

NO.	ROOM NAME	FLOOR	BASE	CEILING		WALL								NOTES
						NORTH		EAST		SOUTH		WEST		
		Material	Mat.	Material	Fin.	Material	Fin.	Material	Fin.	Material	Fin.	Material	Fin.	
100A	Public Corridor A	CPT	RUB	EX	-	GWB	PT	-	-	GWB	PT	GWB	PT	
100B	Public Corridor B	CPT	RUB	EX	-	GWB	PT	GWB	PT	GWB	PT	GWB/EX GL	PT/-	
101	Reception	RVT	RUB	GWB	PT	GWB	PT	GWB	PT	GWB	PT	-	-	
102	Corridor	CPT	RUB	GWB	PT	GWB	PT	GWB	PT	-	-	GWB	PT	
103	Classroom Storage	CPT	RUB	ACT-1	-	GWB	PT	GWB	PT	GWB	PT	-	-	
104	Telecom Room	CPT	RUB	EX	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
105	Classroom Storage	CPT	RUB	ACT-1	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
106	Undesignated	CPT	RUB	ACT-2	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
107A	Classroom	CPT	RUB	ACT-1	-	GWB/FPP	PT/-	GWB	PT	GWB	PT	GWB	PT	
107B	Classroom	CPT	RUB	ACT-1	-	GWB/FPP	PT/-	GWB	PT	GWB/FPP	PT/-	GWB	PT	
107C	Classroom	CPT	RUB	ACT-1	-	GWB	PT	GWB	PT	GWB/FPP	PT/-	GWB	PT	
108A	Open Area	RVT	RUB	ACT-1	-	-	-	GWB	PT	GWB	PT	GWB	PT	
108B	Kitchenette	RVT	RUB	ACT-1	-	-	-	GWB	PT	GWB	PT	GWB	PT	
109	Meeting Room	CPT	RUB	ACT-1/GWB	-/PT	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
110	Multipurpose Room	CPT	RUB	GWB	PT	GL	-	GWB	PT	GWB	PT	GWB	PT	
111	Workstations	CPT	RUB	ACT-1	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
111A	Shared Equipment	CPT	RUB	ACT-1	-	-	-	-	-	-	-	GWB	PT	
112	Office	CPT	RUB	ACT-2	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
113	Quiet Room	CPT	RUB	ACT-2	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
114	Webex Room	CPT	RUB	ACT-2	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	

LEGEND

ACT	Acoustic Ceiling Tile	GT	Glazed Tile
CPT	Carpet Tile	GWB	Gypsum Wall Board
EX	Existing	PT	Paint
EX GL	Existing Glazing	RUB	Rubber Base
FPP	Folding Panel Partition	SV	Sheet Vinyl
GL	Glazed Wall	RVT	Resilient Vinyl Tile

Part I General**I.1 REFERENCES**

- .1 ASTM International
 - .1 ASTM C475/C475M-12e1, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .2 ASTM C557-03(2009)e1, Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
 - .3 ASTM C665-12, Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - .4 ASTM C840-13, Standard Specification for Application and Finishing of Gypsum Board.
 - .5 ASTM C1002-07, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .6 ASTM C1047-14a, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .7 ASTM C1178/C1178M-08, Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel.
 - .8 ASTM C1396/C1396M-06a, Standard Specification for Gypsum Wallboard.
 - .9 ASTM D3273-12, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
 - .10 ASTM D6329-98 (2008), Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers.
 - .11 ASTM E84-14 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - .12 ASTM E96/E96M-05, Standard Test Methods for Water Vapor Transmission of Materials.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 51.34-M86 (R1988), Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
 - .2 CAN/CGSB 71.25-M88, Adhesive, for Bonding Drywall to Wood Framing and Metal Studs.
- .3 Gypsum Association (GA)
 - .1 GA-214-15, Recommended Levels of Finish for Gypsum Board, Glass Mat, and Fiber-Reinforced Gypsum Panels.
- .4 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC S702-09, Mineral Fibre Thermal Insulation for Buildings.

I.2 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for gypsum board assemblies. Include product characteristics, performance criteria, physical size, finish, and limitations.

I.3 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store gypsum board assemblies materials level off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect gypsum board assemblies from nicks, scratches, and blemishes.
 - .3 Protect from weather, elements and damage from construction operations.
 - .4 Handle gypsum boards to prevent damage to edges, ends, or surfaces.
 - .5 Replace defective or damaged materials with new.

I.4 AMBIENT CONDITIONS

- .1 Maintain temperature 10°C minimum, 21°C maximum for 48 hours prior to and during application of gypsum boards and joint treatment, and for 48 hours minimum after completion of joint treatment.
- .2 Apply board and joint treatment to dry, frost-free surfaces.
- .3 Ventilate building spaces as required to remove excess moisture that would prevent drying of joint treatment material immediately after its application.

Part 2 Products**2.1 MATERIALS**

- .1 Standard board: To ASTM C1396/C1396M, paper faced, regular, thickness as shown on Drawings, Type X where indicated, 1200 mm wide x maximum practical length, ends square cut, edges bevelled.

2.2 ACOUSTIC INSULATION

- .1 Non-rated walls: To CAN/ULC S702 or ASTM C665; preformed glass fibre, friction fit batts, unfaced; or preformed mineral fibre processed from rock or slag.
- .2 Rated walls: To CAN/ULC S702, preformed mineral fibre processed from rock or slag, friction fit batts, unfaced.

2.3 PLENUM ACOUSTIC BARRIER

- .1 Plenum barrier: Purpose made, bonded acoustical cotton, mineral wool fibre, or fibreglass, adhered to foil backing; 25 mm minimum thickness.
 - .1 Burning characteristics to ASTM E84: Class A – non-flammable.
 - .1 Flame spread: ≤ 5 .
 - .2 Smoke developed: ≤ 35 .

2.4 ACCESSORIES

- .1 Furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .2 Steel drill screws: To ASTM C1002, Type S.
- .3 Stud adhesive: To CAN/CGSB 71.25 or ASTM C557.
- .4 Casing beads, corner beads, control joints and edge trim: To ASTM C1047, metal, zinc-coated by electrolytic process, 0.5 mm base thickness, perforated flanges, one piece length per location.
- .5 Sealants: In accordance with Section 07 92 00 - Joint Sealants.
 - .1 Acoustic sealant: In accordance with Section 07 92 00 - Joint Sealants.
- .6 Polyethylene: To CAN/CGSB 51.34, Type 2, minimum thickness 0.15 mm.
- .7 Joint compound: To ASTM C475, asbestos-free.

Part 3 Execution**3.1 EXAMINATION**

- .1 Verify conditions of substrates are acceptable for installation of gypsum board assemblies in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate.
 - .2 Inform Departmental Representative of unacceptable conditions.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 ERECTION

- .1 Apply and finish gypsum board to ASTM C840 except where specified otherwise.
- .2 Install work level to tolerance of 1:1200.
- .3 Frame perimeter of openings for access panels, with furring channels.
- .4 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.
- .5 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .6 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.

