1. Section 095113.13
Acoustical Canopy Ceilings - USG
	1. PART 1  GENERAL
		1. SECTION INCLUDES
			1. Acoustical metal canopy units.
2. *The paragraph below is optional text*
	* 1. RELATED REQUIREMENTS
3. *The paragraph below is optional text*
	* + 1. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.
4. *The paragraph below is optional text*
	* + 1. Section 031000 - Concrete Forming and Accessories:  Placement of special anchors or inserts for suspension system.
5. *The paragraph below is optional text*
	* + 1. Section 033000 - Cast-in-Place Concrete:  Placement of special anchors or inserts for suspension system.
6. *The paragraph below is optional text*
	* + 1. Section 053100 - Steel Decking:  Placement of special anchors or inserts for suspension system.
			2. Section 095153 - Direct-Applied Acoustical Ceilings.
			3. Section 211300 - Fire-Suppression Sprinkler Systems:  Sprinkler heads.
			4. Section 233700 - Air Outlets and Inlets:  Air diffusion devices.
			5. Section 265100 - Interior Lighting:  Light fixtures.
			6. Section 275116 - Public Address Systems:  Speakers.
			7. Section 284600 - Fire Detection and Alarm:  Fire alarm components.
		1. REFERENCE STANDARDS
			1. ASTM A580/A580M - Standard Specification for Stainless Steel Wire; 2018.
			2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2022.
			3. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
			4. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2022.
			5. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
			6. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
			7. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023.
			8. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.
7. *The paragraph below is optional text*
	* + 1. ASTM E413 - Classification for Rating Sound Insulation; 2022.
			2. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2022.
			3. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.
		1. ADMINISTRATIVE REQUIREMENTS
			1. Coordination:  Coordinate work of this section with installation of mechanical and electrical components and with other construction activities affected by work of this section.
				1. Review with affected installers those locations of facility services lines and equipment within ceiling plenum that prevent installation of hangers at spacings compliant with limitations established in referenced standards.  Arrange for each affected mechanical or electrical installer to provide necessary number of additional structural support points for ceiling installer.
			2. Preinstallation Meeting:  Convene one week before starting work of this section.
			3. Sequencing:  Schedule work of affected trades to minimize or eliminate installation conflicts and rework.
				1. Supply hanger clips during steel deck erection.  Supply additional hangers and inserts as required.
				2. Ensure that acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.  Do not install acoustical units until after interior wet work is dry.
		2. SUBMITTALS
			1. See Section 013000 - Administrative Requirements for submittal procedures.
			2. Shop Drawings:  Indicate Canopy layout and related dimensioning.
			3. Product Data:  Provide data on suspension system components and acoustical units.
			4. Samples:  Two samples [\_\_\_\_\_] by [\_\_\_\_\_] inches ([\_\_\_\_\_] by [\_\_\_\_\_] mm) in size indicating material and finish of acoustical units.
			5. Samples:  Two samples each, [\_\_\_\_] inches ([\_\_\_\_] mm) long of suspension system main runner, cross runner, and perimeter molding.
8. *The paragraph below is optional text*
	* + 1. Manufacturer's Installation Instructions:  Indicate special procedures and perimeter conditions requiring special attention.
			2. Designer's qualification statement.
			3. Installer's qualification statement.
			4. Maintenance Materials:  Furnish the following for Owner's use in maintenance of project.
9. *The paragraph below is optional text*
	* + - 1. See Section 016000 - Product Requirements for additional provisions.
10. *The paragraph below is optional text*
	* + - 1. Extra Acoustical Units:  [\_\_\_\_] sq ft ([\_\_\_\_] sq m) of each type and size.
11. *The paragraph below is optional text*
	* + - 1. Extra Acoustical Units:  Quantity equal to 5 percent of total installed.
		1. QUALITY ASSURANCE
			1. Designer Qualifications for Seismic Design:  Perform under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
			2. Installer Qualifications:  Company specializing in performing work of the type specified and with at least three years of documented experience and approved by manufacturer.
		2. FIELD CONDITIONS
			1. Maintain uniform temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent before, during, and after acoustical unit installation.
	1. PART 2  PRODUCTS
		1. CEILING ASSEMBLIES
			1. Refer to [Reflected Ceiling Plans] [Room Finish Schedule] and [Reflected Ceiling Plans] [Room Finish Schedule] on drawings for additional ceiling assembly information.
			2. Acoustical Ceiling Assembly Type [APC-1]:
				1. Acoustical Units:  Celebration Metal Canopies [None - N/A].

Face-Cut:  [32/6] [Two/24] [Four/48] [Eight/12].

