

PART 1 - GENERAL

- .1 The requirements of Division 01 form part of this section.
- .2 Section 08 71 00 - Door Finish Hardware
- .3 Section 09 51 99 - Acoustic Ceilings for Minor Works.
- .3 Section 09 91 99 - Interior Painting.
- .4 Section 10 22 13 - Wire Mesh Partitions
- .5 Division 21 Fire Suppression
- .6 Division 23 Heating, Ventilation and Air Conditioning (HVAC)
- .7 Division 26 Electrical.
- .8 Division 28 Electronic Safety and Security.

1.1 REFERENCES

- .1 ASTM International
 - .1 ASTM C1396/C1396M-14a, Standard Specification for Gypsum Wallboard.
 - .2 ASTM C475/C475M-15, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .3 ASTM C514-04(2014), Standard Specification for Nails for the Application of Gypsum Board.
 - .4 ASTM C645-14e1, Standard Specification for Nonstructural Steel Framing Members.
 - .5 ASTM C754-17, Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
 - .6 ASTM C840-17, Standard Specification for Application and Finishing of Gypsum Board.
 - .7 ASTM C954-15, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.122 in. (2.84 mm) in Thickness.
 - .8 ASTM C1002-16, 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.
 - .9 ASTM C1047-14a, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .10 ASTM C1178/C1178M-13, Standard Specification for Glass Mat Water-Resistant Gypsum Backing Board.
 - .11 ASTM E2638-10, Standard Test Method for Objective Measurement of the Speech Privacy Provided by a Closed Room.
- .2 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.

- .3 Underwriters' Laboratories of Canada (ULC)
.1 CAN/ULC-S102.2-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

- .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, framing, sealants and include product characteristics, performance criteria, physical size, finish and limitations.

- .3 Samples:
.1 Submit for review and acceptance of each unit.
.2 Samples will be returned for inclusion into work.
.3 Submit duplicate 300 x 300 mm size samples of vinyl faced gypsum board and 300 mm long samples of corner and casing beads vinyl mouldings shadow mould cornice cap textured finishes insulating strip.

- .4 Test and Evaluation Reports: submit test reports in accordance with Section 01 45 00, from approved independent testing laboratory, certifying partition system complies with sound transmission rating, fire-resistance rating as specified.

- .5 Construction Waste Management:

1.3 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 Delivery and Acceptance Requirements: 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 indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
.2 Store materials inside, level, under cover. Protect from weather, damage from construction operations and other causes, in accordance with manufacturer's printed instructions.
.3 Handle materials to prevent damage to edges or surfaces. Protect metal accessories and trim from being bent or damaged.
.4 Store and protect partition materials from nicks, scratches, and blemishes.
.5 Replace defective or damaged materials with new.

- .4 Packaging Waste Management: in accordance with section
01 74 11.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Performance/Design Criteria:
- .1 Partition assembly to be non-combustible construction fire resistance rated ULC W453 and as detailed.
- .2 Minimum sound transmission class rating of installed panel partition to be STC 54, tested to ASTM E90.
- .2 Non-structural Metal Framing:
- .1 Non-load bearing channel stud framing: to ASTM C645, 0.63 mm stud size, roll formed from 0.53 mm thickness hot dipped galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres.
- .2 Floor and ceiling tracks: to ASTM C645, in widths to suit stud sizes, 41 mm flange height.
- .3 Metal channel stiffener: 19 x 1.4 mm thick cold rolled steel, coated with rust inhibitive coating.
- .3 Gypsum Board:
- .1 Standard board to ASTM C1396/C1396M, Type X 13mm plain and 16mm Firecode 1200mm wide x maximum practical length, ends square cut, edges tapered.
- .1 Metal furring runners, hangers, tie wires, inserts, anchors: to ASTM C1047.
- .2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .3 Steel tapping screws: to ASTM C1002.
- .4 Casing beads, corner beads, control joints and edge trim: to ASTM C1047, zinc-coated by electrolytic process, 0.5 mm base thickness, perforated flanges, one piece length per location.

2.2 ACCESSORIES

- .1 Acoustical insulation: type recommended by manufacturer to achieve STC rating specified.
- .2 Sealants: in accordance with Section 07 92 00 Joint Sealants to ASTM C475.
- .1 VOC limit 250 g/L maximum to SCAQMD Rule 1168.
- .3 Insulating strip: rubberized, moisture resistant, 3

mm thick closed cell neoprene strip, 12 mm wide, with self sticking permanent adhesive on one face, lengths as required.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions prior to partition installation.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 ERECTION OF FRAMING

- .1 Install steel framing members to receive screw-attached gypsum board in accordance with ASTM C754 except where specified otherwise.
- .2 Align partition tracks at floor and ceiling and secure at 600 mm on centre maximum.
- .3 Place studs vertically at 300 mm on centre and maximum of 12 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
- .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 Include two studs extending from floor to ceiling at each side of openings wider than stud centres specified. Secure studs together, 50 mm apart using column clips or other approved means of fastening placed alongside frame anchor clips.
- .7 Install heavy gauge single jamb studs at openings.
- .8 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in same manner and spacing as wall studs.