- .7 Install wall furring for gypsum board wall finishes to ASTM C840, except where specified otherwise.
- .8 Furr openings and around built-in equipment, cabinets, access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
- .9 Furr duct shafts, beams, columns, pipes and exposed services where indicated.
- .10 Erect drywall resilient furring transversely across studs, spaced maximum 600 mm on centre and not more than 150 mm from ceiling/wall juncture. Secure to each support with 25 mm drywall screw.
- .11 Install 150 mm continuous strip of 12.7 mm gypsum board along base of partitions where resilient furring installed.

3.3 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, and electrical and mechanical work have been approved.
- .2 Apply gypsum board to metal furring or framing using screw fasteners. Maximum spacing of screws 300 mm on centre.
- .3 Apply gypsum board vertically or horizontally, providing sheet lengths that will minimize end joints.
- .4 Apply water-resistant gypsum board where ceramic wall tiles are to be applied. Apply water-resistant sealant to edges, ends, cut-outs which expose gypsum core, and to fastener heads. Do not apply joint treatment on areas to receive tile finish.
- .5 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. Seal full perimeter of cut-outs around electrical boxes, ducts, and access panels, in partitions where perimeter sealed with acoustic sealant.
- .6 Install gypsum board on walls vertically to avoid end-butt joints. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs, except where local codes or fire-rated assemblies require vertical application.
- .7 Install gypsum board with face side out.
- .8 Do not install damaged or damp boards.
- .9 Locate edge or end joints over supports. Stagger vertical joints over different studs on opposite sides of wall.

3.4 INSTALLATION

- .1 Install gypsum board in accordance with GA-214.
- .2 Erect accessories straight, plumb or level, rigid, and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges.
- .3 Provide continuous polyethylene dust barrier behind and across control joints.
- .4 Splice corners and intersections together and secure to each member with 3 screws.

- .5 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.
- .6 Install plenum barrier to manufacturer's recommendations.
- .7 Gypsum Board Finish: Finish gypsum board walls and ceilings to following levels in accordance with AWCI Levels of Gypsum Board Finish:
 - .1 Level 1: At plenum areas above ceiling, and other concealed areas.
 - .1 Embed tape for joints and interior angles in joint compound. Surfaces to be free of excess joint compound; tool marks and ridges are acceptable.
 - .2 Level 5: All exposed areas.
 - .1 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.
- .8 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.
- .9 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.
- .10 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .11 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.
- .12 Apply one coat of white primer sealer over surface to be textured. When dry apply textured finish in accordance with manufacturer's instructions.
- .13 Remove ridges by light sanding or wiping with damp cloth.

3.5 CEILING INSTALLATION

- .1 Install to ASTM C754 or GA-216.
- .2 Erect hangers and runner channels for suspended gypsum board ceilings to ASTM C840 except where specified otherwise.
- .3 Install ceiling framing independent of walls, columns, and above ceiling work.
- .4 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.
- .5 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .6 Install work level, to tolerance of 1:1200.
- .7 Coordinate location of hangers with other work.
- .8 Reinforce openings in ceiling suspension system that interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 600 mm past each end of openings.

- .9 Laterally brace entire suspension system.
- .10 Locate control joints at approximate 15 m spacing on ceilings.

3.6 CLEANING

- .1 Progress Cleaning: Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: Upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .2 Waste Management: Remove waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.7 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by gypsum board assembly installation.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 ASTM International
 - .1 ASTM A653/A653M-08, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM C645-14, Standard Specification for Non-structural Steel Framing Members.
 - .3 ASTM C754-15, Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 1.181-99, Ready-Mixed Organic Zinc-Rich Coating.
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .4 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - current edition.
 - .1 MPI #26, Primer, Galvanized Metal, Cementitious.

I.2 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for metal framing and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Samples:
 - .1 Submit duplicate 300 mm long samples of non-structural metal framing.
- .4 Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .5 Certificates: Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

I.3 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:

- .1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Store and protect metal framing from nicks, scratches, and blemishes.
- .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 MATERIALS

- .1 Non-load bearing channel stud framing: To ASTM C645, and ASTM A653/A653M with minimum Z180 (G60) zinc coating, non-load bearing rolled steel, channel shaped, for screw attachment of gypsum board.
 - .1 Knock-out service holes at 460 mm centres.
 - .2 Depth: As scheduled on Drawings.
 - .3 Thickness: To meet performance requirements with minimum thickness 0.53 mm (25 gauge), or as indicated on Drawings.
- .2 Floor and ceiling tracks: To ASTM C645, same material and thickness as studs, in widths to suit stud sizes, 32 mm flange height.
- .3 Acoustical sealant: In accordance with Section 07 92 00 - Joint Sealants.
- .4 Touch-up primer for galvanized surfaces: To CAN/CGSB I.181.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify conditions of substrate are acceptable for non-structural metal framing application in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate.
 - .2 Inform Departmental Representative of unacceptable conditions.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 ERECTION

- .1 Align partition tracks at floor and ceiling and secure at 600 mm on centre maximum.
- .2 Place studs vertically at 400 mm on centre and not more than 50 mm from abutting walls, and at each side of openings and corners.
 - .1 Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
- .3 Refer to Drawings for indication of partitions extending stud framing through the ceiling to the structure above or to particular heights. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners. Refer also to Details.

- .1 Attach studs to bottom track using screws. Do not attach studs to ceiling track to allow for deflection of structural members when in contact.
- .2 Use one of the following methods as best suited for application:
 - .1 50 mm or longer leg ceiling tracks.
 - .2 Use double track slip joint.
 - .3 Use two-piece telescoping top tracks where required.
- .4 Erect metal studding to tolerance of 1:1000.
- .5 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.
- .6 Co-ordinate erection of studs with installation of door/window frames and special supports or anchorage for work specified in other Sections.
- .7 Provide two studs extending from floor to ceiling at each side of openings wider than stud centres specified.
 - .1 Secure studs together, 50 mm apart using column clips or other approved means of fastening placed alongside frame anchor clips.
- .8 Install heavy gauge single jamb studs at openings.
- .9 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs.
 - .1 Secure track to studs at each end, in accordance with manufacturer's instructions.
 - .2 Install intermediate studs above and below openings in same manner and spacing as wall studs.
- .10 Frame openings and around built-in equipment, cabinets, access panels, on four sides. Extend framing into reveals. Check clearances with equipment suppliers.
- .11 Provide 40 mm stud or furring channel (heavy gauge, when necessary) secured between studs for attachment of wall supported elements, fastening fixtures attached to steel stud partitions, or install galvanized or stainless steel back plate reinforcement sheets, minimum 0.912 mm thick by minimum 100 mm wide, elsewhere where necessary and where indicated.
- .12 Install steel studs of furring channel between studs for attaching electrical and other boxes.
- .13 Install 19 mm deep horizontal furring channels at 600 mm o.c. on vertical studs per exterior wall types.
- .14 Extend partitions to exterior wall and ceiling, as detailed, to maintain fireproofing and smoke stop, as indicated.
- .15 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs.
 - .1 Use 50 mm leg ceiling tracks.
- .16 Install continuous insulating strips to isolate studs from uninsulated surfaces.

