

CONSTRUCTION STANDARD SPECIFICATION

SECTION 09250

GYPSUM DRYWALL

Page

PART 1 – GENERAL

1.01	Summary	2
1.02	References	2
1.03	Submittals	3
1.04	Quality Assurance	4
1.05	Delivery, Storage, And Handling.....	5
1.06	Project Conditions.....	5

PART 2 – PRODUCTS

2.01	Manufacturers	5
2.02	Steel Framing Components For Suspended And Furred Ceilings	6
2.03	Steel Framing For Walls And Partitions	6
2.04	Gypsum Board	7
2.05	Trim Accessories	9
2.06	Gypsum Board Joint Treatment Materials	10
2.07	Miscellaneous Materials	10

PART 3 – EXECUTION

3.01	General, Installation Of Steel Framing	11
3.02	Installation Of Steel Framing For Suspended And Furred Ceilings	12
3.03	Installation Of Steel Framing For Walls And Partitions.....	12
3.04	Application And Finishing Of Gypsum Board	13
3.05	Methods Of Gypsum Drywall Application.....	14
3.06	Installation Of Drywall Trim Accessories	15
3.07	Installation Of Miscellaneous Materials	15
3.08	Finishing Of Drywall	16
3.09	Surface Preparation And Primer	16
3.10	Cleaning And Protection.....	17

CONSTRUCTION STANDARD SPECIFICATION

SECTION 09250

GYPSUM DRYWALL

PART 1 – GENERAL

1.01 SUMMARY

- A. Extent of each type of gypsum drywall construction required is indicated on Contract documents. This section includes the following types of gypsum board construction:
1. Light-gauge and heavy-gauge non-load bearing steel framing members
 2. Gypsum board screw-attached to steel framing and furring members.
 3. Exterior gypsum board panels for ceilings and soffitts.
 4. Tile backing panels.

1.02 REFERENCES

- A. American Society of Testing and Materials (ASTM)
- A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
- A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- C 36 Standard Specification for Gypsum Wallboard
- C 79 Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board
- C 442 Standard Specification for Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board
- C 475 Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C 630 Standard Specification for Water-Resistant Gypsum Backing Board

- C 645 Standard Specification for Nonstructural Steel Framing Members
- C 754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
- C 840 Standard Specification for Application and Finishing of Gypsum Board
- C 931 Standard Specification for Exterior Gypsum Soffitt Board
- C 1002 Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
- C 1047 Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base
- C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- C 1178 Standard Specification for Glass Mat Water-Resistant Gypsum Backing Panel
- E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- E 119 Standard Test Methods for Fire Tests of Building Construction and Materials
- E413 Standard Classification for Rating Sound Insulation

B. American National Standards Institute (ANSI)

A118.9 Specifications for Cementitious Backer Units

C. Gypsum Association (GA)

GA-216 Application and Finishing of Gypsum Board

GA-600 Fire Resistance Design Manual

1.03 SUBMITTALS

- A. General: Submit the following in accordance with conditions of Contract and Section 01330, "Submittal Procedures."
- B. Product Data:
 - 1. Submit product information from manufacturers for each type of product specified.

2. Submit gypsum manufacturer's documentation of recycled content for gypsum board.
 3. Submit gypsum manufacturer's documentation of buyback and/or recycling program.
 4. Submit steel framing manufacturer's documentation of U.S. manufactured steel.
- C. Asbestos-Free Certification: Submit manufacturer's written certification that all materials are free of asbestos.

