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| **Revision History** |
| **Revision Date** | **Section/Nature of Revision** |
| **3/1/17** | Document Issued |
| **1/22/18** | Revised |
| **3/26/25** | 3.5 C and D: moved C to D and added Cabinets 60” tall or greater shall have a fixed shelf centered. Cabinets 30” wide or less shall have a ¾” centered fixed shelf. Cabinets greater the 30” shall have a 1” centered fixed shelf.3.13 added D: Cam-locks in drawers shall penetrate both drawer front and the drawer body. Cam-lock shall be bolted to both parts. Notching any drawer parts are not permitted. |

**PART 1 – GENERAL REQUIREMENTS**

1. RELATED DOCUMENTS

1. Pinellas County Schools’ Bidding and Contractual Requirements and General Conditions of Section 00 00 00 Procurement and Contracting Requirements shall apply to all work.

2. SCOPE

A. Specified under this section are two approved methods of providing Pinellas County Schools (PCS) Manufactured Casework for this project. The first method is Hardwood Plywood Casework and the second method is Particleboard Core Plastic Laminate Casework. Provide all labor, materials, services, tools and equipment to shop fabricate, furnish and install PCS Manufactured Laminate Casework.

1. Included in the Hardwood Plywood Casework Section are specifications for any “NATURAL FINISH” WOOD CASEWORK that may be called out on the drawings.
2. Provide all casework and accessory items as specified herein. Refer to the drawings for specific details and requirements.
3. All finishing work shall be shop fabricated.
4. PCS Hardwood Plywood Casework shall be as defined in the latest AWI Standards and as further detailed and set forth in this section.
5. PCS Particleboard Core Plastic Laminate Casework core material shall be as defined in the latest NPA (National Particleboard Association), American National Standards and as further detailed and set forth in this section.
6. PCS Manufactured Casework includes base units, wall units, counter tops, shelving, drawers, storage units with and without doors, cubicles and other casework not identified on drawings by laboratory casework I.D. Number.

3. RELATED WORK SPECIFIED ELSEWHERE

A. General Casework and Custom Casework unless specified herein or so noted on the drawings as included within this section.

1. Rubber, vinyl or another finished toe base
2. Locks.
3. Blocking within walls.
4. Sinks, faucets, fittings, traps, stops, tail pieces, vacuum breakers and other fixtures, electrical and mechanical runs and connections.
5. Fixture installation/services connections: Setting and installation of equipment and fixtures and related utility connections are provided under the relevant sections of this Project Specification.
6. Pest control.

4. QUALIFICATIONS

* 1. Refer to the individual areas of this specification section for specific qualifications.

5. SUBMITTALS

1. Refer to the individual areas of this specification section for specific submittals.

6. PRODUCT DELIVERY AND STORAGE

A. Casework shall not be delivered to the site until the building in which they will be stored and/or installed is enclosed and sufficiently dry to ensure no damage will occur from excessive moisture content and extreme humidity changes. All interior work, masonry, concrete and plaster shall be complete and dry. All painting and other finish work shall be complete in immediate and adjustment areas within the building where the Casework is to be stored or installed.

B. Manufacturer and Installer shall advise the Contractor of temperature and humidity requirements for Casework storage and installation. The Contractor shall maintain the temperature and humidity levels within a 10% balance of the optimum requirements.

**CASEWORK METHODS**

**PARTICLEBOARD PLASTIC LAMINATE CASEWORK AND HARDWOOD PLYWOOD CASEWORK**

**PART I - GENERAL REQUIREMENTS**

1.1 GENERAL

1. Refer to GENERAL REQUIREMENTS at the beginning of this section which shall apply to this part of the specifications.

1.2 QUALITY ASSURANCE

A. Casework shall conform to "Custom Grade" as defined in the latest edition of AWI "Quality Standards except where requirements of this Specification are greater." Materials, where so specified, shall be of "Premium Grade," including all which receive a transparent finish. By definition Casework is simply established as having no face frame. Lumber sizing and grading shall be in accordance with the recognized standards of the lumber industry.

