2.3 GAS FURNACE COMPONENTS

A. Heat Exchanger: stainless steel welded construction for direct vent, sealed combustion application.

B. Burner: Atmospheric type with adjustable combustion air supply.
   1. Gas valve, two state provides 100 percent safety gas shut-off; 24 volt combining pressure regulation, safety pilot, manual set (On-Off), pilot filtration, automatic electric valve.
   2. Electronic pilot ignition, with electric spark igniter.
   3. Combustion air damper with synchronous spring return damper motor.
   4. Non-corrosive combustion air blower with permanently lubricated motor.

C. Burner Safety Controls:
   1. Thermocouple Sensor: Prevents opening of gas valve until pilot flame is proven and stops gas flow on ignition failure.
   2. Flame Rollout Switch: Installed on burner box and prevents operation.
   3. Vent Safety shutoff Sensor: Temperature sensor installed on draft hood and prevents operation, manual reset.
   4. Limit Control: Fixed stop at maximum permissible setting, de-energizes burner on excessive bonnet temperature, automatic resets.

D. Operating Controls:
   1. Cycle burner by room thermostat to maintain room temperature setting.
   2. Supply fan energized from bonnet temperature independent of burner controls, with adjustable timed off delay and fixed timed on delay, with manual switch for continuous fan operation.

PART 3 EXECUTION

3.1 INSTALLATION

A Install in accordance with manufacturer's instructions and requirements of local authorities having jurisdiction in configurations shown on plans.

B. Install in accordance with NFPA 90A and NFPA 90B.

C. For belt driven air handlers, install flexible connections between fan inlet and discharge ductwork. Ensure metal bands of connects are parallel with minimum one inch flex between ductwork and fan while running.

D. For ducted systems, provide sight glass in liquid line within 12 inches of coil.

E. Condensate Drain Pan and Piping
   1. Run condensate drain lines (primary and secondary) from each air handling unit as noted on the Drawings. For primary line, provide a cleanout and trap (minimum depth per manufacturer) to prevent back suction into the air unit. Drain lines shall be sized to match equipment drains, but