring and fastening as shown, and as required by recognized standards, and as required to support applied loading.
- C. Provide washers under bolt heads and nuts in contact with wood.
- D. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- E. Attachment and Anchorage: Use common wire nails, except as otherwise shown or specified. Use finishing nails for finish work. Do not wax or lubricate fasteners that depend on friction for holding power. Select fasteners of a size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood, pre-drill as required. Do not drive threaded friction type fasteners, turn into place. Tighten bolts and lag screws at installation and re-tighten as required for tight connections before closing in or at completion of work.
- F. Provide wood grounds, nailers, or blocking where required for screening or attachment of other work. Form to shapes shown and cut as required for true line and level or work to be attached.
- G. Backing panels for electrical or telephone equipment shall be fire retardant treated A-C exterior type plywood.

3.03 SHEATHING

- A. Secure roof sheathing perpendicular to framing members with ends staggered. Secure sheet edges over firm bearing. Use sheathing clips between sheets between roof framing members. **Use recommended fastening devices for metal roof framing members.**

END OF SECTION

SECTION 06410
LAMINATED FINISH CUSTOM CASEWORK

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. **(ALL MILLWORK UNLESS NOTED OTHERWISE.)**
Furnish, deliver, and install all casework as shown on drawings and as specified herein:
Plastic Laminate finished fiberboard constructed casework.
- B. Furnish and install all hardware, fillers, scribes, finished ends, finished backs, counter tops, back splashes, and cutouts required to provide a complete and finished project.
- C. Provide locks where shown on casework drawings or described in equipment lists. *All sink bases shall have locks.*
- D. Inspect and properly adjust all casework and its related hardware. Repair damages, remove and dispose of all packing material, debris, and dirt resulting from casework installation leaving area broom clean.
- E. *For plastic laminate finished cabinets, Contractor shall note that millwork shall meet or exceed **Premium standards for AWI**. Wood grain laminate shall be applied in direction of fine wood furniture.* Vinyl edging must match face laminate or edge laminate shall be installed prior to face laminate.
- F. If not noted otherwise, Contractor is to *assume wood grain laminate which shall be applied in vertical direction of fine wood furniture.*

1.02 WORK IN OTHER SECTIONS

- A. All sinks and fittings, couplings and connectors, piping, traps, supplies, shutoffs, and special plumbing fixtures to meet local codes; all electrical fixtures and devices, conduit, wiring, and connectors; and all fans, blowers, motors, ductwork, and metal grilles not specified as part of casework contract including Installation, connection, and testing of all sinks, fittings, electrical fixtures, providing all rough-ins, mechanical piping, electrical runs, and connections required for a complete project. This supplier shall be responsible for coordinating these items to fit into casework where required.
- B. Blocking, framing, and reinforcement in walls, ceilings, and floors for anchoring of cabinets and trim.
- C. General millwork and wood trim items.
- D. Locks master keyed to room doors and other special locks other than cabinet locks specified herein.
- E. Vinyl base molding when not specified as part of casework contract.

- F. *Where Solid Surface and Engineered Stone are specified under 06650, this supplier is to coordinate work with that section.*

1.03 QUALIFICATIONS

- A. The casework shall conform to configuration, arrangement, design, material quality, joinery, panel thickness, and surfacing of that specified and shown on drawings.
- B. Manufacturers requesting approval shall submit samples with cutaways showing cabinet construction if requested, joinery, drawer and door construction, hardware, and materials; along with catalogs and specification in order that accurate evaluations can be made. Samples may be impounded for the duration of contract to insure construction specification compliance.
- C. Work in this section shall comply with the specified grade(s) of work and section (s) of the current edition of the Architectural Woodwork Institute Quality Standards.
1. Work in this section shall be performed by a firm certified by the Architectural Woodwork Institute (AWI) Quality Certification Program and shall be certified as meeting the referenced standard under the full terms and conditions of the AWI Quality Certification Program.

1.04 SUBMITTALS

- A. Shop drawings shall be submitted for approval according to Section 01600. Drawings shall consist of all elevations, sections and plans as necessary to indicate arrangement and relation to adjacent work and equipment. Centerline of service requirements shall be noted for use by other trades.
- B. Color samples shall be submitted for selection and coordination at time of contract award. Samples of actual material and colors shall be available as required.

