

## PURCHASE DESCRIPTION

### CONTEMPORARY OAK; CASE PIECES

This Purchase Description was developed by the Engineering Branch, Integrated Workplace Acquisition Center, Federal Supplies and Services, Arlington, VA 22202 and is based upon currently available technical information. It is recommended that Federal agencies use this in procurement and forward recommendations for changes to the preparing activity at the address shown above.

#### 1. SCOPE AND CLASSIFICATION

1.1 Scope. This purchase description covers minimum requirements for contemporary oak furniture intended for use in military quarters, dayrooms and lounge areas. All measurements are in SI (System International units). (See 6.2).

1.2 Classification. The items shall be of the following types, styles, and finishes (see 6.1 herein). All dimensions are overall excluding glides.

Type I - Dresser, Six Drawers (3.1). Fig. 1

1150 mm W x 470 mm D x 750 mm H

Type II - Mirror, Wood Frame (3.2). Fig. 2 (For use with six drawer dresser)

600 mm W x 1150 mm H

Type III - Night Table, (3.3). Fig. 3

Style A - 1 drawer, open bottom compartment

Style B - 2 drawers.

480 mm W x 400 mm D x 550 mm H

Type IV - Chest, free standing, (3.4)

Style A - Three Drawers

Size 1 - 480 mm W x 470 mm D x 710 mm H. Fig. 4  
(Designed to fit inside Type VI, style A wardrobe)

Size 2 - 760 mm W x 470 mm D x 750 mm H, Fig. 5

Style B - Five Drawers (3.4) Fig. 6

760 mm W x 470 mm D x 1150 mm H

Type V - Desk, Study Carrel (3.5)

Style A - Desk, left pedestal, three pedestal drawers,

one kneespace keyboard drawer. Fig. 7

1070 mm W x 560 mm D x 750 mm H.

Style B - Desk, right pedestal, three pedestal drawers, one kneespace drawer. Fig. 8

Style C - Study Carrel, two shelf. Fig. 9

1060 mm W x 280 mm D x 762 mm H.

#### Type VI - Wardrobes (3.6)

Style A - Two doors with lock hasp, one fixed shelf, clothes rod. Fig. 10, 11

915 mm W x 610 mm D x 1900 mm H

Style B - Two doors with lock hasp, one fixed shelf, center partition, clothes rod, and three adjustable shelves. Fig. 10, 12

Size 1 915 mm W x 610 mm D x 1900 mm H

Size 2 1065 mm W x 610 mm D x 1900 mm H

#### Type VII - Bookcase

Style A - One fixed shelf, two adjustable shelves, (3.7) Fig.13

900 mm W x 350 mm D x 915 mm H.

Style B - One fixed shelf, four adjustable shelves, (3.7) Fig. 14

900 mm W x 350 mm D x 1900 mm H.

#### Type VIII - Wall Units, free standing, (3.8).

Style A - Deleted

Style B - Deleted

Style C - Three drawers, drop lid writing door, task light, one fixed and one adjustable shelf behind two doors with locking hasp, Fig. 15

750 mm W x 495 mm D x 1900 mm H.

Style D - Deleted

Style E - Computer Workstation, three full width drawers, minimum of one adjustable shelf and pull out keyboard tray behind upper doors, and duplex surge protected outlets. The upper compartment shall contain one adjustable shelf above the pullout tray for the monitor to accommodate a keyboard tray and mouse below the shelf. Adjustable shelf shall provide capability for paper feed and placement of cables. Fig. 16.

840 mm W x 610 mm D x 1900 mm H.

Style F - Deleted

Type IX – TV Cabinet, mobile with removable casters, open top compartment, two doors, one adjustable shelf (3.8.1). Fig 19

915 mm W x 455 mm D x 760 mm H (with casters),  
710 mm H (without casters)

Type X – Drop Leaf Tables (3.8.2). Fig. 20

Style A – Square top

915 mm x 915 mm x 760 mm H

Style B – Round Top

915 mm Dia. x 760 mm H

Each of the above units are available in the following finishes.

Finish 1 - English Oak

Finish 2 - Natural Oak

## 2. APPLICABLE DOCUMENTS

2.1 Publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of Invitation for Bids or request for proposal shall apply.

### American National Standards Institute Publications:

ANSI/ASQC Z1.4	- Sampling Procedures and Tables for Inspection by Attributes
ANSI/AHA A135.4	- Basic Hardboard
ANSI A208.2	- Medium Density Fiberboard (MDF)
ANSI/HPVA HP-1	- Hardwood and Decorative Plywood
ANSI/KCMA A161.1	- Performance and Construction and Standard for Kitchen and Vanity Cabinets.
ANSI/BIFMA X5.5	- Desk Products

(Copies may be obtained from <http://webstore.ansi.org/>, American National Standards Institute, Attn: Customer Service Department, 25 W 43<sup>rd</sup> Street, 4<sup>th</sup> Floor, New York, NY 10036.)

### American Society for Testing and Materials (ASTM) Standards:

ASTM D905 - Standard Method of Test for Strength Properties of Adhesives in Shear by Compression Loading.

## ASTM D3359 - Standard Test Methods for Measuring Adhesion by Tape Test

(Copies may be obtained from <http://www.astm.org/Standard/index.shtml>, American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

## National Electrical Manufacturers Association Standards Publications:

NEMA LD 3- High Pressure Decorative Laminate.

(Copies may be obtained from <http://nema.org/stds/>, National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1752, Rosslyn, VA 22209.)

### 3. REQUIREMENTS

3.1 Type I Dresser, Six Drawers. The dresser shall be constructed as described below and illustrated in Figure 1.

Same construction as Type III, style B night table (3.3) with the following changes:

1. Larger overall dimensions.
2. Six drawers instead of two.
3. Adjust drawer sizes to fit case.
4. Center vertical pilaster (25 x 19 mm solid exposed wood) or center partition panel is required .
5. Front glides shall be adjustable (3.9.5.6).

3.2 Type II Mirror, Wood Frame. Mirror shall be constructed as described below and illustrated in Figure 2.

Frame: Flat 600 mm W x 1150 mm H, shaped as illustrated. Each mitered corner shall be double dowel or splined. The frame shall be solid exposed wood (3.9.1.2).

Mirror glass: Glass shall be in accordance with (3.9.4). The glass shall be securely cleated in frame.

Mirror Back: Minimum 4.7 mm hardboard (3.9.1.5). The mirror back shall fit closely and shall be secured tightly secure to frame with screws.

Mirror hanging hardware: Shall be provided for mounting the mirror horizontally or vertically. Holes for mounting the hardware shall be pre-drilled.

3.3 Type III Night Table. Constructed as described below and illustrated in Figure 3.

Style A: Night Table, one drawer, open bottom compartment. 480 mm W x 400 mm D x 550 mm H overall, excluding glides. Back shall be finished as an exposed surface.

Top: 19 mm T (3.10.3). Top shall be fastened to end panel with nearly full depth screw cleats and screwed to top front and back rails. If end panels are solid wood, the screw cleats shall not be glued.

End panels: 19 mm T exposed wood (3.10.4) or plywood (3.10.6) with 3 mm chamfer on bottom outside edge.

Top front and back rails: 38 mm minimum X 19 mm unexposed wood (3.9.1.2). Double dowel or tenon top front and back rails to end panel.

Top front trim rail: 25 X 19 mm exposed wood (3.9.1.2) matched for color. Shape as shown in Figure 17.

Top front filler rail: 25 X 19 mm exposed wood (3.9.1.2).

Dust frame: Shall be in accordance with paragraph 3.10.9. Dust frame required under drawer.

Bottom panel: 19 mm, 3 ply oak faced plywood (3.10.6) or 19 mm thick exposed wood (3.10.4) dadoed into end panels.

Drawer: Drawer shall be in accordance with paragraph 3.10.8 with 105 mm H drawer front.

Side trim rails: 57 mm W X 19 mm T exposed wood (3.9.1.2). Rails shall be rabbeted and shaped as illustrated.

Base kick rail: 105 mm W X 25 mm T exposed wood (3.9.1.2). Base kick rail shall be beveled as illustrated. Kick rail shall be reinforced to end panel joints with glued screw cleats. Holes for nail glides shall be pre-drilled.

Back panel exposed back and exposed inside case: Panel shall be 19 mm T, minimum 3 ply, two sided, oak faced plywood (3.9.1.3), fully finished both sides. Panel shall be grooved into top and end panels and shall be recessed 12 mm from the back edges of the top and end panels. Panel shall extend to floor and shall have chamfered bottom edges to prevent splintering. Back panel in night table shall have a minimum 35 mm diameter wire access hole with grommet as shown in Figure 3.

Base kick rail: 105 mm W X 25 mm T exposed wood (3.9.1.2). Base kick rail shall be beveled as illustrated. Kick Rail shall be reinforced to end panel joints with 19 mm x 19 mm glued screw cleats.

Glides: Glides shall be nail type in accordance with 3.9.5.6.

Style B: Night Table, two drawers. 480 mm W x 400 mm D x 600 mm H overall, excluding glides.

Top: 19 mm T (3.10.3). Top shall be fastened to end panel with nearly full depth screw cleats and screwed to top front and back rails. If end panels are solid wood, the screw cleats shall not be glued.

End panels: 19 mm T exposed wood (3.10.4) or plywood (3.10.6) with 3 mm chamfer on bottom outside edge.

Top front and back rails: 38 mm minimum X 19 mm unexposed wood (3.9.1.2). Double dowel or tenon top front and back rails to end panel.

Top front trim rail: 25 X 19 mm exposed wood (3.9.1.2) matched for color. Shape as shown in Figure 17.

Top front filler rail: 25 X 19 mm exposed wood (3.9.1.2).

Drawer parting rails and dust frame: Shall be in accordance with paragraph 3.10.9.

Dust frame required under bottom drawer.

Drawers: Shall be in accordance with paragraph 3.10.8. Both drawer fronts shall be same size.

Drawer suspensions: Shall be in accordance with paragraph 3.9.5.5.

Drawer pulls: Shall be in accordance with paragraph 3.9.5.1.

Back panel behind drawers, exposed back: Panel shall be 19 mm T, minimum 3 ply, one side oak faced plywood (3.9.1.3), fully finished on outside back and sealed on inside face. Panel shall be grooved into top and end panels and shall be recessed 12 mm from the back edges of the top and end panels. Panel shall extend to floor and shall have chamfered bottom edges to prevent splintering.

Side trim rails: 57 mm W X 19 mm T exposed wood in accordance with paragraph 3.9.1.2. Side trim rails shall be rabbeted and shaped as illustrated.

Base kick rail: 105 mm W X 25 mm T exposed wood (3.9.1.2). Base kick rail shall be beveled as illustrated. Kick rail shall be reinforced to end panel joints with glued screw cleats.

Glides: Glides shall be nail type in accordance with 3.9.5.6.

#### 3.4 Type IV Chests.

Type IV, Style A, Size 1 - Three drawer chest designed to fit inside Type VI, Style A wardrobe or be freestanding. 480 mm W x 470 mm D x 710 mm H (See Figure 4).

Same construction as Type III, style B night table (3.3) with the following changes:

1. Larger overall dimensions.
2. Three drawers instead of two.
3. Adjust drawer sizes to fit case.

#### Type IV, Style A, Size 2 - Three drawer chest, free standing

760 mm W x 470 mm D x 750 mm H (See Figure 5).

Same construction as requirements as Type III, Style B night table (3.3) with the following changes:

1. Larger overall dimensions.
2. Three drawers instead of two.
3. Adjust drawer sizes to fit case, all drawers same size.

#### Type IV, Style B - Five drawer chest.

760 mm W x 470 mm D x 1150 mm H (See figure 4B).

Same construction as Type III, Style B night table (3.3) with the following changes:

1. Larger overall dimensions.
2. Five drawers instead of two.
3. Adjust drawer sizes to fit case, all drawers same size.

3.5 Type V Desks and Study Carrel. Desks and Study Carrel shall be constructed as described below and illustrated in Figures 7, 8 and 9.

Style A: Desk, left pedestal, three pedestal drawers with one kneespace keyboard drawer, finished back.

1070 mm W x 560 mm D x 750 mm H overall, excluding glides. (See Figure 7)

Top: 19 mm T (3.10.3). Top shall be attached to pedestal end panels and right knee drawer end panel with nearly full depth screw cleats. If end panels are solid wood, the screw cleats shall not be glued. A grommet shall be located at the top right corner of the back panel to allow cable to enter drawer for keyboard use.

Adjustable Glides: Two adjustable glides in accordance with paragraph 3.9.5.6 shall be provided on two front corners.

Pedestal construction: See below.

Pedestal width: 460 mm.

Pedestal end panels: 19 mm T exposed wood (3.10.4) or plywood (3.10.6). Bottom edge of end panels shall have a 3 mm chamfer.

Top front and back rails: 38 X 19 mm unexposed wood (3.9.1.2). Front rail shall be continuous across desk. Inside end panel shall be notched for front rail. Rails shall be securely attached to end panels using double dowels or tenons. Rails shall be securely screwed to top. Top front trim rails shall be 25 X 19 mm exposed wood (3.9.1.2). Shape shall be as illustrated. Rails shall be securely attached in position using glue and pin nails.

Top front filler rail: 25 X 19 mm exposed wood (3.9.1.2) and shall be matched for color. Rails shall be securely attached in position using glue and pin nails.

Drawer dust panels and bottom frames: Dust panels shall be provided under bottom drawer. Dust panel and bottom frame shall conform to requirements of 3.10.9. 45 x 45 x 90 mm corner blocks shall be glued and screwed at rear of case under bottom drawer bearer frame.

Drawers: Shall be in accordance with paragraph 3.10.8. All drawer fronts shall be the same size.

Drawer pulls: Shall be in accordance with paragraph 3.9.5.1.

Drawer suspensions: Shall be in accordance with paragraph 3.9.5.5.

Side trim rails: 57 mm W X 19 mm T exposed wood (3.9.1.2). Shape shall be as illustrated. Rails shall be securely attached in position using glue and pin nails.

Base kick rail (front): 105 mm W X 25 mm T exposed wood (3.9.1.2). Base kick rail shall be beveled as illustrated. Base rail shall be reinforced to end panel joints with glued screw cleats.

Back panels, exposed back: Panels shall be 19 mm T, minimum 3 ply, one side oak faced plywood (3.9.1.3), fully finished on outside back and sealed on inside face.

Panels shall be grooved into top and end panels and shall be recessed 12 mm from

the back edges of the top and end panels. Pedestal panel shall extend to floor. Back panel behind keyboard drawer shall extend to the bottom of the drawer dust frame. Both back panels shall have chamfered bottom edges to prevent splintering.

Right end panel: 19 mm T exposed wood (3.10.4) or plywood (3.10.6). The bottom edge of the end panels shall have a 3 mm chamfer.

End panel front trim rail: 57 X 19 mm T exposed wood (3.9.1.2). Shape shall be the same as trim rails on pedestal except without rabbet. See figure 5. Rail shall be securely attached in position using glue and pin nails. Joint shall be reinforced with a 44 mm W exposed wood (3.9.1.2), full height, corner block (see Figure 7 corner detail). Corner block shall be attached to end panel using dowel or tongue and groove and shall be reinforced with screws. Screw holes shall be plugged when shape B is used.

Knee drawer assembly: See below.

Top back rail: 38 X 19 mm T unexposed wood (3.9.1.2). Rail joints shall be reinforced with screws. Rail shall be securely screwed to top.