- .9 Install steel studs or furring channel between studs for attaching electrical and other boxes.
- .10 Extend partitions to ceiling height except where indicated.
- .11 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use double track slip joint.
- .12 Install continuous insulating strips to isolate studs from uninsulated surfaces.
- .13 Install insulating strip under studs and tracks around perimeter of sound control partitions.
- .14 Install horizontal stud framing at stud space adjacent door at 1200mm and 2450mm above finish floor. Connect all stud framing to top and bottom track with steel rivets.
- .15 Secure bottom track to floor slab with double expanding mechanical fastener at 300mm o.c.(self tapping screws is not acceptable).
- .16 Provide double stud at inside corners to support interior finish.

3.3 ERECTION OF GYPSUM BOARD AND ACCESSORIES

- .1 Do application and finishing of gypsum board in accordance with ASTM C840 except where specified otherwise.
- .2 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with ASTM C840 except where specified otherwise.
- .3 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .4 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles.
- .5 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.
- .6 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .7 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.
- .8 Install wall furring for gypsum board wall finishes in accordance with ASTM 840, except where specified otherwise.

- .9 Install acoustical insulation and sealant in sound rated partitions to correspond with tested assembly.
- .10 Install gypsum boards in direction that will minimize number of end-butt joints. Stagger end joints 250 mm minimum.

3.4 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work are approved.
- .2 Apply gypsum board to metal furring or framing using screw fasteners. Maximum spacing of screws 300 mm on centre.

3.5 INSTALLATION

- .1 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. Secure at 150 mm on centre
- .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. 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 Install access doors to electrical and mechanical fixtures specified in respective sections.
 - .1 Rigidly secure frames to furring or framing systems.
- .6 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.
- .7 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.
- .8 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.
- .9 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

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.

3.7 PROTECTION

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

3.8 SCHEDULES

- .1 Construct wall assemblies as indicated on drawing A0.1
- .2 Construct fire rated assemblies where indicated.
 - .1 1 hours fire rated partition assembly, ULC Design No. W453.

PART 1 - GENERAL

- .1 The requirements of Division 01 form part of this section.
- .2 Section 09 84 10: Acoustical wall treatment.
- .3 Section 09 91 23 - Interior Painting
- .4 Section 09 21 99 - Partitions for minor works
- .4 Division 21 Fire Suppression
- .5 Division 23 Heating, Ventilation and Air Conditioning (HVAC)
- .6 Division 26 Electrical Fixtures

1.1 REFERENCES

- .1 ASTM International
 - .1 ASTM C635/C635M-13a, Standard Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - .2 ASTM C636/C636M-13, Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - .3 ASTM E1477-98a(2013), Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
 - .4 ASTM E1264, Classification for Acoustical Ceiling Products.
 - .5 ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - .6 ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
 - .7 ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures
 - .8 International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1113-[A2007], Architectural Coatings.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .4 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
- .5 CISCA Ceiling Systems Handbook, for seismic restraint of ceiling grid.
- .1 Submit in accordance with Section 01 78 00.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for ceiling panels ceiling suspension system suspended linear acoustic panels and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
 - .2 Indicate lay-out, insert and hanger spacing and fastening details, splicing method for main and cross runners, and acoustical unit support at ceiling fixture lateral bracing and accessories.
- .4 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate 300x300mm sample of type-1 acoustical units.
- .5 Construction Waste Management: in accordance with section 01 00 10,01 74 11

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 and 01 78 00 and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store materials inside, level, under cover. Protect from weather, damage from construction operations and other causes, in accordance with manufacturer's printed instructions.
 - .3 Handle materials to prevent damage to edges or surfaces. Protect metal accessories and trim from being bent or damaged.
 - .4 Store and protect acoustic ceiling materials

from nicks, scratches, and blemishes.

.5 Replace defective or damaged materials with new.

- .4 Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 00 10 01 74 11.

