



PROJECT: INTERMOUNTAIN HEALTHCARE LIVEWELL

ARCHITECT'S PROJECT NO.: 1918

DATE OF ADDENDUM: DECEMBER, 2019

TO: ALL BIDDERS

FROM: RAY BERTOLDI

ADDENDUM NO: 3

LOCATION: OGDEN, UTAH

The Contract Documents for the above project are amended as follows. These amendments shall become a part of the contract documents as described above. Information contained herein shall supersede previous information, and in case of a conflict between addenda items and the Contract Documents the addenda shall govern. All information in this Addendum shall be made part of the Contractor's bid.

Items

1. Sheet AE-140: Provide 2x2 ceiling grid per specification.

Attachments: Specification Section 09511Acoustical Panel Ceilings

END OF ADDENDUM #3

SECTION 09511 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes ceilings consisting of acoustical panels and exposed suspension systems.
- B. Related Sections include the following:
 - 1. Division 9 Section "Gypsum Board Assemblies"

1.3 SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Coordination Drawings: Reflected ceiling plans drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:
 - 1. Ceiling suspension system members.
 - 2. Method of attaching suspension system hangers to building structure.
 - 3. Ceiling-mounted items including light fixtures; air outlets and inlets; speakers; sprinklers; mechanical; electrical; and special moldings at walls, column penetrations, and other junctures of acoustical ceilings with adjoining construction.
 - 4. Minimum Drawing Scale: 1/8 inch = 1 foot (1:96).
- C. Samples for Verification: Full-size units of each type of ceiling assembly indicated; in sets for each color, texture, and pattern specified, showing the full range of variations expected in these characteristics.
 - 1. 6-inch- (150-mm-) x 12" square samples of each acoustical panel type, pattern, and color.
 - 2. Set of 12-inch- (300-mm-) long samples of exposed suspension system members, including moldings, for each color and system type required.
- D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

- E. Product Test Reports: Indicate compliance of acoustical panel ceilings and components with requirements based on comprehensive testing of current products.
- F. Research/Evaluation Reports: Evidence of acoustical panel ceilings and components' compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed acoustical panel ceilings similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Source Limitations for Ceiling Units: Obtain each acoustical ceiling panel from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.
- C. Source Limitations for Suspension System: Obtain each suspension system from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.
 - 1. Obtain both acoustical ceiling panels and suspension system from the same manufacturer.
- D. Pre-installation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical panels and suspension system components to Project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical panels, permit them to reach room temperature and stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.7 COORDINATION

- A. Coordinate layout and installation of acoustical panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents.
 - 1. Acoustical Ceiling Units: Full-size units equal to 2.0 percent of amount installed.
 - 2. Suspension System Components: Quantity of each exposed component equal to 2.0 percent of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products indicated for each designation in the Acoustical Panel Ceiling Schedule at the end of Part 3.

2.2 ACOUSTICAL PANELS, GENERAL

- A. Acoustical Panel Standard: Provide manufacturer's standard panels of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectance's, unless otherwise indicated.
 - 1. Mounting Method for Measuring Noise Reduction Coefficient: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches (400 mm) away from test surface per ASTM E 795.
- B. Acoustical Panel Colors and Patterns: Match appearance characteristics indicated for each product type.
 - 1. Where appearance characteristics of acoustical panels are indicated by referencing ASTM E 1264 pattern designations and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range of products that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.
- C. Panel Characteristics: Comply with requirements indicated in the Acoustical Panel Ceiling Schedule at the end of Part 3, including those referencing ASTM E 1264 classifications.

2.3 METAL SUSPENSION SYSTEMS, GENERAL

- A. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable ASTM C 635 requirements.
- B. Metal Suspension System Characteristics: Comply with requirements indicated in the Acoustical Panel Ceiling Schedule at the end of Part 3.
- C. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- D. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung, unless otherwise indicated.
 - a. Type: Refer to structural drawings.

2.4 ACOUSTICAL SEALANT

- A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following requirements:
 - 1. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
- B. Acoustical Sealant for Concealed Joints: Manufacturer's standard nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
- C. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Acoustical Sealant for Exposed and Concealed Joints:
 - a. PL Acoustical Sealant; Chemrex, Inc., Contech Brands.
 - b. AC-20 FTR Acoustical and Insulation Sealant; Pecora Corp.
 - c. SHEETROCK Acoustical Sealant; United States Gypsum Co.
 - 2. Acoustical Sealant for Concealed Joints:
 - a. BA-98; Pecora Corp.
 - b. Tremco Acoustical Sealant; Tremco, Inc.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage, and other conditions affecting performance of acoustical panel ceilings.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 2. Work to be concealed: Verify work above ceiling is complete and installed in manner that will not affect layout and installation of ceiling panels.

3.2 PREPARATION

- A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.
 - 1. Furnish cast-in-place anchors and similar devices to other trades for installation well in advance of time needed for coordinating other work.
- B. Field Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and comply with layout shown on reflected ceiling plans.