B. Bid from manufacturers shall comply with all requirements in this specification section.

C. Provide all cabinet work and accessory items furnished by single manufacturers for single responsibility and integration with other trades.

1.3 SUBMITTALS

A. Manufacturer's data: submit eight (8) copies of manufacturer's data for each item furnished under this section.

B. Submit Shop Drawings for approval in the form of one PDF electronic file and four prints. Shop Drawings shall include all materials designations and shall show dimensions, cabinet-cut details anchoring devices and sink/utility locations. Shop Drawings shall also show the relationship of Casework to related work. Confirm all shop drawing dimensions and installation conditions prior to fabrication.

C. Submit in accordance with General, Supplementary and Special Conditions.

D. Provide proper certification on Casework items as called out in these specifications.

E. Submit color samples upon award of contract for selection and coordination with other suppliers. Architects may request and retain samples and catalog cuts as required for accessories and special items.

F. Samples:

1. Submit four (4) 12” x 12” samples of each wood specie to be furnished which will receive transparent finish.
2. Submit four (4) 8” x 10” samples of high-pressure laminate and cabinet liner.
3. Submit samples of milled paneling and trim items.
4. Submit two (2) samples of all casework hardware and accessories.
5. Submit a full-size base and wall cabinet sample and accessories complete with hardware, doors, drawer and adjustable shelves.
6. Submit two (2) 8” x 10” samples of the 3/4” Particleboard, hardwood plywood if specified, exterior high-pressure laminates and cabinet liner on particleboard.

**PART 2 - PRODUCTS**

2.1 PERFORMANCE

1. All manufacturers must comply with the following specific project requirements:
2. ADA Americans with Disabilities Act - special requirements specified herein and as shown on the drawings shall be met. Manufacturers shall comply with the latest ADA, Federal Register volume and number of the Rules and Regulations.
3. Backs of all cabinets shall be minimum 1/4” thick, inset from rear of body, on at least three sides. Provide 3/4” thick stiffeners glued and fastened to back/body as specified herein. Back perimeter and stiffeners to be fully sealed with hot melt adhesive or silicone caulking.
4. All cabinets shall have clear span interiors, without vertical dividers, unless specifically requested by the owner.
5. Shelves in all cabinets’ greater than 30” wide shall be 1” thick.
6. All cabinets shall be designed not to exceed 30” unless there is a special need for a wider cabinet. An exception to this requirement is a sink unit.
7. Sink units shall not be lockable or have shelves.
8. Drawer body material shall be particleboard or plywood ½” thick for all components with bottom recessed on all four sides and sealed with hot melt adhesive or silicone caulking. Provide underbody stiffener as specified herein.
9. Cabinet base support must be separate and continuous platform design leveled and floor mounted prior to the cabinet’s body placement. All material shall be 4” high pressure treated material. Prior to the cabinet’s body placement, the area under cabinet shall be treated for pest control.
10. All sink base cabinet boxes shall be fabricated with plywood and finish materials as specified. All interior horizontal and vertical joints shall have a continuous caulk bead of silicone/caulking compatible with the interior lining of the cabinet.
11. Lamination system for doors, finished end panels and other decorative exposed exterior laminate surfaces shall be composed of minimum 3/4” core, laminated exterior with .028” high pressure plastic laminate and interior with .020” high pressure cabinet liner.
12. All edges of drawer fronts and doors shall be finished with 3 mm thick color through PVC edging. All edges and corners must be rounded to a 1/8” radius. Laminated plastic edge bonding will not be accepted. If the cabinet has natural wood finish it shall be edge banded with matching wood species.
13. All edges of the cabinet’s box and shelves shall be finished with 1 mm thick color through PVC edging. Laminated plastic edge bonding will not be accepted. If the cabinet has natural wood finish it shall be edge banded with matching wood species.

2.2 MATERIALS

A. Overlay plywood: Where cabinets, shelving or other items constructed of plywood are specifically scheduled to be painted, such shall be constructed of overlay plywood conforming to U. S. Product Standard PS-1-74, B. B. Medium Density Overlay.