- .17 Install two continuous beads of acoustical sealant or insulating strip under studs and tracks around perimeter of sound control partitions.

3.3 CLEANING

- .1 Progress Cleaning: Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: Upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: Remove waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by non-structural metal framing application.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 American National Standards Institute (ANSI)
 - .1 ANSI A108/A118/A136.1-2014, Specifications for the Installation of Ceramic Tile.
 - .2 ANSI A137.2:2013, American National Standard Specifications for Glass Tile.
- .2 ASTM International
 - .1 ASTM C979/C979M-10, Standard Specification for Pigments for Integrally Colored Concrete.
- .3 Terrazzo Tile and Marble Association of Canada (TTMAC)
 - .1 2012-2014 Specifications Guide 09 30 00 - Tile Installation Manual.

I.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product data:
 - .1 Include manufacturer's information on:
 - .1 Tile, marked to show each type, size, and shape required.
 - .2 Cement mortar and grout.
- .3 Samples:
 - .1 Base tile: Submit duplicate sample tiles of each selected colour, texture, size, and pattern of tile.
 - .2 Grout: Submit manufacturer's colour sample strips; if not possible submit manufacturer's colour range on card or sheet.

I.3 DELIVERY, STORAGE AND HANDLING

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

I.4 AMBIENT CONDITIONS

- .1 Maintain air temperature and structural base temperature at tile installation area above 12°C for 48 hours before, during, and 48 hours after, installation.
- .2 Do not install tiles at temperatures less than 12°C or above 38°C.

I.5 MAINTENANCE

- .1 Extra Materials:
 - .1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Provide minimum 2% of each type and colour of tile required for project for maintenance use. Store where directed.

- .3 Maintenance material is to be from same production run as installed material.

Part 2 Products

2.1 WALL TILE

- .1 Glass tile: To ANSI A137.2.
 - .1 Dimensions: Nominal 100 x 400 mm.
 - .2 Face: Striated pattern.
 - .3 Colour: Grey.

2.2 BOND COAT

- .1 Glass tile mortar:
 - .1 Thin set interior installation: Polymer modified mortar, non-sag, bright white, meeting shear bond strength requirements of ANSI A118.4.

2.3 GROUT

- .1 Latex Cement Grout: To ANSI A118.6, fast curing, high early strength, polymer-modified, stain resistant, unsanded mix for use with glass tile.
- .2 Colouring Pigments:
 - .1 Pure mineral pigments, limeproof and nonfading, complying with ASTM C979.
 - .2 Colouring pigments to be added to grout by manufacturer.
 - .3 Job coloured grouts are not acceptable.

2.4 ACCESSORIES

- .1 Edge profile: Anodized aluminum, L-shaped profile, 3.2 mm wide top section and vertical wall section, integrated perforated anchoring leg, and integrated grout joint spacer.
 - .1 Finish: Brushed satin chrome.
- .2 Sealant: In accordance with Section 07 92 00 - Joint Sealants.

2.5 MIXES

- .1 Mortar: Mix to manufacturer's instructions.
- .2 Adjust water volumes to suit water content of sand.

2.6 CLEANING COMPOUNDS

- .1 Specifically designed for cleaning masonry and concrete and which will not prevent bond of subsequent tile setting materials including patching and levelling compounds and elastomeric waterproofing membrane and coat.
- .2 Materials containing acid or caustic material are not acceptable.

Part 3 Execution**3.1 MANUFACTURER'S INSTRUCTIONS**

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

3.2 EXAMINATION

- .1 Verify conditions of substrates are acceptable for installation of tile in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate.
 - .2 Inform Departmental Representative of unacceptable conditions.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.3 WORKMANSHIP

- .1 Perform tile work in accordance with TTMAC Tile Installation Manual, except where specified otherwise.
 - .1 Install in accordance with TTMAC detail 305W-2012-2014/Thin Set Method – Walls.
- .2 Apply tile to clean and sound surfaces.
- .3 Fit tile around corners, fitments, fixtures, drains and other built-in objects. Maintain uniform joint appearance. Cut edges smooth and even. Do not split tiles.
- .4 Maximum surface tolerance 1:800.
- .5 Knock down trowel ridges and back butter glass tile to ensure ridges are not visible through installed tile.
- .6 Make joints between tile uniform and approximately 1.5 mm wide, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.
- .7 Remove excess mortar from tile joint areas so at least 2/3 of the tile depth remains for grouting.
- .8 Lay out tiles so perimeter tiles are minimum one-half size.
- .9 Sound tiles after setting and replace hollow-sounding units to obtain full bond.
- .10 Make internal angles square.
- .11 Allow minimum 24 hours after installation of tiles before grouting.
- .12 Clean installed tile surfaces after installation and grouting cured.

3.4 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 ASTM International
 - .1 ASTM A641/A641M-09a (2014) – Standard Specification for Zinc-Coated/Galvanized Carbon Steel Wire.
 - .2 ASTM A653/A653M-08 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .3 ASTM C635/C635M-13a - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
 - .4 ASTM C636/C636M-13 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - .5 ASTM E84-14 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - .6 ASTM E1264-08e1 - Standard Classification for Acoustical Ceiling Products.
 - .7 ASTM E1414/E1414M-11a e1 - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
 - .8 ASTM E1477-98a (2013) - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 92.1-M89 - Sound Absorptive Prefabricated Acoustical Units.
- .3 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC S102-07 - Surface Burning Characteristics of Building Materials and Assemblies.

I.2 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheets.
- .3 Samples: Submit duplicate samples to Departmental Representative for approval prior to ordering of material.
 - .1 Acoustical panels: 100 x 100 mm sample of each type selected.
 - .2 Grid materials: 300 mm length of each type selected.
- .4 Extra Stock Materials:
 - .1 Provide extra materials of acoustic units in accordance with Section 01 78 00 - Closeout Submittals.
 - .2 Provide 2% of total acoustic unit area of extra full panels, to Departmental Representative, with manufacturer's packaging and labelling.

- .5 Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
- .6 Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

I.3 QUALITY ASSURANCE

- .1 Regulatory Requirements:
 - .1 Fire-resistance rated floor/ceiling and roof/ceiling assembly: Certified by Canadian Certification Organization accredited by Standards Council of Canada.
- .2 Mock-up:
 - .1 Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
 - .2 Construct mock-up minimum 5 m² of acoustical panel ceiling including one inside corner.
 - .3 Construct mock-up where directed by Departmental Representative.
 - .4 Allow for review of mock-up by Departmental Representative before proceeding with ceiling work.
 - .5 Reviewed mock-up will demonstrate minimum standard for this work. Mock-up may remain as part of the finished work.