1.04 QUALITY ASSURANCE

- A. Fire Test Response Characteristic: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing and inspection agency.
1. Fire-Resistance-Rated Assemblies: Indicated by design designation from Factory Mutual's "Approved Guide Building Products," Underwriter Laboratory's "Fire Resistance Directory."
- B. Sound Transmission Characteristics (STC): For gypsum board assemblies with STC Ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E413 by qualified testing agency.
1. STC Rated Assemblies: Indicated by design designation from GA-600 fire resistance design manual.
- C. Gypsum Board Finish Mockups: Before finishing gypsum board assemblies, install mockups as required by SDR of at least 100 square feet in surface area to demonstrate aesthetic effects and qualities of materials and execution.
1. Install mockups for the following applications:
 - a. Surfaces with textured finishes.
 - b. Surfaces indicated to receive non-textured paint surfaces.
 - c. Surfaces indicated to receive textured paint finishes.
 - d. Surfaces with a change in textured material.
 2. Simulate finished lighting conditions for review of mockups.
 3. Approval mockups may become part of the completed work if undisturbed at time of construction complete.
- D. Level of Finish: Levels of gypsum board finish will be as per the "recommended specification LEVELS OF GYPSUM BOARD FINISH" as published by the Association of the wall and ceiling Industries-International (AWCI), Ceilings and interior systems Construction Association (CISCA), Gypsum Association (GA),

and Painting and Decorating Contractors of America (PDCA), or as indicated on the contract documents.

1. Level 1 Finish above ceilings.
2. Level 2 Finish where water resistive gypsum backer board is used as substrate for tile.
3. Level 3 Finish at corridors, offices, laboratory walls, mechanical equipment rooms, stairwells, and walls to receive heavy grade wall coverings.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original unopened packages clearly marked with identifying information. Protect materials as recommended by the manufacturer.
- B. Store materials, keep dry, and protect against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels on level surface to prevent sagging.

1.06 PROJECT CONDITIONS

- A. Environmental Conditions: Establish and maintain environmental conditions for application and finishing of gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.
- B. Minimum Room Temperatures: For attachment of gypsum board to framing, maintain not less than 40 degrees F. For finishing of gypsum board, maintain not less than 50 degrees F for 48 hours prior to application, and continuously thereafter until drying is complete.
- C. Ventilation: Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Products made by the following manufacturers, provided they comply with requirements of Contract documents, will be among those considered acceptable. However, it is the Contractor's responsibility to provide only products compatible with adjacent materials in the assembly.
 1. Steel Framing and Furring:
 - a. Dale Industries, Inc.
 - b. Dietrich Industries, Inc.

- c. National Gypsum Co.; Gold Bond Building Products Division
 - d. Unimast, Inc.
 - e. United States Gypsum Co.
2. Grid Suspension System:
- a. Armstrong World Industries, Inc.
 - b. Chicago Metallic Corp.
 - c. United States Gypsum Co.
 - d. Worthington Steel Company (formerly National Rolling Mills Co.)
3. Gypsum Boards and Related Products:
- a. Centex American Gypsum
 - b. Georgia Pacific Corp.
 - c. National Gypsum Co.; Gold Bond Building Products Division
 - d. United States Gypsum Co.

2.02 STEEL FRAMING COMPONENTS FOR SUSPENDED AND FURRED CEILINGS

- A. General: Provide components, which comply with ASTM C 754 for materials and sizes, unless otherwise indicated. Provide U.S. manufactured steel components.
- B. Main Runners: Hot or cold-rolled steel channels with rust inhibitive paint finish.
- C. Wire Ties: ASTM A641, Class 1 zinc coating, soft temper, 0.062 inch (16 gage).
- D. Wire Hangers: ASTM A641, Class 1 zinc coating, soft temper, 0.162 inch (8 gage).
- E. Hanger Anchorage Devices: Screws, clips, bolts, cast-in-place concrete inserts or other devices applicable to the indicated method of structural anchorage for ceiling hangers. Size devices for 3 times the calculated load supported, except size direct pullout concrete inserts for 5 times the calculated loads.
- F. Steel Rigid Furring Channels: ASTM C 645, hat-shaped, depth of 7/8 inch; minimum 25 gauge thickness, unless otherwise indicated.
- G. Grid Suspension System: ASTM C 645, manufacturer's standard grid suspension system composed of main beams and cross furring members which interlock to form a modular supporting network.