Panel Size:  [As indicated on drawings] [24 inches by 24 inches (2 by 2)] [24 inches by 48 inches (2 by 4)] [24 inches by 60 inches (2 by 5)] [24 inches by 72 inches (2 by 6)] [24 inches by 96 inches (2 by 8)] [48 inches by 48 inches (4 by 4)] [30 inches by 30 inches] [30 inches by 60 inches] [48 inches by 60 inches] [\_\_ inches by \_\_ inches].

Panel Edge:  SQ edge.

Finish and Color:

Wood Tones Colors:  [As indicated on drawings] [To be selected from manufacturer's standards] [3467 Beech] [3465 Dark Bamboo] [3466 Light Bamboo] [3468 Dark Cherry] [3469 Light Cherry] [3470 Maple] [3471 Red Oak] [3472 Walnut] or  [\_\_\_\_\_].

Anodized Metal Colors:  [As indicated on drawings] [To be selected from manufacturer's standards] [058 PIA12 Brushed Aluminum] [PM61 Polished Chrome] [PM614 Satin Chrome] [or  \_\_\_\_\_].

Painted - On Metal Colors:  [Custom] [3708 Matte Mat] [050 Flat White] [002 Silver Satin] [or  \_\_\_\_\_].

Characteristics:  Material Noise Reduction Coefficient = 0.95, Ceiling Attenuation Class = [\_\_\_], Light Reflectance = [\_\_\_], Recycled Content = [\_\_\_], Environmental Product Declaration: [\_\_\_], Health Product Declaration: [\_\_\_], GreenGuard Gold: [\_\_\_], EC3 Score: [\_\_\_], ClimaPlus Warranty: 30 year.

* + 1. Ceiling PERFORMANCE REQUIREMENTS
			1. Design for maximum deflection of 1/8 inch of span.
1. *The paragraph below is optional text*
	* + 1. Seismic Performance:  Ceiling systems designed to withstand the effects of earthquake motions determined according to ASCE 7 for Seismic Design Category D, E, or F and complying with the following:
2. *The paragraph below is optional text*
	* + - 1. Local authorities having jurisdiction.
		1. Ceiling COMPONENT PRODUCTS
			1. Acoustical Units:
				1. Acoustical Units - General:  ASTM E1264, Fire Class A.
3. *The paragraph below is optional text*

VOC Content:  As specified in Section 016116.

1. *The paragraph below is optional text*

VOC Content:  Certified as Low Emission by one of the following:

1. *The paragraph below is optional text*

Product listing in UL (GGG).

1. *The paragraph below is optional text*

Product listing in CHPS (HPPD).

Noise Reduction Coefficient (NRC) rating, Ceiling Attenuation Class (CAC) rating, and Light Reflectance Coefficient (LR) performance for each type of unit specified below, as determined in accordance with ASTM E1264.

Fire Class / Surface Burning Characteristics:  Determined in accordance with test method ASTM E84.

Surface Burning Characteristics:  Unless otherwise indicated, flame spread index of [25 or less] , smoke developed index of [50 or less] .

* + - * 1. Acoustical Panel Canopies:  Metal panels with [mineral fiber] [glass fiber] acoustical media backing suspended by hanger wire attached to brackets on panel back.

Classification:  ASTM E1264 Type VII.

Pattern: ["C" - perforated, small holes] ["A"- perforated, regularly spaced large holes].

Panel Material:  Aluminum sheet, ASTM B209/B209M.

Panel Finish:   [Enamel] [Anodized]; [\_\_\_\_\_\_\_\_] color [from manufacturer's standard range] [as selected].

Panel Size:  [As indicated on drawings] [24 inches by 24 inches (2 by 2)] [24 inches by 48 inches (2 by 4)] [24 inches by 60 inches (2 by 5)] [24 inches by 72 inches (2 by 6)] [24 inches by 96 inches (2 by 8)] [48 inches by 48 inches (4 by 4)] [30 inches by 30 inches] [30 inches by 60 inches] [48 inches by 60 inches] [or  \_\_ inches by \_\_ inches].

Panel Edge Thickness and Profile:  Square, upturned 1-3/4 inch with 1/2 inch horizontal return flange.

Finishes:

Wood Tones Colors:  [As indicated on drawings] [To be selected from manufacturer's standards] [3467 Beech] [3465 Dark Bamboo] [3466 Light Bamboo] [3468 Dark Cherry] [3469 Light Cherry] [3470 Maple] [3471 Red Oak] [3472 Walnut] [or  \_\_\_\_\_].

Anodized Metal Colors:  [As indicated on drawings] [To be selected from manufacturer's standards] [058 PIA12 Brushed Aluminum] [PM61 Polished Chrome] [PM614 Satin Chrome] [or  \_\_\_\_\_].

