

**SECTION 09 29 00  
GYPSUM WALLBOARD**

**PART 1 - GENERAL**

**1.01 SCOPE:**

- A. Provide all of the labor, materials, equipment and services to furnish and install the gypsum wallboard and the associated products.

**1.02 QUALITY ASSURANCE:**

- A. References:
  - 1. United States Gypsum Company "Gypsum Construction Handbook".
  - 2. Gypsum Association (GA) Publications.
- B. Regarding fabrication and installation of metal studs conform to the requirements of :
  - 1. ASTM C645
  - 2. ASTM C754
  - 3. IBC 2006.
- C. Fire-test-response characteristics: Where fire-rated assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- D. Single-source responsibility:
  - 1. Obtain steel framing members for gypsum board assemblies from a single manufacturer.
  - 2. Obtain each type of gypsum board and other panel products from a single manufacturer.
  - 3. Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.

**1.03 SUBMITTALS:**

- A. Prior to installation, submit to the Architect for review the following:
  - 1. Manufacturer's literature fully describing each product named which shall include, but not be limited to, the manufacturer's name and catalog number for each item.
  - 2. Accompanying the materials list, submit two (2) copies of the manufacturer's current recommended method of installation for each item.

**1.04 DELIVERY, STORAGE AND HANDLING:**

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Neatly stack gypsum panels flat to prevent sagging.
- C. Handle gypsum board to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

**1.05 PROJECT CONDITIONS:**

- A. Environmental conditions: Establish and maintain environmental conditions for applying and

finishing gypsum board to comply with ASTM C840 and with gypsum board manufacturer's recommendations.

- B. Room temperatures:
  - 1. Non-adhesive attachment of gypsum board to framing: Maintain not less than 40 deg. F.
  - 2. For adhesive attachment and finish of gypsum board: Maintain not less than 50 deg. F for 48 hours prior to application and continuously after until dry.
  - 3. Do not exceed 95 deg. F when using temporary heat sources.
- C. Ventilation: Ventilate building spaces, as required, for drying joint treatment materials. Avoid drafts during hot dry weather to prevent finishing materials from drying too rapidly.

## **PART 2 - PRODUCTS**

### **2.01 MANUFACTURERS:**

- A. The products of the following manufacturers are suitable for use:
  - 1. USG.
  - 2. National Gypsum/Gold Bond.
  - 3. G-P Gypsum Corp.
  - 4. Lafarge North America.
  - 5. BPB America.
  - 6. Temple-Inland.
  - 7. CertainTeed

### **2.02 GYPSUM WALLBOARD:**

- A. Water resistant:
  - 1. Standard:
    - a. 1/2" non-combustible gypsum core enhanced with water-resistant wax emulsion and with paper facings on front and long edges. Tapered edges.
    - b. Conform to "Specification for Gypsum Drywall", ASTM C 1396; Fed. Spec. SS-L-30d, Type VII, Grade W.
  - 2. Fire rated:
    - a. 5/8" non-combustible gypsum core enhanced with water-resistant wax emulsion and glass fibers and with paper facings on front and long edges. Tapered edges.
    - b. Conform to "Specification for Gypsum Drywall", ASTM C 1396 for type "X" gypsum board; Fed. Spec. SS-L-30d, Type VII, Grade W, X.
- B. Cement backer board for ceilings (at shower ceilings only):
  - 1. 1/2" sheets formed in a continuous process of aggregated Portland cement slurry with polymer-coated, glass-fiber mesh completely encompassing edges and back and front surfaces. Edges shall be formed smooth. Ends shall be square cut.
  - 2. Conform to ANSI A1 18.9-1992 for Test Methods and Specifications for CBU and ANSI 108.11-1992 for interior installation of CBU.
  - 3. Conform to ASTM E 136 for non-combustibility.
  - 4. Tape: 2" wide, alkali-resistant glass-fiber tape.
  - 5. Recycled content: 15% pre-consumer.

**2.03 COLD-ROLLED CHANNELS:**

- A. Description:
  - 1. 16-gauge galvanized steel for use in furring, suspended ceilings, and partition construction.
  - 2. Sizes: 3/4", 1-1/2", and 2" as required by the Drawings.

**2.04 METAL TRIM:**

- A. Trim:
  - 1. USG #200 series.
  - 2. All metal that shall be concealed when wall is finished out.
  - 3. Sizes to accommodate drywall thickness.

**2.05 HANGER AND TIE WIRE:**

- A. Soft annealed, low carbon steel wire, zinc-coated.
  - 1. No. 9 gauge for hanger wire.
  - 2. No. 18 gauge for tie wire.

**2.06 JOINT TREATMENT:**

- A. All products to comply with ASTM C-475, "Joint Treatment Materials for Gypsum Wallboard Construction".
  - 1. Joint reinforcing tape: USG Perf-A-Tape Reinforcing Tape.
  - 2. Joint compounds: USG All-purpose Joint Compound.

**2.07 OTHER MATERIALS:**

- A. All other materials, not specifically described but required for a complete and proper installation of gypsum drywall, shall be as selected by the Contractor subject to the approval of the Architect.

**PART 3 - EXECUTION**

**3.01 GENERAL:**

- A. All materials shall be installed in accordance with the manufacturer's current printed directions, approved submittals and the Contract Documents. In the case of a conflict between these instructions, the most stringent condition shall preside.

