

DIVISION 12 - FURNISHINGS AND CASEWORK

A. CASEWORK

1. Section includes plastic laminate cabinets, counters, shelving, tall storage units, cubbies, file drawers, reception counters, and all other built in casework.
2. Definitions: The following definitions apply to plastic laminate faced casework units:
 - a. Exposed portions of casework include all surfaces visible when doors and drawers are closed and all visible members in open shelf cases.
 - b. Semi-exposed portions of casework includes those members behind doors, such as shelves, divisions, interior faces of ends, case back, drawer sides, backs and bottoms and the back face of doors. Tops of cases 6'-6" or more above floor shall be considered as semi-exposed. All visible members behind glass doors also shall be considered as semi-exposed.
 - c. Concealed portions of case work include sleepers, web frames, dust panels and other surfaces not usually visible after installation.
3. Submittals: Submittals and finish color schedules will be required for all cabinets, shelving, countertops, and other casework. Submittals shall include scaled shop drawings showing layout, elevations, ends, cross sections, service run spaces, and location of services. Show details and location of anchors and indicate all hardware and accessory items. Coordinate shop drawings with other applicable work divisions.
4. Samples: Submit 2" x 3" samples of plastic laminate colors, patterns, and textures for exposed and semi-exposed materials for Owner's selection. Color selection shall include full color range of all standard and optional (non-metallic) colors of specified plastic laminate. Submit samples of PVC edges, pulls, hinges, and grommets for color selection and approval of type.
5. Design: Base cabinets and tall storage cabinets shall be 24" deep unless otherwise noted. Wall cabinets shall be 12" deep unless otherwise noted. When cabinets are to be constructed for copy rooms or other work areas, design should be based on desired function and assure that there is adequate cabinet depth and clearance height for copiers, fax machines, etc. For copy/work rooms, base cabinets should typically be 30" deep. Where 30" deep base cabinets are used, wall cabinet depth should be increased to 15".
6. Casework Acceptable Manufacturers:
 - a. Sidney Millwork Co.
 - b. TMI Systems Design Corporation
 - c. LSI Corporation
 - d. Cabcon
 - e. Local casework manufactures who can match or exceed specifications
7. Plastic Laminate Acceptable Manufacturers:
 - a. Wilsonart
 - b. Formica
 - c. Nevamar
8. Fabrication Details:
 - a. Core Material: Minimum density 45 lb. particle board, minimum 3/4" thick. Fabricate panels with plastic laminate on both sides or balancing sheet on concealed faces.
 - b. Plastic Faces:

- c. Exposed Surfaces: Comply with NEMA LD-3, Type GP28 and PF30, high pressure melamine laminate .030" thickness, general purpose type. Owner may select from white, light beige, black, or dove grey.
 - d. Backs of doors and inside faces of exposed ends shall be same as above except .020" thick.
 - e. Semi-exposed surfaces, inside shelving and open faced adjustable shelves shall be Thermofused Melamine Laminate in Owner's choice of color. Open faced shelves shall have a PVC finished edge. Painted surfaces, vinyl's and non-thermofused melamine are not acceptable.
 - f. Exposed Edges: Exposed cabinet body edges shall be covered with 1 mm PVC edge-banding. Plastic laminate is not acceptable for cabinet body edges. Door and drawer front edges shall be covered with 3 mm PVC edge-banding applied with hot melt glue.
9. Hardware and accessory items: All new cabinets shall be provided with pulls, hinges, glides, and other hardware as specified below and necessary for a complete installation.
- a. Hinges shall be Rockford Process Control #RP454-26D (or equal), 5 knuckle, 2-3/4", overlay type, hospital tip, .095" thick steel in dull chrome finish unless otherwise specified and approved. Doors 48" and over in height shall have three (3) hinges per door.
 - b. Door and drawer pulls shall be recessed plastic, color as selected by Owner.
 - c. Drawer glides shall be Knape & Vogt 8400 series (or equal) 100# capacity full extension drawer slides for standard drawers (up to 30" width) and shall be Knape & Vogt 8500 series (or equal) 150# capacity heavy duty full extension drawer slides for drawers noted as file drawers, paper storage drawers, or for any drawer exceeding 30" in width.
 - d. Door catches shall be magnetic type with a minimum 10# pull, attached with screws and slotted for adjustment. Doors over 48" high shall have 2 ea 13# magnetic catches, one at the top and one at the bottom.
 - e. Shelf Supports shall be heavy duty, self-locking nylon, designed for installation in pre-drilled holes in cabinet ends and vertical partitions. The shelf supports shall have two pins .20" in diameter, designed to prevent the shelf support from rotating.
 - f. Door and Drawer Locks (if specified) shall be five (5) disc tumbler, cam type, keyed alike or differently and master keyed. Each lock shall be furnished with two keys. Fifty (50) lock changes available. Locks for sliding 3/4" doors shall be a disc type plunger lock, sliding door type, with strike. Locks for sliding glass doors shall be a ratchet type sliding showcase lock at plastic laminated cabinets only.
 - g. Chain bolts shall be 3" long, with 18" pull and angle strike to secure inactive door on cabinets over 72" in height. Elbow catches shall be used on inactive doors up to and including 72" in height.
 - h. Coat Rods shall be 1-1/4" 14 gauge stainless steel with chrome plated secure flanges.
10. Fabrication: Workmanship shall conform to AWI custom grade quality standards. Casework products shall be constructed as follows:
- a. Fabricate plastic laminate faced casework to dimensions, profiles and details shown. Assemble units in the shop in as large of components as practicable to minimize field cutting and jointing. All joints to be dowelled and glued.
 - b. Bases shall be separate continuous "ladder type" construction utilizing 3/4" thick veneer plywood laminated with exterior glue. Rubber cove base covering will be furnished and applied to toe kicks unless otherwise noted.
 - c. Full 3/4" particle board subtops are required for all units with less than 1" counter tops. 3/4" particle board front and back spreaders are to be used at unit with 1" and greater counter tops. Bottoms shall be 3/4" particle board laminated on the interior with thermofused melamine. The bottom