3.3 INSTALLATION

- A. General: Install acoustical panel ceilings and suspension systems, including necessary hangers, grillage, splines, and other supporting hardware to comply with publications referenced below per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook", (UL Design) and any applicable code requirement.
 - 1. Standard for Ceiling Suspension System Installations: Comply with ASTM C 636.
- B. Suspend ceiling hangers from building's structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
 - 2. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure; that are appropriate for substrate; and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures. Do not secure wire hangers from mechanical and/ or electrical equipment, piping or other equipment occurring above ceiling.
 - 3. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers

- in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
4. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise indicated; and provide hangers not more than 8 inches (200 mm) from ends of each member.
- C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
 2. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3 mm in 3.6 m). Miter corners accurately and connect securely.
 3. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- E. Install accessories as applicable to meet project requirements.
- F. Install acoustical panels with undamaged edges and fitted accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.
1. Arrange directionally patterned acoustical panels as follows:
 - a. As indicated on reflected ceiling plans.
 2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension system runners and moldings.
 3. For reveal-edged panels on suspension system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
 4. For reveal-edged panels on suspension system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension system surfaces and panel faces flush with bottom face of runners.

3.4 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

3.5 ACOUSTICAL PANEL CEILING SCHEDULE

- A. Water-Felted, Mineral-Base with painted finish Acoustical Panels for Acoustical Panel Ceiling ATC-#1: Where this designation is indicated, provide acoustical panels, complying with the following:
1. Products: Available products include the following:
 - a. USG Radar or Equal
 2. Classification: Panels fitting ASTM E 1264 for Type III, mineral base with painted finish; Form 2, water felted.
 3. Pattern: Panels fitting ASTM E 1264 pattern designation CD.
 4. Color: White.
 5. Light Reflectance Coefficient: Not less than LR 0.82.
 6. Noise Reduction Coefficient: Not less than 0.55 in accordance with ASTM C423. Product to have UL acoustical compliance.
 7. Ceiling Attenuation Class: Not less than CAC 33 in accordance with ASTM E1414. Product to have UL acoustical compliance.
 8. Edge Detail: Reveal sized to fit flange of exposed suspension system members. Square.
 9. Thickness: 5/8 inch (15 mm).
 10. Size: 24 by 24 inches (610 by 610 mm).
- B. Metal Suspension System for Acoustical Panel Ceiling SS-#1: Where this designation is indicated, provide acoustical panel ceiling suspension system complying with the following:
1. Products: Available products include the following:
 - a. Chicago Metallic, 1200 (Stab) Seismic Series.
 - b. General: ASTM C635, commercial quality pretreated and painted hot-dipped galvanized cold-rolled steel, exposed surfaces pre-finished in manufacturer's standard corrosion resistant enamel paint finish; Color: Flat White #050 or as selected from manufacturer's standard colors.
 2. Suspension System Components:
 - a. Fire Rated Main Tees: UL Classified Heavy Duty Classification; double web design; 1 ½" high; rectangular to bulb; 15/16" exposed flange with roll-formed steel cap; cross tee holes and hanger wire holes at 6" o.c.; convenience holes at approximately 2" o.c.; integral reversible splices.
 - b. Cross Tees:
 - 1) 1 ½" high; roll-formed into double web design with rectangular bulb; 15/16" exposed flange with pre-painted aluminum cap; high tensile steel end clips clenched to web.
 - 2) 1" high; roll-formed into double-web design with rectangular bulb; 15/16" exposed flange with pre-painted aluminum cap; high tensile steel end clips clenched to web.

- 3) Main tees and cross tees shall be positively locked; yet shall be removable without the use of tools.
- c. Accessories:
- 1) Wall Molding: Angle shape; 7/8" mounting flange by 7/8" face flange; hemmed edges; exposed surface pre-finished to match suspension system components.
 - a) Inside and Outside Corner: Field mitered joints at wall molding.
 - b) Inside and Outside Corners: Pre-fabricated corner cap; formed to 90 degree angle; hemmed edge; size and finish to match wall molding.
 - 2) Shadow Molding: Formed steel section; exposed surfaces to match suspension system components.
 - a) 7/8" exposed flange; 3/4" x 3/4" reveal; 7/8" mounting flange.
 - 3) Channel Molding: U-shape; hemmed edges; exposed surfaces pre-finished to match suspension system components; 1" or 1/2" exposed flange by depth as required for ceiling material.
- d. Suspension System Attachment devices:
- 1) Hanger Wire: Galvanized carbon steel; soft temper; pre-stretched; yield stress load at least three times the design load but not less than 12-gauge.
- e. Suspension System Warranty: When used with a USG acoustical ceiling panel, this suspension system has a Lifetime 30 year warranty that it shall be free from the occurrence of 50% red rust. When used without a USG acoustical ceiling panel, the period of warranty is 10 years.

END OF SECTION 09511