

## **PART 1 GENERAL**

### **1.1 REFERENCES**

- .1 ASTM International (ASTM)
  - .1 ASTM D16-12, Standard Terminology for Paint, Related Coatings, Materials, and Applications.
  - .2 ASTM E84-14, Standard Test Method for Surface Burning Characteristics of Building Materials.
- .2 Department of Justice Canada (Jus)
  - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
- .3 Environmental Protection Agency (EPA)
  - .1 EPA Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 - 1995, (for Surface Coatings).
- .4 International Concrete Repair Institute (ICRI)
  - .1 Guideline 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.
- .5 Master Painters Institute (MPI)
  - .1 MPI Architectural Painting Specifications Manual, 2012.
- .6 South Coast Air Quality Management District (SCAQMD), California State
  - .1 SCAQMD Rule 1113-04, Architectural Coatings.
- .7 Society for Protective Coatings (SSPC)
  - .1 SSPC Painting Manual, 2011 Edition.

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Division 01: Submittal Procedures.
- .2 Product Data:
  - .1 Submit product data and instructions for each paint and coating product to be used.
  - .2 Submit full records of all products used. List each product in relation to finish formula and include the following:
    - .1 Finish designation (e.g., finish schedule on Drawings).
    - .2 Product type and use.
    - .3 Manufacturer's product number.
    - .4 Colour numbers.
    - .5 Manufacturer's Material Safety Data Sheets (MSDS).
    - .6 Maximum VOC classification.
  - .3 Submit manufacturer's installation and application instructions for each product specified.
  - .4 At completion of the project submit 4 copies of a Maintenance Manual. Each one is to include:
    - .1 Cleaning instructions.

- .2 Product list.
  - .3 Colour schedule.
  - .4 Product technical data.
  - .5 Material Safety Data Sheets.
  - .6 Colour samples
- .3 Samples:
  - .1 Confirm colours prior to ordering materials. Submit samples for initial selection before mixing colours for approval by Departmental Representative.
  - .2 Submit full range colour sample chips to indicate where colour availability is restricted.
  - .3 Submit duplicate 200 x 300 mm sample panels of each paint, stain, clear coating, and special finish with specified paint or coating in colours, gloss/sheen and textures required to MPI Architectural Painting Specification Manual standards submitted on following substrate materials:
    - .1 3 mm plate steel for finishes over metal surfaces.
    - .2 13 mm birch plywood for finishes over wood surfaces.
    - .3 50 mm concrete block for finishes over concrete or concrete masonry surfaces.
    - .4 13 mm gypsum board for finishes over gypsum board and other smooth surfaces.
    - .5 10 mm plywood for finishes over wood surfaces.
  - .4 Retain reviewed samples on-site to demonstrate acceptable standard of quality for appropriate on-site surface.
- .4 Closeout Submittals: submit maintenance data for incorporation into Operations and Maintenance Manual, and include following:
  - .1 Product name, type and use.
  - .2 Manufacturer's product number.
  - .3 Colour numbers.
  - .4 MPI Environmentally Friendly classification system rating.

### **1.3 QUALITY ASSURANCE**

- .1 Contractor: minimum of five years proven satisfactory experience. Provide list of last three comparable jobs including, job name and location, specifying authority, and project manager.
- .2 Journeymen: qualified journeymen who have "Tradesman Qualification Certificate of Proficiency" engaged in painting work.
- .3 Apprentices: working under direct supervision of qualified trades person in accordance with trade regulations.

### **1.4 MAINTENANCE MATERIALS**

- .1 Extra Materials:
  - .1 Deliver extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels.

- .2 Quantity: provide one - four 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 Owner's Project Manager requirements for delivery and storage of extra materials.

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

- .1 Packing, Shipping, Handling and Unloading:
  - .1 Pack, ship, handle and unload materials in accordance with General Requirements of the Contract 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 degrees C to 30 degrees 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.