surface of all upper cabinets shall be thermofused melamine, the same color as cabinet interior at semi-exposed surfaces. Front edges to be PVC edging (laminated not acceptable). Sink base cabinets shall have a 1" x 1" x 1/8" angle iron front rail. All cabinets over 42" and up to 72" in height shall be supplied with a finished 3/4" continuous top.

- d. Unexposed cabinet ends shall be 3/4" thick particle board with thermofused melamine laminate surfaces. Exposed cabinet ends shall be laminated with vertical surface cabinet liner. Holes shall be drilled for adjustable shelf clips 32 mm (1-1/4 inches) on center. Front edges to be banded with PVC edging. Bottom edges of wall cabinet ends to be banded with PVC edging. Ends to be bored to accept doweled top and bottom. All ends to be rabbeted to accept recessed back.
- e. Fixed intermediate and adjustable shelves shall be 3/4" thick particle board with thermofused melamine laminate unless otherwise noted. Adjustable shelves up to 36" wide shall be 3/4" thick. Shelves wider than 36" shall be 1" thick. Open shelf unit cabinet shelves to be thermofused melamine laminate.
- f. Cabinet backs shall be recessed and constructed of 1/4" thick prefinished melamine board. All sink cabinets to have split back, removable from inside. Exposed exterior back on fixed or movable cabinets to be high density plastic laminate to match cabinet doors on the exterior surface and thermofused melamine laminate on the interior surface.
- g. Cabinet doors, drawer fronts, and exposed end panels shall be constructed of 3/4" particle board and shall be laminated with high density .050" plastic laminate. Door, drawer, and end panel edges shall be banded with 3 mm PVC edge banding.
- h. Drawer sides, back and subfront, shall be constructed of 1/2" thick particle board with thermofused melamine laminate on inside of drawer. Drawer bottom shall be 1/4" thick melamine finish particle board set into subfront, sides and back. Paper storage drawers to be heavy duty 3/4" particle board construction with 150# full extension slides, plywood reinforcement stiffener at bottom and a retaining hood at the rear of each drawer.

B. PLASTIC LAMINATE COUNTERTOPS

1. Countertops shall be constructed of medium density (45 lbs/cu. ft.) industrial grade particle board, 1" thick with 3/4" thick splashes. Countertop to backsplash to be completely coated with acrylic latex caulk during installation.
2. Counters not supported by cabinets shall be supported by supports constructed of 3/4" particle board with thermofused melamine laminate finish. Counter supports shall be full height from floor to underside of counter top with a corbel profile for adequate knee space and shall be installed at minimum 36" o.c. spacing.
3. Plastic laminate countertops shall comply with NEMA LD3; type, thickness, color, pattern and finish as indicated for each application; use NEMA Type 2, .050" thickness, colors, patterns, finishes as selected; Owner may select multiple colors for each project.
4. All exposed edges of countertop to be trimmed with 3 mm PVC edge banding, 1" wide. Edge banding to be machine applied with hot melt glue utilizing an edge-bander that trims 1 mm of core material immediately prior to application.
5. Provide sink cutouts for sinks as required. Coordinate with Mechanical and Plumbing Specifications. All sink cutouts to be completely sealed with acrylic latex caulk.
6. Provide cutouts and data and power grommets as required in counter tops. Contractor shall coordinate exact locations with Owner in field.

