
**Washroom Buildings Recapitalization
Buildings 32, 34 & 38
Newman Sound Campground
Terra Nova National Park, NL
Proj. No.: R.079272.001**

Issued April 4, 2016

Section 09 21 16 – Gypsum Board Assemblies

Page 1 of 5

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 09 91 23 - Interior Painting

1.2 References

- .1 American Society For Testing And Materials (ASTM):
 - .1 ASTM A 653/A 653M-09 -Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process .
 - .2 AASTM C1396 / C1396M - 09 Standard Specification for Gypsum Board.
 - .3 ASTM C 475/C 475M-02(2007) - Specification For Joint Compound For Finishing Gypsum Board.
 - .4 ASTM C 840-08 - Specification for Application and Finishing Of Gypsum Board.
 - .5 ASTM C 919-08 Standard Practice for Use of Sealants in Acoustical Applications
 - .6 ASTM C 954-07 - Specification For Steel Drill Screws For The Application Of Gypsum Board Or Metal Plaster Bases To Steel Studs From 0.84 mm to 2.84 mm in thickness.
 - .7 ASTM C 1047-09 - Accessories For Gypsum Wallboard And Gypsum Veneer.
 - .8 ASTM C 1280-09 - Specification For Application Of Gypsum Sheathing Board.

1.3 Samples

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

1.4 Environmental Requirements

- .1 Maintain temperature minimum 10°C, maximum 21°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.

PART 2 - PRODUCTS

2.1 Materials

- .1 Gypsum board where indicated on drawings: to ASTM C 36, 16 mm thickness, 1220 mm wide x maximum practical length, ends square cut, tapered.

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Section 09 21 16 – Gypsum Board Assemblies

Page 2 of 5

- .2 Gypsum board where indicated on drawings as fire rated: to ASTM C 36, type X, fire rated, 16 mm thick, 1220 mm wide x maximum practical length, ends cut square, edges tapered.
- .3 Interior wall sheathing board at ceramic tile wall, where indicated on drawings: to ASTM C 1177/C 1177M, 16 mm thickness, 1220 mm wide x maximum practical length, ends square cut.
 - .1 Acceptable material: Dens-shield as manufactured by Georgia Pacific, Westroc, and USG, or an approved alternate.
- .4 Moisture and mold resistant gypsumboard: panels which have coated glass-mat facings and comply with both ASTM C 36/C 36M and ASTM C 1177/C 1177M.
 - .1 Acceptable material: DensArmor Plus Paperless Interior Panel as manufactured by Georgia Pacific, Westroc, and USG, or an approved alternate.
- .5 Metal furring runners, hangers, tie wires, inserts, anchors: to ASTM C 1047, galvanized.
- .6 Main ceiling runner channels: 41 mm in depth, 0.53 mm thickness galvanized steel channel sections.
- .7 Drywall furring channels: 0.53 mm thickness, 22 mm in depth, 70 mm wide, having a face width of 35 mm, 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 Screws: to ASTM C 954. Screws for attaching gypsum board to steel framing or furring: gypsum board screws type "S" minimum 32 mm long for first layer of gypsum board, 50 mm long for second layer of gypsum board.
- .10 Laminating compound: as recommended by manufacturer, asbestos-free.
- .11 Casing beads, corner beads fill type: 0.5 mm base thickness commercial grade sheet steel with Z275 zinc finish to ASTM A 525, perforated flanges; one piece length per location.
- .12 Joint compound: to ASTM C 475, asbestos-free.
- .13 Joint reinforcement: cross-laminated fibre tape with minimal longitudinal stretch and superior tensile strength, precreased along its mid-length for corner application, as recommended by the gypsum board manufacturer.
- .14 Control joints: roll-formed of zinc with an opening width of 6 mm, depth of 12 mm, for application at the face of the gypsum board, opening to be tape protected until crack filling is completed, as recommended by gypsum board manufacturer.
- .15 Partition fireproofing material: non-combustible, semi-rigid, mineral fibre felt.