PART 2 - PRODUCTS

2.1 COMPONENTS

- .1 Acoustic units for suspended ceiling system: ASTM E1264, Classification for Acoustical Ceiling Products.
- .1 Type-1 ACT-1.
 - .2 Pattern: Fine Textured,.
 - .3 Flame spread rating: Class A of 25 or less in accordance with CAN/ULC-S102.
 - .4 Smoke developed 50 or less in accordance with CAN/ULC-S102.
 - .5 Noise Reduction Coefficient (NRC) designation of minimum .85.
 - .6 Attenuation Class (CAC) minimum 30
 - .7 Edge type: square
 - .8 Colour: White
 - .9 Size: 610 x 1220 x 25 mm thick.
 - .10 Shape: flat.
 - .11 Acoustical unit: face and back antimicrobial additive resistant to mold and mildew.
 - .12 Humidity resistant
 - .13 Impact and scratch-resistant.
- .2 Acoustical Suspension:
- .1 Heavy duty system to ASTM C635/C635M.
 - .2 Suspension system: non-fire rated, two directional exposed tee bar grid.
 - .3 Basic Material: Commercial quality cold rolled steel, zinc coated, min. 0.5mm core thickness.
 - .4 Exposed tee bar grid components: shop painted satin sheen, white colour. Components die cut. Main tee with double web, rectangular bulb and 25 mm rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection.
 - .4 Hanger wire: galvanized soft annealed steel wire, 3.6 mm diameter for access tile ceilings.
 - .5 Hanger inserts: purpose made.
 - .6 Carrying channels: 38 x 24mm (15/16") mm channel, of 1.2mm mm core thickness cold rolled galvanized steel.
 - .7 Accessories: splices, clips, wire ties, retainers and wall mouldings flush, to complement suspension system components, as recommended by system manufacturer.
- .3 Performance/Design Criteria:
- .1 Maximum deflection: 1/360th of span to ASTM C635/C635M deflection test.
- .1 Touch-up paint: in accordance with manufacturer's recommendations for surface conditions:

2.2 ACCESSORIES

PART 3 - EXECUTION

3.1 EXAMINATION

.1 Paint: Low VOC limit 250 g/L maximum to GS-11 SCAQMD Rule 1113.

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions prior to acoustical ceiling installation.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.
 - .4 Permit wet work to dry before commencement of installation.
 - .5 Commence installation after dust generating activities are completed.
 - .6 Maintain uniform minimum temperature of 15°C and humidity of 20 - 40% before and during installation.
 - .7 Store materials in work area 48 hours prior to installation.

3.2 INSTALLATION

- .1 Installation: in accordance with ASTM C636/C636M except where specified otherwise.
- .2 Suspension System:
 - .1 Erect ceiling suspension system after work above ceiling has been inspected by Departmental Representative.
 - .2 Secure hangers to overhead structure using attachment methods as indicated acceptable to Departmental Representative.
 - .3 Install hangers spaced at maximum 1200 mm centres and within 150 mm from ends of main tees.
 - .4 Lay out centreline of ceiling both ways, to provide balanced borders at room perimeter with border units not less than 50% of standard unit width system according to reflected ceiling plan.
 - .5 Install wall mouldings to provide correct ceiling height.
 - .6 Completed suspension system to support super-imposed loads, such as lighting fixtures diffusers grilles speakers and fire .
 - .7 Support at light fixtures diffusers with additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
 - .8 Interlock cross member to main runner to provide rigid assembly.
 - .9 Ensure finished ceiling system is square with adjoining walls and level within 1:1000.

- .3 Acoustic Panels:
 - .1 Install acoustical panels and tiles in ceiling suspension system.
 - .2 Co-ordinate ceiling work with work of other sections such as mechanical work, interior lighting, fire protection, communication, and intrusion and detection systems.

3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11.
 - .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.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Sections 01 00 10 01 74 11.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.4 PROTECTION

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

PART 1 - GENERAL

- 1.1 RELATED SECTIONS .1 Read and be governed by the conditions of the Contract and specifications of Division 01.
- 1.2 REFERENCES .1 ASTM International.
.2 ASTM D412-06ae2, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
.4 ASTM D624-00(2007), Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
.3 ASTM D638-10, Standard Test Method for Tensile Properties of Plastics.
.4 ASTM D1894-08, Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting.
.5 ASTM D2047-04, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
.6 ASTM D3389-10, Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double-Head Abrader).
.7 ASTM D3673-89(2009), Standard Text Methods for Chemical Analysis of Alpha Olefin Sulfonates.
.8 ASTM D4060-10, Standard Test Method for Abrasion Resistance of Organic Coatings by the Tabor Abraser.
.9 ASTM D5116-10, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
.10 ASTM E84-11b, Test Method of Surface Burning Characteristics of Building Materials.
.11 ASTM E413-10, Classification for Rating Sound Insulation.
.12 ASTM E648-10e1, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
.13 ASTM E662-09, Test Method of Specific Optical Density of Smoke Generated by Solid Materials.
.14 ASTM F36-99(2009), Standard Test method for Compressibility and Recovery of Gasket Materials.
.15 ASTM F137-08, Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus.
.16 ASTM F147-87(2009), Standard Test Method for Flexibility of Non-Metallic Gasket Materials.
.17 ASTM F150-06, Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring.
.18 ASTM F373-06, Standard Test Method for Embossed Depth of Resilient Floor Coverings.
.19 ASTM F511-04, Standard Test Method for Quality of Cut (Joint Tightness) of Resilient Floor Tile.
.20 ASTM F710-11, Standard Practice for Preparing

Concrete Floors to Receive Resilient Flooring.

.21 ASTM F925-02(2008), Standard Test Method for Resistance to Chemicals of Resilient Flooring.

.22 ASTM F970-07, Standard Test Method for Static Load Limit.

.23 ASTM F1066-04(2014)e1, Standard Specification for Vinyl Composition Floor Tile.

.24 ASTM F1265-03a(2008), Standard Test Method for Resistance to Impact for Resilient Floor Tile.

