

**LEGEND**

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| <p><b>Ceiling Materials and Finish</b><br/>         GWB Gypsum Wall Board White<br/>         ACT Acoustic Ceiling Tile White</p>               | <p><b>Wall Finish</b><br/>         PT Paint - Refer to Spec Section 09911 for complete listing of paint types. Colour allocation (FIN) to be provided by Designer.<br/>         CT Ceramic Wall Tile<br/>         F-PLY Fire Retardant Plywood Backboard (19mm) For Electrical and Comm. Equipment<br/>         DWS Demountable Wall System<br/>         PRE Pre-Finished by Manufacturer<br/>         WC Wall Covering<br/>         EXT Existing</p>  |
| <p><b>Floor Materials</b><br/>         CPT Carpet Tile<br/>         L Linoleum<br/>         VSD Vinyl Static Dissipative Tile</p>              | <p><b>Materials</b><br/>         GWB Gypsum Wall Board<br/>         CT Ceramic Tile for Kitchen backsplash.</p>  |
| <p><b>Base Materials</b><br/>         R Rubber Base<br/>         LC Linoleum Cove at millwork<br/>         PL Plastic Laminate at millwork</p> | <p><b>Schedule Notes</b><br/>         1. See sheet A – 6 for flooring type.<br/>         2. CT for backsplash - refer to millwork drawings.<br/>         3. All areas of ceiling GWB to be painted.<br/>         4. Door finish – refer to Door Schedule.<br/>         5. All ceiling tile to be white.<br/>         6. All GWB Ceiling soffits to be painted white.<br/>         7. Door In-fill only. Repairs around new door location including new paint.<br/>         8. Heating cabinets are factory finished.<br/>         9. All GWB columns to be painted.<br/>         10. Gypsum infill at window point. Entire room to be painted.<br/>         11. Paint existing gypsum walls around perimeter.<br/>         12. Existing walls to be painted.</p> |

| Room # | ROOM NAME              | FLOOR FINISH |      | WALL FINISH |       | CEILING FINISH |     |      | SCHEDULE NOTES |
|--------|------------------------|--------------|------|-------------|-------|----------------|-----|------|----------------|
|        |                        | FIN          | BASE | MAT         | FIN   | MAT            | FIN | HT   |                |
| 2201   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11             |
| 2202   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11             |
| 2203   | UNDESIG. OFFICE        | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 | 9              |
| 2204   | SECURITY AREA          | CPT          | R    | GWB         | PT    | ACT            |     | 2745 | 9, 11          |
| 2204A  | EXISTING DASCO CENTER  | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 9, 12          |
| 2204B  | EXISTING CRISIS CENTER | CPT          | R    | GWB/EXT     | PT    | ACT            |     | 2745 | 10,11,12       |
| 2205   | OPEN OFFICE AREA       | CPT          | R    | GWB/EXT     | PT    | ACT            |     | 2745 | 11,12          |
| 2206   | MEDIUM MEETING         | CPT          | R    | DWS/EXT     | WC/PT | ACT            |     | 2745 | 9, 12          |
| 2207   | QUIET ROOM             | CPT          | R    | DWS/EXT     | WC/PT | ACT            |     | 2745 | 12             |
| 2208   | EXISTING MEETING ROOM  | CPT          | R    | GWB/EXT     | PT    | ACT            |     | 2745 | 10, 11, 12     |
| 2210   | CORR.                  | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 9, 12          |
| 2211   | KITCHEN                | L            | R/LC | DWS         | WC    | ACT            |     | 2745 | 9              |
| 2212   | SHARED EQUIP.          | CPT          | R/PL | DWS         | WC    | ACT            |     | 2745 | 12             |
| 2213   | MEETING ROOM           | CPT          | R    | DWS         | WC    | ACT            |     | 2745 | 9              |
| 2214   | CORR.                  | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 |                |
| 2215   | KITCHENETTE            | L            | R/LC | DWS         | WC    | ACT            |     | 2745 | 9              |
| 2216   | SENIOR MGMT SUITE      | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 | 11, 12         |
| 2217   | SENIOR MGMT. OFFICE #1 | CPT          | R    | GWB         | PT    | ACT            |     | 2745 | 9              |
| 2218   | SENIOR MGMT. OFFICE #2 | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 |                |

| Room # | ROOM NAME              | FLOOR FINISH |      | WALL FINISH |       | CEILING FINISH |     |      | SCHEDULE NOTES |
|--------|------------------------|--------------|------|-------------|-------|----------------|-----|------|----------------|
|        |                        | FIN          | BASE | MAT         | FIN   | MAT            | FIN | HT   |                |
| 2219   | SENIOR MGMT. OFFICE #3 | CPT          | R    | DWS         | WC    | ACT            |     | 2745 | 9              |
| 2220   | SMALL MEETING ROOM     | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 | 12             |
| 2221   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2222   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2223   | CORRIDOR               | CPT          | R    | GWB/EXT     | PT    | GWB            | PT  |      | 3, 9, 11, 12   |
| 2224   | MAIL PICK-UP           | L            | R    | GWB         | PT    | ACT            |     | 2745 |                |
| 2225   | SPS RECORD ROOM        | L            | R    | GWB         | PT    | ACT            |     | 2745 | 9, 11, 12      |
| 2226   | QUIET ROOM B           | CPT          | R    | GWB         | PT    | GWB            | PT  | 2745 | 11             |
| 2227   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2228   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 7, 9, 10, 12   |
| 2229   | OFFICE                 | CPT          | R    | DWS/EXT     | WC/PT | ACT            |     | 2745 | 12             |
| 2230   | MEETING ROOM           | CPT          | R    | DWS/EXT     | WC/PT | ACT            |     | 2745 | 9, 12          |
| 2231   | OFFICE                 | CPT          | R    | DWS/EXT     | WC/PT | ACT            |     | 2745 | 12             |
| 2232   | CORRIDOR               | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2233   | SHARED EQUIP. B        | CPT          | R/PL | DWS/EXT     | WC/PT | ACT            |     | 2745 | 11, 12         |
| 2234   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 9, 11, 12      |
| 2235   | QUIET ROOM             | CPT          | R    | DWS/GWB     | WC/PT | ACT            |     | 2745 | 12             |
| 2236   | OFFICE                 | CPT          | R    | DWS         | WC    | ACT            |     | 2745 |                |
| 2237   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 9, 11          |
| 2238   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2239   | OPEN OFFICE AREA       | CPT          | R    | EXT         | PT    | ACT            |     | 2745 | 11, 12         |
| 2240   | MEDIUM MEETING ROOM    | CPT          | R    | DWS         | WS    | ACT            |     | 2745 | 9              |
| 2241   | KITCHEN                | L            | R/LC | DWS         | WS    | ACT            |     | 2745 | 9              |
| 2242   | TELECOM ROOM           | VSD          | R    | F-PLY       |       |                |     |      |                |
| 2253   | CORRIDOR               | L            | R    | EXT/GWB     | PT    | EXT            | PT  | EXT  |                |
| 2254   | EXISTING WASHROOM      | -            | -    | EXT         | PT    | -              | -   |      |                |
| 2258   | EXISTING WASHROOM      | -            | -    | EXT         | PT    | -              | -   |      |                |

**END OF SECTION**

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**Part 1            General**

**1.1                SECTION INCLUDES**

- .1    Interior panels for walls and ceilings.
- .2    Panel and joint treatment.
- .3    Non-loadbearing metal stud wall framing.
- .4    Metal channel ceiling framing.
- .5    Access doors.
- .6    Acoustic sound insulation.

