LEGALETT HVAC DESIGN
FEE SCHEDULE

(Revised March 2020)

Background

In the past Legalett has simply supplied warm floors for comfortable living. However, 2012 Building Code changes in Ontario make it feasible and practical for Legalett to offer, in addition to its existing product lines, a building envelope HVAC design.

Legalett will now offer a one stop shop for a performance based HVAC design (Engineering provided by HSP Consultants Inc.). In other words, you will now have the ability to order the design for the complete building heating system directly from Legalett. We will be offering multiple but specific design options. The additional HVAC equipment specified in the Legalett design will be supplied by your usual trades/suppliers.

HVAC designs will conform to SB-12 of the most updated version of the 2012 OBC. Legalett will require that a blower door test be done for the home (by others). Note that all designs are limited to Group C residential occupancies that conform to part 9 of OBC (i.e. must be three stories or fewer in building height and have a building area not exceeding 600 m^2.

The performance based solution outlined in this document may not be for everyone, and if it is decided that this route is followed, the building envelope contractor must be very familiar and have a proven track record with a tight building envelope and blower door testing.

There will be a fee associated with the HVAC design, however, it eliminates the need to turn to a secondary design firm for building heat loss/gain and Ventilation design, as this will all be provided by Legalett. See below for the fee schedule.

What is a Blower Door Test?

A Blower Door Test is a simple test to determine the air tightness of a building envelope. Infiltration can amount to a significant portion of a buildings heating and cooling requirements. The amount of infiltration is a function of the quality of construction of the building. Many builders take the necessary steps to ensure proper sealing of the exterior building envelope.

For the blower door test, a technician should be coordinated to arrive at the new construction either during or shortly after the drywall stage to conduct the blower door test. It is important for the test to be conducted at the proper stage of construction to allow any remedial work, if necessary, to be completed with the minimum disturbance of finishes (and minimum cost) for the building envelope contractor. Remedial work could include but may not be limited to sealing of air barrier around

electrical outlets and potlights, caulking around windows and doors, use of expansion foam for hard to get at areas, etc. The test is conducted as the building would be lived in. The cost of all blower door tests is by others. All reports must be forwarded to Legalett for approval as per OBC 2.1.2 of SB-12. Please note that the building official will not issue an occupancy permit until it has been proven that the home is built as specified by the designer.

R2000 guidelines specify a maximum of 1.5 air changes per hour (ACH) at a -50 Pascal pressure differential during the blower door test. The 2012 OBC assumes a maximum of 2.5 ACH for detached homes and 3.0 for homes that share a common wall (all at -50 Pascals). Legalett will be specifying a value in the range of 1.5 to 2.25 ACH at -50 Pascals when providing the HVAC design in order to achieve compliance with the 2012 OBC SB-12 performance based criteria. Experience shows that a stick built home will require greater attentions to detail to provide a well sealed exterior building envelope versus an ICF home which can be naturally more air-tight due to the monolithic wall. In either case, sealing around doors, windows, potlights and other ceiling penetrations is very important.

Set Fee schedule for HVAC Design

Flat Rates

Option #1: Electric Coil Radiant Heat/ERV c/w Electric in duct heater/No A/C
First 1500 ft^2: $1100.00 + HST
Each additional ft^2: $0.30 +HST

Option #2: Water Coil Radiant Heat/ERV c/w Water coil in duct heater/Gas Fired Hot Water tank or Boiler/ No A/C
First 1500 ft^2: $1300.00 + HST
Each additional ft^2: $0.30 +HST

Option #3: Electric Coil Radiant Heat/ERV/Air to Air Electric Heat Pump/Mini Duct Air Handler or VRF system c/w A/C

First 1500 ft^2: $1900.00 + HST
Each additional ft^2: $0.50 +HST

Option #4: Water Coil Radiant Heat/ERV/Air to Air Electric Heat Pump/ Mini Duct Air Handler or VRF system c/w A/C/ Gas Fired Hot Water tank or Boiler

First 1500 ft^2: $2100.00 + HST
Each additional ft^2: $0.50 +HST

Option #5: Water Coil Radiant Heat/ERV/Air to Water Electric Heat Pump/ Mini Duct Air Handler or VRF system c/w A/C/ Gas Fired Hot Water tank or Boiler
First 1500 ft^2: $2100.00 + HST
Each additional ft^2: $0.50 +HST

No other options are available.

