

1 General

1.1 RELATED WORK

- .1 Section 06100 - Rough Carpentry
- .2 Section 09900 - Painting

1.2 REFERENCE STANDARDS

- .1 Do Work in accordance with CSA A82.31-M except where specified otherwise.

1.3 SEQUENCE AND SCHEDULING

- .1 Sequence and co-ordinate application of cementitious fireproofing with Work in other sections, which would interfere with efficient fireproofing application.
- .2 All fire rated separations and partitions are to be assembled prior to application of spray in place fireproofing.

2 Products

2.1 GYPSUM BOARD

- .1 Standard board: to CSA A82.27-M regular and Type X, thickness indicated 1200 mm wide x maximum practical length, ends square cut, edges bevelled.
- .2 Backing board and coreboard: to CSA A82.27-M Type X, thickness indicated square edges.
- .3 Water resistant board: to CSA A82.27-M regular, and Type X, as indicated in Construction drawings and finish schedules
 - .1 Acceptable Products: Westroc Aquaguard (Moisture Resistant Gypsum Board)
- .4 DENS-GLASS GOLD EXTERIOR GUARD
 - .1 Provide Dens-Glass Gold Exterior Guard, manufactured by Georgia Pacific, to all exterior walls requesting 13 mm Glass Mat Gypsum Sheathing.
 - .2 ***Dens-Glass Gold to receive the following joint treatment (drywall applicator to provide this Work) – glass mesh joint tape to all joints c/w a 3/8” bead of caulk at the joints embedded into the entire surface of the mesh tape with a trowel. Utilize backer rod for openings larger than 1/8”. Apply enough caulk to each exposed fastener to cover completely when troweled over. Utilize the following products to achieve the above noted joint treatment and eventual Long-Term Air Barrier function:***
 - Pecora AC-20 acrylic latex sealant***
 - GE Silicone Silpruf Sealant***
 - Tremco Dymonic***
 - Quick-tape, Inc 2” minimum 10 x 10 glass mesh joint tape***
- .5 Reinforced cement board: aggregated portland cement board with vinyl-coated, woven glass-fibre mesh embedded in front and back surfaces, specially formulated to resist water and steam, square cut and smooth finished edges, 900 mm wide x maximum practical length, thickness indicated.
 - .1 Acceptable Products: Wonderboard; Durock; Latapanel.

2.2 METAL FURRING AND SUSPENSION SYSTEMS

- .1 Metal furring runners, hangers, tie wires, inserts, anchors: to CSA A82.30-M, galvanized painted.
- .2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.

- .3 Resilient clips drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.

2.3 FASTENINGS AND ADHESIVES

- .1 Nails, screws and staples: to CSA A82.31- M.
- .2 Stud adhesive: to CGSB 71-GP-25M.
- .3 Laminating compound: as recommended by manufacturer, asbestos-free.

2.4 ACCESSORIES

- .1 Casing beads, corner beads fill type: 0.5 mm base thickness commercial grade sheet steel with Z275 zinc finish to ASTM A525-86, perforated flanges; one piece length per location.
- .2 Acoustic sealant: to CAN/CGSB-19.21.
- .3 Polyethylene: to CAN/CGSB-51.33-M, Type 2, 6 mil thickness.
- .4 Insulating strip: rubberized, moisture resistant, 3 mm thick closed cell neoprene strip, 12 mm wide, with self sticking permanent adhesive on one face, lengths as required.
- .5 Joint and topping compound: to CSA A82.31-M, asbestos-free.

3 Execution

3.1 SUSPENDED AND FURRED CEILINGS

- .1 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with CSA A82.31-M1980, except where specified otherwise.
- .2 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .3 Install Work level to tolerance of 1:1200.
- .4 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles and speakers.
- .5 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.

3.2 CEILING BULKHEADS

- .1 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .2 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.

3.3 WALL FURRING

- .1 Install wall furring for gypsum board wall finishes in accordance with CSA A82.31-M1980, except where specified otherwise.
- .2 Furr openings and around built-in equipment, cabinets, access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
- .3 Furr duct shafts, beams, columns, pipes and exposed services where indicated.

3.4 RESILIENT FURRING

- .1 Erect drywall resilient furring transversely across studs, joists, between the layers of gypsum board, spaced maximum 600 mm oc and not more than 150 mm from ceiling/wall juncture. Secure to each support with 25 mm drywall screw.
- .2 Install 150 mm continuous strip of 12.7 mm gypsum board along track of partitions where resilient furring installed.

3.5 GYPSUM BOARD APPLICATION

- .1 Do not apply gypsum board until bucks, anchors, blocking, electrical, mechanical, insulation and vapour barrier Work are approved.
- .2 Apply single and double layer gypsum board to wood, metal, furring or framing using screw fasteners for first layer, laminating adhesive and screw fasteners for second layer. Maximum spacing of screws 300 mm oc.
- .3 Apply single and double layer gypsum board to concrete and concrete block surfaces, where indicated, using laminating adhesive.
- .4 Apply water resistant gypsum board where wall tiles are to be applied and are to be adjacent to slop sinks in janitor's closets. Apply water-resistant sealant to edges, ends, cut-outs which expose gypsum core and to fastener heads. Do not apply joint treatment on areas to receive tile finish.
- .5 Apply 12 mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components. Seal full perimeter of cut-outs around electrical boxes, ducts, in partitions where perimeter is sealed with acoustic sealant.
- .6 Install in throats of door frames and framing around openings, etc., as required by building code.

