

A0.2 CONSTRUCTION PHASING PLAN
1 : 200



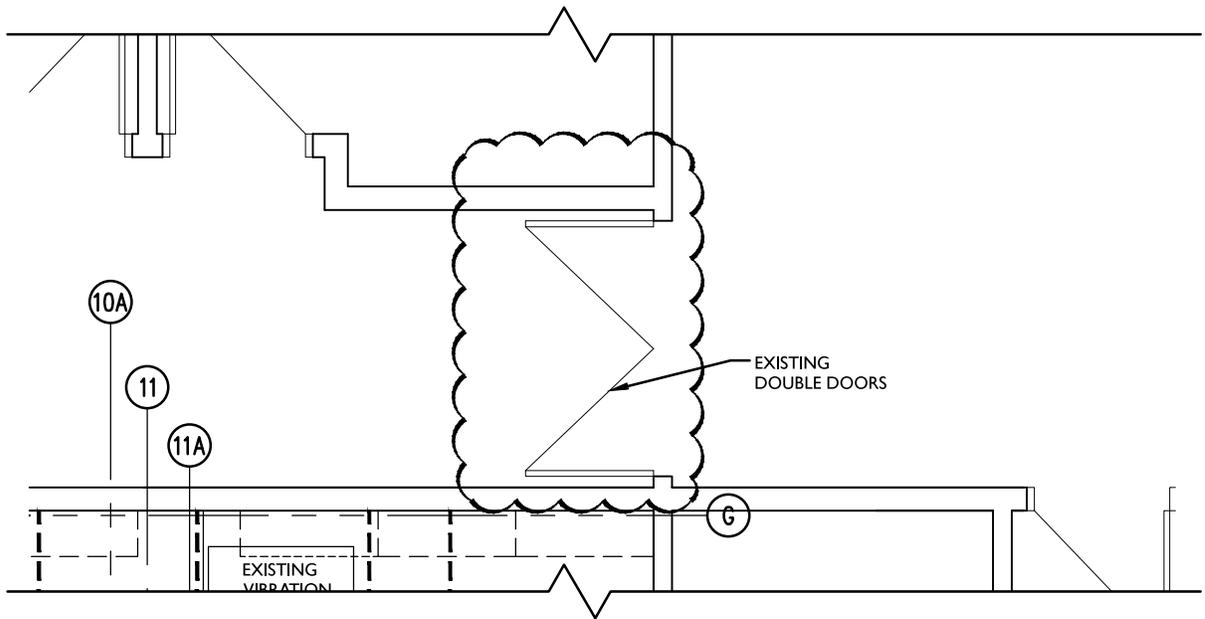
Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1
RA0.2-1 CONSTRUCTION PHASING PLAN



I/A1.2
MAIN FLOOR DEMOLITION PLAN
 1:50



Public Works and
 Government Services
 Canada

Travaux publics et
 Services gouvernementaux
 Canada

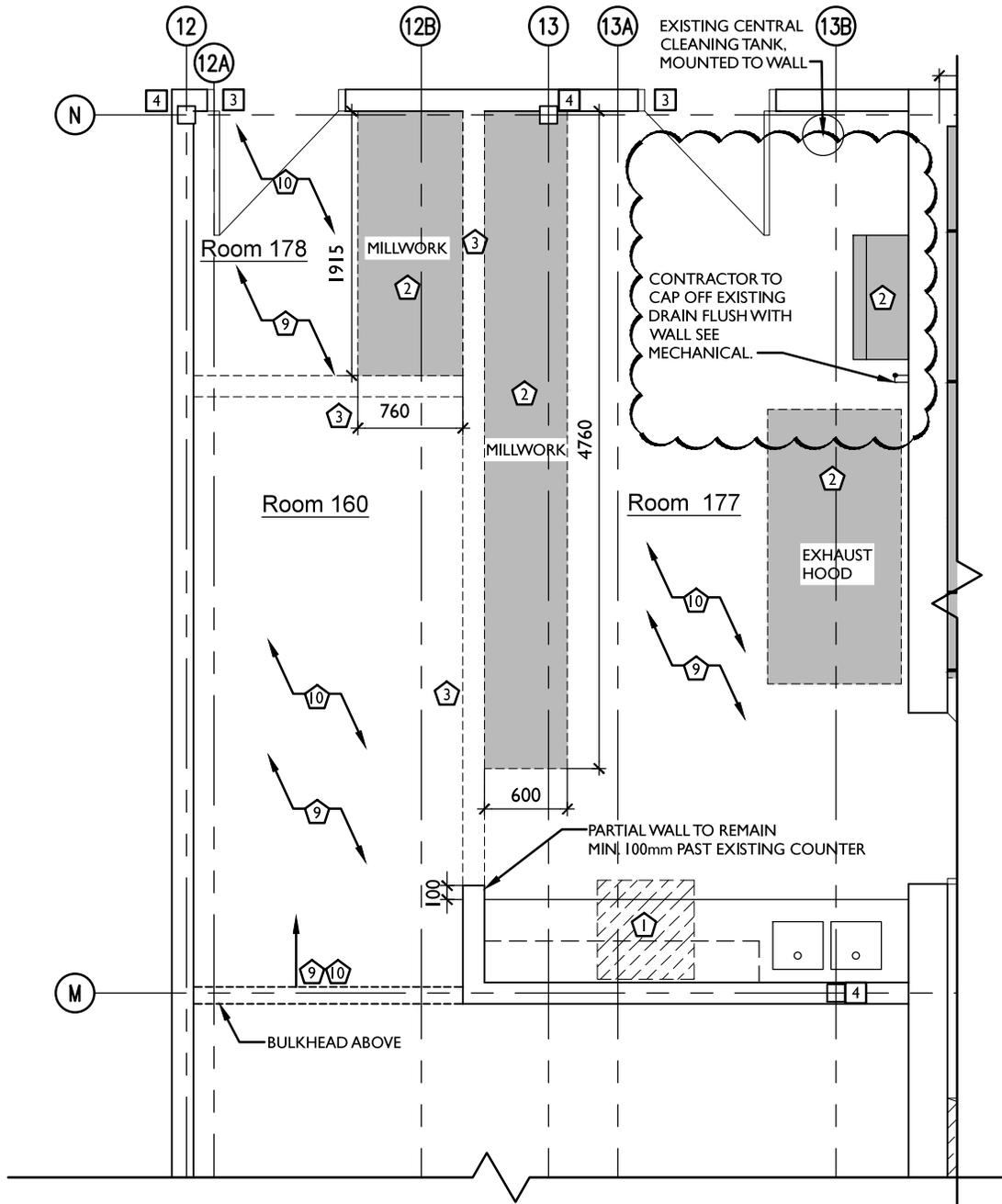
REAL PROPERTY SERVICES
 Western Region
SERVICES IMMOBILIERS
 Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA1.2-1

REVISED MAIN FLOOR DEMOLITION PLAN



2/A1.2 MAIN FLOOR DEMOLITION PLAN RM 177
1:50

LEGEND :



CONTRACTOR TO REMOVE, DISCONNECT, RELOCATE AS NOTED.



A.A.F.C. TO REMOVE EQUIPMENT / LABORATORY FURNITURE PRIOR TO CONSTRUCTION.



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

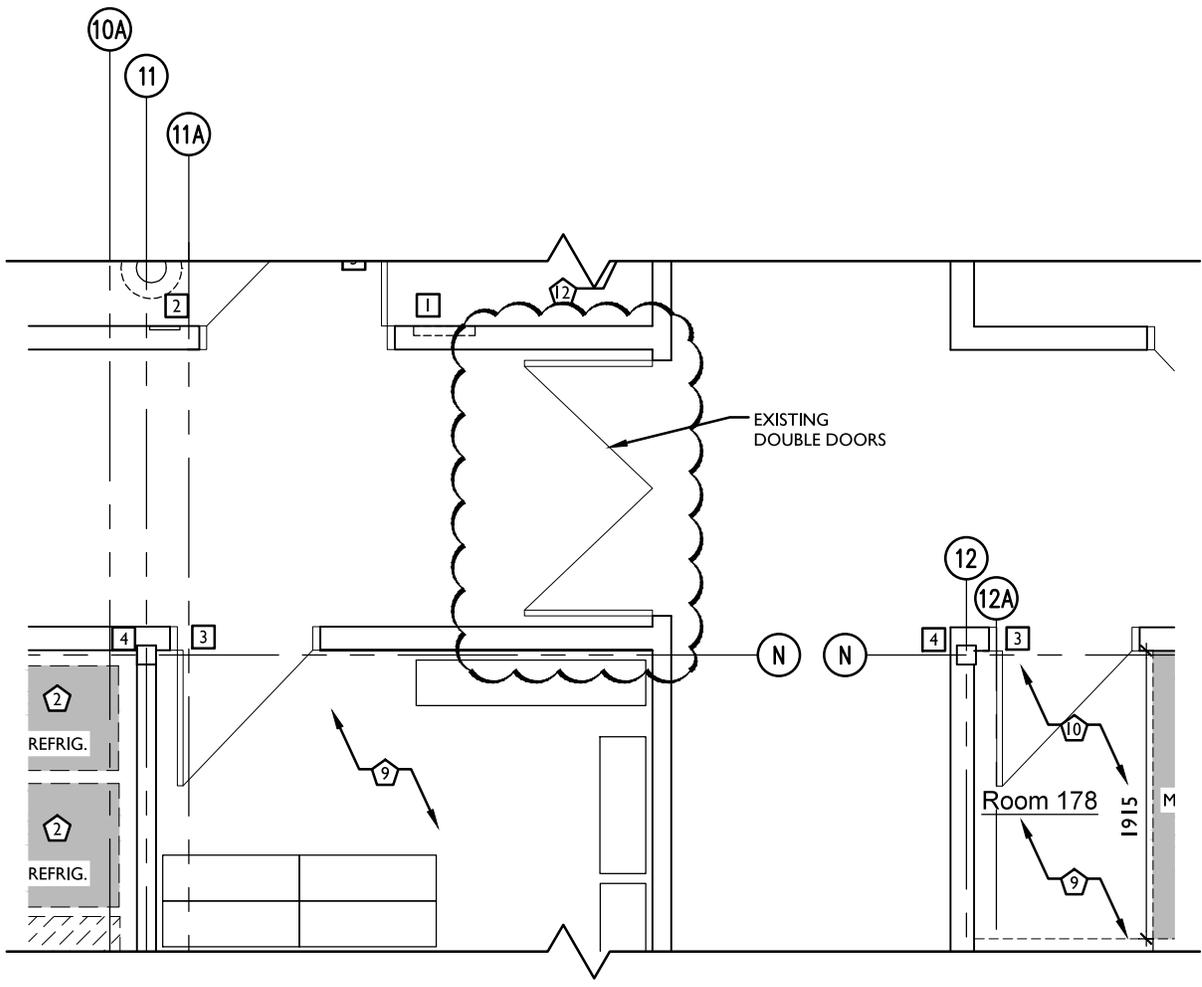
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA1.2-2

