
Note to the Designer/Architect/Engineer: These Specifications are basic minimum criteria to be met in preparing the final project specifications for this section, which is the responsibility of the Designer

York University Building Standards

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1.0 GENERAL

1.1 Scope of Work

- .1 This York University Building Standard includes, covers:
 - .1 materials, equipment, tools and labour required for finish painting of interior and exterior building surfaces
 - .2 field painting of exposed bare and covered pipes, conduits, hangers exposed steel and iron work, and primed metal surfaces of equipment installed under the mechanical and electrical standards
- .2 This York University Building Standard does not cover:
 - .1 Shop priming of ferrous metal items and fabricated components
 - .2 Pre-finished items
 - .3 Integrally coloured CMU or face brick
 - .4 Metal or phenolic core toilet partitions
 - .5 Acoustical materials
 - .6 Anodized aluminium
 - .7 Stainless steel
 - .8 Bronze
- .3 Do not paint over any:
 - .1 Moving parts or operating units
 - .2 Equipment identification
 - .3 Way finding, room numbers or other types of signs
 - .4 name or nomenclature signs
 - .5 Code-required labels
 - .6 Electrical, telecommunications and data cables

1.2 Guideline Principles

- .1 Benjamin Moore paints shall be used exclusively for interior painting, no substitutions shall be permitted

1.3 Sustainable Design Requirements

- .1 Provide documentation from the paint manufacture identifying the volatile organic compounds (VOC) and chemical component limits for all indoor paints and finishes
- .2 For indoor painting and finish work paints and finishes with a low or zero VOC shall be used
- .3 If the project is seeking LEED Certification, materials used in this York University Building standard must comply with the Green Seal Standard, for paints, GS-11, requirements for VOC and chemical component limits

Type	VOC (g/l grams/litre)
Interior Non-Flat	150 g/l
Exterior non-flat	200 g/l
Interior flat	50 g/l
Exterior flat	100 g/l

All types	Shall contain no more than 1.0% by weight of the sum total of Aromatic Compounds
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Please use most up to date requirements for VOC emissions from Green Seal web site

1.4 Submittals

- .1 Submit three (3) sets of paint samples with scheduled colour product type, colour formula, and texture to simulate actual conditions of use on a 304 mm X 304 mm hardboard for review
- .2 Resubmit samples, if requested, until the required sheen, colour, and texture is achieved
- .3 On the actual wall surfaces and other building components, duplicate painted finishes of the acceptable samples
- .4 On a wood surface, provide a 102mm X 204mm samples of each natural and stained wood finish
- .5 At the beginning of project, provide a complete list of the manufacturer's products, colour identification numbers, manufacturer technical data sheets, MSDS Sheets that will be applied in the project. A copy of this list shall be provided to the York University Project Representative, and CSBO Maintenance Director

1.5 Related York University Standards

- .1 Steel Doors and Frames Section 08 11 00
- .2 Wood Doors and Frames Section 08 14 00
- .3 Interior Signage Standards Guideline 2004
- .4 Metal Supports for Gypsum and Cement Board Section 09 21 00

1.6 Performance Standards References

- .1 Canadian General Standards Board, CAN/CGSB-85.100. 93 Painting
- .2 Canadian General Standards Board, CAN/CGSB-85. 10 Protective Coating for Metals
- .3 Ontario Building Code (applicable sections of the latest iteration)
- .4 Green Seal Standard, for paints, GS-11
- .5 Master Painters Institute (MPI) list of approved products
- .6 American Society for Testing and Materials ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- .7 Canadian Painting Contractors Association Painting Specifications Manual, latest edition, available from the Ontario Painting Contractors Association (OPCA)
- .8 Steel Structures Painting Council SSPC-PT2-82 Standard Method of Evaluating Degree of Rusting on Painted Steel Surfaces
- .9 Steel Structures Painting Council SSPC-SP1-82 (R2004) Solvent Cleaning
- .10 Steel Structures Painting Council SSPC-SP 7/NACE no. 4-07 Brush-off blast cleaning
- .11 American Society for Testing and Materials ASTM D523 – 08 Standard Test Method for Specular Gloss