## **1.6 SITE CONDITIONS**

- .1 Heating, Ventilation and Lighting:
  - .1 Ventilate enclosed spaces.
  - .2 Provide heating facilities to maintain ambient air and substrate temperatures above 10 degrees 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 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.
- .5 Provide minimum lighting level of 270 Lux on surfaces to be painted.
- .2 Temperature, Humidity and Substrate Moisture Content Levels:
  - .1 Unless pre-approved written approval by Departmental Representative and product manufacturer, perform no painting when:
    - .1 Ambient air and substrate temperatures are below 10 degrees C.
    - .2 Substrate temperature is above 32 degrees 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 The relative humidity is under 85% or when the dew point is more than 3 degrees C variance between the air/surface temperature. Paint should not be applied if the dew point is less than 3 degrees C below the ambient or surface temperature. Use sling psychrometer to establish the relative humidity before beginning paint work.
    - .5 Rain or snow are forecast to occur before paint has thoroughly cured or when it is foggy, misty, raining or snowing at site.
    - .6 Ensure that 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:
    - .1 12% for concrete and masonry. Allow new concrete and masonry to cure minimum of 28 days.
    - .2 15% for wood.
    - .3 12% for plaster and gypsum board.
  - .3 Test for moisture using calibrated electronic Moisture Meter. Test concrete floors for moisture using "cover patch test".
  - .4 Test concrete, masonry and plaster surfaces for alkalinity as required.
- .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.

## **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.
- .3 Limit paint materials to products with VOC range <221 g/l (E3).

### **2.2 COLOURS**

- .1 Refer to Drawings and as determined by Departmental Representative. Confirm colours prior to ordering materials. Submit samples for initial selection for approval by Departmental Representative before mixing colours.
- .2 Colour Schedule will be based upon selection of no more than 6-colours for entire project.
- .3 Selection of colours from manufacturer's full range of colours.
- .4 Where specific products are available in restricted range of colours, selection based on limited range
- .5 Minimum number of coats shall be three: primer and two topcoats, minimum, plus additional coats as required to achieve an opaque, uniform colour.
- .6 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 Unless otherwise specified or pre-approved, all paint shall be ready-mixed and pre-tinted. Re-mix all paint in contained prior to and during application to ensure break-up of lumps, completed dispersion of settled pigment, and colour and gloss uniformity.
- .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.

### **2.4 GLOSS/SHEEN RATINGS**

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

<b>Description / Gloss Level</b>	<b>Gloss @ 60 degrees</b>	<b>Sheen @ 85 degrees</b>
G1 - Matte Finish (flat)	Max. 5	Max. 10
G2 - Velvet-Like Finish	Max.10	10 to 35
G3 - Eggshell Finish	10 to 25	10 to 35
G4 - Satin-Like Finish	20 to 35	min. 35
G5 - Traditional Semi-Gloss Finish	35 to 70	
G6 - Traditional Gloss	70 to 85	
G7 - High Gloss Finish	More than 85	

- .2 Gloss level ratings of painted surfaces as indicated or otherwise specified.

## **2.5 EXTERIOR PAINTING**

- .1 All exterior painting work to be in accordance with MPI Premium Grade finish requirements. Refer to Schedules for instructions.
- .2 Structural Steel and Metal Fabrications: columns, beams, joists and miscellaneous metal:
  - .1 EXT 5.1D - Alkyd semi-gloss finish.
- .3 Steel - High Heat: heat exchangers, breeching, pipes, flues, stacks, etc., with temperature range as noted:
  - .1 EXT 5.2A - Heat-resistant enamel finish, maximum degrees C.
- .4 Galvanized Metal: non-chromate passivated; high contact/high traffic areas (doors, frames, railings and handrails, etc.):
  - .1 EXT 5.3D - Polyurethane, pigmented finish (over vinyl wash and epoxy primer).