I.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver acoustical ceiling units to project site in unopened manufacturer's packaging. Store in enclosed space and protect from damage.
- .2 Acclimatize acoustical ceiling units at installation site as recommended by manufacturer.
- .3 Store extra materials required for maintenance, where directed by Departmental Representative.

I.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Remove waste materials in accordance with Section 01 74 21 – Construction and Demolition Waste Management and Disposal.

I.6 ENVIRONMENTAL REQUIREMENTS

- .1 Permit wet work to dry before beginning to install.
- .2 Maintain uniform minimum temperature of 15°C and humidity of 20% before and during installation.
- .3 Store materials in work area 48 hours prior to installation.
- .4 Provide extras of each exposed suspension component, amounting to 2% of amount installed.
- .5 Ensure extra materials are from same production run as installed materials.
- .6 Clearly identify each type of acoustic unit, including colour and texture.
- .7 Deliver to Departmental Representative upon completion of the work of this section.

Part 2 Products**2.1 ACOUSTIC UNIT MATERIALS**

- .1 Acoustic Ceiling Tiles: To CAN/CGSB 92.1 and ASTM E1264.
 - .1 Location: Refer to Room Finish Schedule.
 - .2 Thickness: Minimum 22 mm (7/8 inch).
 - .3 Composition: Wet formed mineral fibre.
 - .4 Surface colour: White.
 - .5 Surface finish: Non-directional fine fissured; latex paint.
 - .6 Fire rating: Class A.
 - .7 Fire performance: To CAN/ULC S102 and ASTM E84.
 - .1 Flame spread: 25 or less.
 - .2 Smoke developed: 50 or less.
 - .8 Noise Reduction Coefficient (NRC): Minimum 0.75.
 - .9 Ceiling Attenuation Class (CAC) rating to ASTM E1414/E1414M: Minimum 35.
 - .10 Light Reflectance to ASTM E1477: 0.86.
- .2 Adhesive: Low VOC type recommended by acoustic unit manufacturer.
- .3 Staples, nails, and screws: To CSA B111, non-corrosive finish as recommended by acoustic unit manufacturer.

2.2 GRID MATERIALS

- .1 All Grid Materials: To ASTM A653/A653M, commercial quality cold rolled steel with hot dipped galvanized coating. Main beams and cross tees to be double web construction with exposed flange design. Exposed surfaces chemically cleaned, capped with baked polyester paint.
- .2 Non-fire Rated Grid: Intermediate duty; exposed T; components die cut and interlocking.
- .3 Fire Rated Grid: Intermediate duty, listed by ULC/UL for use in fire-rated assembly, exposed T; components die cut and interlocking.
- .4 Exposed Grid Surface Width: 14.3 mm (9/16 inch) face dimension, with bolt slot and 6 mm (1/4 inch) reveal.
- .5 Grid Finish Colour: White.

2.3 ACCESSORIES

- .1 Adhesives and mounting accessories as recommended by manufacturer.
- .2 Attachment devices: Size for five times design load indicated in ASTM C635/C635M, Table I, Direct Hung, unless otherwise indicated.
- .3 Wire for hangers and ties: To ASTM A641/A641M, Class I zinc coating, soft annealed, with yield stress load at least 3 times design load, but not less than 12 gauge.
- .4 Touch-Up Paint: Type and colour to match acoustic and grid units.

Part 3 Execution**3.1 EXAMINATION**

- .1 Do not install acoustical panels and tiles until work above ceiling has been inspected by Departmental Representative.
- .2 Do not proceed with installation until wet work such as concrete and painting has been completed and thoroughly dried.

3.2 PREPARATION

- .1 Lay out system to balanced grid design or as indicated on reflected ceiling plans, with edge units at least 50% of acoustic unit size.
- .2 Co-ordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers, speakers, sprinkler heads, to be built into acoustical ceiling components. Verify layout of hangers will not interfere with other work.

3.3 INSTALLATION – SUSPENSION SYSTEM

- .1 Install after major above-ceiling work is complete.
- .2 Install suspension system to ASTM C636/C636M, and as supplemented in this section.
- .3 Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- .4 Install system capable of supporting imposed loads to deflection of 1/360 maximum.
- .5 Where ducts or other equipment prevent regular spacing of hangers, reinforce nearest affected hangers and related carrying channels to span extra distance.
- .6 Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability. Support fixture loads by supplementary hangers located within 150 mm of each corner; or support components independently.
- .7 Do not eccentrically load system, nor produce rotation of runners.
- .8 Perimeter Moulding:
 - .1 Install edge moulding at intersection of ceiling and vertical surfaces.
 - .2 Use longest practical lengths.
 - .3 Mitre corners.
 - .4 Provide at junctions with other interruptions.

3.4 INSTALLATION - ACOUSTIC UNITS

- .1 Install acoustic units to manufacturer's instructions.
- .2 Install units after above ceiling work is complete.
- .3 Fit acoustic units in place, without damaged edges or other defects detrimental to appearance and function.
- .4 Install acoustic units level, in uniform plane, and without twist, warp, and dents.

- .5 Scribe and cut acoustic units to fit adjacent work. Butt joints tight, and terminate edges with moulding.
- .6 In fire rated ceiling systems, secure lay-in panels with hold-down clips and protect over light fixtures, diffusers, air return grilles and other appurtenances according to Certification Organizations' design requirements.
- .7 Double cut and field paint exposed edges of tegular units.
- .8 Where round obstructions occur, provide preformed closures to match perimeter moulding.

3.5 ERECTION TOLERANCES

- .1 Maximum Variation from Flat and Level Surface: 3 mm in 3000 mm.
- .2 Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2°.
- .3 Install acoustical units as shown on reflected ceiling plan.

3.6 ADJUSTING AND CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Progress Cleaning: Leave Work area clean at end of each day.
- .3 Final Cleaning: Upon completion, remove surplus materials, rubbish, tools and equipment.
- .4 Replace damaged and broken panels.
- .5 Clean exposed surfaces of acoustical ceilings, including trim, edge mouldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove and replace ceiling products that cannot be successfully cleaned or repaired.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 ASTM International
 - .1 ASTM D2047-11, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
 - .2 ASTM E1155-14/E1155M, Standard Test Method for Determining Floor Flatness and Floor Levelness Numbers.
 - .3 ASTM F150-06 (2013), Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring.
 - .4 ASTM F970-07 (2011), Standard Test Method for Static Load Limit.
 - .5 ASTM F1700-13a, Standard Specification for Solid Vinyl Floor Tile.
 - .6 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).