2.03 STEEL FRAMING FOR WALLS AND PARTITIONS

- A. General: Provide U.S. manufactured steel components.

- B. Steel Studs and Runners: ASTM C 645, galvanized, unless otherwise indicated. For doorjambs and support of restroom fixtures use 20 gauge steel framing members. For walls at or below 8 ft in height use Light-gauge, (minimum 25 gauge) steel framing members. For walls above 8 ft in height use Heavy-gauge (minimum 20 gauge), steel framing members. A transverse load test shall be required for nonload bearing walls based upon the finishes that the particular wall is to receive and the height of the wall. Depth of Section: 3-5/8 inch unless otherwise shown on drawings.
 - 2. Runners: Match studs; type recommended by stud manufacturer for floor and ceiling support of studs, and for vertical abutment of drywall work at other work.
- C. Steel Rigid Furring Channels: ASTM C 645, hat-shaped, galvanized; minimum depth of 7/8 inch and minimum 25 gauge thickness, unless otherwise indicated.
- D. Z-Furring Members: Manufacturer's standard Z-shaped furring members fabricated from hot-dip galvanized steel sheet complying with ASTM A 653, Coating Designation G60; minimum 25 gauge thickness, face flange of 1-1/4 inch, wall-attachment flange of 7/8 inch, and of depth required to fit insulation thickness indicated.
- E. Fasteners: Type and size recommended by gypsum drywall manufacturer for the substrate and application indicated.

2.04 GYPSUM BOARD

- A. General: Provide gypsum board of type, edge configuration, and thickness indicated, in maximum lengths available to minimize end-to-end butt joints.
- B. Recycled Content: Gypsum recycled content to be the greatest amount available, up to 28% postindustrial content. Subject to compliance with requirements, synthetic (flue-gas) gypsum shall be used when available. Paper facing to be 100% post consumer recycled content. Fiber gypsum board shall consist of recycled newspaper and gypsum over recycled newspaper, gypsum and perlite core.
- C. Gypsum Board: ASTM C 36, and unless otherwise indicated:
 - 1. Type: Regular.
 - 2. Edges: Tapered.
 - 3. Thickness: 1/2 inch at ceilings.
 - 4. Thickness: 5/8 inch at walls.
- D. Fiber Gypsum Board (Abuse-Resistant): ASTM C 36, and unless otherwise indicated:
 - 1. Type: Type 'X'.
 - 2. Edges: Tapered.

3. Thickness: 1/2 inch at ceilings.
 4. Thickness: 5/8 inch at walls.
- E. Fire-Resistive Board: ASTM C 36, and unless otherwise indicated:
1. Type: Type 'X.'
 2. Edges: Tapered.
 3. Thickness: 5/8 inch at ceilings and walls.
- F. Gypsum Backing Board: ASTM C 442 where indicated on Contract documents as base layer for multi-layer application. Unless otherwise indicated:
1. Type: Regular or Type 'X' for fire-resistance-rated assemblies.
 2. Edge: Tapered.
 3. Thickness: 1/2-inch non-fire rated or 5/8 inch at fire rated applications.
- G. Water-Resistant Backing Board: ASTM C 630, and use where indicated on drawings. Unless otherwise indicated:
1. Type: Regular or Type "X" for fire-resistance-rated assemblies.
 2. Edge: Tapered.
 3. Thickness: 5/8 inch.
- H. Tile Backing Panels:
1. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
 2. Water-Resistant Gypsum Backing Board: ASTM C 630. Water-Resistant Gypsum Backing Board: ASTM C 630/C 630M.
 - a. Core: As indicated 1/2 inch, regular type or 5/8 inch, Type X.
 3. Glass-Mat, Water-Resistant Backing Board: ASTM C 1178.
 - a. Available Product: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, "Dens-Shield Tile Backer" manufactured by G-P Gypsum Corp.
 - b. Product: Subject to compliance with requirements, provide "Dens-Shield Tile Backer" manufactured by G-P Gypsum Corp.
 - c. Core: As indicated 1/2 inch, regular type or 5/8 inch, Type X.
 4. Cementitious Backer Units: ANSI A118.9.