REVISED MAIN FLOOR DEMOLITION PLAN



1/A1.3 MAIN FLOOR DEMOLITION PLAN (FOR INFORMATION ONLY)
1:50



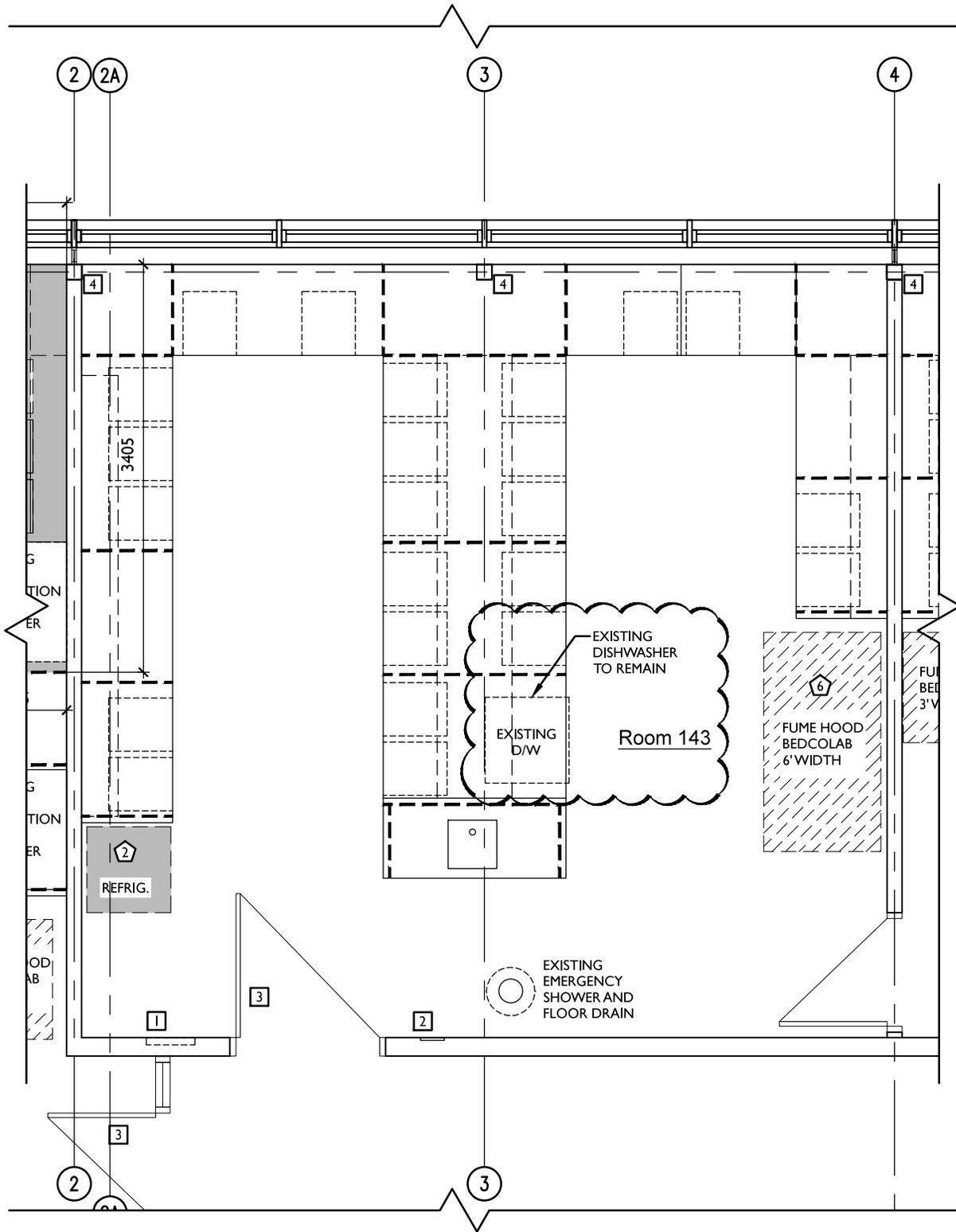
Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1
RA1.3-1
REVISED MAIN FLOOR DEMOLITION PLAN



1/A1.3 MAIN FLOOR DEMOLITION PLAN RM 143
1:50



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

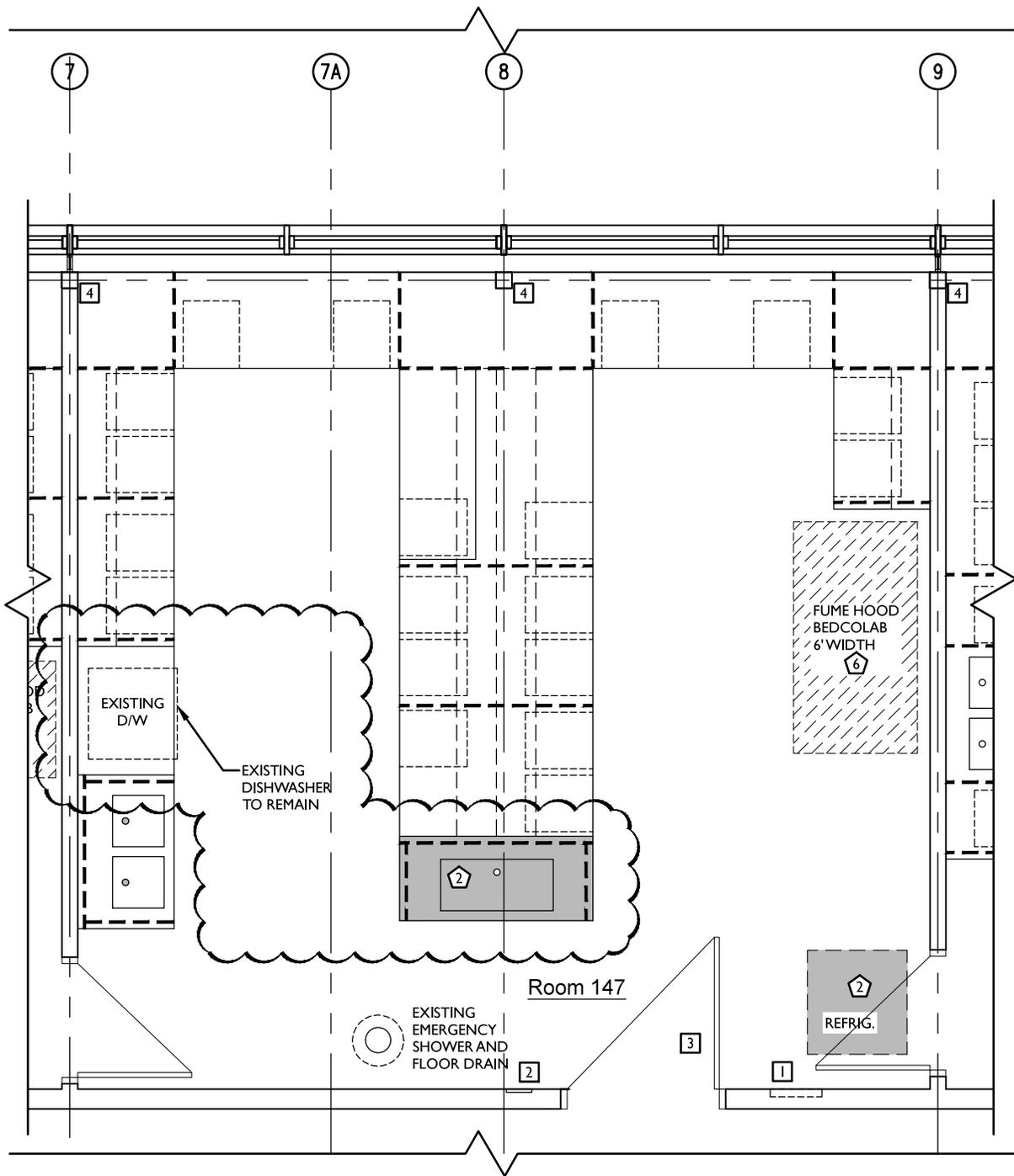
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA1.3-2

