

BuildingName
The Description of the Project
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SPECIFICATION DIVISION 9

NUMBER SECTION DESCRIPTION

DIVISION 09 FINISHES

SECTION 095100 - ACOUSTICAL CEILINGS

END OF CONTENTS TABLE

DIVISION 09 FINISHES
SECTION 095100 - ACOUSTICAL CEILINGS

5/19/2014 -- UPDATED TO INCLUDE LATEST PRODUCT INFORMATION.

REMOVED DIRECT ADHERED TILES. CONSULT MANUFACTURER LITERATURE AND AIA MASTERSPEC FOR DIRECT ADHERED ACOUSTICAL TILE APPLICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Extent of acoustical ceilings is indicated on Drawings and schedules.

FIRE-RATED CEILINGS ARE NOT INCLUDED IN THIS MASTER. CONSULT CATALOGS FOR PRODUCTS AND INSTALLATION REQUIREMENTS.

- B. Types of acoustical ceiling products include the following:

EDIT BELOW TO SUIT PROJECT REQUIREMENTS.

1. Acoustical lay-in panels of the following types:
 - a. Standard acoustic panels.
 - b. Premium acoustic panels.
 - c. Router-cut patterned acoustic panels.
 - d. Gypsum core acoustic panels.
2. Suspended grid systems, specialty trim and accessories.

INCLUDE ARTICLE BELOW IF DEMOLITION OPERATIONS WILL RECYCLE ACOUSTICAL PANELS. NOTE THAT NOT ALL ACOUSTICAL MATERIAL IS ABLE TO BE RECYCLED. ASBESTOS-CONTAINING PRODUCTS CANNOT BE RECYCLED, AND FOIL-BACKED AND FIBERGLASS PRODUCTS WILL NOT BE ACCEPTED BY MANUFACTURERS FOR RECYCLING.

1.2 RELATED SECTIONS

- A. Refer to Division 02 Section "Selective Demolition" for requirements for recycling demolished acoustical ceiling products.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's literature, including certification by a recognized independent testing laboratory, indicating compliance with requirements.

INCLUDE BELOW FOR ALL PROJECTS.

- B. Affidavits of Compliance to be included in final inspection manual:
1. Provide manufacturer's letter of certification showing compliance with finish testing and classification requirements referenced by current adopted NFPA 101 "Life Safety Code".

2. Letter shall include project number, project name, and building name.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with the following:
 1. Acoustical Materials: ASTM E 1264.
 2. Suspension Systems: ASTM C 635 for materials; ASTM C 636 for installation.
 3. Surface Burning Characteristics: Flame spread: 25 or less; smoke developed: 50 or less; per ASTM E 84. UL listed and marked.
 4. Seismic Standard: Comply with Ceilings and Interior Systems Contractors Association (CISCA) "Recommendations for Direct-Hung Acoustical Tile and Lay-in Panel Ceilings--Seismic Zones 0-2."
- B. Source Limitations: Obtain each type of acoustic panel and related grid system from one source and by a single manufacturer.

1.5 PROJECT CONDITIONS

DELETE PARAGRAPH BELOW IF ONLY HUMIDITY-TOLERANT ACOUSTICAL MATERIALS (I.E., "CLIMAPLUS" BY USG OR "HUMIGUARD" BY ARMSTRONG) ARE BEING SPECIFIED FOR THE PROJECT.

- A. Do not install ceilings until ambient temperature and humidity conditions can be continuously maintained at values near those intended for final occupancy.
- B. Building areas to receive ceiling shall be free of construction dust and debris.

PART 2 - PRODUCTS

THIS PART IS ORGANIZED BY PANEL AND SUSPENSION GRID TYPE. ALL POSSIBLE COMBINATIONS COULD NOT BE LISTED HERE, SO CONSULT CATALOGS FOR ADDITIONAL POSSIBILITIES WITH DIFFERENT PERFORMANCE, APPEARANCE OR COST.

FIRE-RATED CEILINGS ARE NOT INCLUDED IN THIS MASTER. CONSULT CATALOGS FOR PRODUCTS AND INSTALLATION REQUIREMENTS.

BELOW IS STANDARD PLAIN PANEL AND GRID SYSTEM.

2.1 STANDARD ACOUSTIC PANELS

- A. Smooth surface, humidity-tolerant, mineral composition panels with washable surface; and as follows:
 1. Surface: Perforated.
 2. Edges: Rabbeted for 15/16-inch grid.