- a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - b. Products: Subject to compliance with requirements, provide one of the following:
 - (1) Custom Building Products; Wonderboard.
 - (2) FinPan, Inc.; Util-A-Crete Concrete Backer Board.
 - (3) United States Gypsum Co.; DUROCK Cement Board.
 - c. Thickness: As indicated 1/2 inch, regular type or 5/8 inch Type X.
- I. Gypsum Sheathing Board: ASTM C 79, and unless otherwise indicated:
- 1. Type: Regular or Type 'X.'
 - 2. Edges: Square.
 - 3. Thickness: 1/2 inch at regular, 5/8 inch at fire rated applications.
- J. Exterior Gypsum Panels for Ceilings and Soffitts:
- 1. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
 - 2. Exterior Gypsum Soffitt Board: ASTM C 931, with manufacturer's standard edges.
 - a. Core: As indicated 1/2 inch, regular type or 5/8 inch, Type X.
 - 3. Glass-Mat Gypsum Sheathing Board: ASTM C 1177.
 - a. Available Product: Subject to compliance with requirements, a product that may be incorporated into the Work includes, but is not limited to, "Dens-Glass Gold" by G-P Gypsum Corp.
 - b. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" by G-P Gypsum Corp.
 - c. Core: As indicated 1/2 inch, regular type or 5/8 inch, Type X.

2.05 TRIM ACCESSORIES

- A. Cornerbead and Edge Trim: Provide cornerbeads, edge trim, and control joints, which comply with ASTM C 1047 and requirements indicated below:
- 1. Material: Unless otherwise indicated, galvanized steel with either knurled and perforated or expanded flanges, and beaded for concealment of flanges in joint compound.

2. Edge trim shapes indicated below by reference to designations of Figure 1 in ASTM C 1047:
 - a. "L" Bead
 - b. "U" Bead
 - c. "LK" Bead
 - d. "J" Bead
- B. Control Joint: Provide one piece control joint formed with V-shaped slot, per Figure 1 in ASTM C 1047, with slot opening covered with removable strip. Control joint to be 30ft on center maximum.

2.06 GYPSUM BOARD JOINT TREATMENT MATERIALS

- A. General: Provide materials complying with ASTM C 475, ASTM C 840 and type recommended by the manufacturer for the application indicated, except as otherwise indicated.
- B. Joint Tape: Paper reinforcing.
- C. Ready-Mixed Taping Joint Compound: Pre-mixed, non-asbestos, vinyl-based compound formulated for tape application, fastener spotting, first fill coat on metal beads and trim and filling.
- D. Ready-Mixed Topping Joint Compound: Pre-mixed, non-asbestos, vinyl based compound for second and third coats over taped joints, fastener spottings and the finish coat over metal beads and trim.
- E. Drywall Primer: A flat latex based primer coat to equalize the texture and porosity differences between joint compound and drywall, as recommended by textured finish manufacturer.
 1. Comply with Section 09900, "Painting"

2.07 MISCELLANEOUS MATERIALS

- A. General: Provide auxiliary materials for gypsum drywall construction, which comply with referenced standards and the recommendations of the gypsum board manufacturer.
- B. Gypsum Board Screws: ASTM C 1002.
- C. Acoustical Sealant: Water base, non-drying, non-bleeding, non-staining type and permanently elastic. Comply with requirements specified in Section 07900, "Joint Sealants", and as recommended by the gypsum board manufacturer for application indicated.

