



Square edge



## 3100 Plycore Specifications

## STEVENS ADVANTAGE 3100 PLYCORE

### SECTION - 12400

#### PART 1 GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Applicable provisions of General Conditions, Special Conditions, and General Requirements shall apply to this section as if repeated in full herein. Reference other Sections and Divisions for work in connection with this section.

##### 1.02 SCOPE OF WORK

- A. **Cabinets:** Furnish prefabricated cabinetry and related components as specified herein. Refer to plans and equipment lists for details and requirements. Cabinetry shall include all fillers, scribes, finish ends, finish backs, laminate and solid polymer countertops. Locks to be provided where shown on casework drawings or described in equipment lists.
- B. **Sinks and Fixtures:** Provide sinks, fixtures, electrical outlets, and fittings specified as part of complete model numbered units. Provide materials to appropriate trades for final hook ups and installation.

##### 1.03 RELATED WORK NOT INCLUDED

- A. **Sinks and Fittings:** Sinks and fittings, connection, piping, traps, supplies, shut offs, and special plumbing applicable to codes. Electrical fittings, devices, conduit, wiring, fans, blowers, motors, ductwork, and special grills not specified as part of furnishings. (Specified in electrical, plumbing, and heating/ventilation/air conditioning sections)
- B. **Blocking, Framing and Reinforcements:** In walls, ceilings, and floors for cabinetry anchorage and mountings. (Specified in carpentry section)
- C. **Locks:** Master keyed to room doors or specialty locking systems. (Specified in lock section)
- D. **Vinyl Base Molding:** (Specified in resilient flooring section)

##### 1.04 QUALIFICATION

- A. **Casework Standards:** Casework shall be Stevens Advantage 3100 Plycore Series. Catalog numbers and specification details shall be based on product offerings of Stevens Industries, Inc., Teutopolis, Illinois. Configuration, size, material options, offerings, and quality to be adhered to.
- B. **Approvals:**
1. Casework of other manufacturers will be considered for approval, providing written request is received and approved at least ten (10) days prior to announced bid date and approved by addendum. Bidder shall state in writing any deviations from requirements and specifications. The casework shall conform to the configuration, arrangement, design, material quality, joinery, panel thickness, and surfacing of that specified and shown on drawings.
  2. Manufacturers requesting approval shall submit samples with cut-aways showing cabinet construction, joinery, drawer and door construction, hardware, and materials, along with catalogs and specification, in order that accurate evaluations can be made. Manufacturers shall show full sized working samples. Catalogs and specifications shall be submitted with written request, along with detailed list of compliance and deviations from these documents for approval. Samples may be impounded by owner and retained until completion of job for verification and compliance of specifications.
  3. Manufacturer must be Architectural Woodwork Institute (AWI) Premium Certified.

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### 1.05 SUBMITTALS

- A. **Shop Drawings:** Shall be submitted for approval after formal notification of award of contract. Drawings shall consist of floor plans indicating arrangement and relation to adjacent work and equipment and complete elevations of casework. Centerline of service requirements shall be noted for use by other trades. A schedule of all sinks, fittings, and accessories that are part of this contract shall be provided.
- B. **Color Samples:** Shall be submitted for selection and coordination at time of shop drawing submittals. Samples of actual materials and color shall be available as required.
- C. **Catalog Cuts:** Additional catalog cuts, details, and samples as requested by architect for evaluation and coordination.

### 1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. **Protection:** Protect casework and related materials during transit, delivery, storage, and handling to prevent damage, soiling, and deterioration.
- B. **Storage:** Store casework and related materials at project site in installation and storage areas with similar ambient conditions as final installation. Storage areas must be kept dry, heated with low relative humidity, and away from construction work such as painting, wet work, grinding, and similar operations.
- C. **Site Conditions:** In accordance with AWI's *Quality Standards Illustrated* (current edition) and Stevens Industries, Inc.'s *Site Conditions*.