REVISED MAIN FLOOR DEMOLITION PLAN



1/A1.3 MAIN FLOOR DEMOLITION PLAN RM 147
1:50



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

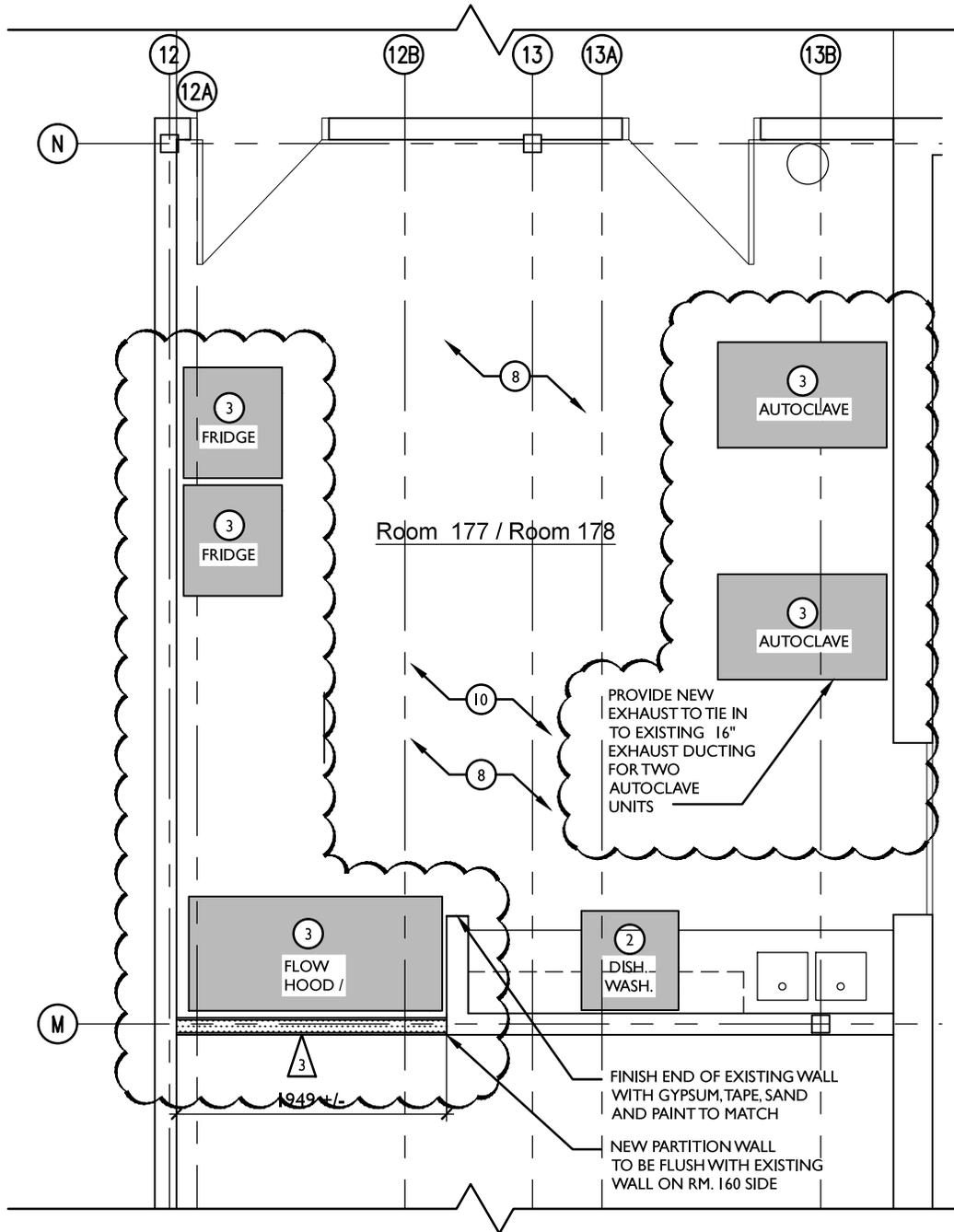
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA1.3-3

REVISED MAIN FLOOR DEMOLITION PLAN



2/A2.1 MAIN FLOOR CONSTRUCTION PLAN RM 177 / 178
1:50

LEGEND :

-  CONTRACTOR TO INSTALL
-  A.A.F.C. / C.R.C. EQUIPMENT. A.A.F.C. TO RELOCATE / INSTALL.



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

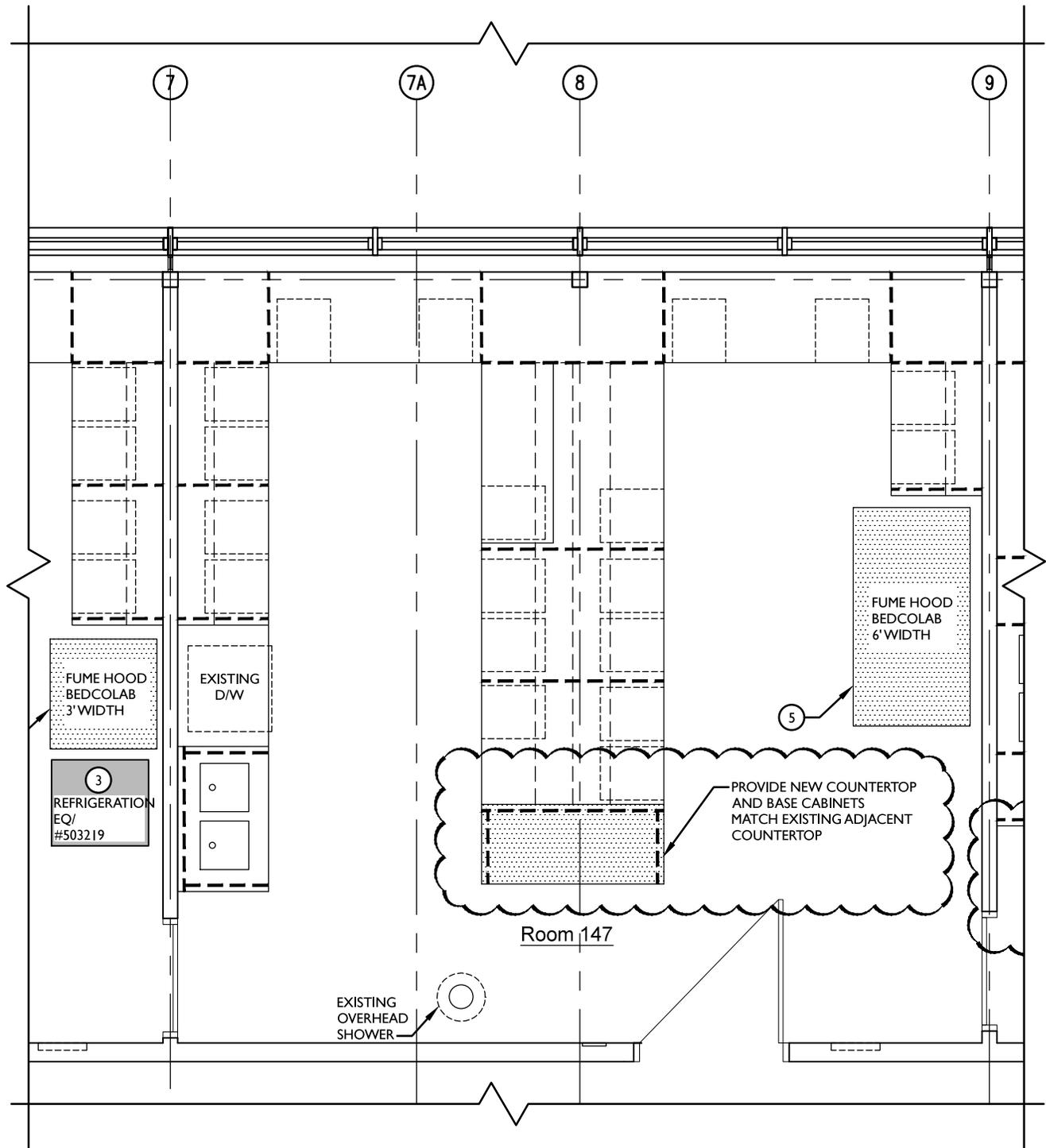
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM

RA2.1-1

RM 177/RM 178 REVISED CONSTRUCTION PLAN



1/A2.2 MAIN FLOOR CONSTRUCTION PLAN RM 147
1:50



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

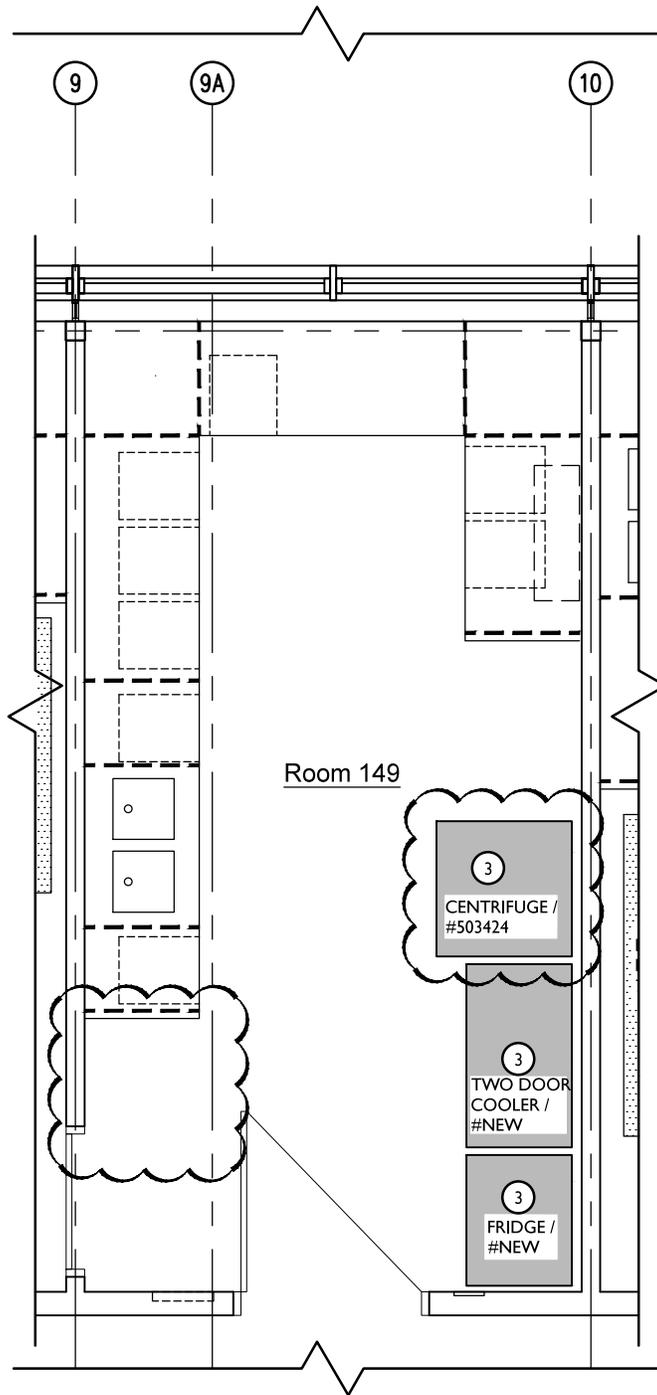
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA2.2-1