- D. Powder Texturing Product: Non-asbestos powder product, mixed with water for producing a satisfactory “spatter” spray texture. Provide other textures as indicated in Contract documents.
- E. Corner Guards: Provide surface-mounted or recessed s on all corridor walls and other high impact areas as indicated on drawings. Where corner guards are required on fire-resistive walls, provide surface or flush-mounted types that are UL listed.
 - 1. Corner guards shall consist of a continuous extruded aluminum retainer, top and bottom high impact nylon closer caps, and a vinyl/acrylic guard.
 - 2. Guard length shall be a minimum of 4'-0" from finished floor
 - 3. Wall thickness of .110 inch and angle-shaped with 3-inch legs and ¼-inch radius at corners and ends.
 - 4. Furnish guard in matte finish from manufacturer's standard color line. Closure caps shall be of the same color as the guards. Color to be selected from color selection charts provided by the manufacturer.
- F. Chair Rails: Provide surface-mounted pre-finished vinyl/acrylic (unless material noted otherwise on drawings) chair rails on all conference room walls and as indicated on drawings.
 - 1. Chair rails shall consist of a continuous extruded aluminum retainer, end and corner transitions, and a vinyl/acrylic rail.
 - 2. Provide rails with a minimum overall height of 3-1/2 inches and overall depth of 7/8 inch.
 - 3. Color: As chosen from manufacturer’s standard color charts at time of submittals.
 - 4. Mounting Height: Mount chair rails above finished floor as shown on drawings unless noted otherwise.

PART 3 – EXECUTION

3.01 GENERAL, INSTALLATION OF STEEL FRAMING

- A. Examination: Examine areas and substrates, with installer present, and including hollow-metal frames, anchors, and structural and non structural framing, for compliance with other requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have corrected.
- B. Steel Framing Installation Standard: Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.
- C. Install supplementary framing, blocking and bracing at terminations in the gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, and similar construction. Comply with details indicated and with gypsum board manufacturer’s written recommendations or, if not available, with United States Gypsum’s “Gypsum Construction Handbook.”

- D. Isolate steel framing from building structure at locations to prevent transfer of loading imposed by structural movement.
 - 1. Isolate ceiling assemblies where they abut or are penetrated by building structure.
 - 2. Isolate partition framing and wall furring where it abuts structure, except at floor. Install slip-type joints at head of assemblies that avoid axial loading of assembly and laterally support assembly.
 - a. Use deep-leg deflection track where indicated.
 - b. Use proprietary deflection track where indicated.
 - c. Use proprietary firestop track where indicated.
- E. Do not bridge building control and expansion joints with steel framing or furring members. Frame both sides of joints independently.

3.02 INSTALLATION OF STEEL FRAMING FOR SUSPENDED AND FURRED CEILINGS

- A. Secure hangers to structural support by connecting directly to structure where possible, otherwise connect to inserts, clips or other anchorage devices or fasteners as indicated on drawings.
- B. Space main runners 4'-0" and hangers 4'-0" o.c. along runners, unless otherwise indicated.
- C. Installation Tolerances: Install steel framing components for suspended ceilings so that cross furring members or grid suspension members are level to within 1/8 inch in 12'-0", measured lengthwise on each member and transversely between parallel members.
- D. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross furring members to each other and butt-cut to fit into wall track.
- E. Attach perimeter wall track or angle wherever support system meets vertical surfaces.

3.03 INSTALLATION OF STEEL FRAMING FOR WALLS AND PARTITIONS

- A. Install runners (tracks) at floors, ceilings and structural walls, and columns where gypsum drywall stud system abuts other work.
- B. Installation Tolerances: Install steel framing & furring members so that fastening surfaces do not vary more than 1/8 inch from plane of faces of adjacent framing.
- C. Extend Partition Framing: For fire-resistance rated and STC rated partitions, extend to underside of floor/roof slabs and decks or other continuous solid-steel surfaces to obtain ratings. Install framing around structural and other members existing below

floor/roof slabs and decks, as needed, to support gypsum board closures and to make partitions continuous from floor to underside of solid structure.