Knee drawer support panel: Plywood (3.10.6) with unexposed veneers. Panel shall be attached to end panels with nearly full depth 25 X 25 mm screw cleats. Nose front edge of cleats. Access holes in panel are permitted for reaching top attachment screws.

Drawer: Shall be in accordance with paragraph 3.10.8. Drawer front shall be 88 mm H. Drawer shall have fold down front for conversion to keyboard tray. Exposed wood block/rail shall be installed to fill spaces on sides and top of knee drawer front. Drawer knob shall be in accordance with paragraph 3.9.5.2.

Drawer suspensions: Shall be in accordance with paragraph 3.9.5.5.

Lower kneespace stretcher: 64 X 25 mm exposed wood (3.9.1.2).

Style B: Desk, right pedestal, three pedestal drawers with one kneespace keyboard drawer, finished back.

1070 mm W x 560 mm D x 750 mm H overall, excluding glides. (See Figure 8)

Same construction as Type V, Style A left pedestal desk (3.5) with the following change:

1. Desk is right pedestal.

Style C: Study Carrel, two shelf.

1070 mm W x 290 mm D x 760 mm H overall. (See Figure 9)

Tackboard: Tack board shall be mounted to inside of back panel under bottom shelf.

Tackboard shall be covered with neutral colored beige fabric, be flush with the bottom of the back panel and extend to within 3 mm of shelf and end panels.

Task light: See 3.9.5.12. Mount under bottom shelf.

Top: See 3.10.3. Top shall be fastened to top end and back panels with nearly full depth exposed wood screw cleats. If end panels are solid wood, screw cleats shall not be glued.

End panels: 19 mm thick exposed wood (3.10.4) or plywood (3.10.6). Solid wood and plywood construction shall not be mixed (shelf and end panels) in any one case. Fixed shelf to end panel joints shall be reinforced with nearly full depth screw cleats. Bottom edges of end panels shall chamfered 3 mm to prevent splintering.

Top front and back rails: 37 mm minimum x 19 mm T unexposed wood (3.9.1.2). Rails shall be attached to end panels using double dowel or tenons. Rails shall be securely screwed to top.

Shelves: 19 mm T exposed wood (3.10.4) or plywood (3.10.6). For wire access, a grommet shall be placed on right side of cabinet, immediately under fixed shelf. The shelf shall be 510 mm above desk surface.

Top front trim rail: 25 x 19 mm T exposed wood (3.9.1.2). Shall be beveled and rabbeted as illustrated. Rail shall be securely attached to end and top panel using glue and pin nails.

Side trim rails: 57 mm W x 19 mm T exposed wood (3.9.1.2). Rail shall be rabbeted and shaped as illustrated. Rails shall be attached by tongue and groove, dowel, glue and reinforce with screw cleats from behind, or glue and screw to end panels. Exposed screw holes shall be plugged and sanded flush.

Back panel: Both sides of the back panel shall be fully finished. Back panel shall be 19 mm T, 3 ply, two sided, oak faced plywood (3.9.1.3). Back panel shall extend to bottom of study carrel and shall have chamfered bottom edges to prevent splintering. Panel shall be grooved into top and end panels and recessed 12 mm from back edges of the top and end panels. A wire management hole (Min. 35 mm) with grommet shall be located at the lower right corner of the back panel.

Attachment to desk: Suitable concealed or semi-concealed hardware shall be provided to securely attach carrel to desk and prevent accidental disengagement.

3.6 Type VI Wardrobes. Wardrobes shall be constructed as described below and illustrated in Figures 10, 11 and 12.

Type VI, Style A: Wardrobe, two doors with lock hasp, one fixed shelf, clothes rod.  
(Accommodates Type IV, Style A, Size 1 three drawer chest)

915 mm W x 610 mm D x 1900 mm H. Figures 10 and 11.

Top: 19 mm solid exposed wood (3.10.4) or plywood, oak on inside face. (3.10.6).

Fixed shelf: 19 mm solid exposed wood (3.10.4) or plywood (3.10.6).

Bottom: 19 mm solid exposed wood (3.10.4) or plywood (3.10.6).

End panels: 19 mm T solid wood (3.10.4), segmented panel (3.10.5) or plywood (3.10.6). Solid wood and plywood construction shall not be mixed (top, shelf, end panel etc.) in any one case. End panels shall be attached to top, fixed shelves and bottom panel with dowels or tongue and groove. Bottom edges of end panels shall have a 3 mm chamfer.

Top front interior rails: 60 x 19 mm solid exposed wood (3.9.1.2).

Exposed interior screw cleats: Solid exposed wood.

Back panel: Both sides of the back panel shall be fully finished. Back panel shall be 19 mm T, 3 ply, two sided, oak faced plywood (3.9.1.3). Back panel shall extend to floor and shall have chamfered bottom edges to prevent splintering. Back shall be grooved into top and end panels.

Top front exterior rail: Solid exposed wood (3.9.1.2). Bottom front edge shall be beveled as illustrated.

Base kick rail: Solid exposed wood (3.9.1.2). Top edge shall be beveled as illustrated.

Doors: Plywood (3.10.6) as shown in Figures 10. Three outside edges of doors shall have 10 mm exposed wood band and shall be shaped as shown in Figures 17 and 18. Inside edge between doors shall have 3 mm exposed wood band with 2 mm radius. Uniform 4-6 mm gap required around and between doors.

Roller catches: See 3.9.5.10. Required as shown in Figure 11.

Hinges: See 3.9.5.9.1. Required as shown in Figure 11.

Mirror, plastic: See 3.9.4. Locate mirror on inside of left door, centered side to side, 125 mm down from the top of the door.

Towel bar: See 3.9.5.16. Towel bar shall be located immediately below mirror on left door.

Door pulls: See 3.9.5.1. Door pulls shall be located as shown in Figure 10.

Padlock hasp, scuff plates and rubber bumpers: See 3.9.5.14. Required as shown in Figure 10.

Clothes rod: 32 mm diameter solid wood. 50 mm clearance between rod and shelf. Shall be mounted in wood blocks glued and screwed in place.

Adjustable glides: See 3.9.5.6. Shall be mounted in two-way screwed wood corner blocks with T nuts as shown in Figure 18. Holes shall be bored in bottom panel for adjusting glides from inside the case. Holes shall be covered with removable, brown plastic plugs.

Type VI, Style B: Wardrobe, two doors with lock hasp, one fixed shelf, center partition, clothes rod, and three adjustable shelves.

Size 1 915 mm W x 610 mm D x 1900 mm H

Size 2 1065 mm W x 610 mm D x 1900 mm H. Figures 10 and 12.

Same construction requirements as Type VI, Style A wardrobe with the following exceptions:

1. Center partition: Shall have a nearly full depth, 19 mm T center partition panel with same construction as end panels. Panel shall be grooved into the top, back and bottom panels.
2. Shelf, fixed: Shelf shall be located on left side of center partition panel as shown in Figure 12.
3. Adjustable shelves: 19 mm T solid exposed wood (3.10.4) or plywood (3.10.6) as shown on Figure 12.
4. Adjustable shelf supports: See 3.9.5.4.

3.7 Type VII – Bookcases. Bookcases shall be constructed as described below and illustrated in Figures 13 and 14.

Style A - Bookcase, one fixed bottom shelf, two adjustable shelves.

900 mm W x 350 mm D x 915 mm H. Figure 13.

Top: See 3.10.3. Top shall be fastened to top end and back panels with nearly full depth exposed wood screw cleats. If end panels are solid wood, screw cleats shall not be glued.

Bottom panels, end panels: 19 mm thick exposed wood (3.10.4) or plywood (3.10.6). Solid wood and plywood construction shall not be mixed (shelf and end panels) in any one case. Bottom panel (fixed shelf) to end panel joints shall be reinforced with nearly full depth screw cleats. 47 x 47 mm corner blocks shall be glued and screwed at rear of case under bottom panel. Bottom edges of end panels shall have a 3 mm chamfer to prevent splintering.

Adjustable shelves: 19 mm T exposed wood (3.10.4) or plywood oak faced 2 sides (3.10.6). For wire access, a 19 to 25 mm clearance behind adjustable shelf (with shelf pulled forward) shall be provided.

Adjustable shelf supports: See 3.9.5.4.

Top front trim rail: 25 X 19 mm exposed wood (3.9.1.2) matched for color. Shape as shown in Figure 17.

Side trim rails: 57 mm W x 19 mm T exposed wood (3.9.1.2). Rail shall be rabbeted and shaped as illustrated.

Back panel: Both sides of the back panel shall be fully finished. Back panel shall be 19 mm T, 3 ply, two sided, oak faced plywood (3.9.1.3). Back panel shall extend to bottom of study carrel and shall have chamfered bottom edges to prevent splintering. Panel shall be grooved into top and end panels and recessed 12 mm from back edges of the top and end panels. A wire management hole (Min. 35 mm) with grommet shall be located at the lower right corner of the back panel.

Base kick rail: 105 mm W X 25 mm T exposed wood (3.9.1.2). Base kick rail shall be beveled as illustrated. Kick rail shall be reinforced to end panel joints with glued screw cleats.

Glides: Nail type, see 3.9.5.6.

Style B - Bookcase, one fixed shelf, four adjustable shelves.

900 mm W x 350 mm D x 1900 mm H. Figure 14.

Same construction as Type VII, Style A, Bookcase with the following exceptions:

1. Overall Height 1900 mm.
2. Four adjustable shelves.

3.8 Type VIII Wall Units, free standing. The wall units shall be constructed as described and illustrated in Figures 8, 9, 10, and 11 herein.

Style C: Wall unit, three drawers, recessed drop lid writing door, task light, one fixed and one adjustable shelf behind two doors with locking hasp.

760 mm W x 470 mm D x 1900 mm H. Figure 15.

Top, fixed shelf above drop lid writing door, end panels: 19 mm T solid exposed wood (3.10.4), or plywood (3.10.6). Solid wood and plywood construction shall not be mixed (shelf and end panels) in any one case. Top and fixed shelf to end panel joints shall be reinforced with nearly full depth screw cleats. Writing compartment shall be 355 mm H. Bottom edges of end panels shall have a 3 mm chamfer to prevent splintering.

Top front trim rail: 70 x 25 mm T exposed wood (3.9.1.2). Rail shall be beveled and rabbeted as illustrated. Rail shall securely attached in position with glue and pin nails. Trim rail to top panel joint shall be reinforced with a nearly full width, glued screw cleat.

Side trim rails: 57 mm W x 19 mm T solid exposed wood (3.9.1.2). Rail shall be attached to end panels with tongue and groove, dowel, or glue and screw. Screw holes shall be plugged and sanded flush. Area behind side trim rail immediately in front of drop lid writing door shall be filled with exposed face oak plywood or solid oak to present a flush surface.

Base kick rail: 105 mm W x 25 mm T exposed wood (3.9.1.2). Rail shall be beveled as illustrated. Base rail to the bottom drawer bearer frame joint shall be reinforced with nearly full width, glued screw cleat.

Adjustable shelf: 19 mm T solid exposed wood (3.10.4) or plywood (3.10.6). Shelf shall be full depth (minus 13 mm) to allow for routing of cables behind shelf.

Adjustable shelf supports: Shall be in accordance with paragraph 3.9.5.4. 145 mm clearance required above adjustable shelf when in upper-most position. (Measure between shelf and bottom edge of top front trim rail.)

Doors over upper compartment: Plywood (3.10.6) as shown in Figure 10. 45 mm wide solid exposed wood strip shall be rabbeted to the outside (hinge) edge of each door and shaped as shown in Figure 17. Top and bottom edges of doors shall have a 10 mm exposed wood band and shall be shaped as shown in Figures 17 and 18. Inside edge between doors shall have 3 mm exposed wood band with 2 mm radius. Uniform 4-6 mm gap required around and between doors.

Padlock hasp, scuff plates and rubber bumpers: See 3.9.5.14. Required as shown in Figure 15.

Roller catches for upper doors: See 3.9.5.10. One on each upper door.

Hinges: See 3.9.5.9.1. Required as shown in Figures 11 and 15.

Door and drawer pulls: See 3.9.5.1.

Drop lid writing door: 19 mm T plywood (3.10.6) as shown in Figure 15 with Decorative HP laminate on inside work surface and oak veneer on outside face. Outside edges of door shall have 10 mm exposed wood band and shall be shaped as shown in Figure 17. Door shall be recessed 80 mm from front edge of case.

Fixed panel behind drop lid writing door: 27-29 mm T solid exposed wood (3.10.4), or

plywood (3.10.6), OR 19 mm T exposed wood or plywood (3.10.6) panel with an 11 mm T exposed wood filler rail at the bottom front edge.

Flap stays for drop lid writing door: See 3.9.5.8, two per lid, properly adjusted by manufacturer. Flap stays shall be securely screwed to flap stay mounting rails. Through bolts stays to writing door with screws and insert nuts (3.9.5.7). Adhesive label shall be placed at back left corner of drop lid with illustrated adjustment instructions for flap stays.

Magnetic catch for drop lid writing door: One on drop lid writing door.

Flap stay mounting rail: (2) 44 mm W, full height, exposed wood, (3.9.1.2). Securely glue and screw in position behind side trim rails.

Stop rail above drop lid writing door: 44 mm W, full width exposed wood (3.9.1.2). Securely glue and screw to bottom of fixed shelf above drop lid writing door.

Top front ledge above top drawer: 120 x 25 mm exposed wood (3.9.1.2).

Drawer parting rails and dust frame: Shall be in accordance with paragraph 3.10.9. Dust frame required under bottom drawer.

Drawers: Three drawers are required. Shall be in accordance with paragraph 3.10.8.

Drawer fronts: 190 mm H. All drawer fronts are same size.

Drawer suspensions: Shall be in accordance with paragraph 3.9.5.5.

Back panel exposed back and exposed inside case: Panel shall be 19 mm T, minimum 3 ply, two sided, oak faced plywood (3.9.1.3), fully finished both sides. Panel shall be grooved into top and end panels and shall be recessed 12 mm from the back edges of the top and end panels. Panel shall extend to floor and shall have chamfered bottom edges to prevent splintering. Back panel in night table shall have a minimum 35 mm diameter wire access hole with grommet as shown in Figure 3.

Wire access holes: Three 38 mm dia. holes shall be bored in the following locations. One in center bottom area of upper compartment back panel, one near lower right corner of lower compartment back panel and one in right rear of fixed shelf between upper and lower compartments. All holes shall be insulated with grommets (3.9.5.11).

Top front trim rail: 70 x 25 mm T exposed wood (3.9.1.2). Rail shall be beveled and rabbeted as illustrated. Rail shall securely attached in position with glue and pin nails. Trim rail to top panel joint shall be reinforced with a nearly full width, glued screw cleat.

Side trim rails: 57 mm W x 19 mm T solid exposed wood (3.9.1.2). Rail shall be attached to end panels with tongue and groove, dowel, or glue and screw. Screw holes shall be plugged and sanded flush. Area behind side trim rail immediately in front of drop lid writing door shall be filled with exposed face oak plywood or solid oak to present a flush surface.

Base kick rail: 105 mm W x 25 mm T exposed wood (3.9.1.2). Rail shall be beveled as illustrated. Base rail to the bottom drawer bearer frame joint shall be reinforced with nearly full width, glued screw cleat.

Light: In accordance with paragraph 3.9.5.12. Light shall be located on bottom of fixed

shelf, against rear of cabinet in writing compartment.

Glides: Adjustable type in accordance with paragraph 3.9.5.6, four per case.

Style E: Wall unit, computer workstation, three drawers, minimum two adjustable shelves and pull out tray for keyboarding/writing behind upper doors, and outlet box.

