PART 1 - GENERAL REQUIREMENTS

1.01 SECTION INCLUDES:

A. Cabinet Unit Heaters

B. Electric Baseboard Convectors

1.02 SUBMITTALS

A. Submit Shop Drawings as required by Division 1.

B. Submit product data for each type and size of electric heater.

C. Shop Drawings shall indicate volts, phase, watts and all options that are to be provided.

D. Wiring diagrams detailing wiring for power and control systems and differentiating clearly between manufacturer-installed and field-installed wiring.

E. Shop Drawings showing fabrication and installation of electric resistance heating units including plans, elevations, sections, details of components, and attachments to other units of Work.

F. Color Samples: Submit color samples for each type of cabinet finish furnished for Architect selection.

G. Maintenance data for electric resistance heaters to include in the operation and maintenance manual specified in Division 1. Include detailed manufacturer's instructions for cleaning.

1.03 REGULATORY REQUIREMENTS

A. Manufacturer Qualifications: Engage a firm experienced in manufacturing radiant heating panels similar to those indicated for this Project and that have a record of successful in-service performance.

B. Comply with NFPA 70 for components and installation.

C. Listing and Labeling: Provide products specified in this Section that are listed and labeled.

1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.

2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

3. Fire-resistance-rated, gypsum board assemblies are identical to design designations in listing and labeling agency's product directory.

D. Provide products listed and classified by Underwriter's Laboratories, Inc. as suitable for purpose intended.

PART 2 - PRODUCTS AND MATERIALS

2.01 GENERAL

A. Provide electric heaters of voltage, size and capacity as indicated on the Drawings.

B. Electric heaters shall be designed for a single circuit supply and provided with a single integral, factory-mounted power disconnect switch. Heating elements, motor and control circuits shall be subdivided and fused.

C. Elements shall consist of helically coiled nickel chromium alloy resistance wire embedded and completely surrounded in magnesium oxide, enclosed in corrosion resistant sheaths and permanently attached to corrosion resistant steel fins.

D. Motors shall be totally enclosed industrial type, permanently lubricated and equipped with thermal overload protection with automatic reset. Motors shall be mounted on a heavy gauge formed metal bracket. After the thermostat has been satisfied, the fan shall continue to run until residual heat has been dissipated.

E. Electric heaters shall be equipped with an automatic reset thermal cutout which disconnects elements and motors in the event normal operating temperatures are exceeded.

F. Contactors, relays and control transformers shall be factory assembled and wired.

G. Provide 24 volt factory wired thermostat.

2.02 CABINET UNIT HEATERS

A. Cabinet unit heaters shall be

1. Berko
2. Brasch
3. Erincraft
4. King Electric
5. Markel
6. Q Mark
7. Raywall
8. Redd-i Products

B. Centrifugal fan motor shall be multi-speed, permanent split capacitor type with external or internal overload protection. Furnish magnetic motor starter and step-down transformer for 115 volt motor control circuit.

C. Cabinets shall be minimum 18 gauge furniture steel, baked enamel finish, with color as selected by the Architect. Filtered air inlet and outlet openings shall be substantially formed grilles. Cabinets for recessed units shall completely overlap all sides of the wall openings. Refer to Architectural Drawings for recess depth available. All recessed units shall be mounted with the bottom 6" above finished floor line.

2.03 ELECTRIC BASEBOARD CONVECTORS

A. Electric baseboard convectors shall be:

1. Berko
2. Brasch
3. King Electric
4. Q Mark
5. Raywall
6. Redd-i Products

B. All elements shall have a full length linear type thermal protection cutout switch with automatic reset for protection against overheating. Element supports shall allow for thermal expansion.

C. Enclosure shall be a minimum 16 gauge steel with a baked enamel finish in a color selected by the Architect. Furnish with necessary blank sections, filler sections, end caps, corners and discharge grilles.>

D. Enclosure shall be custom detailed on the Architectural Drawings. Obtain UL listing for the custom convector.>

E. Provide inside the enclosure {A= a line voltage thermostat.} {B= a power relay.} {C= space for a PE switch by the Temperature Control Contractor.}>

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify conditions are acceptable prior to beginning installation.

3.02 INSTALLATION

A. Install in accordance with manufacturer’s instructions.

B. Locate each unit in the position indicated.

C. Install units with sufficient clearance from adjacent construction, piping, ductwork and other obstructions to allow access for service and maintenance.

D. Support unit heaters from structure.

E. Install flush units tight to the wall. The unit trim shall cover the opening.

3.03 FIELD QUALITY CONTROL

A. Verify operation of each electric heating unit by measuring input voltage and current simultaneously for period of ten minutes of continuous operation.

3.04 DEMONSTRATION

A. Demonstrate location and setting procedures for thermostats and other heating controls.

END OF SECTION