

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 06 20 00 - Finish Carpentry (Wood frames)
- .2 Section 09 22 16 - Non-structural Metal Framing
- .3 Section 07 92 10 - Joint Sealants

1.2 REFERENCES

- .1 Aluminum Association
 - .1 Designation for Aluminum Finishes-2003.
- .2 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C475/C475M-02 (2007), Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .2 ASTM C514-04, Specification for Nails for the Application of Gypsum Board.
 - .3 ASTM C840-07, Specification for Application and Finishing of Gypsum Board.
 - .4 ASTM C954-07, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
 - .5 ASTM C1002-07, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .6 ASTM C1047-05, Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .7 ASTM C1177/C1177M-06, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 - .8 ASTM C1178/C1178M-06, Standard Specification for Glass Mat Water-Resistant Gypsum Backing Board.
 - .9 ASTM C1396/C1396M-06a, Standard Specification for Gypsum Wallboard.
- .3 Association of the Wall and Ceilings Industries International (AWEI)
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.34-M86 AMEND, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
 - .2 CAN/CGSB-71.25-M88, Adhesive, for Bonding Drywall to Wood Framing and Metal Studs.
- .5 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-03, Surface Burning Characteristics of Building Materials and Assemblies.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials in original packages, containers or bundles bearing manufacturers brand name and identification.

- .2 Store materials inside, level and under cover. Keep dry. Protect from weather, other elements and damage from construction operations and other causes.
- .3 Handle gypsum boards to prevent damage to edges, ends or surfaces. Protect metal accessories and trim from being bent or damaged.

1.4 SITE ENVIRONMENTAL REQUIREMENTS

- .1 Maintain temperature minimum 10 degrees C, maximum 21 degrees C for 48 hours prior to and during application of gypsum boards and joint treatment, and for at least 48 hours after completion of joint treatment.
- .2 Apply board and joint treatment to dry, frost free surfaces.
- .3 Ventilation: Ventilate building spaces as required to remove excess moisture that would prevent drying of joint treatment material immediately after its application.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Contract Conditions.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene and corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with applicable provincial and municipal regulations.
- .4 Divert unused gypsum from landfill to gypsum recycling facility for disposal in accordance with applicable provincial and municipal regulations.
- .5 Divert unused metal materials from landfill to metal recycling facility in accordance with applicable provincial and municipal regulations.
- .6 Divert unused wood materials from landfill to recycling or composting facility in accordance with applicable provincial and municipal regulations.
- .7 Divert unused paint and caulking material from landfill to official hazardous material collections site in accordance with applicable provincial and municipal regulations.
- .8 Do not dispose of unused paint and caulking materials into sewer systems, into lakes, streams, onto ground or in other locations where it will pose health or environmental hazard.

Part 2 Products

2.1 MATERIALS

- .1 Standard board: to ASTM C1396/C1396M regular, 16 mm thick and Type X, 16 mm thick, 1200 mm wide x maximum practical length, ends square cut, edges squared.
 - .1 Acceptable Product: Georgia-Pacific, CertainTeed, CGC, or approved equivalent.
- .2 Glass mat water-resistant gypsum backing board (To be used in all wet areas): to ASTM C1178/C1178M, 16 mm thick, 1200 mm wide x maximum practical length.
 - .1 Acceptable product: Georgia-Pacific DensShield Tile Backer, CertainTeed Diamond Back Tile Backer, CGC Durock, or approved equivalent.
- .3 Metal furring runners, hangers, tie wires, inserts, anchors: to CSA G164-M92 (R2003).

- .4 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .5 Resilient clips and drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.
- .6 Nails: to ASTM C514.
- .7 Steel drill screws: to ASTM C1002.
- .8 Stud adhesive: to CAN/CGSB-71.25.
- .9 Laminating compound: as recommended by manufacturer, asbestos-free.
- .10 Casing beads, corner beads, control joints and edge trim: to ASTM C1047, metal, zinc-coated by hot-dip process, 0.5 mm base thickness, perforated flanges, one piece length per location.
- .11 Sealants and acoustic sealant: in accordance with Section 07 92 10 - Joint Sealants.
- .12 Polyethylene: to CAN/CGSB-51.34, Type 2.
- .13 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.
- .14 Joint compound: to ASTM C475, asbestos-free.
- .15 Reveal Moldings: Refer to drawings for locations
 - .1 25mm aluminum reveal - DRM-50-100 By FryRiglet

Part 3 Execution

3.1 ERECTION

- .1 Do application and finishing of gypsum board in accordance with ASTM C840 except where specified otherwise.
- .2 Do application of gypsum sheathing in accordance with ASTM C1177.
- .3 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with ASTM C840 except where specified otherwise.
- .4 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .5 Install work level to tolerance of 1:1200.
- .6 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers and grilles.
- .7 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.
- .8 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .9 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.
- .10 Install wall furring for gypsum board wall finishes in accordance with ASTM C840, except where specified otherwise.
- .11 Furr openings and around built-in equipment, cabinets and access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
- .12 Furr duct shafts, beams, columns, pipes and exposed services where indicated.