C. STAGE DRESSINGS

1. Stage dressings, including certain track and draperies shall be included as part of the general contract.

2. Provide structural supports for stage dressing in appropriate section of specifications. Supports shall be designed for anticipated loads and be properly braced.
3. Materials:
 - a. Fabrics: Fabric used in construction of draperies will be inherently flameproofed or be flameproofed by immersion to meet California standards, which equal or exceed requirements of all other states. Permanent labels indicating flame retardancy will be attached to all drapery pieces and a copy of the certificate of flame retardancy will be submitted to Owner. All fabric panels will be full-length cuts with no splices and shall be sewn vertically. Wrinkles will be allowed to fall out naturally. Nap runs down unless otherwise specified.
 - b. Drapery accessory specifications:
 - i. Top Webbing: 3.5" heavy-duty upholstery jute webbing
 - ii. Grommets: #3 brass or black grommets and washers
 - iii. S-hooks: Zinc-plated 6 gauge steel, minimum inside length of 1.5", working load limit 70# each
 - iv. Tie Lines: 36" long, 1/8" diameter sz. #4, cotton jacket over synthetic core.
 - v. Chain: #8 zinc-plated non-kinking jack chain, approximate weight of 20 lbs. per 100 ft.
 - vi. Canvas Pocket: 8 oz. Canvas duck
 - vii. Thread: #69 nylon bonded
 - c. Drapery construction: Unless otherwise noted, all drapery tops will be box pleated on 12" centers with 50% fullness, reinforced with 3.5" jute webbing and sewn with three rows of stitching. Grommets will be machine set in the center of each pleat and will not cut through any line of stitching on the webbing. Each grommet will be provided with a cotton tie line or S-hook as necessary for hanging. Weighted hems will be double stitched for security and have a separate interior canvas pocket suspended a minimum of 1.5" above the bottom of the hem and contain #8 jack chain. The chain will run the full drapery width and will be anchored to prevent bunching. All vertical hems will be stitched with the salvage edge turned under. All draperies sewn from flame retardant treated fabrics will be equipped with a 3" x 24" flame retardancy test strip sewn vertically to the first vertical seam on the off stage edge of the drapery, for periodic testing of the flame retardancy treatment.
 - d. Traveler drapery: Off-stage vertical hems will be 3" and center stage facebacks will be 18". Bottom hem will be 6" and weighted with chain. S-hooks will be provided.
 - e. Leg drapery: Side hems will be 3", bottom hem will be 6", and weighted with chain. Tie lines will be provided.
 - f. Border drapery: Side hems will be 3", bottom hem will be 4", and chainless. The lines will be provided.
 - g. Lined drapery: Construction of the face draperies will be as previously specified. The lining will be sewn into the jute webbing of the face drapery and be of equal fullness. The lining bottom and side hems will be 2" wide and attached to the face drape using 5/8" wide twill tape tabs. The tabs will have a minimum of 3" of play between face fabric and lining. They will be spaced approximately every 4 feet alongside hems and at each panel seam along bottom hem. The finished bottom hem of the lining will hang 2" shorter than bottom hem of the face fabric.
 - h. Backdrops: Backdrops are sewn flat (0% fullness). All fabric widths are joined horizontally. The top of the drop will be reinforced with heavy-duty 2" wide upholstery jute webbing stitched twice. #3 brass grommets will be machine set on 1 foot centers and provided with 36" cotton tie lines for hanging. Side hems will be 2" wide. The bottom hems will be 6" deep, double stitched, and left open at each end to allow insertion of pipe or a chain weight.
 - i. Scrim drops: Scrim drops are sewn flat (0% fullness). Fabric will be full length cuts with no splices. The top of the drop will be reinforced with heavy-duty 2" wide upholstery jute webbing stitched twice.

#3 brass grommets will be machine set on 1 foot centers and provided with 36" cotton tie lines for hanging. Side hems will be 1" wide. The bottom hems will be 6" deep, double stitched, and lined in 8 oz. canvas duck, and left open at each end to allow insertion of pipe or a chain weight.

4. Installation:
 - a. Draperies shall be fabricated to the proper size for the specific installation.
 - b. Draperies shall be installed straight, plumb and true.
 - c. Installation shall be safe and structurally sound.
 - d. Operating components, such as curtain tracks, etc., shall operate as intended by the manufacturer throughout the full operating range.