RM 147 REVISED CONSTRUCTION PLAN



1/A2.2 MAIN FLOOR CONSTRUCTION PLAN RM 149
1:50



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

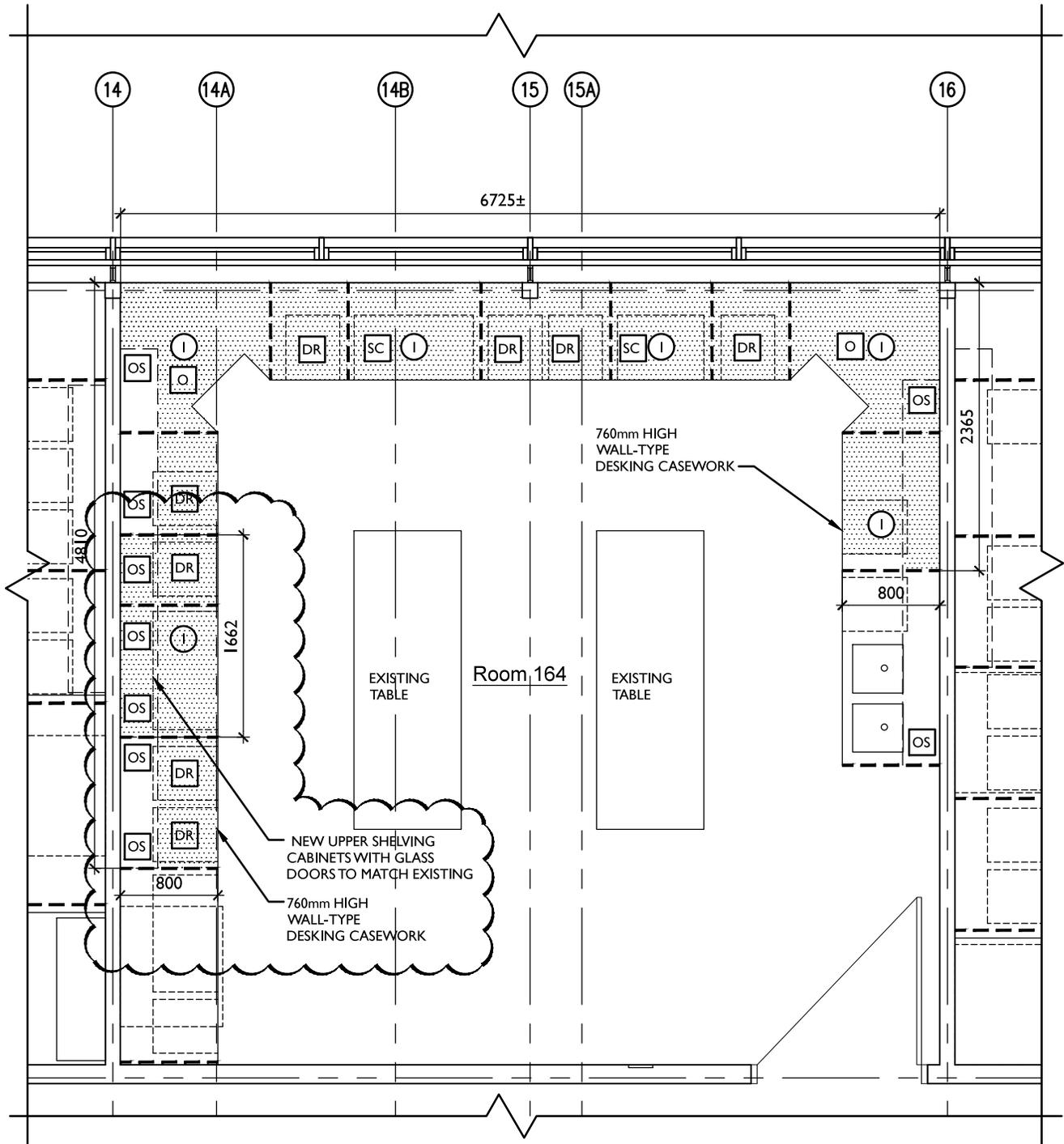
REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA2.2-2

RM 149 REVISED CONSTRUCTION PLAN



1/A2.3 MAIN FLOOR CONSTRUCTION PLAN RM 164
1:50



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Drawing title/Titre du dessin

ADDENDUM 1

RA2.3-1

RM 164 REVISED CONSTRUCTION PLAN



1 EXISTING CASEWORK SYSTEM
TYPICAL EXISTING CORNER WORK DESK STATION



2 EXISTING CASEWORK SYSTEM
TYPICAL EXISTING CORNER NON-WORK DESK STATION



3 EXISTING CASEWORK SYSTEM
TYPICAL SITTING AND STANDING HEIGHT CASEWORK



4 EXISTING CASEWORK SYSTEM
TYPICAL ISLAND UPPER SHELVING WITH GLASS



5 EXISTING CASEWORK SYSTEM
TYPICAL OPEN SHELF



6 EXISTING CASEWORK SYSTEM
TYPICAL ISLAND CASEWORK WITH SINK AND COUNTERTOP

Opus Suspended Cabinets

Part 1 **General**

1.01 **Conditions**

1.02 **Scope of work**

1. This section covers all materials, equipment, tools and labor for the supply and installation of adaptable laboratory casework system and all required accessories, as shown on drawings and as specified below
2. **Work includes:**
 - a. System components
 - b. Suspended cabinets
 - c. Counter tops, back splashes and shelves
3. **Work excludes:**
 - a. All mechanical and electrical connections
 - b. Cabinet cove bases

1.03 **References**

1. **Standard NFPA 30 and UL Approved** - Flammable and Combustible Liquids Code
2. **OSHA Applicable Standards**
3. **CSA C22-1-94** - Canadian Electrical Code
4. **SEFA 8 - 1999** - Laboratory Furniture, Casework, Shelving and Tables Recommended Practices

1.04 Shop Drawings

1. Shop drawings shall include:
 - a. Location of all components in plan and elevation views
 - b. Details of adaptable system construction and dimensions including section views
 - c. Details of suspended cabinets
 - d. Location of plumbing service fittings and electrical outlets to be supplied with the cabinets

1.05 Qualifications

1. These specifications are based on **Bedcolab** products and shall be used as a minimum quality criteria
2. The Contractor must be a recognized laboratory furniture manufacturer with a minimum of five (5) years experience in the industry. They shall also have an **ISO-9001-2000 Accreditation**. Their products must meet all recommended practices of the **Scientific Equipment & Furniture Association (SEFA)**
3. The Contractor must prove his ability to produce and install the required size project within the required schedule
4. All Contractors must obtain pre-qualification from the Architect prior to tender, based on sections 1.05. The Contractor will supply the following:
 - a. Typical mock-up of the cantilever system
 - b. Product catalogue
 - c. ISO - 9001-2000 Certificate (copy)

1.06 Warranty

1. The Contractor must certify, in writing, that all components of the laboratory casework system included in this section are guaranteed for a period of three (3) years starting at the of completion of the installation
2. The Guaranty Document and a Maintenance Manual must be given to the owner within fifteen (15) days following the completion of the installation

1.07 Product Handling

1. The Manufacturer must provide proper packaging of the products in order to ensure the integrity of the products up to the final destination
2. The minimum packaging must correspond to the following:
 - a. Each cabinet must be plastic wrapped and fixed to a wood pallet
 - b. Cabinets may be stacked a maximum of two (2) cabinets high
 - c. Each assembly covered with cardboard and plastic wrapped
 - d. All counter tops must be protected, after their installation, with cardboard until final inspection of this work

2.0 PRODUCTS

2.01 Materials – Generalities

1. Commercial quality cold-rolled steel sheets as per **ASTM A366-85**, Class 1
2. Stainless steel sheets, Type 316 with # 4 Satin Finish, as per **ASTM A167-96**
3. Polished glass as per **CAN/CGBS-12.3**
4. Polished laminated glass as per **CAN/CGSB.12.1**, first quality one-quarter inch thickness (1/4”) / (6mm)
5. Silicone sealant for moisture resistance, **Dow Corning # 786**, black, clear or white and / or black chemical resistant sealant **Dow Corning # 999** according to need

2.02 Suspended Steel Cabinet Construction

1. The laboratory furniture shall be constructed as per **Bedcolab Opus Laboratory Casework**
2. The minimum metal gauges used in the fabrication of the casework shall be the following as per recognized **North American Standards**
 - a. 18-gauge (1.2 mm) - top front dummy panel
 - b. 14-gauge (1.7 mm) - all leveling devices & drawer suspension tracks
 - c. 20-gauge (1.0 mm) - all drawer boxes, drawer front interior and exterior panels and door interior panels
 - d. 18-gauge (1.2 mm) - all the other cabinet components including cabinet frames, doors and shelves
3. **Bedcolab Opus Suspended Door or Drawer Cabinets** will be the same construction as **Bedcolab Forte Laboratory Casework**, without toe kicks; the front rail is replaced with a dummy panel. It will be suspended by rails and supports. All **Opus Cabinets** can be installed at any position between supports. The cabinets can be moved laterally, re-positioned, added or removed without tools or the need for installers
4. The cabinets must successfully pass all required physical and chemical resistance testing per **SEFA-8 Specifications**. Contractor shall supply proof of test results
5. Casework shall feature an all-welded construction. All cases shall be rigid, self-supporting, and fabricated to allow individual unit relocation at any time. **Screws and bolts are acceptable only if they are to be used on removable pieces**
6. All welds shall be ground smooth. Spot welds will not be noticeable
7. Each unit shall have non-exposed top-front and bottom rails to assure the rigidity of the cabinet. The vertical posts and the horizontal rails must form a rigid, square assembly to house the doors and drawers. The fit of the doors and drawers will prevent a sight line within the cabinet and prevent dust penetration

8. The side panels of the cabinet must be formed in one piece. All front vertical posts will be pre-punched to accommodate left or right door hinging as well as any combination of drawers, doors and shelves. In addition, front vertical rails will be reinforced with a U-shaped channel for added strength. All rear vertical posts shall be pre-punched to receive drawer suspension tracks and shelf clips
9. All parts and subassemblies including the doors, drawers, drawer suspension tracks, front center posts and removable back panels, shall be interchangeable in the field without requiring special tools
10. All double-door cabinets must be free of a center post to permit full access to the storage area. The cabinet shall be constructed to allow the retrofitting of a center post to allow different door and drawer combinations
11. The front-top portion of the side panels will be welded to a U-shaped channel to form a rigid square assembly
12. No exposed horizontal structural members between doors and drawers shall be accepted
13. The top front rails will be made of an 11-gauge (3.2 mm) steel channel
14. Perforations or mechanical assemblies are not permitted on visible cabinet sides
15. All base cabinets will be supplied with a finished back and top panel
16. All cabinet boxes must be fabricated to permit any future configuration of doors and drawers. Front center posts or other separators must be able to be added or removed added at any time without having to make additional perforations or modifications to the cabinet
17. **Shelving**
 - a. Shelving shall be cold-rolled steel. Edges shall be turned down on all four (4) sides three-quarter inch (3/4") / (19 mm) and shall turn under on front and back three-quarter inch (3/4") / (19 mm)
 - b. Shelves shall be adjustable in one-half inch (1/2") / (13 mm) increments and shall be the full depth and width of the interior
 - c. Each shelf shall be supported by four (4) zinc plated shelf clips