B. Plywood: Plywood shall bear manufacturer's association stamp, except where exposed to view.

1. Plywood exposed to view unless otherwise so scheduled: Hardwood Plywood, exterior glue. Plywood, as normally defined shall not be used as substrate for laminated plastic to avoid conflicts, this specification will refer to it as Plywood.
2. Hardwood Plywood: In the following paragraphs of this Specification Section and the Drawings for requirements as to veneer species, quality and finish as well as to thickness, application of grain direction and matching. If species isn't specified elsewhere, use Birch or Red Oak. Hardwood plywood shall have banded edges and shall receive a clear "transparent" finish. Plywood with veneers shall meet the following criteria:
3. Exposed panel: Species \_\_\_\_\_\_\_\_\_\_\_\_ grade 3/4” 7-ply A2 domestic plywood (Rotary or Plane slice cut)
4. Clear finish panels shall have rotary cut.
5. Stained clear finish panels shall have the plane slice cut (not behind casework door)
6. Exposed back panel: Species\_\_\_\_\_\_\_\_\_\_ grade 1/4” 3-ply A2 domestic plywood (Rotary or Plane slice cut)
7. Clear finish panels shall have rotary cut.
8. Stained clear finish panels shall have plane slice cut (not behind casework doors)
9. Where normally concealed from view (backs and behind doors): AWI Economy Quality (rotary cut acceptable).
10. Run all exposed Hardwood Plywood grain vertically. Drawer fronts to be horizontal.

C. Softwood Plywood: Covered by plastic laminate

1. Counter tops: Species and grade 7-ply 3/4” AC fir plywood or 7-ply odorless Virola plywood.
2. Concealed panel: Species and grade 3/4: 7- ply odorless virola plywood or 7-ply A B fir plywood 3/4”.
3. Concealed back panel: Species and grade 3 - ply AC fir plywood or 3 - ply 1/4” odorless Virola plywood.
4. "Plywood" covered by laminated plastic shall be either (as determined by the Drawings and these Specifications) 7- ply 3/4" (19 mm) or 5 - ply 1/2" (13 mm), odorless Virola, or other approved plywood grade A2, 95% void free with interior water-resistant glue.
5. 5 - Ply, pressure treated to .15 retention, c/c plug and touch sanded: sub-base platform at base and tall cabinets.

D. Particle Board:

1. Concealed particleboard shall be 45 to 47 lb. density, balance 3 - ply construction with moisture content not to exceed 8%. Particleboard shall meet or exceed ANSI A208. 1- 1993, grade M-3 Industrial.
2. Particleboard shall meet the following minimum performance requirements:
3. Screw holding - face . . . . . . . . . . .250 lbs
4. Screw holding - edge. . . . . . . . . . .225 lbs
5. Table A requirements of ANSI 208. 1 -1993, grade M-3 Industrial
6. Submit compliance data from the manufacturer prior to fabrication

E. Softwood Lumber:

1. Pressure treated pedestal for base and tall units: Species Yellow pine grade 2 percentage of water borne preservatives 0.10.

