

## **1 GENERAL**

### **1.1 REFERENCES**

- .1 Definitions:
  - .1 Exterior surfaces: refers to surfaces of a historic structure which is exposed to exterior weather including wet conditions of rain, sleet or snow, high temperatures and sunlight as well as temperatures below the freezing point.
- .2 Reference Standards:
  - .1 Canada Green Building Council (CaGBC)
    - .1 LEED Canada-NC Version 1.0-[2004], LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations (including Addendum [2007]).
    - .2 LEED Canada-CI Version 1.0-[2007], LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors.
    - .3 LEED Canada 2009 for Design and Construction-[2010], LEED Canada 2009 for Design and Construction Leadership in Energy and Environmental Design Green Building Rating System Reference Guide.
    - .4 LEED Canada for Existing Buildings, Operations and Maintenance-[2009], LEED Canada 2009 Leadership In Energy and Environmental Design Green Building Rating System Reference Guide.
  - .2 Environmental Protection Agency (EPA)
    - .1 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings).
  - .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
    - .1 Material Safety Data Sheets (MSDS).
  - .4 Master Painters Institute (MPI)
    - .1 Maintenance Repainting Manual [current edition], Master Painters Institute (MPI) including Identifiers, Evaluation, Systems, Preparation and Approved Products List.
  - .5 National Fire Code of Canada, [2010].
  - .6 United States Federal Standards, issued by General Services Administration.
    - .1 Federal Standard 595C - Colors Used in Government Procurement.

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

- .1 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for paints and coating products and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29 - Health and Safety Requirements.
- .2 Samples:
  - .1 Submit full range of coating colour sample matches for review and selection.
  - .2 Submit 2 one-litre samples of each paint delivered to site:
    - .1 1 sample from manufacturer's containers; and,
    - .2 1 sample from painter's pot.
    - .3 Take samples in presence of Departmental Representative.

### **1.3 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Contractor: When requested, provide list of last 3 comparable jobs including, job name and location, specifying authority, and project manager.
  - .2 Qualified journeypersons: as identified by local jurisdiction.
  - .3 Apprentices: work under direct supervision of qualified journeyperson in accordance with applicable trade regulations.
  
- .2 Mock-ups:
  - .1 Construct mock-ups for Department Representative's approval with Section [01 45 00 - Quality Control].
  - .2 Allow 48 hours for inspection of mock-up by Departmental Representative before proceeding with work.
  - .2 When accepted, mock-up demonstrates minimum standard for this work. Mock-up may remain as part of finished work.

### **1.4 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance 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.
  - .1 Labels: to indicate:
    - .1 Type of paint or coating.
    - .2 Compliance with applicable standard.
    - .3 Colour number in accordance with established colour schedule.
  
- .3 Storage and Handling Requirements:
  - .1 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect paints and coatings.
  - .3 Keep areas for storage, cleaning and preparation, clean and orderly.
  - .4 Remove paint materials from storage in quantities required for same day use.
  - .5 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.
  - .6 Store materials and equipment within temperature range between 7 degrees C to 30 degrees C.
  - .7 Store materials and supplies away from heat generating devices and sensitive materials above minimum temperature as recommended by manufacturer.
  - .8 Replace defective or damaged materials with new.
  
- .4 Fire Safety Requirements:
  - .1 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site daily.
  - .2 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

### **1.5 AMBIENT CONDITIONS**

- .1 Substrate and ambient temperatures: in accordance with limits prescribed by manufacturer.
  
- .2 Apply paint finish in areas where:
  - .1 Dust is no longer being generated by related construction operations.
  - .2 Wind conditions are such that airborne particles will not affect quality of finished surface.
  
- .3 Substrate and ambient air temperature, humidity and moisture content levels:

- .1 Do not perform repainting work when:
  - .1 Substrate and ambient air temperatures are expected to fall outside [paint manufacturer's prescribed limits.
  - .2 Substrate is wet, damp or frosted.
  - .3 Maximum moisture content of substrate exceeds: 15% for wood.
  - .4 Precipitation is forecast to occur before paint has thoroughly cured.
  - .5 It is foggy, misty, raining, icing or snowing at site.
- .2 Damp and cold weather conditions:
  - .1 Provide and maintain cover for paint finish.
  - .2 Heat substrates and surrounding air to comply with temperature and humidity conditions required.
  - .3 Protect until paint is dry.
  - .4 Protect until weather conditions are suitable.
- .4 Perform work on surfaces exposed to direct, intense sunlight in early morning.