SELECT EDGE TYPE ABOVE OR BELOW.
 3. Edges: Square.
 4. Size: 24 inches by 24 inches by 5/8 inch thick.

SELECT PANEL SIZE ABOVE OR BELOW.

5. Size: 24 inches by 48 inches by 5/8 inch thick.
6. LR: Not less than .82.
7. NRC: Not less than .55.
8. CAC: Not less than 33.
9. Color: White.
10. Manufacturer/Style: Provide one of the following:
 - a. "Fine Fissured"; Armstrong World Industries, Inc.
 - b. "Fine Fissured"; CertainTeed Saint-Gobain.
 - c. "Radar ClimaPlus"; U.S. Gypsum.

BELOW IS ROUTINE GRID FOR THIS PANEL TYPE - OTHERS ARE AVAILABLE - CONSULT CATALOGS.

11. Related Suspension Grid: Standard 15/16-inch Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.

2.2 PREMIUM ACOUSTIC PANELS

SELECTIONS BELOW HAVE APPEARANCE SIMILAR TO USG "FROST".

- A. Smooth surface, humidity-tolerant, mineral composition panels with washable surface, and as follows:

1. Surface: Finely perforated.
2. Edges: Rabbeted and beveled for 9/16-inch grid.
3. Size: 24 inches by 24 inches by 3/4 inch thick.
4. Color: White.
5. LR: Not less than .85.
6. NRC: Not less than .70.
7. CAC: Not less than 35.
8. Manufacturer/Style: Provide one of the following:
 - a. "Cirrus"; Armstrong World Industries, Inc.
 - b. "Cashmere High NRC"; CertainTeed Saint-Gobain.
 - c. "Eclipse ClimaPlus"; U.S. Gypsum.

THE ABOVE THREE PRODUCTS ARE WATER FELTED OR NODULAR. "FROST" IS SIMILAR IN APPEARANCE AND ACOUSTICAL PERFORMANCE, BUT IT IS A CAST/MOLDED PRODUCT (MORE DURABLE).

- d. "Frost ClimaPlus"; U.S. Gypsum.

BELOW IS ROUTINE GRID FOR THIS PANEL TYPE - OTHERS ARE AVAILABLE - CONSULT CATALOGS.

9. Related Suspension Grid: Narrow Bolt-Slot 9/16-inch Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.

SPECIALTY TRIM BELOW REFERS TO USG COMPASSO OR SIMILAR SYSTEMS. MODIFY TO SUIT PROJECT REQUIREMENTS OR DELETE IF NONE.

- a. Provide specialty trim systems where indicated on Drawings.

BELOW IS USG "MILLENA" PANEL AND ARMSTRONG COMPETITOR.

- B. Smooth surface, humidity-tolerant, mineral composition panels with washable surface, and as follows:

1. Surface: Finely perforated.
2. Edges: Rabbeted and beveled for 9/16-inch grid.
3. Size: 24 inches by 24 inches by 3/4 inch thick.
4. LR: Not less than .85.
5. NRC: Not less than .70.
6. CAC: Not less than 35.
7. Color: White.
8. Manufacturer/Style: Provide one of the following:
 - a. "Ultima"; Armstrong World Industries, Inc.
 - b. "Symphony m"; CertainTeed Saint-Gobain.
 - c. "Mars ClimaPlus"; U.S. Gypsum.

BELOW IS ROUTINE GRID FOR THIS PANEL TYPE - OTHERS ARE AVAILABLE - CONSULT CATALOGS.

9. Related Suspension Grid: Narrow Bolt-Slot 9/16-inch Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.

SPECIALTY TRIM BELOW REFERS TO USG COMPASSO OR SIMILAR SYSTEMS. MODIFY TO SUIT PROJECT REQUIREMENTS OR DELETE IF NONE.

- a. Provide specialty trim systems where indicated on Drawings.

USE PRODUCT BELOW ONLY WHEN ATTEMPTING TO MATCH EXISTING ACOUSTICAL PANELS. ARMSTRONG IS THE ONLY MFR. WHO IS MAKING THIS PRODUCT.

2.3 ROUTER-CUT PATTERNED PANELS

SPECIFIC PRODUCT NOT LISTED. DOZENS OF PATTERN VARIATIONS ARE AVAILABLE - CONSULT CATALOGS.