1.7 Qualifications

- .1 The work covered by this section shall be undertaken by skilled labour and in accordance with known industry best practices and the instructions of the manufacturer of the products being used
 - .2 Qualifications of Applicators: applicators shall have minimum 5 years proven and satisfactory painting experience of projects of similar size and class subject to York University's approval
- 1.8 Warranty (Standard Warranty and Extended Warranty)
- .1 Warranty work covered in this standard for a period of 2 years
 - .2 Throughout the warranty period, painting systems shall remain free from failure due to causes including: material failure; surface preparation less than that specified; and paint film thickness less than that specified, or when not specified, less than that coverage recommended by manufacturer
 - .3 Presence of any of the following during the warranty period shall constitute failure: visible corrosion, film peeling, blistering, checking, scaling, embrittling or general film disintegration, and poor adhesion as determined by tape "peel-off" test procedures
- 1.9 Handling and Storage
- .1 Store materials (paints, finishes etc.) in one place that has been designated by the York University Project Representative. Keep the storage area clean, the temperature in this storage area shall be maintained at between 10°C and 26°C
 - .2 Store packaged materials, undamaged, in their original wrapping or containers with manufacturers' labels and seals intact. Manufacturer's labels shall indicate: the manufacturer's name, type of paint, manufacturers' stock number, colour name and/or code, contents by volume (for pigment and vehicle constituents) and thinning and application
 - .3 At the end of the project the assigned storage area shall be returned to the University in its original clean and tidy condition, free of paint traces and other debris
 - .4 Exercise extreme caution in the storage of materials to prevent fire or that may create fire hazards. Thinners and solvents shall be stored in CSA approved metal safety containers in accordance with governing fire and safety regulations
 - .5 Keep waste rags in metal drums containing water and remove from work site at the end of each workday
 - .6 Conform to OPCA Manual

2.0 PRODUCTS

- 2.1 General Requirements:
- .1 Use only products that are listed in Chapter 5 of the OPCA Manual, or on the CGSB or the MPI qualified list of products and that are conforming to the standards listed in this document

- .2 Materials that do not display the manufacturer's standard identification are not acceptable
 - .3 All paint materials must conform to regulatory requirements for surface burning (flame spread, flame spread index, smoke development index and resultant flame spread rating) characteristics. Minimum requirement shall be Class A flame spread rating in accordance with NFPA and testing to ASTM E84
 - .4 Paints and finishes must be lead free
 - .5 All colours and sheen shall be reviewed and authorized by the York University Project Representative, Consultant, Architect, Engineer or the York University agent having designated authority
 - .6 Provide safe and adequate equipment=, scaffolding, ladders, plant, tools, brushes, rollers, clean drop cloths and other items required for the completion of the work
 - .7 Acceptable products: as manufactured by:
 - .1 Benjamin-Moore
- 2.2 Quality Assurance
- .1 Do not apply finishes in areas where dust is being generated
 - .2 Maintain product, surface and ambient air temperature at a minimum of 10°C for latex based paints and a minimum of 7°C for solvent based paints
 - .3 Do not paint over rust, dust, scale, grease, moisture, scuffed surfaces or conditions otherwise detrimental to the formation of a durable paint film
 - .4 Maintain ambient relative humidity below 80% during application
 - .5 Provide adequate ventilation during and after application
 - .6 Do not permit the installation of fixtures and fittings until materials are cured
 - .7 Smoking is not permitted on job site
 - .8 Work shall be undertaken using ambient illumination that is similar to final lighting conditions
 - .9 Conform to OPCA Manual
- 2.3 Mixes and Colouring
- .1 Paint products shall be delivered factory pre-mixed, except for those, which have several components, which are to be mixed on site as per manufacturer's instructions
 - .2 Mix the pigments and tint using non-ferrous metal or plastic containers of appropriate size, using the pigments as recommended by the manufacturer for each colour and type
- 2.4 Colours
- .1 To be selected by the York University Project Representative, Consultant, Architect, Engineer or the York University agent having designated authority from the acceptable product's manufacturers' colour chart
- 2.5 Accessories
- .1 Where required use Type ADH .1B – Latex based contact cement adhesives, contact adhesives, water and synthetic rubber latex based, high solids, applied by roller, brush or spraying