F. Laminated Plastics/Finishes:

1. Laminated plastic: melamine-impregnated paper pressed over phenolic-impregnated kraft layers, to produce high pressure plastic laminate and conforming to NEMA Publication No. LD3.1-1991 GP50-Abrasion Class.
2. Laminated plastic to be approved, shall provide certification by an independent testing authority or laboratory, that the finished material passes the NEMA Taber Wear Resistant Test for 700 cycles. For approval, 3 solid colors and 3 patterns must be submitted and pass.
3. Thickness for top surfaces: 0.050" (0.127 cm). Thickness for vertical surfaces: 0.028" (0.07 cm).
4. Any pre-selected colors and patterns shown on the Drawings or in the Specifications shall govern. Where such pre-selections are not shown, laminate plastic equivalent in cost to the following shall be bid upon, assuming no more than ten (10) colors.
5. Standard solid color.
6. Colors and patterns shall be those judged equal (in the Architect's opinion) to those pre-selected or above specified patterns and colors.
7. No "marble grain or high gloss” patterns are acceptable to the Pinellas County School District unless requested.
8. Where laminated plastic is used as any edge material, the edge strips shall be applied before the face sheets.
9. The Project Architect's range of color selection shall not be limited to those colors stocked locally but only by entire color line of specific manufacturer, as determined by samples in Architect's office.
10. Acceptable manufacturers:
11. Formica
12. Nevamar
13. Pionite
14. Wilson Art
15. Exterior Cabinet Finishes:
16. All exterior vertical surfaces shall be high pressure plastic laminate, .028” in thickness to meet NEMA LD 301991-GP28 standards.
17. Exterior color selection shall be made from the manufacturer’s standard stock solid colors. Marble grain patterns are not acceptable.
18. All cabinet faces (doors, end panels and drawers) shall be one color. Edging may be a different complimentary color.
19. A total of six (6) different colors may be used through the project.
20. Plastic Laminate Balancing Sheet:
21. This balancing sheet shall be a high-pressure cabinet liner, .020" thickness to meet NEMA LD3-1991 CL20 standards and shall be used for balancing exterior surface laminates. Use on all sink cabinet interior surfaces.
22. Color may be putty, light beige, dove gray or white as selected by the Architect.
23. Countertop High Pressure Plastic Laminate:
24. Countertop high-pressure plastic laminate shall be .050" in thickness to meet NEMA LD3-1991-GP50 standards, textured finish.
25. Color shall be selected from the manufacturer's standard stock solid colors. Wood grain or marble grain patterns are not acceptable.
26. Countertop color may be a different complimentary color to the cabinet exterior and edging.
27. Use a heavy gauge neutral colored backing sheet on tops for balanced construction.
28. Polyester or Melamine Laminate (both products are acceptable):
29. Thermal acid persistent polyester resin impregnated laminate permanently bonded to core under pressure.
30. Laminate shall meet NEMA LD3.3-1991-6P28 and NEMA LD3-1991-CL20 standards.
31. Laminate shall be used for cabinet interiors behind doors and drawers, interiors of all open cabinets and undersides of wall cabinets. (Use plastic laminate balancing sheet on all sink cabinet interior surfaces.)
32. Back laminate at all concealed surfaces with a phenolic backer. Color may be putty, light beige, dove gray or white as selected by the Architect.

G. Edging:

1. Door and drawer edging shall be 3mm thick PVC - solid, high impact, purified, color-thru, acid resistant, PVC edging machine applied with hot melt adhesives, automatically trimmed for uniform appearance, buffed and corner radiused for consistent design. The colors shall be either white, black, light beige, dove gray or one custom color.
2. Cabinet boxes and shelves shall have 1 MM flat solid color-thru, acid resistant, PVC edging. The colors shall be either white, black, light beige, dove gray or one custom color.
3. If the cabinet has natural wood finish, it shall be edge banded with matching wood species.
4. Laminate countertop face edges shall be of the same .050” plastic laminate as the top.