Failure of Blower Door test

Should a blower door test not meet the specified infiltration values outlined by the HVAC design, it is advised that the blower door technician remain on site for a reasonable amount of time so that possible large infiltration leaks can be identified and communicated to the building envelope contractor. It is strongly recommended that this building envelope contractor attend the blower door test. Should it be identified that the building has many small leaks and it is not easy to find them, it will be the responsibility of the building envelope contractor to remediate and have another blower door test completed.

Revision to Plans Requiring Re-Issue

The fee for a change to HVAC plans will be determined on a case by case basis depending on the complexity of the change. Additional Drawing issues will be min. $150.00 per issue.

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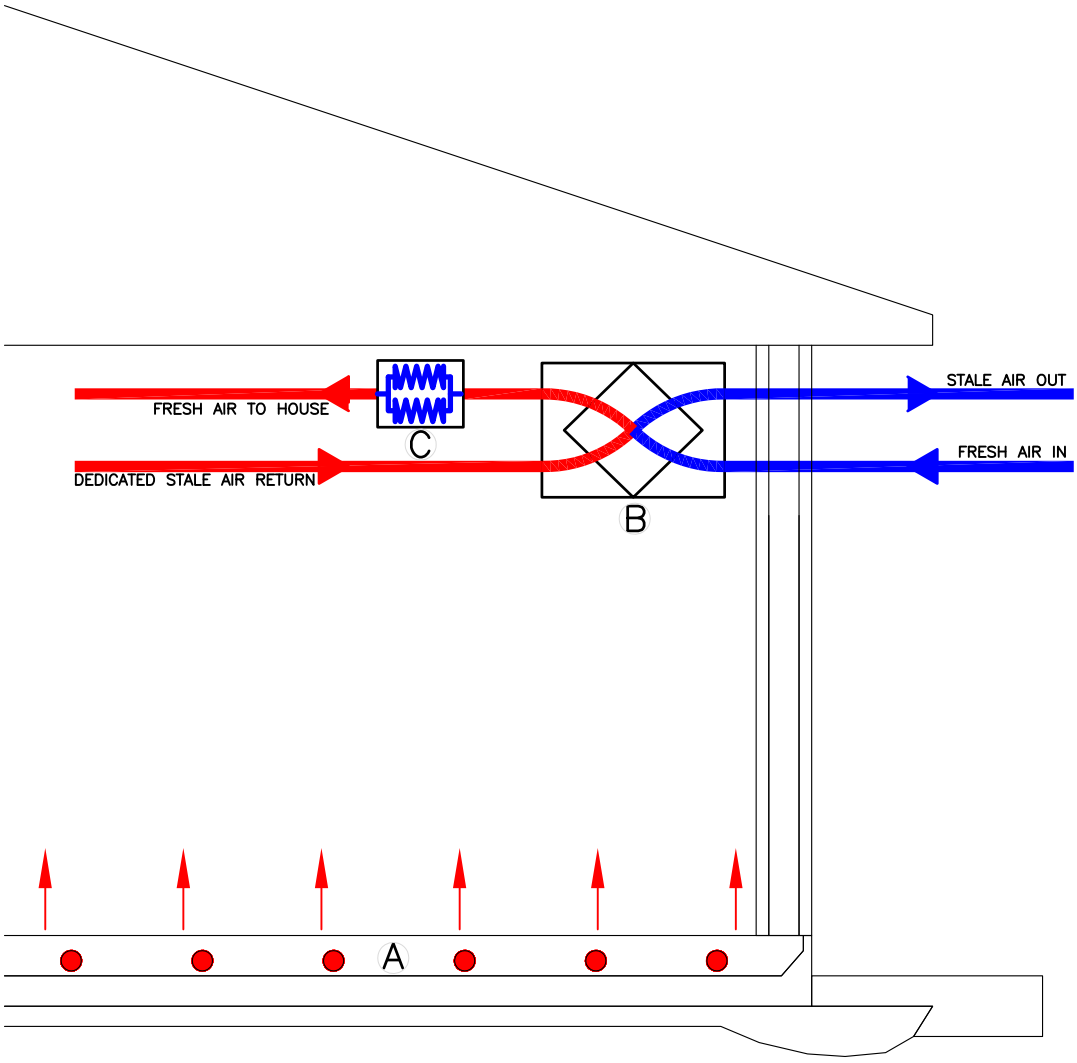