**1.2                RELATED SECTIONS**

- .1    Section 07 84 00 - Firestopping:
- .2    Section 07 92 00 - Joint Sealants.
- .3    Section 08 11 00 – Hollow Metal Frames
- .4    Section 08 31 13 - Access Doors and Frames
- .5    Section 09 91 00 - Painting
- .6    Section 10 22 23 – Demountable Wall System
- .7    Mechanical and Electrical Divisions: Supply of access panels.

**1.3                REFERENCES**

- .1    ASTM C475/C475M-02 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- .2    ASTM C645-04 - Specifications for Non-Structural Steel Framing Members.
- .3    ASTM C754-00 - Installation of Steel Framing Members to Receive Screw-Attached Gypsum Board.
- .4    ASTM C840-04a - Standard Specification for Application and Finishing of Gypsum Board.
- .5    ASTM C1002-01 - Steel Self-Piercing, Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
- .6    ASTM C1280-04 - Standard Specification for Application of Gypsum Sheathing.
- .7    ASTM C1396/C1396M-04 - Standard Specification for Gypsum Board.

- .8 ASTM E119-00a - Method for Fire Tests of Building Construction and Materials.
- .9 ASTM E90-04 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .10 GA-201 (Gypsum Association) - Gypsum Board for Walls and Ceilings.
- .11 GA-214 (Gypsum Association) - Recommended Specification: Levels of Gypsum Board Finish.
- .12 GA-216 (Gypsum Association) - Application and Finishing of Gypsum Board.
- .13 GA-801 (Gypsum Association) - Handling Gypsum Board.
- .14 RECM G13-01 Walls document for secure areas.

#### **1.4 SUBMITTALS FOR REVIEW**

- .1 Submit in accordance with Section 01 33 00.
- .2 Product Data: Provide data on metal framing, gypsum board, joint tape and joint compound.

#### **1.5 QUALITY ASSURANCE**

- .1 Perform Work in accordance with ASTM C840.
- .2 Handling Gypsum Board: Comply with GA-801.

### **Part 2 Products**

#### **2.1 FRAMING MATERIALS**

- .1 Studs and Tracks: ASTM C645; galvanized sheet steel, (20 gauge) 1.02mm thick unless indicated otherwise. Use 20 gauge steel stud at ne partitions with plywood backing. Use 2"x6" 18 gauge stud around secure records room.
- .2 Furring, Framing, and Accessories: ASTM C645 and GA-216.
- .4 Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- .5 Blocking: Galvanized sheet metal; minimum 18 gauge, 200 mm wide minimum.

#### **2.2 PANEL MATERIALS**

- .1 Gypsum Board: ASTM C1396/C1396M, STANDARD AND Type X, thickness as indicated, maximum available length in place; ends square cut, tapered edges.

## 2.3 ACCESSORIES

- .1 Access Panels: Supplied by others, installed by this Section.
- .2 Sound Attenuation Insulation:
  - .1 Glass Fibre Batt: to CAN/ULC-S702; Type: 1; un-surfaced; thickness: to suit partition thickness, full stud thickness.
- .3 Joint Materials: ASTM C475; paper reinforcing tape, joint compound, adhesive, and water.
- .4 Panel Fasteners: ASTM C1002, Type S12 screws.
- .5 Compressible Foam Gasket: sill plate gasket; polyethylene foam, minimum thickness 6 mm x full width of sill plate at all acoustic sound walls.
- .6 Gypsum sheathing board (GWB): to ASTM C1396, Type X, 16mm (5/8<sup>⊙</sup>) thick, 1220 mm (48: wide x maximum practical length, ends square cut, edges beveled. Use this board for ceiling and bulkheads and for walls where indicated. Refer to drawings, legends and schedules for locations.
- .7 Tile back board: glass mat water-resistant gypsum backing board to ASTM C1178, 16mm thick, 1220mm wide x maximum practical length: for use under ceramic tile.
  - .1 Acceptable material:
    - .1 DensShield Tile Backer by Georgia Pacific.
    - .2 GlasRoc Tile Backer by Certainteed.
- .8 Metal furring runners, hangers, tie wires, inserts, anchors: to CAS A82.30, galvanized.
- .9 Drywall furring channels: .0.5mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .10 Steel drill screws: to ASTM C 1002.
- .11 Laminating compound: as recommended by manufacturer, asbestos-free.
- .12 Casing beads, corner beads, control joints and edge trim: to ASTM C1047, Z275 zinc finish, 0.5 mm base thickness, perforated flanges, fillable types only, one piece length per location.
- .13 Trim to GA-216, metal: corner bead, casing bead, L bead, control joint and others as required.
- .14 Sealants: As per Section 07 92 00, installed by 09 21 16.
- .15 Acoustic sealant: As per Section 07 92 00, installed by 09 21 16.
- .16 Joint compound: to ASTM C475, asbestos-free, moisture and mould resistant.

- .17 Joint tape: mould resistant, fibreglass mesh.
- .18 Flattened metal mesh: to EMMA 577-99, style ¾-9F, nominal strand thickness of 0.120". Diamond opening of 0.563" x 1.688". See RCMP G13-01 Walls document for installation requirements.

### **Part 3 Execution**

#### **3.1 METAL STUD INSTALLATION**

- .1 Install studs in accordance with ASTM C754 and manufacturer's instructions.
- .2 Install sill plate gaskets below all tracks.
- .3 Metal Stud Spacing: as indicated.
- .4 Refer to Drawings for indication of partitions extending stud framing through the ceiling to the structure above.
  - .1 Maintain clearance under structural building members to avoid deflection transfer to studs.
  - .2 Provide extended leg ceiling runners.
- .5 The drywall contractor is required to coordinate his stud installation with all other trades, providing openings, bracing, bulkheads etc as required to ensure that partitions are stable and run full height to underside of deck above as noted.
  - .1 No extras will be provided for off-sets, etc.. not shown on drawings.
- .6 Drywall edges shall extend to u/s of floor above and joints sealed with fire caulk or acoustical sealant in non rated acoustic sound walls.
- .7 Door and Window Opening Framing: Install double studs at frame jambs.
  - .1 Install stud tracks on each side of opening, at frame head height, and between studs and adjacent studs.
- .8 Blocking: Install blocking for support of wall cabinets, frame opening, accessories, hardware, equipment, wall mounted door stops, firestopping and as required.
  - .1 Both ends of metal blocking and intermittent lap joints to be secured to studs back-up
- .9 Anchorage to Substrate:
  - .1 Rigidly secure studs to substrate at minimum mid-height to prevent deflection.
  - .2 Provide bracing above ceilings as required to prevent deflection.

#### **3.2 WALL FURRING INSTALLATION**

- .1 Erect furring for direct attachment to substrate.
- .2 Shim wall as required and rigidly secure to substrate to prevent deflection.

- .3 Erect furring channels; space maximum 400 mm on centre, not more than 100 mm from floor and ceiling lines and abutting walls.
  - .1 Secure in place on alternate channel flanges at maximum 600 mm on centre.
  - .2 Provide metal angle at sides, bottom and top of walls for edge securement.

### **3.3 CEILING FRAMING INSTALLATION**

- .1 Install in accordance with ASTM C754 and manufacturer's instructions.
- .2 Coordinate location of hangers with other work.
- .3 Install ceiling framing independent of walls, columns, and above ceiling work.
- .4 Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing.
  - .1 Extend bracing minimum 600 mm past each end of openings.
- .5 Laterally brace entire suspension system.

### **3.4 ACCESSORIES INSTALLATION**

- .1 Install access panels to locations required for access.
- .2 Install resilient channels at maximum 600 mm on centre.
  - .1 Locate joints over framing members.
  - .2 Provide metal angle at bottom and top of wall for edge securement.
- .3 Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
  - .1 Secure with insulation clips or other means to prevent sagging.
  - .2 Stagger Joints.
- .4 Install acoustic sealant at gypsum board perimeter at:
  - .1 Metal Framing: Two beads.
  - .2 Base Layer.
  - .3 Face Layer.
  - .4 Caulk all penetrations of partitions by conduit, pipe, duct work, rough-in boxes.
- .5 Supply and install security mesh as detailed on drawings full height of wall to underside of slab above. Construct per RCMP –G13-01 requirements.