3.6 SHAFT WALL ASSEMBLIES

- .1 Install shaftwall systems to manufacturer's printed instructions.
- .2 Utilize series 622 STC 52 gypsum shaftwall as supplied by Georgia Pacific for 1 hour shaft wall assemblies
- .3 Utilize series 620 for 2 hour shaftwall assemblies as supplied by Georgia Pacific.
- .4 Tape and finish as specified for gypsum board. Countersink fasteners and patch damaged areas to match units texture.
- .5 Seal around full perimeter and at all penetrations with fire stop sealant to provide air-tight seal.

3.7 ACOUSTIC INSULATION

- .1 Install acoustic batt insulation where indicated. Cut and trim insulation to fit tight around protrusions, electrical boxes, etc.; leave no voids. Do not compress batts.

3.8 ACCESSORIES

- .1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges. Secure at 150 mm on centre or using contact adhesive for full length.
- .2 Install casing beads around perimeter of suspended ceilings.
- .3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.
- .4 Install insulating strips continuously at edges of gypsum board and casing beads abutting metal window and exterior door frames, to provide thermal break.

3.9 CONTROL JOINTS

- .1 Construct control joints of preformed units or two back-to-back casing beads set in gypsum board facing and supported independently on both sides of joint. Joints to have solid backing or drywall to maintain fire separations as required.
- .2 Provide continuous polyethylene dust barrier behind and across control joints.
- .3 Locate control joints at changes in substrate construction and at approximately 10 m spacing on long corridor runs.
- .4 Install control joints straight and true.

3.10 EXPANSION JOINTS

- .1 Construct expansion joints as detailed, at building expansion and construction joints. Provide continuous dust barrier.
- .2 Install expansion joint straight and true.

3.11 ACCESS DOORS

- .1 Install access doors to electrical and mechanical fixtures specified in respective Sections.
- .2 Rigidly secure frames to furring or framing systems.

3.12 TAPING AND FILLING

- .1 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and topping compound installed according to manufacturer's directions and feathered out onto panel faces.
- .2 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of topping compound, feathered out onto panel faces.
- .3 Fill screw head depressions with joint and topping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.
- .4 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .5 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

3.13 REINFORCED CEMENT BOARD

- .1 Pre-cut board to required sizes and make necessary cutouts.
- .2 Fit ends and edges closely but not forced together.
- .3 Fasten board to wood studs with 38 mm galvanized roofing nails, or blued or galvanized annular ring nails at 200 mm oc.
- .4 Fasten board to steel studs with rust proof self-drilling, self-threading case hardened screws at 200 mm oc.

3.14 FIRE RATED ASSEMBLIES

- .1 All fire rated separations and partitions are to be assembled prior to application of spray in place fireproofing.

END OF SECTION

1 GENERAL

This section includes all labor, materials, tools and other equipment, services and supervision required to complete all exterior and interior painting and decorating Work as indicated on Finish Schedules and to the full extent of the drawings and specifications.

1.1 RELATED WORK

- .1 Section 09250 - Gypsum Board
- .2 Division 15 - Mechanical
- .3 Division 16 - Electrical

1.2 QUALITY ASSURANCE:

- .1 Do not apply paint finish in areas where dust is being generated.
- .2 The Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of Work that he will maintain a qualified crew of painters throughout the duration of the Work. When requested, the Contractor shall provide a list of the last three comparable jobs including name and location, specifying authority/project manager, start/completion dates and value of the painting Work.
- .3 Only qualified persons, as defined by local jurisdiction shall be engaged in painting and decorating Work.

1.3 MAINTENANCE MATERIALS

- .1 At project completion provide 5 gallons of each type and color of paint from the same production run (batch mix) in unopened cans, properly labeled and identified for The City's later use in maintenance.

2 Products

2.1 MATERIALS

- .1 All materials used shall be lead and mercury free and shall have low VOC content where possible.
- .2 All paint materials shall have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc.
- .3 Where required, paints and coatings shall meet flame spread and smoke developed ratings designated by local Code requirements and/or authorities having jurisdiction.
- .4 Colors shall match existing paint.

3 Execution

3.1 CONDITION OF SURFACES

- .1 Prior to commencement of the Work in this section, thoroughly examine (and test as required) all conditions and surfaces scheduled to be painted and report in writing to the Contractor and the Contract Administrator any conditions or surfaces that will adversely affect Work of this section.
- .2 No painting Work shall commence until all such adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Contractor and Contract Administrator.

