

HVAC Calculation for UA Alternative Design

Project Name: Shelley Residence
 Address 1: Marine Drive
 Address 2:
 City: Coupeville
 State: WA
 Zip Code: 98239

Weather Station: Coupeville # Bedrooms
 Conditioned Floor Area 2,408 2
 Conditioned Building Volume 26889

	Area	UA
Doors	40	8
Overhead Glazing	0	0
Vertical Glazing	432	94
Flat/Vaulted Ceilings	2,638	71
Wall (above grade)	2,607	124
Floors	0	0
Slab on Grade	61	20
Below Grade Wall	617	20
Below Grade Slab	86	36

Proposed UA Total: 373

Design Temp. Difference: 49 (from Weather tab)
 Conductive Envelope Heat Loss: 18296.19658

Blower-Door Air Infiltration Rate: 0.7 ACH50
 Natural vs. ACH50 Conversion Factor: 17.2 (Select from table below)
 Natural Air Infiltration Rate (est.) 0.040697674 ACH Natural
 Convective Heat Loss (Infiltration) 981.2765355 Btuh
 Ventilation Rate (ASHRAE 62.2) 46.58 CFM
 Convective Heat Loss (ventilation) 2506.09716 Btuh
 Recovery Rate (HRV) 0 Percentage
 Net Ventilation Heat Loss: 2506.09716

Total Envelope Heat Loss: 21783.57028 Btuh
 6.384 Kwh

HVAC Efficiency: 15.52 HSPF Daikin Altherma
 4.549 COP
 Net Energy Use @ Design Degree Day: 1.404 Kwh

Number of Stories	1	2	3
Shielded	25.8	20.6	18.1
Normal	21.5	17.2	15.1
Exposed	19.4	15.5	13.5