1. Terminate partition framing at or above suspended ceilings where indicated.
 2. Cut ½ inch short of full height to provide perimeter relief.
- D. Space studs and wall furring at 16 inches o.c., except as otherwise indicated. Attach studs to top and bottom tracks by button punch or screws, except that studs located adjacent to doors, windows, partition intersections or ends, and at corners shall be screwed to tracks.
- E. Frame door openings with double 20 ga vertical studs securely attached by screws at each jamb either directly to frames or to jamb anchor clips on doorframe; install runner track sections (for jack studs) at head and secure to jamb studs. Shot anchors are not allowed in any case.
- F. Frame openings other than door openings in same manner as required for door openings, and install framing below sills of openings to match framing required above door heads.
- G. Walls greater than 10 feet in height shall require a double stud header.
- H. Cutting or notching of drywall studs shall not be reduced less than required by the manufacturer.
- I. Splicing of drywall studs will require engineers approval.

3.04 APPLICATION AND FINISHING OF GYPSUM BOARD

- A. Gypsum Board Application and Finishing Standard: Install and finish gypsum board to comply with ASTM C 840 and GA 216.
- B. Install ceiling boards in the direction and manner which will minimize the number of end-butt joints, and which will avoid end joints in the central area of each ceiling. Stagger end joints at least 12 inches.
- C. Install wall/partition boards vertically to avoid end-butt joints wherever possible.
- D. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16-inch open space between boards. Do not force into place.
- E. Locate either edge or end joints over supports. Position boards so that like edges abut, tapered edges against tapered edges and mill-cut or field-cut ends against mill-cut or field-cut ends. Stagger vertical joints over different studs on opposite sides of partitions.
- F. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.

- G. Form control joints and expansion joints with space between edges of boards, prepared to receive trim accessories.
- H. Isolate perimeter of non-load bearing drywall partitions at structural abutments. Provide 1/4 to 1/2 inch wide spaces and trim edges with "U"-bead trim where edges of drywall panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant. Do not fasten drywall directly to stud system runner tracks.
- I. Where sound attenuation drywall construction is indicated, seal the work at perimeters, control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant including a bead at both faces of partitions. Comply with manufacturer's recommendations for location of beads and close off sound-flanking paths around or through the work.
- J. Space fasteners in each layer of gypsum board in accordance with manufacturer's recommendations, Uniform Building Code, and published U.L. or other published assemblies.

3.05 METHODS OF GYPSUM DRYWALL APPLICATION

- A. Single-Layer Application: Install gypsum wallboard as follows:
 - 1. On ceilings, apply gypsum board prior to wall/partition board application to the greatest extent possible.
 - 2. On partitions/walls, apply gypsum board vertically (parallel to framing), unless otherwise indicated and provide sheet lengths, which will minimize end joints.
 - 3. On Z-furring members, apply gypsum board vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
- B. Wall Tile Base: Where drywall is base for thin-set ceramic tile and similar rigid applied wall finishes, install gypsum-backing board.
 - 1. At showers, tubs and similar "wet" areas, install water-resistant gypsum or cementitious backing board. Apply with un-cut long edge at bottom of work, and space 1/4 inch above fixture lips. Seal ends, cut-edges, and penetrations of each piece with water-resistant compound before installation.
- C. Acoustical Tile Base: Where drywall is base for adhesively applied acoustical tile, install gypsum backing board.
 - 1. Provide either V-joint type backing board, or tape and finish joints (2 coats unsanded).
- D. Double-Layer Application: Install gypsum backing board for base layer and gypsum board for face layer.
 - 1. On ceilings, apply base layer prior to application of face layer on walls/partitions; apply face layers in same sequence. Offset joints between layers at least 10 inches. Insure all joints run in the same direction.