**3.02 CEILING INSTALLATION:**

- A. Grillage erection:
  - 1. Space hanger wires 48" o.c. along carrying channels and within 6" of ends of carrying channel run.
  - 2. Install 1-1/2" carrying channels 48" o.c. and within 6" of walls. Position channels for proper ceiling height, level and secure with hanger wire saddle-ties along channel. Provide 1" clearance between runners and abutting walls and partitions. At channel splices, interlock flanges, overlap ends 12" and secure each end with double-strand 18 ga. tie wire.
  - 3. Erect metal furring channels at right angles to 1-1/2" carrying channels or main supports. Space furring channels 16" o.c. and within 6" of walls. Provide 1" clearance between furring ends and abutting walls and partitions. Secure furring to carrying channels with clips or wire-tie to supports with double-strand 18 ga. wire. At splices, nest furring

- channels at least 8" and securely wire-tie each end with double-strand 18 ga. wire.
4. At light troffers or any openings that interrupt the carrying or furring channels, install additional cross reinforcing to restore lateral stability of grillage.

**3.03 GYPSUM PANEL INSTALLATION - GENERAL:**

- A. Install and finish in accordance with ASTM C840 and gypsum wallboard manufacturer's recommendations.
- B. Install ceiling board panels across framing to minimize the number of abutting end joints and avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels together for a light contact at edges and ends with not more than 1/16" of open space between panels. Do not force into place.
- D. Locate both edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Position adjoining panels so that tapered edges abut tapered edges, and field-cut edges abut field-cut edges and ends. Do not place tapered edges against cut edges or ends.
- E. Attach gypsum panels to framing provided at openings and cutouts.
- F. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.
- G. Coordinate work with that of other Trades. Neatly cut face boards to fit around penetrations through wall. Provide suitable back-up anchorage as required for the attachment of shelves and cabinets.
- H. Screw heads shall provide a slight depression below the surface of the board. Do not install screw closer than 3/8" from edges and ends of the board.
- I. Treat joints, screw head depressions, or defects incurred during the installation of the gypsum board in prescribed manner with joint treatment.
- J. Properly space all fasteners in careful accordance with the manufacturer's recommendations and code requirements with heads driven slightly below the surface for proper cementing but without breaking the paper cover.
- K. Loosely butt all joints to be taped; firmly butt all joints to be left untreated.
- L. Stagger all end joints and the joints between panels to achieve a maximum of bridging and a minimum of continued joints.

**3.04 INSTALLING TRIM AND ACCESSORIES:**

- A. The Drawings do not purport to show all trim required; verify with the Architect the precise locations and types of trim to be used.
- B. In addition to locations shown on Drawings, install trim at ceiling angles and around cut-onto and openings.
- C. Install all trim in strict accordance with the manufacturer's recommendations, paying particular attention to make all trim installation plumb, level, and true to line, with firm attachment to

supporting members.

- D. For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.
- E. Reinforce all vertical and horizontal exterior corners with corner bead fastened with 9/16" rosin-coated staples 9" o.d. on both flanges along entire length of bead.
- F. Metal trim: Where assembly terminates against masonry or other dissimilar material, apply metal trim over panel edge and fasten with screws or 9/16" rosin-coated staples 12" o.c. Install edge trim where edge of gypsum panels would otherwise be exposed or semi-exposed. Provide edge trim type with face flange formed to joint compound.

### **3.05 FINISHING GYPSUM BOARD ASSEMBLIES:**

- A. General: Apply joint treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joints; penetrations; fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration and levels of gypsum board finish indicated.
- B. Prefill open joints, rounded or beveled edges, and damaged areas using setting-type joint compound.
- C. Apply joint tape over gypsum board joints and to rim accessories with concealed face flanges as recommended by trim accessory manufacturer and as required to prevent cracks from developing in joint compound at flange edges.
- D. Levels of gypsum board finish:
  - 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire-resistive-rated assemblies and sound-rated assemblies.
  - 2. Level 2: Water-resistant gypsum or tile backer boards form substrates for tile, and where indicated.
  - 3. Level 3: Gypsum board surfaces indicated to receive medium or heavy-textured finishes before painting.
  - 4. Level 4: Gypsum board surfaces indicated to receive light-textured finishes, wall coverings, and flat paints over light textures and gypsum board surfaces indicated to receive gloss and semi-gloss enamels, non-textured flat paints, and where indicated.

### **3.06 APPLICATION OF PERIMETER CAULKING:**

- A. Apply sound caulking where any wall is designated to receive sound blankets. Apply sealant around all cut-outs and all intersections with adjoining structures.
- B. Cut panels for loose fit around perimeter. Leave a groove no more than 1/8" wide. Apply a 1/4" minimum round bead of sealant each side of runners including those used at partition intersections with dissimilar wall construction. Immediately install panels, squeezing sealant into firm contact with adjacent surfaces. Fasten panels in normal manner over sealed joints.
- C. Seal partitions intersecting sound-isolating partitions that are extended to reduce sound flanking paths.

**3.07 EXPANSION CONTROL:**

- A. Panel surfaces shall be isolated with control joints or other means where:
  - 1. Ceiling abuts a structural element, dissimilar wall or partition or other vertical penetration;
  - 2. Construction changes within the plane of the partition or ceiling;
  - 3. The area within separate ceiling sections exceeds 2,500 sq. ft.;
  - 4. Wings of "L", "U", and "T" shaped ceiling areas are joined.
- B. The location of all control joints shall be verified with the Architect.

**3.08 CLEANING UP:**

- A. Do not allow the accumulation of scraps and debris arising from the work of this Section but maintain the premises in a neat and orderly condition at all times; in the event of spilling or splashing compound onto other surfaces, immediately remove the spilled or splashed material and all trace of the residue to the approval of the Architect.

**- END OF SECTION -**