I.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product data: Manufacturer's printed product literature, specifications, and data sheets.
- .3 Samples:
 - .1 Submit duplicate tile samples in full size.
 - .2 Submit 300 mm long samples of base and transition strips.
- .4 Closeout Submittals:
 - .1 Provide maintenance data for resilient flooring for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

I.3 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Waste Management and Disposal: Remove waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

I.4 AMBIENT CONDITIONS

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

I.5 MAINTENANCE

- .1 Extra Materials:

- .1 Provide extra materials of resilient flooring and adhesives in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Provide 10 m² of each colour, pattern, and type of flooring material required for project for maintenance use.
- .3 Extra materials to be from same production run as installed materials.
- .4 Identify each box or roll of flooring and each container of adhesive.
- .5 Deliver to Departmental Representative, upon completion of the work of this section.
- .6 Store where directed by Departmental Representative.

Part 2 Products

2.1 MATERIALS

- .1 Vinyl resilient flooring: To ASTM F1700, Class III printed vinyl plank.
 - .1 Backing: Commercial grade.
 - .2 Wear layer thickness: Minimum 0.5 mm.
 - .3 Total thickness: Minimum 2.5 mm.
 - .4 Static load limit to ASTM F970: Minimum 52 kg/cm³ (750 psi).
 - .5 Slip resistance to ASTM D2047: Accessibility compliant.
 - .6 Finish: Quartz enhanced polyurethane.
 - .7 Pattern: Striated.
 - .8 Colour: Grey and white, as selected by Departmental Representative.
- .2 Static dissipative vinyl tile: To ASTM F150, and ASTM F1700 or ASTM F1066 Class 2, vinyl composition tile.
 - .1 Wear layer thickness: Minimum 3.2 mm.
 - .2 Total thickness: Minimum 3.2 mm.
 - .3 Slip resistance to ASTM D2047: Accessibility compliant.
 - .4 Accessories:
 - .1 Copper grounding strips, as recommended by tile manufacturer.
 - .2 Adhesive: Conductive, as recommended by tile manufacturer.
 - .5 Colour and pattern: As selected by Departmental Representative.
- .3 Resilient base: To ASTM F1861, continuous, top set, complete with premoulded end stops and external corners.
 - .1 Type: Rubber.
 - .2 Style:
 - .1 Straight for carpeted areas.
 - .2 Coved for sheet vinyl areas.
 - .3 Thickness: 3 mm.
 - .4 Height: 100 mm.
 - .5 Lengths: Cut lengths minimum 2400 mm.

- .6 Colour: As selected by Departmental Representative.
- .4 Transition strips: Finishing and edge-protection profiles; purpose made aluminum extrusions, satin finish.
- .5 Primers and adhesives: Types recommended by resilient flooring manufacturer for specific material on applicable substrate, above, on or below grade.
- .6 Sub-floor filler and leveller: Self-levelling cementitious compound capable of bonding to properly prepared substrate surfaces.
 - .1 Compressive strength: Minimum 36.5 MPa (5300 psi) at 28 days.
 - .2 Capable of being walked on without damage after 3 hours.
 - .3 Capable of being coated after 24 hours at 21 °C.
- .7 Edging to floor penetrations: Aluminum, type recommended by flooring manufacturer.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

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

3.2 EXAMINATION

- .1 Verify conditions of substrates are acceptable for product installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate.
 - .2 Inform Departmental Representative of unacceptable conditions.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.
- .2 Ensure concrete floors are clean and dry, using test methods recommended by flooring manufacturer.
- .3 Perform pH tests on concrete floor regardless of age of concrete. Document and retain test results.
- .4 Confirm flatness of substrate by measurements taken in accordance with ASTM E1155/E1155M.
 - .1 Composite flatness (F_F): Minimum 36.
 - .2 Composite levelness (F_L): Minimum 20.

3.3 PREPARATION

- .1 Remove existing resilient flooring.
- .2 Remove or treat old adhesives to prevent residual, old flooring adhesives from bleeding through to new flooring and/or interfering with the bonding of new adhesives.
- .3 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured and dry.

- .4 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- .5 Prime concrete substrate to resilient flooring manufacturer's printed instructions.

3.4 APPLICATION: FLOORING

- .1 Provide high ventilation rate, with maximum outside air, during installation, and for 48 to 72 hours after installation. If possible, vent directly to outside. Do not let contaminated air recirculate through district or whole building air distribution system. Maintain extra ventilation for at least one month following building occupation.
- .2 Apply adhesive uniformly using recommended trowel. Do not spread more adhesive than can be covered by flooring before initial set takes place.
- .3 For static dissipative resilient flooring, install copper grounding strips under flooring, to flooring manufacturer's installation directions.
- .4 Lay flooring with border widths minimum 1/3 width of full material.
- .5 As installation progresses, and after installation, roll flooring with 45 kg minimum roller to ensure full adhesion.
- .6 Cut flooring around fixed objects.
- .7 Terminate flooring at centreline of door in openings where adjacent floor finish or colour is dissimilar.
- .8 Install aluminum edge strips at unprotected or exposed edges where flooring terminates.

3.5 APPLICATION: 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 pre-moulded end pieces at flush door frames.
- .7 Cope internal corners. Use pre-moulded corner units for right angle external corners. Use formed straight base material for external corners of other angles.
- .8 Use toeless type base where floor finish will be carpet, coved type elsewhere.
- .9 Install toeless type base before installation of carpet on floors.

3.6 CLEANING

- .1 Perform cleaning in accordance with Section 01 74 11 - Cleaning.
- .2 Remove excess adhesive from floor, base, and wall surfaces without damage.
- .3 Clean floor and base surface to manufacturer's printed instructions.

3.7 PROTECTION

- .1 Protect new floors from time of final set of adhesive until final inspection.
- .2 Prohibit traffic on floor for 48 hours after installation.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 Carpet and Rug Institute (CRI)
 - .1 CRI Carpet Installation Standard 2011.
- .2 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

I.2 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-Installation Meetings:
 - .1 Convene pre-installation meeting 1 week prior to beginning work of this Section, with Departmental Representative in accordance with Section 01 31 19 - Project Meetings to:
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Co-ordination with other construction sub-trades.

I.3 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturers' printed product literature and data sheets for each carpet tile, adhesive, and subfloor patching compound. Include product characteristics, performance criteria, physical size, finish, and product limitations.
 - .2 Submit 2 copies of WHMIS MSDS for each product to be used.
- .3 Shop Drawings:
 - .1 Information on shop drawings to indicate:
 - .1 Nap: Direction, open edges, special patterns.
 - .2 Cut-outs: Show locations where cut-outs are required.
 - .3 Edgings: Show location of edge mouldings and edge bindings.
- .4 Samples:
 - .1 Submit duplicate samples of carpet tile specified, in selected colour and pattern.
- .5 Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .6 Test and Evaluation Reports:
 - .1 Certified test reports showing compliance with specified performance characteristics and physical properties.
- .7 Manufacturer's Instructions: Manufacturer's installation instructions.

I.4 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: Submit maintenance data for installed products for incorporation into manual.