840 mm W x 610 mm D x 1900 mm H. Figure 16.

Same construction as Type VIII, Style C, wall unit with the following exceptions

1. The upper compartment shall contain two adjustable shelves.
2. Delete drop lid writing door, fixed panel behind drop lid writing door, filler rail above top drawer.
3. Add pull-out worksurface to accommodate keyboard/mouse and for writing. 19 mm T plywood (3.10.6) as shown in Figure 16 with Decorative HP laminate on top face and oak veneer on bottom face. With raised solid exposed wood side and back trim to help retain items when worksurface is pushed back into cabinet. Suspension (3.9.5.5) and pull knob (3.9.5.2) required.
4. Delete light.
5. Add outlet box (3.9.5.13) attached to lower right corner of back panel above pull out worksurface.
6. Bore two 38 mm dia. holes in the following locations in the upper compartment. One in lower right corner of back panel above bottom panel, near outlet box. One in the center rear of bottom panel to accommodate keyboard cable.

### 3.8.1 Type IX TV cabinet, mobile with removable casters.

915 mm W x 455 mm D x 760 mm H (with casters), 710 H (without casters). Figure 19.

Cabinet shall be constructed as shown in Figure 19.

### 3.8.2 Type X Drop leaf tables.

Style A: Square top table

915 mm x 915 mm x 760 mm H (Figure 20)

Style B: Round table

915 mm diameter x 760 mm H (Figure 20)

Tables shall be constructed as shown in Figure 20.

### 3.9 Materials. Overall and component part dimensions are in millimeters. (See 6.2)

Regulatory requirements. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580, as amended, to the maximum extent practicable.

Formaldehyde emission requirements. All plywood, wood veneered and plastic laminated panels shall meet the formaldehyde emission requirements in ANSI/HPVA HP-1.

### 3.9.1 Wood, wood products.

3.9.1.1. Forest Certification. A minimum of 25% (based on cost) of the solid wood used in furniture components shall be certified by a recognized forest management system such as American Tree Farm System, FSC, or SFI.

3.9.1.2 Wood species permitted. Exposed solid wood shall be Oak (red or white) or Ash (white). Exposed plywood veneer shall be red or white oak. Drawer sides, backs and bottoms shall be Birch or Maple. Unexposed wood shall be suitable hardwood.

3.9.1.2 Solid wood requirements. Shall be uniformly kiln dried to 5-8 percent moisture content without drying defects. All parts shall be equalized to a 5-8 percent moisture content at time of assembly. Finger jointed lumber is not acceptable except as specified in 3.10.4 and in interior lumber core of plywood. Glued up stock (3.10.4) is acceptable provided parts are selected for color and grain uniformity.

(Exposed parts) Bright, well sanded. Brashness, discoloration's, worm holes, splits, shake, or other defects which could adversely affect appearance or serviceability, are not acceptable.

(Unexposed parts) May contain some defects such as pin-knots, sapwood or mineral streaks, provided the strength is not affected.

3.9.1.3 Hardwood plywood. All plywood shall be multi-ply veneer core or minimum 5 ply lumber core construction, made in accordance with ANSI/HPVA HP-I and as specified herein. Glue bond shall be type II or better. Wood used in plywood construction shall conform to 3.9.1.2. Plywood used for exposed components (e.g. drawer fronts, end panels, back panels and exposed case interiors) shall have flat cut, book matched, Grade A or better face veneers and Grade B or better back veneers. Unexposed plywood components shall be Grade B/B or better. Drawer sides, backs and bottoms shall be Grade B/B or better plywood. Cores shall be Grade C or better.

### 3.9.1.4 Open

3.9.1.5 Hardboard. Shall be in accordance with ANSI A 135.4, Class 2 (standard), SIS.

3.9.2 High pressure laminate (HPL). Decorative face sheets shall conform to HGS series with satin finish in LD-3. Finish shall be as specified in 3.3.1. The backing sheet shall be minimum 0.508 mm thick and shall provide for a balanced panel. HPL shall match FSS-L-01008 English Oak or FSS-L-01027 Natural Oak as specified.

3.9.3 Adhesive. Block shear strength: 19,300 kPa minimum. See test procedure paragraph 4.4.6. Hardwood plywood adhesive, Type II bond or better (HPVA HP-I).

### 3.9.4 Mirrors.

Glass (used in Type II mirror). Mirror quality plate glass, 5 mm T (+1.4,-0.7 mm). Best commercial practice shall be used for applying silvering, copper plate and protective

paint. Distortion free reflected image required.

Plastic (used in wardrobes). 400 x 600 mm, 3.2 mm thick, non-breakable acrylic, beveled edges, with holes for mounting with plastic rosettes.

### 3.9.5 Hardware.

3.9.5.1 Drawer and door pulls. Continental Brass, Pull: P-13024-SP/BPC-13024 BED, Finish: BRT HDN HLT or equal. See 6.3.

3.9.5.2. Pull knob for keyboard shelf on Type VIII wall unit, computer workstation. Brass, J.G. Edelen #3057 or equal.

3.9.5.3 Open.

3.9.5.4 Adjustable shelf supports. Heavy duty cadmium or nickel-plated steel tab supports. Stem: 5.5 mm D X 9.5 mm L minimum. Support area: 13 mm W minimum. Supports shall be inserted into prebored holes in end panels and/or partitions. Minimum five level adjustability per shelf, spacing 32 mm (+6.5 mm) apart O.C.

3.9.5.5 Drawer suspensions. Steel side guide, which provides smooth, quiet drawer operation. The drawer suspension shall be self closing.

Outstops: Integral on drawer suspensions. Drawers shall be easily removable without tools.

Instops: Integral on drawer suspension or securely glue and screw two drawer stops behind each drawer. With either option, drawer shall be installed so that it does not stop on drawer front.

Finish on suspensions: Dark brown or black, baked epoxy.

Minimum drawer opening: Minimum 75 percent usable drawer opening required as measured from front face of parting rail to inside face of drawer.

Suspension mounting rails: Shall be wide and long enough to fully support suspension and accommodate all mounting screws. Mounting rails shall be securely screwed in place.

Test requirements: See 4.4.2.

### 3.9.5.6 Glides.

Glides, nail type. Single or three prong stainless steel, nylon, or polypropylene as large as base or legs permit. Prong length, 17 mm minimum. Holes for nail glides shall be pre-drilled.

Glides, adjustable type. Unless otherwise specified, minimum M-8 (5/16") x 25 mm stem, stainless steel or nylon base. Heavy duty type. Mount in minimum 47 X 47 mm two-way screwed wood corner blocks with T nuts.

3.9.5.7 Insert nut. Flat head, satin brass finish, M-4 (No. 8), Stafast 83210 KD or equal.

3.9.5.8 Flap stay, drop lid. Hafele 365.74.713 or equal.

3.9.5.9 Hinge, piano type for drop lid door and drop leaf tables. Minimum 0.87 mm continuous, steel hinge, antique bronze finish. Screw heads shall be flush with hinge surface.

3.9.5.9.1 Hinges for wardrobes and wall units. 70 mm, 0.090" material thickness, minimum 270 degree opening, satin brass finish, J.G. Edelen #374 or equal. Hinges shall be attached with two M-4 (No. 8) through-bolts and insert nuts (3.9.5.7) per leaf.

3.9.5.10 Roller catch for wardrobe and upper wall unit doors. Heavy duty spring catch with 18 mm dia. nylon roller, brass finish, J.G. Edelen #248 or equal.

3.9.5.11 Grommet for wire access holes. Black or dark brown plastic grommet.

3.9.5.12 Light fixture for wall unit and study carrel. 15 Watt fluorescent light, with 3-prong outlet, on-off rocker switch mounted on case, minimum 1.5 M cord, GE #16546 or equal.

3.9.5.13 Outlet box for wall unit. Four 3-prong outlets, on-off rocker switch mounted on case, breaker/reset, minimum 1.5 M cord, black finish, Specialty Lighting #PH401-SW or equal.

3.9.5.14 Padlock hasps, scuff plates and rubber bumpers.

Padlock hasp shall be "L" shaped steel with satin brass finish. One hasp shall be attached to each door with M-4 (No. 8) through-bolt with insert nut (3.9.5.7) and one counter sunk screw as shown in Figure 15. J.G. Edelen #6B or equal.

Scuff plates (one per door) shall be 40 x 85 mm steel with satin brass finish to match the hasp. One required on each door, each plate secured with 4 counter-sunk brass finished screws. J.G. Edelen #841 or equal.

Rubber bumpers shall be 16 mm x 6 mm with metal sleeve, screwed to end panels to prevent padlock hasp from striking the panel. J.G. Edelen #771 or equal.

3.9.5.15 Ball catch for drop front keyboard drawer on desk. Ball catch shall brass construction. J.G. Edelen #173 or equal.

3.9.5.16 Towel bar for wardrobes. Chrome plated with minimum 350 mm L usable bar length. J.G. Edelen #400, Best Value Bathware #8500 or equal.

3.9.5.17 Slide support for drop leaf tables. Two piece, silver anodized aluminum slide assembly. Slide support - 360 mm L, Slide guide - 180 mm L. J.G. Edelen SL00180A 0180AL1 or Hafele 642.40.008 or equal.

3.10 Construction. Construct furniture so that it complies with written requirements and figures. If there is any conflict between text and figures, text governs.

3.10.1 Joinery. When item descriptions do not contain joinery requirements, use the following. Mortise and tenoned, tongue and grooved or doweled. KD fasteners are not acceptable.

Thickness of tenons, dowels, tongues: Not less than 1/3 thickness of member being joined or less than 6.5 mm.

Length of tenons, tongues: Minimum three times its thickness unless limited by size of members being joined. (When using tenons in chairs and panel headboard, they must fit tightly on four sides. Minimum tenon length 32 mm, unless limited by size of members).

Width of tenons, tongues: As wide as practicable.

Depth of groove for drawer bottom: 6.5 mm minimum.

Length of dowels: Six times its diameter unless limited by size of members being joined.

Dowel spacing: Panels/rails 150 mm W or less, two dowels minimum, spaced as far apart as practicable. Panels over 150 mm W, three dowels minimum, spaced as far apart as practicable, 100 mm apart minimum.

Use "floating" joints where necessary to allow for normal shrinking and swelling of solid parts.

For example: Do not glue screw cleats across grain of solid wood panels. Use round or pan head screws only thru enlarged or slotted holes in cleats. Use glued screw cleats when cleat runs with grain of panel or rail. Construct to allow for movement when solid end panels are used.

Machine parts so all glued joints are tight. Securely glue all "non-floating" joints. Use wood glue blocks/screw cleats where necessary to reinforce joints. Secure rabbeted case backs with glue and tapping screws spaced 230 mm apart maximum, around perimeter, across fixed shelves/rails, and one at each corner.

3.10.2 Tolerances. Where tolerances are not specified, the following tolerances are permitted: Overall and component dimensions are in millimeters. (T = thickness)

Overall dimensions: +25, - 6 mm

Component part dimensions: +3, -2 mm

Plywood, Hardboard thickness: +2, -1 mm

3.10.3 Tops. Tops shall be 19 mm T, have a decorative HPL and backing sheet (3.9.2) securely bonded to plywood (3.9.1.3) core to produce a balanced panel. Edges shall be core banded with 10 mm W exposed lumber. Use wider banding where necessary to

accommodate radiused corners or edges. Maximum allowable sag or warp in tops after assembly: 0.0014 mm/mm of length/width. Top overhang on side and back edges, flush to 1.5 mm, even on both sides.

3.10.4 Solid edge-glued panels. Made up of full length, tightly edged-glued wood strips, 32 - 150 mm W (edge strips 13 mm W minimum). Wood shall be selected for color and grain uniformity.

Alternatively, solid panels shall be constructed of random length pieces (150 -760 mm), finger jointed together into continuous random width (25 - 100 mm) strips. Finger joints shall be tight, well glued with no gaps permitted on face, back or edge. Panel finish shall have a uniform appearance. Wood shall be selected for color and grain uniformity.

Distribution of random length pieces in each panel:

150-250 mm long: 20% of panel maximum  
400-760 mm long: 60% of panel minimum

Distribution of random width pieces in each panel:

25-32 mm wide: 10% of panel maximum  
38 mm minimum, average width

Do not mix finger jointed and non-finger jointed end panels on any one piece. Finger jointed panels are not permitted for chair seats.

3.10.5 Segmented solid end panels. Constructed with five solid wood panel segments with front and back stiles. Wall unit stile width shall be 55 mm. Wardrobe stile width shall be 90 mm. Secure together with glued tongue and groove joints. "V" grooves shall be cut between each end panel component.

3.10.6 Plywood panels. 19 mm T plywood (3.9.1.3). Exposed wood veneer shall be used on exposed plywood faces, including both faces of shelves and doors. Select lumber core on exposed parts for color uniformity. Finish shall match rest of case. Exposed edge of lumber core panel shall be one continuous piece or edge. All exposed edges shall be banded as specified.

3.10.7 Legs and posts. Exposed wood (3.9.1.2). Shall be constructed of solid wood or glued-up of two full length pieces with joint line on the side of the post. Glued up stock shall be matched for color and grain.

3.10.8 Drawers:

Front: Drawers shall have replaceable drawer fronts. Drawer fronts shall be made of Solid wood (3.10.4), minimum 19 mm T, shape as illustrated. Minimum 3.5 mm drawer front overlap on rails and molding. The drawer shall be designed so the space around drawers has a uniform, balanced appearance.

Sides and back: Minimum 11 mm, solid wood or minimum 7 ply laminated construction. No voids permitted in core. Difference between drawer side height and drawer opening shall be between 9.5 - 19 mm. Drawer back may be 3.5 mm maximum lower than-drawer sides.

Drawer pulls: In accordance with paragraph 3.9.5.1.

Drawer length: Space between back of drawer and case back, 50 mm maximum.

Drawer Bottom: Hardwood plywood (3.9.1.3). Drawer bottom thickness shall be 6 mm minimum. Drawer bottoms shall be capable of supporting 125% of the rated load of the drawer glides.

Joinery: Multi-finger dovetail joints shall be used to join the drawer sides to the drawer back and interior drawer front panel. The replaceable drawer front shall be screwed to the interior drawer front panel. The drawer bottom shall be grooved into front, sides and back and reinforced with rubbed-in-place glue blocks or a continuous bead of hot melt adhesive.

Drawer suspension: Shall be in accordance with paragraph 3.9.5.5.

Drawer action: Drawer shall operate with smooth, quiet operation without binding.

Drawer side play: See test in 4.4.7.

Install drawer so that it does not stop on drawer front.

3.10.9 Parting rails and bottom dust frame. Front and back parting rails required between each drawer, double doweled or tenoned to end panels. Four sided dust frame and panel required under bottom drawer(s).

Front parting rail: 44 mm minimum X 19 mm T, exposed wood (3.9.1.1) selected for color uniformity and stained to match exterior.

Back parting rails: 37 mm W minimum X 19 mm T, unexposed wood (3.9.1.2).

Bottom dust frame: Front, back and side rails, 37 mm W minimum X 19 mm T, tenoned together. Dust panel, minimum 5 mm T, plywood or hardboard (3.9.1.5) grooved four sides into frame.

### 3.11 Finish, wood.

3.11.1 Exposed surfaces. All exposed exterior and interior parts shall be smoothly sanded and cleaned. All solid edge glued panels over 100 mm W, shall be completely coated with a moisture-retarding solution (Nelsonite No. 30B02 or equal). Finish shall match as closely as possible the overall color of the following Standard Samples: FSS-L-01008 English Oak, FSS-L-01027 Natural Oak. Finish shall be as specified, see 6.1(c). Stain to equalize color. Suitable natural or synthetic top coat, 2 coat process with adequate "build", 25 degree to 45 degree sheen, semi-open pore finish. Final finish shall pass finish tests in 4.4.5.

