

**SECTION 09 29 00
GYPSUM BOARD SYSTEM**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work in this section.

1.2 SECTION INCLUDES

- A. Gypsum Board Partition Systems
- B. Gypsum Board Accessories
- C. Joint Treatment
- D. Textured Finish

1.3 REFERENCES

- A. ASTM C1396/C1396M – Standard Specification for Gypsum Board
- B. ASTM C475 – Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members
- D. ASTM C754 – Standard Specification for Installation of Steel Framing Members to Receive Screw Attached Gypsum Panel Products
- E. ASTM C919 – Standard Practice for Use of Sealants in Acoustical Applications
- F. ASTM E695 – Standard method for Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact loading
- G. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- H. ASTM D5420 – Standard Test Method for Impact Resistance of Flat Rigid Plastic Specimen By Means of a Striker Impacted by Falling Weight (Gardner Impact)
- I. ASTM E119 – Standard Test Methods for Fire Tests of Building Construction and Materials
- J. ASTM C840 – Standard Specification for the Application and Finishing of Gypsum Board
- K. GA-216 –Application and Finishing of Gypsum Panel Products
- L. GA-600 – Fire Resistance Design Manual
- M. Florida Building Code (FBC)

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data sheets and printed installation instructions for each product or system proposed for use.

1.5 QUALITY ASSURANCE

- A. Perform gypsum board systems work in accordance with recommendations of ASTM C754, C840, and GA-216 except as otherwise specified in this Section.
- B. Regulatory Requirements:
 - 1. Fire-rated Assemblies: Listed and rated by Underwriter's Laboratories, Inc. or generic fire resistance ratings listed in GA-600.
 - 2. Fire-Hazard Classification: Listed and labeled by Underwriter's Laboratories, Inc.

1.6 COORDINATION

- A. Prior to and during installation, coordinate with work of other trades to facilities required openings and finishes.
- B. Conduct pre-construction meeting with drywall contractor, architect, owner, project coordinator, and others involved with process.

1.7 DELIVERY, STORAGE AND HANDLING

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- A. Store the material off the floor in dry area to prevent damage from moisture or excessive handling.
- B. Follow manufacturer's requirements for on-site storage and handling of materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. U.S. Gypsum Co products listed as a standard of quality.
- B. Use products manufactured by United States based companies only, do not use drywall manufactured in China.
 - 1. National Gypsum Corp
 - 2. U.S. Gypsum Corp
 - 3. Georgia-Pacific Corp
 - 4. Lafarge North America Inc
 - 5. Other approved equal
- C. All gypsum board products shall have minimum mold growth ASTM D3273 rating of 10.

2.2 MATERIALS

- A. Furring Channels: USG metal stud channel, 1½" deep, roll-formed sections of 20-ga galvanized steel, ASTM C645
- B. Gypsum Wallboard (General and above 8' AFF): ½" thick, ASTM C1396/C1396M, tapered edge, fire rated Type X. (Note: At radius walls the Contractor has the option to install ¼" and/or ⅜" thick gypsum wallboard in layers.)
- C. Gypsum Wallboard (Corridors, stairways, cafeteria, stage, and gymnasium up to at least 8' AFF minimum): Abuse resistant brand, ½" thick, ASTM C1396/C1396M, tapered edge, fire rated Type X. (Note: At radius walls the Contractor has the option to install ¼" and/or ⅜" thick gypsum wallboard in layers.)
 - 1. Acceptable abuse resistant drywall:
 - a. Fiber Rock VHI by USG
 - b. Hi-Abuse-XP Gypsum Wallboard by National Gypsum
 - c. DensArmor by Georgia Pacific
 - d. Protecta AR 100 by LaFarge
 - e. Or approved equal
- D. Water Resistant Gypsum Wallboard: ½" thick, tapered edge
 - 1. Provide at "wet" areas (areas subject to contact with water), as shown on plans.
 - 2. Wet locations use DensArmor Plus Interior Guard or equal product by other approved manufacturers in 2.1 of this section.
 - 3. If for ceramic tile backing, use DensShield Tile Guard by GP or equal product by other approved manufacturers in 2.1 of this section.
- E. Exterior Gypsum Soffit Board: Standard or Fire Rated type, tapered edges, ends square cut, ASTM C931.
- F. Gypsum Backing Board: Standard or Fire Rated type, square edges, ASTM C1396/C1396M.
- G. Gypsum Sheathing 5/8" thick exterior water resistant board for metal framing systems with book tongue and grooved edges.
 - 1. Acceptable product shall be DensGlass Gold Exterior Guard, or similar product by other approved manufacturers in 2.1 of this section.
- H. Compounds: Pre-fill powdered joint compound, laminating adhesive, taping compound and topping compound, ASTM C475.
- I. Joint Tape; use perforated tape per ASTM C475.

