

## **SECTION 09545 SPECIFICATIONS FOR LAY-IN EMBOSSED METAL CEILING SYSTEM**

### **PART 1 - GENERAL**

#### **1.01 Related Work**

- A. Insulation: Section (insert here)
- B. Mechanical equipment: Section (insert here)
- C. Electrical: Section (insert here)
- D. Gypsum board systems: Section (insert here)
- E. Acoustical ceilings: Section (insert here)

#### **1.02 System Description**

- A. Provide the entire system as specified herein, and as detailed within the Contract Documents, and installation drawings of the manufacturer. The system shall be as described in Section 2.02 "Materials".

#### **1.03 Quality Assurance**

- A. Subcontractor qualifications: Installer shall have not less than three years of successful experience in the installation of Grid Cell metal ceiling systems on projects with requirements specified.
- B. Requirements of regulatory agencies: Codes and regulations of authorities having jurisdiction.
- C. Source quality control:
  - 1. Test reports: Manufacturer will provide test certification for minimum requirements as tested in accordance with applicable industry standards and/or to meet performance standards specified by various agencies.
  - 2. Changes from system: System performance following any substitution of materials or change in assembly design must be certified by the manufacturer.

#### **1.04 References**

- A. ASTM C636: Manufacturing and Installation of Suspended Ceilings.
- B. ASTM E119: Fire Tests of Building Construction and Materials.
- C. ASTM C423: Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

#### **1.05 Submittals**

- A. Samples: Submit representative sample of color and finish of all exposed materials. Sample shall be approximately 11"x 11".
- B. Installation Drawings: Submit three copies each of typical installation details indicating system components, splice details, and sequence of installation.
- C. Manufacturer's data: Submit manufacturer's standard catalog cut sheet with sample above.

#### **1.06 Delivery, Storage and Handling**

- A. Delivery of materials: Deliver materials in original, unopened packages clearly labeled with manufacturer's name and identification numbers.

- B. Storage: Store in manner that will prevent warping, scratches or damage of any kind.
- C. Handling: Handle in such a manner as to insure against racking, distortion or physical damage of any kind.

### **1.07 Project Conditions**

- A. Existing conditions: (Include specific alteration work requirements for project, if any).
- B. Environmental requirements for interior installation: Building shall be enclosed with windows and exterior doors in place and glazed, and roof watertight before installation of metal ceiling system and related components. Climatic condition range of 60 degrees Fahrenheit (15.56 degrees Celsius) to 85 degrees Fahrenheit (29.44 degrees Celsius) and relative humidity of not more than 70% before installation of metal ceiling components.
- C. Coordination with other work:
  - 1. Mechanical work: Ductwork above ceiling shall be complete, and permanent heating and cooling systems operating to climate conditions prior to installation of metal ceiling components.
  - 2. Electrical work: Installation of conduit above ceiling shall be complete before installation of metal ceiling components.
  - 3. Fire protection work: Fire protection lines and/or equipment occurring above ceiling shall be completed and tested before metal ceiling components are installed.
  - 4. Protection: Protect completed work above ceiling system from damage during installation of metal ceiling components.

## **PART 2 - PRODUCTS**

### **2.01 Manufacturer**

- A. Provide Embossed Metal Ceiling model number EMF22/1202ND-F41 (replace 1202 with appropriate pattern number if other than Chelsea) (replace F41 with appropriate color number if other than white, per section 2.02 E below) as manufactured by American Decorative Ceilings, Inc.; 4510 E. 71st St.; Cleveland, Ohio 44105; Telephone number (216) 341-2222.

### **2.02 Materials**

- A. All suspension members to be constructed to the Intermediate Duty classification of ASTM C635.
  - 1. Main runners and cross tees shall be of pre-punched, roll formed steel t-bars with the exposed flange surface to match the metal pan finish. Vertical dimensions of t-bar members to be a minimum of 1-1/2" and exposed face of 15/16".
  - 2. Perimeter moldings, where applicable, are interchangeable as long as dimensions and thickness are the same as specified for above t-bar system.
- B. Embossed Metal Ceiling Metal Panels shall be a minimum of .020" thickness (for aluminum) or .010" thickness (for tinplate) All exposed metal shall be free from surface blemishes, seam marks, roller marks, and other imperfections. Unless otherwise indicated, units to be a nominal 2'x 2' for typical lay-in installation.
- C. Provide 1/2" thick 2'x 2' gypsum board backer with all exposed perimeter edges sealed to prevent leakage of gypsum powder residue. (Omit this section if backer is not required)
- D. Metal Cornices of Model Number EMC???-F?? to be provided in matching finish and from same material as Embossed Metal Panels. Width and depth of unit are pre-determined from its standard design.
- E. Finish of Embossed Metal Ceiling Units, suspension members, and Metal Cornices to be factory applied after removal of all manufacturer's lubricants. Said finish to be two-part polyurethane epoxy paint (or primer) for durability and superior color consistency. Finish to be (mill (F0)); (white (F41)); (custom color (F47)); (chrome (F03)); (brass (F07)); (copper(F06)) (strike out all non-applicable finishes.)

## **2.03 Fabrication**

- A. Fabricate Embossed Metal Ceiling Panels into nominal 2'x 2' units for easy lay-in application into supplied 2'x 2' grid opening.
- B. Die form and fabricate Metal Cornices in appropriate designed widths to 48" lengths. Fabricate cornices from same material as Embossed Metal Ceiling Panels

## **PART 3 - EXECUTION**

### **3.01 Inspection**

- A. Examine areas to receive metal ceiling system for conditions which will adversely affect installation.
- B. Do not start work until unsatisfactory conditions are corrected.
- C. Work to be concealed: Verify work above support system is complete, tested, and installed in manner which will not affect layout and installation of metal ceiling system.

### **3.02 Preparation**

- A. Field dimensions: Installer must verify actual field dimension prior to installation.
- B. Coordination: Coordinate and schedule installation of metal ceiling system with work of trades affected by this installation, with particular attention given to mechanical and electrical work required to be installed and operating before ceiling work can begin.
- C. Provide the entire system as specified herein, and as detailed within the Contract Documents, and installation drawings of the manufacturer. The system shall be as described in Section 2.02 "Materials".

### **3.03 Installation**

- A. Reference:
  - 1. Install in accordance with approved installation drawings and Contract Documents.
- B. Hanger wires:
  - 1. Spacing: Space hanger wires maximum 48" o.c. along length of mains and within 6" (for interior applications) from the mains (or carriers) starting and end points, attached directly to structure above.
  - 2. Attachment to Mains (Carriers): Install adjacent wires through manufacturer's prepunched holes at appropriate locations. Align support system straight true and level. Re-level hanging wire as required.
  - 3. Limitation: Do not support hanger wires from mechanical and/or electrical equipment, piping, or other equipment occurring above ceiling.
  - 4. Fixtures at ceiling: Provide additional fixture support as required in accordance with local building codes or other regulatory agencies.

### **3.04 Adjust and Clean**

- A. Adjust components for uniform tolerances. Replace any and all ceiling panels that are scratched or dented.
- B. Clean exposed surfaces with non-solvent based, non-abrasive commercial cleaner.

### **3.05 Extra Stock**

- A. Provide (2-5% (depending on project size)) extra members in matching finish to owner's representative. Stock material to be labeled for storage.