Drawer bodies: Drawer bodies shall be dipped or sprayed with a moisture-retarding solution or one coat of sealer and one coat of natural or synthetic top coat shall be

applied. Drawer suspensions shall not have any finish coatings.

3.11.2 Unexposed wood parts. Parts shall be machined smooth and clean. All solid edge glued wood end panels shall be completely coated with a moisture-retarding solution (Nelsonite No. 30B02 or equal) before drawer suspensions are installed.

3.12 Identification marking. Each item shall be marked permanently, neatly and legibly, either with a label or with contrasting ink, with the following information: National Stock Number, Date of Manufacture, Name of Manufacturer, wood finish: (English Oak, or Golden Oak), Contract Number, purchase description number. Label or mark shall not oversprayed by finishing material. Label shall not be removable by hand without defacement after being affixed for four hours.

3.13 Hardware list. Items with drawer pulls, door knobs, hinges, shelf supports, or any hardware, etc., shall have a hardware parts list. List shall include: drawing of part, part name and manufacturer number, and name and address of part manufacture.

List shall be securely glued to an unexposed surface of each applicable case piece. List shall not be removable after 4 hours without defacement.

3.14 Workmanship. Method of machining, construction, veneering, laminating, joinery, gluing, assembly, and drawer/door/refectory table fit and action shall conform to best commercial practice for furniture used in homes and dormitories. Joints shall be tight, well fitted and securely glued. Veneers shall be securely and smoothly applied without gaps or filler.

All surfaces exposed to view in normal use (including drawer parts and interior areas behind doors) shall be smoothly machined and sanded. Dovetails shall be tight and well fitted. Units shall be free of splits, splinters, sharp corners, and sharp edges to prevent injury to personnel or damage to their clothing. The application of materials, drying time, cleaning, and rubbing shall be controlled to produce items of quality appearance.

Gap around drawer fronts shall be uniform. Drawer faces shall be even and parallel with each other. Drawers shall operate smoothly and quietly and shall not interfere with each other or have excessive side play.

All surfaces (including drawer parts, underside of shelves and drawer partitions) shall be smoothly machined and sanded. Unexposed surfaces shall be smooth and clean.

The natural grain of the wood shall not be clouded by the finishing materials. The application of materials, drying time, sanding, cleaning, and rubbing shall be controlled to produce items of uniform finish without sags, runs, orange peel, overspray or other defects detrimental to a smooth quality appearance. Unexposed parts shall be finished as required. Drips and runs on unexposed parts is not acceptable.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein.

Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that the supplies and services conform to prescribed requirements.

4.2 First article inspection and testing. The required samples shall be inspected and tested by the contractor for all the requirements of the contract. A record of this inspection and test, including certificates of conformance for materials, shall be submitted to the government for approval. The Government reserves the right to witness the contractor's inspection and tests. The sample required for first article inspection and testing shall be examined and tested for all the requirements of this purchase description. The samples shall be manufactured in the same manner, using the same materials, equipment, processes, and procedures as used in regular production. All parts and materials, including packaging and packing, shall be obtained from the same source of supply as used in regular production. First article samples shall be used as manufacturing standards. Manufacturer shall maintain first article samples until the last order is shipped, received, and accepted. New first article samples are required for each new contract. Old first article samples shall not be reused.

4.2.1 Sampling of production items for inspection and acceptance. Sampling for inspection and acceptance shall be performed in accordance with the provisions set forth in ANSI/ASQC Z1.4, except where otherwise indicated.

4.3 Inspection levels and acceptable quality levels (AQL's). Inspection levels and acceptable quality levels expressed in percent units defective shall be as shown below.

Acceptable Quality Levels in Accordance with ANSI/ASQC Z1.4.

For Examination in	Inspection Level	AQL's
4.3.2	II	4.0
4.3.3	II	4.0
4.3.4	S-2	4.0

4.3.1 Open.

4.3.2 Dimensional examination. Inspection shall be made for compliance with dimensions specified. Any dimension not within tolerance specified shall be classified as a defect.

4.3.3 Visual examination. Examine items for compliance with all requirements in section 3, paying close attention to 3.14 Workmanship. Score areas of non-compliance with requirements as defects.

4.3.4 Packaging, packing marking examination. Examine items for compliance with requirements stated in this document and the contract. Score areas of non-compliance with requirements as defects.

4.4 Tests. Testing is required for first article inspection. Test results shall be not more than one year old at time of First Article Inspection. Subsequent shipments during the contract period are not required to be tested, however, the component supplier shall certify that these shipments will meet all applicable test requirements. Retest items in accordance with applicable test requirements whenever there is a change in the construction, materials or hardware since first article testing was performed. For example if the drawer suspension supplier is changed after first article testing is completed, the X 5.5 Out stop test, A 161.1 Drawer Cycle Test 10/, 11/, 12/ and 4.4.7 Drawer side play test shall be performed again. Finish and adhesive tests may be performed before first article inspection. Failure to comply with test requirements will be cause for rejection.

4.4.1 ANSI Desk Product Test X5.5. Failure to comply with test requirements will be cause for rejection. Tests shall be performed at furniture manufacturer's plant or at an independent test laboratory. Test certification from suspension supplier will not be acceptable.

Required test paragraphs in X5.5 →	4	5	6	7	9	8	10	16	16	Test per par. 4.4.4
Type I - Dresser, Six Drawers		X	X	X			X <u>1/</u>			
Type V, Style A or Style B – Desk		X	X	X			X <u>1/</u>	X <u>2/</u>		
Type V, Style C Study Carrel		X			X					
Type VII, Style B - Bookcase										X
Type VIII, Style E – Wall Unit		X					X	X <u>2/</u>		X
Type IX, TV Cabinet (with casters installed)	X	X	X	X		X			X	
Type X, Style B – Drop Leaf Table, Round Top	X					X				

1/ Required only if drawer suspension is different from suspension used on Type VIII, Style E Wall Unit.

2/ Test for horizontal motion only.

4.4.2 Open.

4.4.3 Open.

#### 4.4.4 Shelf/top static load test.

Preparation: Place complete unit on a flat level surface. Install adjustable shelf mid-way in adjustment range. When unit has more than one adjustable shelf, space shelves evenly. Place a mass, that exerts an 89 N force, on both ends of each adjustable shelf for 5 minutes to insure that the shelf supports are fully engaged. Remove this force. Place dial indicators, or equivalent measuring device at the front edge of the top panel and each adjustable shelf. Take initial readings.

Test: Apply an evenly distributed, non-rigid mass that exerts a 0.578 N/mm force on the top panel and each adjustable shelf at the same time. Maintain force for 30 minutes. Record deflections while under load. Remove force.

Acceptance standards: Maximum deflection for top and each shelf while force is being applied: 0.005 mm per mm of shelf/top length. End panels shall not bow while force is being applied to the bookcase. Structural damage to the case, shelves or shelf supports that affect serviceability or could cause personal injury to the user is not acceptable.

4.4.5 Finish test and requirements. (See 3.3.2) The following tests shall be performed on a sample panel finished in the same manner as units are finished in production. Perform all finish tests at first article inspection and again one year after the start of the schedule contract period. Perform test (d) once a month during the contract period. All test panels shall be produced from finish materials currently being used in production. All samples tested shall meet the following test requirements.

Finish Shrinkage and Heat Resistance Test. Finish panel shall comply with ANSI/KCMA A161.1, 9.1 Shrinkage and Heat Resistance.

Finish Hot and Cold Check Resistance Test. Finish panel shall comply with ANSI/KCMA A161.1, 9.2 Hot and Cold Check Resistance.

Finish Chemical Resistance Test. Finish panel shall comply with ANSI/KCMA A161.1, 9.3 Chemical Resistance

Finish Detergent and Water Resistance Test. Finish panel shall comply with ANSI/KCMA A161.1, 9.4 Detergent and Water Resistance.

Finish Adhesion Test. Finish panel shall comply with ASTM D3359, Method B. After performing finish adhesion test, finish shall have a 3B or better Classification (% of Area Removed). Cross Cut blade cutter spacing shall be determined as specified in ASTM D3359.

Model P-A-T Paint Adhesion Test Kit used to perform ASTM D3359 and a copy of the test method is available from Paul N. Gardner Company, Inc., 316 N.E. First Street, Pompano Beach, FL 33060, <http://www.gardco.com/pages/adhesion/PATkit.cfm#cutter>.

4.4.6 Test for adhesives.Table III. Test for adhesives

Component	Characteristic	Requirement reference	Test method
Adhesive	Block shear test	3.1.4	ASTM D 905

Rerun test if all three of the following criteria are met: the average shear strength of all samples is below 19 300 kPa; there is a 10 percent or greater difference between high and low specimen values; and at least one test specimen broke at more than 19 300 kPa.

Disregard a test specimen in computing the average if it breaks at less than 19 300 kPa; and it has 50 percent or more wood failure.

4.4.7 Open.

## 5. PACKAGING, PACKING, MARKING

Package, pack and mark shipping containers in accordance with the contract or order.

## 6. NOTES

6.1 Ordering data. Purchasers should select any desired options offered herein and procurement documents should specify the following:

- (a) Title, number and the date of this purchase description.
- (b) Group, item number.
- (c) Wood finish. (English Oak, or Natural Oak)
- (d) Which style, if any, desired.

6.2 SI - English unit equivalents.

1 m <sup>2</sup> (square meter)	= 1.19617 yd <sup>2</sup>
1 kg/m <sup>3</sup> (kilogram/cubic meter)	= 0.06242 lb.(mass)/ft <sup>3</sup>
1 mm(millimeter)	= 0.03937 inch (thickness of dime)
1 m(meter) = 1000 mm	= 1.0936 yard (39.37 in)
1 N(Newton)	= 0.225 lb. (force)
1 g(gram)	= 0.0022 lb. (mass)
1 g(gram)	= 0.03527 oz.(mass avoirdupois)
1 kPa(kilo Pascal)	= 0.14514 lb(force)/in <sup>2</sup> (PSI)
1 g/m <sup>2</sup> (gram per square meter)	= 0.02949 oz/yd <sup>2</sup>
	or
	0004426 oz/linear yard (54" W)
1°C(degree Celsius)	= 1.8°F (degrees Fahrenheit)

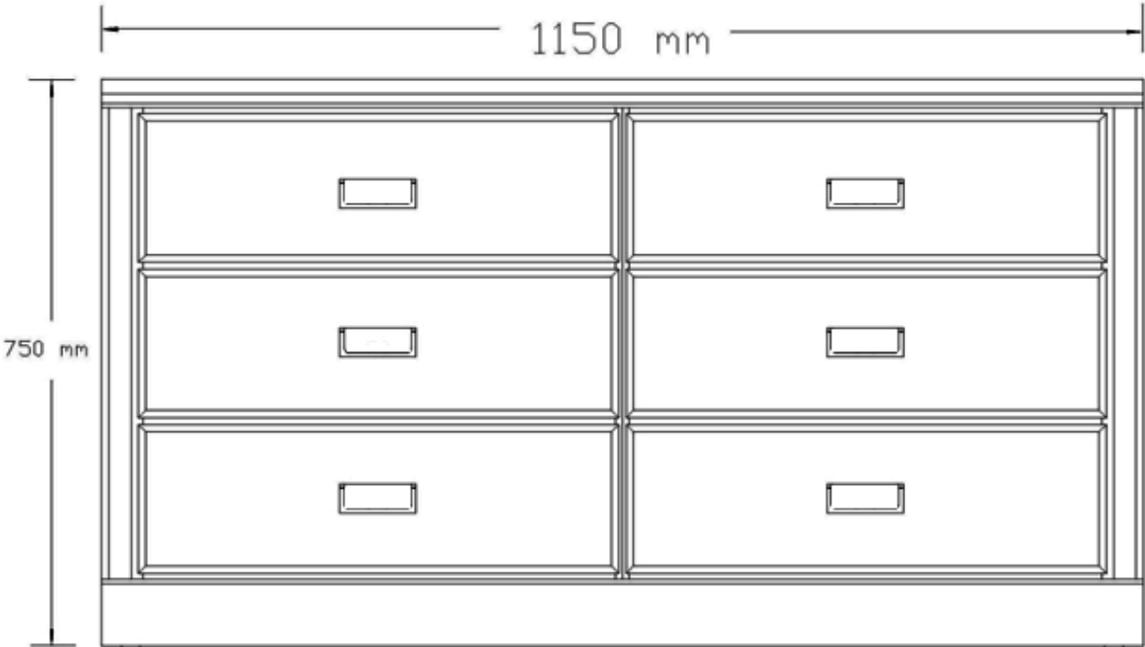
To convert SI units to English units, multiply SI measurement by the appropriate English conversion factor listed above. See example below:

$$900 \text{ mm} \times 0.03937 \text{ in./mm} = 35.43 \text{ inches.}$$

Type I Dresser

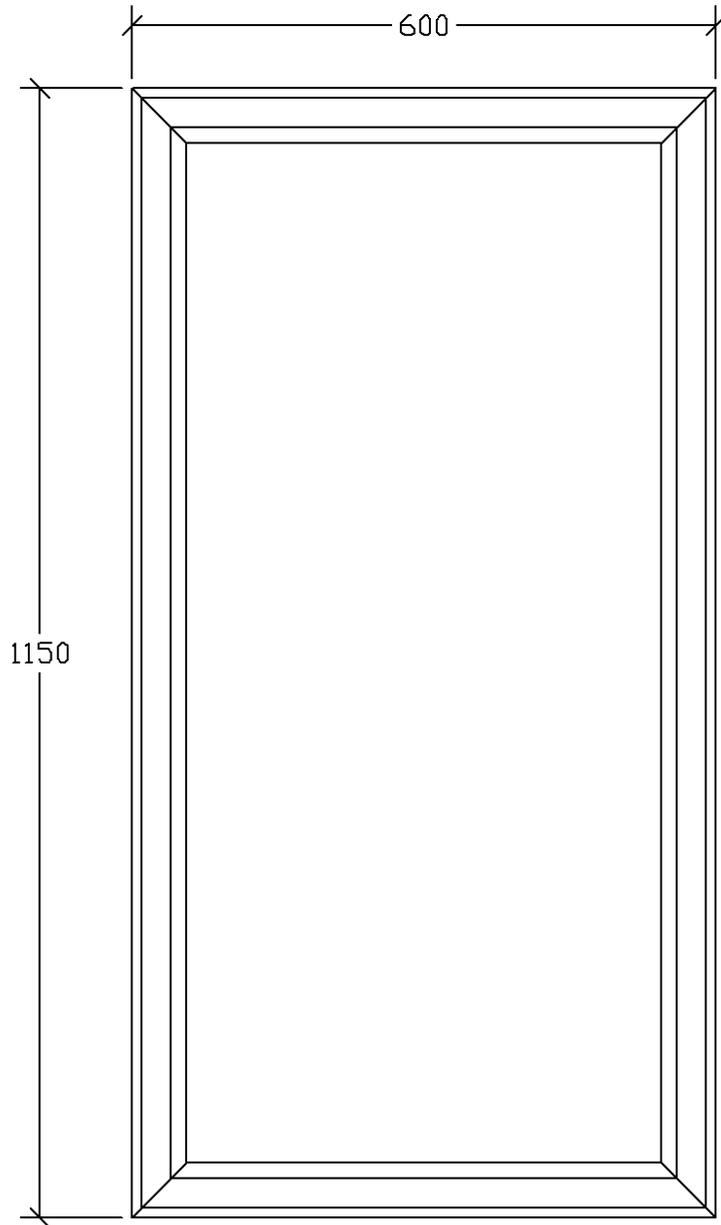
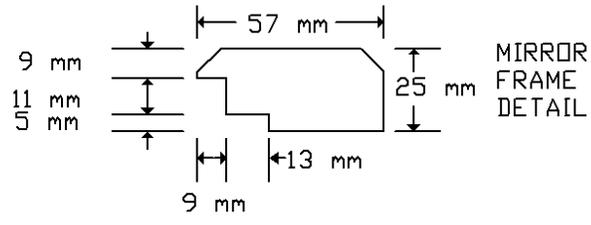
To convert Celsius temperature to Fahrenheit temperature use the conversion equation:  $(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$ . See example below:

$$(20^{\circ}\text{C} \times 1.8) + 32 = 68^{\circ}\text{F}$$



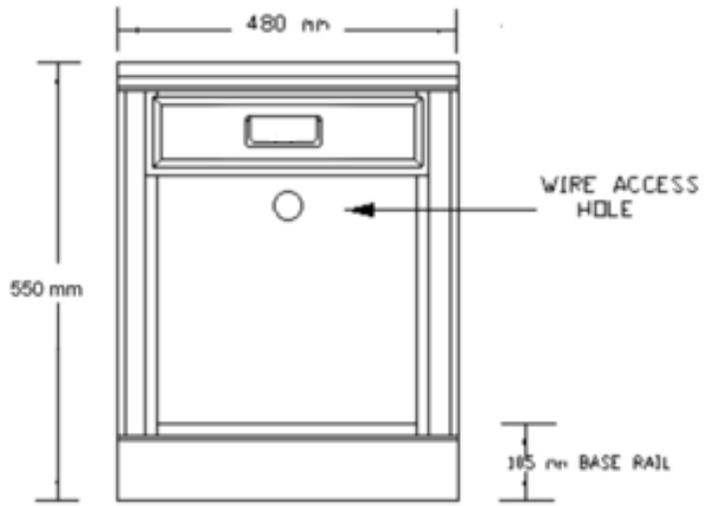
TYPE 1 DRESSER  
SIX DRAWERS

FIGURE 1

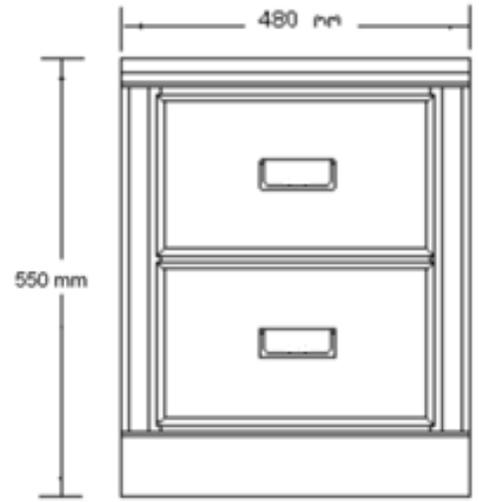


TYPE II MIRROR

FIGURE 2

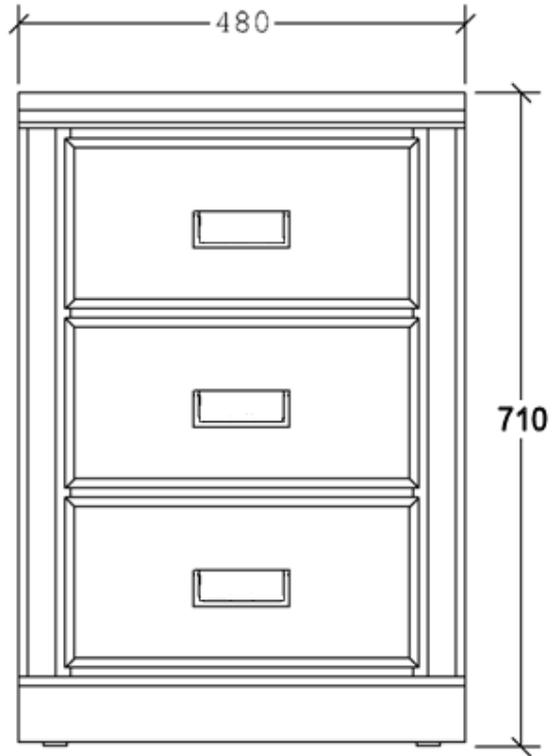


TYPE III, STYLE A, NIGHT TABLE  
1 DRAWER, OPEN BOTTOM COMPARTMENT



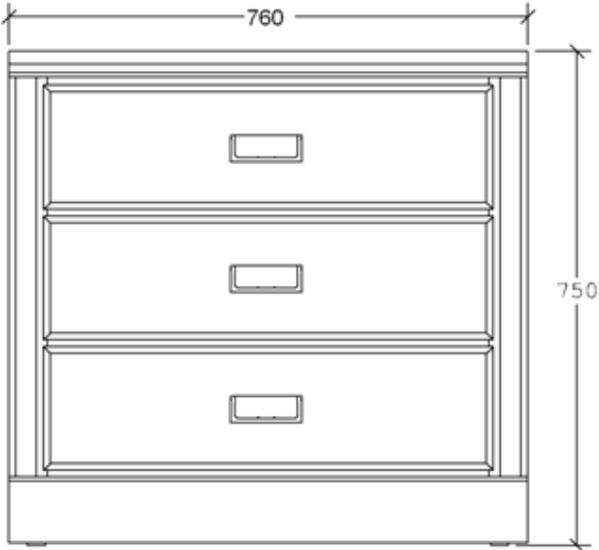
TYPE III, STYLE B,  
NIGHT TABLE, 2 DRAWERS

FIGURE 3



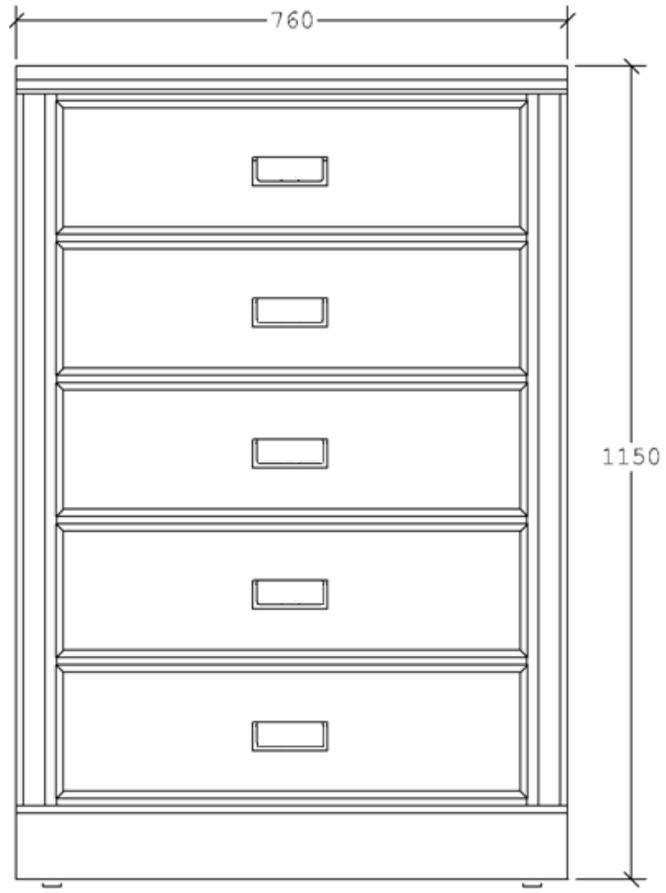
TYPE IV, STYLE A, SIZE I  
3 DRAWER CHEST  
(DESIGNED TO FIT INSIDE TYPE VI, STYLE A WARDROBE)

FIGURE 4



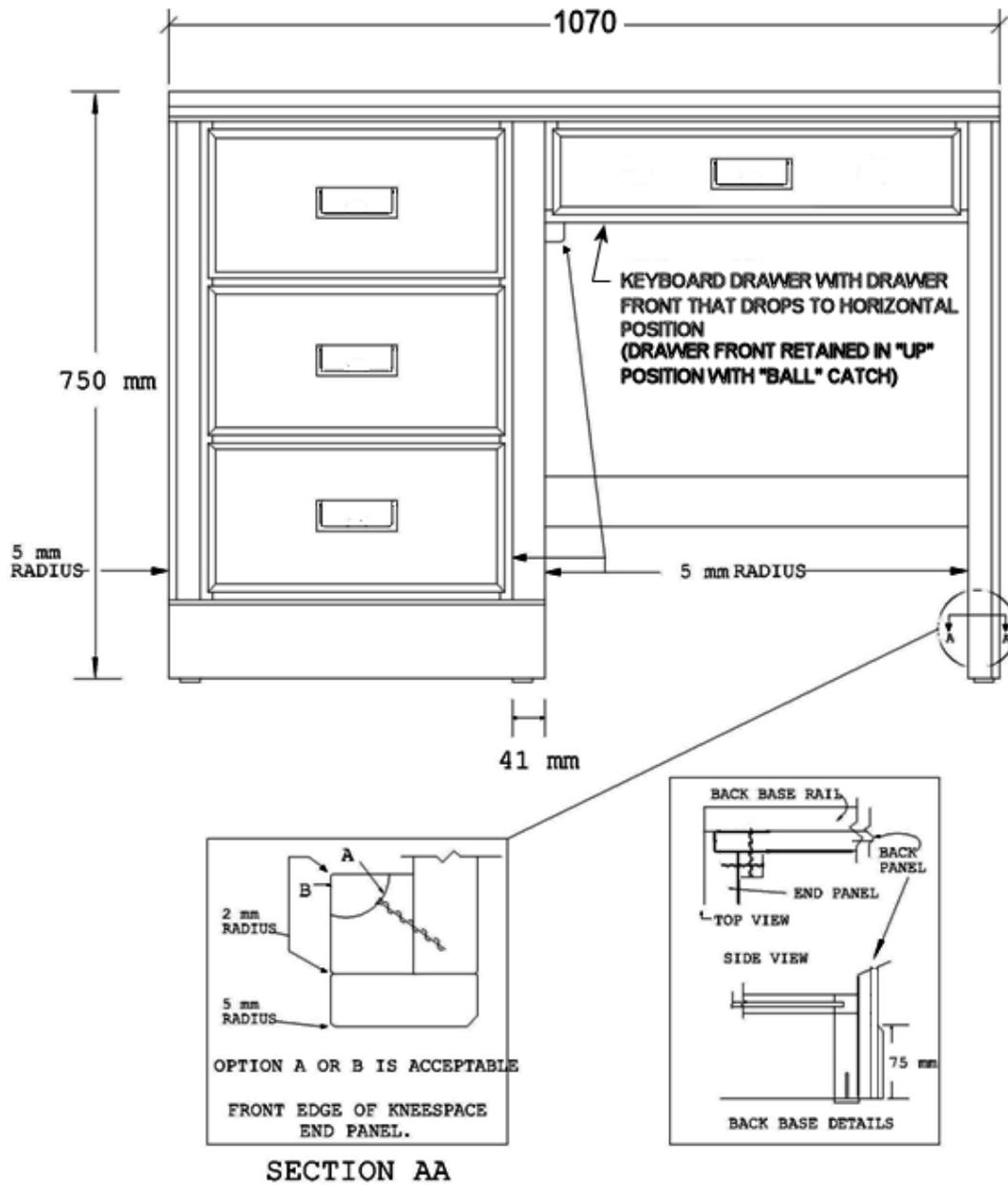
TYPE IV, STYLE A, SIZE 2  
3 DRAWER CHEST