### 1.07 WARRANTY – refer to The Stevens Advantage Warranty

- A. Casework manufacturer shall warrant for a period of three (3) years that its manufactured product is free from defects in materials and workmanship when properly installed and under normal use and conditions.
- B. Accessory equipment (sinks, fittings, etc.) shall be warranted by appropriate manufacturer's guarantee to the limit of that manufacturer's standard warranties.

## PART 2 PRODUCTS

### 2.01 SURFACE MATERIAL

- A. **Cabinet:**
  - 1. Exposed finish ends, fronts, modesty panels, and finish backs shall be faced with vertical grade PF-28 (.028") (.7mm) High Pressure Laminate (HPL), tested under National Electrical Manufacturers Association (NEMA) LD3-2005. Decorative laminate shall be thermoset to core using catalyzed Polyvinyl Acetate (PVA) glue with minimum 80 Pounds per Square Inch (PSI) pressure and average 180 degree F. temperature. (Lower pressure and cold curing glues not acceptable.)
  - 2. Panels with exterior PF-28 surfaces shall have Cabinet Liner Surface (CLS) (.020") (.5mm) interior cabinet liner.
- B. **Interior:** Semi-exposed surfaces shall be CLS (.020") (.5mm) cabinet liner laminate. Unexposed balancing face to cabinet liner shall be Backer Laminate (BKL) (.020") (.5mm) backer or equivalent.
- C. **Drawers:** Sides shall be laminated with CLS (.020") interior liner. Drawer bottom to be Stevens Advantage TF (Thermofused) laminated.
- D. **Backs:** Shall have a solid color coordinated finish.

## 2.02 CORE MATERIALS

- A. **Plycore:** Panel cores shall be multi-ply plycore with water resistant inner resins adhesives and wood veneer plies.
- B. **Medium Density Fiberboard:** Core shall be minimum 48# density conforming to American National Standards Institute (ANSI) A208.1 MD-130 standards.

## 2.03 EDGINGS

- A. **Door and Drawer Fronts:** Edges shall have (.020") flat edge extrusion banding to match face pattern and colors. Automated hot melt adhesive application and trimming.
- B. **Cabinet Edges:** Cabinet sides, top, bottom, adjustable shelves, and other interior components shall be edged with (.020") flat edge extrusion. Automated hot melt adhesive application and trimming.
- C. **Drawer Components:** 3/4" sides shall be edged with (.020") flat edge extrusion. Automated hot melt adhesive application and trimming.
- D. **Selections:** Edgebanding to match laminate selections based on Stevens standard offerings and commercially available stock patterns.

## 2.04 SELECTIONS AND APPLICATIONS

- A. **Exposed:** Cabinet finish ends, fronts, modesty panels, and finish back HPL shall be selected from Wilsonart Design Group I patterns (standard price category).
- B. **Interior and Semi-exposed Surfaces:** Selected from Stevens Advantage Pearl- solid color or Maple- woodgrain pattern.
- C. **Drawers:** Selected from Stevens Advantage Pearl- solid color or Maple- woodgrain pattern.
- D. **Backs:** Shall coordinate with interior selection: Pearl- solid color (Pearl interior), Maple Beige- solid color (Maple woodgrain interior).
- E. **Laminate Countertops:** Selected from Wilsonart Design Group I standard offering.
- F. **Countertop Supports:** Powder coated- three (3) standard colors- Black, Pearl, and Champagne.
- G. **Metal Table Frames:** Powder coated- three (3) standard colors- Black, Pearl, and Champagne.

