

## **SECTION 15855 - REGISTERS AND GRILLES**

### **PART 1 GENERAL**

#### **1.01 RELATED DOCUMENTS**

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

#### **1.02 SUMMARY**

- A. This Section includes ceiling- and wall-mounted diffusers, registers, and grilles.
- B. Related Sections include the following:
  - 1. Division 15 Section "Duct Accessories" for volume-control dampers not integral to diffusers, registers, and grilles.
  - 2. Division 15 Section "Testing, Adjusting, and Balancing" for balancing diffusers, registers, and grilles.

#### **1.03 DEFINITIONS**

- A. Grille: A louvered or perforated covering for an opening in an air passage, which can be located in a sidewall, ceiling, or floor.
- B. Register: A combination grille and damper assembly over an air opening.

#### **1.04 SUBMITTALS**

- A. Product Data: For each model indicated, include the following:
  - 1. Data Sheet: For each type of air outlet and inlet, and accessory furnished; indicate construction, finish, and mounting details.
  - 2. Performance Data: Include throw and drop, static-pressure drop, and noise ratings for each type of air outlet and inlet.
  - 3. Schedule of registers, and grilles indicating drawing designation, room location, quantity, model number, size, and accessories furnished.
  - 4. Assembly Drawing: For each type of air outlet and inlet; indicate materials and methods of assembly of components.

#### **1.05 QUALITY ASSURANCE**

- A. Product Options: Drawings and schedules indicate specific requirements of registers, and grilles and are based on the specific requirements of the systems indicated. Other manufacturers' products with equal performance characteristics may be considered. Refer to Division 1 Section "Substitutions."
- B. NFPA Compliance: Install registers, and grilles according to NFPA 90A, "Standard for the Installation of Air-Conditioning and Ventilating Systems."

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURED UNITS**

- A. Registers, and grilles are scheduled at the end of this Section.

#### **2.02 SOURCE QUALITY CONTROL**

- A. Testing: Test performance according to ASHRAE 70, "Method of Testing for Rating the Performance of Air Outlets and Inlets."

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Examine areas where registers, and grilles are to be installed for compliance with requirements for installation tolerances and other conditions affecting performance of equipment. Do not proceed with installation until unsatisfactory conditions have been corrected.

### **3.02 INSTALLATION**

- A. Install registers, and grilles level and plumb, according to manufacturer's written instructions, Coordination Drawings, original design, and referenced standards.
- B. Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practicable. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.
- C. Install registers, and grilles with airtight connection to ducts and to allow service and maintenance of dampers and air extractors.
- D. Install supply registers with directional throws as indicated on the drawings; i.e., one way, two way, three way or four way throw.

### **3.03 ADJUSTING**

- A. After installation, adjust registers, and grilles to air patterns indicated, or as directed, before starting air balancing.

### **3.04 CLEANING**

- A. After installation of registers, and grilles, inspect exposed finish. Clean exposed surfaces to remove burrs, dirt, and smudges. Replace registers, and grilles that have damaged finishes.

### **3.05 DIFFUSER SCHEDULE**

### **3.06 SELECTION**

- A. Manufacturer shall be responsible for verification of proper selection for capacity, throw and noise. Sizes indicated on the drawings are for general information only to assist the contractor in the approximate sizes expected. Submit schedule showing all relevant data for each room. Manufacturer's standard selection table is not acceptable.

### **3.07 REGISTER SCHEDULE**

- A. Ceiling or Sidewall Register CR and SR:
  - 1. Products: Subject to compliance with requirements, provide model equal to Hart & Cooley model 821 or 831.
  - 2. Material: Steel.
  - 3. Finish: Baked enamel, white.
  - 4. Vertical or horizontal adjustable face bars on  $\frac{3}{4}$  inch centers; with vertical or horizontal adjustable multi-shutter valve.
  - 5. Mounting: Surface.

### **3.08 GRILLE SCHEDULE**

- A. Filter Return Grille FRG.

1. Products: Subject to compliance with requirements, provide model equal to Hart & Cooley model 659.
2. Material: Steel.
3. Finish: Baked enamel, white.
4. Face Blade Arrangement: Fixed horizontal; 1/3 inch spacing; 20 degrees.
5. Mounting: Surface.
6. Accessories: 1 inch thick filters; Farr 30/30 or equal.

**END OF SECTION 15855**

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