OPTION 1:

A LEGALETT ELECTRIC COIL RADIANT HEAT
B DEDICATED HRV
C ELECTRIC IN-DUCT HEATER

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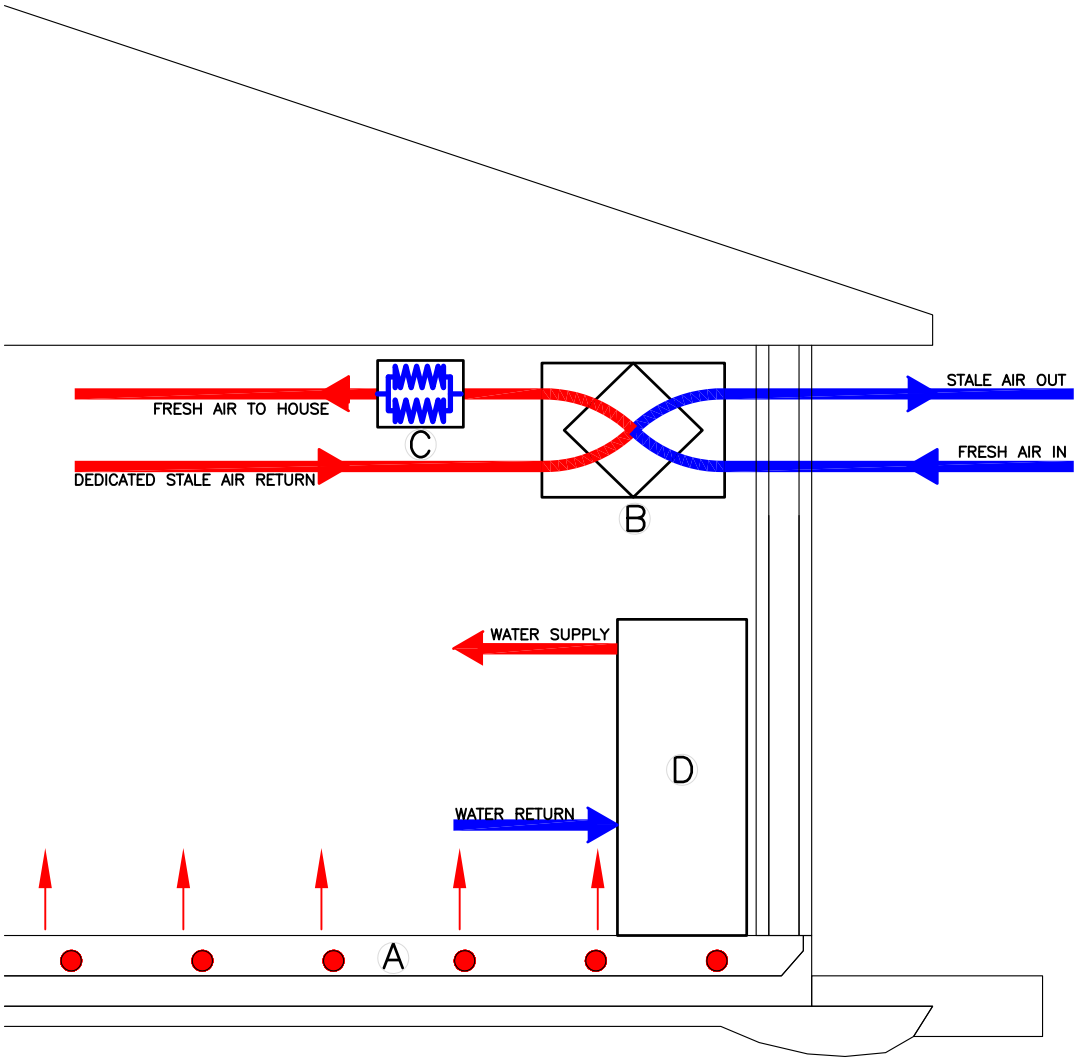

OPTION 2:

A LEGALETT WATER COIL RADIANT HEAT
B DEDICATED HRV
C WATER COIL IN-DUCT HEATER
D GAS FIRED HIGH EFFICIENCY HWT OR BOILER

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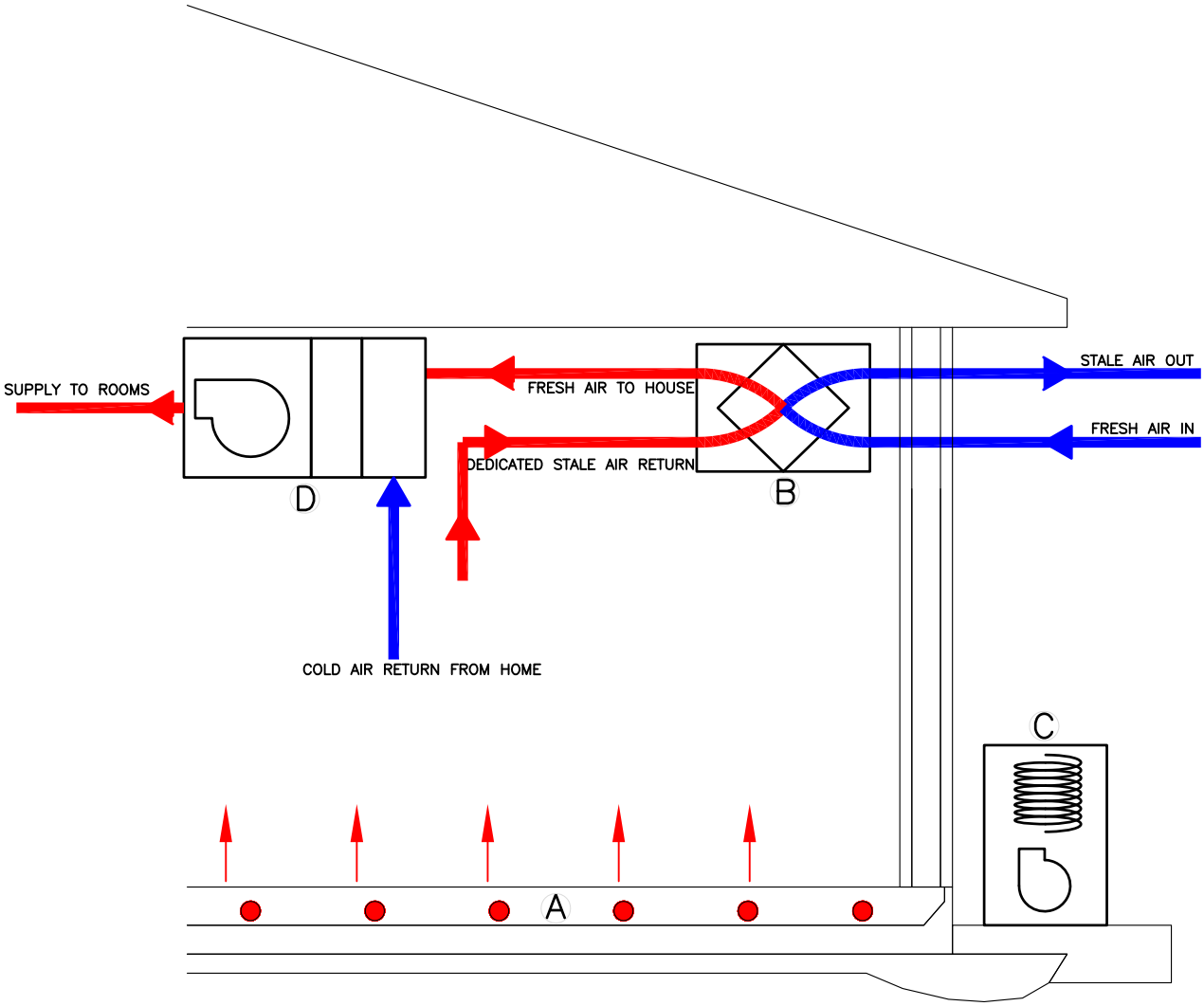

OPTION 3:

A LEGALETT ELECTRIC COIL RADIANT HEAT
B HRV
C AIR TO AIR ELECTRIC HEAT PUMP
D MINI-DUCT AIR HANDLER

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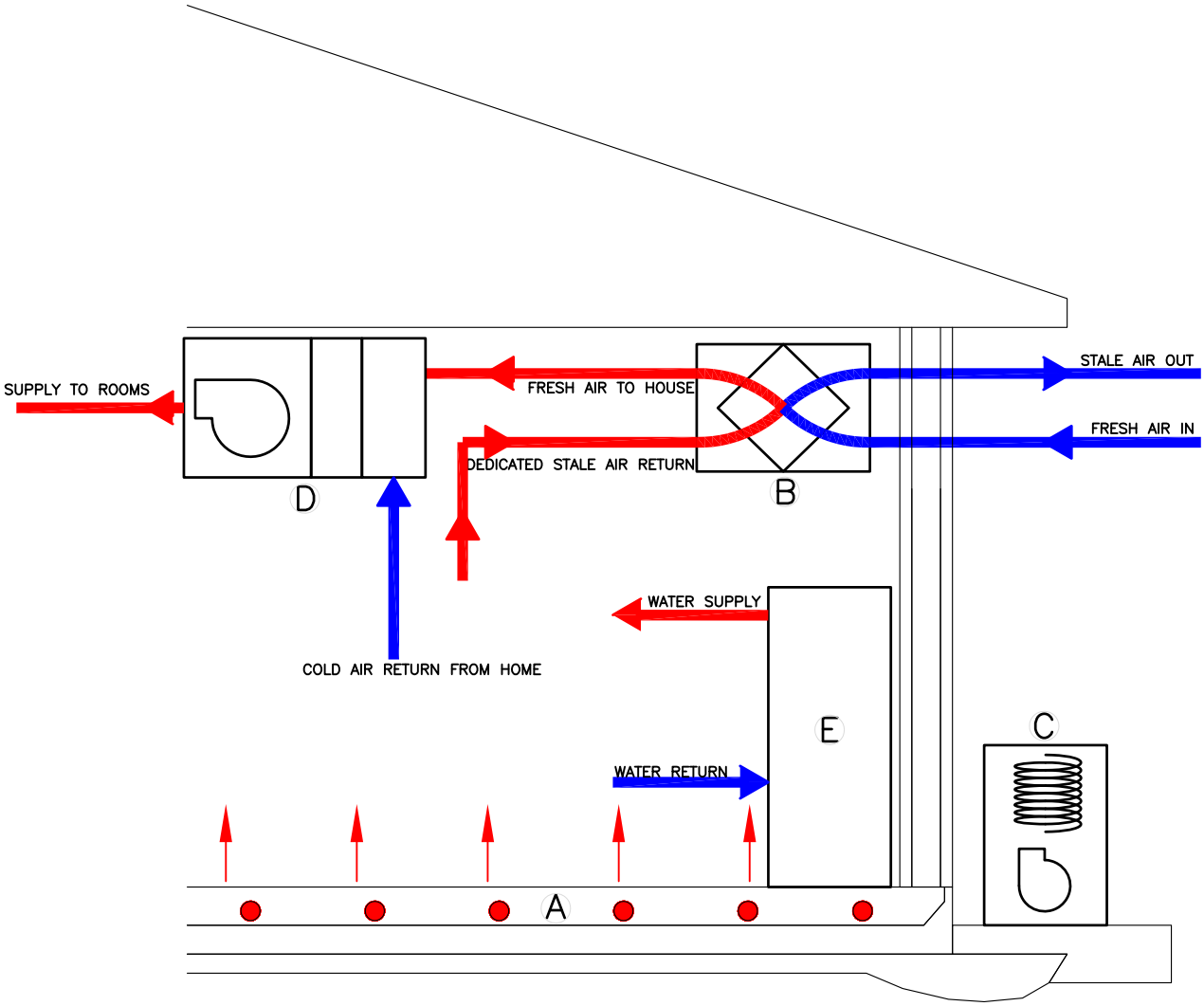

OPTION 4:

A LEGALETT WATER COIL RADIANT HEAT
B HRV
C AIR TO AIR ELECTRIC HEAT PUMP
D MINI-DUCT AIR HANDLER
E GAS FIRED HIGH EFFICIENCY HWT OR BOILER