### **3.5 ERECTION**

- .1 Do application and finishing of gypsum board to ASTM C840 except where specified otherwise.
- .2 Do application of gypsum sheathing to ASTM C1280.

- .3 Erect hangers and runner channels for suspended gypsum board ceilings to ASTM C840 except where specified otherwise.
- .4 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .5 Install work level to tolerance of 1:1200.
- .6 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles.
- .7 Furr openings and around built-in equipment, cabinets, access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
- .8 Furr duct shafts, beams, columns, pipes and exposed services where indicated.
- .9 Erect drywall resilient furring transversely across studs and between the layers of gypsum board, spaced maximum 600 mm on centre and not more than 150 mm from ceiling/wall juncture. Secure to each support.
- .10 Install acoustic sound insulation.

### **3.6 APPLICATION**

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work have been approved.
- .2 Apply single and double layer gypsum board to framing using screw fasteners stud adhesive for first layer, laminating adhesive screw fasteners for second layer. Maximum spacing of screws 300 mm on centre.
  - .1 Single-Layer Application:
    - .1 Apply gypsum board on ceilings prior to application of walls to ASTM C840.
    - .2 Apply gypsum board vertically or horizontally, providing sheet lengths that will minimize end joints.
  - .3 Apply 12 mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components.
    - .1 Seal full perimeter of cut-outs around electrical boxes, ducts, in partitions where perimeter sealed with acoustic sealant.
- .4 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.
- .5 Install gypsum board on walls vertically to avoid end-butt joints.
- .6 Install gypsum board with face side out.

- .7 Do not install damaged or damp boards.
- .8 Locate edge or end joints over supports.
- .9 Stagger vertical joints over different studs on opposite sides of wall.

### **3.7 INSTALLATION**

- .1 Erect accessories straight, plumb or level, rigid and at proper plane.
  - .1 Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured.
  - .2 Mitre and fit corners accurately, free from rough edges.
- .2 Install casing beads around perimeter of suspended ceilings.
- .3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated.
  - .1 Seal joints with sealant.
- .4 Install insulating strips continuously at edges of gypsum board and casing beads abutting metal window and exterior door frames, to provide thermal break.
- .5 Construct control joints of preformed units two back-to-back casing beads set in gypsum board facing and supported independently on both sides of joint.
- .6 Provide continuous polyethylene dust barrier behind and across control joints.
- .7 Locate control joints approximate 10m spacing on long runs at approximate 15m spacing on ceilings.
- .8 Install control joints straight and true.
- .9 Construct expansion joints at building expansion and construction joints. Provide continuous dust barrier.
- .10 Install expansion joint straight and true.
- .11 Install access doors to electrical and mechanical fixtures specified in respective sections.
  - .1 Rigidly secure frames to furring or framing systems.
- .12 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.
- .13 Gypsum Board Finish: finish gypsum board walls and ceilings to level 5 finish in accordance with AWCI Levels of Gypsum Board Finish:
  - .1 Level 5: embed tape for joints and interior angles in joint compound and apply three separate coats of joint compound over joints, angles, fastener

heads and accessories; apply a thin skim coat of joint compound to entire surface; surfaces smooth and free of tool marks and ridges.

- .14 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.
- .15 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.
- .16 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .17 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.
- .18 Mix joint compound slightly thinner than for joint taping.
- .19 Apply thin coat to entire surface using trowel or drywall broad knife to fill surface texture differences, variations or tool marks.
- .20 Allow skim coat to dry completely.
- .21 Remove ridges by light sanding or wiping with damp cloth.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1    ANSI A108.5 - Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar.
- .2    ANSI A108.10 - Installation of Grout in Tile work.
- .3    ANSI A118.4 - Latex-Portland Cement Mortar.
- .4    ANSI A118.6 - Ceramic Tile Grouts.
- .5    ANSI A137.1 - Standard Specifications for Ceramic Tile.
- .6    TTMAC (Terrazzo, Tile, and Marble Association of Canada) - Manual.

**1.2                QUALITY ASSURANCE**

- .1    Perform Work in accordance with ANSI A137.1.
- .2    Conform to TTMAC Manual.
- .3    Maintain one copy of each document on site.

**1.3                SUBMITTALS**

- .1    Section 01 33 00: Submission procedures.
- .2    Product Data: Tile info, instructions for using adhesives and grouts.
- .3    Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

**Part 2            Products**

**2.1                TILE MATERIALS**

- .1    Wall Tile:
  - .1    Hexagon 1.5cmx1.5cm mosaic, mixed gloss glazed, on mesh sheets.
  - .2    Standard of Acceptance: CeraGres Hex Mix Cement.

## **2.2 MORTAR MATERIALS**

- .1 Mortar Materials: ANSI A118.4, premixed polymer modified Portland cement mortar;
- .2 Acceptable Products:
  - .1 Flextile 52,
  - .2 Kiesel Servofix KM,
  - .3 Mapei Ultraflex 2,
  - .4 TEC SturdiFlex.

## **2.3 GROUT MATERIALS**

- .1 Stain Resistant Grout:
  - .1 Acceptable Product:
    - .1 Laticrete
    - .2 Mapei Karacolour
    - .3 Polyblend
  - .2 Colour selection by Departmental Representative

## **2.4 ACCESSORIES**

- .1 Tile edging on all exposed tile edges: extruded anodized aluminum brushed finish. Depth of trim to suit tile. Standard of acceptance: Schluter Jolly.

## **Part 3 Execution**

### **3.1 WORKMANSHIP**

- .1 Do tile work in accordance with TTMAC Tile Installation Manual, except where specified otherwise.

### **3.2 TILE INSTALLATION - GENERAL**

- .1 Install tile and grout to TTMAC Manual.
- .2 Grout tile joints using un-sanded grout type indicated.
- .3 Install transition trim in continuous lengths, solidly embedded in setting material.
  - .1 File exterior corners of metal trim round, smooth.

### **3.3 CLEANING**

- .1 Clean tile and grout surfaces.

**END OF SECTION**

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**Part 1            General**

**1.1                SECTION INCLUDES**

- .1      Suspended metal grid ceiling system and perimeter trim.
- .2      Acoustic panels.
- .3      Caulking of perimeter trim to wall.

**1.2                REFERENCES**

- .1      ASTM C635 - Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- .2      ASTM C636 - Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- .3      ASTM E1264 - Classification of Acoustical Ceiling Products.
- .4      CISCA (Ceilings and Interior Systems Contractors Association) – Acoustical Ceilings: Use and Practice.

**1.3                SUBMITTALS FOR REVIEW**

- .1      Submit in accordance with Section 01 33 00.
- .2      Product Data: Provide data on metal grid system components, and acoustic units.
- .3      Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

**1.4                QUALITY ASSURANCE**

- .1      Conform to CISCA requirements.

**1.5                ENVIRONMENTAL REQUIREMENTS**

- .1      Maintain uniform temperature of minimum 16 degrees C and a humidity of between 20 and 40 percent prior to, during, and after acoustic unit installation.

**1.6                PROJECT CONDITIONS**

- .1      Sequence work to ensure acoustic ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- .2      Install acoustic units after interior wet work is dry.

## **1.7 EXTRA MATERIALS**

- .1 Provide twelve (12) extra panels of each specified type; store where directed.