## 2.05 HARDWARE

- A. **5-Knuckle Hinges:** Shall be heavy duty 5-knuckle 270 degree pivot reveal overlay style. Hinges shall have interlaying leaves 270 degree swing constructed of (.090") thickness steel. Hinges shall be (Grade 1) with hospital ground tips and non-removable pin. 5-knuckle hinges shall be available in minimum five (5) standard finishes as detailed in Stevens Advantage Essentials offering. Doors less than 47" shall have two (2) hinges per door. Doors exceeding 47" shall have three (3) hinges per door. 5-knuckle hinges shall have vertical adjustment and shall be mounted with two (2) 5mm thread screws each leaf with additional #8 screws: two (2) in cabinet leaf and three (3) in door leaf. Total nine (9) fasteners per hinge. (Mountings without 5mm system fasteners not acceptable.)
- B. **Door Catches:** Shall be heavy duty spring loaded, large diameter (17.5mm) roller catches mounted at door bottom. Doors over 48" shall have catch at both top and bottom. Catch strike plate shall be injection molded with integral molded engagement ridge and wide face bumper door stop.
- C. **Pulls:** Shall be offered in easy grip 128mm (5" size). Pulls shall be available as selected from Stevens Advantage Bentwire 128 and Contour 128 styles as shown in Stevens Advantage Essentials offering. Bentwire 128 shall be 8mm diameter wire formed with powder coated or plated finishes (minimum of three (3) powder coated and two (2) plated finishes). Contour 128 styles shall be

injection molded in high impact Acetyl Butyl Styrene (ABS) Black, Pearl, or Grey solid colors. (Offerings of less size, styles, and selection shall not be acceptable.)

- D. **Drawer Slides:** Extension slides shall be bottom and side mount epoxy steel slides. Lateral stability achieved through a formed captive slide profile. Slides shall glide on nylon rollers and carry a 100# dynamic load rating. Slides feature both in and out drawer stop with 3" self close and adjustable cam side alignment. Slides shall also be tested under The Scientific Equipment and Furniture Association (SEFA) 6.5 Drawer Cycle Test.
- E. **Full Extension Slides:** Full extension ball bearing slides to be an option feature available for all cabinet drawers if selected in specification options. Slides shall be side mounted with profile to not reduce interior drawer space normally provided. Ball bearing slides to be tested under The Business and Institutional Furniture Manufacturer's Association (BIFMA) X5.5 Section 7. Slides shall pass both 50,000 and 100,000 cycle test with a 120# load rating.
- F. **Hanger Bars:** Shall be heavy chrome plated oval tubing mounted in adjustable end wall sockets.
- G. **Tote Trays:** High impact polystyrene or polyethylene formed trays shall be provided where indicated by model numbers. Trays shall be suspended on welded wire powder coated rack system. System includes side suspension rack uprights with top and bottom horizontal guideways to capture tray and avoid inadvertent tip out.
- H. **Shelf Supports:** Adjustable shelf supports shall be injection molded clear polycarbonate. Supports shall incorporate integral molded lock tabs to retain shelf from tipping or inadvertent lift out. Supports shall have 5mm diameter double pin engagement into precision bored cabinet vertical hole patterns. Adjustment shall be (32mm) 1 1/4" spacings. Supports shall have a compression ridge effecting force against shelf edge to maintain positive pin engagement. Supports shall have molded-in screw attachment feature. Static test load shall exceed 200# per clip. Shelf spans above 27" shall have 5-point support with backs drilled to receive a mid-span shelf support, further reducing deflection. Shelf spans below 27" shall have end 4-point support.
- I. **Locks:** High security 6-tumbler lock system shall be provided where noted by model number or indicated on drawings. Locks shall have diecast body with dead bolt engagement tang. (Cylinder locks with attached rotating cams not acceptable.) Locks shall have removable and interchangeable 6-tumbler core for easy field and customer re-keying options. Locks shall be master keyed and available key-alike or key-different with 250 standard key changes and the possibility of up to 2000 total changes on special order. Each lock provided with a double bit key and face of lock stamped with key number.
- J. **Sliding Doors:** Solid 3/4" door tracks shall be double channel extrusion both top and bottom. Glass sliding doors shall have aluminum top and bottom track with door bottom aluminum extrusion and slide rollers.
- K. **Coat Hooks:** Under mount and wall mount hooks shall be selected from Stevens Advantage Gallery Collection designs. Hooks shall be formed cold roll steel with ball end tips and welded in stamped steel base. Three (3) under mount designs (double, triple, wardrobe) and three (3) wall mount designs (single, double, schoolhouse). Styles shall be design coordinated with quality matte nickel plated finish. Attachment with #10 screws. (Cast hooks susceptible to breakage, non-matching finishes or designs, and smaller screw mounting not acceptable.)

