

SECTION 09 21 00

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for patching existing and providing new gypsum board systems at walls and ceilings and associated accessories per drawings.

1.02 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of Section 01600.
- B. Deliver fire-rated materials bearing the testing authority's label and fire-rating classification.
- C. Stack sheets so that long lengths are not over short lengths.
- D. Handle sheets carefully to avoid damaging faces and edges.

1.03 ENVIRONMENTAL REQUIREMENTS

- A. Temperature: Maintain ambient air temperature between 55 and 70 degrees F for 24 hours before, during, and after gypsum board and joint treatment application.
- B. Ventilation: Provide ventilation during and after adhesive and joint treatment applications; use temporary air circulators in areas lacking natural ventilation.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Materials shall all be the products of the same manufacturer, or be recommended by the gypsum board manufacturer for use with his products.

2.02 GYPSUM BOARD

- A. Finish Gypsum Board: ASTM C 36 Type 'X', with tapered and wrapped long edges; of thickness indicated, containing recycled gypsum core and 100% recycled paper facing.
- B. Water-Resistant Gypsum Board at ALL bathrooms and restrooms, all buildings: ASTM C 630 Type 'X', with tapered and wrapped long edges; of thickness indicated, containing recycled gypsum core and 100% recycled paper facing.

2.03 SOUND ISOLATION MATERIALS

- A. Acoustical Sealant: ASTM C919, type recommended for use in conjunction with gypsum board.
 - 1. Type: paintable, non-shrinking and non-cracking where exposed, nondrying, nonskinning, nonstaining, and nonbleeding where concealed.
- B. Compressible Tape: Closed-cell neoprene tape with adhesive back, Norton "Norseal V-730," Pemko "Weatherstrip Tape," or equal, of width and thickness required for the conditions of installation.

2.04 ACCESSORIES

- A. Fasteners, Corrosion-Resistant: ASTM C 1002, bugle-head, Type W screws, of length to penetrate supporting wood not less than 1/4 inch nor more than 1/2 inch.
- B. Metal Trim: ASTM B 633, Type GS, standard type galvanized steel fabrications as follows, unless otherwise indicated.
 - 1. Corner Beads: Fine mesh, expanded-flange type, USG No. 800, or equal.
 - 2. Edge Trim: Channel type casing bead, 1/2-inch or 5/8-inch size, for thickness of gypsum board with which used, USG No. 801-A or 801-B.
- C. Joint-Treatment Materials: ASTM C 475; perforated joint tape; lime joint compound – all-purpose joint compound containing inert fillers and natural binder; prefill joint compound in conformance with UBC Standard No. 47-6.
- D. Trim Adhesive: Type recommended by metal trim manufacturer.
- E. Fiberglass Reinforcing Tape: Self-adhering type.
- F. Miscellaneous Materials: Furnish all miscellaneous materials necessary for a complete installation, whether or not such products are specifically indicated or specified.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are satisfactory for installation of gypsum board. If unsatisfactory conditions exist, do not begin installation until such conditions have been corrected.

3.02 PREPARATION

- A. Repair or replace improperly spaced and aligned framing, twisted and otherwise defective framing, and improperly placed and defective door frames.
- B. Fill gaps with compressible neoprene tape where gypsum board partitions abut window mullions or other surfaces, as indicated.