I.5 MAINTENANCE MATERIAL SUBMITTALS

- .1 Extra stock materials in accordance with Section 01 78 00 – Closeout Submittals, deliver to Departmental Representative extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels.
 - .1 Provide minimum extra 3% of carpet tile installed.
 - .2 Provide maintenance material from same dye lot and run as installed material.
 - .3 Delivery, storage, and protection: Comply with Departmental Representative's requirements for delivery and storage of extra materials.

I.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - .3 Store and protect carpet tile and adhesive in original containers or wrapping with manufacturer's seals and labels intact.
 - .4 Store and protect carpet tile and accessories in location as directed by Departmental Representative.
 - .5 Store carpet and adhesive at minimum temperature of 18°C and relative humidity of maximum 65% for minimum of 48 hours before installation.
 - .6 Prevent damage to materials during handling and storage. Keep materials under cover and free from dampness.
 - .7 Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
 - .8 Replace defective or damaged materials with new.

I.7 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Moisture: Ensure substrate is within moisture limits and alkalinity limits recommended by manufacturer. Prepare testing and provide report to Departmental Representative.

- .2 Temperature: Maintain ambient temperature of not less than 18°C from 48 hours before installation to at least 48 hours after completion of work.
- .3 Relative humidity: Maintain between 10% and 65% for 48 hours before, during and 48 hours after installation.
- .4 Install carpet after space is enclosed and weatherproof, wet-work in space is completed and nominally dry, and work above ceilings is complete.

Part 2 Products

2.1 CARPET TILES

- .1 Size: 610 x 610 mm.
- .2 Installation pattern: Ashlar.
- .3 Pile Surface Appearance: Multi-level pattern loop.
- .4 Pile fibre: Nylon 6.
- .5 Dye method: 100% solution dyed.
- .6 Colour and pattern: As selected by Departmental Representative.
 - .1 Multi-tonal greys and greens with orange accents, striped directional pattern.
- .7 Backing: Polyolefin composite.
- .8 Pile weight: 542 g/m².
- .9 Machine gauge: 47.2 rows/10 cm.
- .10 Density: Average 11.66 kilotex/cm².
- .11 Stitch count: 35.43 stitches/10 cm.
- .12 Pile height: 2.3 mm.
- .13 Total thickness: 5.8 mm.
- .14 Stain resistance: Minimum 8.0 to AATCC 175.
- .15 Fibre shape: Maximum modification ratio 2.5 for soil release capability for high traffic area carpet.
- .16 Appearance retention rating: Minimum 3.0 at 12,000 cycles to Hexapod test to ASTM D5252 or 22,000 cycles to Vetterman test to ASTM D5417.
- .17 Dimensional Stability: maximum + 0.12% to CAN/CGSB 4.2 No. 76/ISO 2551.
- .18 Static control: Maximum 3.5 kV to AATCC 134.
- .19 Air quality: To CCI/CRI Green Label Plus requirements.
- .20 Anti-microbial resistance: Permanent treatment to prevent growth of bacteria and fungi.

2.2 ACCESSORIES

- .1 Pressure sensitive adhesive tabs: Recommended by carpet tile manufacturer for direct tape down installation of carpet tiles.

- .2 Carpet edge/reducer strip: Extruded aluminum, anodized satin finish, profile height appropriate to ensure smooth transition to adjoining floor surface.
- .3 Sub-floor filler and leveller: Self-levelling cementitious compound capable of bonding to properly prepared substrate surfaces.
 - .1 Compressive strength: Minimum 36.5 MPa (5300 psi) at 28 days.
 - .2 Capable of being walked on without damage after 3 hours.
 - .3 Capable of being coated after 24 hours at 21°C.

Part 3 Execution

3.1 EXAMINATION

- .1 Examine conditions, substrates and work to receive work of this Section.
- .2 Verify conditions of substrates are acceptable for carpet tile installation in accordance with manufacturer's written instructions.
 - .1 Inform Departmental Representative of unacceptable conditions.
 - .2 Proceed with installation only after unacceptable conditions have been remedied.

3.2 PREPARATION

- .1 Subfloor Preparation:
 - .1 Inspect concrete and determine special care required to make it a suitable for carpet.
 - .2 Fill and level cracks 3 mm wide or protrusions over 0.8 mm with appropriate and compatible patching compound.
 - .3 Comply with manufacturer's written recommendations for maximum patch thickness.
 - .4 Prime large patch areas with compatible primer.
 - .5 Ensure concrete substrates are cured, clean, and dry.
 - .6 Ensure concrete substrates are free of paint, dirt, grease, oil, curing or parting agents, and other contaminants, including sealers, which could interfere with bonding of adhesive.
 - .7 Where powdery or porous concrete surface is encountered, apply primer compatible with adhesive to provide a suitable surface for glue-down installation.
- .2 Surface Preparation: Prepare surface in accordance with manufacturer's written recommendations and co-ordinate with Section 01 70 00 - Examination and Preparation.
 - .1 Prepare floor surfaces in accordance with CRI Carpet Installation Standard.

3.3 INSTALLATION

- .1 Install carpet tiles in accordance with manufacturer's written instructions, and CRI Carpet Installation Standard and co-ordinate with Section 01 73 00 - Execution.

- .2 Co-ordinate tile carpeting work with work of other trades, for proper time and sequence to avoid construction delays.
- .3 Snugly join carpet tiles in completed installation.
 - .1 Do not trap yarn between carpet tiles.
- .4 Apply pressure-sensitive adhesive tabs according to manufacturer's recommendations.
- .5 Ensure finished installation presents smooth wearing surface free from conspicuous seams, burring, and other faults.
- .6 Use material from same dye lot.
 - .1 Ensure colour, pattern, and texture match within visual areas.
 - .2 Maintain constant pile direction.
- .7 Fit around architectural, mechanical, electrical and telephone outlets, furniture fitments, around perimeter of rooms into recesses, and around projections.
- .8 Extend carpet tiles into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- .9 Install carpet tiles smooth and free from bubbles, puckers, and other defects.
- .10 Protect exposed carpet tile edges at transition to other flooring materials with suitable transition strips.

3.4 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Progress Cleaning: Leave Work area clean at end of each day.
- .3 Final Cleaning: Upon completion, remove surplus materials, rubbish, tools, and equipment in accordance with Section 01 74 11 - Cleaning.
 - .1 Vacuum carpets clean immediately after completion of installation.
- .4 Waste Management: Remove waste materials for in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Install carpet protection to satisfaction of Departmental Representative.
- .3 Repair damage to adjacent materials caused by tile carpeting installation.

END OF SECTION

Part I General**I.1 REFERENCES**

- .1 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .2 Master Painters Institute (MPI)
 - .1 MPI Architectural Painting Specification Manual, 2014.
- .3 National Fire Code of Canada – 2010.
- .4 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.

I.2 QUALITY ASSURANCE

- .1 Pre-Installation Meeting:
 - .1 Convene pre-installation meeting one week prior to beginning work of this Section in accordance with Section 01 32 16 - Construction Progress Schedules - Bar (GANTT) Chart.
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Coordination with other building sub-trades.
 - .4 Review installation instructions and warranty requirements.