## **2.6 INTERIOR PAINTING**

- .1 Refer to latest edition of MPI Guide Specification. Repainting work shall comply with MPI Maintenance Repainting Manual.
- .2 Paint VOC range in all instances shall be <221 g/l (EPA Method 24).
- .3 Unless otherwise specified, all interior painting work shall be in accordance with MPI Premium Grade (minimum 3 coats) finish requirements.
- .4 Concrete Block:
  - .1 INT 4.2D - High performance architectural latex G4 finish.
  - .2 Repainting: RIN 4.2K - High performance architectural latex G4 finish.
- .5 Structural Steel and Metal Fabrications:
  - .1 INT 5.1R - High performance architectural latex, G5 finish.
  - .2 Repainting: RIN 5.1R - High performance architectural latex, G5 finish.
- .6 Galvanized metal:
  - .1 INT 5.3M - High performance architectural latex, G5 finish.
  - .2 Repainting: RIN 5.3J - High performance architectural latex, G5 finish.
- .7 Plaster and gypsum board:
  - .1 INT 9.2B - High performance architectural latex, G4 finish.
  - .2 Repainting: RIN 9.2B - High performance architectural latex, G4 finish.

## **PART 3 EXECUTION**

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

- .1 Compliance: comply with manufacturers' printed recommendations and specifications, including product technical bulletins, handling, storage, preparation and application instructions, and technical datasheets.

### 3.2 GENERAL

- .1 Perform preparation and operations for painting in accordance with MPI - Architectural Painting Specifications Manual, Premium Grade.
- .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 Metal: 0%.
  - .2 Stucco, plaster and gypsum board: 12%.
  - .3 Concrete: 12%.
  - .4 Brickwork: 12%.
  - .5 Wood: 15%.
- .4 Prior to commencement of repainting work, thoroughly examine (and test as required) all interior conditions and surfaces scheduled to be repainted and report in writing to the Departmental Representative any conditions or surfaces that adversely affect work of this section.
- .5 The degree of surface deterioration (DSD) shall be assessed as follows:

Condition	Description
DSD-0	Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
DSD-1	Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).
DSD-2	Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
DSD-3	Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
DSD-4	Substrate Damage (repair or replacement of surface required by others).

- .6 Correct defects DSD-0 through DSD-4 as required, ready to be painted. Coordinate with other trades as needed.

### 3.4 PREPARATION – REPAINTING

- .1 Prepare all interior surfaces for repainting in accordance with MPI Maintenance Repainting Manual requirements.
- .2 Sand, clean, dry, etch, neutralize and/or test all surfaces under adequate illumination, ventilation and temperature requirements.

- .3 Remove and securely store all miscellaneous hardware and surface fittings and fastenings (e.g. electrical plates, mechanical louvers, door and window hardware (e.g. hinges, knobs, locks, trim, frame stops), removable labels, washroom accessories, light fixture trim, etc. from wall and ceiling surfaces, doors and frames, prior to repainting and replace upon completion. Carefully clean and replace all such items upon completion of repainting work in each area. Do not use solvent or reactive cleaning agents on items that will mar or remove finishes (e.g. lacquer finishes). Doors shall be removed before repainting to paint bottom and top edges and then re-hung.
- .4 Protect all adjacent interior surfaces and areas, including rating and instruction labels on doors, frames, equipment, piping, etc., from repainting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.

### 3.5 PREPARATION – NEW WORK

- .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 passing pedestrians, building occupants, and general public in and about the building.
- .2 Surface Preparation:
  - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, 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.
- .3 Concrete floor preparation:
  - .1 Mechanically roughen surface to CSP 2-4 in accordance with Guideline 310.2R-2013, and then remove all dust and debris.
  - .2 Refer to Section 03 01 30.71 – Concrete Repair.
- .4 Clean and prepare surfaces in accordance with MPI - Architectural Painting Specification Manual requirements and coating manufacturer's recommendations. Refer to MPI Manual in regard to specific requirements and as follows:
  - .1 Remove dust, dirt, and other surface debris by vacuuming, wiping with dry, clean clothes or compressed air.
  - .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 allow 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.
- .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 pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .6 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.
  - .3 Tint filler to match stains for stained woodwork.
- .7 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.
- .8 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 brushing with clean brushes or vacuum cleaning.
- .9 Prepare existing brick surfaces to be painted to firm substrate by removing dirt, dust, loose, un-adhered and flaking paint, oil, grease and other foreign substances in accordance with MPI requirements. Remove all products from surfaces, pockets, and corners to be painted by brushing with clean brushes or vacuum cleaning.
- .10 Touch up of shop primers with primer as specified.
- .11 Do not apply paint until prepared surfaces have been accepted by Departmental Representative.