.25 ASTM F1514-03(2008), Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change.

.26 ASTM F1700-04(2010), Standard Specification for Solid Vinyl Floor Tile.

.27 ASTM F1861-08, Standard Specification for Resilient Wall Base.

.28 ASTM F1914-07, Standard Test Methods for Short-Term Indentation and Residual Indentation of Resilient Floor Covering.

.29 ASTM F2055-10, Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method.

.30 ASTM F2199-09, Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat.

.2 Underwriter Laboratories of Canada (ULC)

.1 CAN/ULC-S102.2-10, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies.

.3 National Fire Protection Association (NFPA)

.1 NFPA 253-2011, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source.

.2 NFPA 255-2006, Standard Method of Test of Surface Burning Characteristics of Building Materials.

.3 NFPA 258-2001, Standard Research Test Method for Determining Smoke Generation of Solid Materials.

.4 International Code Council/American National Standards Institute (ICC/ANSI)

.1 ICC/ANSI A117.1-2003, Accessible and Usable Buildings and Facilities.

.5 Builders Hardware Manufacturers Association (BHMA)

.1 ANSI/BHMA-A156.21-2009, Thresholds.

.6 CSA Group

.1 CSA B651-12, Accessible Design for the Built Environment.

.7 Scientific Certification Systems (SCS)

.1 SCS-EC10.2-2007, Indoor Air Quality Performance.

1.3 ACTION AND INFORMATIONAL

.1 Submit in accordance with Section 01 33 00.

SUBMITTALS

- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for flooring type, flooring adhesive, primer, sealer and include product characteristics, performance criteria, physical size, finish and limitations in accordance with section 01 33 00 - Submittal Procedures and Section 01 78 00 - Closeout Submittals.
 - .2 Submit 2 copies of WHMIS MSDS.
- .3 Samples:
 - .1 Submit samples in accordance with section 01 33 00
 - .2 Submit for review and acceptance of each unit.
 - .3 Samples will be returned for inclusion into work.
 - .4 Submit duplicate 300 x 300 mm sample pieces of sheet material.
 - .5 Submit 300 mm long base and transition edge strips.
 - .6 Submit listing of adhesives primers and coatings used in building, showing compliance with VOC and chemical component limits or restriction requirements.

1.3 CLOSEOUT
SUBMITTALS

- .1 Submit in accordance with Section 01 78 00
- .2 Operation and Maintenance Data: submit operation and maintenance data for resilient flooring for incorporation into manual.

1.4 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 00 10 and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect resilient flooring from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Waste management in accordance with Section 01 00 10.

1.5 SITE CONDITIONS

- .1 Ensure high ventilation rate, with maximum outside air, during installation.
 - .1 Vent directly to outside.
 - .2 Do not let contaminated air recirculate through a district or whole building air distribution system.
 - .3 Maintain extra ventilation for 1 month minimum after building occupation.

1.6 MAINTENANCE MATERIALS

- .2 Commence installation after dust generating activities are completed.
- .3 Permit wet work to dry prior to commencement of installation.
- .1 Provide 10% of rubber base in addition to the rubber base required to complete the present installation.
- .2 Provide 10% of rubber sheet flooring in addition to the rubber sheet flooring required to complete the present installation.
- .3 Provide 10% of static dissipative tile flooring in addition to the static dissipative tile flooring required to complete the present installation.
- .4 Deliver to job site in boxes clearly marked with information on contents and include address and date of installation.
- .5 Unload and store within building where directed by Departmental Representative.

1.8 ENVIRONMENTAL CHOICE PROGRAM

- .1 Provide adhesive products bearing the 'Ecologo' of the Environmental Choice Program, Department of the Environment, Canadian Environmental Protection Act, Environmental Choice Product Guidelines ECP/PCE-44-92 for Adhesives.
- .2 Submit one copy of the licensing criteria statements and the verification of compliance with Sections 3(a) and 3(b) of the ECP to the Departmental Representative.

1.9 AIR QUALITY

- .1 Select materials and off gas flooring products off site in accordance with CSA B651, including Annex A Environmental Considerations, A.5 Indoor Air Quality and Floor Score certified to SCS-EC10.2-2007.
- .2 No detectable odour after installation from flooring, adhesive or accessories.

PART 2 - PRODUCTS

2.1 RESILIENT SHEET FLOORING MATERIALS

2.2 RESILIENT TILE FLOORING MATERIALS

- .1 Static dissipative tile (SDT): to ASTM F1700, ASTM F066 Class 2 - through pattern in standard series as selected by Departmental Representative from manufacturer's standard pattern range.