FIGURE 5



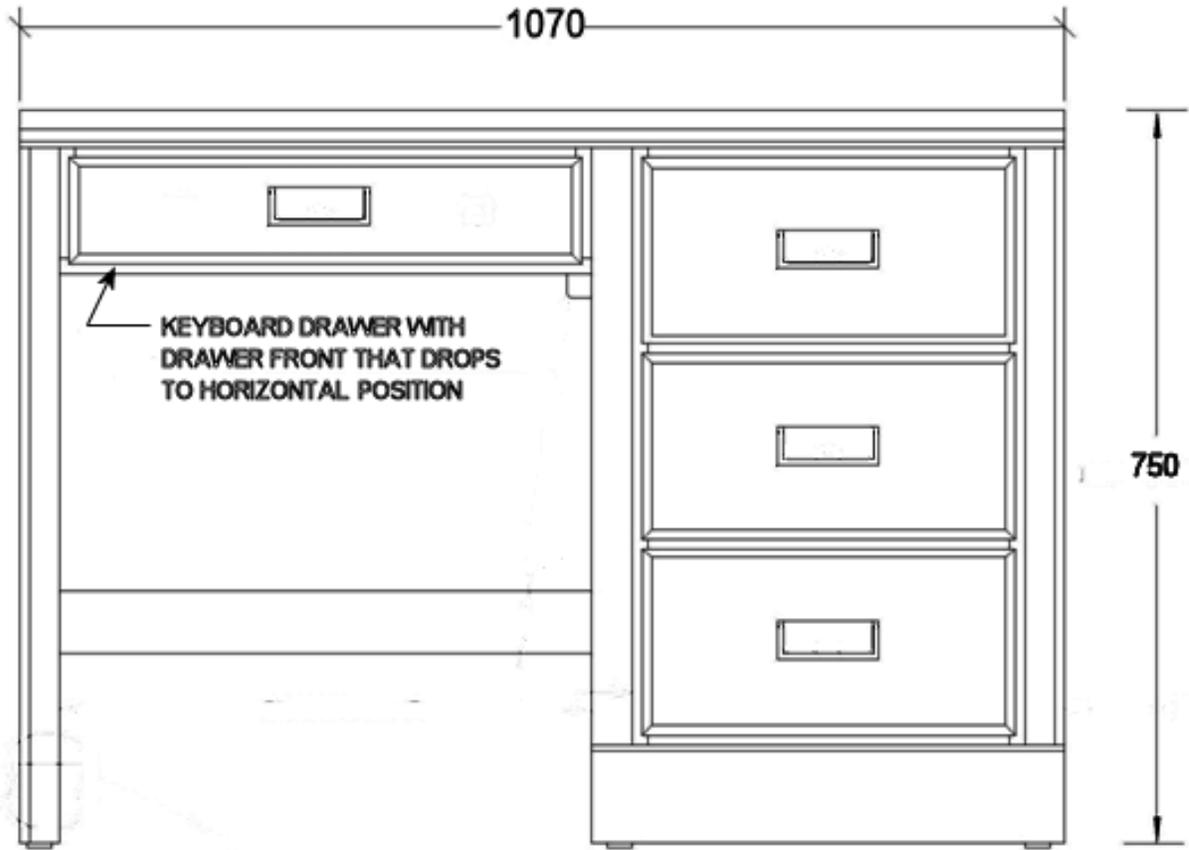
TYPE IV, STYLE B,  
5 DRAWER CHEST

FIGURE 6



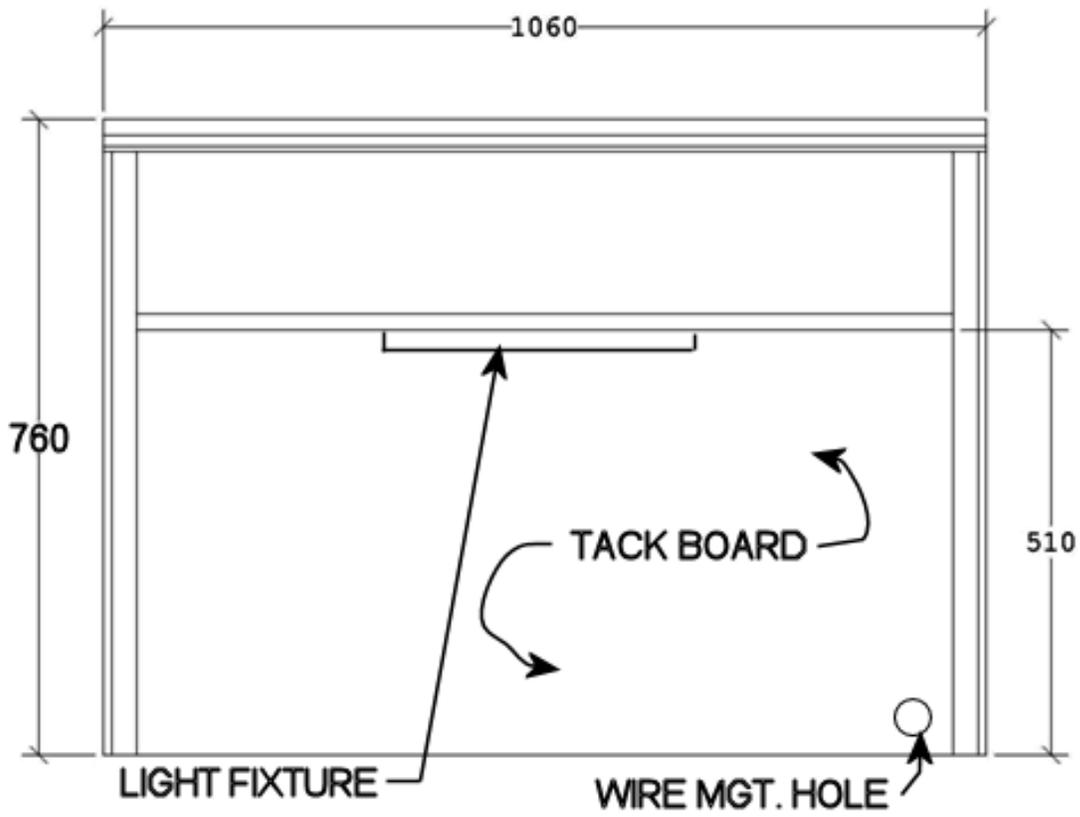
TYPE V, STYLE A  
LEFT PEDESTAL DESK

FIGURE 7



TYPE V, STYLE B  
RIGHT PEDESTAL DESK

FIGURE 8



TYPE V, STYLE C  
STUDY CARREL

FIGURE 9

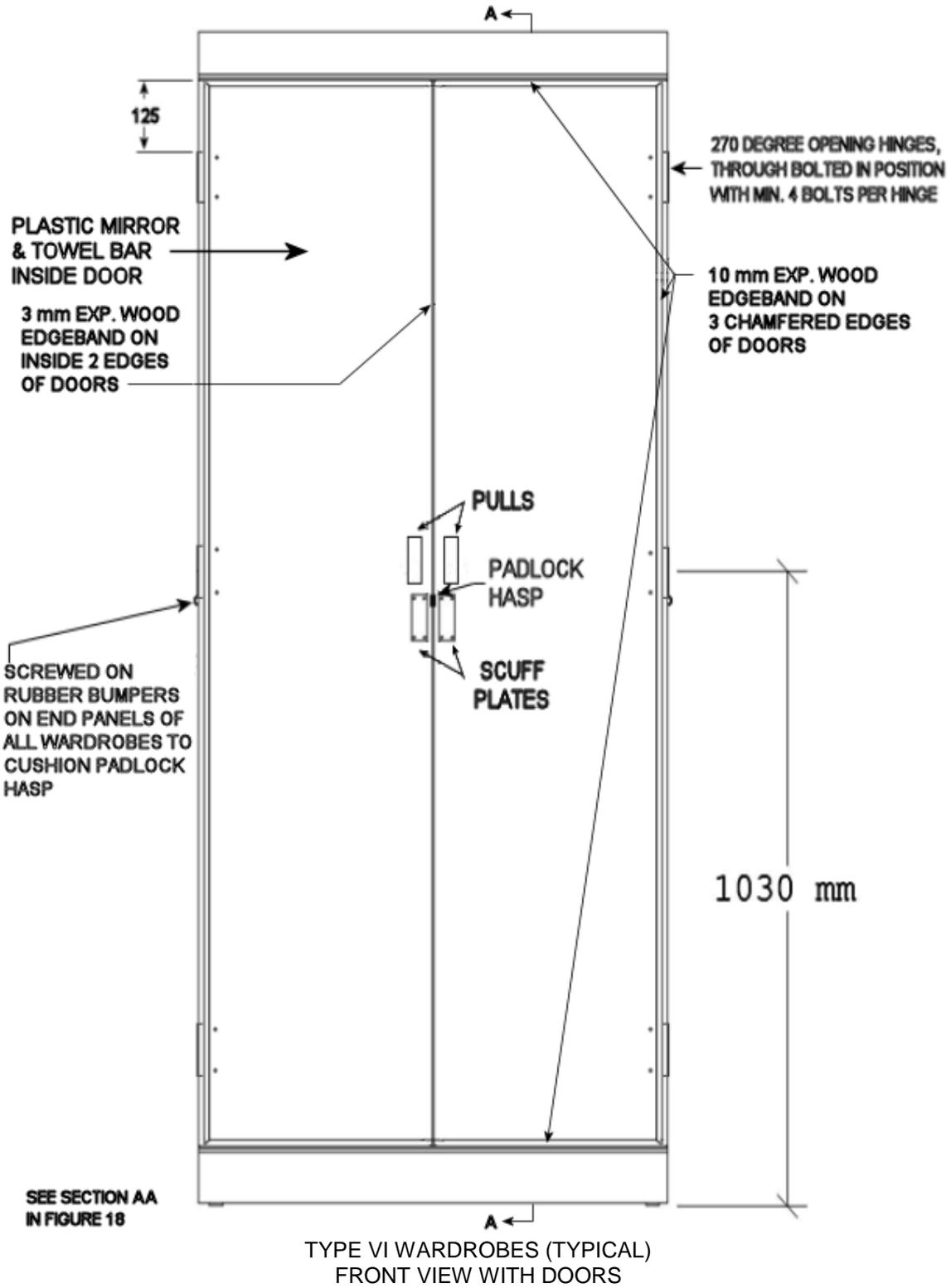
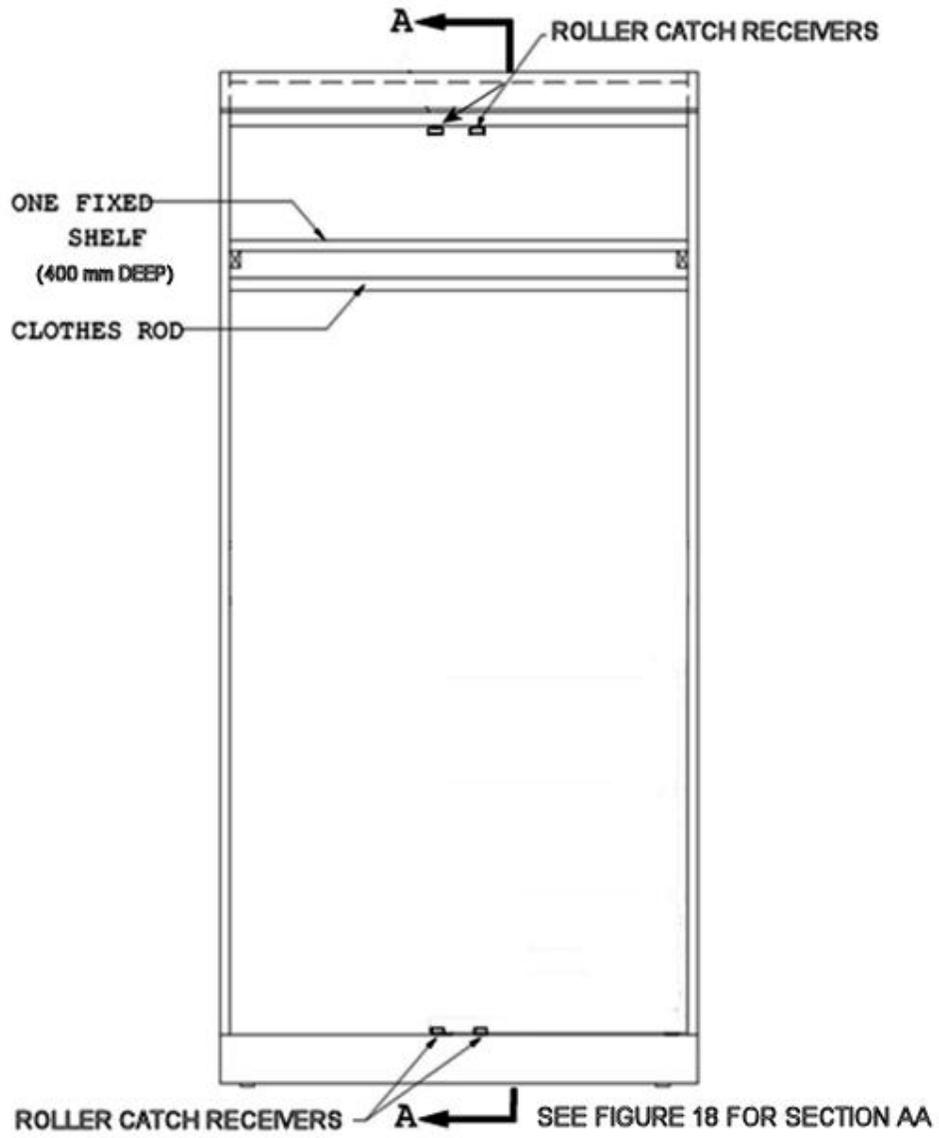
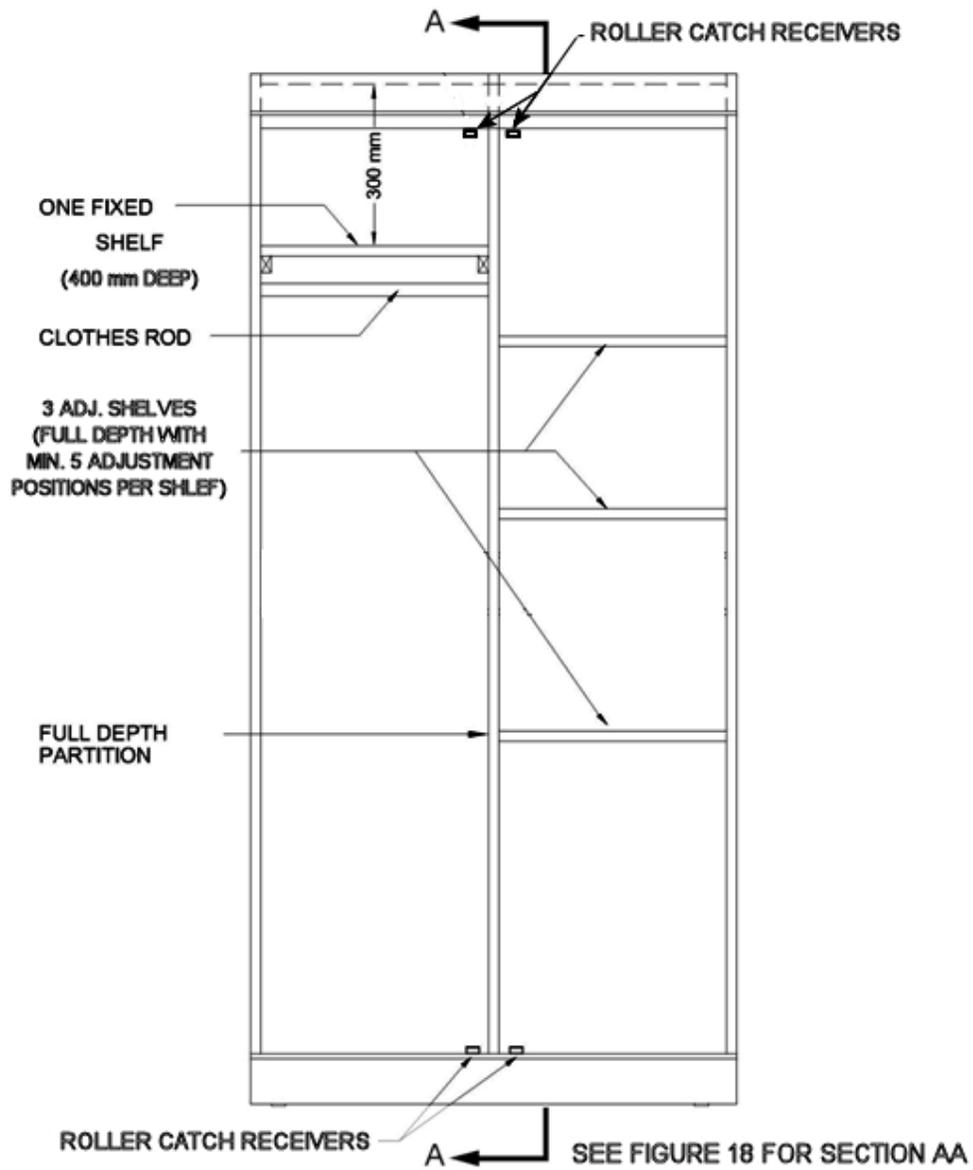