2. On partitions/walls apply base layer and face layers vertically (parallel to framing) with joints of base layer over supports, and with face layer joints offset at least 10 inches with base layer joints. Insure all joints run in the same direction.
 3. On Z-furring members apply base layer and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with joints offset at least one furring member. Locate edge joints of base layer over furring members. Insure all joints run in the same direction.
- E. Single-Layer Fastening Methods: Apply gypsum boards to supports with screws.
- F. Double-Layer Fastening Methods: Apply base layer of gypsum board and face layer to base layer by fastening the two layers separately to supports with screws. On fire-rated wall installations, each layer shall have sufficient screws as though it was the only layer.

3.06 INSTALLATION OF DRYWALL TRIM ACCESSORIES

- A. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports.
- B. Install metal corner beads at external corners of drywall work.
- C. Install metal edge trim whenever edge of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound except where "U" bead (semi-finishing) type is indicated.
1. Install "L" bead where work is tightly abutted to other construction.
 2. Install special "LK" bead where other work is kerfed to receive long leg of "L" bead trim.
 3. Install "U" bead where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints).
- D. Install "U" bead trim where indicated, and where applied moldings do not cover exterior gypsum board edges.
- E. Install control joints at locations indicated, or if not indicated, at spacings and locations required by referenced gypsum board application and finish standard as recommended by GA-216.

3.07 INSTALLATION OF MISCELLANEOUS MATERIALS

- A. Install each item in accordance with the manufacturer's directions and recommendations. Use anchors and other fasteners supplied by the manufacturer, which match the finish of the items. Install all items plumb or level.
- B. Mount chair rails at 2'-6 1/2" above finished floor level.

3.08 FINISHING OF DRYWALL

- A. General: Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fastener heads, surface defects, and elsewhere as required to prepare work for decoration.
 - 1. Prefill any open joints and rounded or beveled edges using type of compound recommended by the manufacturer.
 - 2. Apply joint tape over gypsum board joints, except those with trim accessories having flanges not requiring tape. Do not apply joint tape or joint compound to the base layer in a double layer application, unless otherwise noted on the Contract documents.
 - 3. Finish interior gypsum board by applying joint compound in three coats (not including prefill of openings in base), and sand between coats and after last coat.
- B. Base for Acoustical Tile: Where gypsum board is indicated as a base for adhesively applied acoustical tile, install tape and 2-coat compound treatment, without sanding.
- C. Water-Resistant Gypsum Board Base for Ceramic Tile: Treat joints and fasteners to comply with directions of water-resistant joint compound manufacturer.
 - 1. In areas to be tiled, treat fastener heads with water-resistant joint compound.
 - a. Fill tapered edges in gypsum panels with water-resistant joint compound, embed joint tape firmly, and wipe off excess compound.
 - b. Follow immediately with a second coat of water-resistant joint compound over taping coat, being careful not to crown the joint.
 - c. Fold and embed tape in all interior angles to form true angle.
 - 2. In areas not to be tiled, treat fastener heads and embed tape as indicated above, using water-resistant joint compound. Finish with two coats of joint compound used for regular gypsum board work.
- D. Fire-rated Gypsum Board: Tape and bed all surface joints and caulk all perimeter edges. The base layer joints need not be taped. Insure all joints are staggered and run in the same direction.
- E. Surface Texturing: All gypsum board surfaces exposed in finish areas shall be textured. Finish areas are those specified to be painted and as scheduled on the drawings.
 - 1. Texture shall be a "spatter" spray application unless otherwise approved.
 - 2. Spray shall be applied to produce a uniform texture without starved spots or other evidence of thin application.

3.09 SURFACE PREPARATION AND PRIMER

- A. Prepare and apply primer to gypsum board and other surfaces prior to receiving texture finishes according to texture finish manufacturer's instructions. Apply primer only to surfaces that are clean, dry and smooth.

3.10 CLEANING AND PROTECTION

- A. Promptly remove any residual joint compound from adjacent surfaces not indicated to receive texture.
- B. Provide final protection and maintain conditions, in a manner acceptable to Installer, that ensure gypsum board assemblies are without damage or deterioration at the time of construction complete.

END OF SECTION