## **PART 2 - PRODUCTS**

### **2.02 EXTERIOR PAINTING SYSTEMS**

- .1 Opaque Weatherproofing All-In-One Wood Stain/Paint & Sealer, the colour will match to existing - exterior wooden door and window frames and smooth fascias).

### **2.09 ACCESSORIES**

- .1 Obtain approval of Departmental Representative for use of power tools.
- .2 Use tools that do not damage adjacent materials.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for painting 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.

### **3.2 PREPARATION**

- .1 Ensure workers are kept safe in accordance with Federal, Provincial, Municipal regulations.
- .2 Implement safety measures as required in preparation for implementing work.
  - .3 Place safety devices and signage in locations in accordance with Federal, Provincial, Municipal regulations.

### **3.3 PROTECTION OF IN-PLACE CONDITIONS**

- .1 Protect existing building surfaces and adjacent structures with non-staining covers, masking against paint spatters, markings and other damage.
- .2 Protect factory finished products and equipment.
- .3 As painting operations progress, place "WET PAINT" signs in pedestrian and vehicle traffic areas.

### **3.4 SURFACE PREPARATION**

- .1 Clean and prepare exterior surfaces:
  - .1 Remove dust, dirt, and surface debris by wiping with dry, clean cloths
  - .2 Remove dirt, oil and surface contaminants. Ensure existing substrate is not damaged by process.
  - .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 dry thoroughly.
  - .6 Use water-based cleaners for surfaces to be repainted using water based paints.
- .2 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before priming.
  - .3 Touch-up, spot prime, and apply primer, paint, or pre-treatment immediately after cleaning.
  - .4 Obtain written approval of prepared surfaces by Departmental Representative before applying paint.

### **3.5 APPLICATION**

- .1 Special Techniques:
  - .1 Apply coating in manner that replicates texture of historic existing paint coating.
  - .2 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.
  - .3 Apply paint materials in accordance with paint manufacturer's written application instructions.
    - .1 Apply paint:
      - .1 To adequately prepared surfaces and within moisture limits.
      - .2 When previous coat of paint is dry and adequately cured.
      - .3 In accordance with manufacturer's written instructions.
    - .2 Obtain Departmental Representative's approval of application method before commencing work.
- .4 Brush and Roller Application:
  - .1 Apply paint in a uniform layer using brush/roller suitable for application.
  - .2 Work paint into cracks, crevices and corners.
  - .3 Brush or roll out runs and sags, and overlap marks.
  - .4 Eliminate roller tracking and stipple by finishing with a brush. Maintain historic appearance.
  - .5 Remove runs and sags from finished work and repaint.

- .6 Apply final coat of paint with brush.
- .5 Spray Application:
  - .1 Maintain paint ingredients properly mixed in containers during paint application by as frequently as necessary.
  - .2 Apply paint in uniform layer, with overlapping at edges of spray pattern.
  - .3 Back roll spray applications and immediately brush out runs and sags.
  - .4 Use brushes to work paint into cracks, crevices and places that are not adequately painted by spray.
  - .5 Brush out entire surface of last coat as it is applied. Ensure correct appearance when cured.
  - .6 Apply paint coats in continuous manner.
  - .8 Allow surfaces to dry and cure between coats for minimum time period as recommended by manufacturer.
  - .9 Minimum dry film thickness of coats: not less than that recommended by manufacturer.
  - .10 Repaint thin spots and bare areas before applying next coat of paint.
  - .11 Sand and dust between coats to remove visible defects.
  - .12 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents between applications of coats.
  - .13 Remove paint from areas exposed to freezing, excess humidity, rain, snow, icing or condensation.

### **3.6 CLEANING**

- .1 Leave Work area clean at end of each day.
- .2 Reinstall and clean removed items after painting is completed.
- .3 Remove paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .4 Wipe spills and spots immediately with a damp cloth.
- .5 Minimize use of kerosene and organic solvents to clean up water-based paints.
- .6 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

### **3.7 PROTECTION**

- .1 Protect freshly completed surfaces from paint droppings and dust. Avoid scuffing newly applied paint.
- .2 Remove paint splashings on exposed surfaces. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .3 Protect completed work from paint droppings. Use non-staining coverings.
- .4 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Departmental Representative.
- .5 Remove protective coverings and warning signs as soon as practical after operations cease.

**END OF SECTION**