Size: 3.2 mm X 305 x 305mm
Type A: smooth surface

- .2 Tested in accordance with ASTM F150:
 - .1 Static Propensity: less than 2 kV with conductive footwear per AATCC-134, at 40% relative humidity.
 - .2 Static decay: 5,000 volts to zero in less than 0.01 seconds per US Federal Test Method 101B, Method 4048 at 40% relative humidity.
 - .3 Electrical resistance: equal to or greater than 1 MOhms ($>10^9$ Ohms) & equal to or less than 1,000 MOhms ($>10^6$ Ohms).
 - .2 Flame spread: 19 to CAN/ULC-S102.2.
 - .3 Smoke developed: 38 to CAN/ULC-S102.2.
 - .4 Grounding: 13 mm wide copper foil tape

2.3 ACCESSORIES

- .1 Resilient base RB: to ASTM F1861 continuous, top set, complete with pre-moulded end stops and external corners:
 - .1 Type: TS rubber vulcanized thermoset rubber, 3.0 mm thick. Group 1 solid homogeneous
 - .2 Style: Traditional with toe
 - .3 Height: 100 mm.
 - .5 Colour: as selected by Departmental Representative from manufacturer's standard colour range.
- .2 Primers cement and adhesives: of types recommended by resilient flooring and resilient base manufacturer for specific material on applicable substrate. Below grade application. Primers cement and adhesives to be Ecologo certified.
 - .1 Static dissipative tile adhesives: water based VOC type recommended by flooring manufacturer.
 - .2 Primer, cement and seam adhesives: Low VOC in accordance with manufacturer's recommendations.
- .3 Self-leveling compound: modified cement based material forming a roller-caster-chair and moisture-resistant layer.
- .4 Resin welding rod: type recommended by flooring manufacturer.
- .5 Sub-floor filler: premixed latex modified cement mixed with water to produce cementitious paste.
- .6 Metal edge strips: extruded aluminum, smooth, mill finish with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.
- .7 Sealer and wax: Low VOC type recommended by resilient flooring material manufacturer for material type and location.
- .8 Reducing strip: same material as flooring.

- .9 Transition strip: same material as flooring

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Examine conditions, substrates and work to receive work of this Section, co-ordinate with Section 01 00 10.
- .2 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.
- .3 Refer to project specific asbestos containment report to determine if existing tile flooring contains asbestos.
- .4 Ensure concrete floors are clean and dry by using test methods recommended by flooring manufacturer.

3.2 PREPARATION

- .1 Prepare for installation in accordance with manufacturer's written recommendations.
- .2 Remove dust, old adhesive, paint, dirt, wax, sealer and foreign matter from existing surfaces.
- .4 Follow recommended asbestos abatement procedures for the removal, containment and air testing if any asbestos containing materials are identified in project specific report.
- .5 Ensure existing vinyl flooring is removed by trained personnel.
- .6 Remove existing adhesives to prevent residual bleeding through to new flooring or interfering with bonding of new adhesives.
- .7 Remove sub-floor ridges and bumps
- .8 Clean floor and apply sub floor filler to fill low spots, cracks, holes and other defects. Trowel and float to leave smooth flat hard surface to a tolerance of 1:500.

3.3 APPLICATION: FLOORING

- .1 Prohibit traffic until filler is completely cured and dry.
- .9 Prepare and seal porous and powdery concrete surfaces in accordance with flooring manufacturer's written instructions.
- .10 Test subfloor for moisture content in accordance with flooring manufacturer's instructions using the Vaprecision vapour emission test.
 - .1 Perform moisture condition test in each major area. A minimum of 1 test per 1000 sq. ft., prior to installation. Moisture condition shall not exceed the flooring manufacturer's instructions.
- .11 Do not proceed with work until results of moisture condition tests are acceptable.
- .12 Prime, seal concrete slab as recommended by resilient flooring manufacturer's written instructions.
- .1 Maintain room and material temperature at approximately 20°C for 3 days before laying, and minimum 2 days after laying.
- .2 Apply adhesive uniformly using recommended trowel. Do not spread more adhesive that can be covered by flooring before initial set takes place.
- .4 Heat weld seams of linoleum sheet flooring in accordance with manufacturer's written instructions.
- .5 Prepare floor and install flooring in accordance with flooring manufacturer's instructions.
- .6 Ground SDT in accordance with flooring manufacturer's written instructions.
- .7 Static dissipative tile (SDT) flooring:
 - .1 Lay flooring with joints parallel to building lines to produce symmetrical tile pattern.
 - .2 Border tiles: half tile width minimum.
- .8 Install flooring to square grid pattern with joints aligned.
- .9 Cut flooring neatly around fixed objects.
- .10 Continue flooring over areas which will be under built-in furniture.
- .11 Continue flooring through areas to receive movable type partitions without interrupting floor pattern.
- .12 Terminate resilient flooring at centreline of door in

openings where adjacent floor finish.

.13 Install metal edge strips at unprotected or exposed edges where flooring terminates.

3.4 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 using pre-moulded corner units for right angle external corners and 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.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11.
 - .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.
 - .1 Remove excess adhesive from floor, base and wall surfaces without damage.
 - .2 Clean, seal and wax floor and base surface to flooring manufacturer's printed instructions.
- .3 Construction Waste Management: in accordance with section 01 00 10,01 74 11

3.3 CLEANING AND WAXING

- .1 Clean, seal and wax to manufacturer's instructions.