I.3 SCHEDULING

- .1 Submit work schedule for various stages of painting to Departmental Representative for review. Submit schedule minimum 48 hours in advance of proposed operations.
- .2 Obtain written authorization from Departmental Representative for changes in work schedule.
- .3 Schedule painting operations to prevent disruption of occupants.

I.4 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit product data and instructions for each paint and coating product to be used.
 - .2 Submit product data for the use and application of paint thinner.
- .3 Samples:
 - .1 Submit duplicate 200 x 200 mm sample panels of each paint with specified paint or coating in colours, gloss/sheen and textures required to MPI Architectural

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Painting Specification Manual standards submitted on following substrate materials:

- .1 1.6 mm sheet steel for finishes over metal surfaces.
- .2 13 mm gypsum board for finishes over gypsum board and other smooth surfaces.
- .2 Retain reviewed samples on-site to demonstrate acceptable standard of quality for appropriate on-site surface.
- .3 Test reports: Submit certified test reports for paint from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
- .4 Certificates: Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .5 Manufacturer's Instructions:
 - .1 Submit manufacturer's application instructions.
- .6 Closeout Submittals: submit maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals include following:
 - .1 Product name, type and use.
 - .2 Manufacturer's product number.
 - .3 Colour numbers.

I.5 MAINTENANCE

- .1 Extra Materials:
 - .1 Deliver to extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Section 01 78 00 - Closeout Submittals.
 - .2 Quantity: Provide one - 4 litre can of each type and colour of finish coating. Identify colour and paint type in relation to established colour schedule and finish system.
 - .3 Delivery, storage, and protection: Comply with Departmental Representative requirements for delivery and storage of extra materials.

I.6 DELIVERY, STORAGE AND HANDLING

- .1 Pack, ship, handle, and unload materials in accordance with Section 01 61 00 - Common Product Requirements and manufacturer's written instructions.
- .2 Acceptance at Site:
 - .1 Identify products and materials with labels indicating:
 - .1 Manufacturer's name and address.
 - .2 Type of paint or coating.
 - .3 Compliance with applicable standard.
 - .4 Colour number in accordance with established colour schedule.
- .3 Remove damaged, opened, and rejected materials from site.
- .4 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.
- .5 Store temperature-sensitive products above minimum temperature as recommended by manufacturer.
- .6 Keep areas used for storage, cleaning, and preparation clean and orderly. After completion of operations, return areas to clean condition.
- .7 Remove paint materials from storage only in quantities required for same day use.
- .8 Fire Safety Requirements:
 - .1 Provide one 9 kg Type ABC dry chemical fire extinguisher adjacent to storage area.
 - .2 Store oily rags, waste products, empty containers, and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.
 - .3 Handle, store, use, and dispose of flammable and combustible materials in accordance with National Fire Code of Canada requirements.
- .9 Waste Management and Disposal:
 - .1 Remove waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .2 Place materials defined as hazardous or toxic in designated containers.
 - .3 Handle and dispose of hazardous materials in accordance with TDGA, Regional and Municipal, regulations.
 - .4 Ensure emptied containers are sealed and stored safely.
 - .5 Dispose of unused paint materials at official hazardous material collections site as approved by Departmental Representative.
 - .6 Paint, stain, and wood preservative finishes and related materials (thinners, and solvents) are regarded as hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from Provincial Ministries of Environment and Regional levels of Government.
 - .7 Material that cannot be reused is to be treated as hazardous waste and disposed of in an appropriate manner.
 - .8 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.
 - .9 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into ground follow these procedures:
 - .1 Retain cleaning water for water-based materials to allow sediments to be filtered out.
 - .2 Retain cleaners, thinners, solvents, and excess paint and place in designated containers and ensure proper disposal.

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- .3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
- .4 Dispose of contaminants in approved legal manner in accordance with hazardous waste regulations.
- .5 Ensure empty paint cans are dry prior to disposal or recycling (where available).
- .10 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.

I.7**SITE CONDITIONS**

- .1 Heating, Ventilation, and Lighting:
 - .1 Ventilate enclosed spaces.
 - .2 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.
 - .3 Provide continuous ventilation for seven days after completion of application of paint.
 - .4 Coordinate use of existing ventilation system with Departmental Representative and ensure its operation during and after application of paint as required.
 - .5 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.
 - .6 Provide minimum lighting level of 323 Lux on surfaces to be painted.
- .2 Temperature, Humidity and Substrate Moisture Content Levels:
 - .1 Unless pre-approved written approval by specifying body and product manufacturer, perform no painting when:
 - .1 Ambient air and substrate temperatures are below 10°C.
 - .2 Substrate temperature is above 32°C unless paint is specifically formulated for application at high temperatures.
 - .3 Substrate and ambient air temperatures are not expected to fall within MPI or paint manufacturer's prescribed limits.
 - .4 Relative humidity is under 85% or when the dew point is more than 3 degrees Celsius variance between the air/surface temperature. Paint should not be applied if the dew point is less than 3 degrees Celsius below the ambient or surface temperature. Use sling psychrometer to establish the relative humidity before beginning paint work.
 - .5 Rain or snow is forecast to occur before paint has thoroughly cured or when it is foggy, misty, raining, or snowing at site.
 - .6 Ensure conditions are within specified limits during drying or curing process, until newly applied coating can itself withstand 'normal' adverse environmental factors.
 - .2 Perform painting work when maximum moisture content of the substrate is below:

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- .1 15% for wood.
- .2 12% for plaster and gypsum board.
- .3 Test for moisture using calibrated electronic Moisture Meter. Test concrete floors for moisture using "cover patch test".
- .3 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.
- .4 Additional interior application requirements:
 - .1 Apply paint finishes when temperature at location of installation can be satisfactorily maintained within manufacturer's recommendations.
 - .2 Apply paint in occupied facilities during silent hours only. Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.

Part 2 Products**2.1 MATERIALS**

- .1 Paint materials listed in the MPI Approved Products List (APL) are acceptable for use on this project.
- .2 Provide paint materials for paint systems from single manufacturer for each system used.
- .3 Use materials that are lead and mercury free, and that have low VOC content, where possible.
- .4 Use paint materials with good flowing and brushing properties, and that dry or cure free of blemishes, streaks, sags, or air entrapment. Refer to Field Quality Control/Standard of Acceptance requirements.
- .5 Where required, paints and coatings to meet 'flame spread' and 'smoke developed' ratings designated by local Code requirements and authorities having jurisdiction.
- .6 Conform to latest MPI requirements for interior painting work including preparation and priming.
- .7 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) are to be in accordance with MPI Architectural Painting Specification Manual "Approved Product" listing.
- .8 Linseed oil, shellac, and turpentine: Highest quality product from approved manufacturer listed in MPI Architectural Painting Specification Manual, and compatible with other coating materials as required.
- .9 Provide paint products meeting MPI "Environmentally Friendly" E2 ratings based on VOC (EPA Method 24) content levels.