3.0 EXECUTION

3.1 General

- .1 Carry out preparation, priming, finishing, protection and cleaning work in accordance with trade accepted best practices and the manufacturer's instructions as well as applicable standards
- .2 Ensure that all defects such as streaks, patches and other imperfections and defects have been repaired adequately and surfaces are clean and in proper condition and all other factors such as temperature and ventilation are appropriate for the work.
- .3 Check humidity level of the substrate with an electronic moisture meter do not apply finish if the rate of relative humidity is higher than the levels prescribed by the paint or finish manufacturer or higher than 12 to 15%
- .4 Check surfaces to determine if pH of surfaces meets the manufacturer's requirements
- .5 Inspect surfaces to be painted for gouges, marks, nibs, and other defects and properly prepare patching, filling, smooth or other surface preparation necessary to ensure satisfactory finish
- .6 Do not apply paint on sealants, unless they are compatible. Modified latex elastomer sealants can receive paint, but only 3 weeks after application of the sealant
- .7 Mask surfaces to receive joint sealers
- .8 Allow the necessary cure time (as per paint or finish manufacturers' instructions) between applications of subsequent layers or coats
- .9 Match the finished work to the approved samples: obtain uniform thickness, sheen, colour, pattern and texture throughout the painted/finished area, and make free from defects detrimental to the appearance or performance
- .10 Paint all primed, or unprimed metals and galvanized or zinc-wiped metal surfaces, unless otherwise indicated
- .11 Touch up and refinish all deficiencies. If finished work is deemed to be unsatisfactory by the York University Project representative, repaint the entire surface that has been deemed unacceptable
- .12 Paint edges of openings made in gypsum panels before installing access panels or mechanical and electrical equipment, if applicable
- .13 Ensure perimeter of rooms with suspended ceilings is painted at least 100mm above the ceiling line
- .14 In the case of local repairs, determine in concert with York's Project Representative the total area to be painted / refinished.
- .15 In the case of local repairs, spray painting applications shall only be permitted when large areas or complete rooms are to be painted, and then only when dust and mist protection for adjacent equipment and surfaces are in place. Verify these conditions with the York Project representative prior to start of work
- .16 Protect all existing or new surfaces from paint splatter and other damage resulting from the work. Use protection canvases and non-staining removable masking tape in sufficient quantities
- .17 Protect using canvases, masking tape or other appropriate means, or coordinate with York's Project Representative to computer workstations, printers, scanners and other hardware pieces and all other prefinished adjacent elements, such as apparatus, equipment or accessories removed from the area where painting is to be undertaken. After painting the area, remove protective coverings and tape, touch-up if necessary and clean adjacent areas so that these are returned to

- their initial state
 - .18 Use only clean equipment in good working order
 - .19 Paint glazing beads and trims before installation of the glazing
 - .20 Paint backer boards before installation of mechanical and electrical equipment
 - .21 Do not paint over labels, way finding or other type of signs, name or instruction plates
 - .22 Conform to OPCA Manual
- 3.2 Coordination
- .1 Ensure that new concrete work that is scheduled to be painted has been cured as required, and does not have any curing agents that are detrimental to the finishes to be applied
 - .2 Coordinate with subsequent trades (through the York University Project Representative), to ensure that other related work does not commence before finishes are completely cured
 - .3 Ensure that the substrates are prepared adequately; if they are factory primed, to ensure they have compatible primers
 - .4 Paint and finishing work shall be scheduled to be completed before installation of equipment, fixtures, fitting and application of other finishes for floors, walls and ceilings. Undertake necessary repairs to painted surfaces after the installation of the latter. Coordinate with the York University Project Representative
- 3.3 Preparation of Surface
- .1 Prepare and prime all surfaces as per manufacturer's instructions
 - .2 Patch and repair, if necessary, then sand and adequately clean existing painted surfaces
 - .3 Prepare masonry surfaces as per CAN/CGSB-85-100
 - .4 Prepare drywall surfaces as per CAN/CGSB-85-100. Fill minor cracks with plaster patching compound
 - .5 Touch-up shop paint primer on steel as per CAN/CGSB-85-10
 - .6 Prepare galvanized steel and zinc coated surfaces as per CAB/CGSB-85-10, cleaning and removing grease with a metal conditioner
 - .7 Prepare copper pipes and couplings as per CAN/CGSB-85-10
 - .8 Prepare wood surfaces as per CAN/CGSB-85-100 and apply wood paste filler to nail holes and cracks
 - .9 Conform to OPCA Manual
- 3.4 Application
- .1 All paints shall be applied evenly without streaks, runs, misses, brush marks or other defects. The paint film must adhere uniformly and strongly.
 - .2 Apply additional coats of paint to finished section, if defects appear
 - .3 Apply additional primer coats to all encased structural elements
 - .4 Always sand and dust between subsequent coats and remove defects visible from distance up to 1500mm
 - .5 Finish doors and frames with a brush or a spray gun.; other surfaces may be painted by roller
 - .6 Finish bottoms, edges, tops and cutouts of doors and touch-up after installation, as specified for door surfaces