3.7 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Protect new floors in accordance with manufacturer's printed instructions.
- .3 Repair damage to adjacent materials caused by resilient flooring installation.

3.8 SCHEDULES

- .1 Refer to new architectural construction floor plan floor location of SDT flooring.

PART 1 - GENERAL

1.1 Related Sections

- .1 The requirements of Division 01 form part of this section.
- .2 Section 09 21 99 - partitions for minor works. .
- .3 Section 09 91 23 - Interior Painting.
- .4 Section 09 51 99 - Acoustical ceilings for minor works.
- .5 Division 21 Fire Suppression
- .6 Division 23 Heating, Ventilation and Air Conditioning (HVAC)
- .7 Division 26 Electrical Fixtures

1.2 References

- .1 American Society for Testing and Materials (ASTM International)
 - .1 ASTM C423-09a, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - .4 ASTM E1264, Classification for Acoustical Ceiling Products.
 - .5 ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - .6 ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
 - .7 ASCE 7-10 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures
 - .8 International Code Council-Evaluation Services AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components
- .2 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
- .3 Underwriter Laboratories of Canada (ULC)
 - .1 CAN/ULC-S702-[09], Thermal Insulation, Mineral Fibre, for Buildings. .4 CISCA Ceiling Systems Handbook, for seismic restraint of ceiling grid.

1.3 Samples

- .1 Submit samples in accordance with Section 01 78 00.
- .2 Submit duplicate minimum 300 x 300mm sample of each type acoustical unit.

1.4 Mock-ups

- .1 Construct mock-up in accordance with Section 01 33 00.
- .2 Construct one representative mock-up of each type acoustical wall treatment system.

- .3 Construct 1 mock-up of each panel unit type minimum to indicate method of assembly, installation and fixing.
- .4 Construct mock-up where directed.
- .5 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with work.
- .6 When accepted, mock-up will demonstrate minimum standard for this work. Mock-up may remain as part of the finished work.

1.5 Environmental Requirements

- .1 Commence installation after building enclosed and dust generating activities are completed.
- .2 Permit wet work to dry prior to commencement of installation.
- .3 Maintain uniform minimum temperature of 15°C and relative humidity of 20- 40% prior to, during and after installation.

1.6 Waste Management

- .1 Construction Waste Management: in accordance with section 01 00 10,01 74 11

1.7 Extra Materials

- .1 Provide extra materials of acoustic units adhesive mounting clips and fasteners in accordance with this section
- .2 Provide 3 extra acoustical units for each acoustic unit and type required for project.
- .3 Extra materials to be from same production run as installed materials.
- .4 Clearly identify each package of acoustical units including colour and type, 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 Acoustical construction products must:

- .1 Not require being labelled as poisonous, corrosive, flammable or explosive under the Consumer Chemical and Container Regulations of the Hazardous Products Act.
 - .2 Be accompanied by detailed instructions for proper handling and installation so as to minimize health concerns.
- .2 Demountable Acoustic Ceiling Units: ASTM E1264, Classification for Acoustical Products.
- .1 Type-1 ACT-2.
 - .2 Material: Fiber Glass with scrim face and sides
 - .3 Pattern: Smooth Texture
 - .4 Flame spread rating: Class A of 25 or less in accordance with CAN/ULC-S102.
 - .5 Smoke developed 50 or less in accordance with CAN/ULC-S102.
 - .6 Noise Reduction Coefficient (NRC) designation of minimum .90
 - .7 Light Reflectance (LR) range of .90 to ASTM E1477.
 - .8 Rated sound absorption of 6.50 sabins tested in accordance with ASTM C423.
 - .9 Layout: Straight
 - .10 Edge type: square
 - .11 Colour: Custom
 - .12 Size: 255 x 2385 x 50 mm thick.
 - .13 Shape: Rectangular
 - .14 Suspension orientation: Vertical
 - .15 Metal support clips: roll formed galvanized steel to acoustic unit supplier's standard. Adjustable.
 - .16 Recycled content when calculated on a 12-month rolling average:
 - .2 Over 70% recycled material by weight of finished product if made from glass fibre or mineral composition.
- .3 Standard Acoustic wall panel Systems: ASTM E1264, Classification for Acoustical Ceiling Products
- .1 Type-1 'AWP-1'.
 - .2 Material: Fiber Glass
 - .3 Finish: Woven fabric
 - .2 Pattern/Colour: Blue Papier
 - .3 Flame spread rating: Class A of 25 or less in accordance with CAN/ULC-S102.
 - .5 Noise Reduction Coefficient (NRC) designation of minimum .80
 - .6 Sound transmission Class (STC) 43
 - .7 Edge type: half radius
 - .8 Size: 760 x 1830 x 25 mm thick.
 - .9 Shape: Rectangular
Orientation: Vertical
 - .10 Metal support clips: roll formed galvanized

- x clips and adhesive steel to acoustic unit supplier's standard.
- .11 Recycled content when calculated on a 12-month rolling average:
 - .1 Over 70% recycled material by weight of finished product if made from glass fiber or mineral composition.