FIGURE 10



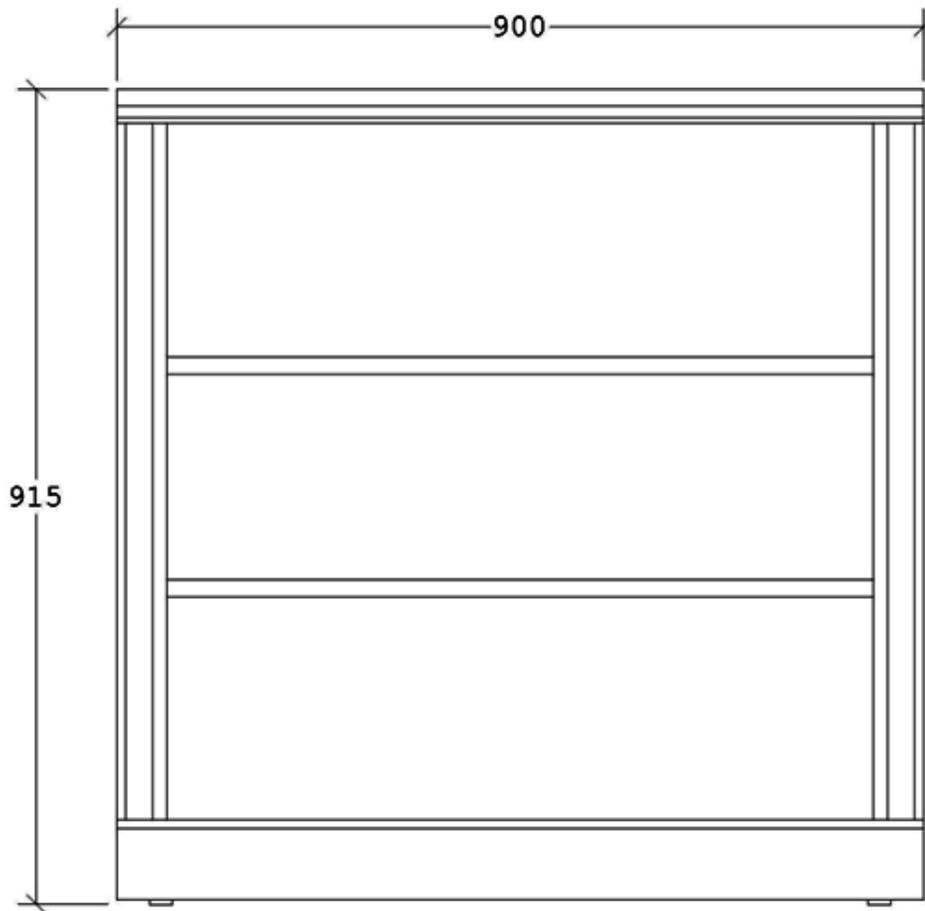
TYPE VI, STYLE A  
WARDROBE, SHOWN WITH DOORS REMOVED

FIGURE 11



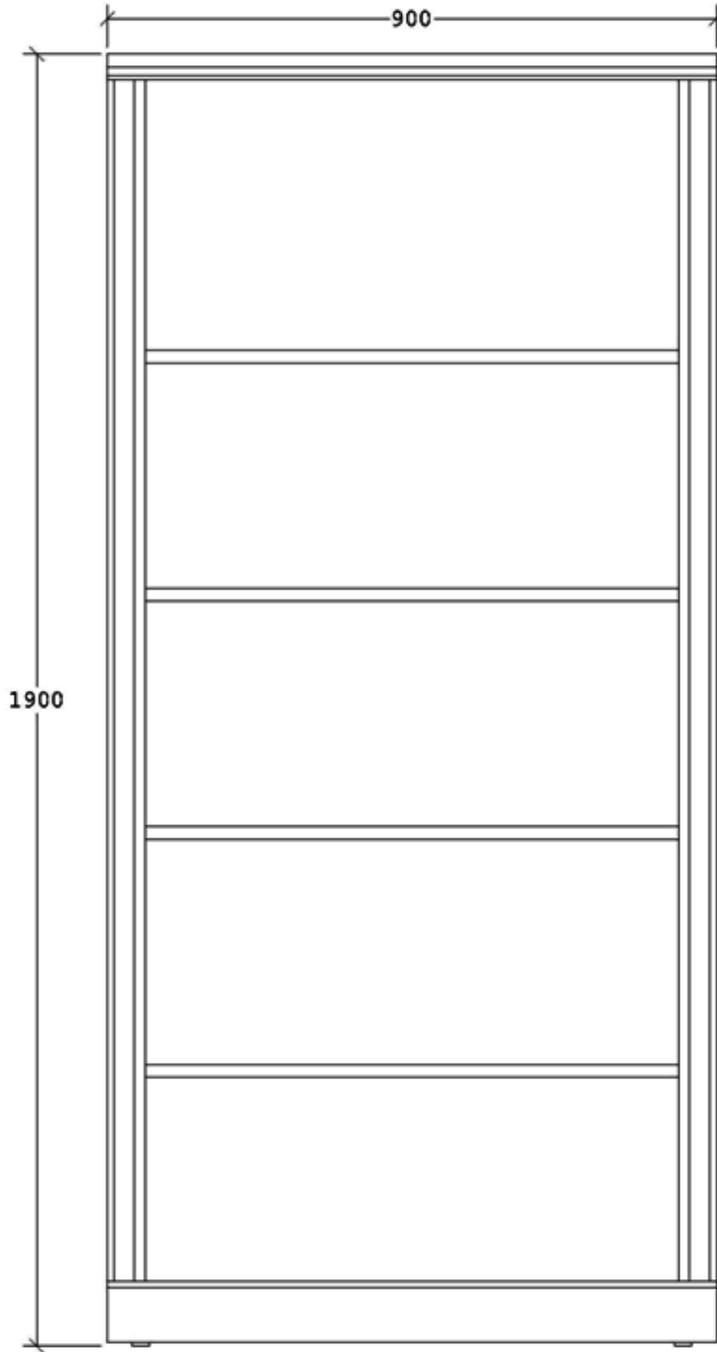
TYPE VI, STYLE B, SIZES 1 AND 2  
WARDROBE, SHOWN WITH DOORS REMOVED

FIGURE 12

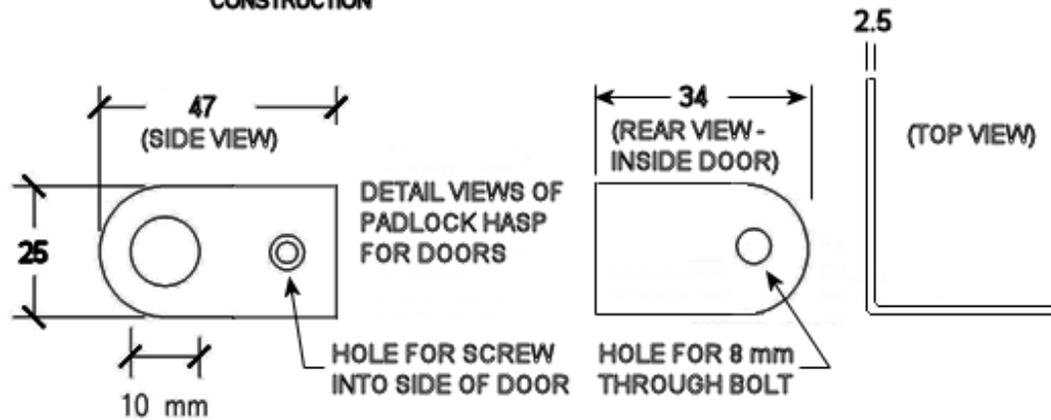
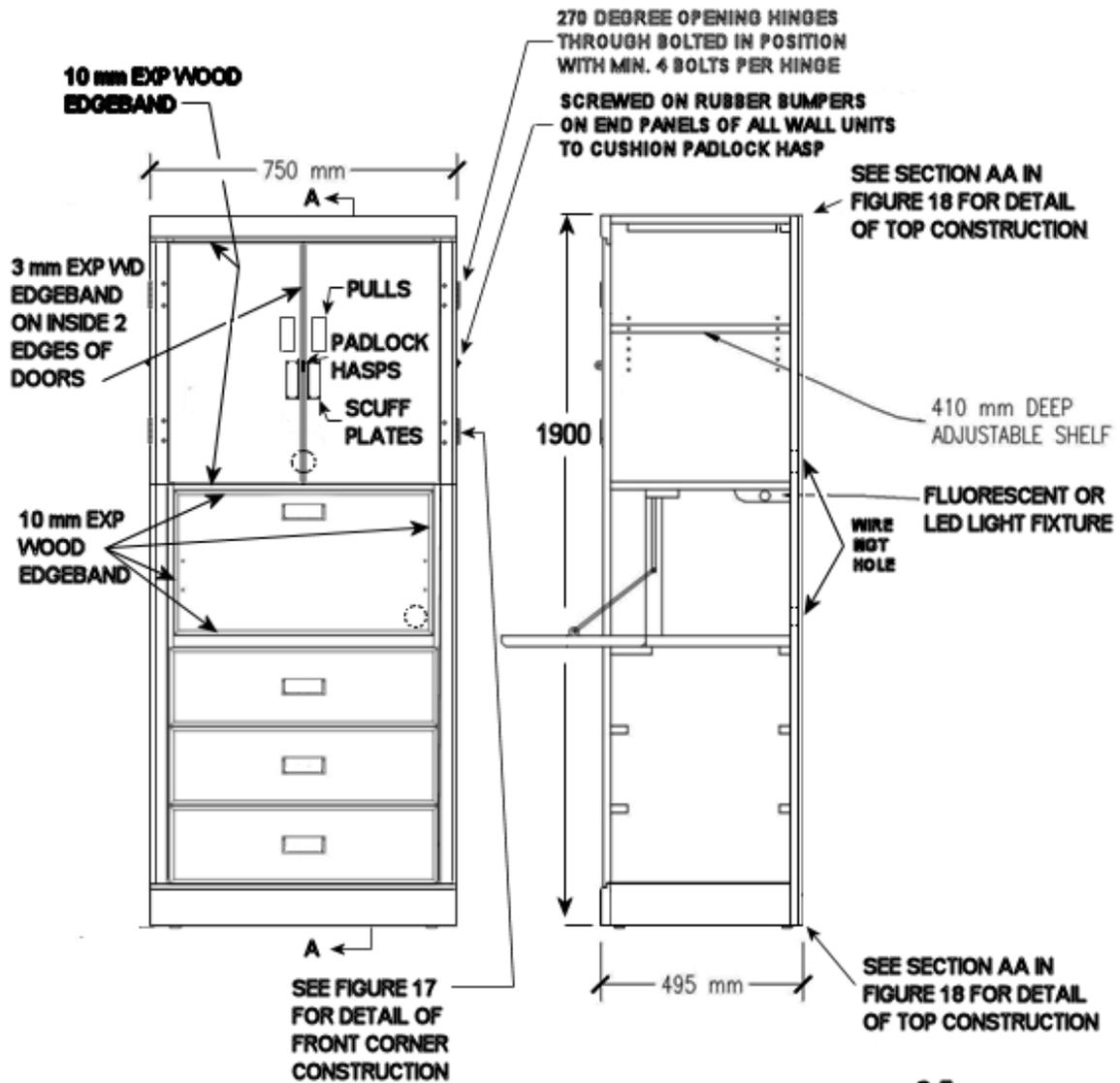


