

Part 1 General

1.1 RELATED SECTIONS

- .1 Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this section.

1.2 Summary

- .1 This section includes non-load bearing steel framing members for the following applications:
 - .1 Interior framing systems

1.3 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM C645 Specification for Nonstructural Steel Framing Members.
 - .2 ASTM C754 Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
- .2 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-1.40 Primer, Structural Steel, Oil Alkyd Type.
- .3 Environmental Choice Program (ECP).
 - .1 CCD-047a Paints - Surface Coatings.
 - .2 CCD-048- Surface Coatings - Recycled Water-borne.

1.4 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements

Part 2 Products

2.1 MATERIALS

- .1 Framing members, General: Comply with ASTM 754 for conditions indicated:
 - .1 Steel sheet components: Comply with ASTM C 645 requirements for metal.
 - .2 Protective Coating : ASTM A 653/ A 653M , G90 (Z 275), hot-dip galvanized.
- .2 Non-load bearing channel studs: 92 mm stud size; roll formed from 0.91mm thickness hot-dip galvanized steel sheet, for screw attachment of plywood board.

- .3 Floor and ceiling tracks: size to suit studs; roll formed from 0.91mm thickness hot-dip galvanized steel sheet.
- .4 Insulating strip: rubberized, moisture resistant 3 mm thick foam strip, 12 mm wide, with self sticking adhesive on one face, lengths as required.

2.2 Auxiliary Materials

- .1 General: Provide auxiliary materials that comply with referenced installation standards:
 - .1 Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power and other properties required to fasten steel members to substrates.

Part 3 Execution

3.1 EXAMINATION

- .1 Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance and other conditions affecting performance.
 - .1 Proceed with installation only after unsatisfactory conditions have been corrected

3.2 ERECTION

- .1 Align and install tracks (runners) at floor and overhead supports and secure at 400 mm on centre maximum.
- .2 Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior walls.
- .3 Install damp proof course under stud shoe tracks of partitions on slabs on grade.
- .4 Place studs vertically at 400 mm on centre and not more than 50 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
- .5 Erect metal studding to tolerance of 1:1000.
- .6 Install studs so flanges within framing system point in the same direction.
- .7 Attach studs to bottom and overhead supporting tracks using screws.
- .8 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.
- .9 Co-ordinate erection of studs with installation of door/window frames and special supports or anchorage for work specified in other Sections.
- .10 Provide 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.

- .11 Install two studs at each jamb.
- .12 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.
- .13 Frame openings and around built-in equipment, cabinets, access panels, on four sides. Extend framing into reveals. Check clearances with equipment suppliers.
- .14 Extend partitions to ceiling height except where noted otherwise on drawings.
- .15 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use 50mm leg ceiling tracks or use double track slip joint.
- .16 Install continuous insulating strips to isolate studs from uninsulated surfaces.

3.3 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act (CEPA), c. 33
- .2 Environmental Protection Agency (EPA)
 - .1 EPA 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 MPI Architectural Painting Specifications Manual.
- .5 National Fire Code of Canada
- .6 Society for Protective Coatings (SSPC)
 - .1 SSPC Painting Manual, Volume Two, 8th Edition, Systems and Specifications Manual.
- .7 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act (TDGA), c. 34 .

1.2 SCOPE OF WORK

- .1 The scope of work includes, but is not limited to:
 - .1 Paint all new interior walls
 - .2 All interior piping shall be painted in accordance with this specification.
 - .3 Any new metal surfaces, not already factory finished, shall be painted in accordance with this specification. Touch up any equipment factory painted, including equipment supplied by the City.
 - .4 Existing structural steel shall be painted in accordance with this specification as indicated in the drawings
 - .5 All concrete repairs, patching and new concrete shall be painted in accordance with this specification.
 - .6 Paint all existing concrete walls and surfaces as shown in the Specifications and Drawings.

1.3 SUBMITTALS

- .1 Product Data:
 - .1 Submit product data and instructions for each paint and coating product to be used.

- .2 Provide color samples to the Contract Administrator for approval before application.
- .3 Submit product data for the use and application of paint thinner.
- .4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .5 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation and application instructions.
- .6 Extra Materials:
 - .1 Submit one 4-litre can of each type and colour of primer and finish coating. Identify colour and paint type in relation to established colour schedule and finish formula.
 - .2 Deliver to the City of Winnipeg and store where directed.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Packing, Shipping, Handling and Unloading:
 - .1 Pack, ship, handle and unload materials in accordance with 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.
- .5 Store temperature sensitive products above minimum temperature as recommended by manufacturer.
- .6 Keep areas used for storage, cleaning and preparation clean and orderly.
- .7 Remove paint materials from storage only in quantities required for same day use.

1.5 ENVIRONMENTAL REQUIREMENTS

- .1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.
- .2 Ventilation: ventilate area of work by use of approved portable supply and exhaust fans.
- .3 Provide temporary heating where permanent facilities are not available to maintain minimum recommended temperatures.

- .4 Apply paint finish only in areas where dust is no longer being generated by related construction operations such that airborne particles will not affect the quality of the finished surface.
- .5 Apply paint only when surface to be painted is dry, properly cured, and adequately prepared.