- A. Smooth surface, router-cut pattern, mineral composition panels with washable surface; and as follows:

UPDATE BELOW BASED ON TILE SELECTED

1. Surface: Finely perforated.
2. Pattern: Linear scored with border.
3. Edges: Rabbeted for 9/16-inch grid.
4. Size: 24 inches by 24 inches by 3/4 inch thick.
5. LR: Not less than .85.
6. NRC: Not less than .70.
7. CAC: Not less than 35.
8. Color: White.
9. Manufacturer/Style:

INSERT SELECTED TILE MFR AND STYLE

10. Related Suspension Grid: Standard 9/16-inch Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.

2.4 GYPSUM CORE PANELS

BELOW IS USG GYPSUM CORE PANEL AND CELOTEX COMPETITOR (NO ARMSTRONG PRODUCT). THESE ARE SUITABLE FOR USE IN KITCHENS

AND SIMILAR APPLICATIONS, BUT NOT CLEAN ROOMS. DUST-FREE CLEAN ROOM PANELS ARE AVAILABLE FROM ALL THREE MFRS., BUT THEY ARE MUCH MORE EXPENSIVE.

A. Smooth surface, humidity resistant, gypsum core panels with vinyl facing, and as follows:

1. Composition: Gypsum board core with vinyl overlay.
2. Surface: Unperforated.
3. Edges: Square.
4. Size: 24 inches by 24 inches by 1/2 inch thick.

SELECT PANEL SIZE ABOVE OR BELOW.

5. Size: 24 inches by 48 inches by 1/2 inch thick.
6. LR: Not less than .77.
7. CAC: Not less than 35.
8. Color: White.
9. Manufacturer/Style: Provide one of the following vinyl-clad gypsum board panels:
 - a. "Aquarock"; CertainTeed Saint-Gobain.
 - b. "Gridstone"; National Gypsum Co.
 - c. "Sheetrock Lay-In ClimaPlus Ceiling Panels"; U.S. Gypsum.
10. Related Suspension Grid: Moisture-Resistant 15/16-inch Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.

RETAIN OR DELETE BELOW TO SUIT PROJECT REQUIREMENTS SELECT PANEL SIZE ABOVE OR BELOW.

11. Related Accessories: Manufacturer's standard hold-down clips designed to prevent air pressure uplift of acoustic panels.

2.5 SUSPENSION SYSTEMS

A. Suspension Systems, General: As required to support acoustical units, electrical and mechanical fixtures and other components as indicated, including anchorages, hangers, runners, cross runners, splines, clips, moldings, fasteners and other members, devices and accessories. Comply with requirements of ASTM C 635.

1. Hanger Wire: Not less than 12 gage (0.106 inch) galvanized steel.
2. Type: Exposed Direct-Hung Steel Suspension System
3. Structural Class: Medium-Duty System.

BELOW IS STANDARD WIDE FACE, STEEL CAPPED PRODUCT.

B. Standard 15/16-inch Panel Suspension System: Suspension system with exposed faces painted.

1. Face Width: 15/16-inch wide.
2. Product/Manufacturer: Provide the following:
 - a. "Prelude XL 15/16": Armstrong World Industries, Inc.
 - b. "Classic Stab System"; CertainTeed Saint-Gobain.
 - c. "Donn DX"; U.S. Gypsum.

BELOW IS NARROW FACE, STEEL CAPPED PRODUCT. CONSIDER SPECIALLY SHAPED EDGE ANGLES - CONSULT CATALOGS FOR RANGE OF POSSIBILITIES.

C. Standard 9/16-inch Panel Suspension System: Suspension system with exposed faces painted.

1. Face Width: 9/16-inch wide.
2. Product/Manufacturer: Provide the following:
 - a. "Suprafine 9/16"; Armstrong World Industries, Inc.
 - b. "Elite Narrow Stab"; CertainTeed Saint-Gobain.
 - c. "Centricitee DXT"; U.S. Gypsum

BELOW IS STEEL SLOT-TYPE GRID. SLOT WIDTHS VARY AND COLOR INSERTS MAY BE ADDED. CONSULT CATALOGS FOR FULL EXTENT OF POSSIBILITES.