## **Part 2 Products**

### **2.1 SYSTEM MATERIALS**

- .1 Acoustical Tiles: to ASTM E1264, for suspended ceiling system, 500 mm x 1500mm (20" x 60") size, square edge, cut to suit reflected ceiling plan layout and existing tile size:
  - .1 Minimum Noise Reduction Coefficient (NRC) of 0.55.
  - .2 Minimum Ceiling Attenuation Class (CAC) rating 35.
  - .3 Minimum Light reflectance range of 0.85
  - .4 Colour: white.
  - .5 Acceptable Products: Armstrong Fine Fissured 1736, CGC Radar 2617, or approved alternate
- .2 Suspension system: Non-fire rated, intermediate duty system to ASTM C 635, commercial quality galvanized rolled steel, standard white colour;
  - .1 Acceptable Products: Armstrong Prelude XL, CGC Donn DX, Chicago Metallic.
- .3 Accessories: Stabilizer bars, clips, splices, perimeter mouldings, hold down clips, required for suspended grid system.
- .4 Support Channels, Furring and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verify that layout of hangers will not interfere with other work.

### **3.2 INSTALLATION - LAY-IN GRID SUSPENSION SYSTEM**

- .1 Install suspension system in accordance with ASTM C636 and manufacturer's written instructions and as supplemented in this section.
- .2 Install system capable of supporting imposed loads to a deflection of 1/360 maximum.
- .3 Locate system according to reflected plan.
- .4 Install after major above ceiling work is complete.
  - .1 Coordinate the location of hangers with other work and before demountable wall system.

- .5 Hang suspension system independent of walls, columns, ducts, pipes and conduit.
  - .1 Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- .6 Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- .7 Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- .8 Support fixture loads by supplementary hangers located within 150 mm of each corner; or support components independently.
- .9 Do not eccentrically load system, or produce rotation of runners.
- .10 Perimeter Moulding:
  - .1 Install edge moulding at intersection of ceiling and vertical surfaces
  - .2 Use longest practical lengths.
  - .3 Overlap and rivet corners.
  - .4 Provide at junctions with interruptions.
  - .5 Install small bead of white paintable acrylic sealant along all bottom edges to wall.
- .11 Form expansion joints to accommodate plus or minus 25 mm movement.
  - .1 Maintain visual closure.

### **3.3 INSTALLATION - ACOUSTIC UNITS**

- .1 Install acoustic units in accordance with manufacturer's instructions.
- .2 Fit acoustic units in place, free from damaged edges or other defects detrimental to appearance and function.
- .3 Install units after above ceiling work is complete.
- .4 Install acoustic units level, in uniform plane, and free from twist, warp, and dents.
- .5 Cutting Acoustic Units:
  - .1 Cut to fit irregular grid and perimeter edge trim.
  - .2 Cut square reveal edges to field cut units.

### **3.4 TOLERANCES**

- .1 Maximum variation from flat and level surface: 3 mm in 3 m.
- .2 Maximum variation from plumb of grid members caused by Eccentric Loads: 2 degrees.

**END OF SECTION**

**PART 1      General**

**1.1            SECTION INCLUDED**

- .1      Linoleum flooring.
- .2      Static dissipative vinyl tile.
- .3      Vinyl base.
- .4      Linoleum Cove Base
- .5      Floor prep and leveling.

**1.2            RELATED SECTIONS**

- .1      Work of this section includes removal of existing resilient flooring and the preparation of floor substrate to accept new flooring as shown on Flooring Type Plans.
- .2      Section 09 68 00 Carpeting
- .3      Section 06 40 00 Architectural Woodwork

**1.3            REFERENCES**

- .1      American Society for Testing and Materials International (ASTM)
  - .1      ASTM F1303-04, Standard Specification for Sheet Vinyl Floor Covering with Backing.
  - .2      ASTM F1861-08 (2012) e1, Standard Specification for Resilient Wall Base.
- .2      Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1      Material Safety Data Sheets (MSDS).

**1.4            SUBMITTALS**

- .1      Provide submittals in accordance with Section 01 33 00 - Submittal Procedure.
- .2      Provide product data in accordance with Section 01 33 00 – Submittal Procedures
- .3      Provide samples in accordance with Section 01 33 00 - Submittal Procedures.
  - .1      Submit duplicate 300 x 300 mm sample pieces of sheet material.
  - .2      Submit full range of base sample material for selection.
- .4      Closeout Submittals:
  - .1      Provide maintenance data for resilient flooring for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

## **1.6 AMBIENT CONDITIONS**

- .1 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees for 48 hours before, during and 48 hours after installation.

## **1.7 WARRANTY**

- .1 For all Work of this Section 09 65 19, the 12 month warranty period is extended to a full five (5) year commercial warranty for materials and installation, non pro-rated.

## **1.8 MAINTENANCE**

- .1 Extra Materials:
  - .1 Provide extra materials of resilient sheet flooring, vinyl base and adhesives in accordance with Section 01 78 00 - Closeout Submittals.
  - .2 Provide one piece; 3 sq meters of flooring of each colour, pattern and type from same production run as installed materials.
  - .3 Provide one piece; 3 lineal meters of flooring of each colour, and type from same production run as installed materials.
  - .4 Identify each roll of sheet flooring and each container of adhesive.
  - .5 Deliver to and store where directed by Departmental Representative upon completion of the work of this section.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 General: colors of all materials to be selected and approved by Departmental Representative.
- .2 Linoleum Sheet Flooring (LSF):
  - .1 Linoleum sheet to ASTM F2034, Type 1.
  - .2 Products must meet FloorScore or GreenGuard requirements. All components of the flooring system must meet requirements of LEED EQc4.1 and EQc4.3.
  - .3 Homogenous mixture of primarily natural materials consisting of linoleum cement (linseed oil, natural tree resin, drying oil catalyst), wood flour, limestone and colour pigments, mixed and calendared onto a natural jute backing. Pattern and colour to extend through total thickness of material.
  - .4 Width: 2000mm (79").
  - .5 Nominal total thickness (gauge): 2.5 mm (1/10").
  - .6 Top coat/finish: high performance coating to protect the surface.
  - .7 Seams: heat welding rod; colour-matched or multi-colour heat welding rod. Colour to be compatible with field colour of flooring, selected from available range.

- .3 Linoleum Flash Cove Base for millwork cabinetry in kitchens only unless otherwise noted on plans and millwork drawings.
  - .1 Fabricate flash coves from the same material and dye lots as linoleum flooring, in practical lengths and full height and width of millwork toe kick (230mm) with 38x38mm formed aluminum reinforcing binded to the back of the base material.  
Provide manufacturer's trim cap matching the flooring on exposed edges at cabinet returns.
- .4 Vinyl Tile, Static-Dissipative (VTD): solid vinyl tile made with 100 percent pure vinyl containing no regrind material; complying with ASTM F1700, not requiring waxing to achieve a gloss finish or to maintain electrical properties, and with the following conductive tile performance characteristics:
  - .1 FloorScore certified.
  - .2 Electrical Resistance, Surface to Ground: 25,000 to 1,000,000 (2.5 x 10 to 1 x 10<sup>6</sup>) ohms, when tested in accordance with ESD S7.1.
  - .3 Static Decay: Less than 0.3 seconds, from 5000 volts to 0 volts, when tested in accordance with FTM 101B, Method 4046.1.
  - .4 Static Generation: Less than 25 volts with conductive footwear at 20 percent relative humidity.
  - .5 Colour: Selected by DCC Representative from manufacturer's standard range.
  - .6 Adhesive: conductive adhesive as recommended by flooring manufacturer. .1 VOC limit for adhesives to meet content limits for VOC of SCAQMD Rule 1168, as per Section 01 35 21.
  - .7 Grounding Strips: Copper foil, of type recommended by flooring manufacturer; provide minimum of 3 strips in a single room.
  - .8 Acceptable material: .1 3M 8400 Series ESD Floor Tiles by 3M Electronic Solutions Division .2 Conductile by VPI. .3 Static Dissipative SDT by Armstrong.
- .5 Rubber base:
  - .1 Thermoset rubber wall base to ASTM F1861, Type TS, Group 1 (solid).
  - .2 Continuous, top set, complete with premoulded inside and outside corners.
  - .3 Thickness: 3.17mm (1/8").
  - .4 Style:
    - .1 Type 1: 64 mm (2½") high, toeless (straight) for carpet flooring unless otherwise noted.
    - .2 Type 2: .100mm (4"0 high) with moulded toe for linoleum floors except at millwork and unless otherwise noted.
  - .6 Lengths: cut lengths from 120' coils.
  - .7 Colour: as selected by Departmental Representative, from manufacturer's standard colour range.
- .6 Primers and adhesives: of types recommended by flooring manufacturer for specific material on applicable substrate, above, on or below grade.
  - .1 Sheet floor and tile adhesives: maximum VOC limit 60 g/L to SCAQMD Rule 1168.
  - .2 Rubber base adhesives: maximum VOC limit 50 g/L to SCAQMD Rule 1168.