1.05 COLOR SELECTION

- A. A minimum of thirty colors and patterns shall be available as standard selections for cabinet exteriors, door and drawer colors. See 06001 for manufacturers.
- B. All exposed exterior cabinet body edges and door and drawer edges shall be color matched with cabinet sides, doors, and drawer fronts.

PART 2 - PRODUCTS

2.01 CABINET MATERIALS

- A. Cabinets shall be constructed 45pcf minimum density (medium) fiberboard except that all countertops and shelves at sink bases shall be 3/4" plywood with exterior rated glue. PARTICLE BOARD IS NOT ACCEPTABLE. See component description for thickness.
- B. Doors shall be laminated *both sides* with 1/32 inch high pressure plastic laminate.
- C. All exposed exterior surfaces should be laminate with 1/32 inch plastic laminate.
- D. All exposed edges of cabinets, doors and drawer edges shall be **3mm minimum vinyl** in colors *as selected by Architect*.

- E. All countertop (counter) edges shall be **3mm "T-Molding"** equal to **#4542** or **#4245** (as selected by Architect) by Charter Industries with a minimum of 16 stock colors. Color to be selected by Architect.
- F. All framing members should be laminate on both sides and exposed edges.
- G. All exposed interior surfaces should be laminated with .025 inch, high pressure plastic laminate cabinet liner including shelves and dividers or shall be constructed of thermally fused Melamine surfaced material meeting NEMA LD3-1991-GP28 and American Laminators Assoc. Standards 1988.
- H. Drawers: Drawer fronts should have 1/32 inch plastic laminate on exposed face of fiberboard board core with .025 inch plastic laminate liner on interior surface. Drawer front edges should be edged with vinyl to match face laminate. Drawer body should be laminated on both sides with .025 inch plastic laminate liner (see G) with top edges receiving edge trim. Drawer bottoms should be laminated with .025 inch plastic laminate liner (see G).
- I. Plastic Laminate will be selected from Nevamar, Wilson Art, Formica at designers discretion.

2.02 HARDWARE

- A. Hinges: shall be Blum Module 170 degree concealed, European style, 170 degree opening (90 degree opening where adjacent to wall), self-closing. Products by Hafele are approved for bidding.
- B. Pulls shall be cast brass, accurately positioned on door and drawer front with machine screws. Pulls shall be Stanley #4484. Finish shall be brushed aluminum. Equal pulls by Hafele are approved for bidding.
- C. Drawers and glide out shelves shall be suspended on nylon roller steel slides to insure quiet, smooth operation. Slides shall have 100 pound load rating (minimum) with built in drawer stop and self close feature in the last one inch of travel. Glides shall be full extension K & V 8400 typical or Hafele Accuride.
- D. File drawers shall be suspended on full extension steel slides with ball bearings and a 100 pound minimum load rating, equal to K&V 8400 or Hafele Accuride. In addition file drawers shall be provided with hanging frames. Hanging file rail shall be mounted on drawer sides manufactured by CPF. An equivalent framing system by KineFlex is acceptable. **Submit shop Drawing for approval indicating details, manufacturer, etc.**
- E. Locks will be provided where shown on drawings or cabinet description:
Locks shall be cylinder type, die cast, with five disc tumbler mechanism. Each lock shall be provided with 3 milled brass keys. Provide option of selecting keyed alike, keyed different, and master keyed locks; Knape Vogt 986, Corbin 02067, Yale 9730 - see plan notes for more specifics.
- F. Adjustable shelf standards and supports shall be Stanley 798/799, Knape & Vogt 255 or Grant 120/121. *Line Boring with metal support clips is acceptable.*
- H. Grommets shall be solid plastic with cord slot cover (equal to Mockeet) with at least 8 colors to choose from.
- I. K&V or Hafele Glass Window Tracks where noted. Refer also to Section 11132 for Television and Monitor Equipment. *This contractor shall coordinate installation of these devices into the millwork.*

Confirm supplier with general contractor.