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Section 09 21 16 – Gypsum Board Assemblies

Page 3 of 5

PART 3 - EXECUTION

3.1 Erection

- .1 Do work in accordance with ASTM C 840 and ASTM C 1280 except where specified otherwise.
- .2 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with manufacturer's instructions.
- .3 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .4 Install work level to tolerance of 1:1200.
- .5 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles, etc.
- .6 Locate hangers not more than 150 mm from the ends of main runners and furring channels. Locate hangers not more than 1,200 mm O.C. both ways.
- .7 Locate main runners not more than 150 mm from walls which are parallel to them or from ceiling interruptions and not more than 1,200 mm O.C.
- .8 Attach furring channels at right angles to main runners and space at not more than 600 mm O.C.
- .9 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .10 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.
- .11 Install wall furring for gypsum board wall finishes in accordance with manufacturer's instructions, except where specified otherwise.
- .12 Furr openings and around built-in equipment, cabinets, access panels, etc., on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
- .13 Furr duct shafts, beams, columns, pipes and exposed services.
- .14 Install furring channels spaced at 600 mm O.C. attached with anchors at 600 mm o/c maximum and staggered in alternate furring channel flanges.
- .15 Shim furring channels as required to provide straight surfaces.
- .16 Erect drywall resilient furring transversely across studs, spaced maximum 600 mm o/c and not more than 150 mm from ceiling/wall juncture. Secure to each support with 25 mm gypsum board screws.

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Section 09 21 16 – Gypsum Board Assemblies

Page 4 of 5

- .17 Install 150 mm continuous strip of 16 mm gypsum board along base of partitions where resilient furring is installed.

3.2 Application

- .1 Gypsum board is to be installed in accordance with ASTM C 840.
- .2 Do not apply gypsum board until bucks, anchors, blocking, electrical and mechanical work are approved.
- .3 Any joints between panels of the first layer of gypsum board, which are open and not tightly butted together, and broken corners of panels or other such openings, are to be filled with gypsum board crackfilling material, before application of second layer of gypsum board.
- .4 Where partitions are indicated on drawings to be fire rated or are around the perimeter of areas where the ceiling space is used as an air plenum, and occur directly under and parallel to open web joists, provide furring and gypsum board on each side of joists to carry partition up to the level of the underside of the deck above.
- .5 Gypsum board is to be carried down to within 3 mm of the floor slab. Gaps in the gypsum board behind bases will not be permitted.

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 oc.
- .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.
- .4 Construct control joints of preformed units set in gypsum board facing and supported independently on both sides of joint. In all partitions finished with two layers of gypsum board, the control joint is to be located in the outside layer of gypsum board only. The backup layer of gypsum board is to carry through unbroken behind the control joint.
- .5 Locate control joints at changes in substrate construction, at approximately 9,000 mm spacing on long partitions or furred surfaces, where indicated on drawings and in the following locations:
 - .1 Where a partition or furred surface abuts a structural element and the gypsum board carries straight through on the same plane.
 - .2 Where expansion or control joints occur in the backup wall.

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Section 09 21 16 – Gypsum Board Assemblies

Page 5 of 5

- .6 Install control joints straight and true.
- .7 Install access doors to electrical and mechanical fixtures specified in respective sections:
 - .1 Rigidly secure frames to furring or framing systems.
- .8 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.
- .9 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.
- .10 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.
- .11 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .12 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.
- .13 Where cutouts occur in gypsum board walls and ceilings, for electrical boxes, etc., fill the spaces between the boxes and the edges of the gypsum board with crack filler material.

3.4 Installation Of Partition Fireproofing Material

- .1 Where partitions are indicated on drawings to be fire rated, or partitions surrounding areas where the ceiling space is used as an air plenum, as indicated on drawings, close any spaces between the tops of partitions and the structure above using fireproofing completely filling the space above the partitions, including deck flute spaces where partitions run perpendicular to steel deck.
- .2 Fireproofing material is to extend the full width of the partition including all layers of gypsum board. Where partitions occur under a structural member and spaces occur between the top of the structural member and the deck flutes, fill the spaces both above and below the structural member in the same manner.
- .3 Close off any openings surrounding ductwork, piping, etc., which may occur in fire rated partitions, using fire barrier material.