

SAMPLE COMPREHENSIVE SPECIFICATION

©2007 Focus Collaborative, Inc – Specification and Quality Assurance Consultants

156 Prospect Avenue

Lansdale, PA 19446

Phone: 215.412.0601 Fax: 215.412.0602

2231 Route 50, P.O. 248

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SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Metal stud wall framing.
 - 2. Metal ceiling framing.
 - 3. Shaft wall system.
 - 4. Gypsum board and joint treatment.
 - 5. Gypsum sheathing.
 - 6. Cementitious backer board.
 - 7. Acoustic insulation and sealant.

- B. Related Sections:
 - 1. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood blocking for support of wall mounted fixtures and accessories.
 - 2. Section 07 21 00 - Thermal Insulation: Thermal insulation.
 - 3. Section 08 31 13 - Access Doors and Frames: Metal access panels for walls and ceilings.
 - 4. Section 10 28 13 - Toilet Accessories: Frames for recessed washroom accessories.

1.2 REFERENCES

- A. ASTM C36 - Standard Specification for Gypsum Wallboard.
- B. ASTM C442 - Standard Specification for Gypsum Backing Board and Coreboard.
- C. ASTM C475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- D. ASTM C630 - Standard Specification for Water-Resistant Gypsum Backing Board.
- E. ASTM C645 - Standard Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
- F. ASTM C665 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- G. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Board.
- H. ASTM C1002 - Standard Specification for Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases.

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- I. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne-Sound Transmission Loss of Building Partitions.
- J. GA-201 - Using Gypsum Board for Walls and Ceilings.
- K. GA-214 - Recommended Specification: Levels of Gypsum Board Finish.
- L. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board.
- M. GA-600 - Fire Resistance Design Manual.
- N. UL - Fire Resistance Directory.
- O. WH (Warnock Hersey) - Certification Listings.

1.3 PERFORMANCE REQUIREMENTS

- A. Stud Selection: Select stud gage and yield strength so maximum unbraced span does not exceed heights permitted by SSMA with maximum deflection of 1/240 for 5 psf uniform load.
- B. Conform to applicable codes for fire rated assemblies.
- C. Acoustic attenuation for identified interior partitions.
- D. Shaft wall for identified interior partitions.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on metal framing, gypsum board types, joint tape, joint compound, and acoustic materials.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with GA-214, GA-216 and GA-600.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

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1.7 REGULATORY REQUIREMENTS

- A. Conform to applicable codes and designated testing agency design for fire rated assemblies as indicated on Drawings.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

- A. Framing Manufacturers:
 - 1. Dale/Incor.
 - 2. Dietrich Industries.
 - 3. Superior Steel Studs Inc.
 - 4. Substitutions: Section 01600 - Product Requirements.
- B. Direct Suspension System Manufacturers:
 - 1. United States Gypsum Company.
 - 2. Chicago Metallic Corp.
 - 3. National Rolling Mills Co.
 - 4. Substitutions: Section 01600 - Product Requirements.
- C. Gypsum Board and Joint Treatment Manufacturers:
 - 1. United States Gypsum Company.
 - 2. Gold Bond Building Products.
 - 3. Georgia Pacific.
 - 4. Substitutions: Section 01600 - Product Requirements.
- D. Acoustic Insulation Manufacturers:
 - 1. United States Gypsum Company; Thermafiber Sound Attenuation Fire Blankets (SAFB).
 - 2. Owens Corning; Sound Attenuation Batts/MW or Sound Attenuation Batts.
 - 3. CertainTeed; CertaSound Sound Attenuation Batts.
 - 4. Manville; Sound Shield Sound control Batts.
 - 5. Substitutions: Section 01600 - Product Requirements.

2.2 COMPONENTS

- A. Framing Materials: Studs and Tracks: ASTM C645; galvanized sheet steel, minimum 25 gage (0.63 mm) , size as indicated on Drawings, 'C' shape.
- B. Furring, Framing, and Accessories: ASTM C645.
- C. Fasteners: ASTM C1002.
- D. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- E. Adhesive: ASTM C557.

