

The School District of Palm Beach County

Project Name

SDPBC Project No.

**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.

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1.7 DELIVERY, STORAGE AND HANDLING

- 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: **ClarkDietrich** metal stud channel, 1½" deep, roll-formed sections of 20-ga galvanized steel, **AISI S220**.
- 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.

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- I. Joint Tape; use perforated tape per ASTM C475.
- 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