TYPE VII, STYLE A BOOKCASE  
2 ADJUSTABLE, 1 FIXED SHELF

FIGURE 13

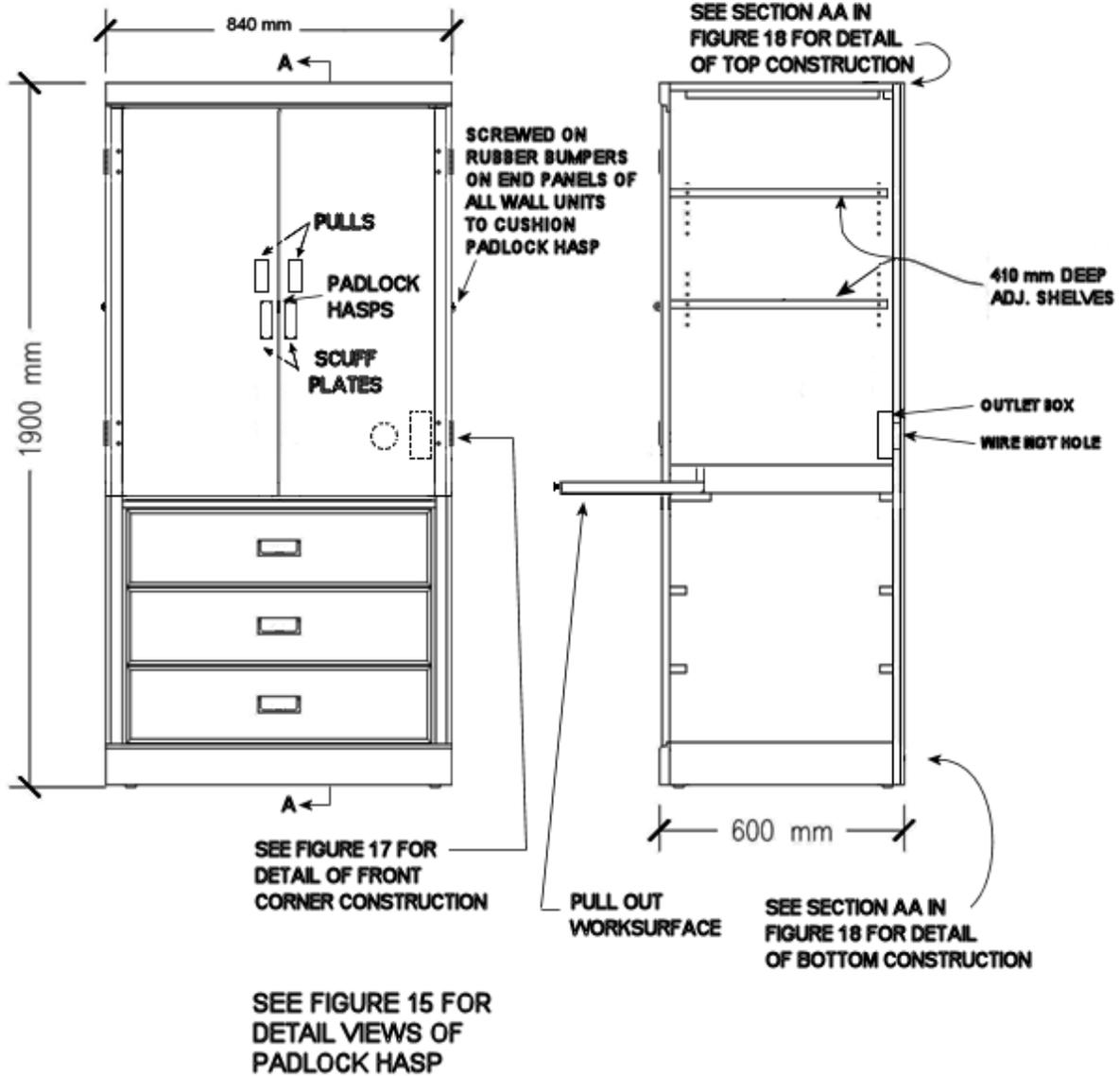


TYPE VIII, STYLE B BOOKCASE  
4 ADJUSTABLE SHELVES, 1 FIXED SHELF  
FIGURE 14

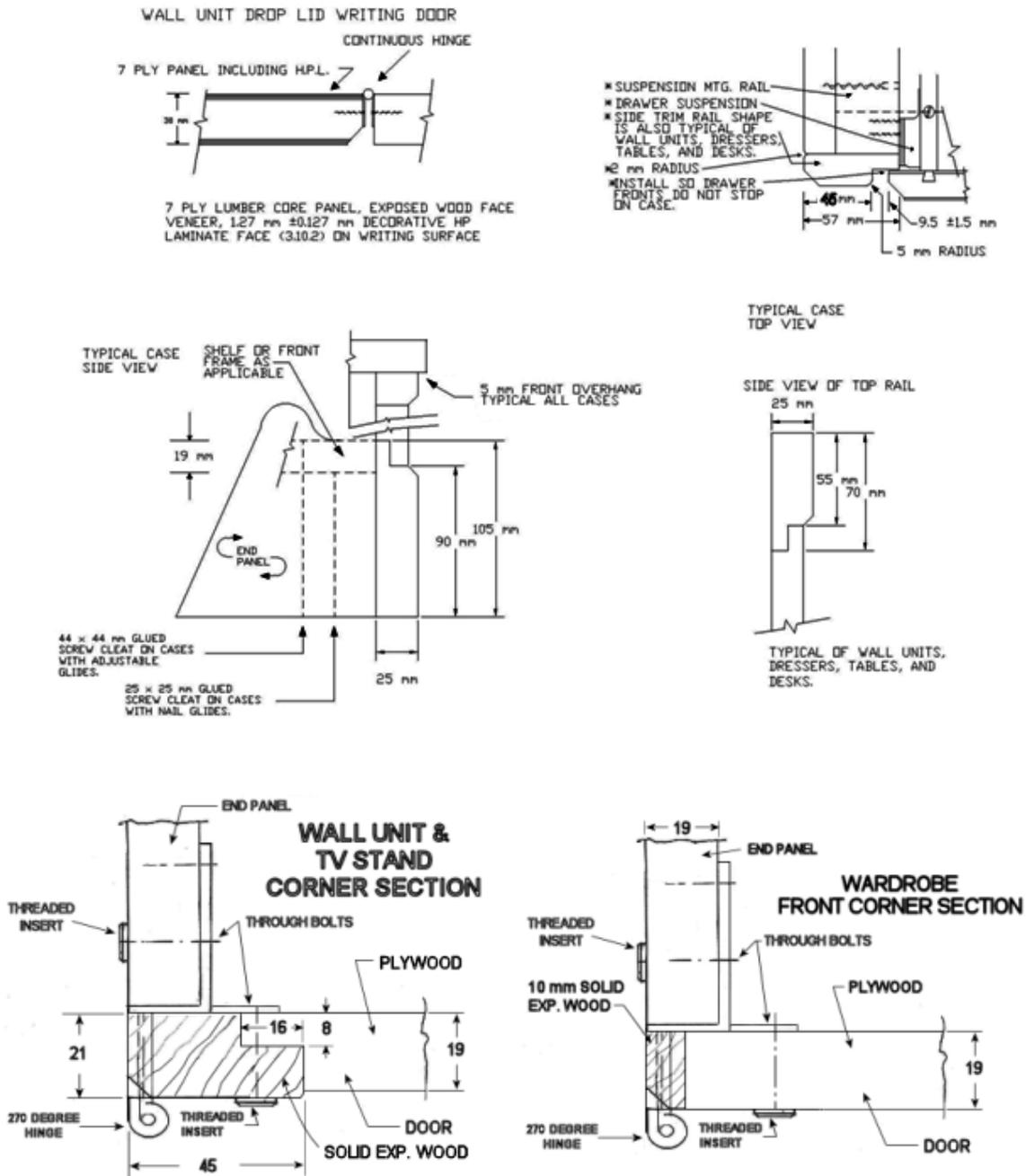


TYPE VIII, STYLE C  
WALL UNIT  
3 DRAWERS, DROP LID WRITING DOOR, 2 DOORS

FIGURE 15

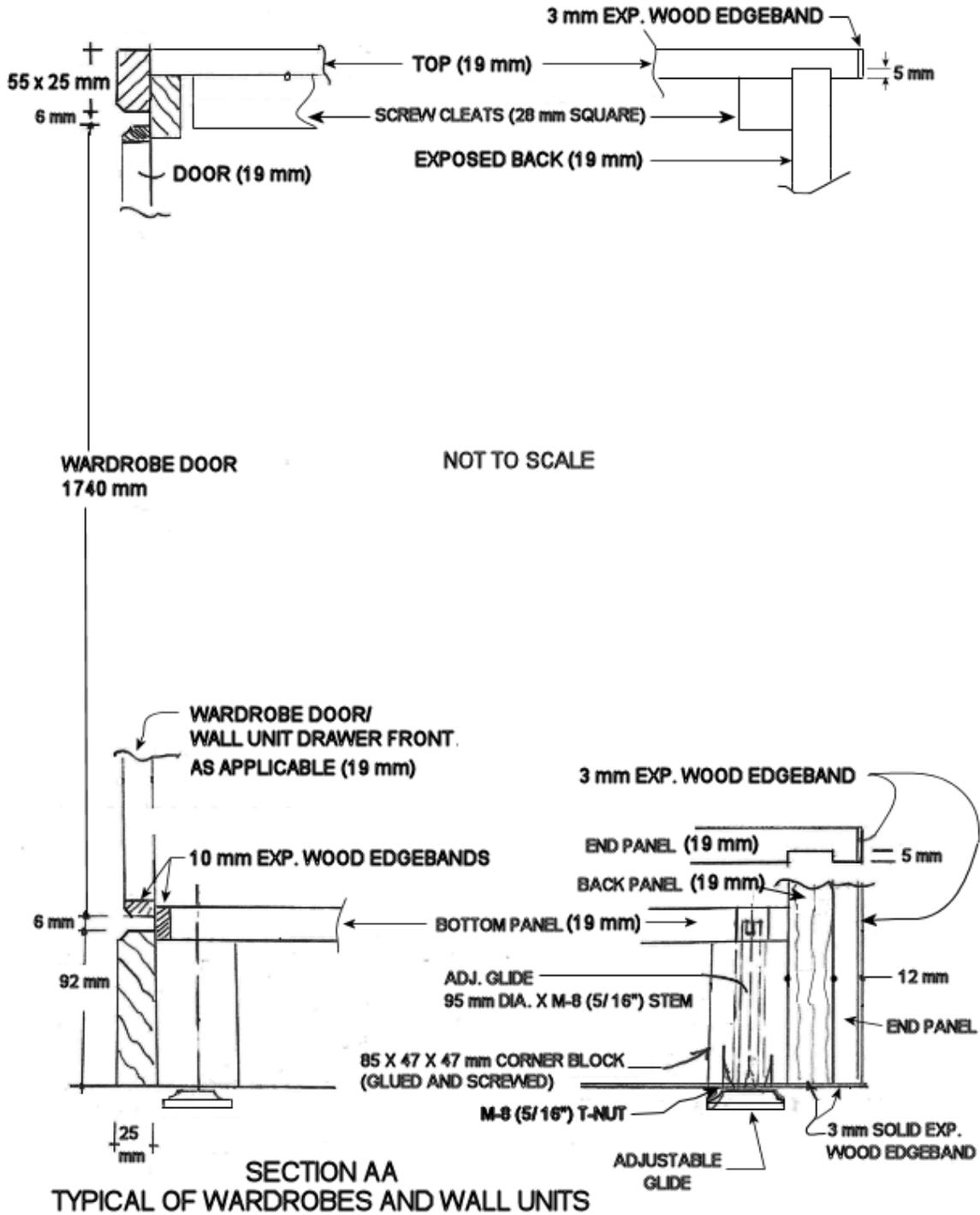


TYPE VIII, STYLE E  
WALL UNIT, COMPUTER WORKSTATION  
3 DRAWERS, 2 DOORS  
FIGURE 16



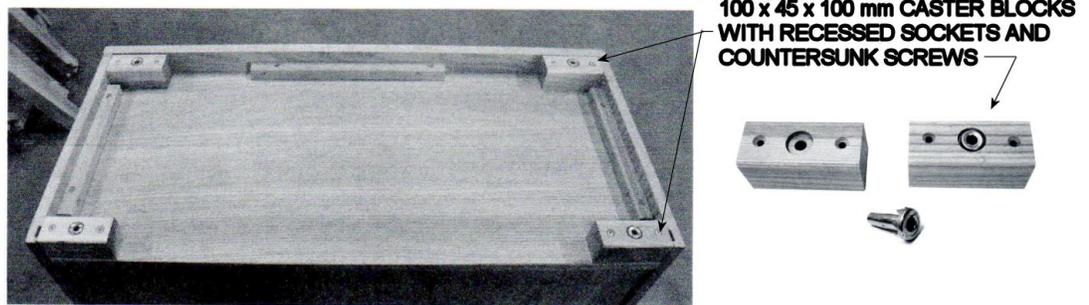
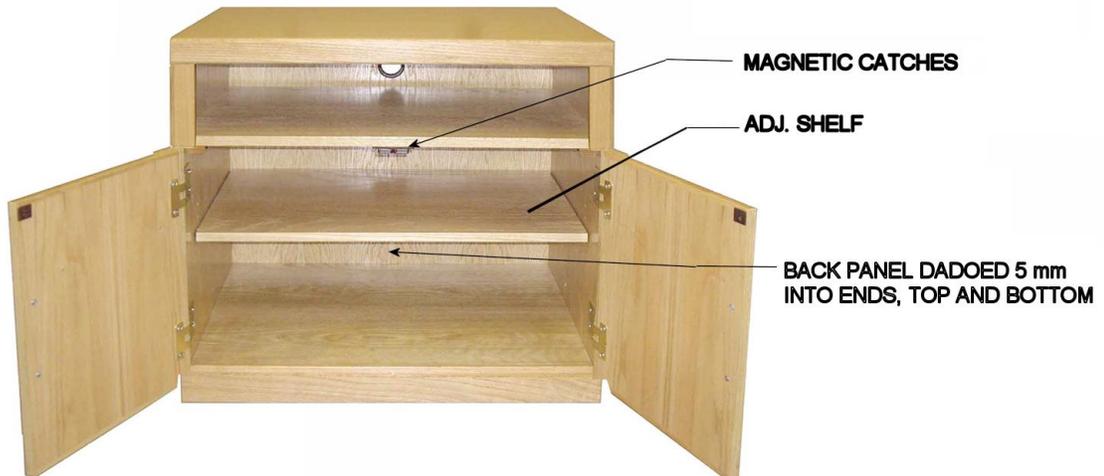
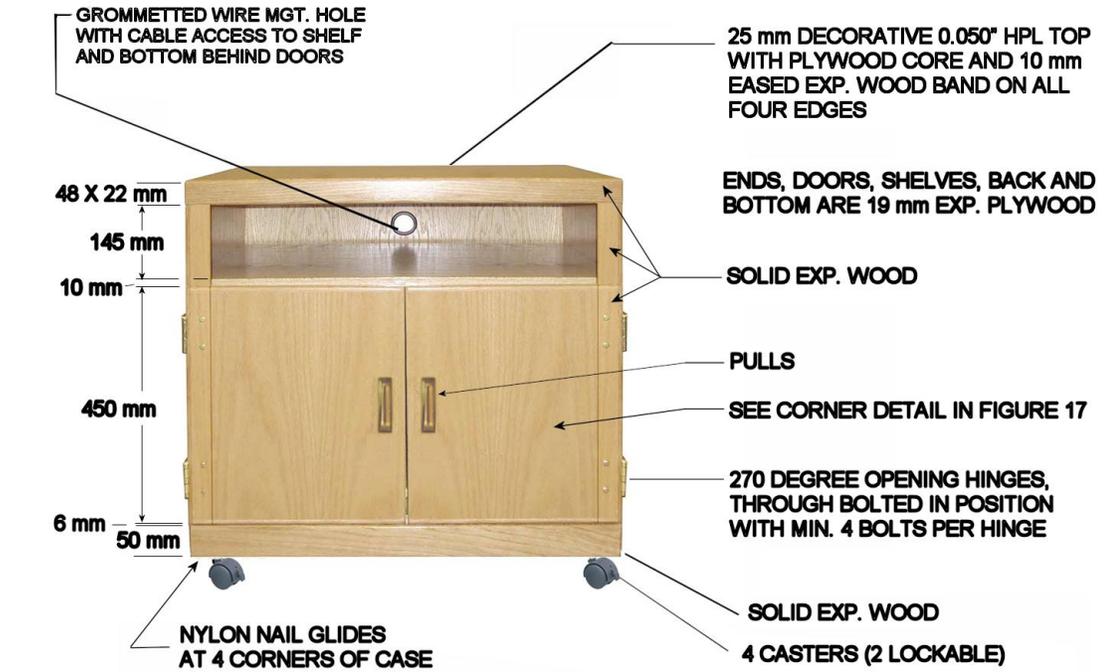
TYPICAL DETAIL VIEWS

FIGURE 17



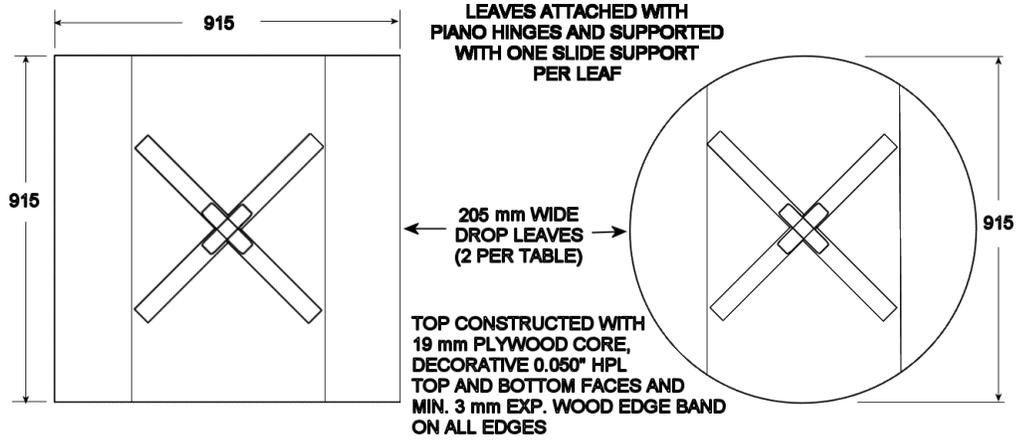
WARDROBE AND WALL UNIT CONSTRUCTION DETAILS

FIGURE 18

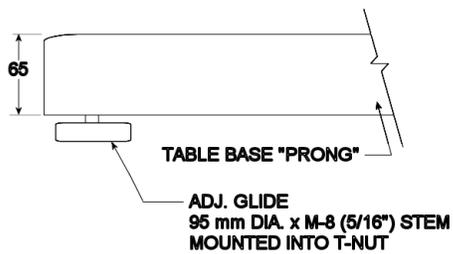
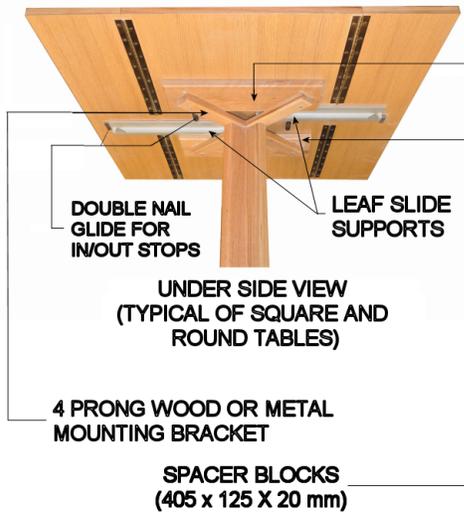


BOTTOM VIEW OF UNDERSIDE OF CABINET

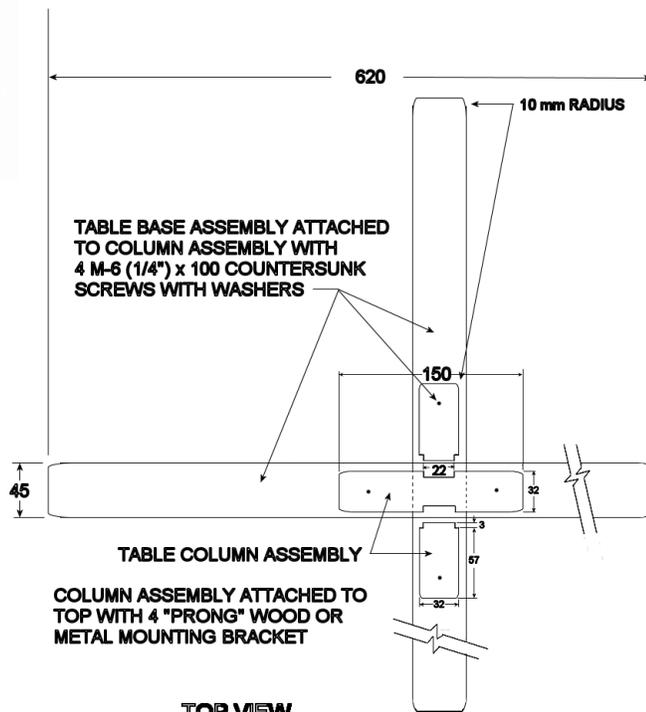
TV CABINET  
FIGURE 19



TOP VIEW



SIDE VIEW



TOP VIEW

DROP LEAF TABLES  
FIGURE 20