18. Doors - Cabinets

- a. Hinged metal doors shall consist of an inner and outer panel, painted inside and out, with sound-deadening material covering the entire inside surface of the door
- b. The two top corners of the doors must be welded the full thickness of the doors and ground smooth
- c. The inside panel shall be removable and be mechanically fastened to the front panel by two (2) fasteners at the bottom of the door to form a rigid three-quarter inch (3/4") / (19 mm) thick door with no vibrations during the opening and the closing of the door
- d. Hinged sides shall be reinforced adequately to ensure firm fastening and prevent sagging
- e. Recessed black PVC or aluminum handles must be installed in the upper section of the door opposite the hinges to permit an easy and natural opening

19. Drawers

- a. The drawer bottom flanges will be bent upwards on four (4) sides for easier cleaning
- b. Drawer fronts shall consist of an inner and outer panel, painted inside and out, with a sound deadening material covering the entire inside surface of the drawer front
- c. The outside panel shall be removable and be mechanically fastened to the front panel to form a rigid three-quarter inch (3/4") / (19 mm) thick door
- d. Drawer sides shall be structurally reinforced around the top edge by a three-quarter inch (3/4" / 19 mm) return flange with a one-quarter inch (1/4" / 6 mm) seam bend to the inside. The front and back drawer panels shall be reinforced by a three-quarter inch (3/4") / (19 mm) flange all around and shall be welded to the sides to form a rigid drawer unit
- e. Drawers shall operate on one inch (1") / (25 mm) diameter nylon wheels with steel ball bearings. One such wheel shall be on each drawer slide and one on each drawer suspension track
- f. Drawer tracks shall be designed to prevent metal to metal contact and shall incorporate a self-closing action for the last seven (7") / (178 mm) inches of drawer travel

- g. The two sections of the drawer suspension tracks must have a rounded top section to eliminate the possibility of side movement at full drawer opening
- h. The drawer slides shall have built-in stops to prevent inadvertent removal of the drawers and shall be designed so the drawers can be removed from a full-open position by lifting the front of the drawers and pulling out. Two (2) rubber bumpers shall cushion the closing action of the drawers and the drawers shall be designed to operate freely and quietly even when loaded
- i. One (1) recessed black PVC or aluminum handle shall be supplied in the center front of each drawer, except for drawers thirty-five inches (35") / (889 mm) or wider which require two (2) pulls
- j. The cabinet must be designed to permit the addition of a full-extension drawer slide in replacement of the self-closing slide without modifications to the cabinet. This addition must be possible after the installation

26. **Furniture Hardware**

- a. **Flush Finger Pulls** - All handles for hinged and sliding metal doors and drawers shall be extruded aluminum or extruded black PVC four inches (4") (102 mm) long, set flush within thickness on door and drawer front panels
- b. **Glass Door Handles** - One (1) finger pull five-eighths inch by three inch (5/8" x 3") / (16 mm x 76 mm) per door shall be ground into glass on side of door next to cabinet frame
- c. **Hinges** - Door hinges shall be 14-gauge (1.9 mm) steel; five-knuckle type screwed into door and fastened to cabinet side with two (2) counter sunk 8-32 stainless steel screws. Hinges shall have black baked enamel or chrome plated finish
- d. **Door Catches** - Shall be adjustable zinc-plated steel spring loaded, nylon roller, Model **Number 950** by **Canaropa**
- e. **Strike Plates** - Shall be made of steel and be part of the structure of the cabinet
- f. **Levelers** - Levelers at the four (4) cabinet corners shall be cadmium plated hex head 5/16" (8 mm) machine screws one and one-half inch (1 1/2") / (38 mm) long slotted on threaded end for screw driver adjustment. Levelers are supplied with white nylon glide caps
Cluthe # 805
- g. **Press Plugs** - Press plugs for cabinet floors shall be black nylon,
Cords # DP875

- h. **Shelf Clips** - Shelf clips shall be **Roll-It # 101** with a zinc finish
 - i. **Drawer and Hinged Door Bumpers** - Drawer and hinged door bumpers shall be black rubber, tongue type press fit bumper. Two (2) bumpers per door and/or drawer **3M # SJ-5003**
 - j. **Drawer Tracks** - Shall be **Bedcolab Model # DT002** with a seven-inch (7") self-closing feature
 - k. **File Drawer Tracks** - Shall be full-extension type, zinc finish. **Waterloo # 3464-1763**. Weight capacity is 250 pounds per pair of slides. The drawer slide must be installed in such a manner that drawer can be easily removed from cabinet without tools
 - l. **File Hanger Rods** - Shall be made of painted steel one eighth inch by three-quarter inch (1/8" x 3/4") / (3 mm x 19 mm) and shall be adjustable to accommodate legal or letter size files

27. **Steel Furniture Finish**

- a. When fabrication of unit is completed, all surfaces shall be free of scratches, spot weld marks or material imperfections. Welds will be ground smooth where necessary. The unit will be washed using a three-stage iron phosphate process for proper surface preparation and subsequently dried in a dry-off oven to remove all traces of humidity
- b. A high-quality chemical resistant thermosetting polyester enamel paint will be applied to all surfaces, including the interior of door and drawer panels, using an electrostatic spray process. The parts will pass through a baking oven for duration and at a temperature as recommended by the paint manufacturer. Painted surfaces will conform to **AAMA 603.8** and **CGSB 1-GP-300**
- c. The painted surfaces will meet or exceed the **SEFA 8 Specification** for chemical resistance as specified by the **Scientific Equipment and Furniture Association**

d. **Technical Performance:**

1. Adhesion to substrate: 100% 5B (ASTM D-3359B)
2. Hardness: 4H to 5H (ASTM D 2197-86)
3. Gloss: 40 to 50 (ASTM D-523-89)
4. Flexibility: 3mm mandrel (ASTM D-522)
5. Impact resistance: 100 in. / lb (ASTM D-2795)
No effect
6. Corrosion resistance: excellent (ASTM B 117-85)
No visible effects after 250 hour salt
spray
7. Humidity resistance: Excellent (ASTM D-2247-85)

2.07 Colors

1. Twenty colors are available as per the **Bedcolab** Color Chart.
 - a. Cabinets are available in one solid color
 - b. Cabinets are available in a two-color scheme. Cabinet bodies are painted one color; the door and drawers are painted a second color

Chorus Adaptable Furniture System

1.0 General

1.1 Conditions

1.2 Scope of work

.1 This section covers all materials, equipment, tools and labor for the supply and installation of laboratory furniture and all required accessories, as shown on drawings and as specified below.

.2 Works Include:

- .1 Steel casework
- .2 Fume hoods
- .3 Counter tops, splash back and shelves
- .4 Sinks, cup sinks and faucets (water, air, vacuum, gas)
- .5 Electrical outlets and pedestals.
- .6 Emergency showers and eye-washes
- .7 Storage shelving
- .8 Balance table

.3 Works exclude:

- .1 All mechanical and electrical connections.
- .2 Cabinet cove bases

1.3 References

- .1 *Ashrae Standard ANSI/ASHRAE 110.1995 - Methods of Testing Performance of Laboratory Fume hoods.*
- .2 *Standards and Directives MD15128, Laboratory Fume Hoods, revision 00, April 1988, Public Works Canada.*
- .3 *Standard NFPA 30 - Flammable and Combustible Liquids Code.*
- .4 *SEFA -1.2-1996 - Fume hoods.*
- .5 *OSHA applicable standards.*
- .6 *CSA C22-1-94- Canadian Electrical Code.*
- .7 *SEFA 8 – 1999 – Laboratory furniture, casework, shelving and tables recommended practices*

1.4 Shop drawings

- .1 Shop drawings shall include :
 - .1 Location of all cabinets in plans and elevations.
 - .2 Details of laboratory casework construction and dimensions including section view.
 - .3 Location of plumbing service fittings and electrical outlets to be supplied with the cabinets.

1.5 Qualifications

- .1 These specifications are based on *Bedcolab's* products and shall be used as minimum quality criteria.
- .2 The Contractor must be a recognized laboratory furniture manufacturer with a minimum of 5 years experience in the industry. They shall also have ISO-9001-2000 accreditation and their products must meet all recommended practices of the "Scientific Equipment & Furniture Association" (SEFA).
- .3 The Contractor must demonstrate and prove his ability to produce and install projects of similar sizes and delay.
- .4 All Contractors must obtain pre-qualification from the Architect prior to tender limit, based on sections 1.5.2 and 1.5.3. In addition, the Contractor will be required to supply the following:
 - .1 A typical cabinet with one drawer and one door
 - .2 A product catalogue
 - .3 A copy of the ISO- 9001-2000 certificate

1.6 Warranty

- .1 The Contractor must certify, in writing, that all components of the laboratory furniture included in this section are guaranteed for a period of three year starting at the date of achievement of his work.
- .2 The Guaranty document as well as a Maintenance manual must be given to the owner within 15 days following the date of achievement of his work .

1.7 Products handling

- .1 The manufacturer must provide proper packaging of the products in order to ensure the integrity of the products up to the final destination.

- .2 The minimum packaging must correspond to the following: each cabinet must be covered with a plastic bag and then fixed to a wood pallet, cabinets may be stacked a maximum of two cabinets high, and each assembly covered with cardboard and a plastic wrapping.
- .3 All counter tops must be protected, after their installation, with cardboard until the final inspection of this work.

2.0 PRODUCTS

2.1 Materials - Generalities

- .1 Commercial Quality Cold Rolled Steel sheets as per ASTM A366-85, class 1.
- .2 Stainless Steel sheets, type 316 with # 4 satin finish, as per ASTM A167-96.
- .3 Polished glass as per CAN/CGBS-12.3, 6 mm (1/4") thickness
- .4 Polished laminated glass as per CAN/CGSB.12.1, first quality, 6 mm (1/4") total thickness.
- .5 Silicone sealant for moisture resistance, Dow Corning # 786, black, clear or white and / or black chemical resistant sealant Dow Corning # 999 according to needs.