- .7 Apply paint of similar properties and matching the existing in at least two finishing coats on existing painted surfaces
 - .8 Apply at least two coats of paint over the primer and base coats, for all new surfaces to be painted, unless instructed (in writing) by the York Project Representative
 - .9 Paint all unfinished metal inserts in concrete, or other surfaces in such a manner as to match the background texture and sheen, to the York Project Representative's satisfaction
 - .10 In general, do not paint over sealants, except if sealant and paint/finishes are compatible and when the sealant has set completely (as per manufacturers instructions)
 - .11 When painting ceilings ensure that any telecommunications, data, electrical or other cables that are either free – suspended or enclosed within a communication cable tray are not painted over. If necessary, mask all cables before painting. Failure to comply with this requirement will result in the Contractor being required to pay for the cost of rewiring any cable runs that may have been painted over as a result of their work.
 - .12 Conform to OPCA Manual
- 3.5 Woodwork
- .1 Sand existing finish, wipe off dust and grit before prime coat application. Putty nail holes and minimal cracks after primer has fully dried; sand between primer and top coats with No. 300 sandpaper and remove dust
- 3.6 Mechanical and Electrical and metal Equipment
- .1 Keep sprinkler heads free of paint
 - .2 Apply cold phosphate surface treatment to SSPC-PT2-82 to unpassivated zinc-coated metal
 - .3 For passivated zinc-coated metal ("white rusted"), power wire brush or vigorously hand wire brush to scuff galvanize thoroughly, and solvent clean to SSPC-SP1-82 (R2004)
 - .4 Prepare exterior exposed galvanized steel and galvanized steel at wet areas to SSPC-SP 7/NACE No. 4-07 – Sweep Blast
 - .5 Paint all unfinished exposed and unexposed equipment, piping, conduits, hangers, etc. occurring in finished and unfinished areas; colours and texture to match adjacent surfaces, except as noted otherwise by the York Project Representative. Above ceiling spaces are not considered finished areas, but equipment therein is not considered to be exposed.
 - .6 Paint inside ductwork where visible (at egg crates, diffusers and other openings) with primer and one coat of matt black paint
 - .7 Leave pre-finished equipment, piping, conduits, hangers, etc., in original finish and touch up scratches and marks in unfinished areas
 - .8 Remove all cover plates and other removable mechanical and electrical equipment and reinstall after all paint is completely dry
- 3.7 Paint and Finish Schedule

Metal Doors, and metal door frames Wood Doors and wood door frames Non-galvanized metal pipes

Roof, wall or ground mounted equipment
New surfaces shall have one (1) coat of primer and two (2) finish coats of paint
Existing surfaces shall have a minimum of two (2) finish coats of paint
If sprayed, all walls, except mechanical rooms, storage areas, closets and ceilings, shall be backed rolled on final coat
Patch painting is NOT acceptable, total affected area shall be painted. Terminate painting only at corners or joints

Interior paint: Premium Grade Paint
Exterior paint: Premium Grade Paint

Gloss terms have following values in accordance with ASTM D523-08

Gloss Term	Gloss Units @60° Angle
Level 1 – Matte	>0 to 5 Level
Level 2 – High Sheen; Flat, velvet	0 to 10 Level
Level 3 – Traditional Eggshell	10 to 25 Level
Level 4 – Satin	20 to 35 Level
Level 5 – Traditional Semi-gloss	35 to 70 Level
Level 6 – Traditional Gloss	70 to 85 Level
Level 7 – High Gloss	>85

Interior Finishes

- .1 Wood
- .2 Plaster, Drywall (Gypsum Board)

3.7 Cleaning

- .1 During work, clean all paint marks and droppings with appropriate solvents recommended by the paint/finish manufacturer. Repair surfaces marked or damaged by paint
- .2 Upon completion of painting, remove all paint marks and protection from floors, hardware, etc., so as to leave all surfaces clean and in perfect condition
- .3 Conform to OPCA Manual

End of Section