H. Hardware:

1. Hinges:
2. Heavy duty, five knuckle 2 3/4” institutional type hinge shall meet ANSI/BHMA A156. Grade 1 requirements. Mill ground, hospital tip, tight pin feature with all edges eased. Hinge to be full wrap around type of tempered steel. 095 inch thick. Each hinge to have minimum 9 screws.
3. One pair per door to 48” in height. One and one-half pair greater then 48” in height. Hinge to accommodate 13/16” thick laminated door and allow 270-degree swing.
4. Finish shall be Chrome Powder Finish, Black, Dove Gray, or White epoxy coated.
5. Pulls:
6. 3” solid brass wire pulls 3-5/16” long, 1-1/4” projection, 5/16” wire diameter, with a brushed chrome finish
7. Provide two drawer pulls for drawers over 30” wide.
8. Sliding Door Hardware:
9. Frameless 1/4” thick glass sliding door hardware shall be double track rolling door assembly - style mark # 610007 or K&V # 1092 EZ Roll Aluminum Track Assembly with steel ball bearing rollers.
10. Drawer Slides:
11. Standard Drawers: shall be of self-closing design, epoxy coated to match drawer body color, with positive in-stop and out-stop, out-keeper to maintain drawer in the 80% open position. Slides shall have captive nylon rollers, front and rear and shall have a minimum 100 lb. dynamic load rating.
12. File and Paper Storage Drawers: full extension, minimum 100 lb. zinc plated or epoxy coated at manufacturer’s option.
13. Catches:
14. Provide one minimum 5 lb. magnetic catch for base and wall cabinet doors. Provide two minimum 5 lb. each catch at each tall cabinet door over 60” at top and bottom of unit.
15. When a cam-lock is scheduled for a cabinet, there shall be an elbow catch in place of a magnetic catch for adjacent door.
16. Adjustable Shelf Supports:
17. Shall be trim pin design with anti-tip-up shelf restraints for both 3/4” and 1” shelves. Load rating for each support shall be a minimum of 200 lbs. Cabinet interior sides shall be flush, without shelf system permanent projection. The color of shelf support shall be the same color as the surface being installed or clear. The in-line boring for the shelf supports shall be full height of cabinet.
18. Wardrobe Rod:
19. Shall be 1-1/16” rod supported by flanges.
20. Coat Hooks:
21. Single coat hooks wall mounted, shall be Ives #581-Satin Aluminum or equal.
22. Double coat hooks, wall mounted shall be Ives #582 -Satin Aluminum or equal.
23. Cabinet Locks, Drawer, Hinged Doors and Sliding Glass Doors:
24. The locks shall be 5-disc tumbler keyed alike. Finish shall be US 26D on brass. 5-disc and drawer bumpers/silencers shall be clear rubber.
25. Door and drawer bumpers/silencers shall be clear rubber.

**PART 3 - FABRICATION**

3.1 MEASUREMENTS, DETAIL REQUIREMENTS

1. Before proceeding with fabrication of Casework required it shall be fitted to other construction, obtain field measurements and verify dimensions and shop drawing details as required for accurate fit.
2. Units will be constructed in dimensional increments which will eliminate unnecessary fillers. Units will have equal door and drawer fronts unless shown otherwise on the drawings.
3. Units shall be constructed in dimensional increments not to exceed 30” unless noted on drawings.

3.2 DETAILED REQUIREMENTS FOR CONSTRUCTION

1. Sub-Base: cabinet sub-base shall be separate and continuous (no cabinet body side-to-floor). Sub-base may be pressure treated 2x4 with ½” plywood on top side to give a full 4” in height, pressure treated 1 X materials (3/4” x full 4” in height) or 3/4” x full 4” high pressure treated plywood with concealed fastening to the cabinet bottom. Ladder-type construction of front, back and intermediate 24” on center to form a secure and level platform to which cabinets attach. Inset 1/4" at cabinet finish ends for a recessed vinyl base condition.

3.3 CABINET TOP AND BOTTOM

A. All base cabinet units greater then 36” high or any exposed to view (no doors) shall have solid sub-tops - 3/4" thick. All base cabinet units 36” or less may use a solid sub-top ¾” thick or ¾” thick 4”wide spreader/top web frame for the front and back of top side of cabinets fasten with two approved fasteners per side.

B. Wall cabinet’s tops and bottoms shall be 3/4" thick unless otherwise noted.

C. Exterior exposed wall cabinet bottoms shall be a minimum of .028” high pressure laminate underside, balanced with .020” high pressure cabinet liner interior side. Assembly devices to be concealed on the bottom side of wall cabinets.

D. Base cabinet bottoms shall be polyester .020”/melamine 120-gram pressure faced laminate interior, backed with a phenolic backer on the concealed side.

E. At sink locations: cabinet box shall be fabricated from plywood with finish materials as specified. All interior horizontal and vertical joints shall have continuous caulk bead of silicone/caulking compatible with the interior lining of the cabinet.

F. All exposed body edges, including all tops of wall and tall cabinets, shall have 1mm flat edge in color to match either the body of the cabinet or the 3mm edging as selected by the architect. If the cabinet has natural wood finish it shall be edge banded with matching wood species.