- J. Counter supports shall be equal to Rakks EH Series for Flush Mounted Installation as manufactured by Rangine Corporation, Needham, Massachusetts 02494, Phone (781) 455-8700. *Furnish all accessories for complete installation. Escutcheons Plates required. Install per manufacturers printed instructions & recommendations.* Finish shall be Clear Anodized Aluminum. Furnish and install anodized aluminum **face plates** to trim around supports at wall intersections. Spacing of brackets shall be **32" or less**. Counters shall overhang supports a maximum of 5". Add additional wood blocking inside metal studs as recommended by manufacturer. Provide all components and accessories as required for a complete installation and install per manufacturers printed instructions and recommendations.

NOTE: These counter supports are for **any counters spanning over 32"**.

2.03 WORK SURFACES & DECORATIVE SURFACES

- A. Plastic laminate counter tops shall be surfaced with general purpose .050 thick plastic laminate meeting NEM spec. LD3-1975 GP-50. Counter top cores shall be 3/4" exterior grade AB plywood. All exposed edges which are not **solid surface or engineered quartz** shall be as specified above.
- B. Back splashes and end splashes are to be provided as indicated on drawings and shall be surfaced with same laminate as top with coved transition unless noted otherwise. *Unless noted otherwise back splashes shall be full height to bottom of cabinet.* Where 4" or 6" back splash are shown core shall be 3/4" exterior plywood (edging to be 1mm). All counters with sinks shall have back splashes. Provide backer for cove from top to splash.
- C. **Refer to Section 06650 - Solid Polymer Fabrications (solid surface)** where noted on drawings or schedules. Coordinate installation.

2.04 COMPONENT DETAILS

- A. Corner joints incorporated in cabinets shall be equal to dowel pin construction and must be factory glued and clamped under pressure to assure rigid load bearing corner joints.
- B. Cabinet ends shall be 3/4 inch thick panels of balanced construction, precision bored for dowel pins installed in horizontal cabinet members. Base and tall units shall have one piece end panels continuous to floor for added load capabilities. Unexposed ends shall have laminate backing sheet.
- C. Cabinet bottoms and tops shall be 3/4 inch thick panels of balanced construction for base and tall units.
- D. Kick panels shall be four inch high, set back from the cabinets front edge and mechanically fastened to the cabinet bottom and ends, becoming an integral part of the cabinet structure.
- E. Back panels shall be set 3/8 inch thick set in cabinet side grooves with melamine finish. Wall cabinet backs shall also set in top and bottom shelf grooves.

- F. Finished exposed backs of fixed cabinets are to be 3/4 inch thick panels of balanced construction surfaces.
- G. Frame rails between drawers must be full length, 3/4 inch thick x 3-1/2 inch wide, dowel pinned, and fastened into cabinet sides.
- H. Hang rails shall be provided in wall cabinets in the upper back corner for mounting units to wall.
- I. Drawers shall be full box design with a separate front. Drawer sides and end must be constructed of 5/8 inch high density fiberboard. Bottoms shall be 1/4 inch thickness. Corner joints shall be interlocking dowel pin design. Hardwood dowel pins eight mm diameter shall be inserted into drawer ends and fitted into matching hole patterns in drawer sides. Bottoms must be trapped in grooves all four sides. All joints shall be glued and bottoms shall have additional mechanical fasteners. Drawers shall be suspended on slides. Seal drawer joints to match finish & make them leakproof.
- J. Solid hinged doors shall be 3/4 inch thick material of balanced construction. Doors 48 inches and less in height shall have two hinges per door. Doors above 48 inches in height, but not exceeding 63 inches in height, shall have three hinges per door, and all doors in excess of 63 inches in height shall have four hinges per door. Doors over 48" shall be 1" thick. Adjacent doors shall match in thickness.
- K. Adjustable shelves less than 36 inches in length shall be 3/4 inches thick. Shelves 36 inches long and over, and all adjustable shelves in wall cabinets and bookcases, shall be one inch thick. All adjustable shelves shall be constructed of 50 pound density fiber board.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Verify adequacy of backing and support framing before proceeding.
- B. Set and secure casework in place rigid, plumb, and level. Permanently fix cabinet and counter bases to floor using appropriate angles and anchorages.
- C. Use purpose designed fixture attachments at concealed locations for wall mounted components.
- D. Carefully scribe casework which is against other building materials, leaving gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinet and counter bases to walls using appropriate angles and anchorages.
- F. Counter sink anchorage devices at exposed locations used to wall mount components, and conceal with solid plugs of species to match surrounding wood. Finish flush with surrounding surfaces.
- G. Use threaded steel concealed joint fasteners to align and secure adjoining cabinet units, counter tops and overhead cabinets.