## 2.06 COMPONENT DETAILS AND CONSTRUCTION

- A. **Fronts:** Door and drawer fronts shall be 3/4" thick. Fronts shall be edged with (.020") flat edge extrusion with face laminate as described in 2.01.A. Automated hot melt adhesive application and trimming.

- B. **Wall Cabinets:** Components shall be 3/4" thick members throughout. Wall cabinet tops and bottoms shall include back groove and minimum four (4) dowel pins per joint for insertion into cabinet ends. Wall cabinet ends shall be 3/4" thick with back groove and precision Computer Numerical Control (CNC) drill pattern for accurate location of fixed members, hardware, and shelf supports. Wall cabinets to have two (2) integral (dowel into end) mounting frames. (Designs with simple spacer rails or rails without dowel pin engagement into ends are not acceptable.)
- C. **Mounting Frames:** Incorporated in wall units, tall units, and base units, shall be 3/4" thick with minimum two (2) dowel pins per mounting frame end joint for wall and tall units. Base units shall have a minimum of three (3) dowel pins per mounting frame end joint.
- D. **Tall Cabinets:** Components shall be 3/4" thick members throughout. Tall cabinet tops and bottoms shall include back groove and up to eight (8) total dowels per end joint (based on cabinet depth). Tall cabinet ends shall be 3/4" thick with back groove and precision CNC drill pattern for accurate location of fixed members, hardware, and shelf supports. Tall cabinets to have two (2) integral (dowel into end) mounting frames. (Designs with simple spacer rails or rails without dowel pin engagement into ends are not acceptable.)
- E. **Base Cabinets:** Components shall be 3/4" members throughout. Base unit bottoms shall incorporate back groove and up to eight (8) dowel pins per end joint (based on cabinet depth). Base units shall have a wide top and back frame feature. A wide frame in the flat horizontal plane at cabinet front with minimum three (3) dowels per end joint provides stable squaring of the top area. A second wide frame in the vertical plane behind back provides stable side-to-side rack resistance. Construction shall provide lateral and vertical stability. Open rear top area allows for easy wall mounting and ease of installation of mechanical services. (Sub tops without horizontal and vertical plane ridged frame members not acceptable.) Base cabinet ends shall be 3/4" thick with back groove and precision CNC drill pattern for accurate location of fixed members, hardware, and shelf supports.
- F. **Toe Kicks:** Bases shall be an integral base design. Construction of end panels, cabinet bottoms, and horizontal toe kick members are integrally joined together for greater structural strength. This design facilitates load transfer from upper loaded areas directly through cabinet end to floor, reducing lower joint stresses. (Separate attached bases not acceptable.)
- G. **Cabinet Backs:** Shall be in an integrated system of a 1/4" prefinished Medium Density Fiberboard (MDF) back captured in side and horizontal grooves. Unit back to be further integrated with attachment to 3/4" doweled-in mounting frames. Fixed backs are mechanically fastened into grooves and sealed with hot melt adhesive. Removable backs shall be set in groove and attached with screws.
- H. **Adjustable Shelves:** Shelves shall be 3/4" thick. Shelving shall have end 4-point support for spans under 27". Spans above 27" shall have 5-point support with backs drilled to receive additional mid-span shelf support, reducing deflection under heavier loads.
- I. **Drawers:** Four (4) sided full box design with separate attached front shall be provided. Drawer members shall be 3/4" thick with dowel pin construction at all four (4) corners. Drawer bottoms shall be 1/4" MDF trapped in groove four (4) edges as well as mechanically fastened. Drawer bottoms to be Stevens Advantage TF laminated. (Drawers utilizing 1/2" members or with overlay applied bottoms, non-captured groove, or staple joint construction not acceptable.)
- J. **File Drawers:** Shall be a four (4) sided box design with separate attached front. Drawer members shall be laminated and have dowel pin construction at all four (4) corners. Drawer bottom shall be laminated 1/4" MDF core trapped in groove four (4) edges, as well as mechanically fastened. 3/4" file drawer sides shall include file hanging rails. Full extension ball bearing suspensions shall be BIFMA 120# load tested slides.