G. Plastic laminate cabinets 48”or lower the tops of cabinets shall have .050” high pressure laminate.

3.4 CABINET ENDS

A. Exposed exterior cabinet ends shall be laminated with .028" high pressure plastic laminate, balanced with .020" high pressure cabinet liner interior surface.

B. Polyester/melamine high pressure cabinet liner shall be laminated to the interior surface with phenolic backers on concealed side of cabinet ends.

C. Drill holes into the cabinet ends at 1 1/4"/31.75 MM center for adjustable shelves.

D. Exposed edges shall be 1mm flat edge in a color to match cabinet body or 3 mm edging as selected by the architect. If the cabinet has natural wood finish it shall be edge banded with matching wood species.

E. Cabinet ends shall be edged so that there are no exposed edges.

F. Sink base units shall be fabricated with plywood with finish materials as specified. All horizontal and vertical joints shall have a continuous caulk bead of silicone/caulking compatible with the interior lining of the cabinet.

3.5 FIXED AND ADJUSTABLE SHELVING

A. All shelving shall be 3/4" thick for shelving 30” wide or less and 1" thick for shelving greater than 30" in width.

B. Shelving shall be laminated with .020 polyester/melamine high pressure fused laminate, both sides and shall be edged with 1mm flatedge PVC on all four edges of shelf (No Exposed Wood). Color shall be putty, light beige and dove gray or white as selected by the Architect. If the cabinet has natural wood finish, it shall be edge banded with matching wood species.

C. Cabinets 60” tall or greater shall have a fixed shelf centered. Cabinets 30” wide or less shall have ¾” centered fixed shelf. Cabinets greater than 30” shall have a 1” centered fixed shelf.

1. Sink units shall not have shelving.

3.6 CABINET BACKS

A. Standard cabinet backs shall be a minimum 1/4" thick, inset from rear of body, on at least three sides and back shimmed if needed to eliminate open seam. Back shall be recessed 1" from cabinet rear. Rear unexposed side of back shall receive a continuous bead of hot melt adhesive at the joints or caulking.

B. Hang rails shall be 3 3/4" high, glued to the rear of the cabinet back and mechanically fastened to cabinet sides. Hang rails shall abut the sides, tops and bottoms of cabinet. Provide minimum of two hang rails per unit (top and bottom) and cabinets 60” or higher provide three hang rails (top, bottom and center).

C. Exposed exterior backs to be .028" high pressure plastic laminate on 3/4" particleboard balanced with .020" high pressure cabinet liner on the interior. If cabinet is scheduled for natural wood finish back shall be ¾” thick hardwood plywood.

3.7 DOOR AND DRAWER FRONTS

A. Plastic laminated doors and drawer fronts shall be a minimum of 3/4” thick for all hinged and sliding doors. Hinged doors and drawer fronts shall overlay the cabinet body. Maintain a 1/8" reveal between pairs of doors and drawer front or between multiple drawer fronts within the cabinet. Core materials shall be practical board unless otherwise noted bonded on the exterior with .028" high pressure laminate and on the interior with .020" high pressure cabinet liner balancing sheet. Exterior color shall be as selected by the Architect. Interior color shall be putty, light beige, dove gray or white as selected by the Architect.

B. Exposed edges shall be 3mm thick color through PVC, color as selected by the Architect. All edges and corners shall be machine raduised and buffed to a consistent 1/8" radius. If the cabinet has natural wood finish it shall be edge banded with matching wood species.

C. Stile and rail doors shall be a minimum of 3/4” thick by 1 ½” wide. Doors with a full 1/4” tempered or safety glass, available hinged or sliding. All exposed lite-opening edges shall be trimmed and glazed with extruded vinyl glazing bead or approved equal.

D. Frameless sliding glass doors shall be 1/4" clear tempered glass with ground and polished edges, fitted with anodized aluminum shoes and nylon rollers.

E. Provide necessary doorstops/holders to prevent damage to doors, adjacent cabinets and/or walls.

F. All doors and drawers shall have silencers. Doors shall have two silencers, one on the top bottom of the leading edge. Drawers shall have two silencers centered on the vertical sides of drawer one per side.