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- .10 Use MPI listed materials having minimum E2 rating where indoor air quality (odour) requirements exist.
- .11 Paints, coatings, adhesives, solvents, cleaners, lubricants, and other fluids:
 - .1 Water-based.
 - .2 Non-flammable.
 - .3 Manufactured without compounds that contribute to ozone depletion in the upper atmosphere.
 - .4 Manufactured without compounds that contribute to smog in the lower atmosphere.
 - .5 Do not contain methylene chloride, chlorinated hydrocarbons, toxic metal pigments.
- .12 Formulate and manufacture water-borne surface coatings with no aromatic solvents, formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.
- .13 Flash point: 61.0°C or greater for water-borne surface coatings and recycled water-borne surface coatings.
- .14 Ensure manufacture and process of both water-borne surface coatings and recycled water-borne surface coatings does not release:
 - .1 Matter in undiluted production plant effluent generating 'Biochemical Oxygen Demand' (BOD) in excess of 15 mg/L to natural watercourse or sewage treatment facility lacking secondary treatment.
 - .2 Total Suspended Solids (TSS) in undiluted production plant effluent in excess of 15 mg/L to natural watercourse or a sewage treatment facility lacking secondary treatment.

2.2 COLOURS

- .1 Colour schedule will be based upon selection of three base colours and five accent colours. No more than eight colours will be selected for entire project and no more than three colours will be selected in each area.
- .2 Refer to Section 09 00 10 – Room Finish and Materials Schedules.
- .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. Obtain written approval from Departmental Representative for tinting of painting materials.
- .2 Mix paste, powder or catalyzed paint mixes in accordance with manufacturer's written instructions.
- .3 Use and add thinner in accordance with paint manufacturer's recommendations. Do not use kerosene or similar organic solvents to thin water-based paints.
- .4 Thin paint for spraying in accordance with paint manufacturer's instructions.

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- .5 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

2.4 GLOSS/SHEEN RATINGS

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

	Gloss @ 60 degrees	Sheen @ 85 degrees
Gloss Level 1 - Matte Finish (flat)	Max. 5	Max. 10
Gloss Level 2 - Velvet-Like Finish	Max.10	10 to 35
Gloss Level 3 - Eggshell Finish	10 to 25	10 to 35
Gloss Level 4 - Satin-Like Finish	20 to 35	min. 35
Gloss Level 5 - Traditional Semi-Gloss Finish	35 to 70	
Gloss Level 6 - Traditional Gloss	70 to 85	
Gloss Level 7 - High Gloss Finish	More than 85	

- .2 Gloss level ratings of painted surfaces as specified.

2.5 INTERIOR PAINTING SYSTEMS

- .1 Galvanized metal: Door frames, railings, fire extinguisher cabinet, miscellaneous steel.
- .1 INT 5.3N – G5 – Institutional low odour/low VOC.
- .2 Dressed lumber: Doors, chair railing:
- .1 INT 6.3Q – Waterborne varnish, G4 finish.
- .3 Gypsum wallboard and textured finishes:
- .1 INT 9.2B - High performance architectural latex.
- .1 Walls: G4 finish.
- .2 Ceilings: G1 finish.

2.6 INTERIOR REPAINTING

- .1 Steel – High Heat: Radiators.
- .1 RIN 5.2A – G5 – Heat resistant enamel, maximum 205°C.
- .2 Galvanized Metal: High contact/high traffic areas (doors, frames).
- .1 RIN 5.3K – G5 – institutional low odour/low VOC.
- .3 Gypsum wallboard and textured finishes:
- .1 RIN 9.2B – High performance architectural latex.
- .1 Walls: G4 finish.
- .2 Ceilings: G1 finish.

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Part 3 Execution**3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 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 EXAMINATION

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Departmental Representative damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.
- .2 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "cover patch test". Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.
- .3 Maximum moisture content as follows:
 - .1 Gypsum board: 12%.
 - .2 Wood: 15%.

3.4 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. 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 building occupants and general public in and about the building.
- .2 Surface Preparation:
 - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, bath 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.

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- .3 Clean and prepare surfaces in accordance with MPI Architectural Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 Remove dust, dirt, and other surface debris by vacuuming, or wiping with dry, clean cloths.
 - .2 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil, and other surface contaminants.
 - .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
 - .4 Allow surfaces to drain completely and to dry thoroughly.
 - .5 Prepare surfaces for water-based painting. Water-based cleaners should be used in place of organic solvents.
 - .6 Use trigger operated spray nozzles for water hoses.
 - .7 Many water-based paints cannot be removed with water once dried. Minimize use of mineral spirits or organic solvents to clean up water-based paints.
- .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .5 Where possible, prime non-exposed surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.
 - .1 Apply vinyl sealer to MPI #36 over knots, pitch, sap, and resinous areas.
 - .2 Apply wood filler to nail holes and cracks.
- .6 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.
- .7 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements. Remove traces of blast products from surfaces, pockets and corners to be painted by vacuum cleaning.
- .8 Touch up of shop primers with primer as specified.
- .9 Do not apply paint until prepared surfaces have been accepted by Departmental Representative.

3.5 APPLICATION

- .1 Method of application to be as approved by Departmental Representative. Apply paint by brush, roller, or sprayer. Conform to manufacturer's application instructions unless specified otherwise.
- .2 Brush and Roller Application:
 - .1 Apply paint in uniform layer using brush and/or roller type suitable for application.
 - .2 Work paint into cracks, crevices, and corners.

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- .3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers, or sheepskins.
- .4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces free of roller tracking and heavy stipple.
- .5 Remove runs, sags, and brush marks from finished work and repaint.
- .3 Spray application:
 - .1 Provide and maintain equipment that is suitable for intended purpose, capable of atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
 - .2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
 - .3 Apply paint in uniform layer, with overlapping at edges of spray pattern. Back roll first coat application.
 - .4 Brush out immediately all runs and sags.
 - .5 Use brushes and rollers to work paint into cracks, crevices, and places that are not adequately painted by spray.
- .4 Use dipping, sheepskins, or daubers only when no other method is practical in places of difficult access.
- .5 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .6 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .7 Sand and dust between coats to remove visible defects.
- .8 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.
- .9 Finish closets and alcoves as specified for adjoining rooms.
- .10 Finish top, bottom, edges and cut-outs of doors after fitting as specified for door surfaces.

3.6 MECHANICAL/ELECTRICAL EQUIPMENT

- .1 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .2 Do not paint over nameplates.
- .3 Keep sprinkler heads free of paint.

3.7 SITE TOLERANCES

- .1 Walls: No defects visible from a distance of 1000 mm at 90° to surface.
- .2 Ceilings: No defects visible from floor at 45° to surface when viewed using final lighting source.

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- .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. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .4 Protect freshly completed surfaces from paint droppings and dust to approval of Departmental Representative. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing, and handling of paint to clean condition as approved by Departmental Representative.

END OF SECTION