- .4 Metal support clips for ceiling units ACT-2: roll formed galvanized steel to acoustic unit supplier's standard.
- .5 Metal support clips for wall units AWP-1: roll formed galvanized steel to acoustic unit supplier's standard.
- .6 Adhesive for wall units AWP-1: type to be low VOC recommended by acoustic unit manufacturer.
- .7 Staples, nails and screws: to CSA B111, non-corrosive finish, type recommended by acoustic unit manufacturer.
- .8 Select paints that provide reduced environmental impacts as described in section 09 91 23. Ensure that selected paint materials will not compromise the acoustical properties of wall treatments.

2.2 Fabrication

- .1 Demountable acoustic wall panel unit:
 - .1 Use concealed fasteners

PART 3 - EXECUTION

3.1 Installation

- .1 Ensure substrate surface is straight to tolerance of plus or minus 3 mm over 3000 mm.
- .2 Install acoustic units to clean, dry and firm substrate using adhesive screws and specified mounting hardware.
- .3 Install acoustic units plumb and aligned. Arrange units symmetrical on each wall as indicated on architectural drawings. Cut units to be at least 50 % of unit width.
- .4 Do not scribe acoustic units to fit adjacent work. Do not butt panels tight together.

3.2 Cleaning

- .1 Keep acoustic installation and all components clean. Remove blemishes immediately.

3.3 Protection

- .1 Use cardboard to protect finished acoustical wall treatment from damage.
- .2 Remove prior to substantial completion.

3.4 Schedules

- .1 Refer to architectural new construction floor plan and building sections for panel sizes and locations.

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- .1 Read and be governed by the conditions of the Contract and specifications of Division 01.
- .2 Section 07 92 00 joint sealing.
- .3 Section 08 11 13 - Steel Doors and Frames.
- .4 Section 09 21 99 - Partitions for Minor Works.
- .5 Section - 09 51 99 - Acoustical ceilings for minor works.
- .6 Section - 09 80 00 acoustic treatment
- .7 Division 21 Fire Suppression
- .8 Division 23 Heating, Ventilation and Air Conditioning (HVAC)
- .9 Division 26 Electrical Fixtures

1.2 REFERENCES

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .2 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - current edition.
 - .2 Maintenance Repainting Manual - current edition.
- .3 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1113-A2016, Architectural Coatings.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00, 01 78 00.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for paint and coating products and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS.

1.4 DELIVERY, STORAGE AND HANDLING

- .3 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate 200 x 300 mm sample panels of each paint with specified paint or coating in colours, gloss/sheen and textures required to MPI Painting Specification Manual standards.
- .4 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .5 Low-Emitting Materials:
 - .1 Submit listing of paints and coatings used in building, comply with VOC and chemical component limits or restriction requirements.
- .1 Deliver, store and handle materials in accordance with Section 01 00 10, 01 61 00 and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Provide and maintain dry, temperature controlled, secure storage.
 - .2 Store painting materials and supplies away from heat generating devices.
 - .3 Store materials and equipment in well ventilated area within temperature as recommended by manufacturer.
- .4 Fire Safety Requirements:
 - .1 Supply 1, 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.
- .5 Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 00 10 and Section 01 74 20

1.5 SITE CONDITIONS

- .1 Heating, Ventilation and Lighting:
 - .1 Ventilate enclosed spaces in accordance with Section 01 00 10, 01 74 11.
 - .2 Co-ordinate use of existing ventilation system with Departmental Representative and ensure its operation during and after application of paint as

required.

.3 Provide minimum lighting level of 323 Lux on surfaces to be painted.

.2 Temperature, Humidity and Substrate Moisture Content Levels:

.1 Apply paint finishes when ambient air and substrate temperatures at location of installation can be satisfactorily maintained during application and drying process, within MPI and paint manufacturer's prescribed limits.

.2 Test concrete, masonry and plaster surfaces for alkalinity as required.

.3 Apply paint to adequately prepared surfaces, when moisture content is below paint manufacturer's prescribed limits.

.3 Additional application requirements:

.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 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 Supply paint materials for paint systems from single manufacturer.

.2 Conform to latest MPI requirements for painting work including preparation and priming.

.3 Materials in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual "Approved Product" listing.

.1 Use MPI listed materials having minimum E2 rating where indoor air quality requirements exist.

.2 Primer: VOC limit [100] g/L maximum to GS-11 or SCAQMD Rule 1113 A2016.

.3 Paint: VOC limit 100 g/L maximum to GS-11 or SCAQMD Rule 1113 A2016.

.4 Colours:

.1 Submit proposed Colour Schedule to Departmental Representative for review.

.2 Base colour schedule on selection of 5 base colours and 3 accent colours.