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- F. Ceiling Suspension System Framing:
1. Channels: Hot or cold rolled; G90 hot dipped galvanized steel channel; minimum 1-1/2 inches (38 mm) size and minimum 0.475 lb/ft (700 g/m) in accordance with ASTM C754.
 2. Fasteners: ASTM C646.
 3. Hanger Wire: ASTM A641 soft temper, Class 1 galvanized steel, minimum 8 gage (4.3 mm).
 4. Hanger Rods: Mild steel rod, with zinc coating, minimum 7/32 inches (5.5 mm) diameter.
 5. Angle Hangers: minimum 7/8 x 7/8 inches (22 x 22 mm), 16 gage (1.6 mm thick) ASTM A653 G90 galvanized steel formed angles with 5/16 inches (8 mm) diameter bolted connections.
 6. Anchorage Devices: Screws, clips, bolts, concrete inserts, and other devices of type and size to suit application; to rigidly secure materials in place. Size devices for 5x calculated load for concrete inserts and 3x calculated load for other devices.
- G. Gypsum Board Materials: Thickness as indicated on Drawings; maximum available length in place; ends square cut, tapered edges, unless specified otherwise.
1. Standard Gypsum Board: ASTM C36.
 2. Fire Rated Gypsum Board: ASTM C36; fire rated type.
 3. Moisture Resistant Gypsum Board: ASTM C630; standard and fire rated type as indicated on Drawings.
 4. Exterior Gypsum Soffit Board: ASTM C931/C931M; standard and fire rated type as indicated on Drawings.
 5. Gypsum Backing Board: ASTM C442; standard and fire rated; square edges, ends square cut, maximum available size in place.
 6. Gypsum Sheathing Board: ASTM C79; moisture resistant and fire resistant type; ends square cut, square edges; water repellent paper faces.
 7. Gypsum Coreboard: ASTM C442, 1 inch (25 mm) thick, maximum available size in place; square edges, ends square cut.
 8. Tile Backer Board: ASTM C1178; maximum available length in place; ends square cut, tapered edges; Dens Shield manufactured by Georgia Pacific.
 9. Cementitious Backing Board: High density, glass fiber reinforced, Durock manufactured by United States Gypsum Company.

2.3 ACCESSORIES

- A. Acoustical Insulation: ASTM C665; preformed fiberglass, friction fit type without integral vapor barrier membrane, 2-1/2 inch thick, unless otherwise indicated on Drawings.
- B. Acoustical Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
- C. Corner Beads: Metal.
- D. Edge Trim: GA 201 and GA 216; plastic, type to suit application.
- E. Joint Materials: ASTM C475; reinforcing tape, joint compound, adhesive, water, and fasteners.
- F. Fasteners: ASTM C1002 Type S12 hardened screws.

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PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01300 - Administrative Requirements: Coordination and project conditions.
- B. Verify that site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.

3.2 INSTALLATION

- A. Install studs in accordance with ASTM C754 and manufacturer's instructions.
- B. Metal Stud Spacing: 16 inches (400 mm) on center.
- C. Extend stud framing to ceiling only. Attach ceiling runner securely to acoustic ceiling track details indicated.
- D. Refer to Drawings for indication of partitions extending stud framing through the ceiling to the structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
- E. Door Opening Framing: Install double studs at door frame jambs.
- F. Blocking: Bolt or screw steel channels to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories and fire extinguisher cabinets.
- G. Erect wall furring for direct attachment to concrete masonry walls.
- H. Erect furring channels horizontally; space maximum 24 inches (600 mm) on center, not more than 4 inches (100 mm) from floor and ceiling lines. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) on center.
- I. Place acoustical insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- J. Install acoustical sealant at gypsum board perimeter at:
 - 1. Framing: One bead.
 - 2. Face Layer Gypsum Board: One bead.
 - 3. Seal gypsum board penetrations by conduit, pipe, ductwork, rough-in boxes, and other items.
- K. Install gypsum board in accordance with GA 201 and GA 216 and manufacturer's instructions.
- L. Erect single layer gypsum board in most economical direction, with ends and edges occurring over firm bearing.

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- M. Shaft Wall Framing: To GA-600 requirements.
- N. Use screws when fastening gypsum board to framing.
- O. Ceiling Framing: Install in accordance with ASTM C754.
- P. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
- Q. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes in accordance with manufacturer's instructions.
- R. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch (0.8 mm).
- S. Sanding is not required at surfaces above finished ceilings.

3.3 TOLERANCES

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) any direction.

END OF SECTION