D. Narrow Bolt-Slot 9/16-inch Panel Suspension System: Suspension system with exposed faces painted and slotted.

1. Face Width: 9/16-inch wide with 1/8-inch wide reveal.
2. Product/Manufacturer: Provide the following:
 - a. "Silhouette XL-1/8 Reveal 9/16 Bolt Slot"; Armstrong World Industries, Inc.
 - b. "SmoothLine Bolt Slot System"; CertainTeed Saint-Gobain.
 - c. "Fine-Line 1/8"; U.S. Gypsum

BELOW IS FOR GYPSUM CORE PANELS IN SEMI-WET LOCATIONS (SUCH AS ANIMAL FACILITIES). ALL-ALUMINUM SYSTEMS AND PVC SYSTEMS ARE ALSO AVAILABLE.

E. Moisture-Resistant 15/16-inch Panel Suspension System: Suspension system with G60 hot-dip galvanized exposed faces with rolled, painted, aluminum caps.

1. Face Width: 15/16-inch wide.
2. Product/Manufacturer: Provide the following:
 - a. "Prelude Plus XL Fireguard"; Armstrong World Industries, Inc.
 - b. "Protectone Aluminum Fire-Rated Capped System"; CertainTeed Saint-Gobain.
 - c. "Donn ZXLA"; U.S. Gypsum

2.6 SPECIALTY TRIM SYSTEMS

BELOW IS CUSTOM "FLOATING" APPEARANCE TRIM SYSTEM.

A. Custom Exposed Edge and Perimeter Trim System: Manufacturer's custom designed, painted steel trim system for fully exposed edge conditions; integrated with manufacturer's suspension system to create a free-floating installed appearance. Provide units of depth with 9/16 inch horizontal legs and with hems for attachment to suspension system.

1. Depth: 4-inches unless otherwise indicated.
2. Product/Manufacturer: Provide the following:
 - a. "Axiom"; Armstrong World Industries, Inc.
 - b. "Infinity"; Chicago Metallic Corp.
 - c. "COMPASSO"; U.S. Gypsum

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with ASTM C636 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Layout: Balance ceiling borders on opposite sides, using more-than-half width acoustical units, except where otherwise dimensioned or indicated.
 - 1. Tolerance: 1/8 inch in 12 feet level tolerance.
 - 2. Pattern Direction: One-way, align joints.
- C. Suspension System: Secure to building structure, free from contact with objects within the ceiling plenum, with hangers spaced 48 inches on center along supported members; provide hangers not more than 8 inches from ends of each member.
 - 1. Where interference with ducts or suspended equipment prevents direct connection of suspension elements to building structure, provide steel channel members (Unistrut or equivalent) hung from structural members with threaded rods with appropriate fasteners; and adequately sized for suspension system capacity. Secure suspension system to steel channels. Connection to ductwork or equipment is not permitted.
 - 2. Do not fasten ceiling suspension members to metal roof deck.

INCLUDE BELOW FOR RABBETED PANELS.

- D. Rabbeted Panels: Rabbet panel edges that have been field cut to fit non-modular suspension grid shapes at room perimeter, columns, and similar obstructions. Use router or other factory-approved rabbeting method.
- E. Edge Moldings: Secure to substrate with screw anchors spaced 16 inch on center. Set with concealed bead of acoustical sealant. Miter corner joints. Cope exposed flanges of intersecting suspension members for flush intersections.

DELETE ARTICLE BELOW IF NO HOLD-DOWN CLIPS REQUIRED FOR FIRE-RESISTIVE CEILINGS OR AIR-PRESSURE-RESISTANT CEILINGS.

- F. Provide hold-down clips at each acoustic panel in systems indicated for Animal Facility application. Install in accordance with manufacturer's recommendations for an air pressure uplift-resistant installation.

DELETE ARTICLE BELOW IF NO SPECIALTY TRIM INCLUDED.

3.2 SPECIALTY TRIM INSTALLATION

- A. Exposed Edge and Perimeter Trim System: Install units in accordance with manufacturer's printed instructions for specific Project application.

3.3 CLEANING AND REPAIR

- A. Clean suspension grid and panels. Remove and replace panels and grid that are defective, or that have been damaged.
- B. Touch-up paint field-cut edges of factory painted tile that are exposed to view in finished installation, including horizontal and vertical surfaces at perimeter of ceilings where panels are cut for rabbeted edge molding.

END OF SECTION 095100