

SECTION 09250 - GYPSUM BOARD

City of San Diego, CWP Guidelines

PART 1 -- GENERAL

1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing gypsum board over wood or light gauge metal framing and furring members, and providing ceiling suspension and furring systems for gypsum board ceilings wherever wood ceiling joists are not indicated, and all appurtenant work, complete.

1.2 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.
 - 1. Section 06100 Rough Carpentry
 - 2. Section 07920 Sealants and Caulking

1.3 CODES

- A. The WORK of this Section shall comply with the current editions of the following codes as adopted by the City of San Diego Municipal Code:
 - 1. Uniform Building Code
 - 2. Uniform Fire Code

1.4 SPECIFICATIONS AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the WORK of this Section:

- 1. **Federal Specifications:**

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| QQ-W-461 | Wire, Steel, Carbon (Round, Bare, and Coated) |
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- 2. **Commercial Standards:**

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| ASTM C 36 | Specification for Gypsum Wallboard |
| ASTM C 208 | Specification for Insulating Board (Cellulosic Fiber), Structural and Decorative |
| ASTM C 475 | Specifications for Joint Treatment Materials for Gypsum Wallboard Construction |
| ASTM C 514 | Specification for Nails for the Application of Gypsum Wallboard |

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| ASTM C 630 | Specification for Water-Resistant Gypsum Backing Board |
| ASTM C 645 | Non-Load (Axial) Bearing Steel Studs, Runners (Track), and rigid Furring Channels for Screw Application of Gypsum Board |
| ASTM C 754 | Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board, or Water-Resistant Backing Board |
| ASTM D 2626 | Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing |

3. Trade Standards:

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| GA-203-71 (Gypsum Assn.) | Installation of Screw-Type Steel Framing Members to Receive Gypsum Board |
| GA-216-85 (Gypsum Assn.) | Recommended Specifications for the Application and Finishing of Gypsum Board |
| GA-600-78 (Gypsum Assn.) | Fire Resistance Manual |

1.5 SHOP DRAWINGS AND SAMPLES

- A. The following shall be submitted in compliance with Section 01300:
 - 1. Manufacturer's literature, installation instructions, and samples of metal trim and furring devices.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. **Delivery of Materials:** Manufactured materials shall be delivered in original unbroken packages, containers, or bundles bearing the manufacturer's name and product description and rating.
- B. **Storage:** All materials shall be carefully stored in an area which is protected from deleterious elements in a manner recommended by the material manufacturer. Storage shall be in a manner that will prevent damage to the material and its finish.

PART 2 -- PRODUCTS

2.1 GENERAL

- A. **Manufacturers' Standards:** The gypsum board products shall be in accordance with the manufacturer's literature and published specifications for the products indicated.
- B. **Labelling:** Fire-rated materials shall bear testing agency labels and required fire classification numbers.

2.2 GYPSUM BOARD

- A. **General:** All gypsum board shall be fire-rated unless otherwise indicated.
- B. **Gypsum Board:** All gypsum board shall be 5/8-inch thick and provided with tapered edges unless otherwise indicated.

- [1. Regular gypsum board shall conform to ASTM C 36, unless otherwise indicated.]
- 2. Fire-rated gypsum board shall conform to ASTM C 36, type "x", unless otherwise indicated.
- 3. Water-resistant gypsum board shall conform to ASTM C 630, regular, type "x".
- 4. Tile backing board shall be a Portland cement slurry, reinforced with fiber glass mesh and coated vinyl board. The board shall be not less than 1/2-inch thick and shall be designed for use behind tile.
- 5. Sound deadening board shall conform to ASTM C 208 (wood fiber) Class A.
- 6. Foil backed gypsum board shall conform to ASTM C 36, type "x", with laminated foil on the back surface.

2.3 TAPE AND COMPOUND

- A. Joint reinforcing tape and joint compound shall conform to ASTM C 475.