Painted - On Metal Colors:  ]As indicated on drawings] [To be selected from manufacturer's standards] [3708 Matte Mat] [050 Flat White] [002 Silver Satin] [or  \_\_\_\_\_].

1. *The paragraph below is optional text*

Recycled Content:  As applicable to selected products.

1. *The paragraph below is optional text*

Material Ingredients Transparency:  Products included in the USG EcoBlueprint Program.

1. *The paragraph below is optional text*

Low Emissions (VOC):  Greenguard-certified products.

Products:

USG Corporation; Celebration Metal Canopies:  www.usg.com/ceilings/#sle.

Substitutions:  Not permitted.

* + 1. ACCESSORIES
			1. Suspension Wire[] [None - N/A]:  Size and type as required for application[None - N/A] [seismic requirements].
				1. Concealed Suspension:

Suspension Wire:  Steel, annealed, galvanized finish, 12 gauge, 0.0808 (2.05 mm) diameter, complying with ASTM A641/A641M.

* + - * 1. Exposed (To View) Suspension:

Suspension Wire:  Stainless steel, 18 gauge, 0.0403 (1.02 mm) diameter, complying with ASTM A580/A580M.

Suspension Rope:  1/32 inch (0.8 mm) stainless steel rope wire complying with ASTM A492, with loop and crimp-end or turnbuckle connection.

* + 1. Fabrication
			1. Shop fabricate ceiling components to the greatest extent possible.
	1. PART 3  EXECUTION
		1. EXAMINATION
			1. Verify existing conditions before starting work.
			2. Verify that layout of hangers will not interfere with other work.
			3. Verify that field measurements are as indicated on shop drawings.
			4. Start of installation constitutes acceptance of project conditions.
		2. Preparation
			1. Coordinate the location of hangers with other work.
			2. Provide hanger clips during steel deck erection.  Provide for anticipated additional hangers and inserts as required.
			3. Install ceiling system after major above-ceiling work is complete.
			4. Acclimate wood ceiling materials by removing from packaging in installation area a minimum of 72 hours prior to installation.
		3. INSTALLATION - SUSPENSION Hangers
			1. Install suspension hangers in accordance with ASTM C636/C636M and manufacturer's instructions and as supplemented in this section.
			2. Install hangers and inserts coordinated with overhead work.  Provide additional hangers and supports as required.
			3. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
1. *The paragraph below is optional text*
	* + 1. Lay out system to indicated design.
2. *The paragraph below is optional text*
	* + 1. Locate system according to reflected ceiling plan.
3. *The paragraph below is optional text*
	* + 1. Seismic Suspension System, Seismic Design Category C:  Hang suspension system independent of walls, columns, ducts, pipes and conduit.
4. *The paragraph below is optional text*
	* + 1. Seismic Suspension System, Seismic Design Categories D, E, F:  Hang suspension systemwires independent of walls, columns, ducts, pipes and conduit.
			2. Where ducts, facility services, or equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
			3. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
			4. Support fixture loads using supplementary hangers located within 6 inches (152 mm) of each corner, or support components independently.
			5. Do not eccentrically load system or induce rotation of runners.
			6. Edge Moldings:  Install at intersection of ceiling and vertical surfaces and penetrations, using components of maximum length; set level. Provide edge moldings at junction with other ceiling finishes. Miter corners. Provide preformed edge closures to match bullnosed cornered partitions.
				1. Install in bed of acoustical sealant.
				2. Use longest practical lengths.
				3. Overlap and rivet corners.
5. *The paragraph below is optional text*
	* + 1. Install light fixture boxes constructed of gypsum board above light fixtures in accordance with fire rated assembly requirements and light fixture ventilation requirements.
		1. INSTALLATION - ACOUSTICAL UNITS
			1. Install acoustical units in accordance with manufacturer's instructions.
			2. Hang acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
			3. Install acoustical units free from twist, warp, and dents.
			4. Cutting Acoustical Units:
				1. Cut to fit irregular grid and perimeter edge trim.
				2. Make field cut edges of same profile as factory edges.
			5. Lay acoustical insulation for a distance of 48 inches (1219 mm) either side of acoustical partitions as indicated.
			6. Install hold-down clips on acoustical units within 20 ft (6 m) of an exterior door.
		2. TOLERANCES
			1. Maximum Variation from Flat and Level Surface:  1/8 inch in 10 feet (3 mm in 3 m).
			2. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads:  Two degrees.
		3. Cleaning
			1. Clean and touch up minor finish damage.  Remove and replace components that cannot be successfully cleaned and repaired.
6. END OF SECTION