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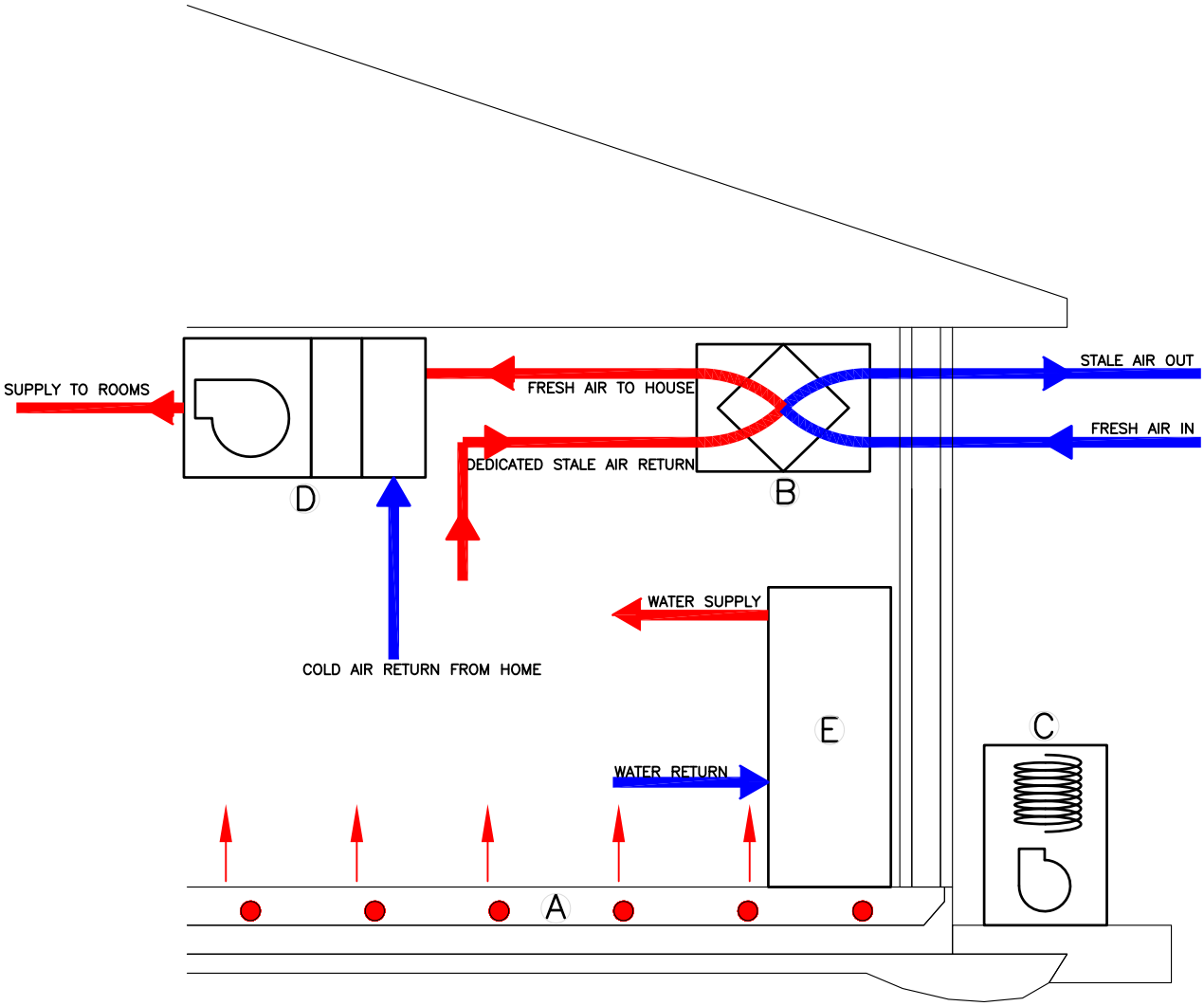

OPTION 5:

A LEGALETT WATER COIL RADIANT HEAT
B HRV
C AIR TO WATER ELECTRIC HEAT PUMP
D MINI-DUCT AIR HANDLER
E GAS FIRED HIGH EFFICIENCY HWT OR BOILER