- .13 Erect drywall resilient furring transversely across studs, spaced maximum 600 mm on centre and not more than 150 mm from ceiling/wall juncture. Secure to each support with 25 mm drywall screw.
- .14 Install 150 mm continuous strip of 12.7 mm gypsum board along base of partitions where resilient furring installed.

3.2 APPLICATION

- .1 Do not apply gypsum board until bucks, anchors, blocking, sound attenuation, electrical and mechanical work is approved.
- .2 Apply single or double layer gypsum board to metal furring or framing using screw fasteners for first layer, laminating adhesive for second layer. Maximum spacing of screws 300 mm on centre. Refer to partition types for exact application.
 - .1 Single-Layer Application:
 - .1 Apply gypsum board on ceilings prior to application of walls in accordance with ASTM C840.
 - .2 Apply gypsum board vertically or horizontally, providing sheet lengths that will minimize end joints.
 - .2 Double-Layer Application:
 - .1 Install gypsum board for base layer and exposed gypsum board for face layer.
 - .2 Apply base layer to ceilings prior to base layer application on walls; apply face layers in same sequence. Offset joints between layers at least 250 mm.
 - .3 Apply base layers at right angles to supports unless otherwise indicated.
 - .4 Apply base layer on walls and face layers vertically with joints of base layer over supports and face layer joints offset at least 250 mm with base layer joints.
 - .5 Stagger joints between first and second layers.
- .3 Apply single layer gypsum board to concrete or concrete block surfaces, where indicated, using laminating adhesive.
 - .1 Comply with gypsum board manufacturer's recommendations.
 - .2 Brace or fasten gypsum board until fastening adhesive has set.
 - .3 Mechanically fasten gypsum board at top and bottom of each sheet.
- .4 Ceilings: Install exterior gypsum board perpendicular to supports; stagger end joints over supports. Install with 6 mm gap where boards abut other work.
- .5 Apply glass mat water-resistant gypsum board where wall tiles to be applied, where there are toilets and urinals, adjacent to showers and adjacent to slop sinks in janitors' 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.
- .6 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, pipes, conduits and any other cut-out penetrating the partition, in partitions where perimeter sealed with acoustic sealant.
- .7 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.

- .8 Install gypsum board on walls vertically to avoid end-butt joints. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs, except where local codes or fire-rated assemblies require vertical application.
- .9 Install gypsum board with face side out.
- .10 Do not install damaged or damp boards.
- .11 Locate edge or end joints over supports. Stagger vertical joints over different studs on opposite sides of wall.

3.3 INSTALLATION

- .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 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.
- .5 Construct control joints of preformed units set in gypsum board facing and supported independently on both sides of joint.
- .6 Provide continuous polyethylene dust barrier behind and across control joints.
- .7 Locate control joints at changes in substrate construction at approximate 10 m spacing on long corridor runs and at approximate 15 m spacing on ceilings.
- .8 Install control joints straight and true.
- .9 Construct expansion joints as detailed, at building expansion and construction joints. Provide continuous dust barrier.
- .10 Install expansion joint straight and true.
- .11 Splice corners and intersections together and secure to each member with 3 screws.
- .12 Install access doors to electrical and mechanical fixtures specified in respective sections.
 - .1 Rigidly secure frames to furring or framing systems.
- .13 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.
- .14 Gypsum Board Finish: finish gypsum board walls and ceilings to following levels in accordance with Association of the Wall and Ceiling Industries (AWCI) International Recommended Specification on Levels of Gypsum Board Finish:
 - .1 Levels of finish:
 - .1 Level 0: No tapping, finishing or accessories required.
 - .2 Level 1: Embed tape for joints and interior angles in joint compound. Surfaces to be free of excess joint compound; tool marks and ridges are acceptable.
 - .3 Level 2: Embed tape for joints and interior angles in joint compound and apply one separate coat of joint compound over joints, angles, fastener heads and

- accessories; surfaces free of excess joint compound; tool marks and ridges are acceptable.
- .4 Level 3: Embed tape for joints and interior angles in joint compound and apply two separate coats of joint compound over joints, angles, fastener heads and accessories; surfaces smooth and free of tool marks and ridges.
 - .5 Level 4: Embed tape for joints and interior angles in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads and accessories; surfaces smooth and free of tool marks and ridges.
 - .6 Level 5: Embed tape for joints and interior angles in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads and accessories; apply a thin skim coat of joint compound to entire surface; surfaces smooth and free of tool marks and ridges.
- .15 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.
 - .16 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.
 - .17 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
 - .18 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.
 - .19 Apply one coat of white primer sealer over surface to be textured. When dry apply textured finish in accordance with manufacturer's instructions.
 - .20 Mix joint compound slightly thinner than for joint taping.
 - .21 Apply thin coat to entire surface using trowel or drywall broadknife to fill surface texture differences, variations or tool marks.
 - .22 Allow skim coat to dry completely.
 - .23 Remove ridges by light sanding or wiping with damp cloth.
 - .24 Provide protection that ensures gypsum drywall work will remain without damage or deterioration at time of substantial completion.

3.4 SCHEDULES

- .1 Partition types are listed on the drawings. Construct fire rated assemblies where indicated.

END OF SECTION