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### 2.07 LAMINATE TOPS

- A. Countertops shall be high pressure decorative plastic laminate, thermoset to core using catalyzed PVA glue with minimum average pressure of 80 PSI and average 180 degree F. temperature. Decorative laminate shall meet NEMA LD3-2005 PF-42 (.042") specification standards. Patterns chosen from Wilsonart Design Group I.
- B. Laminate tops shall be 1 1/16" thick with solid particleboard core structures and laminated with backer sheet.
  - LS00C: 90 degree postform seamless front edge with matching 90 degree postform backsplash
  - LS05C: 3mm Polyvinyl Chloride (PVC) edged countertop with 3mm PVC edged backsplashSpecify design required.

### 2.08 SOLID SURFACE COUNTERTOPS (SOLID POLYMER)

- A. **Solid Surface:**
  - 1. Countertops to be fabricated from 1/2" thick acrylic cast sheets. Sheets to be continuous cast thermoset acrylic resins in combination with Aluminum Trihydrate (ATH) and pigments.
  - 2. Solid surface countertops to have 1/2" thick downturned leading edges with overall top thickness of 1 1/16". Faces to be polished to a matte suede finish with 3mm radius edges and corners.
  - 3. Countertops to be additionally strengthened with adhesive-applied longitudinal composite wood rails for mounting to cabinets and supports. Spans shall not exceed 36" without intermediate supports.
- B. **Backsplashes:** Applied backsplashes shall be 1/2" thick with 3mm radius edges provided along back wall endsplashes at end walls and tall cabinet ends.
- C. **Sink Bowls:** Shall be factory installed, integral one (1) piece.

### 2.09 WELDED STEEL LEG TABLES

- A. **Tables:** Stevens Advantage 49700 shall incorporate a one (1) piece all welded apron assembly. Apron frames shall be a cold roll steel formed 12 gauge section with offset channel bends providing heavy load capacity.
- B. **Frames:**
  - 1. Shall be 1 3/4" high, providing a low profile for maximum leg height and Americans with Disabilities Act (ADA) specifications.
  - 2. Frames shall include 12 gauge channel (welded in) diagonal corner struts on leg corners with a 5/16" wedge bolt. Aprons shall also have 12 gauge outside 90 degree corner brackets welded to aprons, forming a rigid leg pocket.
- C. **Legs:**
  - 1. Shall be 2x2 cold roll 14 gauge tubing. Tube legs shall have effectively a 5-bolt attachment. Legs shall bolt into corner pocket with four (4) 1/4"- 20 chrome hex drive bolts and corner strut with 5/16" wedge bolt.
  - 2. 2x2 legs shall include tube insert with threaded adjustable nylon glide. A means of affixing legs to floor shall be provided where a fixed installation is required.
- D. **Additional Options:**
  - 1. Formed horizontal "C" channels may be added to the apron frame to allow use of Tote Trays as a slide-under accessory drawer.

2. Wire form book boxes of welded 5/16" and 3/16" rod may also be bolted into the "C" channels, providing convenient student book boxes. Wire form book boxes shall eliminate the solid enclosed areas susceptible to trash and hidden item accumulation. (Solid side book boxes or compartments not acceptable.)

E. **Finishes:** Powder coated- three (3) standard colors- Black, Pearl, and Champagne.

F. **Countertops:** Table tops shall be available in laminate and solid polymer. (Specify tops as required.)

### 2.10 APRON STEEL LEG TABLES

A. **Tables:** Stevens Advantage 49800 shall be constructed with 4 1/2" wide apron rails. Aprons shall have double diagonal formed-steel corner gussets machined in and attached with #10 screws. 1" thick aprons shall have laminate face in patterns to match casework selection.

B. **Legs:**

1. Shall be 2x2 cold roll 14 gauge steel with two (2) welded in 5/16"- 18 corner anchor bolts. Tube legs shall have retainer angles for clamping onto wood apron members.