3.03 ADJUSTING AND CLEANING

- A. Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly and correctly.
- B. Clean casework, counters, shelves, hardware, fittings and fixtures.

END OF SECTION

SECTION 06610
Shower Surrounds & Solid Surface Receptors

PART 1 – GENERAL

1.01 SUMMARY

- A. Shower Receptors and Shower Systems

1.02 REFERENCES

- A. American National Standards Institute (ANSI)

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide shower receptors and shower systems that conform to the following requirements of regulatory agencies and the quality control of Inpro® Corporation.
 - 1. Provide shower receptors and shower systems that conform to ANSI Z124.1.2-2005 when tested for workmanship and finish, structural integrity and material characteristics.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's printed product data for each type of shower receptor and shower system specified.
- B. Samples: Verification samples minimum of 3" x 3" samples indicating color and pattern.
- C. Manufacturer's Installation Instruction: Printed installation instructions for shower receptors and shower systems.

1.05 DELIVERY, STORAGE, & HANDLING

- A. Deliver materials in unopened factory packaging to the jobsite.
- B. Inspect materials at delivery to assure that specified products have been received.
- C. Store in original packaging in an interior climate-controlled location away from direct sunlight.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements: Products must be installed in an interior climate-controlled environment.

1.07 WARRANTY

- A. Standard Prism™ Solid Surface Limited 10 Year Warranty against material and manufacturing defects.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Basis-Of-Design Product- For the purpose of establishing quality, type & design, products by InPro Corporation, Endurant Washroom Systems
PO Box 406 Muskego, WI 53150 USA; Telephone: 800.222.5556, Fax: 888.715.8407, Website: www.inprocorp.com have been specified.
- B. Substitutions: Per Instructions to Bidders and Section 01600.
 - 1. Submit comparable products of one of the following for approval by architect:
 - a. Insert name of manufacturer of comparable product.
 - b. Submit requests for substitution in accordance with Instructions to Bidders and Section 01600.

2.02 MANUFACTURED UNITS

- A. Shower receptors and shower systems
 - 1. Prism™ Solid Surface Shower Systems
 - a. Receptor Size,
 - 1) 36" x 36", Systems include: Drain Assembly, back, right, and left wall panels
 - 2) 36" x 42", Systems include: Drain Assembly, back, right, and left wall panels.
 - b. Wall:
 - 1) Wall Height Prism™ Solid Surface
 - a) Up to 96"
 - c. Shower Drain:
 - 1) Shower Drain assembly shall be Oatey number 42150, Brass, No-caulk, Drain w/Stainless Steel (standard) or Brass Strainer. Drain body is sealed to shower base with a fiber and rubber washer. Drain is secured to 2", 40 DWV pipe with a mechanically compressed gasket that does not require caulking. Drain top to accommodate 4-1/4" Universal Snap-Tite Strainer.
 - 2. Wall Panels Only
 - a. Custom made to order.
 - 1) Edge Options: Unfinished, Eased, Radius, Beveled.
 - b. Panel options: Provide Prism™ Solid Surface Panels with the following decorative options as selected by Architect.
 - 1) Groove width, Groove style, cutting depth
 - a) 1/8", V-groove, .060" deep
 - b) 3/16", Ball Nose, .050" deep
 - c) 1/8", Ball Nose, .015" deep, double lines, 2.75"O.C. (Bead Board Only)