3.8 DRAWER BODY:

A. Drawer fronts shall be applied to separate drawer body component sub-front.

B. Drawer sides shall be dadoed, rabbeted or doweled and glued to receive front and back, squared and held under pressure while hot melt glued and pinned together.

C. Drawer bottom to be housed into front, sides and back. Underside of drawer to receive continuous bead of hot melt adhesive or silicone caulking at joint between bottom and back/sides/front for sealing and rigidity. Reinforce drawer bottoms with 1/2-inch x 4 inch front-to-back intermediate under body stiffeners, hot melt glued and fastened. One at 24 inches, two at 36 inches, four at 48 inches.

D. Drawer bottom materials shall be a minimum of ¼” plywood or particleboard.

E. Paper storage drawers fitted with full width hood at back.

F. All drawers shall have roller guides as specified herein.

G. Laminate on all drawer components shall be as specified herein.

H. All exposed edges shall be 1 mm flat edge PVC in a color to match the rest of the drawer. If the cabinet has natural wood finish, it shall be edge banded with matching wood species.

I. Alternate drawer body design shall be particleboard or fiberboard ½” thick for all components. Drawer box shall be constructed with a full ½” thick non-racking, non-deflecting platform bottom, which is carried directly by L shaped, bottom mounted drawer sides. The L bracket section of the drawer slide shall support the ½” bottom platform a minimum of ¼” and the sides are secured with 1 ½” long screws directly through the sides and into the platform. This design only applies to drawers less the 30” in width.

3.9 VERTICAL AND HORIZONTAL DIVIDERS

1. Polyester/Melamine high pressure laminated 3/4" thick particle board secured in cabinet with molded plastic clips or dowels. All exposed edges shall be 1 mm flat edge PVC.

3.10 DOOR/DRAWER SPREADER (FRONT RAIL)

A. All door and drawer spreaders shall be 3/4” thick x 4” in depth and shall expand across the full width of the cabinet.

B. Spreaders shall be 3/4” thick particleboard, polyester/melamine pressure fused laminate. All exposed edges shall receive 1mm flat edge PVC edge banding of a color to match the interior of the cabinet with exception to the front edge banding color which shall match the exterior cabinet body. If the cabinet has natural wood finish it shall be ¾” hardwood plywood and be edge banded with matching wood species.

C. Spreaders shall be placed immediately behind all door/drawer and multiple door or drawer horizontal joints. Spreaders shall close off reveals and accommodate locks where required.

D. Spreader in sink/lavatory (wet) compartment shall be ¾” thick plywood with finish materials as specified.

3.11 COUNTERTOPS

A. All countertops shall be plywood as specified herein. Plywood countertops shall be laminated with .050: high-pressure laminate to the tops and exposed edges and balanced with a heavy gauge backing sheet on the other side.

B. Provide tops in as long as practical continuous lengths with field glued splines or mechanical splined at all joints.

C. There shall be no joints closer than 24" on either side of the sink cutout.

D. All seams shall have seam filler/caulking of matching color as laminate.

3.12 TRANSPARENT FINISH

1. Hardwood and plywood shall have two (2) coats of sanding sealer and two (2) coats of lacquer base catalyzed butyrate varnish satin finish with sanding between coats. Unexposed hardwood and plywood shall have one (1) coat of sealer.
2. HARDWARE

A. Provide fasteners at all hardware mounting holes.

B. Cam-locks shall be installed as per plans. There shall be no cam-locks for any water containing cabinetry.

C. When a Cam-lock is scheduled for a pair of doors the inactive door will require an elbow catch. Elbow catch shall be installed on the top side of the interior of a base unit, wall hung cabinets shall be installed on the bottom side of interior of cabinet and tall storage cabinets shall be installed on the bottom side of the center fixed shelf when shelf is available and the top if not available.

1. Cam-locks in drawers shall penetrate both drawer front and drawer body. Cam-lock shall be bolted to both parts. Notching any drawer parts are not permitted.