D. OVERHEAD STAGE RIGGING

1. All items including but not limited to stage lighting, stage drapery, curtain track, and scenery pipe batons must be held in place using hardware rated for the use in overhead rigging and should be installed by individuals with proper training for overhead stage rigging installations.
2. Stage electric pipes or stage lighting positions located over head at the high school level should use overhead electric winch systems or other approved means for overhead rigging electrical mechanical lifting capabilities allowing lighting pipes to be lowered to "working" height between 4'-0" and 5'-0" above the stage floor and raised to a high position to structural steel. Electrical cabling should be lifted with the electrical pipe to minimize tangling and catching of cable. Lifting and load capacities must be indicated both on each individual lighting pipe and at the control position. Lifting capacities should be suitable to maintain a proper safety factor on all hardware while with the potential to lift a full pipe of stage lighting instruments. All stage electrics should have a high trim and a low trim electrical cut off.
3. All overhead stage rigging systems in high school complete with fly lofts should utilize motorized winch systems for all "line sets" to include but not limited to stage electrics, all curtain drapes, all scenery batons and all "spare" line sets. Lifting and load capacities must be indicated both on each line set and at the control location. All line sets must have a high trim and a low trim electrical cut off.

E. HORIZONTAL LOUVER BLINDS

1. Materials: Provide and install Bali Contract "CustoMiser" (or equal) conforming to the following:
 - a. Slats: Aluminum alloy. Heat-treated and spring tempered.
 - b. 1" wide x .008" thick before painting
 - c. Headrail: 1" x 1" x .017" thick steel, corrosion-resistant. U-shaped profile with rolled edges. Baked-on polyester finish to match slats.
 - d. Tilter: Polymer worm and gear, enclosed in housing of engineering polymer. Control position, tilter at left, cordlock at right.
 - e. Tiltwand: Clear acrylic or polycarbonate, tubular construction. Hexagonal shape, wand shall be easily detachable. Tiltrod solid steel with corrosion-resistant finish.
 - f. Cordlock: Engineering polymer, with crashproof locking device.
 - g. Bottom Rail: .022" steel corrosion-resistant, able to receive end caps, with hold down pins to secure rail to jamb or sill.
 - h. Braided Ladders: 100% polyester yarn color compatible with slats. Spacing not more than 22 mm.
 - i. Lift Cords: Two-ply polyester cord filler. Braided polyester jacket.

- j. End Support Brackets: Standard hinged cover end support brackets of phosphate treated steel. Blinds over 48" shall have intermediate support brackets.
2. Installation of Mini-Blinds:
- a. Contractor shall furnish, deliver and install mini-blinds to include removal of existing mini-blinds if required. Mini-blinds shall be installed in accordance with manufacturer's recommendations.
 - b. Contractor shall be responsible for field measurement of openings and provision of correct size blinds for all openings.
 - c. Submit samples to Owner for approval and color selection.
 - d. Ensure no obstructions are present to prevent proper installation of mini-blinds.
 - e. The District will provide an area at the school for storage and assembly. It is the Contractor's responsibility to insure that adequate precautions are taken to protect the area in which they are to be stored and assembled.

F. FURNISHINGS AND TECHNOLOGY

Furnishings and technology equipment for all District projects shall be provided by Owner unless otherwise noted. Design consultants shall work with Owner during design phase to identify furnishings and technology requirements that require plan documentation and coordination with project specifications. Design consultants shall incorporate owner-furnished equipment and furnishings schedules into drawings as necessary and shall also provide furniture layout plans if requested. Where systems furniture is provided, Consultants and Contractors shall coordinate electrical requirements.

G. ATHLETIC EQUIPMENT

Athletic Equipment for all District projects shall be provided by Owner unless otherwise noted. Design consultants shall work with Owner during design phase to identify athletic equipment requirements that require plan documentation and coordination with project specifications. Design consultants shall incorporate owner-furnished equipment schedules into drawings as necessary and shall also provide installation plans if required or requested. Where systems furniture is provided, Consultants and Contractors shall coordinate electrical requirements.

H. SCIENCE LAB REQUIREMENTS

Science lab requirements for District facilities are subject to change based on available products, programmatic needs, and available budget. Science lab configurations and furnishings requirements will be determined during the programming phase of each project and communicated to Contractors in project plans, specifications, and/or requests for proposals (RFP's). Architects and sub consultants shall collaborate with District Project Manager (COTR) and District building design advisory committee (BDAC) to quantify and specify all equipment needs.

<<<<END OF DIVISION 12>>>>