2.2 Steel cabinet Construction

- .1 The laboratory storage cabinets used with this System shall be ***Bedcolab's Opus Casework***.
- .2 The minimum metal gauges used in the fabrication of the casework shall be the following as per recognized North American standards.
 - .1 18 gauge (1.2 mm), for top front dummy panel
 - .2 14 gauge (1.7 mm), for all leveling devices & drawer suspension tracks.
 - .3 20 gauge (1.0 mm), for all drawer boxes, drawer front's interior and exterior panels and the door's interior panels.
 - .4 18 gauge (1.2 mm), for all the other cabinet components including cabinet frames, doors and shelves.
- .4 ***Bedcolab's Opus*** Suspended door or drawer cabinets will be of the same construction as ***Bedcolab's Forte*** line, without toe kicks and the front rail is replaced with a dummy panel. It will be suspended by rails and P-leg supports.

All *Opus* cabinets can be installed at any position between P-leg supports. The cabinets can be moved laterally, re-positioned or be added without the use of tools or the help of installers.

.5 Locking device of the suspended cabinets.

- .1 All suspended cabinet's steel painted finished top will be equipped, on its front center with a security bolt # GBOLTM-8X100U from *Selby Hardware*, of 8 mm (5/16") of diameter and 101 mm (4") in length.
- .2 The bolt will be fixed through a 3 mm reinforced plate welded to the cabinet's top panel and, once secured, will not allow the cabinet to be removed from the structural support rails.
- .3 The locking device can be removed at anytime, without the help of tools therefore allowing the relocation of the cabinet elsewhere on the system.
- .6 The *Chorus* P-legs are designed for wall or island configuration of all length and can be adapted to the construction site conditions.
- .7 Painted steel access panels are installed behind the cabinets, between the leg supports, to close the technical chase. These panels are screwed to the structure supporting the technical chase.
- .8 The *Chorus* P-legs is made of tubular steel of 38 mm x 38 mm x 1.5 mm thick (1 1/2" x 1 1/2" of 16 gauge), and is to be an all welded construction. All P-legs are equipped with a leveling device.
- .9 Front and back suspension rails, between P-legs are made of steel of 67 mm high by 1.5 mm thick (2 5/8" of 16 gauge) with a fixing reinforced fold return in the top part and, a 45 ° return holding fold to suspend cabinets. Each end will be closed to allow fastening to the P legs.
- .10 The mechanical space behind the P-legs includes pipe supports aligned with the p-legs and finish panels between supports. These finish panels will be made of a fixed panel on the bottom and an access panel on the top.
- .11 Pipe supports space will be closed where visible with two part filler panels screwed to the structure of the mechanical space. The top panel can be easily removed to gain access to that space
- .12 All welds shall be ground smooth. Spotweld will not be noticeable.
- .13 Each unit shall have non-exposed top front and bottom rails to assure the rigidity of the cabinet. The vertical posts and the horizontal rails must form a rigid, square assembly to house the doors and drawers. The fit of the doors and drawers will be such to prevent a sight line within the cabinet and to prevent dust penetration.

- .14 The side panels of the cabinet must be formed in one piece. All front vertical posts will be pre-punched to accommodate left or right door hinging as well as any combination of drawers, doors and shelves. In addition, front vertical rails will be reinforced with a U shaped channel for added strength. All rear vertical posts shall be pre-punched to received drawer suspension tracks and shelf clips.
- .15 All parts and sub assemblies including the doors, drawers, drawer suspension tracks, front center posts and removable back panels, shall be interchangeable in the field without requiring special tools.
- .16 All double door cabinets must be free of a center post, to permit full access to the storage area. The cabinet shall be constructed in such a way as to allow the retrofitting of a center post so that different door and drawer combinations can be installed.
- .17 The front top portion of the side panels will be welded to a "u" shaped channel to form a rigid square assembly to properly support the counter top.
- .18 No exposed horizontal structural members between doors and drawers shall be accepted.
- .19 The top front rails will be made of a 11 (3.2 mm) gauge steel channel.
20. Perforations or mechanical fixations are not permitted on visible cabinet sides.
- .21 All base cabinets, with the exception of drawer units, will be supplied with a back panel which shall be removable, without the use of tools. Back panels shall extend full height and width between the structures of the cabinet. Sink cabinets shall have a partial back panel, 9" (227 mm) high, to accommodate plumbing requirements.
- .22 All cabinet boxes must be fabricated to permit any future arrangement of doors and drawers. Front center posts or any other separator must be removable or can be added at any time, without having to make additional perforations or modifications to the cabinet.
- .23 **Shelving :**
 - .1 Shelving shall be Cold Rolled Steel. Edges shall be turned down on all four sides 19 mm (3/4") and shall return under on front and back (3/4") 19 mm.
 - .2 Shelves shall be adjustable on 1/2" (13 mm) increments and shall be full depth and width of the interior.
 - .3 Each shelf shall be supported by four zinc plated shelf clips.

.24 Doors :

- .1 Hinged metal doors shall consist of an inner and outer panel (painted inside and out) with sound deadening material covering the entire inside surface of the door.
- .2 The two top corners of the doors must be welded the full thickness of the doors and ground smooth.
- .3 The inside panel shall be removable and be mechanically fastened to the front panel by two fasteners at the bottom of the door to form a rigid 3/4" (19 mm) thick door with no vibrations during the opening and the closing of the door.
- .4 Hinged side shall be reinforced adequately to ensure firm fastening and prevent sagging.
- .5 Recessed black PVC or aluminum handles must be installed in the upper section of the door opposite the hinges, to permit an easy and natural opening.

.25 Drawers :

- .1 The drawer bottom flanges will be bent upwards on four sides for easier cleaning.
- .2 Drawer fronts shall consist of an inner and outer panel (painted inside and out) with a sound deadening material covering the entire inside surface of the drawer front.
- .3 The outside panel shall be removable and be mechanically fastened to the front panel to form a rigid 3/4" (19 mm) thick door.
- .4 Drawer sides shall be structurally reinforced around the top edge by a (3/4") 19 mm return flange with a 1/4" (6 mm) seam bend to the inside. The front and back drawer panels shall be reinforced by a (3/4") 19 mm flange all around and shall be welded to the sides to form a rigid drawer unit.
- .5 Drawers shall operate on 1" (25 mm) diameter nylon wheels with steel ball bearings. One such wheel shall be on each drawer slide and one on each drawer suspension track.
- .6 Drawer tracks shall be designed to prevent metal to metal contact and shall incorporate a self closing action for at least the last 7" (178 mm) of drawer travel.

- .7 The two sections of the drawer suspension tracks must have a rounded top section to eliminate the possibility of side movement at full drawer opening.
- .9 The drawer slides shall have built-in stops to prevent inadvertent removal of the drawers and shall be designed so that the drawers can be removed from full open position by lifting the front of the drawers and pulling out. The closing action of the drawers shall be cushioned by two rubber bumpers and the drawers shall be so designed as to operate freely and quietly even when loaded.
- .10 One recessed black PVC or aluminum handle or a wire pull shall be supplied in the center of the front of each drawer, except for drawers 889 mm (35") or wider which require two pulls.
- .11 The cabinets must be designed to permit the addition of full extension drawer tracks in replacement of the self closing tracks, without any modifications to the cabinets. This addition must be possible after the installation.

.26 Wall Storage Cabinets :

- .1 All wall storage cabinets are made of Cold Rolled Steel and are built using the same construction as the standard base cabinets.
- .2 Cabinet sides, bottom and top shall be 18G (1.2 mm) steel panels with the same construction detail on the front edge as the standard base cabinets.
- .3 Back panel shall be flanged 1/2" (13 mm) on all four sides and spot welded to cabinet sides, bottom and top. Back panel shall be reinforced with two hat section channels welded vertically at 5" (125 mm) from each side and have two vertical rows of holes at 1/2" (13 mm) increments for shelf support clips.
- .4 The cabinet floor shall cover the full interior width and depth with return flanges turned down on all four sides. This panel shall be removable for easy access to wall fastenings.
- .5 Shelves shall be Cold Rolled Steel 3/4" (19 mm) thick with all four sides turned down and shall have a 3/4" (19 mm) return flange on the front and back. Shelves shall be adjustable at 1/2" (13 mm) increments and shall be full depth and width of interior. Four zinc plated clips per shelf shall be provided.
- .6 The wall storage cabinets should permit the addition of all of the following kinds of door arrangements without any modifications to the cabinet.

Cabinets can be supplied open on the front or with the following types of doors :

- .1 Sliding glass doors shall be 1/4" (6 mm) glass fitted to a "W" shaped extruded aluminum shoe running the full width of door bottom. Shoe shall be provided with two nylon wheel assemblies. The door assembly shall run on an inverted "W" shaped extruded aluminum track. One finger pull 5/8" x 3" (16 mm x 76 mm) per door shall be ground into glass on side of door.
- .2 Sliding metal doors shall be the same construction as the doors on the standard base cabinets but shall be guided at the bottom with a full width aluminum track and a black nylon track on top.
- .3 Hinged metal doors shall be the same construction as the doors on the standard base cabinets.
- .4 Hinged glass doors shall be 1/4" (6 mm) glass with a 2" x 3/4" (51 mm x 19 mm) metal frame all around the glass.

2.3 Acid Storage Cabinets:

- .1 Acid storage cabinets will be of the same construction than the standard base cabinets, with a one piece white chemical resistant polyethylene (HDPE) interior box and doors lined with the same material 1/4" (6 mm) thick. Three integral shelf position supports are located on each side of the box. The bottom is equipped with an integral 1/4" high edge to prevent leakage to the exterior of the cabinet.
- .2 Air grills are provided at top and bottom of each door for air circulation.
- .3 Each unit comes with an adjustable white chemical resistant polyethylene (HDPE) perforated shelf.
- .4 Each unit is labelled "ACIDS – DANGER" for clear identification.
- .5 All interior hardware is made of stainless steel.

2.4 Flammable Solvents storage cabinets :

- .1 Construction shall meet *O.S.H.A. Standard 1910-106(d)(3)*, comply with the *NFPA Flammable and Combustible Liquids Code No. 30* and be UL 1275 certified.
- .2 They shall be made of 18G (1.2 mm) thick Cold Rolled Steel with double wall construction with fire proof insulation. The floor shall be made of

galvanized steel and be recessed 2" (51 mm) below the front opening of the cabinet. The four corners will be welded to form a liquid-tight well.