2.4 FASTENERS

- A. Nails shall conform to ASTM C 514, and shall be of the length recommended by the Gypsum Association referenced standards and the Uniform Building Code for various gypsum board thicknesses. Nails for nailing tile backing board to wood studs shall be 1-1/4-inch galvanized roofing nails unless otherwise required by UBC, and board manufacturer.
- B. Screws shall be self-drilling, self-tapping, bugle head for use with power tools, length as recommended by Gypsum Association referenced standards and the Building Code.
 - 1. Type "S" for board to sheet metal application.
 - 2. Type "W" for board to wood application.
 - 3. Type "G" for board to board application.
 - 4. Type "S" or "S-12", 1-1/4-inch for tile backing board to metal studs application.
- C. Resilient channels shall be metal channels designed for use with sound wall construction. They shall be as recommended and approved by the gypsum board manufacturer and code.

2.5 ADHESIVES

- A. Adhesives for fastening gypsum board to gypsum board shall be in accordance with the printed recommendations of the gypsum board manufacturer.

2.6 ACCESSORIES

- A. Metal trim, corner beads, edge, casing beads, and accessories shall be manufactured from galvanized sheet steel unless otherwise indicated and shall be manufacturer's standard products. Special shapes shall be provided where indicated.

2.7 ACCESS PANELS

- A. Access panels shall be suitable for flush installation. Cylinder locks shall be provided where indicated.
- B. In fire-rated construction, both wall and ceiling access panels shall have a fire rating equivalent to the adjoining work.

2.8 WATERPROOF MEMBRANE

- A. Waterproof membrane shall be asphaltic saturated 43 lb (vapor-retarder) membrane conforming to ASTM D 2626 Type 1, 25 lb/100 sq ft minimum or 10-mil polyethylene film membrane.

[2.9 FRAMING MEMBERS]

- [A. Light-gauge, non-load-bearing steel framing shall comply with ASTM C 645 and shall be provided wherever another system is not indicated.]
- [B. Metal furring channels for ceilings and walls shall be galvanized steel designed for screw attachment of 5/8-inch gypsum board. The furring channel shall be not less than 7/8-inch deep and 2-3/4-inch wide.]
- [C. Channels shall be hot-rolled or cold-rolled steel, free of rust; shall be given a coating of protective paint; and shall be of the size set forth in the UBC for the span and load imposed.]
- [D. Tie wire or clips used for securing cross-furring to primary members shall be galvanized, soft annealed steel wire. The weight of galvanizing shall be not less than Class 1 as set forth in Federal Specifications QQ-W-461. Tie wire gauge shall be as set forth in the UBC.]
- [E. Wire hangers supporting main runners in suspended ceilings shall be galvanized steel and the weight of galvanizing shall be not less than Class 1 as set forth in Federal Specifications QQ-W-461. The gauge of galvanized steel hanger wire shall be as required under the UBC.]

2.10 MANUFACTURERS

- A. Products shall be of the following type and manufacture (or equal):
 1. Tile backing board: United States Gypsum's "Durock Board"; Laticrete International's "Latipanel."
 2. Gypsum board: Laticrete International; National Gypsum Co.; United States Gypsum Co.
 3. Access Panel: Milcor "Type DW"; Boice "Type C."

PART 3 -- EXECUTION

3.1 GENERAL

- A. Gypsum board installation and fire-rated gypsum board construction shall conform to applicable codes, reference standards, manufacturers printed recommendations, and Gypsum Association's printed recommendations.
 - 1. Gypsum board shall be applied first to ceiling and then to walls. Wall application shall be horizontal (right angles to framing), or vertical (parallel to framing), conforming to reference standards.
 - 2. All gypsum board shall be screw fastened to metal framing and furring, and/or nail or screw fastened to wood framing and furring. Fastener spacing shall be per reference standards.
 - 3. Multi-layer application shall be per reference standards indicated and manufacturers recommendations.
 - 4. Resilient channels and multi-layer gypsum board shall be furnished, installed and constructed where sound walls are indicated.
 - 5. Gypsum wallboard surface finish shall be three coat work.
 - 6. Installation of steel framing shall be in accordance with ASTM C 754 and UBC.
- B. Access panels shall be provided where indicated or where required for access to valves and equipment.

