

Part 1 General

1.1 REFERENCES

- .1 Aluminum Association
 - .1 Designation for Aluminum Finishes-[1997].
- .2 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C36/C36M-[01], Specification for Gypsum Wallboard.
 - .2 ASTM C79/C79M-[01], Standard Specification for Treated Core and Non-treated Core Gypsum Sheathing Board.
 - .3 ASTM C442/C442M-[01], Specification for Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board.
 - .4 ASTM C475-[01], Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .5 ASTM C514-[01], Specification for Nails for the Application of Gypsum Board.
 - .6 ASTM C557-[99], Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
 - .7 ASTM C630/C630M-[01], Specification for Water-Resistant Gypsum Backing Board.
 - .8 ASTM C840-[01], Specification for Application and Finishing of Gypsum Board.
 - .9 ASTM C931/C931M-[01], Specification for Exterior Gypsum Soffit Board.
 - .10 ASTM C954-[00], 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.
 - .11 ASTM C960/C960M-[01], Specification for Pre-decorated Gypsum Board.
 - .12 ASTM C1002-[01], Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .13 ASTM C1047-[99], Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .14 ASTM C1278-[11], Standard Specification for Fiber-Reinforced Gypsum Panel.
 - .15 ASTM C1280-[99], Specification for Application of Gypsum Sheathing Board.
 - .16 ASTM C1177-[01], Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 - .17 ASTM C1178/C1178M-[01], Specification for Glass Mat Water-Resistant Gypsum Backing Board.
- .3 Association of the Wall and Ceilings Industries International (AWEI)
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.34-[M86(R1988)], 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-[1988(R2000)], Surface Burning Characteristics of Building Materials and Assemblies.

1.2 SHOP DRAWINGS

- .1 Submit fire rated partition assemblies, ULC Design No.'s to Contract Administrator for approval.

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, 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 QUALIFICATIONS

- .1 Dry wall installers: minimum 5 years proven experience.

1.6 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 00 - Cleaning and Waste Management.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Divert unused gypsum from landfill to gypsum recycling facility for disposal.
- .4 Divert unused metal materials from landfill to metal recycling.
- .5 Divert unused wood materials from landfill to recycling facility.
- .6 Divert unused paint and caulking material from landfill to official hazardous material collections site.
- .7 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 gypsum board: to ASTM C36/C36M.
 - .1 Type and Thickness: 1/2" and 5/8" Type X, thickness as indicated, 48" wide maximum practical length, ends square cut, edges bevelled.
- .2 Abuse resistant gypsum board: to ASTM C1278/C1278M.
 - .1 Types and Thicknesses: 1/2" and 5/8" Type X, thickness as indicated, 48" wide x maximum practical length, ends square cut, edges bevelled.
 - .2 Panels to have reinforcing mesh and provide increased resistance to abrasion, indentation and penetration.
 - .3 Product: Subject to compliance with requirements, provide FIBEROCK® brand Abuse Resistant VHI interior gypsum panels by United States Gypsum Company or approved equal in accordance with B6.
- .3 Moisture and mold resistant gypsum board: to ASTM C 1396
 - .1 Type and Thickness: 1/2" thickness as indicated, 48" wide x maximum practical length, ends square cut, edges bevelled.
 - .2 Panels to have a moisture and mold-resistant gypsum core that is encased in moisture and mold-resistant, 100 percent recycled green face and brown back papers.
 - .3 Product: Subject to compliance with requirements, provide SHEETROCK® brand MOLD TOUGH™ gypsum panels by United States Gypsum Company or approved equal in accordance with B6.
- .4 Exterior glass mat gypsum sheathing: to ASTM C 1177.
 - .1 Type and Thickness: Type X, 5/8 inch thick, 48" x maximum practical length with square edge.
 - .2 Product: Subject to compliance with requirements, provide SECUROCK Brand Glass Mat Sheathing by United States Gypsum Company or approved equal in accordance with B6.
- .5 **Glass mat roof board: to ASTM C 1177.**
 - .1 **Type and Thickness: Type X, 5/8 inch thick, 48" x maximum practical length with square edge.**
 - .2 **Product: Subject to compliance with requirements, provide DENS DECK Brand Glass Mat Roof Board by Georgia Pacific or approved equal in accordance with B6.**
- .6 Metal furring runners, hangers, tie wires, inserts, anchors: to CSA A82.30 galvanized.
- .7 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .8 Resilient drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.
- .9 Nails: to ASTM C514.
- .10 Steel drill screws: to ASTM C1002.

- .11 Stud adhesive: to CAN/CGSB-71.25.
- .12 Laminating compound: as recommended by manufacturer, asbestos-free.
- .13 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
- .14 Polyethylene: to CAN/CGSB-51.34, Type 1.
- .15 Insulating strip: rubberized, moisture resistant, 3 mm thick cork strip, 12 mm wide, with self sticking permanent adhesive on one face, lengths as required.
- .16 Joint compound: to ASTM C475, asbestos-free.
- .17 Sealants:
 - .1 In accordance with Section 07 92 00 - Joint Sealing.
 - .2 Acoustic sealant: in accordance with Section 07 92 00 - Joint Sealing.
 - .3 Sealant For Glass Mat Gypsum Sheathing Board: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials.
 - .4 Sealant for Glass-Mat Gypsum Sheathing Board: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing.
 - .5 Sheathing Tape for Glass-Mat Gypsum Sheathing Board: Self –adhering, glass fiber tape, minimum 2” wide for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing board.

2.2 FINISHES

- .1 Texture finish: asbestos-free [standard white] texture coating and primer-sealer, recommended by gypsum board manufacturer.

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 C 1280.
- .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, 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, 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, joists, 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 Apply single layer gypsum board to metal, wood furring or framing using screw fasteners. Maximum spacing of screws 300 mm on centre.
 - .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 in accordance with ASTM C840.
 - .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.
- .2 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 sealed with acoustic sealant.
- .3 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.
- .4 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.

- .5 Install gypsum board with face side out.
- .6 Do not install damaged or damp boards.
- .7 Locate edge or end joints over supports. Stagger vertical joints over different studs on opposite sides of wall.
- .8 Install glass mat water-resistant gypsum backing board behind ceramic tile finishes as indicated.

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 using contact adhesive for full length.
- .2 Install casing beads around perimeter of suspended ceilings and where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.
- .3 Install insulating strips continuously at edges of gypsum board and casing beads abutting metal window and exterior door frames, to provide thermal break.
- .4 Construct control joints of preformed units two back-to-back casing beads set in gypsum board facing and supported independently on both sides of joint.
- .5 Provide continuous polyethylene dust barrier behind and across control joints.
- .6 Locate control joints at changes in substrate construction, at approximate 10 m spacing on long corridor runs, at approximate 15 m spacing on ceilings.
- .7 Install control joints straight and true. Construct expansion joints as detailed at building expansion and construction joints. Provide continuous dust barrier.
- .8 Install expansion joint straight and true.
- .9 Install cornice cap where gypsum board partitions do not extend to ceiling.
- .10 Fit cornice cap over partition, secure to partition track with two rows of sheet metal screws staggered at 300 mm on centre.
- .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 ROOF BOARD INSTALLATION

- .1 Install roofing board in accordance with manufacturer's written instructions, local code requirements and Underwriters Laboratories (UL) requirements for proper installation.**

3.5 SCHEDULES

- .1 Construct fire rated assemblies where indicated, seal penetrations, as per Section 07 84 00 – Firestopping.

END OF SECTION