Part 2 Products

2.1 MATERIALS

- .1 Only paint materials listed in the MPI Approved Products List (APL) are acceptable for use on the project, except where other products are specified.
- .2 Paint materials for each coating formula to be products of a single manufacturer.
- .3 Colour schedule will be determined by the Contract Administrator. Selection of colours will be from manufacturer's full range of colours.
- .4 Paint Finishes: Except for Formula 1 (epoxy) use Master Painters Institute (MPI) finishing formulae as specified below:
 - .1 Formula 1: for wood to receive paint finish: MPI EXT 6.4B - Alkyd GR (semi-gloss) finish premium grade.
 - .2 Formula 2: for shop primed and unprimed ferrous metal surfaces (Alkyd):
 - .1 MPI EXT 5.1D Alkyd G5 (semi-gloss) finish premium grade.
 - .2 Touch-up shop primer (if used) with primer provided by the manufacturer.
 - .3 One coat marine alkyd metal primer CGSB-1-GP-48M.
 - .4 Two coats semi-gloss enamel CAN/CGSB-1.57.
 - .5 Acceptable products: Pratt and Lambert, Benjamin Moore, Glidden, Cloverdale or Northern Paint.
 - .6 Provide color samples to the Contract Administrator for approval before application.
 - .7 Paint and primer shall be from the same manufacturer.
 - .3 Formula 3: for galvanized and zinc-coated metal: MPI EXT 5.3B - Alkyd G5 (semi-gloss) finish premium grade.
 - .4 Formula 4: for concrete, walls and ceilings apply: MPI EXT 3.1A - Latex G5 (semi-gloss) finish premium grade.
 - .1 One coat latex primer-sealer CAN/CGSB-1.119.
 - .2 Two coats semi-gloss enamel CAN/CGSB-1.57.
 - .3 Acceptable products: Pratt and Lambert, Benjamin Moore, Glidden, Cloverdale or Northern Paint.
 - .4 Paint and primer to be white.
 - .5 Paint and primer shall be from the same manufacturer.
 - .5 Formula 5: for concrete floors apply: MPI EXT 3.2D – Alkyd floor enamel #59 low gloss finish premium grade. Sprinkle with clean silica sand to provide slip-resistant surface acceptable to Contract Administrator.

2.2 EXTRA MATERIALS

- .1 Submit one 4-litre can of each type and colour of primer and finish coating. Identify colour and paint type in relation to established colour schedule and finish formula.
- .2 Deliver to City and store as directed.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

3.2 GENERAL

- .1 Perform preparation and operations for interior painting in accordance with MPI Architectural Painting Specifications Manual except where specified otherwise.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.

3.3 EXAMINATION

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to the Contract Administrator.
- .2 Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.

3.4 PREPARATION

- .1 Protection:
 - .1 Cover or mask floors, walls, and equipment adjacent to areas being painted to prevent damage and to protect from paint drops and splatters. Use non-staining coverings.
 - .2 Protect items that are permanently attached such as Fire Labels on doors, frames, and name plates on equipment.
- .2 Surface Preparation: Clean and prepare surfaces in accordance with MPI Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 Remove dust, dirt, and other surface debris by vacuuming, wiping with dry, clean cloths 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.
- .3 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.
- .4 Where possible, prime 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.
- .5 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.
- .6 Touch up of shop primers with primer as specified in applicable section. Major touch-up including cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas, shall be by supplier of fabricated material.

3.5 APPLICATION

- .1 Apply paint in accordance with manufacturer's application instructions unless specified otherwise.
- .2 Apply each coat of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .3 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .4 Sand and dust between each coat to remove visible defects.
- .5 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.
- .6 Do not paint over galvanized metal, aluminium, stainless steel, brass or bronze, rubber, plated surfaces, machined surfaces, hangers and nameplates.
- .7 Ventilate area of work by use of approved portable supply and exhaust fans.
- .8 Provide temporary heating where permanent facilities are not available to maintain minimum recommended temperatures.
- .9 Apply paint finish only in areas where dust is no longer being generated by related construction operations such that airborne particles will not affect the quality of the finished surface.
- .10 Apply paint only when surface to be painted is dry, properly cured, and adequately prepared.

- .11 Apply each coat of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .12 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .13 Sand and dust between each coat to remove visible defects.
- .14 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .15 Paint both sides and edges of backboards for electrical equipment before installation. Leave equipment in original finish except for touch-up as required.

3.6 CLEANUP

- .1 Clean and reinstall all hardware items that were removed before undertaken coating operations.
- .2 Remove over-spray, paint splatter and spills from exposed surfaces that were not intended for painting. Remove smears and spatter immediately as operations progress, using appropriate methods as per manufacturer's instructions.

3.7 PUMPS

- .1 Do not apply primer or paint to pumps.

3.8 MECHANICAL/ELECTRICAL EQUIPMENT

- .1 Do not paint exposed conduit, ductwork and hangers, unless otherwise indicated.
- .2 Paint exposed piping. Colour and texture to match adjacent surfaces, except as noted otherwise.
- .3 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .4 Do not paint over nameplates, brass or bronze surfaces or machined surfaces.
- .5 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.

3.9 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 splashes on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.

- .4 Protect freshly completed surfaces from paint droppings and dust to approval of the Contract Administrator. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by the Contract Administrator.

3.10 STANDARDS OF ACCEPTANCE

- .1 Walls: No defects visible from a distance of 1000 mm at 90 degrees to surface when viewed using final lighting source.
- .2 Ceilings: No defects visible from floor at 45 degrees to surface when viewed using final lighting source.
- .3 Piping, valves and pumping equipment: No visible defects from a distance of 1000 millimetres at 90 degrees to surface when viewed using final lighting source.
- .4 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

END OF SECTION