2.03 ACCESSORIES

- A. Trim
 - 1. Inside Corner Wedge Molding, 15/16"
 - 2. Inside Corner Molding - L-Shaped, 1" x 1"
 - 3. Batten Strip, 2 1/2"
 - 4. Outside Corner Molding - L-Shaped 1" x 1"
 - 5. Perimeter Trim, 2 1/2" x 1/2"
 - 6. Outside Corner Perimeter Trim, 2 1/2" x 1"
 - 7. Panel Molding, 2 1/4" x 13/16"
 - 8. Wall Base, 5" x 1/2"

- 9. Beveled Edge Trim, 1 3/16" x 1/2"
- B. Recessed Dishes
 - 1. Recessed Toiletry Shelf, 12" x 18"
 - 2. Recessed Toiletry Niche, 10" x 16"
 - 3. Recessed Toiletry Shelf, 8" x 16"
- C. Solid Surface Bonding Adhesive
- D. Adhesive Cartridge Dispenser
- E. Adhesive Mixing Tips
- F. Silicone Adhesive/Sealant
- G. Pick Resistant Color Coordinated Caulk (Sealant)

2.04 MATERIALS

- A. Prism™ Solid Surface: Shower wall panels shall be manufactured from polyester/acrylic blended resins with natural filler material.

2.05 FINISHES

- A. Select color from Inpro® Corporation Prism™ Solid Surface color palette.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions in which shower receptors and shower systems will be installed.

3.02 PREPARATION

- A. General: Prior to installation, clean area to remove dust, debris, and loose particles.

3.03 INSTALLATION

- A. General: Install components plumb and level, scribe adjacent finishes, in accordance with approved shop drawings and recommended installation instructions.

3.04 CLEANING

- A. At completion of the installation, clean surfaces in accordance with the manufacturer's clean-up and maintenance instructions.

End of Section

SECTION 06650
SOLID POLYMER FABRICATIONS
(Solid Surface)

PART I. GENERAL

1.01 Description

- A. Work described in this section includes counter tops edges, thresholds and backsplashes where noted.
- B. *Assume Series F for Corian or equivalent **if not indicated on Room Color Schedule.***

1.02 REFERENCES

- A. Applicable Standards: Standards of the following, as referenced herein:
 - 1. American National Standards Institute (ANSI)
 - 2. American Society for Testing and Materials (ASTM)
 - 3. National Electrical Manufacturers Association (NEMA)
 - 4. Federal Specifications (FS)

1.03 SUBMITTALS

- A. Shop drawings: Indicate dimensions, component sizes, fabrication details, attachment provisions and coordination requirements with adjacent work.
- B. Samples: Submit minimum 2" x 2" (50 mm x 50 mm) samples. Indicate full range of color and pattern variation. Approved samples will be retained as standards for work.
- C. Product description, fabrication information and compliance with specified performance requirements.
- D. Care and maintenance data, including repair and cleaning instructions. Include in project close-out documents.

1.04 QUALITY ASSURANCE

- A. Allowable tolerances:
 - 1. Variation in component size: $\pm 1/8"$ (3 mm).
 - 2. Location of openings: $\pm 1/8"$ (3 mm) from indicated location.
- B. Solid Surfacing must be applied by a certified installer. Provide installers certification prior to start of work.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Do not deliver components to a project site until areas are ready for installation. Store components indoors prior to installation.
- B. Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.06 WARRANTY

- A. Provide manufacturer's 10 year warranty against defects in materials. Warranty shall provide material and labor to repair or replace defective materials. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.

1.07 CARE & MAINTENANCE

- A. Provide care and maintenance information for the owner.