3.2 CEILING SYSTEM FIRE RATING

- A. Where a fire rating is indicated, the complete ceiling system shall meet the requirements for the rating indicated. The system shall conform to governing codes and shall meet UL requirements for the approved system.

3.3 INSTALLATION OF METAL ACCESSORIES

- A. Metal edge trim shall be applied at all discontinued edges, where abutting with another material, and where indicated. Corner beads shall be applied at all exterior corners.
- B. All metal accessories shall be set plumb, level, and true and shall be shimmed where necessary. The accessories shall be mitered at corners; exposed joints shall be accurately and tightly fitted. Sections shall be installed in lengths as long as practicable and splices shall be held to a minimum.
- C. All accessories, trim, and beads shall be securely fastened to framing members.

3.4 EDGE SEALING

- A. All cut, broken, or exposed edges of moisture-resistant gypsum board shall be sealed with a sealer recommended in the printed standards of the gypsum board manufacturer.

3.5 SURFACE FINISH

- A. All gypsum board joints shall be taped, and all joints, end trim, corner beads, fastener, and other depressions shall be treated with joint and finishing compounds applied per manufacturer's printed recommendations for three coat work.
- B. The gypsum board shall be sanded smooth, dusted, and provided with a textured [orange peel] [roller] [fog and splatter] [smooth sealer] finish coat.
- C. Gypsum board behind vinyl wall covering and wood paneling shall be left with a sanded, flush, and smooth finish surface ready for painting.
- D. Gypsum board at non-visible locations, such as within attics, shall be finished as required for fire protection.

3.6 RECESSED LIGHT FIXTURES

- A. Light fixtures, speakers, and other recessed items in rated ceilings shall be provided with gypsum board enclosures as required for rated ceiling system.

3.7 ATTIC SEPARATIONS

- A. Gypsum board attic separations, with framing if necessary, shall be provided where shown and shall be installed and taped per UBC. Access doors shall be self-closing, and return air openings shall be equipped with fusible fire links and self-closures.

3.8 TILE BACKING

- A. **General:** All tile at toilets, locker rooms, showers, laundries, wash areas, and wet or moist areas shall be mortar set. Tile backing board shall be installed behind all tile walls which are not indicated to have mortar set tiles. Backing board shall be installed per manufacturer's published instructions.
- B. **Backing Surface Treatment:** Gypsum drywall backing surfaces shall have all nails and screws recessed. Joints shall be taped and all joints, nail, and screw depressions shall be floated.
- C. **Finish:** The finish surface shall be a sanded, dusted, and smooth finish ready for application of finish material. Joints or any other irregularities of backing surfaces shall not be visible.
- D. **Shower:** Tile backing board at showers shall be installed over a waterproof membrane.

3.9 CEILING SYSTEM

- A. The seismic restraint systems shall conform to code and shall be provided in all locations required by code.
 1. Ceiling systems shall be provided with diagonal bracing wires. Horizontal restraints shall be four No. 23-gauge wires secured to the main beans within 2 inches of the cross tee intersection and splayed 90 degrees from each other at an angle not exceeding 45 degrees from the plane of the ceiling. These horizontal restraint points shall be placed not more than 12 feet on center in both directions with the first point within 4 feet from each wall. The restraint wire attachment to the supporting structure

shall be adequate for the loads imposed. Side wall ties shall be provided where necessary.

2. Ceiling system shall be provided with a vertical restraint system to resist seismic uplift movements. The system shall be vertical metal struts attached to the main [channel] [tees], [runners], and fastened, secured and anchored to the underside of the structural system above. Restraint locations shall be not less than required by code and at horizontal restraint locations.
- B. Lighting fixtures, air diffusers, speakers and other embedments shall be coordinated to provide the ceiling design and to prevent interferences with the locations of the embedded items and the ceiling system.

**** END OF SECTION ****