Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Town / City of _____

Contractor _____

Mechanical License # _____

Building Permit # _____ Zone # _____

Job Address (Street or Lot #, Block, Subdivision) _____

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets): Or	Yes ☐ No ☐
MJ1AE Form (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution system sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature _____ °F

Indoor temperature _____ °F

Total heat loss _____ Btu

Summer Design Conditions

Outdoor temperature _____ °F

Indoor temperature _____ °F

Grains difference _____ Δ Gr @ _____ % Rh

Sensible heat gain _____ Btu

Latent heat gain _____ Btu

Total heat gain _____ Btu

Building Construction Information

Building

Orientation (Front door faces) _____

North, East, West, South, Northeast, Northwest, Southeast, Southwest

Conditioned floor area _____ Sq Ft

Number of bedrooms _____

Number of Occupants _____

Envelope Tightness _____

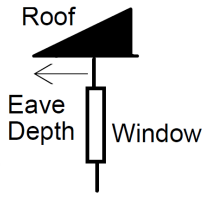
Windows

Eave overhang depth _____ Ft

Internal shade _____

Blinds, drapes, etc.

Number of skylights _____



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type _____

Furnace, Heat pump, Boiler, etc.

Model _____

Heating output capacity _____ Btu

Heat pumps - capacity at winter design outdoor conditions

Auxilliary heat output capacity _____ Btu

Cooling Equipment Data

Equipment type _____

Air Conditioner, Heat pump, etc.

Model _____

Sensible cooling capacity _____ Btu

Latent cooling capacity _____ Btu

Total cooling capacity _____ Btu

Blower Data

Heating CFM _____ CFM

Cooling CFM _____ CFM

SEER: _____ EER: _____ HSPF: _____ COP: _____ AFUE: _____

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow _____ CFM

External Static Pressure (ESP) _____ IWC

Component Pressure Losses (CPL) _____ IWC

Available Static Pressure (ASP) _____ IWC

ASP = ESP - CPL

Longest supply duct: _____ Ft

Longest return duct: _____ Ft

Total Effective Length (TEL) _____ Ft

Friction Rate: _____ IWC

Friction Rate = (ASP x 100) / TEL

Duct Materials Used (circle)

Trunk Duct: Duct board, Flex, Sheet metal, Lined sheet metal, Other (specify)

_____

Branch Duct: Duct board, Flex, Sheet metal, Lined sheet metal, Other (specify)

_____

I declare the load calculations, equipment selection, and duct system design were rigorously performed based on the building plan listed above, I understand the claims made on these forms will be subject to review and verification.

Contractor's Printed Name _____ Date _____

Contractor's Signature _____

Note: One form is required for each zone.