- .3 Commencement of the Work shall not be held to imply acceptance of surfaces except as qualified herein. Such surfaces as concrete, masonry, structural steel and miscellaneous metal, wood, gypsum board and plaster, shall not be the responsibility of the Painting Subcontractor.
- .4 The Painting Subcontractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate which may adversely affect the painting Work except for minimal Work normally performed by the Painting Sub-trade and as indicated herein. It shall always, however, be the responsibility of the Painting Sub-trade to see that surfaces are properly prepared before any paint or coating is applied.

3.2 PREPARATION OF SURFACES

- .1 Prepare all surfaces in accordance with the latest standards of commercial paint applications.
- .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/fastenings (eg electrical plates, mechanical louvers, door and window hardware (eg hinges, knobs, locks, trim, frame stops), removable rating/hazard/instruction labels, washroom accessories, light fixture trim, etc., from wall and ceiling surfaces, doors and frames, prior to painting. Carefully clean and replace all such items upon completion of painting Work in each area. Do not use solvent or reactive cleaning agents on items that will mar or remove finishes (eg lacquer finishes). Doors shall be removed before painting 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 painting 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.
- .5 Substrate defects shall be made good and sanded by others ready for painting, particularly after the first coat of paint. Start of finish painting of defective surfaces (eg gypsum board) shall indicate acceptance of substrate and any costs of making good defects shall be borne by the painter, including repainting of entire defective surface (no touch-up painting).
- .6 Confirm preparation and primer used with fabricator of steel items. Refer to Quality Assurance.

3.3 APPLICATION

- .1 Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other subtrade Work) are acceptable for applications of products.
- .2 Apply paint or stain in accordance with latest standards in publication at time of Work taking place.
- .3 Apply paint and decorating material in a workmanlike manner using skilled and trade qualified applicators as noted under Quality Assurance.
- .4 Apply paint and coatings within an appropriate time frame after cleaning when environmental conditions encourage flashing-rusting, rusting, contamination or the manufacturer's paint specifications require earlier applications.
- .5 Painting coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .6 Tint each coat of paint progressively lighter to enable confirmation of number of coats.
- .7 Unless otherwise approved by the Contract Administrator, apply a minimum of four coats of paint where deep or bright colours are used to achieve satisfactory results.

- .8 Sand and dust between each coat to provide an anchor for next coat and to remove defects visible from a distance up to 1000 mm (39").
- .9 Do not apply finishes on surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.
- .10 Prime coat of stain or varnish finishes may be reduced in accordance with manufacturer's directions.
- .11 Paint finish shall continue through behind all wall-mounted items (eg chalk and tack boards).

3.4 MECHANICAL/ELECTRICAL EQUIPMENT AND RELATED SECTIONS

- .1 Unless otherwise specified or noted, paint all "unfinished" conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and texture to match adjacent surfaces, in the following areas:
 - .1 where exposed-to-view in all exterior (includes roof top unit(s)) and interior areas.
 - .2 in all interior high humidity interior areas.
 - .3 in all boiler room, mechanical and electrical rooms.
- .2 In unfinished areas, leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks.
- .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.
- .5 Paint the inside of all ductwork where visible behind louvers, grilles and diffusers for a minimum of 460 mm (18") or beyond sight line, whichever is greater, with primer and one coat of matt black (non-reflecting) paint.
- .6 Paint the inside of light valances gloss white.
- .7 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
- .8 Paint red or band on all fire protection piping and sprinkler lines in accordance with mechanical specification requirements. Keep sprinkler heads free of paint.
- .9 Paint yellow or band on all natural gas piping in accordance with mechanical specification requirements.
- .10 Back prime and paint face and edges of plywood service panels for telephone and electrical equipment before installation to match adjacent wall surface. Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.
- .11 Paint exterior steel electrical light standards. Do not paint outdoor transformers and substation equipment.

3.5 FIELD QUALITY CONTROL AND STANDARD OF ACCEPTANCE

- .1 All surfaces, preparation and paint applications shall be inspected.
- .2 Painted exterior and interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Painting Inspection Agency inspector:
 - .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.).
- .3 Painted surfaces shall be considered unacceptable if any of the following are evident under natural lighting source for exterior surfaces and final lighting source (including daylight) for interior surfaces:
- .1 visible defects are evident on vertical surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39").
 - .2 visible defects are evident on horizontal surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm (39").
 - .3 visible defects are evident on ceiling, soffit and other overhead surfaces when viewed at normal viewing angles.
 - .4 when the final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
- .4 Painted surfaces rejected by the Contract Administrator 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.

3.6 PROTECTION

- .1 Protect all exterior surfaces and areas, including landscaping, walks, drives, all adjacent building surfaces (including glass, aluminum surfaces, etc.) and equipment and any labels and signage from painting 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.
- .2 Protect all interior surfaces and areas, including glass, aluminum surfaces, etc. and equipment and any labels and signage from painting 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 Erect barriers or screens and post signs to warn of or limit or direct traffic away or around work area as required.

3.7 CLEAN-UP

- .1 Remove all 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/solvents as well as all other 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.

3.8 REPAINTING OF EXISTING FINISHES

- .1 Use finish coat of respective new surface paint system for minor repair of existing finishes. Use system primer where existing finishes are damaged down to bare surface

END OF SECTION