

**PART 1 - GENERAL**

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| 1.1 <u>RELATED SECTIONS</u>                       | .1 Section 013300 - Submittal Procedures<br>.2 Section 014500 - Quality Control<br>.3 Section 016100 - Common Product Requirements<br>.4 Section 017800 - Closeout Submittals.  |
| 1.2 <u>BASIS OF PAYMENT</u>                       | .1 No measurement for payment will be made under this section. Include costs where required and include in lump sum price bid. Costs shall include all labour, materials and equipment.   |
| 1.3 <u>REFERENCES</u>                             | .1 Architectural Painting Specifications Manual by the Master Painters Institute (MPI)<br>.2 Systems and Specifications Manual, SSPC Painting Manual, Volume Two, Society for Protective Coatings (SSPC).<br>.2 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).<br>.3 National Fire Code of Canada.  |
| 1.4 <u>QUALITY ASSURANCE</u>                      | .1 Conform to latest MPI requirements for exterior painting work including cleaning, preparation and priming.<br>.2 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) shall be in accordance with the latest edition of the MPI Approved Product List and shall be from a single manufacturer for each system used.<br>.3 Paint materials such as linseed oil, shellac, turpentine, etc. shall be the highest quality product of an approved manufacturer listed in MPI Painting Specification Manual and shall be compatible with other coating materials as required.<br>.4 Retain purchase orders, invoices and other documents to prove conformance with noted MPI requirements when requested by Departmental Representative<br>.5 Standard of Acceptance: When viewed using natural prevailing sunlight at peak period of the day (mid-day) on surface viewed, surfaces shall indicate the following:<br>.1 Walls: No defects visible from a distance of 1000 mm at 90° to surface.<br>.2 Final coat to exhibit uniformity of colour and sheen across full surface area |
| 1.5 <u>ENVIRONMENTAL PERFORMANCE REQUIREMENTS</u> | .1 Provide paint products meeting MPI "Environmentally Friendly" ratings based on VOC (EPA Method 24) content levels.   |

1.6 SUBMITTALS

- .1 Submittals shall be in accordance with the requirements of Section 013300 - Submittal Procedures.
- .2 Submit product data and manufacturer's installation/application instructions for paints and coating products to be used.
- .3 Upon completion, submit records of products used. List products in relation to finish system and include the following:
  - .1 Product name, type and use (i.e. materials and location).
  - .2 Manufacturer's product number.
  - .3 Colour code numbers.
  - .4 MPI Environmentally Friendly classification system rating.
  - .5 Manufacturer's Material Safety Data Sheets.

1.7 QUALITY CONTROL

- .1 Provide a mock-up in accordance with requirements of Section 014500 - Quality Control to Departmental Representative.
- .2 Prepare and paint mock-up designated exterior surface or item to requirements specified herein, with specified paint or coating showing selected colours, gloss/sheen, textures and workmanship to MPI Painting Specification Manual standards for review and approval.
- .3 Submit two samples of the paint applied on 600mm x 600mm composite panels of the same type as the ones used on the composite screen. The samples must show both faces of the panels and all edges painted.
- .4 When approved, painted surface and/or item shall become acceptable standard of finish quality and workmanship for similar on-site exterior painting work.

1.8 DELIVERY, HANDLING AND STORAGE

- .1 Deliver and store materials in original containers, sealed, with labels intact.
- .2 Labels shall clearly indicate:
  - .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 Observe manufacturer's recommendations for storage and handling.
- .5 Store materials and equipment in a secure, dry, well-ventilated area with temperature range between 7° C to 30° C. Store materials and supplies away from heat generating devices and sensitive products above minimum temperature as recommended by manufacturer.

- .6 Keep areas used for storage, cleaning and preparation, clean and orderly to approval of Departmental Representative. Upon completion of operations, return areas to clean condition to approval of Departmental Representative.
- .7 Remove paint materials from storage in quantities required for same day use.
- .8 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.
- .9 Fire Safety Requirements:
  - .1 Provide one 9 kg 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 the National Fire Code of Canada.

1.9 SITE REQUIREMENTS

- .1 Temperature, Humidity and Substrate Moisture Content Levels:
  - .1 Do not perform painting work when:
    - .1 Ambient air and substrate temperatures are below 10° C.
    - .2 Substrate temperature is over 32° C unless paint is specifically formulated for application at high temperatures.
    - .3 Substrate and ambient air temperatures are expected to fall outside MPI paint manufacturer's prescribed limits.
    - .4 Relative humidity is above 85% or when dew point is less than 3° C variance between air/surface temperature.
    - .5 Rain or snow is forecast to occur before paint has thoroughly cured.
    - .6 It is foggy, misty, raining or snowing at site.
- .2 Application Requirements:
  - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind conditions are such that airborne particles will affect quality of finished surface.
  - .2 Apply paint when previous coat of paint is dry or adequately cured, unless otherwise pre-approved by specific coating manufacturer.
  - .3 Apply paint finishes when conditions forecast for entire period of application fall within manufacturer's recommendations.
  - .4 Do not apply paint when:
    - .1 Temperature is expected to drop below