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- J. Fasteners; Self-drilling, self-tapping bugle head screws, Type S12 and GA 216, length required for each assembly.
- K. Metal Accessories:
 - 1. Corner Beads; Dur-A-Bead No. 101, galvanized or plastic.
 - 2. Metal Trim (Casing Bead): No. 200-A or 200-B metal trim, galvanized or plastic.
- L. Interior Expansion Joint Covers: Balco Inc. or equal;
 - 1. Walls – Use Type 6ADW-1 and 6ADWC-1 or type as recommended by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine adjacent construction for conditions that prevent proper installation of drywall systems.
- B. Do not proceed until defects are corrected.

3.2 METAL FRAMING INSTALLATION

- A. General:
 - 1. Install metal framing in accordance with ASTM C754 except as otherwise specified.
 - 2. Install the members true to line and level to provide surface flatness with maximum variation of $\frac{1}{8}$ " in 10' in any direction.
 - 3. Install metal studs at 16" o.c. unless noted otherwise.
- B. Metal Furring Channels
 - 1. Secure to masonry walls and around door and window openings, intersections, and corners with low velocity power driven anchors.
 - 2. Install metal furring at 16" o.c. vertically.
 - 3. Extend furring on exterior walls full height of wall.

3.3 GYPSUM BOARD SYSTEM INSTALLATION

- A. Install in strict accordance with GA-216 and GA-600, do not install until building is dried in.
- B. Maximum variation in flatness required is $\frac{1}{8}$ " in 10'.
- C. Install sound-attenuation blankets, where indicated, prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.
- D. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling.
 - 1. Stagger abutting end joints of adjacent panel not less than one framing member.
- E. Install gypsum panels with face side out.
 - 1. Do not install imperfect, damaged, or damp panels.
 - 2. Butt panels together for a light contact at edges and ends with not more than $\frac{1}{16}$ " of open space between panels.
 - 3. Do not force into place.
- F. Locate both edge or end joints over supports, except in ceiling applications where providing intermediate supports or gypsum board back blocking behind end joints.
 - 1. Do not place tapered edges against cut edges or ends.
 - 2. Stagger vertical joints on opposite sides of partitions.
 - 3. Avoid joints other than control joints at corners of framed openings where possible.
- G. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- H. Attach gypsum panels to framing provided at openings and cutouts.
- I. Spot grout hollow metal doorframes for solid-core wood doors, and hollow metal doors.
 - 1. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.

- J. Form control and expansion joints at locations indicated and as detailed, with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels.
 - K. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Except in concealed applications indicating or requiring sound, fire, air, or smoke ratings, may use scraps of not less than 8 sf in.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow $\frac{1}{4}$ " - $\frac{3}{8}$ " wide joints to install sealant.
 - L. Isolate perimeter of non load-bearing gypsum board partitions at structural abutments, except floors, as detailed.
 - 1. Provide ($\frac{1}{4}$ " - $\frac{1}{2}$ " wide spaces at these locations and trim edges with U-bead edge trim where edges of gypsum panels are exposed.
 - 2. Seal joints between edges and abutting structural surfaces with acoustical sealant.
 - M. In STC-rated gypsum board assemblies, seal construction at perimeters, behind control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant at both faces of the partitions.
 - 1. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.
 - N. Space the fasteners in gypsum panels according to GA-216, finishing standard, and manufacturer's recommendations.
- 3.4 ACCESSORIES INSTALLATION
- A. Corner Beads: Install on external corners, with screws spaced 8" o.c. both sides.
 - B. Trim: Install over face-layer gypsum board with fasteners spaced 8" o.c. Install where gypsum board surfaces meet dissimilar surfaces and at other detailed locations.
 - C. Corner beads and trim may be either galvanized metal or plastic.
- 3.5 JOINT TREATMENT
- A. Treat joints, interior angles, fastener depressions, and finishing trim on face-layer gypsum board, including gypsum board in ceiling plenums.
 - B. Pre-fill, tape, fill, and finish in accordance with manufacturer's directions.
 - C. Apply a thin skim coat of joint compound over entire surface of gypsum board.
 - D. Sand finish coat and leave surfaces smooth, uniform, and free of fins, depressions, cracks and other imperfections (Level 4 finish).
 - E. Joints and fasteners in ceiling plenums or other unexposed areas may be taped only (1 coat) provided the joints are completely sealed.

END OF SECTION