### 3.6 APPLICATION

- .1 Repainting work shall comply with MPI Maintenance Repainting Manual.
- .2 New work shall comply with MPI Architectural Painting Manual.
- .3 Method of application shall be as approved by Departmental Representative. Apply paint by brush, roller, air sprayer or airless sprayer. Conform to manufacturer's application instructions unless specified otherwise.
- .4 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.
  - .3 Paint surfaces and corners not accessible to brush using spray, daubers, 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, brush marks from finished work, and repaint.
- .5 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 which are not adequately painted by spray.
- .6 Use dipping, sheepskins or daubers only when no other method is practical in places of difficult access.
- .7 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .8 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum period as recommended by manufacturer.
- .9 Sand and dust between each coat to provide an anchor for next coat and to remove defects in previous coat (runs, sags, etc.) visible from a distance up to 1000 mm (39").
- .10 To avoid air entrapment in applied coats, apply materials in accordance with manufacturer's spread rates and application requirements.
- .11 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.
- .12 Finish inside of cupboards and cabinets as specified for outside surfaces.
- .13 Finish closets and alcoves as specified for adjoining rooms.
- .14 Finish top, bottom, edges, and cut-outs of doors after fitting as specified for door surfaces.

### 3.7

#### **MECHANICAL/ELECTRICAL EQUIPMENT**

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

- .7 Paint inside of ductwork where visible behind grilles, registers and diffusers with primer and one coat of matt black paint.
- .8 Paint fire protection piping red.
- .9 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
- .10 Paint natural gas piping yellow.
- .11 Paint both sides and edges of backboards for telephone and electrical equipment before installation. Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.
- .12 Do not paint interior transformers and substation equipment.

### 3.8 FIELD QUALITY CONTROL

- .1 Where "special" painting, coating or decorating system applications (i.e. elastomeric coatings) or non-MPI listed products or systems are to be used, paint or coating manufacturer shall provide as part of this work, certification of surfaces and conditions for specific paint or coating system application as well as on site supervision, inspection and approval of their paint or coating system application as required at no additional cost to Owner
- .2 Advise Departmental Representative when surfaces and applied coating is ready for inspection. Do not proceed with subsequent coats until previous coat has been approved.
- .3 Retain purchase orders, invoices and other documents to prove conformance with noted MPI requirements when requested by Departmental Representative.
- .4 Painted interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Departmental Representative:
  - .1 brush / roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
  - .2 evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
  - .3 damage due to touching before paint is sufficiently dry or any other contributory cause.
  - .4 damage due to application on moist surfaces or caused by inadequate protection from the weather.
  - .5 damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).
- .5 Painted interior surfaces shall be considered unacceptable if any of the following are evident under final lighting source conditions:
  - .1 visible defects are evident on vertical surfaces when viewed at 90 degrees to the surface from a distance of 1000 mm (39").
  - .2 visible defects are evident on horizontal surfaces when viewed at 45 degrees to the surface from a distance of 1000 mm (39").
  - .3 visible defects are evident on ceiling surfaces when viewed at 45 degrees to the surface.
  - .4 when the final coat on any surface exhibits a lack of uniformity of sheen across full surface area.

- .6 Painted surfaces rejected by the Departmental Representative shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas or areas without sufficient dry film thickness of paint shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.

### **3.9 CLEANING**

- .1 Progress Cleaning: clean in accordance with Division 01: Cleaning. Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Division 01: Cleaning. Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .3 Manage and dispose of demolition and construction waste materials in accordance with Division 01: Construction/Demolition Waste Management and Disposal.

### **3.10 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by Work of this Section.

**END OF SECTION**