- 10° C before paint has thoroughly cured.
- .2 Substrate and ambient air temperatures are expected to fall outside paint manufacturer's limits.
- .3 Surface to be painted is wet, damp or frosted.
- .5 Provide and maintain cover when paint must be applied in damp or cold weather. Heat substrates and surrounding air to comply with temperature and humidity conditions specified by manufacturer. Protect until paint is dry or until weather conditions are suitable.
- .6 Schedule painting operations such that surfaces exposed to direct, intense sunlight are scheduled for completion during early morning.
- .7 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and paint.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- .1 Paint materials listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project.
- .2 Paints, coatings, thinners, solvents, cleaners and other fluids used in painting, shall:
  - .1 Be manufactured without compounds which contribute to ozone depletion in the upper atmosphere.
  - .2 Be manufactured without compounds which contribute to smog in the lower atmosphere.
  - .3 Be manufactured in a manner where matter generating a 'Biochemical Oxygen Demand' (BOD) in undiluted production plant effluent discharged to a natural watercourse or a sewage treatment facility lacking secondary treatment does not exceed 15 mg/L.
  - .4 Be manufactured in a manner where the total suspended solids (TSS) content in undiluted production plant effluent discharged to a natural watercourse or a sewage treatment facility lacking secondary treatment does not exceed 15 mg/L.
- .3 Paints and coatings must be manufactured and transported in a manner that steps of processes, including disposal of waste products arising therefrom, will meet requirements of applicable governmental acts, by-laws and regulations including, for facilities located in Canada, Fisheries Act and Canadian Environmental Protection Act (CEPA).
- .4 Paints and coatings must not be formulated or manufactured with formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.

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| 2.1 <u>COLOR</u>                     | .1 | Color must correspond to prescriptions on drawings and match the existing color of the temporary washrooms.  |
| 2.1 <u>EXTERIOR PAINTING SYSTEMS</u> | .1 | High quality acrylic latex paint. One coat of a compatible primer is required for all cut portions of the composite panel and the back side of the panels. The front side is pre-primed. 2 coats of the finishing coat must be applied on all faces and edges of the panels. |

**PART 3 - EXECUTION**

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| 3.1 <u>GENERAL</u>             | .1 | Perform preparation and operations for exterior painting in accordance with MPI Painting Specifications Manual requirements except where specified otherwise.   |
|                                | .2 | Apply paint materials in accordance with paint manufacturer's written application instructions.   |
| 3.2 <u>EXISTING CONDITIONS</u> | .1 | Prior to commencing work, thoroughly examine site conditions and existing exterior substrates to be painted and report in writing to Departmental Representative damages, defects, unsatisfactory or unfavorable conditions of surfaces that will adversely affect this work. |
|                                | .2 | No painting work shall commence until such adverse conditions and defects have been corrected and surfaces and conditions are acceptable.   |
| 3.3 <u>PROTECTION</u>          | .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 such surfaces as directed by Departmental Representative.                                 |
|                                | .2 | Protect factory finished products and equipment.  |
|                                | .3 | Protect general public and building occupants in and about the building.  |
|                                | .4 | Removal surface hardware on doors, and surface mounted equipment, fittings and fastenings shall be done prior to undertaking painting operations by Contractor. Items shall be securely stored and re-installed after painting is completed by Contractor.                    |
|                                | .5 | As painting operations progress, place "WET PAINT" signs in pedestrian and vehicle traffic areas to approval of Departmental Representative.  |

3.4 CLEANING AND PREPARATION

- .1 Clean and prepare exterior surfaces to be painted in accordance with MPI Painting Specifications Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
  - .1 Remove dust, dirt, and surface debris by wiping with dry, clean cloths.
  - .2 Wash surfaces with a biodegradable detergent and clean warm water using a stiff bristle brush to remove dirt, oil and surface contaminants.
  - .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
  - .4 Use trigger operated spray nozzles for water hoses.
  - .5 Allow surfaces to drain completely and to dry thoroughly.
  - .6 Use water-based cleaners in place of organic solvents where surfaces will be repainted using water based paints.
  - .7 Many water-based paints cannot be removed with water once dried. However, minimize the use of kerosene or such organic solvents to clean up water-based paints.
- .2 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before priming and between applications of remaining coats. Touch-up, spot prime, and apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .3 Do not apply paint until prepared surfaces have been accepted by Departmental Representative.

3.5 APPLICATION

- .1 Apply paint by method that is best suited for substrate being painted. Conform to manufacturer's application instructions unless specified otherwise. In each case the method of application shall be as pre-approved by Departmental Representative before commencing work.
- .2 Apply paint coats in a continuous manner and allow surfaces to dry and properly cure between coats for minimum time period as recommended by manufacturer. Minimum dry film thickness of coats shall not be less than that recommended by the manufacturer. Repaint thin spots or bare areas before next coat of paint is applied.

3.6 CLEAN-UP

- .1 Remove paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .2 Keep work area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.
- .3 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .4 Clean equipment and dispose of wash water used for water

borne materials, solvents used for oil based materials as well as cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, paint removers / strippers in accordance with the safety requirements of authorities having jurisdiction and as noted herein.

- .5 Painting equipment shall be cleaned in leak-proof containers that will permit particulate matter to settle out and be collected. Sediment remaining from cleaning operations shall be disposed of in a manner acceptable to authorities having jurisdiction.

3.7 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 affected exposed surfaces. 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 \*\*\***