II. PRODUCTS

2.01 SOLID POLYMER FABRICATIONS

- A. Specified product:
CORIAN® SURFACES, F Color, Matt Finish from The DuPont Company, Formica brand equivalents are approved for bidding.
- B. Material: Homogeneous filled acrylic; not coated, laminated or of composite construction; meeting ANSI Z124.3 & .6, Type Six, and Fed. Spec. WW-P-541E/GEN.
1. Material shall have minimum physical and performance properties specified in the following Section U.
 2. Superficial damage to a depth of 0.010" (.25 mm) shall be repairable by sanding and polishing.
- C. Counter tops: 1/2" (13 mm) thick solid surface material adhesively joined with inconspicuous seams; edge details as specified on the Architect's Drawings (1 1/2" thick, reverse bevel); color as listed on color schedule or to be selected from range of colors stipulated above.
- D. Surfaces to be unaffected by Class I reagents and repairable after exposure to Class II reagents.
- E. At areas where exposed to cold, use Technical Bulletins: CTDC 119, 124, 125.
1. Make cutouts to templates furnished by the cold appliance manufacturer.
 2. Reinforce joints and cutouts as recommended by the surfacing manufacturer.
 3. Provide insulation between CORIAN and adjacent cold pans.
 4. Thermally isolate hot applications from cold.
- F. At areas where exposed to hot, use Technical Bulletins: CTDC-119, 124, 125.
1. Provide expansion joints in counter top as detailed on the Architect's Drawings or required by manufacturer for specific application.
 2. Make cutouts to templates furnished by the hot appliance manufacturer.
 3. Reinforce joints and cutouts as recommended by the surfacing manufacturer.
 4. Thermally isolate hot applications from cold.
- G. Performance characteristics:

PROPERTY	REQUIREMENT	TEST PROCEDURE
Tensile Strength	6000 psi	ASTM D 638
Tensile Modulus	1.5 x 10 ⁶ psi	ASTM D 638
Flexural Strength	7890 psi	ASTM D 790

Flexural Modulus	1.4 x 10 ⁶ PSI	ASTM D 790
Elongation	0.4%	ASTM D 638
Strain at Break	0.81%	ASTM D 638
Work to Break	2.48 in. lbs.	ASTM D 638
Hardness	94 Rockwell "M" Scale 56 Barcol Impressor	ASTM D 785
Thermal Expansion	3.02 x 10 ⁻⁶ in/in/°C	ASTM D 696
	1.80 x 10 ⁻⁶ in/in/°F	
Thermal Conductivity	7.0 Btu/hr/sq ft °F	DuPont Test
Specific Heat	0.2935 + (0.001 % °C) pcu/lb °C	DuPont Test
Volumetric Heat Capacity	0.33 Btu/lb °F	DuPont Test
Gloss (60 Gardner)	5-80 (matte-polished)	NEMA LD 3-3.15
Color Stability	No Change - 200 hrs	NEMA LD 3-3.10
Wear and Cleanability	Passes	ANSI Z 124.3
Abrasion Resistance	No loss of pattern Wt loss (1,000 cycles) - 0.2 gm Wear (10,000 cycles) - .008"	NEMA LD 3-3.10
Boiling Water Surface Resistance	No Change	NEMA LD 3-3.05
High Temperature Resistance	No Change	NEMA LD 3-3.06
Conductive Heat Resistance	No Change	NEMA LD 3-3.08
Impact Resistance Notched Izod Gardner	.28 ft. lbs/in. of notch solid colors 9.3 ft. lbs particulate colors 13.3 ft. lbs	ASTM D 256 (Method A) ASTM D 3029
Ball Drop 1/4" (6 mm) sheet 1/2" (13 mm) sheet 3/4" (19 mm) sheet	>36" w 1/2 lb ball, no failure >144" w 1/2 lb ball, no failure >204" w 1/2 lb ball, no failure	NEMA LD 3-3.03
Bowls (Point Impact)	No cracks or chips	ANSI Z124.3 and 124.6
Stain Resistance	Passes	ANSI Z124.3
	Rating - 41 (modified*)	ANSI Z124.3(modified)
Weatherability	No Change - 1000 hours	ASTM D 1499
Fungi and Bacteria	No Attack	ASTM G 21, G 22
Specific Gravity solid colors particulate colors	1.8 1.69	
Material Weight solid colors particulate colors	1/4" (6 mm), 1/2" (13 mm), 3/4" (19 mm) 2.35 4.7 7.0 lbs/sq. ft 2.1 4.2 6.2 lbs/sq. ft.	
Water Absorption 3/4" (12 mm) sheet 1/4" (6 mm) sheet	After 24 hrs Long Term 0.04% 0.94% 0.09% 0.8%	ASTM D 570
Flammability solid colors Flame Spread Smoke Developed Class Rating	1/4"(6 mm) 1/2"(13mm) 3/4" (19mm) 25(15) 5 5 25(20) 10 15 1 1 1	ASTM E84