- .5 Mixing and tinting:
- .1 Perform colour tinting operations prior to delivery of paint to site, in accordance with manufacturer's written recommendations. Obtain written approval from Departmental Representative for tinting of painting materials.
 - .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 written recommendations.
 - .4 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.
- .6 Gloss/sheen ratings:
- .1 Paint gloss is defined as sheen rating of applied paint, in accordance with following values:

Gloss Level-Category	Gloss @ 60 degrees	Sheen @ 85 degrees
Gloss Level 1 - Matte	Max. 5	Max. 10
Gloss Level 2 - Velvet	Max.10	10 to 35
Gloss Level 3 - Eggshell	10 to 25	10 to 35
Gloss Level 4 - Satin	20 to 35	min. 35
Gloss Level 5 - Semi-Gloss	35 to 70	
Gloss Level 6 - Gloss	70 to 85	
Gloss Level 7 - <u>High Gloss</u>	More than 85	
 - .2 Gloss level ratings of painted surfaces as indicated.
 - .3 Match existing base building Gloss level ratings of painted surfaces.
- .7 Interior painting:
- .1 Galvanized Metal: high contact/high traffic areas (doors, frames, railings and handrails, etc.)or low traffic area (overhead decking, pipes,

- ducts ect.
 - .1 Cementitious Primer. Touch up primer used same primer as fabricator.
 - .2 INT 5.3C - Finish. Alkyd, match base building existing gloss level finish.
- .2 Drywall, "sheet rock" type material, etc.
 - .1 INT 9.2B - Primer. Low permeability, Latex, primer sealer. Low odor, low VOC.
 - .2 INT 9.2B - Latex Finish. 100% Acrylic. match base building existing gloss level finish. low odour/low VOC.
- .3 INT 5.3 Structural Steel and Metal Fabrications: columns, beams, joists and miscellaneous metal.(new steel lintels)
 - .1 INT 5.1S Institutional low odor low VOC - rust inhibitive acrylic metal primer.
 - .2 INT 5.1B W.B. Light Industrial Coating, low VOC - Acrylic low lustre gloss enamel
- .8 Interior re-painting:
 - .1 Galvanized Metal: high contact/high traffic areas (doors, frames, railings and handrails, etc.).
 - .1 RIN 5.3C - Alkyd, match base building existing gloss level.
 - .2 Plaster and Gypsum Board: gypsum wallboard, drywall, "sheet rock" type material, etc.
 - .1 RIN 9.2B - Primer. Low permeability, Latex, primer sealer match base building existing gloss level.(for existing unpainted drywall above and below ceilings) low odour/low VOC.
 - .2 RIN 9.2B - Latex Finish. 100% Acrylic. match base building existing gloss level finish. low odour/low VOC.
 - .3 RIN 6.8: Plastic Existing: vinyl covered gypsum panels, type material, etc.)
 - .1 RIN 6.8G - High Performance Latex, match base building existing gloss level.
 - .4 RIN 3.1: Concrete Vertical Surfaces (Used for localized areas of exposed/unfinished concrete for above or below new ceiling work.)
 - .1 RIN 3.1A - Latex, match base building existing gloss level.
 - .5 RIN 4.2: Concrete Masonry Units: (Concrete block for any localized areas of exposed/unfinished concrete masonry surfaces above or below ceiling.)

- .1 RIN 4.2A - Block Filler, primer sealer. Low odor, low VOC.
- .2 RIN 4.2A - Latex Finish. 100% Acrylic. match base building existing gloss level finish. Low odour/low VOC.

PART 3 - EXECUTION

3.1 GENERAL

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheets.
- .2 Perform preparation and operations for interior painting in accordance with MPI - Architectural Painting Specifications Manual and MPI - Maintenance Repainting Manual except where specified otherwise.

3.2 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.

3.3 PREPARATION

- .1 Protection of in-place conditions:
 - .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.
- .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.

.4 Clean and prepare surfaces in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual specific requirements and coating manufacturer's recommendations.

.5 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 pretreatment as soon as possible after cleaning and before deterioration occurs.

.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.

.8 Touch up of shop primers with primer as specified.

3.4 APPLICATION

.1 Paint only after prepared surfaces have been accepted by Departmental Representative.

.2 Use method of application approved by Departmental Representative.

.1 Conform to manufacturer's application recommendations.

.3 Apply coats of paint in continuous film of uniform thickness.

.1 Repaint thin spots or bare areas before next coat of paint is applied.

.2 Apply 1 coat primer, 2 coats finish or as indicated in manufacturer's instructions for unfinished surfaces

.4 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.

.5 Sand and dust between coats to remove visible defects.

.6 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.

.1 Paint conduits, piping, hangers, ductwork and other mechanical and electrical equipment exposed in finished areas, to match adjacent surfaces, except as indicated.

- .2 Do not paint over nameplates.
- .3 Keep sprinkler heads free of paint.
- .4 Paint fire protection piping red.
- .5 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
- .6 Paint natural gas piping yellow.
- .7 Paint both sides and edges of backboards for telephone and electrical equipment before installation.
 - .1 Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11.
 - .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.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 20
- .4 Place paint stains primer defined as hazardous or toxic waste, including tubes and containers, in containers or areas designated for hazardous waste.