- .7 Edge strips:
  - .1 Use vinyl reducers/transitions and caps at changes of all resilient flooring materials to carpet tile.
  - .2 Provide manufacturer's trim cap matching the flooring on exposed edges at cabinet returns.
- .8 Joint Filler:
  - .1 Fast-setting, semi-rigid polyurethane joint filler, capable of being trimmed flush with the floor, for all saw cuts in Level 1 topping slabs and at all cold pour joints in structural slabs.

### **PART 3 Execution**

#### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

#### **3.2 SITE VERIFICATION OF CONDITIONS**

- .1 Ensure concrete floors are clean and dry by using test methods recommended by flooring manufacturer.

#### **3.3 PREPARATION**

- .1 Remove existing flooring.
- .2 Remove old adhesives. Provide a clean concrete surface for new flooring. To meet manufacturer's installation instructions.
- .3 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- .4 Apply sealers or bonding product to meet manufacturer's installation instructions.

#### **3.3 APPLICATION: LINOLEUM SHEET FLOORING**

- .1 Install flooring in strict accordance with the latest edition of the manufacturer's printed installation instructions.
- .2 Install flooring wall to wall before the installation of furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.
- .3 Scribe, cut, and fit or flash cove to built-in cabinets. Cove to be full height off toe kick and continuous where cabinet returns to the wall. Provide manufacturer's trim cap matching the flooring on exposed edges at cabinet returns.

- .4 Adhere flooring to the subfloor without cracks, voids, raising and puckering at the seams. Roll with a 100 lb. (45 kg.) roller in the field areas. Hand-roll flooring at the perimeter and the seams to assure adhesion. Refer to specific rolling instructions of the flooring manufacturer.
- .5 Lay flooring to provide a minimum number of seams. Avoid cross seams, filler pieces, and strips. Match edges for colour shading and pattern at the seams in compliance with the manufacturer's recommendations.
- .6 Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.
- .7 Prepare heat-welded seams with special routing tool supplied for this purpose and heat weld with vinyl welding rod in seams. Use methods and sequence of work in conformance with written instructions of the flooring manufacturer. Finish all seams flush and free from voids, recesses, and raised areas.
- .8 Install edge strips at unprotected or exposed edges where flooring terminates.

#### **3.4 APPLICATION: LINOLEUM FLASH COVE BASE**

- .1 Provide flash cove base for integral base at millwork cabinetry for kitchens and business centers.
- .2 Dry fit flash cove base; cut and fit material to required lengths. Mitre inside and outside corners. Provide continuous cove at cabinet returns and apply manufacturer's trim cap on exposed edges.
- .3 Apply adhesive in full spread (100% coverage on 2 surfaces) for full length of cove material. Apply base to full height of cabinet toe kick base straight and level.
- .4 Hand roll base material to cabinet base removing bubbles, ripples and fishmouths. Remove excess adhesive.
- .5 Heat weld seams in base material and to adjacent flooring for an integral sealed installation.

#### **3.5 APPLICATION: VINYL TILE, Static-Dissipative (VTD):**

- .1 Install flooring in strict accordance with the latest edition of manufacturer's installation instructions.

#### **3.6 APPLICATION: RUBBER BASE**

- .1 Lay out base to keep number of joints at minimum.
- .2 Clean substrate and prime with one coat of adhesive.
- .3 Apply adhesive to back of base.

- .4 Set base against wall and floor surfaces tightly by using 3 kg hand roller.
- .5 Install straight and level to variation of 1:1000.
- .6 Scribe and fit to door frames and other obstructions. Use premoulded end pieces at flush door frames.
- .7 Cope internal corners. Use premoulded corner units for right angle external corners. Use formed straight base material for external corners of other angles, minimum 300mm (12") each leg.
- .8 Apply base to built-in millwork as indicated.

### **3.6 FIELD QUALITY CONTROL**

- .1 Manufacturer's Field Services:
  - .1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

### **3.7 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Remove excess adhesive from floor, base and wall surfaces without damage.

### **3.8 PROTECTION**

- .1 Protect new floors until final inspection.
- .2 Prohibit traffic on floor for 48 hours after installation.
- .3 Use only water based coating for linoleum.

**END OF SECTION**

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**PART 1      General**

**1.1            SECTION INCLUDES**

- .1      Carpet tile.
- .2      Installation accessories.
- .3      Floor prep and leveling.

**1.2            RELATED SECTIONS**

- .1      Section 09 65 16: Resilient Sheet Flooring.
- .2      Section 10 22 23 Moveable Wall System.

**1.3            REFERENCES**

- .1      Canadian General Standards Board (CGSB).
  - .1      CAN/CGSB-4.129-93 (R1977), Carpets for Commercial Use.
- .2      Carpet and Rug Institute (CRI).
  - .1      CRI 104-2002, Standard for Installation Specification of Commercial Carpet.
  - .2      IAQ Carpet Testing Program.

**1.4            SUBMITTALS**

- .1      Submit control submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2      Submit verification to demonstrate compliance with CAN/ULC-102 and CAN/ULC-102.2.
- .3      Submit verification of pile fibre as branded and certified type 6.6 or 6 fibre, externally extruded by a fibre producer offering a construction and performance standards testing program and maximum Modification Ratio of 2.2 cross section per the carpet specifications.
- .4      Submit proof that carpet has been tested and passed the Indoor Air Quality (IAQ) Carpet Testing Program requirements of the Carpet and Rug Institute (CRI) and the Canadian Carpet Institute (CCI).
- .5      Submit report outlining proposed dust control measures for removals.
- .6      Submit carpet manufacturer's installation instructions: Indicate special procedures and conditions requiring special attention.
- .7      Submit certification and of manufacturer's carpet reclamation program

## **1.5 QUALITY ASSURANCE**

- .1 Installer shall be responsible for field measurements to determine carpet layout.
- .2 Comply with CRI 104.
- .3 The Installer is responsible for reviewing carpet manufacturer's published installation instructions prior to installation.
  - .1 This includes understanding dye lots, pattern sequencing, pattern matching and any special instructions.
  - .2 Failure to abide by the manufacturer's instructions could result in a backcharge to the installer for corrections to the installation.
- .4 Installer is responsible for damages to Work performed by others.
- .5 The Installer is responsible for verification of quantities within fourteen (14) days.
- .6 The Installer shall provide take-offs of all carpet and padding, as required for a complete installation.
  - .1 No compensation will be allowed for materials and labour that may be required to install additional carpeting because of incorrect quantity takeoffs.
  - .2 Installer is responsible for floor preparation and floor surface levelling.