2. Legs shall be bolted into apron corner gussets and include insert with threaded adjustable nylon glide. Legs shall be available in three (3) finishes- powder coated Black, Pearl, and Champagne. A means of affixing legs to floor shall be provided where a fixed installation is required.

C. **Countertops:** Table tops shall be available in laminate and solid polymer. (Specify tops as required.)

### 2.11 ADD COST OPTIONS FOR 3100 PLYCORE SERIES

**Pulls:**

- Artisan Collection 128mm pulls in lieu of standard Essentials Collection.
- or  Studio Collection 128mm semi-recessed pulls in lieu of standard Essentials Collection.
- or  SA-001SS stainless steel 128mm bentwire pulls in lieu of standard Essentials Collection.
- SA-103SS stainless steel 5-knuckle hinge.
- Matching open interiors to exterior.
- Matching wall bottoms to exterior.
- Full extension 120# ball bearing slides throughout job in lieu of standard 100# epoxy.
- 3/4" birch veneer plycore drawer.
- Special Order- Formica, Pionite, Nevamar laminates.

## PART 3 EXECUTION

### 3.01 INSTALLATION

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

B. Casework, countertops, and related materials to be conditioned to average prevailing humidity condition in installation areas prior to start of work.

C. Install casework and countertops with factory-trained supervision, authorized by manufacturer.



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Casework shall be installed plumb, level, true, and straight with no distortions (shim as required). Casework shall be securely attached to building structure with anchorage devices of appropriate type, size, and quantity to meet applicable codes, specifications, and safety conditions. Where casework and countertops abut other finished work, scribe and trim to accurate fit, and caulk as required.

- D. Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind. Lubricate operating hardware.
- E. Repair, or remove and replace, defective work as directed upon completion of installation.
- F. Advise project site superintendent of problems and precautions for protection of casework and countertops from damage by other trades until acceptance of the work by the owner.
- G. Cover casework with 4-mil polyethylene film for protection against soiling and deterioration during remainder of construction period.