3.14 END FILLER STRIPS/PANELS

1. Filler/Panels shall be fabricated out of the same materials as the finished side panel of the cabinetry that the filler is being installed to. Filler/Panels may match the laminate of cabinetry or the edge banding of cabinetry.

3.15 WORKMANSHIP

A. Cabinet parts shall be accurately machined and bored for quality joinery construction utilizing automatic machinery to ensure consistent sizing of modular components.

B. Back panels shall be fully housed into and recessed from the back of cabinet sides, top and bottom to ensure rigidity and a fully closed cabinet. ¾ inch thick hang rails shall be glued to backside and mechanically fastened to end panels of all walls, base and tall cabinets for extra rigidity and to facilitate installation.

C. Rear of cabinet back and underside of drawer bottom joints to receive a continuous bead of hot melt adhesive or silicone caulking to add to unit body strength and develop moisture and vermin seal.

D. All cabinet boxes shall be square, plumb and true.

E. Provide removable back panels and closure panels for plumbing access where shown on architectural and/or plumbing drawings.

F. Sides, top and bottom shall be fastened with any of the following: dado, dovetail, mod-ezz fasteners, wood biscuits and, splines and 5/16 inches (8 mm) (minimum) hardwood dowels or screw spaced 2 ½ inches (64 mm) center to center for upper cabinets and 3 ¾ inches (96 mm)center to center for tall and base cabinets.

**PART 4 - EXECUTION**

1. GENERAL

A. Pre-installation meeting

The Contractor shall convene with manufacturer and installers one week prior to installment of cabinets to review final details of project and scheduling.

B. Coordinate work of this Section with related work of other Sections as necessary to obtain proper installation of all items.

1. INSTALLATION

A. Storage and Protection: casework shall be protected in transit. Store undercover in a ventilated building not exposed to extreme temperature and humidity changes. Do not store or install casework in building until concrete, masonry and drywall/plaster work is dry. Do not install casework over carpet.

B. Workmen: install casework under the supervision of the manufacturer's representative with factory-trained mechanics certified by manufacturer.

C. Cabinet base support must be of separate and continuous platform design leveled and floor mounted prior to cabinet’s body placement. Base support shall be 4” high pressure treated material. Prior to cabinet’s body placement the area under cabinet shall be treated for pest control.

D. Workmanship:

* 1. Erect casework straight, level and plumb and securely anchor in place. Scribe and closely fit to adjacent work. Cut and fit work around pipes, ducts, etc.
	2. Install all items complete and adjust all moving parts to operate properly.
	3. Leave surface clean and free from defects at time of final acceptance.
	4. Wall cabinets shall be supported by sufficient and adequate fasteners. The Cabinetwork sub-contractor shall coordinate with the general contractor and other trades to assure that adequate blocking is provided in all wall systems to receive casework. Fastening details shall be provided in the shop drawings. Plastic anchors shall not be used. Fasteners shall be a maximum of 16” on center within 2” from sides of unit and installed in top and bottom hang rails.
	5. Base and tall cabinets resting on the floor shall have a minimum of two (2) fasteners per unit two inches from sides.
	6. All seams of cabinets and counter tops shall be filled with seam filler/caulking to match color of laminate.
	7. Filler shall be installed so that cabinet elevation is sealed off to adjacent substrate. This includes the top of all cabinets and the bottom of the wall hung cabinets.
	8. Clean Up: Remove all cartons, debris, sawdust, scraps, etc. and leave spaces clean and all casework ready for Owner’s use.

4.3 GUARANTEE AND WARRANTY

1. The manufacturer, shall warrant that all workmanship, materials and equipment provided under this Section are free from defect and are of the quality which complies with the requirements of the Contract Documents and warrants to the Owner that they will, at no cost to the Owner, correct, repair and/or replace defective work, at a time convenient to the Owner, any item of the work which is identified as being defective, within one (1) year of the date of Substantial Completion. The Manufacturer shall guarantee for an additional two (2) years beyond the first year’s contractors’ warranty that all materials and equipment shall be free from manufacturer’s defects and workmanship.

**\*\*\*END OF SECTION\*\*\***