3.03 APPLICATION

- A. General: Apply materials in conformance with ASTM C 840, UBC Chapters 43 and 47, the manufacturers' printed instructions, and as indicated.
- B. Gypsum Board:
1. Install water-resistant gypsum board at ALL bathroom and toilet room walls. See Section 09310 for ceramic tile substrates.
 2. Requirements of rated wall assemblies supercede any requirements indicated in this section.
 3. Apply sheets to framing using sheets of maximum size practical to minimize joints, neatly fitting edges and staggering joints.
 4. Cut and fit neatly around penetrations, locating back-to-back penetrations a minimum of one stud space apart to provide for the installation of insulation.
 5. For vertical surfaces, apply sheets with long edges parallel to supporting studs, centering abutting edges on a stud. Locate edge joints on different studs for sheets on opposite sides of partitions, and for successive layers of double-layer construction.
 6. For horizontal surfaces, apply sheets with long edges perpendicular to supporting studs, centering abutting ends on a joist, and staggering end joints in adjacent rows.
 7. Seal penetrations and cuts in acoustical partitions with a full bead of acoustical sealant at perimeter. Seal electrical boxes, washing machine boxes, and telephone plates on the back side with a sheet sealant pad; where wires enter boxes, seal openings airtight around wires and knockout openings.
 8. Provide perimeter relief where gypsum board abuts other construction; finish edge of gypsum board with metal casing bead, sealing space between casing bead and structure with continuous sealant bead; seal at base of sheets as indicated.
 9. Clean and prime existing steel subframes at jambs and head of existing windows prior to installation of gypsum board and sealant to allow bonding of sealant to frame. No part of existing steel subframes shall be exposed to view at the jambs and head.
- C. Accessories:
1. Locate fasteners not more than 3/8 inch from edges and ends of sheets. Drive shanks perpendicular to surface of sheets, using power driver. Install screws using guns with magnetic bit and depth locator; do not hammer screws.
 2. Set fastener heads slightly below surface of sheets, taking care not to break or strip paper face of sheets around fasteners. Stagger fasteners opposite each other on adjacent ends and edges. Omit fasteners at edges where metal edge trim will be installed.
 3. Use floating-type interior angle construction for partitions where indicated or recommended by gypsum board manufacturer.
 4. Locate fasteners along perimeter edge bearings and field bearings at not more than 12 inches on centers; do not locate fasteners on any bearing closer than 8 inches below top tracks of partitions secured to overhead structures.
 5. Install metal trim at vertical and horizontal external corners and angles, junctions of gypsum board with other materials, unless otherwise indicated, and at exposed edges.
 6. Apply fiberglass reinforcing tape at wall and corner junctures where new gypsum board abuts existing plaster.
- D. Tolerances:

1. There shall be no measurable variation in any two-foot direction in gypsum board application, nor a maximum variation exceeding 1/8 inch in ten feet when a straightedge is laid on the surface in any direction.
 2. Planes of abutting sheets shall not exceed a 1/16 inch offset.
- E. Taping and Finishing:
1. Mix and apply joint compounds. Center joint tape over joint, embedding tape in a uniform layer of joint compound sufficiently thick and wide to ensure complete bond; apply skim coat while embedding tape.
 2. Apply tape and metal trim to corners and angles, positioning straight and true to line.
 3. Allow a minimum of 24 hours' drying time between applications of joint and finishing compounds.
 4. Apply three coats minimum finishing compound over joint compound and tape, applying as many coats as necessary to ensure that joints and depressions will be invisible after application of finish.
 - a. Apply first coat of finishing compound evenly, feathering out beyond edges of tape and joint compound.
 - b. After first coat has dried, apply second coat, feathering edges out beyond edges of preceding coat.
 - c. Apply third coat in same manner as specified for second coat.
 5. Apply one coat of joint compound and two coats minimum of finishing compound to dimples at fastener heads and marred spots on face of sheets; apply in same manner as previously specified.
 6. Conceal exposed flanges of metal trim with two coats minimum of finishing compound, extending compound 8 to 10 inches on each side of trim piece.
 7. Lightly sand joints after each application of joint and finishing compound has dried.
 8. Finished surfaces shall be plumb and even within specified tolerances.
 9. Match existing adjacent finish, unless otherwise indicated, to match approved sample.
 10. **All new location gypsum board match existing gypsum board finish or a minimum Level 3 application.**

3.04 COMPLETION

- A. After completion of installation, maintain temperature and humidity conditions in accordance with the gypsum board manufacturer's printed instructions.

END OF SECTION - 09 21 00