- .3 The cabinets shall be equipped with four 5/16" (8 mm) diameter threaded bolt type steel levelers as on the standard base cabinets.
- .4 The back of each cabinet shall be supplied with two 1/2" (38 mm) fire baffle vents.
- .5 Each cabinet shall be equipped with an adjustable galvanized 16G (1.5 mm) steel shelf.
- .6 Each cabinet shall be clearly identified as such with the inscription *FLAMMABLE - KEEP FIRE AWAY*
- .7 Doors shall overlap cabinet frame and have a full length piano hinge. Handle shall have a two point locking mechanism.

2.5 Shelving systems on support post:

- .1 Posts are made of painted tubular steel of 16 gauge (1.5 mm) thick x 1 1/2" mm (38) square with double slots on two sides allowing the installation of the adjustable painted steel shelves
- .2 Posts are secured in the bottom, with a high caliber steel angle fastened to the post and the floor permitting height adjustment, and under the counter using a steel U shape piece of high caliber attached to the post and to the P-leg
- .3 Shelf supports are designed using 4 notches for fastening to the post and, are made of painted steel 14 gauge, (1.6 mm) thick with a return angle for fastening of 5/8" (16 mm).
- .4 Shelves are made of painted steel, 18 gauge (1.2 mm) thick with a raised back ledge of 2" (51 mm) to prevent equipment from falling and welded U shape reinforcement for the length of the shelf

2.6 Furniture Hardware :

- .1 **Flush finger pulls** : all handles for hinged and sliding metal doors and drawers shall be extruded black PVC 4" (102 mm) long set flush within thickness on door and drawer front panels.
- .2 **Glass door handles** : one finger pull 5/8" x 3" (16 mm x 76 mm) per door shall be ground into glass on side of door next to cabinet frame.

- .3 **Hinges** : Door hinges shall be 14 gauge (1.9 mm) steel, five knuckle type screwed into door and fastened to cabinet side with two counter sunk 8-32 stainless steel screws. Hinges shall have a black baked enamel finish.
- .4 **Door catches:** Shall be adjustable zinc plated steel spring loaded, nylon roller, model number 950 by *Canaropa*.
- .5 **Strike plates:** shall be made of steel and part of the structure of the cabinet.
- .6 **Levelers:** Levelers at the four cabinet corners shall be cadmium plated hex head 5/16" (8 mm) machine screws 1 1/2" (38 mm) long slotted on threaded end for screwdriver adjustment. Levelers are supplied with white nylon glide caps. *Cluthe* # 805
- .7 **Press plugs** : Press plugs for cabinet floors shall be black nylon, *Cords* # DP875.
- .8 **Shelf clips** : Shelf clips shall be Roll-It # 101 with a zinc finish.
- .9 **Drawer and hinged door bumpers** : Drawer and hinged door bumpers shall be black rubber, tongue type press fit bumper. Two bumpers per door or drawer. *3M* # SJ-5003.
- .10 **Drawer tracks** : shall be *Bedcolab* model # DT002 with 7" self-closing feature.
- .11 **File drawer tracks** : shall be full extension type, zinc finish. *Waterloo* # 3464-1763. Weight capacity is 250 lbs per pair of slides. The drawer slide must be installed in such a manner that drawer can be easily removed from cabinet without the use of tools.
- .12 **File hanger rods** : shall be made of painted steel 1/8" x 3/4" (3 mm x 19 mm) and shall be adjustable to accommodate legal or letter size files.

2.7 **Steel Furniture Finish :**

- .1 When fabrication of unit is completed, all surfaces shall be free of scratches, spot weld marks or material imperfections. Welds will be ground smooth where necessary. The unit will be washed using a three stage iron phosphate process for proper surface preparation, and subsequently dried in a dry off oven to remove all traces of humidity.
- .2 A high quality chemical resistant thermosetting polyester enamel paint will then be applied to all surfaces including the interior of door and drawer panels using an electrostatic spray process. The parts will pass through a baking oven for a duration and at a temperature as recommended by the

paint manufacturer. Painted surfaces will conform to AAMA 603.8 and CGSB 1-GP-300.

- .3 The painted surfaces will meet or exceed the SEFA 8 specification for chemical resistance as specified by the “Scientific Equipment and Furniture Association”.

- .3 **Technical Performance :**

- .1 Adhesion to substrate : 100% 5B (ASTM D-3359B)

- .2 Hardness : 4H to 5H (ASTM D 2197-86)

- .3 Gloss : 40 to 50 ° (ASTM D-523-89)

- .4 Flexibility : 3mm mandrel (ASTM D-522)

- .5 Impact resistance : 100 in./lb (ASTM D-2795)

- No effect

- .6 Corrosion resistance : excellent (ASTM B 117-85)

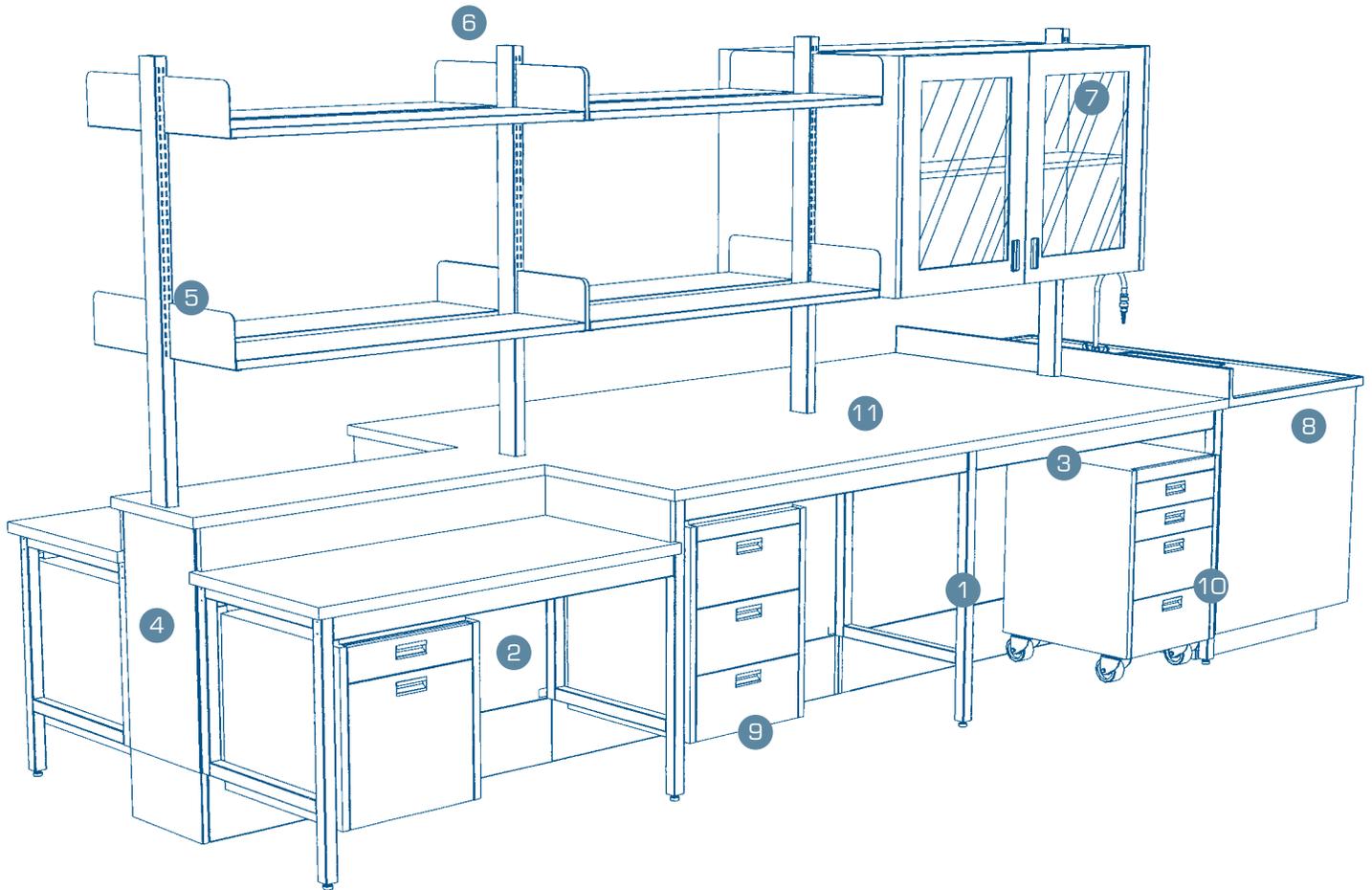
- No visible effects after 250 hour salt spray

- .7 Humidity resistance : excellent (ASTM D-2247-85)