## **1.6 SEQUENCING**

- .1 Do not install carpet until completion of painting operations.

## **1.7 ENVIRONMENTAL REQUIREMENTS**

- .1 Moisture: Ensure substrate is within moisture limits prescribed by manufacturer.
- .2 Temperature: Maintain ambient temperature of not less than 18°C from 72 hours before installation to at least 72 hours after completion of work.
- .3 Relative humidity: Maintain relative humidity between 10 and 65% RH for 48 hours before, during and 48 hours after installation.
- .4 Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
- .5 Ventilation:
  - .1 Ventilate area of work by use of approved portable supply and exhaust fans.
  - .2 Provide continuous ventilation during and after carpet application.
    - .1 Run ventilation system 24 hours per day during installation; provide continuous ventilation for 7 days after completion of carpet installation.

- .6 Subfloor Moisture Conditions: Verify that moisture emission rate of not more than 8 lb/1000 sq. ft./24 hours when tested by calcium chloride moisture test in compliance with CRI 104, with subfloor temperatures not less than 12 degrees C.
- .7 Subfloor Alkalinity Conditions: Verify that a pH range of 5 to 9 when subfloor is wetted with potable water and pH hydrion paper is applied.

## **1.8 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .2 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .3 Prevent damage to materials during handling and storage.
- .4 Keep materials under cover and free from dampness.
- .5 Maintain temperature of store room at a minimum of 18°C, and a relative humidity of 65% for at least 48 hours before the start of the installation work.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Manufacturers:
  - .1 Minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.
  - .2 Certified to Carpet and Rug Institute and the Canadian Carpet Institute Green Label Plus IAQ requirements.
- .2 Description:
  - .1 Adhesives: water-based, releasable, VOC limit 50g/L maximum to SCAQMD Rule 1168.
  - .2 Primer - Sealer: in accordance with manufacturer's recommendations for surface conditions:
    - .1 VOC limit: 100 g/L maximum to SCAQMD Rule 1113.
  - .3 Carpet and accessories: to CAN/CGSB 4.129 and as follows:
    - .1 Green Label Plus certified.
    - .2 40% minimum recycled content.

### **2.2 PERFORMANCE**

- .1 Flammability: certified for flammability to Health Canada regulations under "Hazardous Products - Carpet Regulations", Part II of Schedule 1.

- .2 Flame Spread: maximum flame spread rating 300, maximum smoke developed classification 500, when tested to CAN/ULC-S102.2.
- .3 Smoke Development: 450 or less per ASTM E662.
- .4 Wear: maximum 10% of pile face fiber by weight for 15 years.
- .5 Edge Ravel: none for 10 years.
- .6 Static Resistance: permanent static control to AATCC 134, 3000 V maximum at 20% RH and 22 degrees C and 22 degrees C.
- .7 Static Generation: less than 3.0 kV per AATCC 134, permanent.
- .8 Tuft Bind: Tuft Lock: to ASTM D1335, minimum acceptable 3.6 kg.
- .9 De-lamination of Secondary Backing: lamination strength of secondary backing: to ASTM D3936, minimum acceptable peel strength of 1.6 kg/25 mm (5N/cm).
- .10 Stain resistance:
  - .1 To AATCC 171 minimum 2 washings to simulate removal of topical treatments by hot water extraction, followed by:
  - .2 To AATCC 175, minimum of 8, using Red Dye 40 Reference Scale.
- .11 Soil Resistance: Fluorine Durability Level to AATCC 189:
  - .1 Average of 350 ppm fluorine minimum by weight of 3 fluorine analyses of a single composite sample when new;
  - .2 Average of 200 ppm fluorine minimum by weight of 3 fluorine analyses of a single composite sample after 2 AATCC 171 (HWE) cleanings.
- .12 Colourfastness to light: to CAN/CGSB-4.2 No.18.3 or AATCC 16:
  - .1 Minimum of L4 after 40 hours.
- .13 Colourfastness to atmosphere: to AATCC 129 or AATCC 23.
- .14 Colourfastness to crocking: to CAN/CGSB-4.2 No. 22.
- .15 Indoor Air Quality Certification: certified to CRI Green Label Plus IAQ

## **2.3 FABRICATION**

- .1 Size 455 mm x 455 mm, minimum; 1000 mm x 1000 mm, maximum.
- .2 Face construction:
  - .1 Tufted-level or multi-level loop.
- .3 Pile Surface Appearance:
  - .1 Level loop, textured and multi-textured, multiple colour tones.
- .4 Pile fibre: to CAN/CGSB-4.129.
  - .1 Nylon: BCF.
    - .1 Type: Nylon 6 and 6.6, 100% first quality, bulk continuous filament.

- .1 Externally produced by a fibre manufacturer offering a construction and performance standards testing program and
- .2 branded and certified by the fibre manufacturer for the carpet specified.
- .2 Trilobal or square hollowfill cross section for permanent soil hiding.
- .3 Fibre shape maximum modification ratio: 2.2.
- .4 Stain resistance: permanent.
- .5 Face Fiber Content: 100% nylon.
- .6 Face Fiber Denier: minimum 18.
- .7 Dyeing Method: 100% solution dyed or a minimum of 70% solution dyed and a maximum of 30% yarn dyed.
- .8 Tufted Carpet Backing: to CAN/CGSB-4.129.
  - .1 Primary backing: non-woven.
- .9 Secondary and Unitary Backings: to CAN/CGSB-4.129. PVC, Polyolefin and other polymeric systems:
  - .1 Density to ASTM D1667
  - .2 Dimensional stability: ISO 2551 (Aachner Test) maximum 0.15% change.
- .10 Pile Density: minimum 9.5 kilotex and 5400 density
- .11 Finished Pile Height: minimum 2 mm, maximum 5mm.
- .12 Surface Pile Weight: minimum 576 g/m<sup>2</sup>.
- .13 Performance Rating: to CRI Test Method No. 3: 3.0 minimum at 12,000 cycles to Hexapod test or 22,000 cycles to Vetterman Test.
- .14 Total Weight: minimum 4,376 g/m<sup>2</sup> with fiberglass or nylon reinforced vinyl composite secondary backing; 3,187 g/m<sup>2</sup> with polyolefin secondary backing.
- .15 Dimensional Stability: maximum + 0.15% to CAN/CGSB-4.2 No. 76/ISO 2551.
- .16 Colour, texture and pattern:
  - .1 To be selected by the Departmental Representative from the standard range.
  - .2 Non directional pattern integrated within the face material; not applied
  - .3 Multiple colour tones in medium range to minimize visible effects of soiling
  - .4 Minimum 4 colours within every carpet tile.
  - .5 Refer to Sheet A6 FLOORING for pattern
  - .6 Approved color mix:

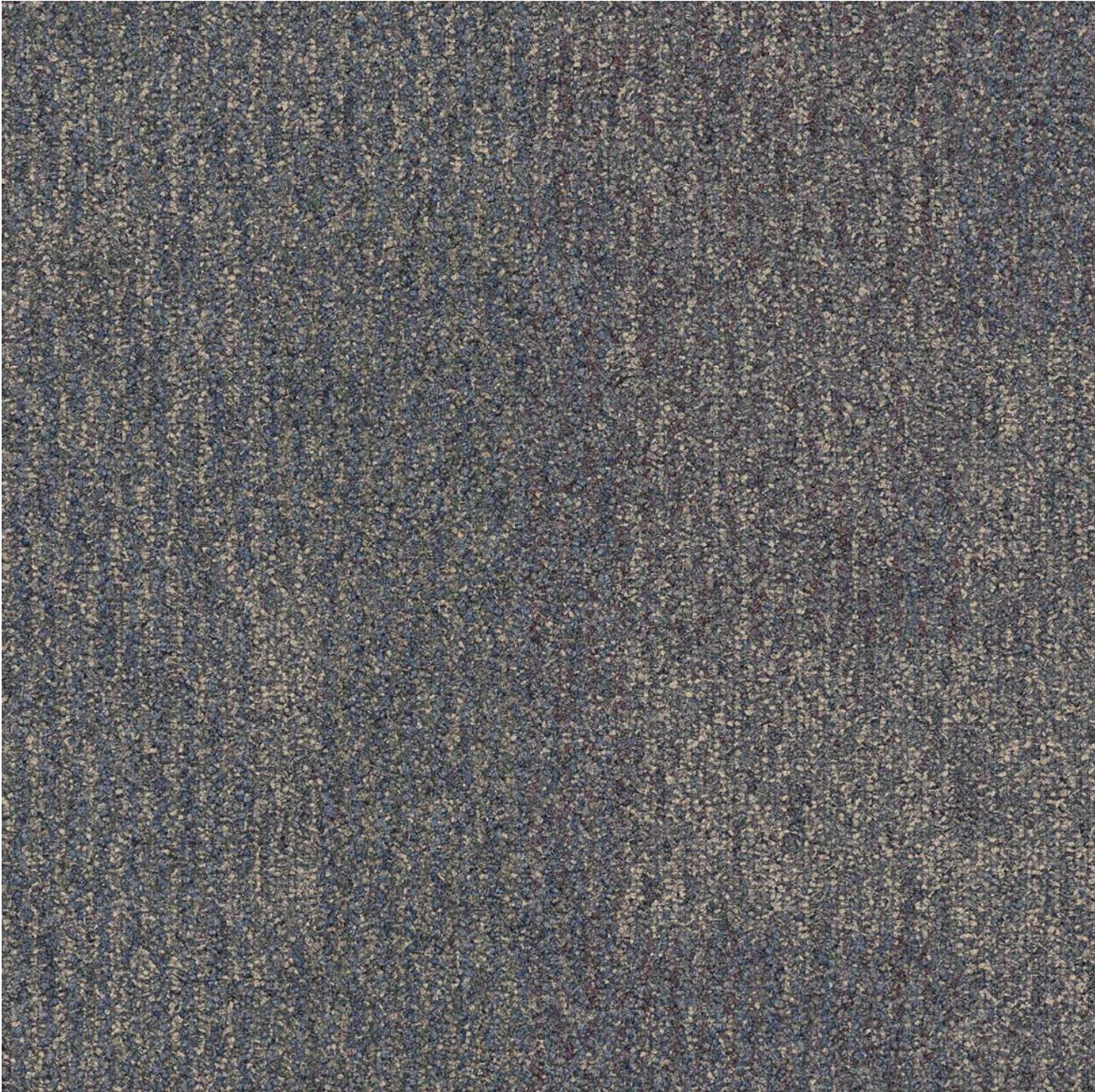
.1 Colour 1: Grey mix



.2 Colour 2: Grey blue red mix



.3 Colour 3: Grey blue mix



## **2.4 ACCESSORIES**

- .1 Rubber Base:
  - .1 63 mm high DCT-XX toeless rubber base or as indicated.
  - .2 Colour to be selected by Departmental Rep from standard range.
- .2 Edge Strips:
  - .1 Metal:
    - .1 Designed for carpet being installed.
    - .2 Floor flange minimum 38mm wide, face minimum 16 mm wide.
    - .3 Finish: clear anodic coating.
  - .2 Vinyl:
    - .1 Bevelled floor flange minimum 50 mm wide.
    - .2 Bevelled surface to finish flush with carpet tile for tight joint and other edge to floor finish.
  - .3 Colour: selected by the Departmental Representative before installation.
- .3 Adhesive:
  - .1 Water based
  - .2 Recommended by carpet tile manufacturer
  - .3 Meeting VOC emissions criteria of CRI Green Label Plus IAQ Program.
- .4 Concrete floor sealer/primer: recommended by the carpet tile manufacturer.
- .5 Subfloor patching compound: Portland cement base filler, mix with latex to form cementitious paste.
- .6 Transition mouldings: carpet edge/reducer strip as approved by the Departmental Representative.
- .7 Carpet protection: non-staining, heavy duty kraft paper.

## **PART 3 Execution**

### **3.1 SITE VERIFICATION OF CONDITIONS**

- .1 Ensure concrete floors are clean and dry by using test methods recommended by flooring manufacturer.

### **3.2 PREPARATION**

- .1 Remove existing flooring.
- .2 Remove and prepare slab surface for new flooring to meet manufacturer's installation instructions.
- .3 Remove sub-floor ridges and bumps.

- .4 Profile concrete sub-floor using floor profiler, scarifier or other mechanical method acceptable to Departmental Representative.
  - .1 Provide ICRI CSP 3 surface profile.
- .5 Fill low spots, floor depressions, control or construction joints, cracks, joints, holes and other defects with sub-floor filler.
  - .1 Level floor using cement based leveller feathered out a minimum of 600 mm (24 inches) from edge of area to 0 mm thickness.
  - .2 Prohibit traffic until filler cured and dry.
- .6 Prime Seal concrete slab to flooring manufacturer's printed instructions.
- .7 Test cementitious substrate for porosity, moisture content and alkalinity.
- .8 Ensure substrate has an acceptable level of absorbency.
- .9 For direct glue-down installation, ensure minimum substrate temperature is 18°Celsius.

### **3.3 INSTALLATION - GENERAL**

- .1 Install carpet to pattern as indicated on drawings.
- .2 Install carpet and accessories in accordance with manufacturer's recommendations and as specified.
- .3 Apply adhesive and install modular carpet in accordance with manufacturer's written instructions.
- .4 Lay modular carpet with butt seams.
- .5 Fit neatly around architectural, mechanical, electrical and furniture fitments, around perimeter of rooms into recesses, and around projections. Carpet is to be installed prior to demountable wall system.
- .6 Roll modular carpet with appropriate roller for complete contact of carpet with mill-applied adhesive to sub-floor.

### **3.4 CLEANING AND DISINFECTION**

- .1 Follow carpet manufacturer's recommendations for all cleaning procedures.
- .2 Remove adhesive from carpet face, accessories and adjacent surfaces.
- .3 Vacuum clean carpet after installation, as soon as traffic is allowed and during final cleaning of building.
- .4 Protect carpet from damage and soiling due to construction traffic until Final Inspection.

**END OF SECTION**

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**Part 1            General**

**1.1                RELATED SECTIONS**

- .1      Section 08 11 00 - Metal Doors and Frames.
- .2      Section 08 14 16 – Flush Wood Doors
- .3      Section 09 21 16 - Gypsum Board Assemblies.
- .4      Section 10 22 23 – Demountable Wall System

**1.2                REFERENCES**

- .1      Master Painters Institute (MPI)
  - .1      MPI Architectural Painting Specifications Manual, Latest Edition
- .2      American Society for Testing and Materials (ASTM)
  - .1      ASTM D2369-04, Standard Test Method for Volatile Content of Coatings.

**1.3                QUALITY ASSURANCE**

- .1      The Work must be performed by skilled workers under the regulations in the local jurisdiction.
- .2      Apprentices may be employed provided they work under the direct supervision of a skilled worker, in accordance with the regulations governing this trade.
- .3      Comply with the latest requirements of the MPI including those for surface preparation and application of primary or print painting.
- .4      Products used must be on the list of approved products given in the MPI Painting Specification Manual and all the products forming the coating system selected must be from the same manufacturer.