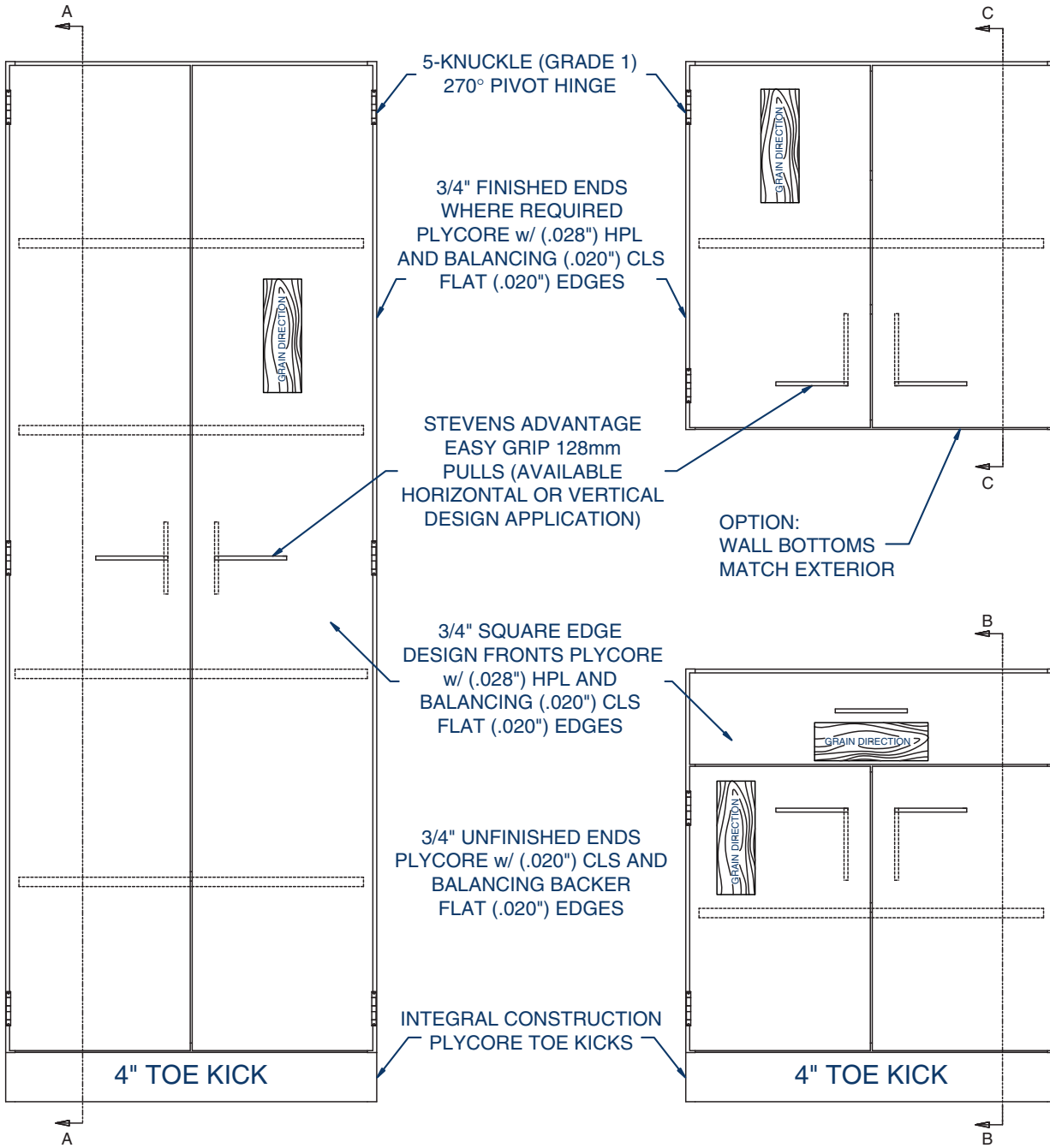
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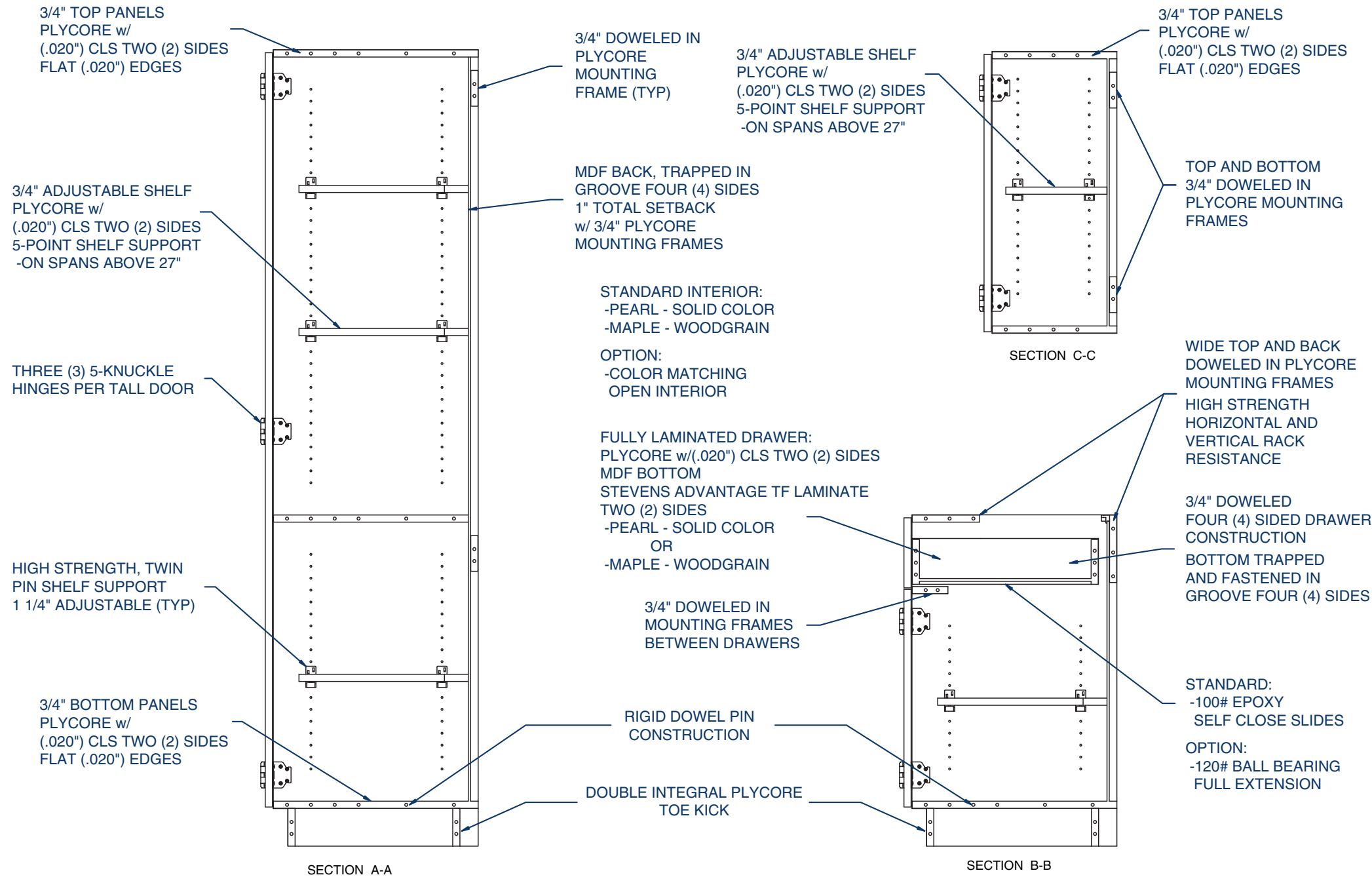
## **GLOSSARY OF ACRONYMS**