particulate colors Flame Spread Smoke Developed Class Rating	20 5 1	15 25 1	15 30 1	
Oxygen Index	0.357			ASTM D 2863
Pittsburgh Protocol Toxicity (as used by NY State)	solid colors 99 grams particulate colors 67 grams			"LC 50" Test
Coefficient of Friction	0.189 static 0.171 dynamic			DuPont Test TD-511-A
Arc Resistance	190 seconds, no track 60 seconds, rerun, no track			ASTM D 495
Dielectric Strength solid colors particulate colors	275 volts/0.001" 263 volts/0.001"			ASTM D 149
Dielectric Constant solid colors particulate colors	4.96 at 100 Hz 4.46 at 100 Hz			ASTM D 150
Dissipation Factor solid colors particulate colors	0.0698 at 100 Hz 0.077 at 100 Hz			ASTM D150
Surface Conductivity solid colors	5.0 x 10 ¹⁶ Mho			DuPont Test TD-533-A or equivalent

Volume Conductivity solid colors	4.7 x 10 ¹⁶ Mho	DuPont Test TD-533-A or equivalent
Volume Resistivity solid colors particulate colors	4.2 Ohms cm x 10 ⁻¹⁴ 10.0 Ohms cm x 10 ⁻¹⁴	ASTM D 257
Electrical Charge Relaxation Time solid colors	560 seconds	PTMS 101B, MIL B-81705
Heat of Combustion	2.20 cal/gm	Oxygen bomb (calorimeter method)

2.02 ACCESSORY PRODUCTS

- A. Joint adhesive: Manufacturer's standard two-part adhesive kit to create inconspicuous, non-porous joints, with a chemical bond. (Technical Bulletin: CTDC 102)
- B. Panel Adhesive: Manufacturer's standard neoprene-based panel adhesive meeting ANSI A 136.1-1967 UL® listed. (Technical Bulletin: CTDC 102)
- C. Sealant: Manufacturer's standard mildew-resistant, FDA/UL® recognized silicone sealant in color matching or clear formulations. (Technical Bulletin: 102, 127)

2.03 FABRICATION

- A. Fabrications to be performed by a manufacturer certified fabricator/installer.
- B. Fabricate components in shop to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's requirements. (Technical Bulletin: CTDC-117)

- C. Form joints between components using manufacturer's standard joint adhesive. Joints shall be inconspicuous in appearance and without voids. Attach 2" (50 mm) wide reinforcing strip of solid surface material under each joint. [Technical Bulletins: CTDC-124, 129, 134]
- D. Provide holes and cutouts for plumbing and bath accessories as indicated on the drawings.
- E. Route and finish component edges to a smooth, uniform finish. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.
- F. Matt Finish: All surfaces shall have uniform finish. [Technical Bulletins:CTDC100, 123, 132] Matte, with a gloss rating of 5 - 20.
- G. Backsplashes (and Aprons where noted): Fabricate straight backsplashes using [1/2" (13 mm) matching solid surface material. Fabricate in shop or field. [Technical Bulletin: CTDC-112] Set backsplash on counter top and seal joint with matching sealant.

III. EXECUTION

3.02 INSTALLATION

- A. Install components plumb and level, in accordance with approved shop drawings and product installation details.
- B. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work. Keep components and hands clean when making joints.
- C. Adhere top mount sinks/bowls to counter tops using manufacturer recommended adhesives and color-matched silicone sealant. Where bowls are solid surface material, adhere as recommended by manufacturer.
- E. Provide back splashes and end splashes as indicated on the drawings. Adhere to counter tops using manufacturer's standard color-matched silicone sealant.
- F. Keep components and hands clean during installation. Remove adhesives, sealants and other stains. Components shall be clean on Date of Substantial Completion.
- G. Make plumbing connections to sinks in accordance with Division 15. Mechanical.
- H. Protect surfaces from damage until Date of Substantial Completion. Repair or replace damaged work that cannot be repaired to architect's satisfaction.
- I. Fabricator/Installer is to provide the manufacturer's Commercial Care and Maintenance video, review maintenance procedures and the provide warranty upon completion of project.

End of Section