**1.4                SUBMITTALS**

- .1      Submittals in accordance with Section 01 33 00.
- .2      Submit product data and instructions for each paint and coating product to be used.
- .3      Samples: Submit full range colour sample chips to indicate where colour availability is restricted.
  - .1      Once colours are selected, provide colour samples of each colour selected on 8 ½ “ x 11” paint card for approval.
  - .2      Once colours are selected, provide 8 ½” x 11” stained veneer samples for approval. Stain colour to match colour used in wood doors for demountable wall system.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, Shipping, Handling and Unloading: in accordance with manufacturer's written instructions.
- .2 Remove damaged, opened and rejected materials from site.
- .3 Storage and Protection:
  - .1 Provide and maintain dry, temperature controlled, secure storage.
  - .2 Store materials and supplies away from heat generating devices.
  - .3 Store materials and equipment in well ventilated area with temperature range 7°C to 30°C.

## **1.6 SITE CONDITIONS**

- .1 Heating, Ventilation and Lighting:
  - .1 Provide heating facilities to maintain ambient air and substrate temperatures above 10°C for 24 hours before, during and after paint application until paint has cured sufficiently.
  - .2 Provide continuous ventilation for seven days after completion of application of paint.
  - .3 Provide temporary ventilating and heating equipment where permanent facilities are not available or supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements.
  - .4 Provide the required lighting equipment to maintain a lighting level of 323 lux on the surfaces to be painted.
- .2 Surface and Environmental Conditions:
  - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
  - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits.
  - .3 Apply paint when previous coat of paint is dry or adequately cured.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Paint materials shall be listed on the current edition of the MPI Approved Products List.
  - .1 Where selection of finishes from MPI Approved Products List is limited, selection of alternate materials will be at the option of the Departmental Representative.

- .2 Under no circumstance shall paint materials be applied without prior review of VOC limits by the Departmental Representative.
- .3 Provide interior paint products with a VOC range of 0g/L to 151 g/L.
- .4 Provide paint materials for paint systems from single manufacturer.
- .5 Conform to latest MPI requirements for interior painting work including preparation and priming.

## 2.2 COLOURS

- .1 Departmental Representative will provide Colour Schedule after Contract award.
- .2 Selection of colours from manufacturer's full range of colours.
- .3 Second coat in three coat system to be tinted slightly lighter colour than top coat to show visible difference between coats.

## 2.3 MIXING AND TINTING

- .1 Perform colour tinting operations prior to delivery of paint to site.
- .2 Use and add thinner in accordance with paint manufacturer's recommendations.
  - .1 Do not use kerosene or similar organic solvents to thin water-based paints.
- .3 Thin paint for spraying in accordance with paint manufacturer's instructions.

## 2.4 GLOSS/SHEEN RATINGS

- .1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with the following values:

| Gloss Level                    | Gloss @ 60 degrees | Sheen @85 |
|--------------------------------|--------------------|-----------|
| G1- matte (flat)               | Max 5              | Max 10    |
| G 2 – velvet-like              | Max 10             | 10 to 35  |
| G 3 – eggshell                 | 10 to 25           | 10 to 35  |
| G 4 – satin-like               | 20 to 35           | min 35    |
| G 5 - semi-gloss - traditional | 35 to 70           |           |
| G 6 – gloss- traditional       | 70 to 85           |           |
| G 7 – high gloss               | More than 85       |           |

- .2 Gloss levels (in general) unless noted otherwise:
  - .1 Ceiling : G1
  - .2 Walls : G3
  - .3 Metals : G6

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**Part 3 Execution**

**3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

**3.2 GENERAL**

- .1 Perform preparation and operations for interior painting in accordance with MPI Architectural Painting Specifications Manual except where specified otherwise.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.

**3.3 PREPARATION**

- .1 Protection:
  - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking.
    - .1 If damaged, clean and restore surfaces as directed by Departmental Representative.
  - .2 Protect items that are permanently attached such as Fire Labels on doors and frames.
  - .3 Protect factory finished products and equipment.
  - .4 Protect passing pedestrians, building occupants and general public in and about the building.
- .2 Surface Preparation:
  - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, accessories and other surface mounted equipment, fittings and fastenings prior to undertaking painting operations. Identify and store items in secure location and re-installed after painting is completed.
  - .2 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.
  - .3 Place "WET PAINT" signs in occupied areas as painting operations progress. Signs to approval of Departmental Representative.
- .3 Clean and prepare surfaces in accordance with MPI Architectural Painting Specification Manual requirements.
- .4 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.

**3.4 APPLICATION**

- .1 Conform to manufacturer's application instructions unless specified otherwise.
- .2 Apply coats of paint continuous film of uniform thickness.
  - .1 Repaint thin spots or bare areas before next coat of paint is applied.

- .3 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .4 Sand and dust between coats to remove visible defects.
- .5 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.
- .6 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.

### **3.5 INTERIOR PAINT AND COATING SYSTEMS**

- .1 The following is list of principal items only.
  - .1 Surfaces not included in this schedule shall be painted at the discretion of the Departmental Representative.
- .2 Pressed steel frames and doors:
  - .1 Benjamin Moore:
    - .1 - Wash with Corotech V600 Oil and Grease Emulsifier
    - .2 - Apply 2 coats of Ultra Spec 500 K539 Semi- Gloss
  - .2 PPG:
    - .1 - Apply 1 coat of 60000 Dulux gripper
    - .2 - Apply 2 coats of 95-1210 PPG semi-gloss latex
  - .3 Sherwin Williams:
    - .1 – Apply 1 coat of Multi-Purpose Latex Primer - White
    - .2 – Apply 2 coats of SOLO Interior / Exterior 100% Acrylic, Egg Shell Extra White.
- .3 Stain for Wood Doors:
  - .1 Benjamin Moore: Lenmar 1AA Alkyd Wiping Stain two coats in color of choice.
  - .2 Minwax Water Based Wood Stain Apply minimum of 2 coats.
  - .3 Sherwin Williams: Stain for wood doors.
- .4 Gypsum Board - Dry Areas: Drywall surfaces, cement board, other wall and ceiling panels incl. wall-mounted equipment to be painted-out.
  - .1 Benjamin Moore:
    - .1 Apply 1 coat of Ultra Spec 500 K534-00 Latex Primer 1 coat
    - .2 Apply 2 coats of Ultra Spec 500 K537 Low Sheen Eggshell two coats
  - .2 PPG:
    - .1 Apply 1 coat of 8130 Dulux primer
    - .2 Apply 2 coats of 59311 Dulux life master to desired color
  - .3 Sherwin Williams:

- .1 - Apply 1 coat of PVA Drywall Primer & Sealer White.
- .2 - Apply 2 coats of SOLO Interior / Exterior 100% Acrylic, Egg Shell Extra White.

### **3.6 MECHANICAL AND ELECTRICAL EQUIPMENT**

- .1 Paint finished area exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and finish to match adjacent surfaces, except as indicated.
- .2 Other unfinished areas: leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks.
- .3 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .4 Do not paint over nameplates.
- .5 Keep sprinkler heads free of paint.

### **3.7 SITE TOLERANCES**

- .1 Walls: no defects visible from a distance of 1000 mm at 90 degrees to surface.
- .2 Ceilings: no defects visible from floor at 45 degrees to surface when viewed using final lighting source.
- .3 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

### **3.8 RESTORATION**

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.
- .3 Remove paint splashings on exposed surfaces that were not painted.
- .4 Remove smears and spatter immediately as operations progress, using compatible solvent.
- .5 Protect freshly completed surfaces from paint droppings and dust to the satisfaction of the Departmental representative.
- .6 Avoid scuffing newly applied paint.

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CSC – 2<sup>nd</sup> Floor Tenant Fit-up  
GOCB Moncton  
Moncton, New Brunswick  
PWGSC Project No. R. 083937.002

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PAINING

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**END OF SECTION**