<b>ABS:</b>	Acetyl Butyl Styrene
<b>ADA:</b>	Americans with Disabilities Act
<b>ANSI:</b>	American National Standards Institute
<b>ASTM:</b>	American Society for Testing and Materials
<b>ATH:</b>	Aluminum Trihydrate
<b>AWI:</b>	Architectural Woodwork Institute
<b>BIFMA:</b>	The Business and Institutional Furniture Manufacturer's Association
<b>BKL:</b>	Backer Laminate
<b>CLS:</b>	Cabinet Liner Surface
<b>CNC:</b>	Computer Numerical Control
<b>HPL:</b>	High Pressure Laminate
<b>MDF:</b>	Medium Density Fiberboard
<b>NEMA:</b>	National Electrical Manufacturers Association
<b>PSI:</b>	Pounds per Square Inch
<b>PVA:</b>	Polyvinyl Acetate
<b>PVC:</b>	Polyvinyl Chloride
<b>SEFA:</b>	The Scientific Equipment and Furniture Association
<b>TF:</b>	Thermofused

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**Standard Features:**

- Square flat edge style overlay design fronts\*
- HPL finished ends and fronts
- Laminate selections from Wilsonart Design Group I
- Stevens Advantage interiors in Pearl or Maple woodgrain
- Flat (.020") extrusion cabinet edges, hot melt applied\*
- Essentials Collection 128mm pulls, with horizontal or vertical application
- SA-101 5-knuckle, institutional grade I, 270° pivot hinge
- SA-402 6-tumbler high security dead bolt lock
- Stevens fabricated laminate, solid polymer, and supplied stainless steel and specialty tops

**Optional Features:**

- Artisan Collection 128mm pulls in lieu of standard Essentials Collection
- Studio Collection 128mm semi-recessed pulls in lieu of standard Essentials Collection
- SA-001SS stainless steel 128mm bentwire pulls in lieu of standard Essentials Collection
- SA-103SS stainless steel 5-knuckle hinge
- Matching open interiors to exterior
- Matching wall bottoms to exterior
- Full extension 120# ball bearing slides throughout job in lieu of standard 100# epoxy
- 3/4" birch veneer plycore drawer
- Special Order- Formica, Pionite, Nevamar laminates

\* Flat PVC or ABS extrusion edges, based on commercially available stock patterns