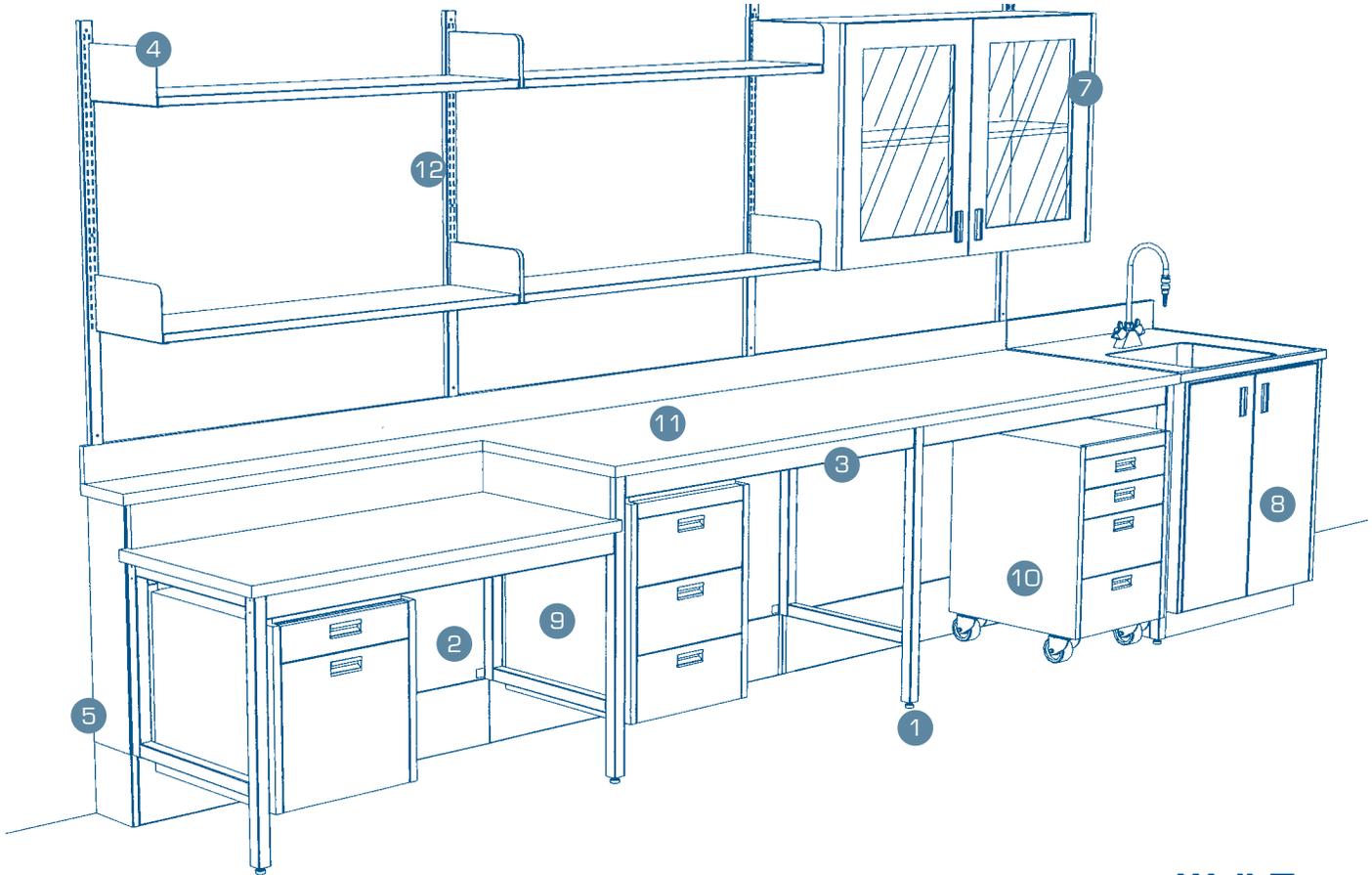
- .4 **Colors** : Twenty colors are available as per the *Bedcolab* color chart. Cabinets may be painted in one solid color or a two color scheme may be applied, where all cabinet bodies are painted one color and the doors and drawers are painted a second color.

Chorus System

Our value leader. This sturdy, cost effective system has always been a favorite. It offers the same stable work environment as floor mounted cabinets but with the added benefit of flexibility in cabinet configuration. It features a rigid 'P' shaped bench support system for high load bearing and vibration resistance. Plumbing and other services are fully accessible by removing the convenient front access panels. The horizontal members of the frame assembly are designed to work with our **Opus** suspended cabinets that can easily be slide from side to side allowing the user to quickly adapt the space to his or her needs. Because each lab has it's own requirements, the **Chorus** system can also be used in combination with standard floor mounted casework, mobile cabinets and a multitude of adjustable upper shelving arrangements.



Island Type



Wall Type

Features

- 1 P Leg counter support

- 2 Service chase cover panel

- 3 Horizontal support member

- 4 Shelf support set

- 5 End closing panel

- 6 Double post assembly

- 7 Wall storage cabinet

- 8 Additional **Forte** cabinet

- 9 **Opus** suspended cabinet

- 10 Mobile cabinet

- 11 Work surface

- 12 Single Post assembly

Characteristics

- Vibration resistant. Available in sitting or standing height

- Full access to rear services

- Can accommodate **Opus** suspended cabinets

- Adjustable to 1 inch increments

- For lateral access to services

- Supports counter tops and shelving for Island benches

- For protected storage

- Adds storage and is available as a sink unit

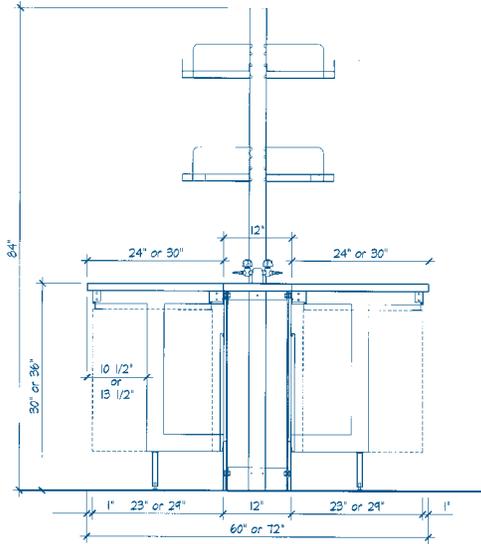
- Slides laterally under the counter top

- Easily re-locatable to another workstation

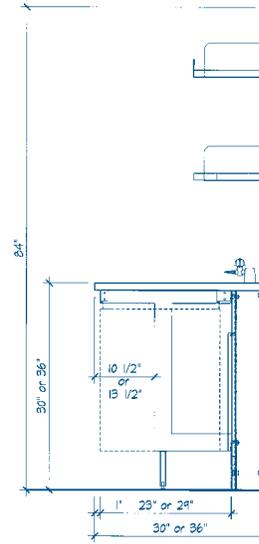
- Available in many materials and finishes

- Supports upper storage cabinets and shelving at wall benches

*Additional technical information is available on our CD Rom

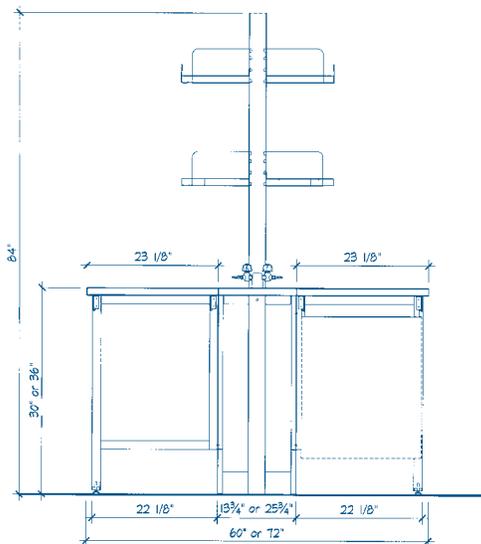


Island Type

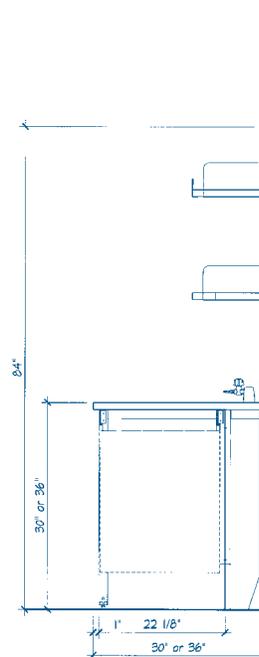


Wall Type

Concert System



Island Type



Wall Type

Chorus System

Opus Suspended Storage cabinets

We offer an assortment of under-counter cabinets designed to work with all Bedcolab adaptable systems. These cabinets include front and rear support rails that are mated to the counter structure rails. The cabinets are securely suspended under counter top. The cabinets can easily be slide laterally to any desired position.

Suspended cabinets for standing height benches: 21" deep x 24^{3/4}" high



1 door unit

Model no.	Width	
	inches	mm
SB1-15	15	381
SB1-18	18	457
SB1-21	21	533
SB1-24	24	610



2 door unit

SB2-30	30	762
SB2-36	36	914
SB2-42	42	1067
SB2-48	48	1219



1 drawer - 1 door unit

SB4-15-1	15	381
SB4-18-1	18	457
SB4-21-1	21	533
SB4-24-1	24	610



2 drawer - 2 door unit

SB5-30-2	30	762
SB5-36-2	36	914
SB5-42-2	42	1067
SB5-48-2	48	1219



3 drawer unit

SB7-15-3	15	381
SB7-18-3	18	457
SB7-21-3	21	533
SB7-24-3	24	610



4 drawer unit

SB7-15-4	15	381
SB7-18-4	18	457
SB7-21-4	21	533
SB7-24-4	24	610



1 file drawer - 1 drawer unit

SB11-15-2	15	381
SB11-18-2	18	457
SB11-21-2	21	533
SB11-24-2	24	610



2 door sink unit

SB16-30	30	762
SB16-36	36	914
SB16-42	42	1067
SB16-48	48	1219

Suspended cabinets for Sitting height benches



2 door unit

SC1-15	15	381
SC1-18	18	457
SC1-21	21	533
SC1-24	24	610



1 file drawer - 1 drawer unit

SC11-15-2	15	381
SC11-18-2	18	457
SC11-21-2	21	533
SC11-24-2	24	610



3 drawer unit

SC7-15-3	15	381
SC7-18-3	18	457
SC7-21-3	21	533
SC7-24-3	24	610



2 door unit

SC2-30	30	762
SC2-36	36	914
SC2-42	42	1067
SC2-48	48	1219



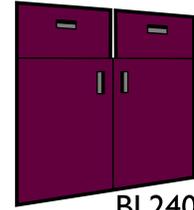
BLI40



BL200



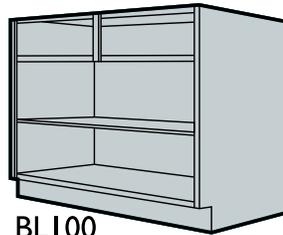
BL220



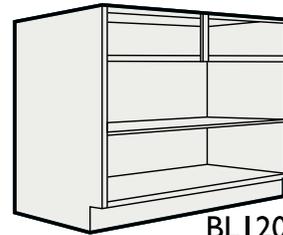
BL240



BLI50



BLI00



BLI20



BL250



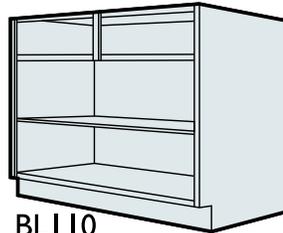
BLI60



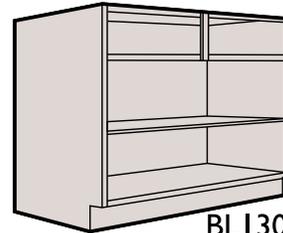
BL260



BLI70



BLI10



BLI30



BL270



BLI80



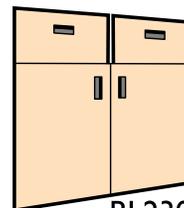
BL280



BLI90



BL210



BL230



BL290

Two-tone co-ordinated colors are standard. Actual colors on steel product may vary slightly from the colors shown here.

Les choix de deux couleurs assorties sont standards. Les couleurs reproduites sur la charte peuvent varier légèrement sur l'acier fini.